



IGCS 2022 Abstracts: E-Posters

Registered Delegates will have access to all posters in the E-Poster Gallery located within the Meeting Portal from September 28, 2022 (09:00 am EDT (New York)) until December 28, 2022.

Poster presenters were given the option to submit an audio file as well. The audio file will be located with the E-Poster within the Meeting Portal.

EP001 / #442

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

THE EFFECT OF MILD HYPERTHERMIA ON IMMUNE EVASION ACTORS PD-L1 AND NLRC5 IN OVARIAN CANCER

Maha Fezza¹, George Hilal¹, David Atallah², Roula Tahtouh¹

¹Saint Joseph university of Beirut, Cancer And Metabolism Lab, beirut, Lebanon, ²Hôtel Dieu de France, Gynecology And Obstetrics, beirut, Lebanon

Objectives: Multiple preclinical studies have demonstrated the benefit of augmenting immunotherapy with hyperthermia (HT) considering the proven ability of HT to enhance immune cell immunogenicity and to stimulate an antitumor immune response primarily via heat shock proteins (HSP). However, antitumor immune responses are often invalidated by immune evasion mechanisms such as the overexpression of programmed death-ligand 1 (PD-L1) and the loss of MHC class I expression. In this context, we sought to investigate the effects of HT on PD-L1 and the transcriptional activator of MHC class I genes NLRC5 and their interplay in ovarian cancer.

Methods: A co-culture of ovarian cancer cell lines (IGROV1 and SKOV3) with peripheral blood mononuclear cells was set up. Culture media conditioned with IGROV1 or SKOV3 subjected to HT were tested on untreated cell cultures. Knockdown of HSPA1 and HSPB1 and inhibition of STAT3 activation were performed. Expression levels of PD-L1, NLRC5, proinflammatory cytokines and HSP were measured. The correlation between PD-L1 and NLRC5 expression in ovarian cancer was evaluated using data from The Cancer Genome Atlas (TCGA) database.

Results: HT produced a significant concomitant decrease of PD-L1 and NLRC5 expression in co-culture. Notably, however the conditioned media by heat shocked cells increased their expression. Knockdown of the HSPB1 gene reversed this increase, an effect enhanced by STAT3 activation inhibition. Correlation analysis showed a positive correlation between NLRC5 and PD-L1 ($r=0.54$, p -value <0.001) in TCGA database.

Conclusions: Our results revealed that HSP27 induces a concomitant upregulation of PD-L1 and NLRC5 expression through the activation of a common regulator "STAT3".

EP002 / #550

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

PRECLINICAL SYNERGISTIC MECHANISMS OF INVESTIGATIONAL NEW DRUG, SHETA2.

Doris Benbrook¹, Rajani Rai¹, Vishal Chandra¹, Amy Kennedy¹, Kathleen Moore²

¹University of Oklahoma Health Sciences Center, Gynecologic Oncology, Stephenson Cancer Center, Oklahoma City, United States of America, ²Stephenson Cancer Center University of Oklahoma, Gynecologic Oncology, Oklahoma City, United States of America

Objectives: The investigational new drug, SHetA2 (NSC 726189) is being evaluated in a Phase 1 clinical trial in advanced and recurrent ovarian, cervical and endometrial cancers (clinicaltrials.gov: NCT04928508). SHetA2 selectively kills cancer cells without harming healthy cells by disrupting complexes of heat shock protein 70 molecular chaperones (mortalin, Grp78 and hsc70) with their client oncoproteins. We sought to evaluate efficacy, toxicity and mechanisms of SHetA2 in combination with other drugs.

Methods: Single and combined drug effects were compared in cell culture and murine xenograft models of human gynecologic cancer cell lines. Mechanisms were evaluated by immunohistochemistry of tumors, immunofluorescent and electron microscopic cell imaging, Seahorse assays, and co-immunoprecipitation, western blot, and mass spectrometry of protein extracts.

Results: SHetA2 interacted synergistically with a p53 reactivator, paclitaxel, and cyclin dependent kinase 4 or 6 inhibitors (CDK4/6i's) in cell culture. Synergy with paclitaxel was verified in two endometrial cancer xenograft models and additive interaction was observed for all other combinations in endometrial, cervical or ovarian xenograft models of treatment or maintenance therapy. Mechanisms of drug synergies involved SHetA2-induced mitochondrial damage, mitophagy and cell cycle arrest mediated by release of client proteins (p53, cyclin D1, CDK4/6, apoptosis inducing factor/AIF, metabolic enzymes) from HSP70 protection, and complemented by effects of the other drugs on these client proteins and their pathways.

Conclusions: SHetA2 activity against gynecologic cancers can be enhanced by paclitaxel, p53 reactivators, and CDK4/6i's, which have complementary mechanisms against HSP70 client proteins. These studies support development of SHetA2 as a synergistic complement to existing therapies in gynecologic cancers.

EP003 / #1114

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

IDENTIFICATION OF MOLECULAR TARGETS AND PATHWAYS FOR IMPROVING ENDOMETRIAL CANCER RACIAL DISPARITIES

Lindsay Borden¹, Pouya Javadian¹, Amy Kennedy², Chao Xu³, Virginie Sjoelund¹, Doris Benbrook²

¹University of Oklahoma, Gynecologic Oncology, Oklahoma City, United States of America, ²University of Oklahoma Health Sciences Center, Gynecologic Oncology, Stephenson Cancer Center, Oklahoma City, United States of America, ³University of Oklahoma, Department Of Biostatistics, Oklahoma City, United States of America

Objectives: Identify proteins present at significantly different levels in endometrial cancer specimens across 4 racial groups to direct future therapy.

Methods: Proteins extracted from endometrioid endometrial cancer specimens of women who self-identified as Black, American Indian, or White (N=12 each), or Asian (N=10) were measured by Tandem Mass Tag liquid chromatography-tandem mass spectrometry. Patients were matched for age and body mass index. Significant differences in protein levels were identified by ANOVA after adjustment of the first principal component and evaluated by Ingenuity Pathway Analysis. Drug effects on human Ishikawa endometrial cancer cells were evaluated using an MTT assay.

Results: The only patient characteristics significantly different across racial groups were higher rates of diabetes in Blacks and hypertension in Whites. Fifty-eight proteins exhibited significant differences across all groups. The most significant pathways identified to be regulated by proteins significantly different in non-Whites compared to Whites are regulators of protein synthesis. Trametinib and 2-deoxyglucose inhibition of mitogen-activated protein kinase 3 and hexokinase-2, which were significantly upregulated in specimens from Blacks compared to Whites, reduced growth of endometrial cancer cells with half-maximal inhibitory concentrations of 3 μ M and 3 mM, respectively, but did not interact synergistically.

Conclusions: This study demonstrated significantly different protein expression profiles in endometrioid endometrial cancers across 4 races. These proteins represent candidate biomarkers and drug targets for development of strategies to improve disparate outcomes of endometrial cancer patients.

EP004 / #741

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

DNA METHYLATION LANDSCAPE AS A POTENTIAL PLAYER IN ACQUIRED-DRUG RESISTANCE IN OVARIAN CANCER

Romina Silva^{1,2,3}, Kate Glennon⁴, Michael Metoudi⁵, Bruce Moran⁶, Sofia Salta⁷, Karen Slattery⁸, Ann Treacy⁹, Terri Martin¹⁰, Jacqui Shaw¹¹, Peter Doran¹⁰, Lydia Lynch¹², Carmen Jeronimo^{7,13}, Antoinette Perry^{1,3}, Donal Brennan¹⁴

¹University College Dublin, Cancer Biology And Therapeutics Laboratory, Dublin, Ireland, ²University College Duvlin, Ucd School Of Medicine, Dublin, Ireland, ³University College Dublin, School Of Biology And Environmental Science, Dublin, Ireland, ⁴Mater Hosptial, Gynaecology Oncology, D RWY, Ireland, ⁵University College Dublin, Systems Biology Ireland, Dublin, Ireland, ⁶St Vincent's University Hospital, Department Of Pathology, Dublin, Ireland, ⁷Portuguese Oncology Institute of Porto (IPO Porto /Porto Comprehensive Cancer Center (Porto.CCC), Cancer Biology & Epigenetics Group, Porto, Portugal, ⁸Trinity College Dublin, School Of Biochemistry And Immunology, Dublin, Ireland, ⁹Mater Hospital, Department Of Pathology, Dublin, Ireland, ¹⁰Mater Misericordiae University Hospital, Clinical Research Centre, Dublin, Ireland, ¹¹University of Leicester, Leicester Cancer Research Centre, Leicester, United Kingdom, ¹²Trinity College Dublin, Trinity Biomedical Science Institute, Dublin, Ireland, ¹³Institute of Biomedical Sciences Abel Salazar, Department Of Pathology And Molecular Immunology, Porto, Portugal, ¹⁴University College Dublin Gynaecological Oncology Group, Ucd School Of Medicine, Mater Hospital, Dublin, Ireland

Objectives: Development of therapeutic resistance is a major cause of mortality in high-grade serous ovarian cancer (HGSOC), thus a better understanding of acquired resistance mechanisms is needed. This study aimed to investigate how epigenomic events might be associated with acquired-drug resistance in HGSOC patients.

Methods: Methylation and gene expression differences between primary platinum-sensitive (n=32) and recurrent acquired-resistant samples (n=28) was explored using a HGSOC dataset. High resolution melting was used to validate results using epithelial ovarian cancer cell lines and HGSOC tumours. A CRISPR-Cas9 approach was used to investigate the effects of DNA methylation editing in vitro. Plasma samples from HGSOC patients (n=17) and age-matched healthy controls (n=20) were used to investigate longitudinal methylation dynamics via droplet digital PCR.

Results: Comparison of methylation and gene expression analysis identified several genes, known to be involved in diverse immune and chemoresistance-related pathways, that significantly differentiated between paired platinum-sensitive and acquired-resistant HGSOC samples, with three genes displaying the most consistent methylation changes (PDCD1, NKAPL, APOBEC3A). A CRISPR-Cas9 approach was used to interrogate the effects of APOBEC3A and NKAPL promoter methylation editing on platinum sensitivity, with demethylation of NKAPL promoter being associated with increased platinum sensitivity. Hypermethylation of NKAPL and APOBEC3A were detected in 46% and 69%, respectively, of plasma samples from women with relapsed HGSOC.

Conclusions: Promoter methylation has been identified as potentially involved in HGSOC drug resistance. Further research is warranted to understand the future use of these methylation patterns as prognostic/predictive markers in the OC clinical setting.

EP005 / #572

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

EXPLOITING SMARCA2 DEPENDENCY FOR TARGETED THERAPY IN SMARCA4-DEFICIENT OVARIAN CANCERS

Melica Brodeur¹, Higinio Dopeso¹, Hunter Green¹, Koichi Ito², Michael Hulse², Justin Brown², Britta Weigelt¹, Dmitry Zamarin³

¹Memorial Sloan Kettering Cancer Center, Pathology, New York, United States of America, ²Prelude Therapeutics Incorporated, Cancer Biology And Drug Discovery, Wilmington, United States of America, ³Memorial Sloan Kettering Cancer Center, Medicine, New York, United States of America

Objectives: Most ovarian cancer (OC) patients recur after first-line treatment and develop chemoresistance, highlighting an unmet need for precision medicine in OC. Half of OCs harbor mSWI/SNF chromatin-remodeling complex alterations including 10% in the SMARCA4 gene. Studies to date have suggested that the catalytic subunits of the mSWI/SNF complex, SMARCA2 and SMARCA4, exhibit paralog dependency and thus present an opportunity for synthetically lethal molecular targeting. The aim of this study is to investigate SMARCA2-dependency in SMARCA4-deficient OCs and to identify synthetic lethal interactions of SMARCA2-protein degradation in these cancers.

Methods: Using CRISPR-Cas9 lentiviral-transduction targeting the SMARCA4 gene, we developed novel murine syngeneic/isogenic OC cell lines from well-characterized cell lines ID8 and UPK10, and novel electroporation-based genetically engineered mouse model-derived cell line 3_1. Human isogenic OC cell lines OAW28 were also derived using the same technique. SMARCA2 protein degrader (proteolysis-targeting chimera) was provided in collaboration with industry. Western blots were performed to define paralog dependency in SMARCA4-deficient cells and to assess adequate SMARCA2-degradation. SMARCA2 protein degrader response was assessed using viability assays.

Results: SMARCA4-deficient isogenic OC cell lines displays increased SMARCA2 protein expression compared to SMARCA4-wildtype cells, suggesting that paralog dependency exists in OC. Furthermore, near complete SMARCA2-degradation occurs at low nanomolar range after 6-hour incubation. Comparing IC₅₀ values, we show a 5-fold increased sensitivity to the SMARCA2 protein degrader in SMARCA4-deficient OC cell lines compared to control, suggesting a synthetic lethal interaction in these cancers.

Conclusions: This study identifies SMARCA2 protein degradation as a unique therapeutic vulnerability and potential therapeutic target for SMARCA4-deficient OCs.

EP006 / #812

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

THE EXPRESSION LEVEL OF OBESITY AND LIPID METABOLISM RELATED GENES CONDITIONS TUMOR BEHAVIOR AND SURVIVAL IN GYNECOLOGICAL CANCERS

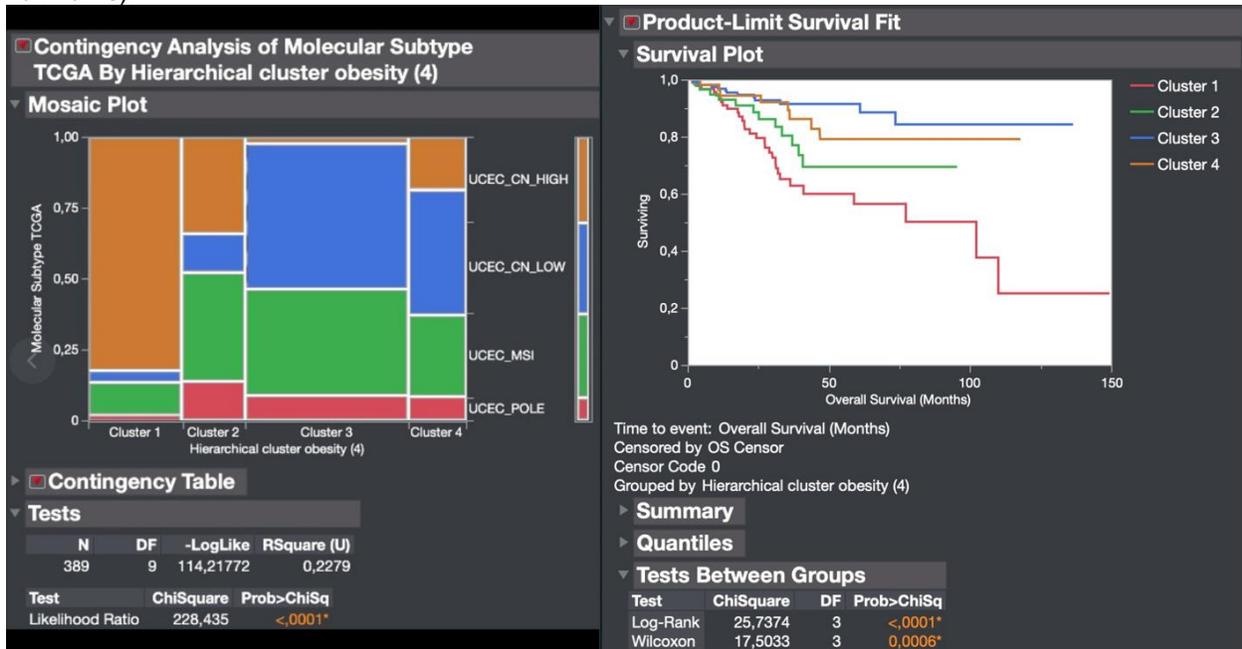
Mauricio Cuello¹, Sumie Kato¹, Fernán Gomez¹, Felipe Suárez¹, Cristián Salazar¹, Ignacio Wichmann²
¹Pontificia Universidad Católica de Chile, Gynecology, Santiago, Chile, ²Pontificia Universidad Católica de Chile, Obstetrics, Santiago, Chile

Objectives: Currently, the carcinogenesis of thirteen neoplasms has been related to obesity. Of the gynecological ones, endometrial and ovarian cancers are associated with it. To date, obesity is defined based on BMI (≥ 30 kg/m²). However, not all obesity is associated with a metabolic disorder (healthy-metabolic-obesity or HMO). Likewise, there are individuals with normal BMI (< 25 kg/m²) who are carriers of metabolic disorders. The objective of this study was to establish whether the abnormal expression of obesity- and lipid metabolism-related genes could determine the biological behavior and survival of the most prevalent gynecological cancers.

Methods: To do this, we built a 2208 obesity/dyslipidemia/hypercholesterolemia-related gene dataset (ODH) according to phenopedia (PGHKB (v7.7)). We then downloaded TCGA endometrial (UCEC=543-cases), cervical (CESC=304-cases) and ovarian (OVCA=374-cases) cancers RNAseq datasets. NMF-consensus clustering, differential-gene-expression-analyses (DGEA), Gene-set-enrichment (GSEA) and Gene-Ontology (GO) analyses were carried out, and Kaplan-Meier survival curves were built-up. Significantly up- or downregulated genes were defined as those with $\log_{2}FC \geq 1.5$ at non-adjusted p-values ≤ 0.01 .

Results: Based on ODH-gene expression, we identified UCEC, CESC and OVCA clusters with significantly different overall survival (OS). Regarding UCEC, a cluster allocates the high-copy-number endometrioid-variant as well as the serous type (worse prognosis), in a similar manner as observed with the mesenchymal-variant in high-grade-serous ovarian cancer (see fig1). Interestingly, the GSEA and GO-analyses show that for worse prognosis histologies exhibit different enrichment patterns regarding antitumor immune response, TGF-beta (EMT)-mediated signaling, lipid metabolism and inflammatory response (all cancer

hallmarks).



Conclusions: These in-silico findings support the role of obesity in conditioning behavior/therapeutic response/prognosis of these gynecologic cancers. (Supported_by_fondecyt_1201083)

EP007 / #994

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

BAY 1895344, A NOVEL ATR INHIBITOR, DEMONSTRATES IN VIVO ACTIVITY AGAINST ATRX ALTERED UTERINE LEIOMYOSARCOMA

Justin Harold¹, Diego Manavella², Stefania Bellone¹, Eric Siegel³, Tobias Hartwich², Luca Zammataro⁴, Levent Mutlu⁵, Gary Altwerger², Gulden Menderes⁵, Elena Ratner², Gloria Huang⁵, Mitchell Clark², Vaagn Andikyan⁵, Masoud Azodi², Peter Schwartz⁵, Ludmil Alexandrov⁶, Alessandro Santin²
¹Yale, Gynecologic Oncology, New Haven, United States of America, ²Yale University, Obstetrics, Gynecology And Reproductive Sciences, New Haven, United States of America, ³University of Arkansas, Department Of Biostatistics, Little Rock, United States of America, ⁴Kiromic Biopharma, Inc., Unit Of Artificial Intelligence Systems For Immunoinformatics, Houston, United States of America, ⁵Yale University, Obstetrics, Gynecology And Reproductive Sciences, Fmb328, New Haven, United States of America, ⁶University of California San Diego, Department Of Cellular And Molecular Medicine, La Jolla, United States of America

Objectives: Uterine leiomyosarcoma (uLMS) is a rare, aggressive gynecologic malignancy. Up to 51% of uLMS harbor somatic mutations in ATRX, a tumor suppressor in the transcription regulation pathway, which increase sensitivity to ATR inhibitors. We sought to investigate the in vivo activity of a novel ATR inhibitor, BAY 1895344, against ATRX altered uLMS.

Methods: ATRX altered PDX models LEY11 and LEY 16 were grafted into female CB-17/SCID mice and triaged to treatment with control or BAY1895344 (10 or 20 mg/kg daily). Treatments were given via oral gavage twice daily for three days weekly and tumor measurements and weights obtained twice weekly. ATR and DAXX expression were determined by Western blotting and RTPCR. Tumor volume differences were calculated with a two-way ANOVA, and p-value <0.05 was considered statistically significant. OS was compared via a Kaplan-Meier survival curve.

Results: Tumor growth inhibition was significantly greater in the BAY1895344 groups in both LEY 11 (n=12) and LEY 16 (n=13) (p=0.0003 and p = 0.006, respectively). Median overall survival was significantly longer in both LEY 11 (12.5 vs. 42 days, p = 0.001) and LEY 16 (32 vs. 60 days, p < 0.001). There was no significant toxicity. ATRX was overexpressed in LEY 11 (Avg dCt 10.09 vs. 6.56) as well as DAXX (Avg dCt 8.97 vs. 6.46).

Conclusions: BAY1895344 demonstrates promising in vivo activity against a PDX model of uLMS that harbors ATRX mutations, with no significant toxicity. Phase I trials of BAY1895344 are currently ongoing, and its clinical use in uLMS warrants further investigation.

EP008 / #378

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

COMPARATIVE GENOMIC ANALYSIS OF OVARIAN CLEAR CELL CARCINOMA PATIENTS WITH AND WITHOUT A SECOND PRIMARY MALIGNANCY

Liat Hogen^{1,2}, Emily Van De Laar³, Marjan Rouzbaham⁴, Marcus Bernardini¹, Alicia Tone¹, Stephenie Prokopec⁵, Jeffrey Bruce⁶, Natalie Stickle⁷, Trevor Pugh⁸

¹University of Toronto,, Department Of Obstetrics And Gynecology, Division Of Gynecologic Oncology, Toronto, Canada, ²Princess Margaret Cancer Center, Sinai Health System, Gynecologic Oncology, Toronto, Canada, ³Princess Margaret Cancer Centre/University Health Network/Sinai Health Systems, Gynecology Oncology, Toronto, Canada, ⁴University Health Network, Anatomy And Pathology, TORONTO, Canada, ⁵Ontario Institute for Cancer Research, Toronto, ON, Canada, Informatics & biocomputing, TORONTO, Canada, ⁶Princess Margaret Cancer Center, University Health Network, Toronto, ON, Princess Margaret Genomic Centre, TORONTO, Canada, ⁷Princess Margaret Cancer Center, Bioinformatics And Hpc Core, TORONTO, Canada, ⁸Princess Margaret Cancer Center, Ontario Institute For Cancer Research, University Of Toronto, TORONTO, Canada

Objectives: Previous study showed that patients with Ovarian clear cell carcinoma (OCCC) are at increased risk for developing secondary malignancy (SM). Objectives: To identify and compare germline and somatic mutations in patients with OCCC only, and patients with OCCC and a SM by whole exome sequencing (WES) analysis. To compare somatic mutations in primary and SM tissue from the same patient by WES and deep targeted sequencing.

Methods: DNA was extracted from patient tumour(s) and peripheral blood samples, sequenced to identify somatic and germline mutations, copy-number variants and rearrangements in the exome. Exome sequencing was performed using the Agilent SureSelect Human All Exon (V7) panel covering 49.7 Mb across all genes annotated by RefSeq, CCDS, and GENCODE.

Results: Ten patients with OCCC were selected: Five had SM and 5 patients had OCCC only. We did not uncover any pathogenic or likely-pathogenic germline variants in this cohort, as annotated by ClinVar. Consistent with previous reports in OCCC, we uncovered recurrent, oncogenic mutations in PIK3CA and loss-of-function mutations in ARID1A in 8 OCCCs. One of the two OCCCs without these mutations had somatic mutations of RRAS2 (encoding downstream target of PIK3CA pathway) and loss-of-function mutation in ARID4B, consistent with the more frequent oncogenic mechanisms in OCCC. In the SM, none of the somatic mutations were shared with the primary OCCCs.

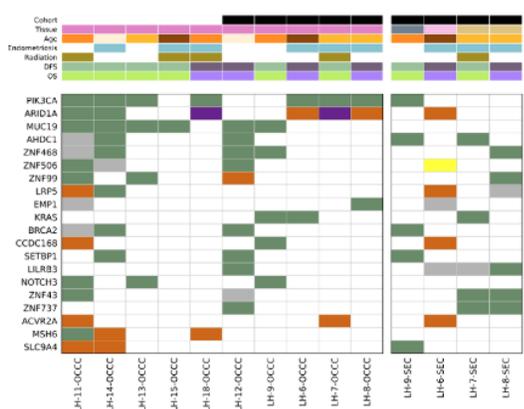
Table 1. clinical characteristics of patients with ovarian clear cell carcinoma (OCCC) with or without SM*

	Age at dx of OCCC	Stage of OCCC	Secondary malignancy (SM)	Radiation for OCCC	Recurrence of OCCC	BMI	First cancer diagnosed
case 1	81	1C	Endometrial (grade 1 endometrioid)	No	Yes	27	Concurrent
Case 2	57	1C	Thyroid	Yes	No	22.8	Thyroid
Case 3	54	3B	Thyroid	No	Yes	22.8	Thyroid
Case 4	63	1A	Vaginal SCC	No	No	24	OCCC
Case 5**	46	3A	Gastric	No	Yes	24.3	OCCC
Case 6	68	2B	No SM	Yes	No	33.4	
Case 7	57	3C	No SM	No	No	28	
Case 8	43	1A	No SM	No	No	28.7	
Case 9	74	1C	No SM	Yes	No	32.7	
Case 10	63	1C	No SM	Yes	Yes	31.5	

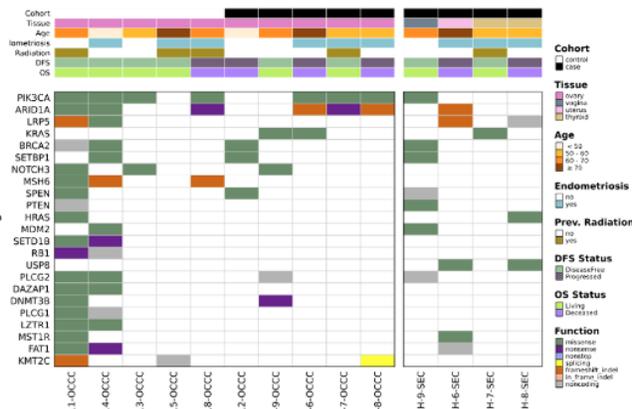
*SM: secondary Malignancy

**Case 5 had insufficient viable tumor from the SM for analysis, hence only the OCCC was analyzed

Somatic single nucleotide variants (SNVs) summary



Summary of the most frequently mutated genes across the cohort (filtered to remove mutations with low coverage and likely passenger genes). Colours indicate predicted functional consequence (white = no mutation detected). Gene set is truncated to top 20 hits where necessary.



Mutations were filtered to those predicted to be pathogenic/likely pathogenic by ClinVar and/or oncogenic by OncoKB (filtered to remove mutations with low coverage). Colours indicate predicted functional consequence (white = no mutation detected). Gene set is truncated to top 20 hits where necessary.

Conclusions: In this pilot study, SM did not share somatic mutation with OCCC. Larger cohort and deeper molecular analysis can be used to further understand potential common pathway contributing to development of SM in patients with OCCC.

EP009 / #709

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

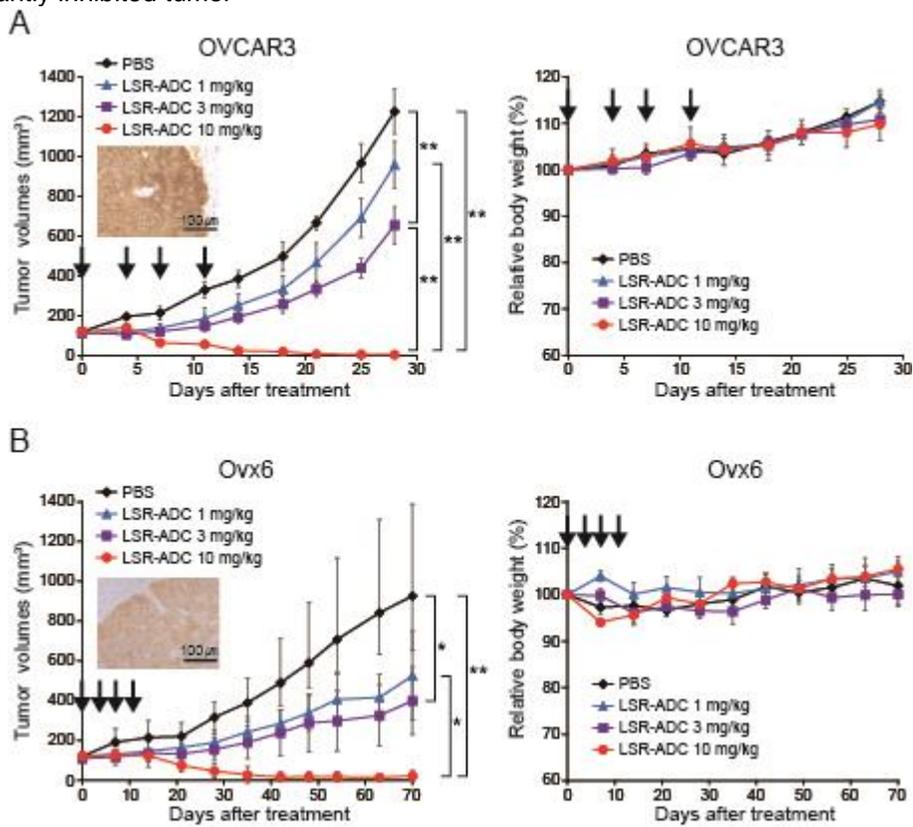
LIPOLYSIS-STIMULATED LIPOPROTEIN RECEPTOR - ANTIBODY-DRUG CONJUGATES (LSR-ADC) DEMONSTRATES POTENT ANTITUMOR ACTIVITY TO EPITHELIAL OVARIAN CANCER

Mizuki Kanda¹, Kousuke Hiramatsu¹, Yutaka Ueda¹, Masashi Funauchi¹, Tetsuji Naka², Tadashi Kimura¹
¹Osaka University Graduate School of Medicine, Obstetrics And Gynecology, Osaka, Japan, ²Iwate Medical University, Allergy And Rheumatology, Yahaba, Japan

Objectives: Epithelial ovarian cancer (EOC) is the leading cause of cancer-related deaths among women, thus new treatment option is urgently required. Lipolysis-stimulated lipoprotein receptor (LSR) is widely expressed in EOC and associated with poor prognosis. In this study, we developed antibody-drug conjugate (ADC) targeting LSR as a new therapy for EOC.

Methods: We developed novel anti-LSR monoclonal antibodies (mAbs) and LSR-ADC by conjugating monomethyl auristatin E (MMAE) as a payload. Then, we evaluated the expression of LSR in EOC cell lines and antitumor effect of LSR-ADC in vitro and in vivo xenograft models.

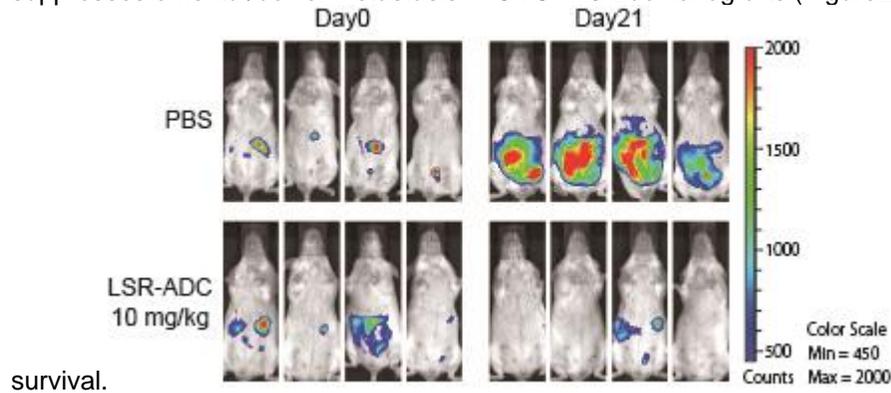
Results: We evaluated the strong expression of LSR in EOC cell lines (NOVC7C and OVCAR3) and the strong binding affinity of LSR-ADC to these LSR positive cell lines. Moreover, we demonstrated the rapid internalization of LSR-ADC into tumor cells and trafficked to lysosome. In vitro, LSR-ADC showed a potent antitumor effect against NOVC7C and OVCAR3. Moreover, in the OVCAR3 xenograft model (Figure1A), and patient-derived xenograft (PDX) models of LSR -positive EOC (Figure1B), LSR-ADC significantly inhibited tumor



growth.

LSR-ADC also

suppresses omental/bowel metastasis in OVCAR3-Luc xenografts (Figure2) and improved median



survival.

Conclusions: LSR-ADC showed significant antitumor activity against LSR-positive EOC cell lines and LSR-positive EOC tissues. Our preclinical data demonstrated that LSR-ADC is a novel therapy for patients with LSR-positive EOC.

EP010 / #645

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

TRANSCRIPTOMIC ANALYSIS OF PROGESTERONE RESISTANCE IN ENDOMETRIAL CANCER CELLS

Mi-Kyung Kim¹, Bora Kim¹, Yun Hwan Kim¹, Sung-Yup Cho²

¹Ewha Womans University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Seoul National University College of Medicine, 2department Of Biochemistry And Molecular Biology, Seoul, Korea, Republic of

Objectives: To identify differentially expressed genes (DEGs) and signaling pathways in progesterone-resistant endometrial cancer (EC) cells.

Methods: Medroxyprogesterone acetate (MPA)-resistant endometrial cancer cells were established through continuous treatment of endometrial cancer cells (RL95-2 and Ishikawa) with gradually escalating doses of MPA. RNA-seq was performed on both original and MPA-resistant EC cells to evaluate DEGs. Gene-set enrichment analysis (GSEA) was also performed to find biologic processes or pathways in relation to MPA resistance. Further validation was undertaken by real-time polymerase chain reaction (RT-PCR) on selected genes.

Results: The profiles of DEGs were substantially different between RL95-2 and Ishikawa cells. In MPA-resistant RL95-2 cells, the enriched hallmark gene sets include KRAS signaling_down, myogenesis, and late estrogen response. In MPA-resistant Ishikawa, hallmark gene sets of TNF α signaling via NF κ B, hypoxia, and late estrogen response were significantly enriched. Common hallmark gene sets in both MPA-resistant RL95-2 and Ishikawa include late estrogen response and myogenesis. In addition, common gene ontology biological processes include cellular response to corticosteroid stimulus and epithelial cell differentiation.

Conclusions: We identified DEGs and several pathways enriched in MPA-resistant endometrial cancer cells as potential therapeutic targets of progesterone resistance, which need further validation.

EP011 / #648

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

DEVELOPMENT AND GENOMIC CHARACTERIZATION OF PATIENT-DERIVED ENDOMETRIAL CANCER ORGANOID

Mi-Kyung Kim¹, Bora Kim¹, Yun Hwan Kim¹, Ja-Lok Ku²

¹Ewha Womans University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Seoul National University College of Medicine, Department Of Biomedical Sciences, Cancer Research Institute, Seoul, Korea, Republic of

Objectives: We have developed endometrial cancer organoids to establish reliable pre-clinical models, and performed genomic characterization of the established organoids to assess whether they maintain the mutational landscapes of the original tumors from which the organoids originated.

Methods: Endometrial cancer organoids were cultured using endometrial cancer surgical specimens. After establishment of the organoids, we performed whole genome sequencing (WGS) on original tumor tissues and the paired organoids to identify driver mutations, mutational signatures, and structural variations. We also classified the organoids based on the TCGA molecular classifications.

Results: Endometrial cancer organoids were successfully established in 7 of 34 cases (20%) and 11 cases (32%) are ongoing. Among them, we performed WGS analysis on 5 pairs of original endometrial cancer tissue and organoid. Although numerous passenger mutations were accumulated during organoid culture, all the established organoids retained the driver mutations of the tumors and showed similar mutational signatures. The organoids comprised the 4 TCGA molecular classifications, including 1 POLE ultramutated, 1 MSI (MSH6 mutation), 1 TP53 mutated, and 2 copy-number low groups.

Conclusions: We developed endometrial cancer organoids representing the 4 TCGA molecular classifications, which will provide useful experimental models for translational research.

EP012 / #891

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

EXPRESSION OF CHEMOKINE RECEPTOR AND SUPPRESSION OF INHIBITORY RECEPTORS OF CD8 T CELL ERADICATED EFFECTIVELY CERVICOVAGINAL TUMOR IN MOUSE

Sung-Jong Lee¹, Taek Sang Lee²

¹Seoul St. Mary's Hospital/The Catholic University of Korea, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Seoul Metropolitan Government Seoul National University Boramae Medical Center, Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: Activation of exhausted CD8 T cell and migration of immune cells into tumor site is an important for overcoming resistance to cancer therapy. We evaluated the role of suppression of inhibitory receptors and chemokine axis in cervicovaginal tumor bearing mouse.

Methods: C57BL/6 mice were categorized into four groups according to treatment modality. Mice were challenged with 1×10^5 TC-1 cells on cervix and vagina. HPV DNA therapeutic vaccine was injected intramuscularly and intratumoral injection of GMCSF was performed. The mice were harvested on day 21 and immune cells were investigated by flow cytometry. We checked the expression of inhibitory receptors of CD8 T cells, including PD1, TIM3 and LAG3. Chemokine axis such as CXCL9, CXCL10, and CXCR3 were evaluated to know migration mechanism.

Results: Combination of HPV DNA vaccine and GMCSF resulted in significantly lower expression of TIM3 inhibitory receptors of CD8+ T cells in tumor ($p < 0.05$) (Fig 1). However, expression level of PD1 and LAG3 was not changed after combination therapy. They significantly induced accumulation of tumor specific CD8 T cell in tumor site and increased expression of CXCR3 on tumor infiltration CD8 T cell ($p < 0.05$). CXCL9, chemokine, was overexpressed in cervicovaginal tumor after combination therapy ($p < 0.05$) (Fig 2). However, expression level of CXCL10 was not changed after combination therapy. Finally, mice treated with combination therapy survived significantly longer than other groups with single therapy ($p < 0.05$).

Conclusions: In conclusion, we overcame T cell exhaustion and identified chemokine axis during migration of CD8 T cell into cervicovaginal tumor using HPV DNA vaccine and GMCSF.

EP013 / #933

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

TESTING FOR MISMATCH REPAIR PROTEIN DEFICIENCY, MICROSATELLITE INSTABILITY, AND LYNCH SYNDROME IN OVARIAN CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS

Cristina Mitric¹, Lina Salman², Soyoun Rachel Kim³, Lilian Gien⁴, Sarah Ferguson⁵

¹University Health Network, University of Toronto, Gynecologic Oncology, Toronto, Canada, ²University of Toronto, Department Of Obstetrics And Gynecology, Division Of Gynecologic Oncology, Toronto, Canada, ³Princess Margaret Cancer Centre/University Health Network/Sinai Health Systems, Gynecology Oncology, Toronto, Canada, ⁴Sunnybrook Odette Cancer Centre, Division Of Gynecologic Oncology, Toronto, Canada, ⁵Princess Margaret Cancer Centre/University Health Network/Sinai Health Systems, Gynecologic Oncology, Toronto, Canada

Objectives: Identifying Lynch syndrome (LS) in endometrial cancer through reflex tumour testing for mismatch repair protein deficiency (MMRd) and microsatellite instability (MSI) is widely accepted, but knowledge is limited about its value in ovarian cancer. The current systematic review and meta-analysis evaluated the prevalence of MMRd, MSI-high, and LS in ovarian cancer, as well as the tests performance characteristics.

Methods: We systematically searched the MEDLINE, Cochrane Central Register of Controlled Trials, and Embase databases from inception until February 2022. We included studies assessing MMRd using immunohistochemistry (IHC), MSI, and/or germline LS by next-generation sequencing (NGS).

Results: A total of 45 studies were included. The incidence for MMRd was 9% (95% CI 6-14%), MSI-high 12% (12-15%), and LS 5% (2-14%) in all epithelial ovarian cancer respectively. Hypermethylation was identified in 77% (95% CI 63-87%) of those with MLH1 deficiency. MMR IHC for LS diagnosis has 92% sensitivity, 77% specificity, 58% positive predictive value, and 98% negative predictive value, whereas MSI performance characteristics were 97%, 91%, 25% and 77% respectively. Synchronous ovarian and endometrial cancers had highest rates of MMRd (26%) and MSI-H (34%). Serous histology had lowest prevalence of 1% for MMRd and 7% for MSI. The highest prevalence of germline pathogenic variants in MMR genes (LS) were found in those with synchronous endometrial-ovarian cancer (53%) as well as clear cell ovarian cancer (25%) with the lowest prevalence in serous ovarian (1%) cancer.

Conclusions: MMR deficiency, MSI, and LS are frequent in ovarian cancer, in particular in non-serous histological subtypes.

EP014 / #408

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

EVALUATION OF NAPI2B EXPRESSION IN A WELL ANNOTATED LONGITUDINAL TISSUE SERIES OF OVARIAN SEROUS CARCINOMAS

Ronny Drapkin¹, Euihye Jung², Chelsea Bradshaw³, Leslie Demars⁴, Rebecca Mosher⁵

¹University of Pennsylvania, Department Of Obstetrics And Gynecology, Perelman School Of Medicine, Philadelphia, United States of America, ²University of Pennsylvania, Technical Director, Ocr Tumor Biotrust Collection,, Philadelphia, United States of America, ³Mersana Therapeutics, Development Management, Cambridge, United States of America, ⁴Mersana Therapeutics, Clinical Development, Cambridge, United States of America, ⁵Mersana Therapeutics, Translational Medicine, Cambridge, United States of America

Objectives: Upifitimab rilsodotin (UpRi) is a first-in-class NaPi2b-targeting ADC with a novel scaffold-linker-payload that enables high drug-to-antibody ratio and controlled bystander effect. NaPi2b is , a sodium-dependent phosphate transporter broadly expressed in high-grade serous epithelial ovarian, fallopian tube and primary peritoneal cancers. Emerging UpRi data suggests a relationship between patients with higher expression of NaPi2b, the SLC34a2 gene product, and clinical activity, with a generally well tolerated safety profile (Richardson et al., SGO 2022). However, change in NaPi2b expression in ovarian cancer over the course of disease has not been well defined.

Methods: 11 individuals diagnosed with high grade serous ovarian cancer had tumor biopsies evaluated for NaPi2b expression at more than one time point. These included matched samples taken from debulking procedures/post-chemotherapy (n=5); pretreatment biopsy/post neoadjuvant (n=4); pretreatment/post neoadjuvant/at progression (n=2). Tumor samples were evaluated by immunohistochemistry (IHC) using a rabbit antibody to detect NaPi2b expression, and a tumor proportion score (TPS) was calculated. High NaPi2b expression was defined as TPS $\geq 75\%$.

Results: 7/11 (64%) individuals had an initial sample with high NaPi2b expression. 6 of these 7 subjects (86%) remained NaPi2b high through their matched samples; 8/11 (73%) of individuals maintained their NaPi2b status through matched samples. Of the three individuals who had a change in expression status, two showed increased NaPi2b expression above TPS $\geq 75\%$ following treatment; one showed decreased expression.

Conclusions: In this cohort , NaPi2b expression status was maintained over the treatment course in the majority of evaluated individuals reinforcing that this marker remains consistent throughout the disease course.

EP015 / #546

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

IN VITRO AND IN VIVO EFFICACY OF TRASTUZUMAB DERUXTECAN (T-DXd) IN EPITHELIAL OVARIAN CANCER WITH HER2/NEU OVEREXPRESSION

Levent Mutlu, Diego Manavella, Stefania Bellone, Alessandro Santin
Yale University, Obstetrics, Gynecology And Reproductive Sciences, New Haven, United States of America

Objectives: Epithelial ovarian cancer (EOC) has high recurrence rates, and treatment options are limited. T-DXd is a novel anti-HER2 antibody linked to the topoisomerase I inhibitor. This study aimed to determine the in vitro and in vivo efficacy of T-DXd in EOC.

Methods: HER2 expression was analyzed with flow cytometry in primary high grade serous (KRCH31 and OVA3) and clear cell (OVA10 and OVA12) EOC cell lines. Cell lines were treated with T-DXd or Control antibody drug conjugate (CTL ADC). The IC_{50} , apoptosis, bystander antitumor assays were performed. KRCH31 cells were injected into the SCID mice and animals were treated with PBS, CTL ADC or T-DXd.

Results: KRCH31 and OVA10 EOC cell lines expressed HER2 by flow cytometry, OVA3 and OVA12 had negligible expression. T-DXd mean IC_{50} were 0.014 $\mu\text{g/ml}$ and 0.017 $\mu\text{g/ml}$ for KRCH31 and OVA10 cell lines, but no effect was observed in the OVA3 or OVA12 cell lines. Apoptotic cells increased to 65% and 60% in the KRCH31 and OVA10 cell lines after T-DXd. T-DXd did not show cytotoxicity on ARK4-GFP cells; however, substantial cytotoxicity was observed due to bystander antitumor activity when cocultured with KRCH31 and OVA10 cell lines (live ARK4-GFP cells 55% and 50%). Day 8 mean tumor volumes were 0.86, 0.81 and 0.43 cm^3 in PBS, CTL ADC and T-DXd treated mice, respectively ($p < 0.001$). Median overall survival was 15, 16.5 days and not reached in PBS, CTL ADC, T-DXd treated mice, respectively ($p = 0.0002$).

Conclusions: T-DXd showed in vitro and in vivo preclinical efficacy in HER2 overexpressing EOC. Further clinical trials are warranted.

EP016 / #807

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

DYNAMIC CHANGES OF PERIPHERAL REGULATORY T CELLS DURING PARP INHIBITOR MAINTENANCE THERAPY IN PATIENTS WITH OVARIAN CANCER

Junsik Park^{1,2}, Mi-Ran Lee¹, Joohyang Lee¹, Yoo-Na Kim¹, Yong Jae Lee¹, Jung-Yun Lee¹

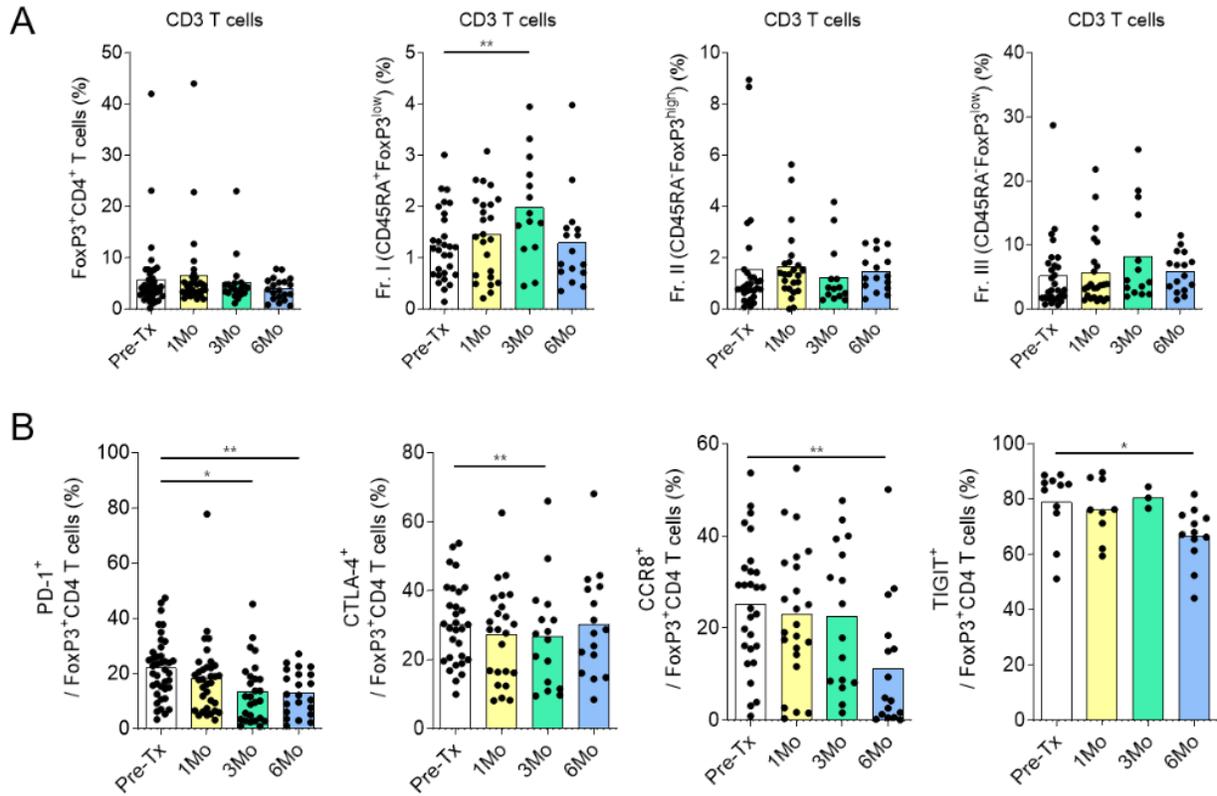
¹Institute of Women's Life Medical Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Yonsei University College of Medicine, Severance Biomedical Science Institute, Seoul, Korea, Republic of

Objectives: Poly (adenosine diphosphate [ADP]-ribose) polymerase inhibitors (PARPi) are becoming the standard of care for ovarian cancer. However, it has been reported that poly(ADP-ribosyl)ation of FoxP3 negatively regulates suppressive function of regulatory T cells (Treg). Most of the studies on PARPi have focused on the tumor itself and synthetic lethality. The immunological effect, particularly the effect on Treg cells, has been overlooked. In the current study, we investigated the dynamic changes of immune properties of peripheral Treg cells during PARPi maintenance therapy and explored their clinical implications.

Methods: We analyzed serial peripheral blood mononuclear cells (PBMCs) from PARPi-treated patients (n=46) with ovarian cancer using multicolor flow cytometry. The PBMCs were collected at the time points included pre-treatment as well as 1, 3, and 6 months after the initiation of treatment. Olaparib or niraparib was used as maintenance therapy.

Results: First, the percentages FoxP3⁺CD4⁺ regulatory T cells (Treg cells) did not changed significantly after initiation, but only the % of resting Treg cells (CD45RA⁺FoxP3^{low}) increased 3 months after initiation. Second, we analyzed expression of immune checkpoints and properties of Treg cells. We found that the PD-1 and CTLA-4 expression on Treg cells significantly decreased after 3 months and TIGIT and CCR8

decreased after 6 months.



Conclusions: Long-term PAPri treatment regulated suppressive function of Treg cells, but since PARPi-induced changes in Treg cells and their clinical implications has not yet been fully elucidated, further research is warranted.

EP017 / #425

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

COMPARISON OF NAPI2B EXPRESSION FROM PAIRED TISSUE SAMPLES IN A CLINICAL STUDY OF UPIFITAMAB RILSODOTIN (UPRI; XMT-1536) SUPPORTS A STRATEGY OF TESTING IN ARCHIVE MATERIAL

Debra Richardson¹, Minal Barve², Andreas Saltos³, Kyriakos Papadopoulos⁴, John Hays⁵, Anthony Tolcher⁶, Susan Ellard⁷, Deborah Doroshov⁸, Paul Mitchell⁹, Corrine Zarwan¹⁰, Theresa Werner¹¹, Charles Anderson¹², Alex Spira¹³, Linda Mileshkin¹⁴, Chelsea Bradshaw¹⁵, Leslie Demars¹⁶, Rebecca Mosher¹⁷, Erika Hamilton¹⁸

¹Stephenson Cancer Center University of Oklahoma, Gynecologic Oncology, Oklahoma City, United States of America, ²Texas Oncology, Mary Crowley Cancer Research, Dallas, United States of America, ³Moffitt Cancer Center, Thoracic Oncology, Tampa, United States of America, ⁴START San Antonio, Medical Oncology, San Antonio, United States of America, ⁵Ohio State University James Cancer Center, Medical Oncology, Columbus, United States of America, ⁶NEXT Texas Oncology, Medical Oncology, San Antonio, United States of America, ⁷University of British Columbia, Bc Cancer Agency, Vancouver, Canada, ⁸Mount Sinai, Medical Oncology, New York, United States of America, ⁹Austin Health - Olivia Newton John Cancer Center, Medical Oncology, Heidelberg, Australia, ¹⁰Lahey Hospital, Medical Oncology, Burlington, United States of America, ¹¹Huntsman Cancer Institute, Medical Oncology, Salt Lake City, United States of America, ¹²Willamette Valley Cancer Institute and Research Center, Medical Oncology, Eugene, United States of America, ¹³Virginia Cancer Specialists, Medical Oncology, Fairfax, United States of America, ¹⁴Peter MacCallum Cancer Center, Medical Oncology, Melbourne, Australia, ¹⁵Mersana Therapeutics, Development Management, Cambridge, United States of America, ¹⁶Mersana Therapeutics, Clinical Development, Cambridge, United States of America, ¹⁷Mersana Therapeutics, Translational Medicine, Cambridge, United States of America, ¹⁸Tennessee Oncology, Sarah Cannon Research Institute, Nashville, United States of America

Objectives: UpRi is a first-in-class NaPi2b ADC with a novel scaffold-linker-payload that enables high drug-to-antibody ratio and controlled bystander effect. NaPi2b is a sodium-dependent phosphate transporter broadly expressed in high-grade serous ovarian cancer (HGSOC), with limited expression in normal tissues. Emerging UpRi data suggests a relationship between high NaPi2b expression and clinical activity. To determine if archive material would be sufficient to classify biomarker status, we evaluated NaPi2b expression in paired freshly biopsied and archive material from the Phase 1b study.

Methods: Two sample sets were evaluated for NaPi2b expression using an IHC assay. The first set (18 pairs) was procured from tissue banks, representing synchronous sampling of primary and metastatic lesions to establish a reference NaPi2b heterogeneity rate. The second set were matched metachronous samples (56 pairs) from the Phase 1b study, sampled prior to UpRi administration. Expression was shown as a tumor proportion score (TPS \geq 75). Concordance rates and Kappa values were calculated.

Results: Synchronous primary and metastatic lesions from an archival tumor bank showed a concordance rate of 72%. When fresh biopsy samples from a clinical study cohort were compared to archival tissue from the same patient, 76% of NaPi2B high tumors in archival tissue were also high in fresh samples, regardless of the elapsed time between archival and fresh tissue samples.

Conclusions: UpRi is being evaluated in clinical trials, requiring either fresh or archival tissue for NaPi2b expression assessment. The high expression concordance rate seen suggests that NaPi2b remains consistent throughout chemotherapy treatment, supporting use of archival tissue for analysis.

EP018 / #324

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

THE EFFICACY AND MOLECULAR MECHANISMS OF MDR-REVERSAL AGENTS (STONY BROOK TAXANES) IN RESISTANT OVARIAN CARCINOMA MODELS

Radka Vaclavikova^{1,2}, Karolina Seborova^{2,3}, Alzbeta Spalenkova^{2,3,4}, Marie Ehrlichova³, Iwao Ojima⁵, Petr Daniel⁶, Jan Kovar⁶, Pavel Soucek^{2,3}

¹National Institute of Public Health, Toxicogenomics Unit, Praha, Czech Republic, ²Biomedical Center, Laboratory Of Pharmacogenomics, Pilsen, Czech Republic, ³National Institute of Public Health, Toxicogenomics Unit, Praha, Czech Republic, ⁴University Hospital Kralovske Vinohrady, Third Faculty Of Medicine, Prague, Czech Republic, ⁵State University of New York at Stony Brook, Institute Of Chemical Biology & Drug Discovery, Stony Brook, United States of America, ⁶Third Faculty of Medicine, Division Of Cell And Molecular Biology, Prague, Czech Republic

Objectives: Taxane resistance is a serious problem in the successful treatment of ovarian carcinoma. New generations of taxane analogs (Stony Brook taxanes; SB-Ts) seem to be effective against resistant solid tumors. Our aim was to estimate in vitro and in vivo efficacy of SB-Ts in comparison to paclitaxel and discover underlying changes of gene expression profile connected with the treatment of taxanes.

Methods: NCI/ADR-RES and SKOV-3/PCT-RES human ovarian cancer cell lines were used as multidrug-resistant model. The efficacy of taxanes was compared via assessment of IC₅₀ values. Flow cytometry was used for analysis of cell cycle changes. In vivo efficacy of taxanes was measured after intraperitoneal application of paclitaxel alone (10 mg/kg) or combined with SB-Ts (1-5 mg/kg) twice a week in resistant ovarian cell line-derived xenograft (CDX) models. Gene expression profiles were followed by quantitative real-time PCR in CDX tumors.

Results: In vitro experiments revealed the third generation SB-Ts – SB-T-121605 and SB-T-121606 as the most effective. In vivo, both SB-Ts effectively suppressed tumor growth at low doses (<3 mg/kg) in combination with paclitaxel, limiting their adverse effects. Treatment of SB-Ts also led to significant deregulation of many genes involved in resistance.

Conclusions: SB-T-121605 and SB-T-121606 are promising candidates for further studies, aimed at development of novel therapeutics for therapy of resistant ovarian tumors. Supported by projects of the Czech Science Foundation no. 21-14082S, the Czech Ministry of Education, Youth and Sports: INTER-ACTION, project no. LTAUSA19032, and the National Institutes of Health (NIH), U.S.A. grant R01 CA103314.

EP019 / #212

EPOSTER VIEWING: AS01 BASIC/TRANSLATIONAL SCIENCE

THE PROPHYLACTIC EFFECTS OF RED GINSENG ON NIRAPARIB-INDUCED MYELOSUPPRESSION

Huiyan Liao¹, Shenming Chen¹, Zhaofeng Fan¹, Jing Xiao²

¹The Second Clinical College of Guangzhou University of Traditional Chinese Medicine, Gynecology, Guangzhou, China, ²The Second Affiliated Hospital of Guangzhou University of Traditional Chinese Medicine, Gynecology, Guangzhou, China

Objectives: Myelosuppression is one of the evident side effects of Niraparib. The aim of this study was to investigate the prophylactic effect of the red ginseng (RG) on Niraparib-induced myelosuppression.

Methods: Female C57BL/6 mice were divided into 5 groups: Normal, Tumor, Model, RG-L or RG-H group. Cell-derived xenograft model was established for mice in all groups in advance except Normal group. On D1-7, mice were administered by gavage once in the morning: Normal group, Tumor group and Model group were given distilled water, RG-L group and RG-H group were given RG solution at the doses of 100mg·kg⁻¹ or 200mg·kg⁻¹ respectively. On D5-7, mice were also administered by gavage once every afternoon: Normal and Tumor group was given distilled water, Model group, RG-L Group and RG-H group were given Niraparib solution 80mg·kg⁻¹. Samples were collected on D8.

Results: With the increase of concentration, the effect of RG on protecting the hematopoietic function of bone marrow might improve (Figure 1&2). The mechanisms of RG ameliorating myelosuppression were that it protected the differentiation ability, promoted the repair of DNA double-strand breaks and improved the cell cycle transition of bone marrow nucleated cells (Figure 3). There was no evidence suggesting that RG worsened the efficacy of Niraparib(Figure

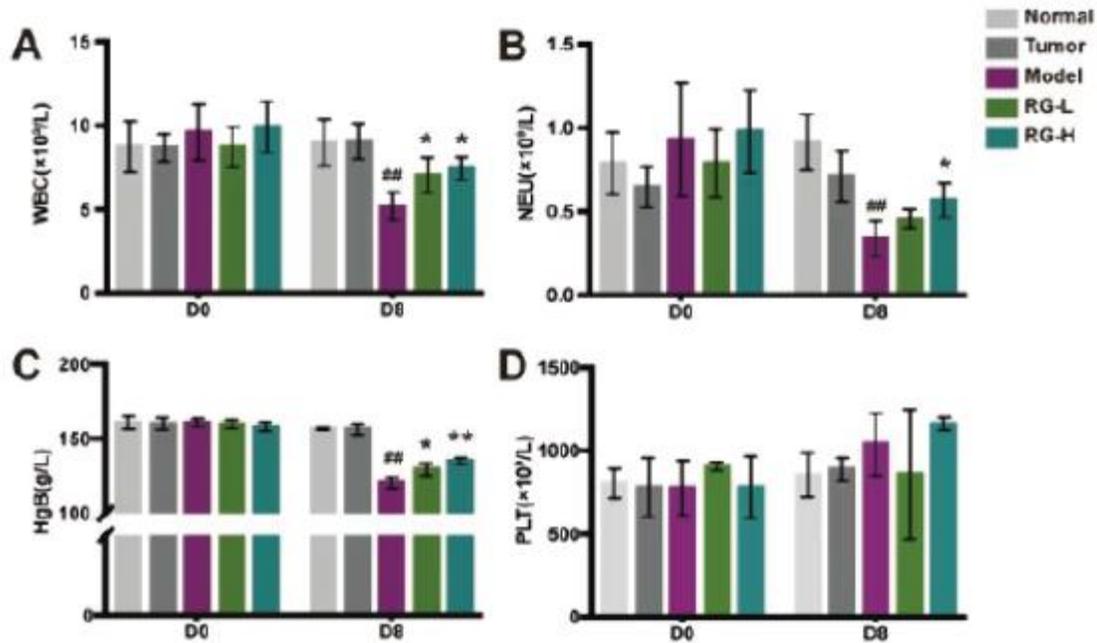


Figure 1 Effect of RG on peripheral blood cells in Niraparib-induced mice. RG-L and RG-H treatment significantly increased the quantities of WBC (A) and HgB (C). Only RG-H can increase the quantity of NEU (B) significantly.

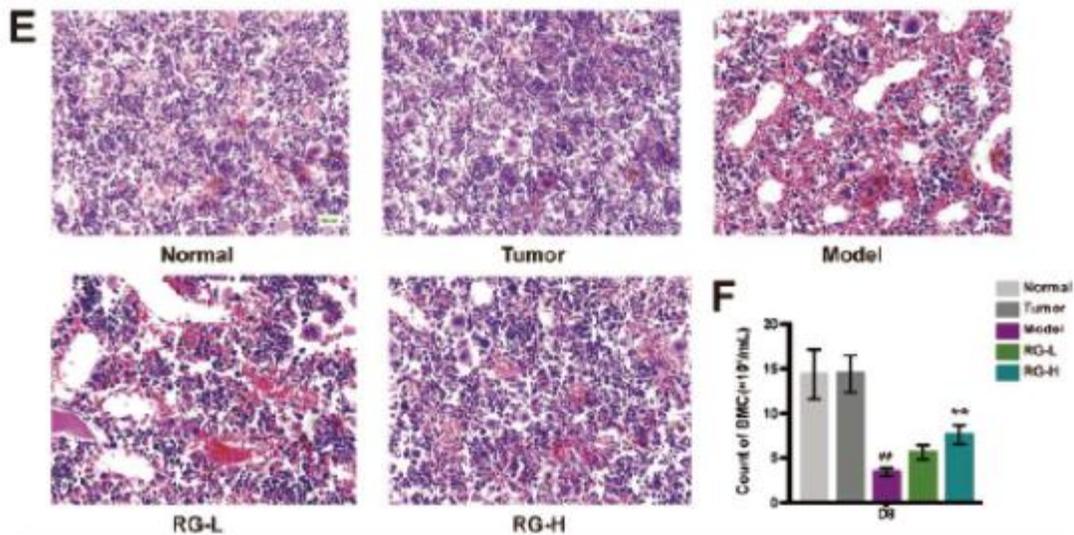


Figure 2 (E) RG increased the hematopoietic area of bone marrow. (F) The quantity of BMC was increased in RG-H group.

4).

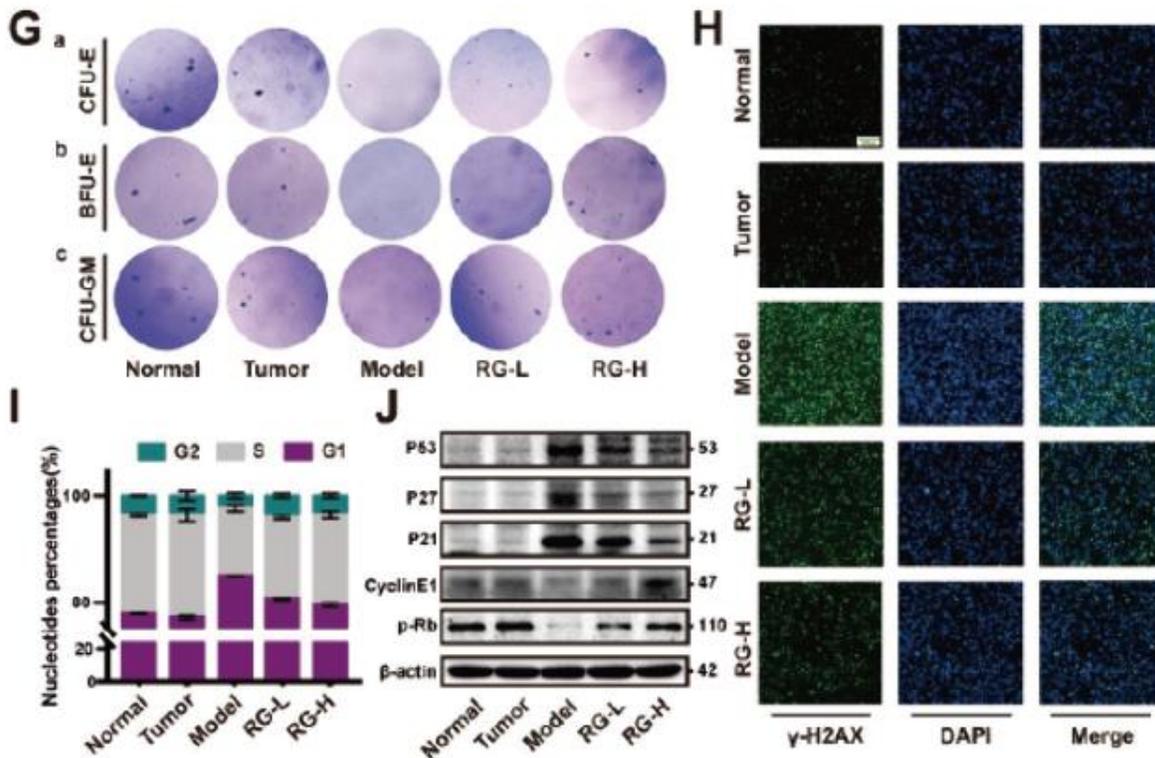


Figure 3 (G) More colony yield of hematopoietic progenitor cells in RG-H group. **(H)** Immunofluorescence showed the lower expression of γ -H2AX in RG-L and RG-H group. **(I)** RG increased the percentage of the S phase and G2 phase. **(J)** Effect of RG on cell-cycle protein expressions.

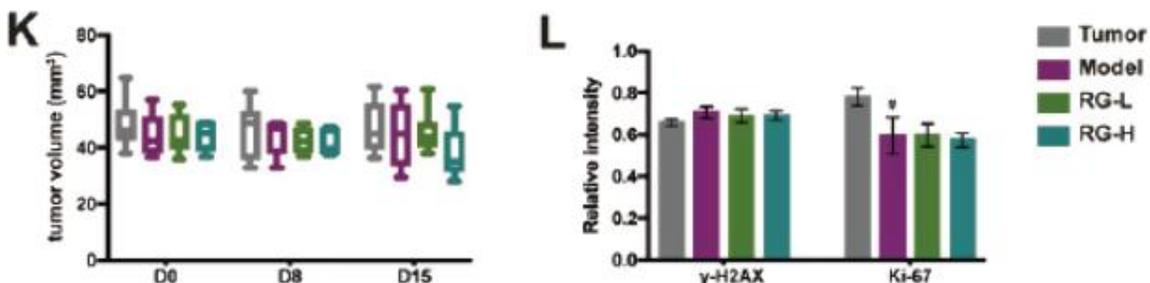


Figure 4 (K) No differences in tumor volumes among groups. **(L)** RG did not affect the Niraparib-induced lower expression of Ki-67.

Conclusions: 1. RG may have the advantage of relieving myelosuppression induced by Niraparib. High concentration of RG may be more effective. 2. RG may be a safe agent which does not negatively affect the efficacy of Niraparib.

EP020 / #947

EPOSTER VIEWING: AS02 BREAST CANCER

THE INCREASE IN INCIDENCE OF BREAST CANCERS IN ASIANS IN THE UNITED STATES AND THE REPUBLIC OF CHINA: WHO IS MOST AT RISK?

Cheng-I Liao¹, Chinmayi Aryasomayajula², Caitlin Johnson³, Chloe Chan⁴, Kathleen Darcy⁵, Chunqiao Tian⁵, Daniel Kapp⁶, John K Chan⁷

¹Kaohsiung Veterans General Hospital, Ob Gyn, Kaohsiung, Taiwan, ²Kaiser Permanente Santa Clara, Obgyn, Santa Clara, United States of America, ³California Pacific Medical Center Research Institute, Gynecologic Oncology, San Francisco, United States of America, ⁴Palo Alto Medical Foundation Research Institute, Obgyn, Palo Alto, United States of America, ⁵Henry M Jackson Foundation for the Advancement of Military Medicine, Inc., Gynecologic Cancer Center Of Excellence Program, Bethesda, United States of America, ⁶Stanford University School of Medicine, Radiation Oncology, Palo Alto, United States of America, ⁷California Pacific/Palo Alto Medical Foundation/Sutter Health, Gynecologic Oncology, Palo Alto, United States of America

Objectives: The aim of this study was to identify trends associated with incidence of breast cancers in Whites, US Asians and Native Chinese.

Methods: Data was obtained from the United States Cancer Statistics, the Behavioral Risk Factor Surveillance (BRFSS), and the Taiwan Cancer Registry between 2001 and 2018. Native Chinese were defined as individuals from Taiwan. SEER*Stat and Joinpoint regression programs were used for analyses.

Results: Of 3,402,974 patients, there were 3,098,931 (91.1%) White 139,612 (4.1%) US Asian, and 164,431 (4.8%) Native Chinese. In 2018, the incidences of White, US Asians and Native Chinese were 132.85, 102.27, and 76.66 (per 100,000). Over the 18-year period, the incidence of breast cancer in Whites remained unchanged (average annual percent change (AAPC) = -0.21%, p=0.05). However, US Asians and Native Chinese have increased at 0.91% and 3.96% per year (p<0.001). An intersectional analysis showed US Asians at age 55-59 with distant stage had the highest AAPC (2.89%, p<0.001). Native Chinese at age 75-79 had the highest AAPC (6.43%, p<0.001). Using BRFSS data, 41% of US Asians never had mammogram screening compared to 18% of Whites. Furthermore, the screening rates improved at over 3% per year (p<0.001) annually for Whites, but have not improved in US Asians. (0.80%, p=0.410).

Conclusions: Incidences of breast cancers in Asians have significantly increased in both the US and Republic of China in the past two decades. US Asians were found to be diagnosed at a more advanced stage of disease; and accordingly, were less likely to undergo screening mammograms.

EP021 / #1089

EPOSTER VIEWING: AS02 BREAST CANCER

TRENDS IN THE INCIDENCE OF INVASIVE BREAST CANCERS IN THE REPUBLIC OF CHINA

Cheng-I Liao¹, Chinmayi Aryasomayajula², Caitlin Johnson³, Chloe Chan⁴, Kathleen Darcy⁵, Chunqiao Tian⁵, Daniel Kapp⁶, John K Chan⁷

¹Kaohsiung Veterans General Hospital, Ob Gyn, Kaohsiung, Taiwan, ²Kaiser Permanente Santa Clara, Obgyn, Santa Clara, United States of America, ³California Pacific Medical Center Research Institute, Gynecologic Oncology, San Francisco, United States of America, ⁴Palo Alto Medical Foundation Research Institute, Obgyn, Palo Alto, United States of America, ⁵Henry M Jackson Foundation for the Advancement of Military Medicine, Inc., Gynecologic Cancer Center Of Excellence Program, Bethesda, United States of America, ⁶Stanford University School of Medicine, Radiation Oncology, Palo Alto, United States of America, ⁷California Pacific/Palo Alto Medical Foundation/Sutter Health, Gynecologic Oncology, Palo Alto, United States of America

Objectives: The aim of this study was to identify trends associated with incidence of breast cancers in Native Chinese from the Republic of China.

Methods: Data was obtained from the Taiwan Cancer Registry between 2001 and 2018. SEER*Stat 8.3.9 and Joinpoint regression programs 4.9.0.0 were used to calculate the incidences and trends. The incidence was adjusted by WHO 2000 standard population.

Results: From 2001 to 2018, the incidence of breast cancer has increased dramatically from 40.23 to 76.66 (per 100,000). The highest incidence was in the 60-64 year age group (232.23) and those residing in Taipei City (92.34). The incidence of infiltrating ductal carcinoma was higher at 65.2, while lobular carcinoma was 3.46. The overall incidence of breast cancer has increased over the last 18 years at an average annual percentage change (AAPC) of 3.96% ($p < 0.001$). Of the breast cell carcinoma subtypes, mixed infiltrating ductal and lobular carcinoma had the highest increase of 5.82% ($p = 0.001$), followed by lobular carcinoma (5.54%, $p < 0.001$) and infiltrating ductal (4.08%, $p < 0.001$). In an intersectional analysis, the highest AAPC was seen in younger women (45-49 years) residing in Tainan City with lobular carcinoma at 10.9% ($p < 0.001$).

Conclusions: The incidence of invasive breast carcinoma is increasing in Taiwan, especially in younger women (<50 years) in Taipei City. Early screening programs are particularly warranted in these high risk groups. Further studies are warranted to determine potential genetic and social determinant factors associated with this rise in incidence.

EP022 / #229

EPOSTER VIEWING: AS02 BREAST CANCER

NON-MAMMARY BREAST METASTASES: A CLINICO-PATHOLOGICAL STUDY

Karim Ben Hamida¹, Yoldez Houcine², Amal Maaoui², Khedija Hamza², Salma Kamoun², Amira Hmidi², Senda Ayadi², Riadh Chargui¹, Maha Driss²

¹Salah Azaiez Institute of Oncology, Surgical Oncology Department, Tunis, Tunisia, ²Salah Azaiez Institute of Oncology, Pathology Department, Tunis, Tunisia

Objectives: We aimed to evaluate non-mammary breast metastases, and to precise their clinico-pathological and follow-up characteristics.

Methods: We identified 17 patients diagnosed with non-mammary breast metastases between 2006 and 2021 at Salah Azaiez Institute of Oncology. Histological slides were reviewed. Clinico-pathological characteristics and follow-up data were retained from medical files.

Results: Seventeen patients were included in our study (three men and fourteen women). The median age at diagnosis was 44 years (17-65 years). The most common presentation was a palpable mass (50%). The metastases were unifocal, and the median size of the metastatic focus was 12mm. The most common metastatic neoplasia was lymphoma (43,8%) (90% diffuse large B-cell lymphoma and 10% Hodgkin lymphoma). It was followed by melanoma (17,6%), mostly cutaneous, leiomyosarcoma (15%), undifferentiated carcinomas of nasopharyngeal type (11,6%), neuroendocrine tumor (6%, mostly from the gynecologic tract) and fibrosarcoma (6%). The diagnoses were confirmed by immunohistochemistry in 75% of cases. Breast metastases were unique in 15% of patients and associated with other organ metastases in 85% of patients. The median time of follow-up from the breast metastasis event to the last follow-up was 12 months. The median overall survival after BM diagnosis was 24 months (1 month-13 years).

Conclusions: In our series, the most common tumor type was lymphoma, followed by melanoma. The diagnosis of metastases from primary breast lymphoma may be challenging, especially when the metastasis is unique. The initial clinico-radiological correlation may be very helpful to identify metastases and provide optimal patient care.

EP023 / #255

EPOSTER VIEWING: AS02 BREAST CANCER

PROGNOSTIC SIGNIFICANCE OF TUMOR INFILTRATED LYMPHOCYTES IN TRIPLE-POSITIVE BREAST CANCER

Karim Ben Hamida¹, Yoldez Houcine², Salma Kamoun², Khedija Hamza², Amal Maaoui², Amira Hmidi², Senda Ayadi², Riadh Chargui¹, Maha Driss²

¹Salah Azaiez Institute of Oncology, Surgical Oncology Department, Tunis, Tunisia, ²Salah Azaiez Institute of Oncology, Pathology Department, Tunis, Tunisia

Objectives: Our aim was to determine if tumor infiltrating lymphocytes (TILs) have a prognostic significance in triple-positive breast cancer.

Methods: A cohort of 123 female patients diagnosed with invasive breast carcinoma at Salah Azaiez Institute of Oncology between January 2014 and December 2019, were enrolled in this retrospective study. Clinicopathological data on pathological tumor size, the status of pathological lymph node metastasis, and clinical course were extracted from patients' medical records. Histological slides were reviewed for variables including tumor morphology and hormonal status. Additional clinical data were obtained from electronic medical records. The Kaplan-Meier method was used to determine the association between survival and TILs.

Results: Our series contained 123 cases of invasive ductal carcinomas. The mean age was 52 years with extremities of 26 and 102 years. TILs were not significantly associated to response to neoadjuvant chemotherapy ($p=0,728$), to metastases ($p=0,737$), neither to recurrences ($p=0,939$). Furthermore, TILs were not associated with the overall survival ($p=0,928$).

Conclusions: In this series, TILs seem not to be associated with outcomes. We did not find additional benefits for estimating TILs in triple-positive breast cancer.

EP024 / #463

EPOSTER VIEWING: AS02 BREAST CANCER

HAS HORMONE THERAPY ANY BENEFIT ON DISEASE-FREE SURVIVAL IN ER-LOW POSITIVE/HER2-NEGATIVE BREAST CANCER?

Karim Ben Hamida¹, Yoldez Houcine², Khedija Hamza², Amal Maaoui², Salma Kamoun², Amira Hmidi², Senda Ayadi², Riadh Chargui¹, Maha Driss²

¹Salah Azaiez Institute of Oncology, Surgical Oncology Department, Tunis, Tunisia, ²Salah Azaiez Institute of Oncology, Pathology Department, Tunis, Tunisia

Objectives: We aimed to study the benefit in terms of survival of hormone therapy in patients with ER-low positive/HER2-negative breast cancer compared to patients with high ER-positive/HER2-negative breast cancer.

Methods: Fifty patients diagnosed with ER-positive/HER2-negative breast cancer between January, 2015 and December, 2018 were identified. ER status was assessed using immunohistochemistry (IHC) based on American Society of Clinical Oncology/College of American Pathologists (ASCO/CAP) guidelines at the time of the study. According to the ER positivity by IHC, cases were categorized into two groups: ER-high positive if there was more than 10% of ER expression and ER-low positive if it ranged from 1 to 10%. Clinical and pathological data were collected from our institute database.

Results: The median age in ER-positive patients was 57 years (range 35-80). Histological subtypes were as follows: no specific ductal type (n=45), lobular (n=2), mixed (n=1), and special ductal (n=). The median tumor SBR grade was II. The tumor stage was pT1 (eight cases), pT2 (17 cases), pT3 (12 cases), and pT4 (six cases) and not available in seven cases. Thirty-one patients were ER-high positive and 19 patients were ER-low positive. The median follow-up period was 20 months. All the patients received hormone therapy. In the ER-low positive group, five patients were free of relapse while 14 others presented a relapse (three local relapses and eleven distant relapses) among which seven patients died.

Conclusions: Our study shows no survival benefit from hormone therapy in patients with ER-low positive breast cancer. Larger and prospective longitudinal studies are needed to validate the current ASCO/CAP.

EP025 / #611

EPOSTER VIEWING: AS02 BREAST CANCER

KI67 AS A PREDICTOR OF CLINICAL RESPONSE TO NEOADJUVANT CHEMOTHERAPY IN TRIPLE-POSITIVE BREAST CANCER

Karim Ben Hamida¹, Yoldez Houcine², Amal Maaoui², Khedija Hamza², Salma Kamoun², Senda Ayadi², Riadh Chargui¹, Maha Driss²

¹Salah Azaiez Institute of Oncology, Surgical Oncology Department, Tunis, Tunisia, ²Salah Azaiez Institute of Oncology, Pathology Department, Tunis, Tunisia

Objectives: Our aim was to evaluate whether the immunohistochemical expression of Ki67 can predict clinical response to neoadjuvant chemotherapy (NACT) in triple-positive breast cancer (TPBC).

Methods: A cohort of 17 female patients diagnosed with invasive breast cancer at Salah Azaiez Institute of Oncology between January 2015 and December 2019, were enrolled in this retrospective study. Ki67 was determined by immunochemistry on initial core biopsies. The inclusion criteria were women with locally advanced non-metastatic TPBC who received NACT. We chose the median value of 20% as the threshold to define a high Ki67. Statistical analysis was performed using the Chi-square test.

Results: The median age was 48 years with extremities of 35 and 60 years. The Scarff-Bloom-Richardson modified by Elston and Ellis grade was I in one case, II in 12 cases, and III in one case. The grade was difficult to specify in three cases because of the lack of 10 fields to evaluate the mitotic account. In our study, Ki67 was high in 14 cases. The Residual Cancer Burden (RCB) score was II in four cases and III in ten cases. pCR was found in three cases. Ki67 value was not significantly related to clinical response to NACT in TPBC ($p = 0,501$).

Conclusions: Our study suggests that Ki67 expression detected by immunohistochemistry is not a predictor factor of clinical response to NACT in locally advanced TPBC. Other studies with higher number of subjects are needed to confirm these results.

EP026 / #1090

EPOSTER VIEWING: AS02 BREAST CANCER

BREAST CANCER IN YOUNG WOMEN.

Amal Chermiti¹, Hajer Bettaieb², Rahma Bouhmida³, Nesrine Souayah², Hadir Lamiri¹, Meriem Ouederni¹, Hadhami Rouiss¹, Idriss Abidi², Hedhili Oueslati², Chaouki Mbarki²
¹tunis, Gynaecology And Obstetrics, Tunis, Tunisia, ²Regional hospital Ben Arous, Gynaecology And Obstetrics, Tunis, Tunisia, ³Regional hospital Ben Arous, Gynaecology, Tunis, Tunisia

Objectives: we aimed in our study to analyse clinical and epidemiological as well as histopathological properties and management plus the outcome of breast cancer in young women.

Methods: we conducted a descriptive retrospective study including 38 young women (≤ 40 years old) operated for breast cancer in the obstetrics and gynaecology department of Ben Arous hospital between January 2012 and December 2019. Data were collected from hospital records involving: *epidemiological, clinical and histopathological properties. *Received treatment. *Outcome after treatment.

Results: Among 150 patients operated for breast cancer 26% were younger than 40 years old. The middle age was 37 ± 2 years. Ten percent of these patients had a medical history of breast cancer in their family. Twenty percent of them were nulliparous and 69% had breastfed their babies. Pregnancy was noticed in 15% of cases and 15% used oestrogen-progestin combination as a contraceptive method. Fifty six percent of patients were diagnosed with stage 2 disease and 20% with stage 4. Pathological subtype was invasive ductal carcinoma in 92% of cases and 80% were triple negative. Treatment strategy was mainly based on a radical surgery with radiotherapy and chemotherapy. During the follow up period, metastatic disease occurred in 15% of cases. Five patients died due to disease progression. Overall survival after treatment was about 86%.

Conclusions: young breast cancer patients seem to have a more aggressive disease course. That's why the management of this special patient population requires an interdisciplinary approach.

EP027 / #870

EPOSTER VIEWING: AS02 BREAST CANCER

BREAST CANCER IN UZBEKISTAN

Sayde Djanklich, Zulfiya Sabirdjanova, Alisher Berkinov
Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology, Gynecological,
Tashkent, Uzbekistan

Objectives: To estimate the morbidity and mortality of breast cancer in the Republic of Uzbekistan over the last 3 years.

Methods: The statistical indicators for analyzing the breast cancer prevalence in Uzbekistan were taken from annual official report - "Information on diseases of malignant neoplasms in 2019-2021 yy".

Results: For the last 3 years there were 10984 new breast cancer cases registered and incidence rate was 11,0 per 100 thousand population. Of the total number in 2019 year there were registered 3718 (incidence rate – 11,2 per 100 thousand population) cases, in 2020 year – 3317 (9,8 per 100 thousand population) and in 2021 year – 4164 (12,0) breast cancer patients. Percentage of breast cancer stages were distributed as follows: I-II stages in 2019 year – 51,8, 2020 year - 63,0 and 2021 year - 62,0, at the same time II-IV stages in 2019 year – 32,9, 2020 year - 34,4 and 2021 year – 32.8. There was high percentage of patients with advanced breast cancer stages despite of its visual localization. The mortality rate over the 3 years was 5,2 per 100 thousand population. 5-year survival rate was 45,4%.

Conclusions: According to the above it can be concluded that breast cancer morbidity in Uzbekistan tends to increase. Over the last 3 years breast cancer takes a first leading place in the structure of oncological morbidity and mortality in the Republic of Uzbekistan. There are high percentages of patients with early stages, but at the same time there are about 30% of advanced stages.

EP028 / #551

EPOSTER VIEWING: AS02 BREAST CANCER

KNOWLEDGE AND UTILIZATION OF BREAST CANCER SCREENING GUIDES AMONG WOMEN OF 20-55 YEARS IN NKALIKI UNUPHU VILLAGE IN ABAKALIKI LOCAL GOVERNMENT AREA OF EBONYI STATE

Kenneth Ekwedigwe¹, Luciana Anyanwu², Paul Ekwedigwe³

¹Alex-Ekwueme Federal University Teaching Hospital, Abakaliki, Obstetrics And Gynaecology, Abakaliki, Nigeria, ²Alex-Ekwueme Federal University Teaching Hospital, Abakaliki, School Of Nursing, Abakaliki, Nigeria, ³ST.ELIZABETH HOSPITAL & FERTILITY CENTRE LTD, Obstetrics & Gynaecology, ENUGU, Nigeria

Objectives: The objectives were to determine the level of Knowledge and Utilization of Breast Cancer Screening Guide Among Women of 20-55 years, to ascertain the factors influencing the utilization of breast cancer screening guides among women 20-55 years.

Methods: A cross-sectional survey design was adopted in this study. The area of the study was Nkaliki Unuphu Village in Abakaliki Local Government Area of Ebonyi State. The target population of 1000 was used and 400 sample selected by convenience sampling technique. The instrument used for data collection was self-structured questionnaires. The data was analyzed according to the respondent's demographic data and researcher's objectives and presented in mean, standard deviation, frequency tables and percentages. Validity and reliability of the instrument were ensured and ethical consideration was obtained before conducting the study.

Results: The findings showed that the women age 20-55 years demonstrated a fair knowledge of breast cancer screening guides, however, utilization of breast cancer screening guides was poor. Some factors influencing the utilization were identified.

Conclusions: This study showed that the knowledge was high contrary to the expectation, however, utilization and availability of the screening tools were poor.

EP029 / #364

EPOSTER VIEWING: AS02 BREAST CANCER

3-YEAR SURVIVAL AND RISK OF CANCER PROGRESSION AND PREMATURE DEATH CAUSED BY BREAST CANCER IN GEORGIA

Tamar Gvazava, Vasil Tkeshelashvili, Tinatin Berushashvili, Ekaterine Shvelidze, Diana Nemsadze
University of Georgia, School Of Health Sciences, Tbilisi, Georgia

Objectives: Introduction Breast cancer survival rates, cancer progression and risk of death with this cause have not yet been studied in Georgia. Conducting the study based on population registry data has become possible only since 2015. 5 years registry dBase allowed us to study 3-year survival and risks.

Methods: 29,303 cases of cancer (56% of all cancers) were registered in Georgian female population in 2015-2019, including 5,432 (18.5%) cases of breast cancer. Using dBase SPSS of the registry, 3-year survival of breast cancer and risks of cancer progression were studied; Risks of cancer progression and death were assessed 36 months after the incidence.

Results: Average 3-year survival of female breast cancer in Georgia was 81.1%, in Tbilisi - 83.8%. The 3-year survival rate was 96.9% for stage 1 breast cancer, 92.5% for stage 2 breast cancer, and 78.7% for stage 3 breast cancer. That is, in stages 1 and 3, the 3-year survival rate varied in the 18.2% range. From Stage 3 to Stage 4 - 3-year survival fell by 30.9% to 47.8%. Breast cancer recurrence rate in Georgia in 3 years was 8.0%, in Tbilisi - 10%. Depending on the cancer site, the risk of recurrence and death from this cause varies. Risks of death increase in cases of axillary location of cancer (C50.6), or combined breast damage (C50.8).

Conclusions: Conclusion Research should be continued and 5-year survival and risks of cancer progression, death, based on treatment method/scheme, histological types, histochemical and molecular-genetic characteristics of cancer should be further studied.

EP030 / #867

EPOSTER VIEWING: AS02 BREAST CANCER

PREDICTIVE FACTORS OF NON-SENTINEL LYMPH NODE INVOLVEMENT IN EARLY BREAST CANCER

Nayssem Khessairi¹, Leila Achouri², Olfa Jaidane¹, Lamia Naija¹, Amani Jellali¹, Jamel Ben Hassouna¹, Riadh Chargui¹, Khaled Rahal¹

¹Salah Azaiez Institute of Oncology, Surgical Oncology Department, Tunis, Tunisia, ²Regional Hospital of Jendouba, Surgical Oncology Department, Jendouba, Tunisia

Objectives: For a long time, axillary lymph node dissection (ALND) was routinely performed in patients with an involved sentinel lymph node (SLN). However, in 30 to 50% of cases, the non-sentinel lymph nodes (NSLN) were not involved, and these patients would have suffered the morbidity of ALND excessively. The aim of our study was to identify the risk factors for NSLN involvement in patients with a positive SLN.

Methods: We included patients with early breast cancer and positive sentinel node who underwent ALND in Salah Azaiez Institute of Oncology between 2005 and 2018. We analyzed retrospectively the clinicopathological data to predict NSLN involvement.

Results: Among the 77 selected patients, 36% did not have any NSLN involvement during the pathological examination of the ALND product. Univariate analysis using $\alpha=0.05$ as the significance level, showed that radical surgery($p=0.05$), tumor size $>30\text{mm}$ ($p=0.01$), number of extracted SLN ≤ 2 ($p=0.02$), number of positive SLN >1 ($p=0.01$), ratio positiveSLN/Extracted SLN >0.5 ($p=0.05$), macrometastasis($p<10^{-3}$), SBRIII grade($p=0.007$), and Ki67 $>20\%$ ($p=0.04$) were predictive of NSLN involvement. In multivariate analysis, the type of surgery, the tumor size, the Ki67 level and the ratio Positive SLN/Extracted SLN were excluded. Only the number of extractedSLN ≤ 2 (OR=18.518, CI=1.402-250, $p=0.027$), the number of positive SLN >1 (OR=9.624, CI=1.266-73.172, $p=0.029$), SBRIII grade(OR=58.82, CI=2.86-1000, $p=0.008$), and macrometastasis(OR=759.19, CI=10.166-56698.2, $p=0.003$) were found to be independent risk factors of NSLN involvement.

Conclusions: Our results prove that there is a correlation between tumors' clinicopathological features and NSLN involvement. Therefore, a careful study of these criteria could avoid unnecessary ALND in patients with positive SLN who do not need it.

EP031 / #958

EPOSTER VIEWING: AS02 BREAST CANCER

IS THE EXTEMPORANEOUS PATHOLOGICAL EXAMINATION RELIABLE FOR THE EVALUATION OF SURGICAL MARGINS DURING CONSERVATIVE TREATMENT FOR BREAST CANCER?

Ons Kaabia¹, Nihed Abdessayed², Rim Bouchahda¹, Mohamed Ben Abdesslem¹, Riadh Ncibi¹, Samir Hidar¹

¹Université de Sousse, Faculté de Médecine de Sousse, Gynecology Obstetrics, Sousse, Tunisia, ²Université de Sousse, Faculté de Médecine de Sousse, Pathology, Sousse, Tunisia

Objectives: We aim to compare the performance of the extemporaneous pathological examination (EPE) with the definitive pathology examination (DPE) of the surgical margins in conservative surgery for breast cancer.

Methods: It is a retrospective single-center study including all the breast cancer patients who underwent a conservative breast surgery with EPE of the surgical margins in our department of gynecology and obstetrics from 2007 to 2017. The uninterpretable samples because totally necrotic, crushed, electro-coagulated, and/or poorly preserved were excluded. We did evaluate the performances of the EPE of the surgical margins by calculating the sensitivity, specificity, false-positive (FP), false negative (FN), positive predictive value (PPV), negative predictive value (NPV), diagnostic efficacy, and the Youden index.

Results: The EPE was performed 366 times for the evaluation of surgical limits. DPE objectified 279 healthy limits (76.2%) and 87 tumoral limits (23.8%). Of the 366 EPE carried out, the EPE was concordant with the final examination in 321 cases and discordant in 45 cases including 27 FN and 18 FP. The FN rate was 4.9%. The statistical analysis has shown that the EPE for the evaluation of the surgical limits had a sensitivity of 68.97% and a specificity of 93.55%. The positive and negative predictive values were 76.92% and 90.63% respectively. The diagnostic efficiency of the EPE for the surgical margins in conservative breast surgery was 87.70% and the Youden index was 0.63.

Conclusions: Regarding the evaluation of the surgical margins in conservative breast surgery, the EPE has a low sensitivity and a high rate of false negatives.

EP032 / #969

EPOSTER VIEWING: AS02 BREAST CANCER

EVALUATION OF THE RELIABILITY OF THE EXTEMPORANEOUS PATHOLOGICAL EXAMINATION FOR THE PATHOLOGICAL DIAGNOSIS OF BREAST TUMORS

Ons Kaabia¹, Nihed Abdessayed², Rim Bouchahda¹, Mohamed Ben Abdesslem¹, Riadh Ncibi¹, Samir Hidar¹

¹Université de Sousse, Faculté de Médecine de Sousse, Gynecology Obstetrics, Sousse, Tunisia, ²Université de Sousse, Faculté de Médecine de Sousse, Pathology, Sousse, Tunisia

Objectives: We aim to compare the performance of the extemporaneous pathological examination (EPE) to the definitive pathology examination (DPE) for the pathological diagnosis of the nature of breast tumors.

Methods: It is a retrospective single-center study including all the patients who an EPE to determine the pathological diagnosis of the nature of a breast tumor in our institution from 2007 to 2017. The uninterpretable samples because totally necrotic, crushed, electro-coagulated, and/or poorly preserved were excluded. We did evaluate the performances of the EPE of the surgical margins by calculating the sensitivity, specificity, false-positive (FP), false negative (FN), positive predictive value (PPV), negative predictive value (NPV), diagnostic efficacy, and the Youden index.

Results: The EPE was performed 812 times on a breast surgical specimen for pathological diagnostic purposes. Extemporaneous responses were "benign" for 415 cases (51.10%), "malignant" for 332 cases (40.88%), and "delayed" for 65 cases (8%). The DPE objectified 457 benign lesions (56.3%) and 355 malignant lesions (43.7%). The response of the EPE was concordant with that of the DPE in 737 cases (406 true negatives +331 true positives). There is a single case of FP and 9 FN. Regardless of the delayed answers, the EPE for the pathological diagnosis of the nature of breast tumors has a sensitivity of 97.35% and a specificity of 99.75%. Its PPV and NPV were 99.69% and 97.83% respectively. Its diagnosis efficiency was 98.52% and the Youden index was 0.97.

Conclusions: The EPE for histological diagnostic purposes in the management of breast tumors remains an excellent diagnostic test when no preoperative diagnostic tools are available

EP033 / #52

EPOSTER VIEWING: AS02 BREAST CANCER

A QUALITATIVE EXPLORATION OF PERCEIVED CAUSES OF BREAST CANCER IN BUSIA AND TRANS NZOIA, WESTERN KENYA

Vaidehi Mujumdar¹, Violet Naanyu², Jemima Kamano³, Phoebe Cherono⁴, Hilary Koros⁴, Lennah Etyang⁴, Lawrence Misoi⁴, Peter Itsura⁵, Philliph Tonui⁵, Waqo Ejersa⁶, Miriam Schneidman⁷, William Aruasa⁵

¹Icahn School of Medicine at Mount Sinai, New York Health and Hospitals, Obstetrics And Gynecology, New York, United States of America, ²Moi University, Department Of Social Sciences, Eldoret, Kenya, ³Moi University, Department Of Medicine, Eldoret, Kenya, ⁴The Academic Model Providing Access to Healthcare (AMPATH), -, Eldoret, Kenya, ⁵Moi University, Reproductive Health, Eldoret, Kenya, ⁶Kenyan Ministry of Health, Department Of Social Sciences, Nairobi, Kenya, ⁷World Bank, World Bank, New York, United States of America

Objectives: The Primary Integrated Care for Four Chronic Diseases (PIC4C) is an initiative by the Kenyan Ministry of Health and Moi Teaching Hospital to pilot screening, referral, treatment integration for diabetes, hypertension, breast cancer, cervical cancer in Busia and Trans-Nzoia, Western Kenya. A major aspect of the PIC4C qualitative arm was to determine how localized knowledge affects perceptions of breast cancer causes in the two counties and to use this information to develop targeted interventions.

Methods: 174 participants were included in 18 focus group discussions (FGDs) engaging patients, community members (CHVs), health care providers (HCPs). 12 patients with breast cancer were included in patient FGDs. The group sessions were facilitated by trained moderators and captured using audio recorders and field notes. Two analysts independently coded and analyzed the data using NVivo 12.

Results: Overall, patients, CHVs, HCPs perceived breast cancer to be a chronic disease that could be treated, but led to death. All participants perceived genetics, unhealthy eating, low breastfeeding rate to cause breast cancer. Three factors were reported by patients and community members, but not by HCPs: poor breast hygiene, poorly fitting bras, witchcraft. Only HCPs cited smoking as a cause of breast cancer.

Conclusions: This study reports how localized knowledge affects perceptions of breast cancer causes in Busia and Trans-Nzoia. Our study shows that misconceptions and inadequate knowledge about breast cancer causes persist in the two counties. Our findings suggest a need for improved screening and treatment via dedicated health education campaigns, treatment resources, training for CHVs and HCPs to ensure communities receive accurate information.

EP034 / #944

EPOSTER VIEWING: AS02 BREAST CANCER

EVALUATION OF THE EISINGER SCORE FOR GENETIC TESTING IN TUNISIAN PATIENTS WITH BREAST CANCER

Haifa Rachdi¹, Yosra Berrazaga¹, Yosr Hamdi², Nesrine Mejri¹, Hamouda Boussen¹

¹Abderrahmen Mami Hospital, Medical Oncology, ariana, Tunisia, ²Pasteur institute, Laboratory Of Biomedical Genomics And Oncogenetics, tunis, Tunisia

Objectives: Mutations on BRCA1/2 genes are known to confer high risk of breast and ovarian cancers. The identification of these mutations not only helped in selecting high risk individuals that need appropriate prevention approaches but also led to the development of the PARP-i therapy. This study aims to evaluate the Eisenger score (ES) risk for hereditary form of breast cancer.

Methods: We calculated in 200 patients with breast cancer (BC) the ES which is a score taking into account all family history validated for oncogenetic consultation (GC). A GC was indicated for any ES>2. The method used for the genetic study was next generation sequencing (NGS).

Results: The average score was 5.9 with extremes ranging from 0 to 17. Two patients had a score of 0 : the first had a mother who died of BC at 80 years and the second had a cousin who had hpancreatic cancer at early age. A majority of 85.7% of patients had an indication for family GC (ES>2). In 14.3% of patients, the usefulness of the genetic investigation we considered low according to the score. Among the 200 patients, we were able to perform only 28 genetic studies .14 patients had a BRCA1 gene mutation (50%) and 11 BRAC2 mutation (39.3%). A mutation of CHEK2 gene was found in 2 patients and that of TP53 in 1 patient.

Conclusions: The ES is predictive of BC risk in BRCA1 and BRAC2 carriers. This score must be carried out systematically in order to optimize the therapeutic management.

EP035 / #1039

EPOSTER VIEWING: AS02 BREAST CANCER

HOW TUNISIAN YOUNG ADULT PATIENTS FOLLOWING BREAST CANCER LIVE THEIR DISEASE EXPERIENCE ?

Ahmad Anas Haouari, Yosra Berrazaga, Sofiene Fendri, Haifa Rachdi, Myriam Saadi, Nouha Daoud, Nesrine Mejri, Hamouda Boussen
Abderrahmen Mami Hospital, Faculty of Medicine of Tunis; University Tunis Manar, Medical Oncology, ariana, Tunisia

Objectives: Young adult patients may confront breast cancer differently because of expectations in life and future planning. We aimed to investigate the experience of young adult patients in the Tunisian context.

Methods: Patients aged 20 to 40 years treated for breast cancer regardless of stage (n=62) were asked to complete a questionnaire in April 2022. The survey included items about: socioeconomic conditions, coping strategies, sexuality, body image and future life projects.

Results: Mean age was 35 years old [26-40]. Eight patients (12%) were under 30. Twenty-nine patients (46%) felt less physically attractive. Negative impact on sexuality was revealed by 21 patients (34%). Thirty patients (48%) reported less self-confidence. Fear of infertility was described by 33 patients (53%). Thirty-nine (63%) patients asked "Why Me God?". Forty-one patients (66%) thought about stopping treatment. Twenty-five patients (40%) consulted a psychiatrist or desired to consult. Feeling less physically attractive impacted negatively on sexuality (OR: 0.068 [0.016-0.269]) and self-confidence (OR: 3.8 [1.32-10.89]). Spiritual practice (prayer) had positive impact on self-confidence (OR: 0.14 [0.28-0.72]). Sixteen (25%) patients stopped planifying for future (marriage, children bearing, buying a property) which was impacted by less self-confidence (OR 4.94[1.37-17]), fear of infertility (OR: 3.75 [1.04-13.4]) and negative sexuality impact (OR : 1.87 [1.34-2.61]).

Conclusions: Breast cancer impacts on self-confidence, future life perception and sexuality of young adult Tunisian who need personalized psychological care.

EP036 / #1050

EPOSTER VIEWING: AS02 BREAST CANCER

ECONOMIC CHALLENGES FACED BY YOUNG ADULT TUNISIAN PATIENTS FOLLOWING BREAST CANCER

Ahmad Anas Haouari, Yosra Berrazaga, Sofiene Fendri, Haifa Rachdi, Myriam Saadi, Nouha Daoud, Nesrine Mejri, Hamouda Boussen
Abderrahmen Mami Hospital, Faculty of Medicine of Tunis; University Tunis Manar, Medical Oncology, ariana, Tunisia

Objectives: Young adult Tunisian patients treated for breast cancer are confronting ,in addition to disease , its financial impact. We aim to investigate socioeconomic profiles and financial challenges of young adult patients in the Tunisian context.

Methods: Patients aged 20 to 40 years treated for breast cancer regardless of stage (n=62) were asked to complete a questionnaire in April 2022. The survey included items about: socioeconomic conditions and future life projects.

Results: Mean age was 35 years old [26-40]. Eight patients (12%) were under 30. Thirty-four patients (54%) had high educational level. Thirty-six patients (58%) had job. Twenty-seven patients (43%) lost their jobs because of sick leaves and 19 patients (30%) found difficulties to get job when announcing disease to employers. Twenty-four patients (38%) were economically dependent on their husbands and 12 patients (19%) to their parents. Thirty-six patients (58%) reported financial difficulties. Immigration intention to developed countries was reported by 25 patients (40%) mostly seen in patients under 30 years old (OR: 0.18 [0.03-0.98]), with high educational level (OR: 4.64 [1.5-14.3]) and following current treatment (OR: 0.29 [0.09-0.9]) because mostly of better health system and financial support (61.5%).

Conclusions: Tunisian young adult patients following breast cancer are facing economic and social difficulties that must be considered on the same level as others sides of health care.

EP037 / #733

EPOSTER VIEWING: AS02 BREAST CANCER

THE EFFECT OF 7-KETOCHOLESTEROL ON BREAST CARCINOMA CELL LINES TREATED WITH TAMOXIFEN IN VITRO

Alzbeta Spalenkova^{1,2,3}, Marie Ehrlichova^{2,3}, Karolina Seborova^{2,3}, Radka Vaclavikova^{2,3}, Stepan Balatka^{2,3}, Pavel Soucek^{2,3}

¹Charles University, Third Faculty Of Medicine, Prague, Czech Republic, ²Biomedical Center, Laboratory Of Pharmacogenomics, Pilsen, Czech Republic, ³National Institute of Public Health, Toxicogenomics Unit, Prague, Czech Republic

Objectives: Oxysterols are oxidative derivatives of cholesterol that play many roles in human physiology and pathology, including cancer. For example, oxysterols modulate cell proliferation, apoptosis, or migration. This study aimed to analyze the role of important oxysterol, 7-ketocholesterol (7-KC), in response of breast carcinoma cell line models to treatment with tamoxifen.

Methods: Two estrogen receptor (ER) positive (MCF-7 and T47D) and one ER-negative (BT-20) breast carcinoma cell lines were employed. Cell lines were co-incubated with tamoxifen and 7-KC at different concentration ratios, and the viability of cells, proliferation, cell cycle, caspase activity, and gene expression changes were evaluated. Next, the ability of 7-KC to stimulate cell migration and invasivity was tested.

Results: 7-KC slightly increased the IC₅₀ value of tamoxifen in the MCF7 cell line, but decreased it in the BT-20 cell line. No significant difference was observed for T47D cells. In line with these data, caspase 3/7 activity was enhanced by 7-KC in BT-20 cells, but not in any ER-positive cell line. Gene expression analysis showed upregulation of tamoxifen metabolizing genes, e.g. CYP1A1 and CYP1B1 in MCF-7 while downregulation in BT-20 cells. Finally, we found that the presence of 7-KC potentiates cellular migration and invasivity.

Conclusions: 7-KC seems to modulate the response of breast carcinoma cells to tamoxifen according to ER status in vitro, making it an interesting candidate for future studies. The study was supported by projects INTER-ACTION no. LTAUSA19032 and AZV no. NU20-09-00174.

EP038 / #548

EPOSTER VIEWING: AS02 BREAST CANCER

PREDICTIVE FACTORS OF AXILLARY LYMPH NODE INVOLVEMENT IN TUNISIAN WOMEN WITH EARLY BREAST CANCER

Leila Achouri¹, Houyem Mansouri¹, Amani Jellali², Houda Henchiri¹, Sabrine Boukhris¹, Nedja Boujelbene^{3,4}, Ines Zemni^{2,4}

¹Regional Hospital of Jendouba, Surgical Oncology Department, Jendouba, Tunisia, ²Salah Azaiez Institute of oncology, Surgical Oncology Department, Tunis, Tunisia, ³Salah Azaiez Institute, Pathology Department, Tunis, Tunisia, ⁴University of Tunis El Manar, Sciences Faculty of Tunis, Laboratory Of Microorganismes And Active Biomolecules, Tunis, Tunisia

Objectives: This study aimed to identify clinicopathological predictive factors of axillary lymph node metastases in patients with early breast cancer.

Methods: We included patients with clinical T0, T1 and T2 invasive breast carcinoma who underwent resection of the primary tumor and axillary staging by sentinel lymph node biopsy and/or axillary lymph node dissection between 2012 and 2018

Results: Of the 135 patients included, 41.5% had ALNI. Regarding univariate analysis, clinical factors correlated with positive ALNM were clinical tumour size >30mm (p=0.006), clinical tumour stage (p=0.047), clinical number of tumours (p=0.016), clinical axillary nodal status (p<0.001) and nodal status on ultrasound (p<0.001). Pathologic factors associated with nodal involvement were pathologic tumour stage (p=0.003), tumor grade SBR (p=0.001), number of foci (p<0.001), lympho vascular invasion (p<0.001), perineural invasion (p=0.001) and Ki67 >20% (p=0.049). In multivariate logistic regression, clinical axillary nodal status (OR=4.31, CI 2.26-50, p=0.032), pathologic tumour stage (OR=3.66, CI 2-19.23, p=0.016) and lympho vascular invasion (LVI) (OR=4.29, CI 1.91-29.41, p=0.026) remained as independent predictors of ALNI.

Conclusions: Based on these results, we suggest that clinical axillary nodal status, pathologic tumor stage, and LVI are predictive factors for ALNM in Tunisian women with early breast cancer.

EP039 / #692

EPOSTER VIEWING: AS03 CERVICAL CANCER

EVALUATION OF THE FACTORS ASSOCIATED WITH THE DELAY IN INITIATION OF TREATMENT OF ADVANCE STAGE CERVICAL CANCER PATIENTS

Tohmina Akhter¹, Shahana Pervin², Rifat Ara³, Taslima Nigar³, Dilruba Yeasmin⁴

¹National Institute of Cancer Research and Hospital, Gynecological Oncology, Dhaka, Bangladesh, ²National Institute of Cancer Research & Hospital, Gynecological Oncology, Dhaka, Bangladesh, ³National Institute of Cancer research and Hospital, Gynecological Oncology, Dhaka, Bangladesh, ⁴National Institute of Cancer Research & Hospital, Gynecological Oncology, dhaka, Bangladesh

Objectives: Background: Cervical cancer ranks 2nd in women cancer and third leading cause of female cancer death in Bangladesh. Delay in initiation of treatment in advanced stage cervical cancer patients is associated with significant morbidity and mortality. It is crucial to overcoming the barrier for initiation of effective treatment in appropriate time.: Objective:Assessment of the factors that lead to delay in diagnosis and treatment of advanced stage cervical cancer patients.

Methods: This observational cross-sectional study was conducted from November 2019 to October 2020 in the Gynecological Oncology department of National Institute of Cancer Research and Hospital, Dhaka.138 patients of advanced stage cervical cancer were included in the study.

Results: The mean age of the patients was 48.74 (± 9.57) years.30.4% of patients were illiterate and the majority(43.47%) belonged to low middle income family. Illiteracy, low monthly income, residents of rural areas, embarrassment, fear, lack of knowledge regarding cervical cancer, contacting a non-medical person prior to the first medical person, not performing per speculum examination at initial consultation, misdiagnosis, delay in referral to tertiary care centre hospital, long distance of the primary health care facility and tertiary care centre hospital from the residence were predictors of longer delays in treatment initiation (p value<.05) .

Conclusions: Financial Crisis, lack of education, Inappropriate management,lack of availability and accessibility of health services and radiotherapy resource limitation have led to delays. Proper initiatives should be taken to remove the obstacles in cancer care pathway and subsequently treatment outcome as well as quality of life will be improved.

EP040 / #682

EPOSTER VIEWING: AS03 CERVICAL CANCER

CERVICAL CANCER TREATMENT CAPACITY IN AFRICA: MAPPING OF RADIATION ONCOLOGY AND GYNECOLOGIC ONCOLOGY SERVICES

Emma Allanson¹, Chidinma Anakwenze Akinfenwa², Agnes Ewongwo³, Lisa Bazzett-Matabele⁴, Susan Msadabwe⁵, Paul Kamfwa⁶, Tarek Shouman⁷, Dorothy Lombe⁸, Fidel Rubagumya⁹, Alfredo Polo Rubio¹⁰, Atara Ntekim¹¹, Verna Vanderpuye¹², Rahel Ghebre¹³, Lotfi Kochbati¹⁴, Munir Awol¹⁵, May Abdel-Wahab¹⁶, Edward Trimble¹⁷, Kathleen Schmeler¹⁸, Hannah Simonds¹⁹, Surbhi Grover²⁰

¹University of Western Australia, Gynaecologic Oncology, Subiaco, Australia, ²MD Anderson Cancer Center, Department Of Radiation Oncology, Houston, United States of America, ³Stanford Cancer Institute, Department Of Radiation Oncology, Stanford, United States of America, ⁴University of Botswana, Department Of Obgyn, Gabarone, Botswana, ⁵Cancer Diseases Hospital, Consultant Clinical And Radiation Oncologist, Lusaka, Zambia, ⁶Cancer Diseases Hospital, Consultant- Gynaecologic Oncology Unit, Lusaka, Zambia, ⁷Cairo University, Radiation Oncology, Cairo, Egypt, ⁸MidCentral District Health Board, Regional Cancer Treatment Services, Palmerston North, New Zealand, ⁹University of Global Health Equity, Oncology, Kigali, Rwanda, ¹⁰International Atomic Energy Agency, Applied Radiation Biology And Radiotherapy Section, Vienna, Austria, ¹¹University of Ibadan, Department Of Radiation Oncology, Ibadan, Nigeria, ¹²Korlebu Teaching Teaching Hospital, National Center For Radiotherapy Oncology And Nuclear Medicine, Accra, Ghana, ¹³University of Minnesota Medical School, Division Of Gynecologic Oncology, Minneapolis, United States of America, ¹⁴El Manar University, Radiotherapy Department, Tunis, Tunisia, ¹⁵Addis Ababa University, Radiation Oncology, Addis Ababa, Ethiopia, ¹⁶International Atomic Energy Agency, Division Of Human Health, Vienna, Austria, ¹⁷National Cancer Institute, Office Of The Director, Rockville, United States of America, ¹⁸MD Anderson Cancer Center, Gynecologic Oncology & Reproductive Medicine, Houston, United States of America, ¹⁹Stellenbosch University, Division Of Radiation Oncology, Cape Town, South Africa, ²⁰Hospital of University of Pennsylvania, Department Of Radiation Oncology, Philadelphia, United States of America

Objectives: To meet demands for cervical cancer care in Africa, there is a need to understand current access to surgery and radiotherapy.

Methods: We collected data on gynecologic and radiation oncology staffing and infrastructure capacities from each African country from February-July 2021 through collaboration by querying partners at the International Atomic Energy Agency, National Cancer Institute, International Gynecologic Cancer Society, and African Organisation for Research and Training in Cancer. Cancer incidence data were obtained from GLOBOCAN. The number of radiation oncologists, therapists, physicists, and gynecologic oncologists were reported. The adequate number of radiation and gynecologic oncologists were both defined as 2 physicians per 1000 cases (assuming a radiotherapy utilization rate of 65% for cervical cancer cases).

Results: Six of 54(11%) countries reported an adequate number of gynecologic and radiation oncologists. Seven(13%) had neither. Thirty-one(57%) countries reported external beam radiation availability, 25(46.3%) brachytherapy availability, and 31(57%) gynecologic oncology availability. In 6(11%) countries, general gynecologists perform radical hysterectomies. Where data were reported, there were a median of 2 (range 1-13, IQR 2) physicists and 6 (range 1-40, IQR 7) radiation therapy technicians. The number of countries with training for gynecologic oncology, radiation oncology, medical physics, and radiation therapy was 14(26%), 16(30%), 11(20%), and 17(31%) respectively.

Conclusions: This study maps available gynecologic and radiation oncology services for cervical cancer care in Africa. Our results suggest major gaps in infrastructure, human resources, and training. These data serve as a cervical cancer treatment capacity database, which can facilitate multi-national collaborative clinical, implementation and research projects.

EP041 / #256

EPOSTER VIEWING: AS03 CERVICAL CANCER

ENDOGENOUS RETROVIRUS RNA EXPRESSION DIFFERENCES BETWEEN RACIAL, STAGE AND HPV COHORTS OFFER IMPROVED PROGNOSTICATION AMONG WOMEN WITH CERVICAL CANCER

Jill Alldredge¹, Vinay Kumar², James Nguyen², Brooke Sanders¹, Karina Gomez¹, Jin Zhang³, Peter Grigsby³, Julie Schwartz³, Farahnaz Rahmatpanah²

¹The University of Colorado, Obstetrics And Gynecology, Aurora, United States of America, ²University of California Irvine, Pathology And Laboratory Medicine, Orange, United States of America, ³Washington University, Radiation Oncology, St Louis, United States of America

Objectives: Endogenous human retroviruses (ERVs) are remnants of exogenous retroviruses that have been integrated into the human genome. Some ERVs may become activated allowing epigenetic alterations through DNA methylation or histone modification, which can further translate into altered gene regulation or transcription. This is a novel area of exploration in cervical cancer.

Methods: We applied ERV mapping tools to RNA-seq data from 63 cervical cancers to investigate expression of ~550,000 ERV elements from the Human Endogenous Retrovirus database (HERVd) to investigate ERV expression among various cohorts. We also investigated a prognostic model, supplementing a baseline prediction model using FIGO stage, age and HPV-positivity with ERVs.

Results: 98 ERVs were differentially expressed ($p_{adj} < 0.1$), with Black American patients having 40 upregulated and 58 downregulated (including MER21C, HERVH-int) ERVs when compared to white American patients. Of the 138 ERVs differentially expressed between early-stage and locally advanced-stage groups, 38 were upregulated, including ERV3, and 100 were downregulated. 26,916 ERVs were differentially expressed between HPV positive and negative cohorts. There were significant differences in ERV3 protein expression ($p = 0.000905$). While clinical parameters are predictive of progression free survival at $p = 0.06027$, our supplemented model combining a 67-ERV panel and the clinical data, discriminated the two risk groups at $p = 9.433 \times 10^{15}$.

Conclusions: ERV RNA expression differences in cervical cancers is significantly different among racial cohorts, HPV-subgroups and disease stages. The correlation of ERV expression alongside clinical factors significantly improves prognostication when compared to clinical factors alone and may serve as future therapeutic targets.

EP042 / #818

EPOSTER VIEWING: AS03 CERVICAL CANCER

ROLE OF UTERINE TRANSPOSITION IN INVASIVE CERVICAL CANCER TREATMENT

Vitaly Antipov¹, Evgeniya Moskovskaya¹, Alena Chernyashova², Sergei Krasilnikov³

¹Vita clinic, Gynecologic Oncology, Moscow, Russian Federation, ²Oncology Research Institute Tomsk, Gynecologic Oncology, Tomsk, Russian Federation, ³E.N. Meshalkin National Medical Research Center, Ministry of Health of Russia, Gynecologic Oncology, Novosibirsk, Russian Federation

Objectives: Nowadays radical trachelectomy is the main surgical procedure in the treatment of invasive cervical cancer for patients who want to preserve fertility. In case intraoperative findings, large size of tumor which spreads onto the vagina or parametric, regional lymph nodes metastasis, patients require radiation therapy, which excludes the possibility of independent pregnancy.

Methods: Today we observe 7 patients with stage Ib1-IIb cervical cancer. Median of their age is 29 year old. Five patients had not had pregnancies and all of them insisted on preserving fertility. At the first step of treatment, 2-3 courses of chemotherapy were carried out. The second step included a radical trachelectomy (Piver type III) with uterus transposition. The oncological stage of operation corresponded to a routine radical trachelectomy. Then, we made paraumbilically uterus transposition to created conditions for performing the radiotherapy. The third step marked a combined radiotherapy which was carried out according to the prescribed standards. In three months a uterine reposition with utero-vaginal anastomosis was conducted. Currently, all the patients has no sign of recurrence and may start to realize pregnancy.

Results: The patients have been under the median observation for 22, 6 months so far. All our patient's menses have been recovered. No one has any signs of recurrence. Three of them are preparing to the in vitro fertilization.

Conclusions: The uterine transposition makes feasible to provide a combined radiotherapy according to the prescribed standards and, thus, ensures, fertility preservation. It is very important to continue and carrying out research in this field.

EP043 / #407

EPOSTER VIEWING: AS03 CERVICAL CANCER

FIRST-IN-WOMEN STUDY OF A DROP-IN GAMMA PROBE FOR ROBOT-ASSISTED RADIOGUIDED SENTINEL LYMPH NODE DETECTION IN EARLY-STAGE CERVICAL CANCER

Ilse Baeten¹, Jacob Hoogendam¹, Arthur Braat², Ronald Zweemer¹, Cornelis Gerestein¹

¹University Medical Center Utrecht, Department Of Gynecologic Oncology, Division Of Imaging And Oncology, Utrecht, Netherlands, ²University Medical Center Utrecht, Department Of Radiology And Nuclear Medicine, Division Of Imaging And Oncology, Utrecht, Netherlands

Objectives: Minimally invasive radioguided sentinel lymph node (SLN) procedures, increasingly performed with robot-assisted laparoscopy, currently rely on the use of a rigid laparoscopic gamma probe. We evaluated the safety and feasibility of a drop-in gamma probe system for SLN detection in patients with early-stage cervical cancer and compared its performance with the rigid gamma probe.

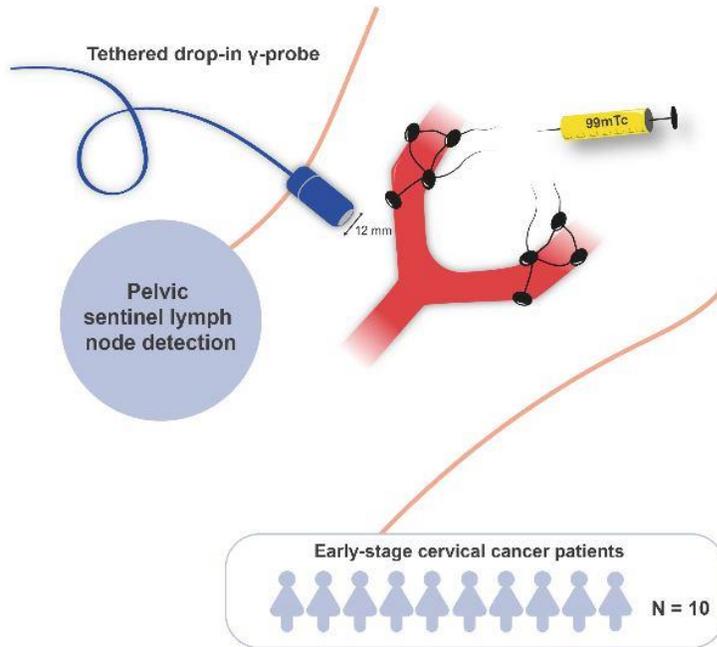
Methods: Ten patients with FIGO stage IA1(LVSI+) – IB2 or IIA1 cervical cancer scheduled for robot-assisted laparoscopic SLN procedure were included. All patients underwent preoperative ^{99m}Tc-technetium-nanocolloid injection followed by SPECT/CT imaging. Intraoperatively, the tethered drop-in gamma probe SENSEI® (Lightpoint Medical Ltd, Chesham, UK) was used for radioguided SLN detection, subsequently confirmed by the standard rigid laparoscopic gamma probe. We assessed SLN detection rates, anatomical SLN location and usability.

Results: Overall and bilateral SLN detection rate with the drop-in gamma probe was 100% and 80%, respectively, which was confirmed by the rigid gamma probe. Combined use of preoperative SPECT/CT and drop-in gamma probe resulted in a bilateral detection rate of 90%. Gamma count rates of the drop-in and rigid gamma probe were equal ($p=0.69$). Because of wristed articulation of the robotic tissue grasper and possibility of autonomous probe control by the surgeon, maneuverability and control with the drop-in gamma probe were highly rated in usability questionnaires. No adverse events related to the intervention

occurred.

First-in-women study of a drop-in gamma probe for radioguided sentinel lymph detection in early-stage cervical cancer

MATERIALS & METHODS



RESULTS

Feasibility

✓ Detection



Overall detection
100%



Bilateral detection
80%

+ Preoperative SPECT/CT



Bilateral detection
90%

- ✓ Improved maneuverability
- ✓ Autonomous probe control

Conclusions: Sentinel lymph node detection with a drop-in gamma probe is safe and feasible in patients with early-stage cervical cancer. The drop-in gamma probe provides enhanced maneuverability and surgical autonomy compared to the rigid gamma probe.

EP044 / #846

EPOSTER VIEWING: AS03 CERVICAL CANCER

EFFECT OF A STRUCTURED CURRICULUM FOR THE LEARNING CURVE OF ROBOT-ASSISTED SURGERY ON ONCOLOGICAL OUTCOME IN EARLY-STAGE CERVICAL CANCER

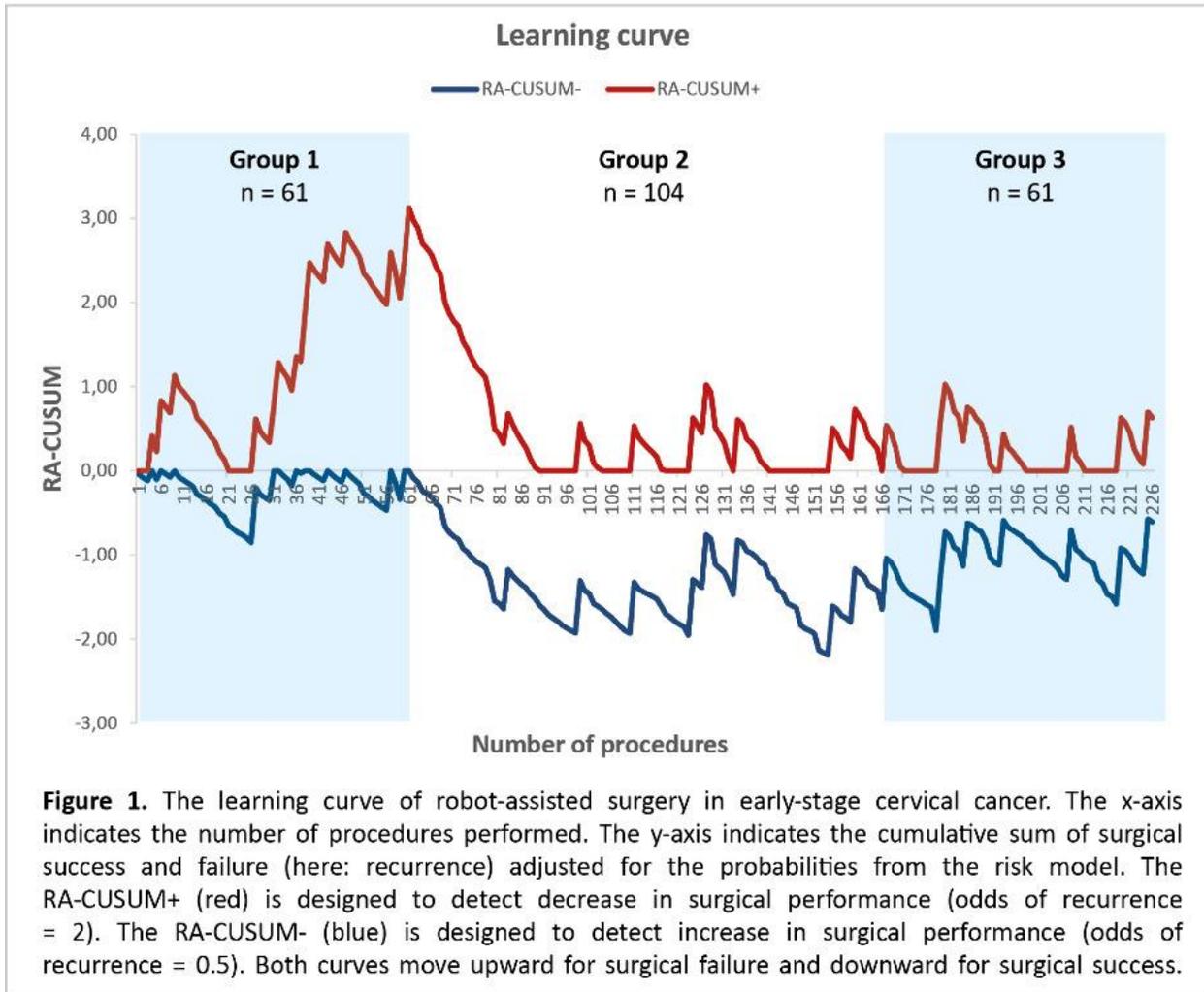
Ilse Baeten, Jacob Hoogendam, Ronald Zweemer, Cornelis Gerestein
University Medical Center Utrecht, Department Of Gynecologic Oncology, Division Of Imaging And Oncology, Utrecht, Netherlands

Objectives: We have previously shown a learning phase of 61 procedures when starting with robot-assisted surgery for early-stage cervical cancer. We evaluated the learning phase with a novice robotic surgeon who had access to a structured curriculum.

Methods: Patients with early-stage cervical cancer who received primary robot-assisted treatment were included. In addition to the 165 patients included in our former learning curve analysis, we now included the 61 patients consecutively treated by the new surgical team, consisting of one experienced surgeon (proctor) and one novice robotic surgeon. To assess the learning phase, we extended the risk-adjusted cumulative sum (RA-CUSUM) analysis based on recurrence rate and assessed its impact on survival using Kaplan-Meier method.

Results: In total 226 patients were divided over three groups: the previously reported learning phase of 61 procedures (group 1), the experienced phase of 104 procedures thereafter (group 2), and the first 61 procedures after introduction of structured curriculum training of the novice surgeon (group 3). No significant differences in baseline characteristics were observed between the groups. Based on RA-CUSUM analysis, no new learning phase was observed for group 3 (see Figure 1). The 5-year recurrence free survival was 80.3% in group 1, 91.7% in group 2 and 84.7% in group 3 ($p=0.10$). The 5-year overall survival was 84.8% in group 1, 94.1% in group 2 and 90.9% in group 3

($p=0.12$).



Conclusions: Based on these single center results, introduction of a novice robotic surgeon with access to a structured curriculum did not introduce a new learning phase measured on oncological outcomes.

EP045 / #852

EPOSTER VIEWING: AS03 CERVICAL CANCER

IS BILATERAL SENTINEL LYMPH NODE DETECTION IN EARLY-STAGE CERVICAL CANCER AFFECTED BY A LEARNING CURVE?

Ilse Baeten, Jacob Hoogendam, Ronald Zweemer, Cornelis Gerestein
University Medical Center Utrecht, Department Of Gynecologic Oncology, Division Of Imaging And Oncology, Utrecht, Netherlands

Objectives: Literature suggests that with increasing experience the sentinel lymph node (SLN) detection rate improves. We evaluated if a learning curve affects the SLN detection rate in early-stage cervical cancer.

Methods: All patients with early-stage cervical cancer who had undergone robot-assisted SLN procedures between September 2009 and May 2021 were retrospectively included. Sentinel lymph node mapping was performed with a combination of preoperative technetium-99m nanocolloid (followed by preoperative imaging) and intraoperative blue dye, which were injected into four quadrants of the cervix. Risk-adjusted cumulative sum (RA-CUSUM) analysis was used to determine if a learning curve based on non-bilateral SLN detection (i.e. non-detection or unilateral detection) existed in this cohort.

Results: In total 229 cervical cancer patients were included and a median of 20 SLN procedures per year were performed. In 98.3% of patients (225/229) at least one SLN was successfully detected. The bilateral SLN detection rate was 87.8% (201/229). Except for age (OR 1.05, 95%CI 1.02 – 1.09) we found no significant risk factors for non-bilateral SLN detection (e.g. prior conization, BMI or FIGO stage). The RA-CUSUM showed no clear learning phase for the first procedures. A peak in the learning curve was observed for procedure number 64 to 70, indicating an increase in non-bilateral SLN detection, which could not be explained from the data (see Figure

1).

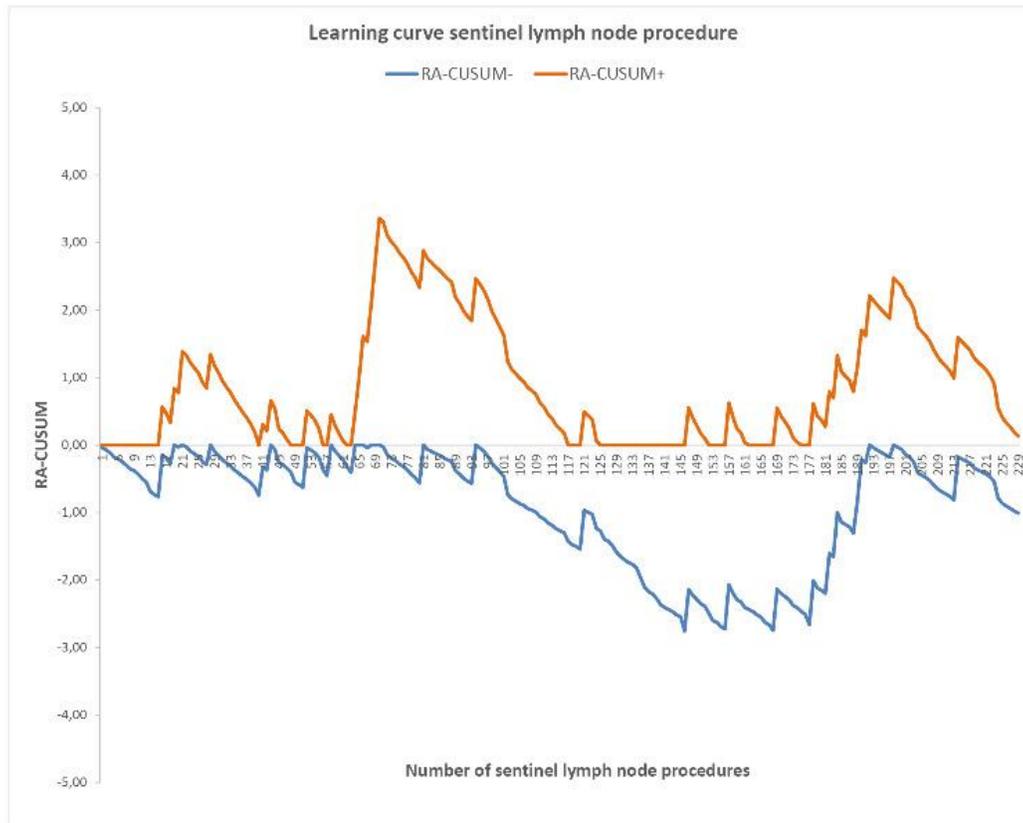


Figure 1. The learning curve of robot-assisted sentinel lymph node (SLN) procedure in early-stage cervical cancer. The x-axis indicates the number of SLN procedures performed. The y-axis indicates the cumulative sum of surgical success and failure (here: non-bilateral detection) adjusted for age. The RA-CUSUM+ (orange) is designed to detect decrease in surgical performance. The RA-CUSUM- (blue) is designed to detect increase in surgical performance. Both curves move upward for surgical failure and downward for surgical success.

Conclusions: We observed no clear learning curve on bilateral SLN detection for a center performing a median of 20 SLN procedures per year in early-stage cervical cancer patients.

EP046 / #457

EPOSTER VIEWING: AS03 CERVICAL CANCER

OUTCOMES OF WOMEN DIAGNOSED WITH CERVICAL CANCER AS PART OF A SCREENING PROGRAM IN MOZAMBIQUE: A SUBSET-ANALYSIS OF THE MULHER STUDY

Samantha Batman¹, Ricardina Rangeiro², Ellen Baker¹, Eliane Monteiro³, Carla Carrilho⁴, Dercia Changule², Siro Daud², Nafissa Osman⁵, Andrea Neves⁶, Celda De Jesus², Arlete Mariano², Renato Moretti-Marques⁷, Marcelo Vieira⁸, Georgia Fontes-Cintra⁹, Andre Lopes¹⁰, Jean Claude Batware¹¹, Elvira Luis², Cesaltina Lorenzoni⁴, Kathleen Schmeler¹, Mila P. Salcedo¹

¹The University of Texas MD Anderson Cancer Center, The Department Of Gynecologic Oncology & Reproductive Medicine, Houston, United States of America, ²Maputo Central Hospital, The Obstetrics And Gynecology Department, Maputo, Mozambique, ³Mavalane General Hospital, Department Of Pathology, Maputo, Mozambique, ⁴Maputo Central Hospital, Department Of Pathology, Maputo, Mozambique, ⁵Universidade Eduardo Mondlane, : The Obstetrics And Gynecology Department, Maputo, Mozambique, ⁶Jose Macamo General Hospital, : The Obstetrics And Gynecology Department, Maputo, Mozambique, ⁷Albert Einstein Hospital, Gynecologic Oncology Department, São Paulo, Brazil, ⁸Beneficência Portuguesa, Department Of Gynecology, São Paulo, Brazil, ⁹Hospital do Coracao, Department Of Gynecology, São Paulo, Brazil, ¹⁰Instituto do Cancer do Estado de São Paulo, Department Of Gynecology, São Paulo, Brazil, ¹¹Xai-Xai Provincial Hospital, : The Obstetrics And Gynecology Department, Gaza, Mozambique

Objectives: Mozambique has one of the highest burdens of cervical cancer globally. As cervical cancer screening programs are implemented, many women are identified with invasive cancer. Our objective was to describe the outcomes of women diagnosed with invasive cervical cancer as part of the MULHER cervical cancer screening study in Mozambique.

Methods: Women ages 30-49 were prospectively enrolled and offered cervical cancer screening with primary human papillomavirus (HPV) testing. HPV+ women underwent ablation or excision as appropriate. Those with findings suspicious for malignancy were referred to gynecologic oncologists trained through the IGCS Global Curriculum program.

Results: Between January 2020 and April 2022, 7,829 women underwent screening, with 32.3% found to be HPV+. 22 women were diagnosed with cervical cancer. Median age was 43 years and 14 (63.6%) were living with HIV. Five patients (22.7%) underwent radical hysterectomy; three of whom required adjuvant radiotherapy and/or chemotherapy. Three patients (13.6%) underwent neoadjuvant chemotherapy which was followed by radiotherapy in two patients, with one patient still awaiting radiotherapy. Three patients (13.6%) received chemotherapy only. No patients received primary chemoradiation due to limited capacity and long wait times for radiotherapy. Six patients (27.3%) received only palliative care or died prior to receiving any treatment and five patients are awaiting workup/treatment.

Conclusions: As cervical screening programs are implemented in low-resource settings, there will be an increase in the number of women diagnosed with invasive cervical cancer. Our results in Mozambique demonstrate the need to increase access to advanced surgery, radiation, and palliative care services.

EP047 / #629

EPOSTER VIEWING: AS03 CERVICAL CANCER

RESPONSE TO TREATMENT AND OVERALL SURVIVAL OF CERVICAL CANCER IN WOMEN WITH AND WITHOUT HIV IN BOTSWANA: IPABALELE STUDY U54 CA190158-01

Rohini Bhatia¹, Memory Bvochora-Nsingo², Siqi Zhang³, Sebathu Chiyapo⁴, Dawn Balang², Nicola Zetola⁵, Erle Robertson⁶, Doreen Ramogola-Masire⁷, Surbhi Grover^{4,8}

¹401 N Broadway, Radiation Oncology, Baltimore, United States of America, ²Gaborone Private Hospital, Radiation Oncology, Gaborone, Botswana, ³University of Pennsylvania, Biostatistics, Philadelphia, United States of America, ⁴Botswana-University of Pennsylvania Partnership, Princess Marina Hospital, Gaborone, Botswana, ⁵University of Pennsylvania, Radiation Oncology, Philadelphia, United States of America, ⁶University of Pennsylvania, Otorhinolaryngology, Philadelphia, United States of America, ⁷University of Botswana, Department Of Obstetrics And Gynecology, Gaborone, Botswana, ⁸Hospital of University of Pennsylvania, Department Of Radiation Oncology, Philadelphia, United States of America

Objectives: This study aimed to characterize factors associated with survival and response to treatment among women with cervical cancer in Botswana.

Methods: Patients with histologically confirmed cervical cancer were prospectively enrolled between Jan 2015 and June 2019 to the Ipabalele study in Botswana. Response to treatment was characterized using squamous cell antigen (SCCAg) level <2.2ng/ml at the end of treatment and 3 months post treatment.

Results: Of 293 women diagnosed with cervical cancer, 73.7% (n=216) were women living with HIV (WLWH). Fifty-six percent (n=150) of all patients had a complete response to treatment by clinical assessment and 65% (n=78) based on SCC-Ag. There was no difference in response to treatment by either clinical or SCC-Ag by HIV status. Two-year overall survival (OS) probability was 73%. There was no difference in survival by HIV status (5-year OS was 57.1% for WLWH and 61.9% for those without). Survival probability difference by HIV status was not significant. In multivariate regression, EQD2 >80Gy ($p<0.0001$) and at least four chemotherapy cycles ($p=0.002$), were significantly related to OS. In logistic regression of clinical and SCC-Ag response, only final stage was associated with clinical response ($p<0.001$). Among patients with clinical and SCC-Ag documented (n=118), there was no correlation between SCC-Ag and clinical response.

Conclusions: Multivariate survival regression of cervical cancer patients demonstrated EQD2 >80Gy and greater than 4 cycles of chemotherapy were associated with OS. There was no difference in OS by HIV status. Further studies are needed to evaluate cut-offs for SCC-Ag and the role of SCC-Ag in Sub-Saharan Africa.

EP048 / #231

EPOSTER VIEWING: AS03 CERVICAL CANCER

DETECTION OF THE INCIDENCE OF HPV IN THE CERVIX, FOR HPV TYPING IN WOMEN FROM THE ULTRA-ORTHODOX JEWISH SECTOR, IN COMPARISON WITH THE GENERAL POPULATION

Shani Bochobsa¹, Gabi Haran¹, Eduardo Shecter²

¹maayeny hayeshuah medical center, Gynecology And Obstetrics, beney brak, Israel, ²women health center, Gynecology And Oncology, petach tikva, Israel

Objectives: Main goal- Detection of the incidence of papillomavirus infection in the cervix according to HPV typing in women from the ultra-Orthodox Jewish sector in comparison with the general population and characterization of the common strains in this population. Secondary goals- 1. Assessing the need to perform a cervical smear in the ultra-Orthodox sector. 2. Assessing the need for a vaccine against HPV in the ultra-Orthodox population.

Methods: A prospective analytical study in which cervical smears were taken for HPV typing from 92 ultra-Orthodox women from January 2020 to January 2022

Results: Of the more than five hundred women who met the inclusion criteria and were asked to participate in the study, 91 women were eligible to participate. , 87 surfaces were included in the study. Of these, 89 surfaces were obtained with a negative response to the presence of papillomavirus, i.e. 100% negative tests. According to data published by the Maccabi HMO about the results of the HPV test as a survey test in a group that numbered 115,807 women between March 2017 and March 2019 as a group representing the entire population in the State of Israel, 9% of all subjects (10,582 tests) .

Conclusions: The results of the study raise an interesting conclusions given 0% positive tests compared to a parallel group. . Another interesting and unique conclusion for this study is that multiple births do not constitute a risk factor for malignant and pre-malignant findings in the cervix, in contrast to what is reported in the literature.

EP049 / #1023

EPOSTER VIEWING: AS03 CERVICAL CANCER

STAGING CERVICAL CANCER WITH PET/CT IN LIMITED RESOURCE SETTINGS

Jairo Rubio-Cordero¹, Pamela Vega¹, Rebeca Ramírez¹, Lenny Gallardo-Alvarado¹, Cristina Uxul¹, Mauricio Ramirez¹, David Cantu De Leon²

¹Instituto Nacional de Cancerología de México, Clinical Research, CDMX, Mexico, ²Instituto Nacional de Cancerología de México, Direction Of Research, CDMX, Mexico

Objectives: To determine the utility of PET/CT in staging locally advanced cervical cancer (LACC) in limited resource settings.

Methods: Cross-sectional observational study of 984 records of patients with clinically proven LACC was performed. Only 142 patients had clinical and both image techniques (CT and PET/CT images) available and suitable for evaluation. PET/CT was requested when CT was consistent with advanced disease. Descriptive statistics, χ^2 , and Cohen kappa were performed.

Results: Mean age at diagnosis was 47.7 years. All cases were locally advanced disease, most common stages were IIb (41.5%) and IIIC1(41.5%) for clinical and CT, and IIIC1 (41.5%) for PET/CT. Upstage was present in 74% of CT evaluations and 84% for PET/CT in comparison to clinical staging. Concordance between CT and PET/CT in staging was 50%, with better results in the group of patients with stages IIB and IIIC1. In case of Stage IVB concordance was 33%. Eleven percent of cases IIIC1-2 by CT were upstaged to IVB by PET/CT ($\chi^2 = 85.2$, $p = 0.0001$).

Conclusions: Imaging studies are required by FIGO 2018 staging of cervical cancer. A significant difference between the use of PET/CT and CT for upstage was demonstrated in all cases; therefore, PET/CT as an initial study, can improve the accuracy of diagnosis of patients with LACC. Even though concordance between PET/CT and CT is not as high as expected, it can be replaced by CT in limited resource settings with very good performance in identifying nodal and distant disease. Larger number of cases are needed to ascertain these findings.

EP050 / #1168

EPOSTER VIEWING: AS03 CERVICAL CANCER

**TREATMENT-INDUCED LYMPHOPENIA AS AN INDEPENDENT PROGNOSTIC FACTOR IN
LOCALLY ADVANCED CERVICAL CANCER**

David Cantu De Leon¹, Ludwing Rodriguez², Aylin Tejada³, Abraham Ozuna⁴, Lenny Gallardo-Alvarado³
¹INCAN, Reseach, Mexico, Mexico, ²INCAN, Clinical Reseach, Mexico, Mexico, ³Instituto Nacional de
cancerologia, Clinical Reseach, mexico, Mexico, ⁴Instituto Nacional de cancerolofia, Clincial Reseach,
Mexico, Mexico

Objectives: Aim of this study is to investigate if lymphopenia during concurrent chemoradiotherapy (CCRT) is related to a worse outcome survival.

Methods: We analysed 430 patients with newly diagnosed Federation of Gynecology and Obstetrics (FIGO) stage IB3-IVA cervical cancer who received weekly cisplatin-based concurrent with external beam radiotherapy and brachytherapy using Kaplan-Meier curves and the Cox proportional hazard models.

Results: lymphopenia <300cells/ul was significantly associated with a poor disease-free survival (DSS) and worse overall survival (PFS) (adjusted hazard ratio (95% confidence interval (CI)) =1.68 (1.17-2.40), p=0.025 and 1.935 (1.5-2.7), p=0.001, respectively). The 5-year DFS and 5-year OS were significantly higher among patients with lymphopenia \geq 300 cells/ μ l than among those with >300 cells/ μ l lymphopenia (73% vs. 59%, p<0.02, and 67% vs. 50%, p=0.03, respectively).

Conclusions: Severe lymphopenia related to treatment in locally advanced cervical cancer is an independent factor to predict poor survival.

EP051 / #743

EPOSTER VIEWING: AS03 CERVICAL CANCER

QUALITY OF LIFE FOLLOWING RADICAL HYSTERECTOMY FOR CERVICAL CANCER

Mihai Emil Capilna¹, Mihai Stanca²

¹ "G. E. Palade" University of Medicine, Pharmacy, Science and Technology, First Obstetrics And Gynecology Clinic, Târgu Mureş, Romania, ² "G. E. Palade" University of Medicine, Pharmacy, Science and Technology, First Obstetrics And Gynecology Cliniv, Târgu Mureş, Romania

Objectives: Cervical cancer patients have been found to have worse Quality-of-Life (QoL) scores due to disease and also to surgical and oncologic treatment.

Methods: The authors aimed to evaluate the QoL of patients who had undergone type C2 radical hysterectomy (RH) +/- oncologic treatment for FIGO 2018 stages IA2 - IIB using two translated standardized questionnaires EORTC QLQ-C30 and QLQ-CX24.

Results: On 430 RH patients, the five-years overall survival (OS) was 72.4%. Of the alive patients (n=308), 208 answered the QoL self-assessment questionnaires. The mean age of the participants was 52 years (22-60). Of these, 59% of patients received concurrent adjuvant chemoradiotherapy (CCRT), 24% neoadjuvant chemoradiotherapy (CRT), 14% RH only and only 3% adjuvant CT. The questionnaires were sent after an average follow-up of 48 months. Regarding the QLQ-C30, the survivors revealed a relatively good global QoL of 64.6 (median) out of 100. The functional status represented by physical, role, cognitive, emotional, and social functioning also had satisfactory scores, symbolizing good functioning and good QoL. The symptoms that most frequently caused discomfort, but rarely led to significant problems were constipation, insomnia, and fatigue. The QLQ-CX24 questionnaire measures the specific symptoms of cervical cancer. The symptoms experience showed a good result with a value of 25.9. However, the body image, lymphedema, peripheral neuropathy, and menopausal symptoms showed above-average cervical cancer-specific symptoms. Concerning sexual activity, data indicated an unsatisfying level of sexual enjoyment with a worsening of sexual activity.

Conclusions: Properly treated patients achieve a good 5-years OS, but with relatively negative repercussions on QoL.

EP052 / #1125

EPOSTER VIEWING: AS03 CERVICAL CANCER

**EARLY STAGE CERVICAL CANCER AFTER THE LACC TRIAL, ARE WE IN THE RIGHT PATH?
SINGLE CENTER EXPERIENCE IN ARGENTINA**

Maria Darin, Johana Quiroga Luna, Maureen Oconor, Santiago Cucci, Jorge Perez, Lucas Noferi, Antonio Maya, Julian Di Guilmi
Hospital Británico de BsAs, Ginecología Oncológica., CABA, Argentina

Objectives: The aim of this study is to describe two cohorts of patients and analyzed variables associated with the risk of relapse in patients operated of cervical cancer after the LACC trial

Methods: retrospective observational study that included all patients with CC FIGO 2009 IA2-IB1, operated between April2013-April 2021, with at least one year follow up. All patients underwent RH with SLN mapping, with/without pelvic lymphadenectomy. In the first cohort of patients (2013-2018) we did a laparoscopic RH (LRH), In the second cohort (2018-2021) we did a laparoscopic-abdominal RH (LARH)

Results: 55 patients were included: 42 in LRH Group and 12 in LARH Group . Median follow up was 53,5 and 28 months respectively. Time to relapse was 8,5 months in LRH and 18 in LARH (P 0.14) -Regarding group 1 (LRH): 4 patients relapsed (9,3%). 3 (75%) died of the disease. 2 had local recurrences, 2 had distant metastases. two patients had tumors <2cm. They all had an adenocarcinoma -In Group 2 (LARH): 2 patients relapsed locally (16,6%) without deaths. Both have initially tumors >2cm. None of the patients that recurred had a previous conization All patients in LRH were operated with uterine manipulator, none in LARH (p<0.00001)

Conclusions: Even though we can't compare groups, we can see a tendency of oncological behavior between them. Time to relapse was longer in LARH, without distant metastasis or deaths. Adenocarcinoma seems to have worst outcomes. We need more follow up and more patients to evaluate if this combination of techniques is safer than the MIS

<i>Characteristics</i>	<i>Minimally invasive surgery</i>	<i>SLN + Open surgery</i>	<i>p</i>
<i>N</i>	42	12	
<i>Follow-up months. Median</i>	53,5	28	
<i>Age at diagnosis, years Median (range)</i>	46 (38-56)	43,5 (36,5-49)	
<i>Histologic subtype</i>			
<i>Squamous-cell carcinoma</i>	22 (52,3%)	7 (58,3%)	
<i>Adenocarcinoma</i>	19 (45,2%)	5 (41,6%)	
<i>Not reported</i>	2 (4,7%)		
<i>Stage of disease (FIGO 2009)</i>			
<i>IA2</i>	19 (45,2%)	0	
<i>IB1</i>	19 (45,2%)	11 (91,6%)	
<i>IB2</i>	2 (4,7%)	1 (8,3%)	
<i>Not reported</i>	2 (4,7%)	0	
<i>Grading</i>			
<i>G1</i>	9 (21,4%)	0	
<i>G2</i>	20 (47,6%)	4 (33,3%)	
<i>G3</i>	8 (19%)	3 (25%)	
<i>Not reported</i>	6 (14,2%)	5 (41,6%)	
<i>Tumor size (mm)</i>	15 (12-20)	32 (23,5-38,7)	0.0037
<i>Tumor size >20mm</i>	22 (52,3%)	9 (75%)	0.19
<i>Lymphovascular invasión positive</i>	11 (26,1%)	6 (50%)	0.15
<i>Lymph Node Metastasis</i>	5 (11,9%)	0	0.6
<i>Dept of infiltration (mm)</i>	6 (3-10)	10 (5-16,5)	0.2
<i>Dept of infiltration <10mm</i>	10 (23,8%)	2 (16,6%)	0.9
<i>Cone biopsy</i>	11 (26,1%)	4 (33,3%)	0.7
<i>Adjuvant Treatments</i>	16 (38%)	7 (58,33%)	0.21
Outcome			
<i>N, % Recurrences</i>	4 (9,5%)	2 (16,6%)	
<i>Local</i>	2 (50%)	2 (100%)	
<i>Distant</i>	2 (50%)	0	
<i>Time to recurrence (months)</i>	8.5	18	
<i>Death from cervical cancer</i>	3 (75%)	0	
<i>Tumor size >20mm</i>	2 (50%)	2 (100%)	
<i>Lymph node metastasis</i>	1 (25%)	0	
<i>Dept of infiltration >10mm</i>	3 (75%)	2 (100%)	
<i>Cone biopsy</i>	0	0	
<i>Histologic subtype</i>			
<i>Squamous-cell carcinoma</i>	0	1 (50%)	
<i>Adenocarcinoma</i>	4 (100%)	1 (50%)	
<i>Grading</i>			
<i>G1</i>	1 (25%)	0	
<i>G2</i>	2 (50%)	0	
<i>G3</i>	1 (25%)	2 (100%)	
<i>Lymphovascular invasión positive</i>	1 (25%)	1 (50%)	
<i>positive vaginal margin</i>	1 (25%)	0	

EP053 / #83

EPOSTER VIEWING: AS03 CERVICAL CANCER

TIMING AND DURATION OF DEFINITIVE RADIATION THERAPY FOR FIGO 2018 STAGE IB3 - IVA CERVICAL CANCER IN A TERTIARY REFERRAL HOSPITAL IN THE PHILIPPINES

May David, Nonette Cupino, Renee Vina Sicam
Philippine General Hospital, Department Of Obstetrics And Gynecology, Manila, Philippines

Objectives: The objective of this study was to determine the timing and treatment duration of definitive radiation therapy and the factors affecting its delivery to women with cervical cancer in a tertiary referral hospital in the Philippines.

Methods: This was a single center, retrospective study performed among 107 women with newly-diagnosed, biopsy-proven bulky or locally-advanced cervical cancer (FIGO 2018 stage IB3 – IVA) seen from January 1 to December 31, 2019 and received radiation therapy. Individual medical records were reviewed to retrieve demographic information, pertinent clinical data, treatment details, and disease status of each patient.

Results: Out of 456 new cases referred to the subspecialty clinic, 329 (72%) were candidates for concurrent chemoradiation (CCRT) and brachytherapy (BT). Only 107 (32.5%) women have received treatment at the time of the study. Among these, 51 (48%) completed treatment, while 28 (26%) received external radiation therapy only, and another 28 (26%) were still ongoing primary treatment. The median interval from first clinic consult to initiation of treatment was 85 days. The median total treatment duration was 81 days. Furthermore, only 4 women (8%) completed treatment within 56 days.

Conclusions: This study showed that there was substantial delay in initiation and protraction in delivery of definitive radiation therapy in our cohort. Due to the severe imbalance of patients with ideal and protracted treatment duration, no factors were identified affecting radiation therapy delivery. Still, apart from supplementing the existing institutional infrastructure, other opportunities to improve the gaps in treatment planning and delivery were identified in this study.

EP054 / #637

EPOSTER VIEWING: AS03 CERVICAL CANCER

PATTERNS OF USE OF PRIMARY CHEMOTHERAPY AND FIRST-LINE CHEMOTHERAPY FOR RECURRENCE AMONG PATIENTS WITH CERVICAL CANCER

Alexandra Diggs¹, Yongmei Huang², Alexander Melamed³, Elizabeth Szamreta⁴, Matthew Monberg⁴, Jason Wright^{5,6}

¹NYP - Columbia University Irving Medical Center, Obstetrics And Gynecology, New York, United States of America, ²Columbia University Irving Medical Center, Obstetrics And Gynecology, New York, United States of America, ³Massachusetts General Hospital, Gynecologic Oncology, Boston, United States of America, ⁴Merck & Co., Inc., Center For Observational And Real-world Evidence, Rahway, United States of America, ⁵Columbia University, Obstetrics And Gynecology, New York, United States of America, ⁶Columbia University Medical Center, Gynecologic Oncology, New York, United States of America

Objectives: Little is known about the patterns of chemotherapy use in women with cervical cancer. We examined chemotherapy use in the primary setting and at the time of first recurrence

Methods: We identified patients in the IBM MarketScan database with cervical cancer who underwent first-line hysterectomy or radiation therapy between 2011-2020. The use of clinically relevant therapeutic regimens was determined in the primary setting and at the time of first recurrence

Results: We identified a total of 5390 patients: 2667 (49.5%) underwent primary hysterectomy and 2723 (50.5%) received primary radiotherapy. Among patients who underwent primary hysterectomy, 36.7% received adjuvant radiation, and 23.1% received primary chemotherapy. The most common chemotherapy regimens were single agent platinum (51.7%), platinum combination therapy (35.2%) and non-platinum drugs (3.4%). Among patients treated with primary radiation, 73.6% received primary/concurrent chemotherapy, either platinum alone (66.4%), platinum in combination with another agent (32.2%), or non-platinum drugs (1.4%). The median duration of primary chemotherapy was 1.2 months. Therapy for recurrent cervical cancer was initiated in 959 patients. The most commonly used regimens were platinum combination (63.9%), non-platinum cytotoxic agents (16.5%), single platinum agent (14.9%), targeted therapy with bevacizumab (6.0%) and immunotherapy with pembrolizumab (3.2%). The median duration of first-line chemotherapy for recurrence was 2.5 months (IQR, 1.2-5.1 months).

Conclusions: Platinum-based chemotherapy is the most commonly used therapy in patients with cervical cancer in the primary setting and at the time of recurrence. The rate of utilization of non-platinum agents at first recurrence has increased over time.

EP055 / #86

EPOSTER VIEWING: AS03 CERVICAL CANCER

PREVALENCE OF CERVICAL CANCER IN THE REPUBLIC OF UZBEKISTAN

Sayde Djanklich¹, Mirzagaleb Tillyashaykhov², Nargiza Zakhirova¹, Shavkat Ibragimov¹, Alisher Berkinov¹, Olim Imamov¹, Zulfiya Sabirdjanova¹

¹Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology, Gynecological, Tashkent, Uzbekistan, ²Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology., Director, Tashkent, Uzbekistan

Objectives: To analyze the main statistical indicators for cervical cancer in the Republic of Uzbekistan.

Methods: The object of the study was statistical data on cervical cancer in Uzbekistan annual official report - "Information on diseases of malignant neoplasms".

Results: In the structure of the general oncological incidence, cervical cancer takes 3rd place, accounting for 7.1% of all newly diagnosed malignant neoplasms. At the same time, in the structure of oncological morbidity among women, cervical cancer occupies the 2nd place (12.1% of all new cases of malignant neoplasms). In 2021, 1827 new cases of cervical cancer were detected in the Republic, and the incidence rate was 5.3 per 100 thousand population. There were 66.1% cervical cancer cases in stages I-II, and 28.6% - in III-IV stages. By the end of 2021, there were 9591 patients with cervical cancer. In the Republic, 1008 patients died from cervical cancer, while the mortality rate per 100 thousand population was 2.9. At the same time, in the overall structure of oncological mortality, cervical cancer takes 5th place, accounting for 6.9% of all deaths from cancer, and among women, cervical cancer ranks 2nd (12.6% of all deaths of malignant neoplasms).

Conclusions: The analysis showed that cervical cancer takes a leading position in the structure of oncological morbidity and mortality in the Republic of Uzbekistan. There are almost 10 thousand patients with cervical cancer in Uzbekistan. About one-third of primary patients with cervical cancer were diagnosed at early stages I-II, and just over 28% of patients were diagnosed at stages III-IV of the disease.

EP056 / #1026

EPOSTER VIEWING: AS03 CERVICAL CANCER

QUALITY OF LIFE AFTER RADICAL SURGERY FOR CERVICAL CANCER IN A PUBLIC HOSPITAL OF GUATEMALA: TIME TO ANALYZE OUR OWN DATA.

Erick Estrada, Julio Lau

Hospital General San Juan de Dios, Gynecology And Obstetrics, Guatemala City, Guatemala

Objectives: The study aimed to analyze for the first time at our institution the quality life in postoperative patients after radical hysterectomy type C1 of the Querleu-Morrow classification at Hospital General San Juan de Dios

Methods: This is a nonexperimental, descriptive cross-sectional study of patients treated with radical hysterectomy type C1 between March 2021 and March 2022 in Hospital General San Juan de Dios. To assess quality of life, we used the EORTC QLQ-CX24 Questionnaire.

Results: Eighty-five patients had a diagnosis of cervical cancer, 12 had a diagnosis of stage Ib1 and 73 patients had stage Ib2. Median of age is 45 years (21-79). Scores obtained in each of the scale domains were the following: Adequate physical well-being 74.1%, adequate social/family environment 67.1%, adequate emotional well-being 85.9%, adequate functional well-being 77.6%.

Conclusions: Eight out of ten patients undergoing radical surgery for early-stage cervical cancer had an adequate quality of life. Nerve-sparing radical hysterectomy warrants better clinical outcomes.

EP057 / #158

EPOSTER VIEWING: AS03 CERVICAL CANCER

REAL-WORLD PATIENT PROFILES, TREATMENT PATTERNS, AND OUTCOMES AMONG RECURRENT, PERSISTENT, AND METASTATIC CERVICAL CANCER PATIENTS

Mugdha Gokhale¹, Rebekah Yu², Matthew Monberg¹, Cumhur Tekin¹, Lin Fan¹, Rich Declue², Keith Knapp², Lincy Lal²

¹Merck & Co., Inc., Center For Observational And Real-world Evidence, Rahway, United States of America, ²ConcertAI, Rwe Sciences, Memphis, United States of America

Objectives: Real-world evidence among advanced cervical cancer (aCC) patients in the US is limited. This study evaluated patient characteristics, treatment patterns, and clinical outcomes among aCC patients under routine clinical care.

Methods: This retrospective study used the ConcertAI Oncology Dataset which draws from US oncology electronic medical records. Patients were ≥18 years, diagnosed with persistent, recurrent, or metastatic cervical cancer, and initiated systemic anti-cancer therapy between August 2014 and June 2021. Descriptive statistics were generated for patient characteristics and treatments. Kaplan-Meier product limit estimator was used to characterize time on treatment and real-world overall survival (rwOS).

Results: There were 325 patients with median age 51.5 years, 70.5% were White, and 47.7% were stage IVB at diagnosis. About 68.0% initiated bevacizumab in first line (1L) (Bev1L), 10.2% in 2L/3L (Bev2L/3L), and 21.8% did not receive bevacizumab (NoBev). The NoBev group was generally older and had more comorbidities, compared to patients on bevacizumab (Table 1). Overall, the most common regimen received in 1L was bevacizumab-carboplatin-paclitaxel (38.5%), with median duration 3.51 months, followed by bevacizumab-cisplatin-paclitaxel (19.7%) with median duration 3.48 months, and carboplatin-paclitaxel (10.5%) with median duration 2.31 months. Median rwOS from 1L start was 16.5 months [95% CI:14.2, 19.9] overall, and generally higher in patients receiving bevacizumab (Bev1L 17.9 [14.5, 21.4] months, Bev2L/3L 16.0 [10.8, 43.6] months, and NoBev 10.5 [7.4, 32.7]

months).

Table 1

Patient Characteristics	Overall (N=325)	Bev1L (N=221)	Bev2L/3L (N=33)	NoBev (N=71)
Median age, years	51.5	50.3	46.9	56.0
Race, n (%)				
White	229 (70.5)	154 (69.7)	24 (72.7)	51 (71.8)
Black/African American	49 (15.1)	32 (14.5)	6 (18.2)	11 (15.5)
Other/Undocumented	47 (14.5)	35 (15.8)	3 (9.1)	9 (12.7)
Care Setting, n (%)				
Community	261 (80.3)	177 (80.1)	28 (84.8)	56 (78.9)
Academic	64 (19.7)	44 (19.9)	5 (15.2)	15 (21.1)
Charlson-Number of Comorbidity Conditions, n (%)				
0	229 (70.5)	162 (73.3)	25 (75.8)	42 (59.2)
1	79 (24.3)	50 (22.6)	8 (24.2)	21 (29.6)
2	13 (4.0)	8 (3.6)	0	5 (7.0)
3	3 (<1)	1 (<1)	0	2 (2.8)
4	1 (<1)	0	0	1 (1.4)
Stage, n (%)				
I	37 (11.4)	27 (12.2)	4 (12.1)	6 (8.5)
II	39 (12.0)	30 (13.6)	1 (3.0)	8 (11.3)
III	69 (21.2)	52 (23.5)	3 (9.1)	14 (19.7)
IV	8 (2.5)	4 (1.8)	1 (3.0)	3 (4.2)
IVA	6 (1.8)	5 (2.3)	0	1 (1.4)
IVB	155 (47.7)	94 (42.5)	23 (69.7)	38 (53.5)
Undocumented	11 (3.4)	9 (4.1)	1 (3.0)	1 (1.4)
Tumor Grade, n (%)				
Low (G1-G2)	100 (30.8)	69 (31.2)	12 (36.4)	19 (26.8)
High (G3-G4)	152 (46.8)	103 (46.6)	19 (57.6)	30 (42.3)
Undocumented	73 (22.5)	49 (22.2)	2 (6.1)	22 (31.0)
Histology, n (%)				
Adenocarcinoma (invasive)	70 (21.5)	55 (24.9)	6 (18.2)	9 (12.7)
Squamous cell	209 (64.3)	146 (66.1)	18 (54.5)	45 (63.4)
Other/Undocumented	46 (14.2)	20 (9.0)	9 (27.3)	17 (23.9)

Conclusions: This study highlights burden of disease and unmet need for specific treatments in the real-world recurrent, persistent, and metastatic cervical cancer patients in the US.

EP058 / #487

EPOSTER VIEWING: AS03 CERVICAL CANCER

ALTERNATIVE FRACTIONATION MAY ENABLE DOSE ESCALATION WITH SBRT FOR RECURRENT GYNAECOLOGICAL CANCER

Nana Gomes^{1,2}, Desmond Barton², Alexandra Taylor^{1,2}

¹The Institute of Cancer Research, Gynaecologic Oncology, London, United Kingdom, ²The Royal Marsden Hospital, Gynaecologic Oncology, London, United Kingdom

Objectives: Stereotactic radiotherapy (SBRT) and brachytherapy treatments usually entail a small number of fractions. Deliverable tumour dose can be limited by normal tissue tolerances which are more dependent on dose per fraction. Isotoxic planning is routinely used in brachytherapy. A similar approach with SBRT has potential to escalate tumour dose when brachytherapy is not feasible, but optimal fractionation is uncertain. Aim: To compare different fractionation schedules for isotoxic dose-escalation with SBRT for locally recurrent gynaecological cancer.

Methods: Scans from 20 patients with pelvic recurrence were used, delivering EBRT 45Gy/25 fractions to pelvis followed by SBRT boost. Cumulative dose limits for bowel, bladder, sigmoid, rectum and sciatic nerve were converted to 5 and 10 fraction equivalent constraints. For isotoxic planning, prescription was escalated/de-escalated until any OAR dose constraint was exceeded. Feasible tumour doses (EQD210) with 5 and 10 fractions were compared.

Results: With conventional VMAT 20 Gy in 10 fractions, median GTV and PTV dose was 20.0Gy (total EQD210 64.2Gy). Using isotoxic SBRT planning for central pelvic disease, median PTV dose (EQD210) was 29.9Gy (total 74.1Gy) with 5 fractions compared to 32.9Gy (77.2Gy) with 10 fractions and GTV 30.8Gy (cumulative 75Gy) versus 33.9Gy (cumulative 78.1Gy) ($p < 0.0001$). Similarly, with pelvic sidewall disease isotoxic doses were increased with 10 fractions: PTV 42.2Gy (cumulative 86.4Gy) versus 45.5Gy (cumulative 89.7Gy); GTV 45Gy (cumulative 89.2Gy) versus 48.6Gy (cumulative 92.9 Gy) ($p < 0.0001$)

Conclusions: Longer fractionation can significantly increase deliverable tumour doses. Further investigation is required to determine optimal patient specific regimens.

EP059 / #489

EPOSTER VIEWING: AS03 CERVICAL CANCER

IMPACT OF MANDATORY VERSUS OPTIMAL ORGAN AT RISK DOSE CONSTRAINTS FOR ISOTOXIC DOSE ESCALATION WITH AN SBRT BOOST FOR RECURRENT GYNAECOLOGICAL CANCER

Nana Gomes^{1,2}, Desmond Barton², Alexandra Taylor^{1,2}

¹The Institute of Cancer Research, Gynaecologic Oncology, London, United Kingdom, ²The Royal Marsden Hospital, Gynaecologic Oncology, London, United Kingdom

Objectives: Outcomes using external beam radiotherapy alone for pelvic recurrence are poor. Stereotactic radiotherapy (SBRT) can potentially improve local control by dose escalation. Isotoxic planning using cumulative OAR dose tolerances is internationally established for intrauterine brachytherapy, with GEC-ESTRO tolerances modified with new optimal constraints. Aim: To evaluate the impact of different OAR target doses on an isotoxic dose-escalation approach with SBRT for locally recurrent gynaecological cancer.

Methods: Dosimetric studies were undertaken on 20 planning scans, 10 central recurrent disease (CRD) and 10 pelvic sidewall recurrences (SWRD), delivering 45Gy/25 fractions to pelvis followed by SBRT boost. Mandatory and optimal dose constraints were defined for 2cc bowel bladder, sigmoid, and rectum, and 1cc sciatic nerve. Starting with 20Gy/5 fractions, the prescription dose was escalated or de-escalated until OAR dose limits were exceeded.

Results: Median GTV volume was CRD 41.52 cm³, SWRD 26.17 cm³. With conventional VMAT boost, median PTV dose was 20Gy (cumulative EQD210 64.3Gy) and GTV 19.8Gy (64.1Gy). For CRD, median SBRT prescription dose was 17.4Gy/5 fractions (EQD210 19.5Gy) with optimal constraints, increased to 21.1Gy (26.6Gy) mandatory constraints. This resulted in median EQD210 PTV 22.3Gy (cumulative 66.6Gy) versus 29.9Gy (74.1Gy); GTV 22.6 Gy (66.9Gy) versus 30.8Gy (75Gy) respectively. With SWRD, higher prescription doses were feasible, optimal 23.5Gy (28.8 Gy EQD210) versus 26.7Gy (34.1Gy) mandatory. This resulted in PTV 29.9Gy(79.2Gy) versus 42.2Gy (total 86.4Gy); GTV 36.9Gy (total 81.1Gy) versus 45Gy (total 89.2Gy).

Conclusions: SBRT boost can significantly dose escalate to tumour using mandatory GEC-ESTRO dose constraints, particularly for sidewall disease.

EP060 / #889

EPOSTER VIEWING: AS03 CERVICAL CANCER

PATTERNS OF CARE AND TREATMENT OUTCOMES FOR ELDERLY WOMEN WITH CERVICAL CANCER- ARE THEY DIFFERENT? - A RETROSPECTIVE ANALYSIS

Sudharshan Gupta, Neenu John, Arvind Sathyamurthy, Jebakarunya Rami Reddy, Thomas Ram
Christian Medical College, Radiation Oncology, Vellore, India

Objectives: To evaluate the patterns of care and treatment outcomes in elderly patients with carcinoma cervix treated in our centre.

Methods: We retrospectively analyzed the medical database of previously treated elderly patients diagnosed with carcinoma cervix between Jan 2013 to Dec 2018 after approval from the IRB.

Results: The mean age of patients was 65 years (Range:60 -95). Of the 176 patients, 98 (56%) patients received only RT, 63 (35%) received CRT, five (3%) patients received adjuvant RT, 4(2.8%) patients received chemotherapy and 1 (0.5%) patient received palliative RT. The most common schedule used for EBRT(External beam radiotherapy) was 50 Gy in 25#, five days a week. The mean EBRT dose was 50 Gy (Range:46-54 Gy). 63 patients (37%) received concurrent cisplatin (dose of 40 mg/sq.m). Out of 161 patients who completed EBRT, 19 patients received EBRT boost,133 patients underwent intracavitary brachytherapy. LDR was used in 48 patients and HDR was used in 85 patients. 2 patients underwent interstitial brachytherapy and mould brachytherapy was used in 8 patients. The median OTT was 69 days (9.8 weeks). Acute grade 3 GI toxicities were found in 21(12.8%) patients. The median follow-up duration was 22 months. Twenty patients had disease progression. The median PFS was 25 (18- 31) months and median OS was 27(18-35) months. 3 yr PFS was 37% and 5 yr PFS was 20%. 3 yr OS was 43% and 5 yr OS was 21%.

Conclusions: To conclude, definitive radiotherapy comprising both EBRT and brachytherapy should be recommended even in the elderly women with careful assessment of comorbid conditions.

EP061 / #647

EPOSTER VIEWING: AS03 CERVICAL CANCER

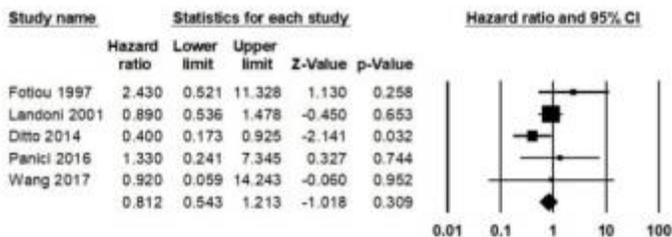
EFFECT OF THE EXTENT OF RADICAL EXCISION ON CLINICAL OUTCOMES AFTER RADICAL HYSTERECTOMY FOR EARLY-STAGE CERVICAL CANCER: A META-ANALYSIS

Dong Won Hwang¹, Min Young Park¹, Hee Seung Kim², Jae-Weon Kim², Noh Hyun Park², Soo Jin Park¹
¹Seoul National University hospital, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Seoul National University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

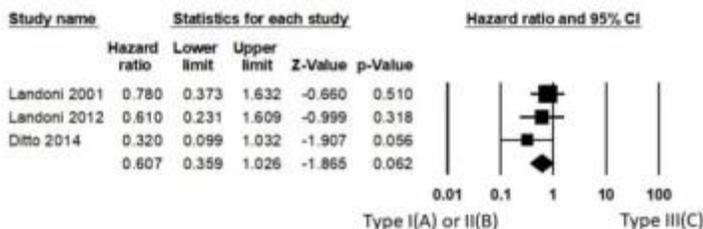
Objectives: Although the extended resection of the paracervix during radical hysterectomy causes an increase in surgical complications, there is no clear evidence of whether it can contribute to improved prognosis of cervical cancer. We performed a meta-analysis for investigating the association between the extent of radical excision and survival after radical hysterectomy for early-stage cervical cancer.

Methods: We searched studies which compared disease-free survival (DFS) or overall survival (OS) between type I (A) or II (B) and type III (C) hysterectomy reported till January 2022. In total, we used six studies including 1,010 patients with stage IB-IIIB diseases in this meta-analysis. We compared DFS and OS, surgical outcomes, complications and the pattern of recurrence between the two groups.

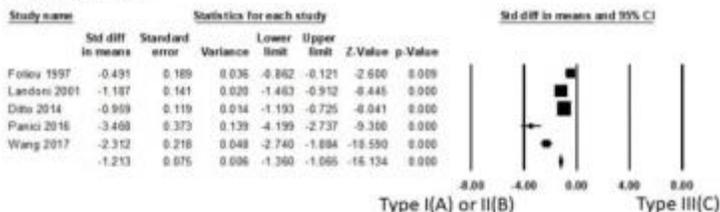
Disease-free survival



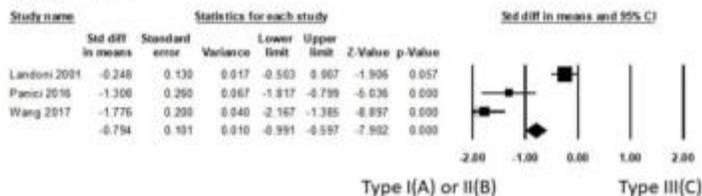
Overall survival



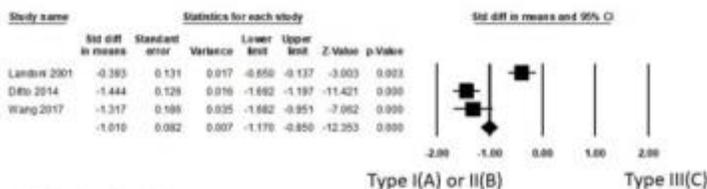
Operation time



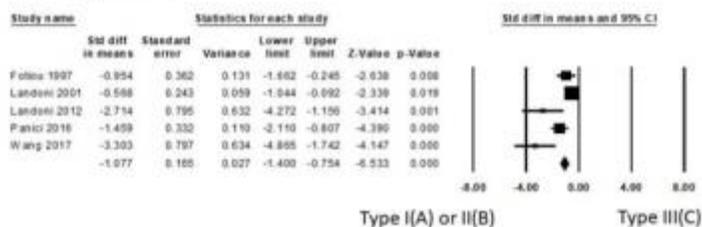
Hospitalization



Blood loss



Bladder dysfunction



Results:

There were no differences in DFS and OS (hazard ratios, 0.810 and 0.605; 95% confidence intervals [Cis], 0.539 to 1.215 and 0.324 to 1.130 between type I (A) or II (B) and type III (C) hysterectomy. Operation time and hospitalization were shorter, and blood loss and the rate of bladder dysfunction were less (standard difference in means, -1.213, -0.794, -1.010 and -0.855; 95% CIs, -1.360 to -1.065, -0.991 to -0.597, -1.170 to -0.850 and -1.233

to -0.558) in type I (A) or II (B) hysterectomy. However, there were no differences in surgical complications and the pattern of recurrence between the two groups.

Conclusions: Type I (A) or II (B) hysterectomy may have the similar effect on survival to type III (C) hysterectomy for early-stage cervical cancer with an improvement of surgical outcomes and bladder dysfunction.

EP062 / #902

EPOSTER VIEWING: AS03 CERVICAL CANCER

THE STANDARDIZED UPTAKE VALUE FOR F-18 FLURODEOXYGLUCOSE POSITRON EMISSION TOMOGRAPHY AS A PREDICTIVE MARKER FOR CERVICAL CANCER RECURRENCE AND PROGRESSION FREE SURVIVAL

Ariella Jakobson Setton¹, Gabriel Levin², Oded Raban¹, Gad Sabah¹, Daliah Tsoref³, Anat From⁴, Tamar Perri², Ram Eitan⁴

¹Rabin Medical Center, Petah Tikva, affiliated with the Sackler Faculty of Medicine, Tel Aviv University, Obstetrics And Gynecology, Tel Aviv, Israel, ²Hadassah University Hospital, Obstetrics And Gynecology, Jerusalem, Israel, ³Rabin Medical Center Petah Tikva, affiliated with Sackler Faculty of medicine, Tel Aviv University, Israel, Department Of Oncology, TEL AVIV, Israel, ⁴Rabin Medical Center Petah Tikva, affiliated with Sackler Faculty of medicine, Tel Aviv University, Department Of Obstetrics And Gynecology, TEL AVIV, Israel

Objectives: Patients with locally advanced cervical cancer (CC) have pre-treatment imaging before definitive chemoradiation. We aimed to evaluate the prognostic value of the maximal standardized uptake value (SUV(max)) of F-18 fluorodeoxyglucose (FDG) on positron emission tomography (PET), in patients with locally advanced CC treated by chemoradiation.

Methods: We performed a retrospective study of 50 consecutive CC patients who underwent pretreatment FDG-PET, and were treated by chemoradiation. All medical records, imaging studies, and laboratory tests were reviewed. PET images were re-evaluated by blinded nuclear medicine radiologists. The analysis included measurement of SUVmax, tumor size, and lymph node involvement. Univariable analysis was performed using Mann-Whitney test. Kaplan-Meier curves were used for survival analyses.

Results: Median tumor size was 4.8 cm [range 3.4-6.0]. Lymph node involvement was found in 35 (70.0%) of women. 20 patients (40.0%) had stage 2B disease. Median SUVmax was 16.5 [range 4.6-30.0]. There were 14 (28.0%) recurrences, with a median PFS of 13 months. The mean SUVmax was similar between stages of disease, involvement of adjacent organs and parametrium, lymph node involvement and tumor size. Mean SUVmax did not differ between cases of recurrence and no recurrence ($p=0.239$), but was higher in women who died of disease (17.7 ± 4.8 vs. 14.6 ± 4.8 , $p=0.037$). A cut-off value of $SUV_{max}=12.7$ was found to predict recurrence (95% CI 0.453-0.763) but not Overall survival.

Conclusions: The SUVmax cutoff value of 12.7, was correlated with an increased risk for recurrence and decrease in PFS in CC patients treated by chemoradiation, but did not correlate with overall survival.

EP063 / #799

EPOSTER VIEWING: AS03 CERVICAL CANCER

RECURRENCE RATE ACCORDING TO THE PERSISTENCE OF HPV IN PATIENTS WITH POSITIVE MARGIN AFTER LOOP ELECTROSURGICAL EXCISION PROCEDURE (LEEP) FOR HIGH-GRADE CERVICAL INTRAEPITHELIAL LESION (HSIL)

Choi Ji Yeon, Kang Gun Gu, Kim Tae Jin, Yang Eun Jung, Lee A Jin, So Kyeong A, Shim Seung Hyuk, Lee Sun Joo
Konkuk University School of Medicine, Seoul, Korea, Obstetrics And Gynecology, -, Neungdong-ro, Gwangjin-gu, Seoul, Republic of Korea, Korea, Republic of

Objectives: The purpose of this study was to evaluate the role of HPV by comparing HSIL recurrence rate according to the persistence of HPV in patients with positive margin after LEEP for HSIL.

Methods: We performed a retrospective study of patients diagnosed with HSIL from January 2015 to December 2019 who underwent LEEP. In all patients, cytology, HPV, and colposcopy were performed to confirm HSIL residual lesions and the HPV persistence. We compared clinical pathological characteristics and HSIL recurrence rate according to HPV persistence in patients with positive margin after LEEP surgery.

Results: During the study period, 538 patients received LEEP for HSIL. The mean age of the patients was 41.2 years. Among them, 179 patients (33.3%) had positive margins after LEEP. Of these, 40 (22.3%) had HPV persistence and 139 (77.7%) were negative. In patients with a positive margin after LEEP, the recurrence rate of HSIL was significantly increased in the HPV persistence group compared to the HPV negative group (20% vs 1.4%, $P = <0.001$). In patients with negative margin after LEEP, the recurrence rate of HSIL was increased in the HPV persistence group compared to the HPV negative group (4.5% v/s 0.4%, $P = 0.014$)

Conclusions: This study demonstrates that persistence of HPV in patients who are margin-positive after LEEP for HSIL is associated with relapse of HSIL. This suggests that HPV test as a postoperative follow-up in patients with positive margins is an important to monitor for recurrence of HSIL.

EP064 / #192

EPOSTER VIEWING: AS03 CERVICAL CANCER

POTENTIAL MECHANISM FOR OCULAR ADVERSE EVENTS OBSERVED WITH TISOTUMAB VEDOTIN

Ignace Vergote¹, Stella Kim², Paul Ursell³, Sandro Pignata⁴, Antonio Gonzalez-Martin⁵, Leslie Randall⁶, Bohuslav Melichar⁷, Kristine Madsen⁸, Sven Mahner⁹, Domenica Lorusso¹⁰, Stéphanie Henry¹¹, Lydia Gaba¹², Theodora Salcedo¹³, Haley Neff-Laford¹⁴, Jeffrey Harris¹⁵, Joy Jiang¹⁶, Ibrahima Soumaoro¹⁷, Shweta Jain¹⁸, Bradley Monk¹⁹, Robert L Coleman²⁰

¹Belgium and Luxembourg Gynaecological Oncology Group (BGOG) and European Network for Gynaecological Oncological Trials (ENGOT), University Hospital Leuven, Leuven Cancer Institute, Division Of Gynecological Oncology, Leuven, Belgium, ²University of Texas McGovern Medical School, Department Of Ophthalmology & Visual Science, Houston, United States of America, ³Epsom & St Helier University Hospitals NHS Trust, Ophthalmology, Epsom, United Kingdom, ⁴Istituto Nazionale Tumori Napoli, Department Of Urology And Gynecology, Napoli, Italy, ⁵Clinica Universidad di Navarra, Medical Oncology, Madrid, Spain, ⁶Virginia Commonwealth University, Medical Oncology, Richmond, United States of America, ⁷Palacky University Medical School and Teaching Hospital, Oncology, Olomouc, Czech Republic, ⁸Rigshospitalet, Department Of Oncology, Copenhagen OE, Denmark, ⁹Arbeitsgemeinschaft Gynäkologische Onkologie Study Group (AGO), University Hospital, LMU Munich, Department Of Obstetrics And Gynecology, Munich, Germany, ¹⁰Fondazione Policlinico Universitario A. Gemelli IRCCS, Gynecologic Oncology, Rome, Italy, ¹¹CHU UCL NAMUR, Site Ste Elisabeth, Sormn Service D'hémato-oncologie, Radiothérapie Et Médecine Nucléaire, Namur, Belgium, ¹²Hospital Clínic de Barcelona, Department Of Medical Oncology, Barcelona, Spain, ¹³Genmab US, Inc., Nonclinical Safety And Toxicology, Princeton, United States of America, ¹⁴Seagen Inc., Nonclinical Sciences, Bothell, United States of America, ¹⁵Genmab US, Inc., Translational Research, Princeton, United States of America, ¹⁶Seagen, Inc., Drug Safety, Bothell, United States of America, ¹⁷Genmab US, Inc., Oncology, Plainsboro, United States of America, ¹⁸Seagen Inc., Late Stage Development, Bothell, United States of America, ¹⁹University of Arizona College of Medicine/Creighton University School of Medicine, Division Of Gynecologic Oncology, Phoenix, United States of America, ²⁰US Oncology Research, Gynecologic Oncology Group (GOG), Gynecologic Oncology, The Woodlands, United States of America

Objectives: Tisotumab vedotin (TV), a tissue factor (TF)-directed antibody-drug conjugate (ADC) with a monomethyl auristatin E payload, received accelerated FDA approval for treatment of adult patients with recurrent or metastatic cervical cancer with disease progression on or after chemotherapy. TV-associated ocular adverse events (OAEs) present as symptomatic ocular surface inflammations, dissimilar to microcystic keratopathies reported for other ADCs. We hypothesize TF expression in the eye may be linked to TV-associated OAEs.

Methods: In vitro human tissue cross-reactivity (TCR) and repeat-dose cynomolgus monkey toxicity studies were conducted. TV was evaluated for efficacy and safety in the pivotal innovaTV 204/GOG-3023/ENGOT-cx6 trial; patients performed mandatory eye care to mitigate OAE risk.

Results: TCR results indicate TV binds to cryosections of human ocular tissues, including conjunctival epithelium (n=3 donors per tissue). Ocular findings from cynomolgus monkeys receiving TV Q3W for 5 doses (n=5M/5F per dose level) included partially closed eyes and reddened eyes and/or conjunctiva. Binding or inhibiting TF with unconjugated anti-TF antibody in cynomolgus monkeys did not lead to similar ocular findings. In innovaTV 204, 54% of patients exhibited OAEs (1.4-month median onset, IQR 0.7-2.0), mostly Grade 1-2 in severity. Common events included conjunctivitis, dry eye, and keratitis. Four patients experienced visual acuity changes; 3 resolved at last follow-up.

Conclusions: Preclinical data suggest an ocular surface-expressed TF-dependent phenomenon and provide potential mechanistic rationale which may partly contribute to the inflammatory and symptomatic

nature of clinically observed TV-associated OAEs. Clinical trial experience suggests adherence to required eye care and appropriate dose modifications reduce risk and severity of OAEs.

EP065 / #654

EPOSTER VIEWING: AS03 CERVICAL CANCER

LAPAROSCOPIC RADICAL HYSTERECTOMY IS SAFE IN CERVICAL CANCER WITH TUMOR SIZE ≤ 2 CM, EVEN IF PARAMETRIAL INVASION OR LYMPH NODE METASTASIS IS FOUND AFTER SURGERY

Naery Kim¹, Se Ik Kim^{1,2}, Dong Hoon Suh³, Hee Seung Kim^{1,2}, Ki Dong Kim³, Hyun Hoon Chung^{1,2}, Jae Hong No³, Yong Beom Kim³, Jae-Weon Kim^{1,2}, Noh Hyun Park^{1,2}, Yong-Sang Song^{1,2}, Chel Hun Choi⁴, Maria Lee^{1,2}

¹Seoul national university hospital, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Seoul National University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ³Seoul National University Bundang Hospital, Obstetrics And Gynecology, Seongnam, Korea, Republic of, ⁴Samsung Medical Center, Sungkyunkwan University School of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: Previously our research team suggested cervical cancer (CC) patients with tumor size ≤ 2 cm on preoperative magnetic resonance imaging (MRI) were safe candidates for laparoscopic radical hysterectomy (RH). We aimed to further investigate whether laparoscopic RH is feasible in patients with small-sized, early CC, having high-risk pathologic factors.

Methods: From CC cohorts of three tertiary hospitals, we identified patients with 2009 FIGO stage IB1 who received open or laparoscopic Type C RH. Among them, those with tumor size ≤ 2 cm on preoperative MRI and who followed the guidelines for adjuvant treatment were included. Patients' survival outcomes were compared between the laparoscopic and open RH groups. Subgroup analyses were conducted according to the parametrial invasion (PMI) and lymph node metastasis (LNM).

Results: A total of 498 patients were included: 299 and 199 for laparoscopic and open RH groups, respectively. All study populations were managed properly in adjuvant treatment. After a median observation of 59.4 months, two groups showed similar progression-free survival (PFS; $P=0.615$) and overall survival ($P=0.439$). On pathologic examination, 16 (3.2%) and 49 (9.8%) had PMI and LNM, respectively, and 10 (2.0%) had both. In PMI subgroup, no difference in PFS was observed between the laparoscopic and open RH groups ($P=0.893$). In LNM subgroup, the two groups also showed similar PFS ($P=0.169$). Consistent results were also found in subgroups of non-PMI and non-LNM.

Conclusions: Laparoscopic RH might be safe in tumor size ≤ 2 cm CC, regardless of PMI and LNM when adjuvant treatment is appropriately administered. Further large cohort studies are required.

EP066 / #613

EPOSTER VIEWING: AS03 CERVICAL CANCER

L1CAM AS PROGNOSTIC FACTOR FOR TYPE OF RECURRENCE IN EARLY-STAGE SQUAMOUS CELL CERVICAL CANCER PATIENTS

Jaroslav Klat¹, Martina Romanova¹, Sylva Bajsova¹, Vladimir Zidlik², Ondrej Simetka¹

¹University Hospital Ostrava, Ob/gyn, Ostrava, Czech Republic, ²University Hospital Ostrava, Pathology, Ostrava, Czech Republic

Objectives: L1CAM belongs to the immunoglobulin superfamily of cell adhesion molecules. In cancer cells, L1CAM promotes cell proliferation, migration, invasion, and metastasis. Its expression is associated with tumor progression in many types of cancer, including colorectal, gastric, renal, endometrial and breast cancer. In this study, we aimed to investigate how L1 cell adhesion molecule (L1CAM) positivity was associated with outcome and relapse pattern in early-stage stage cervical cancer.

Methods: This is retrospective study. Total number of 251 patients who underwent surgical treatment for early-stage cervical carcinoma were enrolled into the study. Patients who underwent a minimally invasive procedure were excluded from the study. Tumor samples of 191 (76,1%) patients were available for L1CAM analysis by immunohistochemistry and total number of patients with squamous histology was 144.

Results: Of the 144 tumor samples, 21 (14,6%) were found to be L1CAM positive. Recurrence was observed in 20 patients (13,8%) with no statistical significance between L1CAM positive and L1CAM negative tumors ($p=0.766$). Type of disease progression was clinically but not statistically significant for multiple and distant metastasis ($p=0.11$). Comparing of Progression free interval and Overall survival did not shown statistical significance.

Conclusions: In our study L1CAM is only clinically significant factor for distant type of recurrence and worse prognosis, but not statistically significant.

EP067 / #802

EPOSTER VIEWING: AS03 CERVICAL CANCER

A COMPARISON OF ADVERSE OUTCOMES WITH THE USE OF BEVACIZUMAB WITH CISPLATIN/PACLITAXEL OR CARBOPLATIN/PACLITAXEL IN RECURRENT, PERSISTENT OR METASTATIC CERVICAL CANCER

Maryam Kotait¹, Tessa Anzai², Rosa Chow³, Clare Reade⁴, Vanessa Carlson⁴, Lua Eiriksson⁴, Waldo Jimenez⁴, Julie Nguyen⁴

¹McMaster University, Obstetrics & Gynecology, Hamilton, Canada, ²McMaster University, Michael G. Degroote School Of Medicine, Hamilton, Canada, ³McMaster University, Pharmacy, Hamilton, Canada, ⁴Juravinski Cancer Centre, Gynecologic Oncology, Hamilton, Canada

Objectives: Background: GOG-240 demonstrated improved oncologic outcomes with addition of bevacizumab to standard chemotherapy for metastatic or recurrent cervical carcinoma. Previously, JCOG0505 revealed non-inferior oncologic outcomes of carboplatin/paclitaxel(TC) compared to cisplatin/paclitaxel(TP). However, there is no recent data comparing adverse events and chemotherapy response rates between TC and TP since addition of bevacizumab. Objective: To compare adverse events and response to chemotherapy of patients with metastatic or recurrent non-resectable cervical carcinoma who initiated chemotherapy between 01/2015 and 09/2021 with carboplatin/paclitaxel/bevacizumab(TCB) or cisplatin/paclitaxel/bevacizumab(TPB).

Methods: A retrospective study was conducted. Adverse events were classified using the National Cancer Institute Common Terminology Criteria for Adverse Events.

Results: Forty-seven patients were included; 29 with squamous cell histology and 18 with adenocarcinoma or adenosquamous histology. Median follow-up was 19 months. Thirty-eight patients received TCB, 9 received TPB; 19 were treated for metastatic disease, 3 for persistent disease, and 26 for recurrent disease. Median number of chemotherapy cycles was 6. While response to chemotherapy was similar in both groups (stable disease 13.2% vs 33.3%, $p=0.15$, partial or complete response, 36.8% vs 33.3%, $p=0.84$), patients receiving TCB experienced significantly less grade 3-5 (26.3% vs 66.7%, $p=0.02$) and grade 1-2 adverse events (13.2% vs 55.6%, $p=0.005$). Bevacizumab was discontinued in 12 patients (25.5%) due to severe toxicity, with significantly greater rate of fistula and perforation compared to rates in GOG 240 (12.8% vs 3%, $p=0.004$).

Conclusions: In this cohort, patients receiving TCB had similar response to chemotherapy, but significantly less adverse events, than those receiving TPB. Bevacizumab confers a high risk of severe adverse events.

EP068 / #585

EPOSTER VIEWING: AS03 CERVICAL CANCER

LONG-TERM EFFECT OF HPV VACCINATION AGAINST HPV INFECTION IN JAPANESE YOUNG WOMEN

Megumi Kurosawa¹, Masayuki Sekine¹, Manako Yamaguchi¹, Risa Kudo¹, Sharon Hanley², Megumi Hara³, Sosuke Adachi¹, Yutaka Ueda⁴, Etsuko Miyagi⁵, Sayaka Ikeda⁶, Asami Yagi⁴, Takayuki Enomoto²
¹Niigata university, Obstetrics And Gynecology, Chuo-ward, Niigata city, Japan, ²Hokkaido University Graduate School of Medicine, Obstetrics And Gynecology, Sapporo, Japan, ³Saga university, Preventive Medicine, Saga, Japan, ⁴obstetrics and gynecology, Osaka University, Osaka, Japan, ⁵obstetrics and gynecology, Yokohama City University, Yokohama, Japan, ⁶Institute for Cancer Control, National Cancer Center, Surveillance And Policy Evaluation, Tokyo, Japan

Objectives: In Japan, public funding for HPV vaccine began in 2010 for girls aged 13-16 (birth years 1994-1997), and women born in 1994 turned 25 in 2019. We aimed to verify long-term effect of bivalent HPV vaccine in women aged 25.

Methods: The subjects were women aged 25-26 who underwent cervical cancer screening and HPV testing in Niigata from 2019 to 2020 (birth years 1993-1994). Vaccination status and sexual behavior were obtained from a questionnaire and municipal record. We compared the following groups regarding HPV infection rate; (1) the vaccinated group to the unvaccinated group, (2) the publicly funded generation (birth year 1994) to the pre-introduction generation (birth year 1993).

Results: Of 429 registrants, vaccinated and unvaccinated women were 150 (35.0%) and 279 (65.0%), respectively. The average period from HPV vaccination to HPV testing was 102.7 months. HPV16/18 infection rate was 0% (0/150) in the vaccinated group and 5.4% (15/279) in the unvaccinated group, showing a significant difference ($p=0.0018$). The cross-protective type, HPV31/45/52 infection in the vaccinated group was significantly lower than that in the unvaccinated group (3.3% vs 10.0%: $p = 0.013$). In an analysis by birth year, the vaccination rate was 77.4% (96/124) for publicly-funded generation and 17.7% (54/305) for pre-introduction generation. HPV16/18 infection rate in the publicly-funded generation was significantly lower than that in the pre-introduction generation (0% vs 4.9%: $p = 0.01$).

Conclusions: The long-term effect of bivalent vaccine against HPV infection was confirmed 9 years after the vaccination for the first time in Japanese data.

EP069 / #855

EPOSTER VIEWING: AS03 CERVICAL CANCER

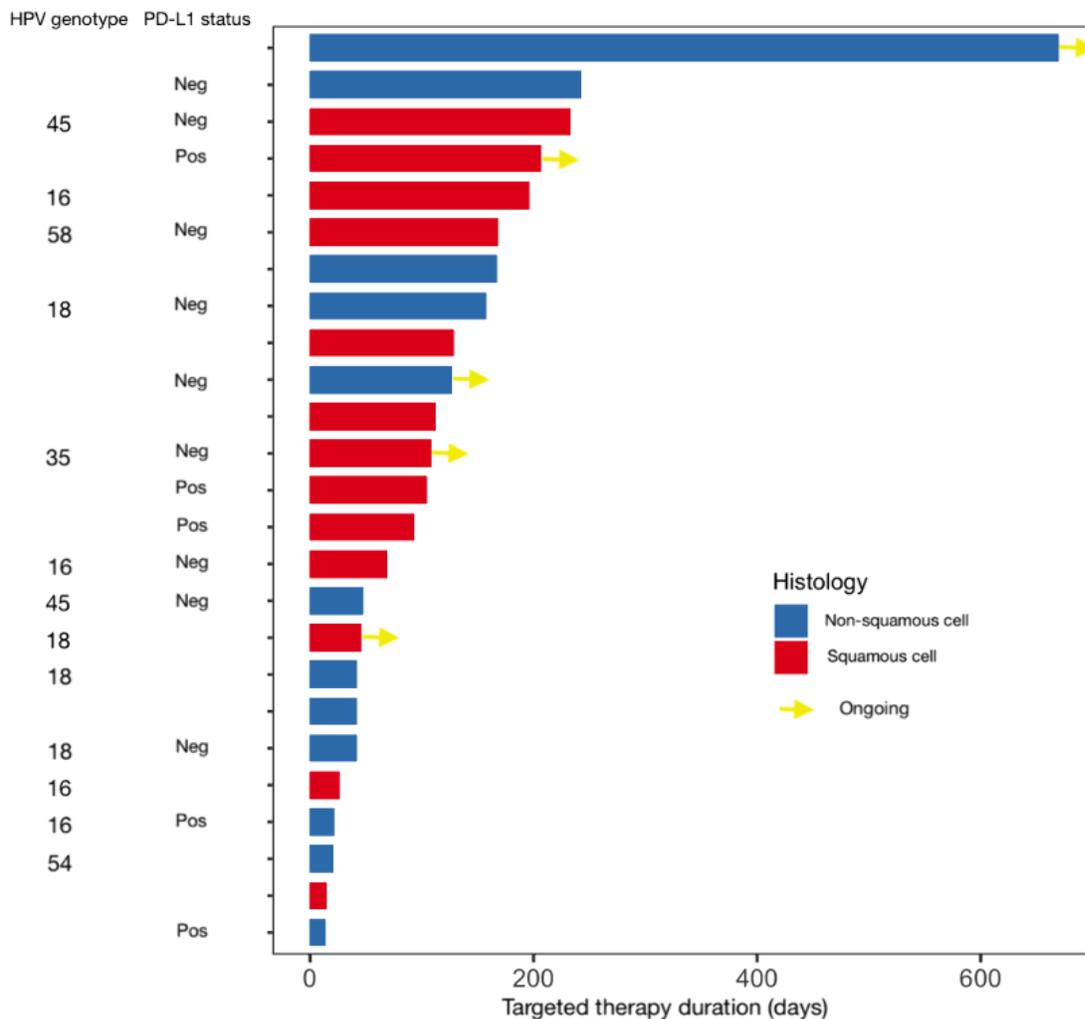
COMPREHENSIVE PROFILING OF CERVIX CANCER PATIENTS USING TUMOR NEXT-GENERATION SEQUENCING (NGS) AND IMMUNOHISTOCHEMISTRY (IHC)

Lee Kyunglim, Yoo-Na Kim, Jung-Yun Lee, Sang Wun Kim, Sunghoon Kim, Eun Ji Nam, Yong Jae Lee, Young Tae Kim
 Severance hospital, Seodaemun-gu, Seoul, Korea, Republic of

Objectives: To investigate the landscape of genomic alterations and immunohistochemistry based targetable characteristics in cervix cancer patients.

Methods: Cervix cancer patients who underwent tumor NGS using TruSight Oncology 500 were analyzed. Clinical information including histology, stage, HPV genotype, serum tumor marker, IHC profile, and therapy outcome were reviewed. PD-L1 positive was defined as having CPS of 10 or higher based on 22C3 antibody.

Results:



A total of 63 cervix cancer patients with predominantly advanced stage disease (III and above, 62%) were

identified. Among 26 patients tested for HPV genotype, 16 and 18 were the most common (21% and 13%, respectively). PD-L1 positive was identified in 8 out of 38 tested (20.5%). With respect to histology, PD-L1 positivity was 41% for SCC and 4.5% for non-SCC (p-value = 0.01). Among 63 patients, alteration in SNV was found in 49 patients (78%) and CNV in 10 patients (16%). Most common SNV altered gene were PIK3CA (40.8%), TP53 (34.7%), PIK3R1 (12.2%), FAT1 (12.2%), FBXW7 (10.2%), and PTEN (10.2%). For CNV, the most frequent mutation was CCNE1 amplification (4 out of 10 patients, 40% of tested). In terms of treatment, 18 patients received immunotherapy with PD1 or PD-L1 as targets, and 5 patients are still ongoing. Median PFS for immunotherapy overall was 3.5 months (range: 0.5–22.3).

Conclusions: For patients with cervical cancer, tumor NGS and IHC profile may help identify potential candidate for targeted therapy and immunotherapy.

EP070 / #527

EPOSTER VIEWING: AS03 CERVICAL CANCER

EVALUATION OF THE CONSTRUCTED MULTILAYER SCANNER FOR LBC (LIQUID BASE CYTOLOGY) ALONG WITH SOFTWARE CONTAINING ARTIFICIAL INTELLIGENCE ALGORITHMS ENABLING REMOTE SUPPORT FOR THE DIAGNOSIS PROCESS.

Łukasz Lasyk¹, Jacek Gronwald², Wojciech Olszewski³, Mariusz Bidziński⁴, Paweł Żuk⁵, Artur Prusaczyk⁵, Ewa Prokurat⁵, Jakub Barbasz⁶, Tomasz Włodarczyk¹

¹Digitmed S.A., R&d, Oleśnica, Poland, ²Pomeranian Medical University, Department Of Genetics And Pathology, Szczecin, Poland, ³Maria Skłodowska-Curie Memorial Cancer Center and Institute of Oncology, Department Of Pathology, Warsaw, Poland, ⁴Maria Skłodowska-Curie Memorial Cancer Center and Institute of Oncology, Oncological Gynaecology Clinic, Warsaw, Poland, ⁵Centrum Medyczo-Diagnostyczne Sp. z o.o., Healthcare, Siedlce, Poland, ⁶Institute of Catalysis and Surface Chemistry Polish Academy of Sciences, Nano And Microscale Systems, Kraków, Poland

Objectives: Cervical cancer mortality in Poland is high. Since the COVID pandemic lasts, access to diagnostics and diagnosticians has been severely limited. To deal with this problem, a complete system was built and implemented (multilayer LBC sample scanner and software), which enabled quick and accurate diagnostics. Due to limitations in the availability of diagnosticians, a support system during diagnostics based on artificial intelligence algorithms was launched, as well as the possibility of remote viewing for many diagnosticians for the same multi-layer scans of samples. It is possible to access the history of the patient. The diagnostics and software indications are marked on the scan. However, the final diagnosis is always made by cyto-screeners.

Methods: The software uses the artificial neural network (U-NET architecture) designed to recognize suspicious regions and neural network (VGG) allowing to determine the type of disorder in line with Bethesda classification. A machine learning element (fuzzy K-Means) was added - responsible for the fusion of the patient's history (eg. addictions, diseases) with the neural network system results..

Results: 839 (LBC) samples were evaluated by cyto-sreeners. Cytological abnormalities were found in 122 (14.5%) cases. Selected samples with diagnosed abnormality were a model to teach the artificial intelligence algorithms. Preliminary results obtained with use of U-NET ,VGG and fuzzy k-Means so far indicate 93-97% compliance with results obtained using standard methods.

Conclusions: Further refinement of neural networks is necessary to reduce the number of false positives and false negatives. A study with a larger sample size is required to evaluate the software.

EP071 / #406

EPOSTER VIEWING: AS03 CERVICAL CANCER

ASSESSING GEOGRAPHIC VARIATION IN RATES OF RECURRENT OR METASTATIC CERVICAL CANCER (BASED ON COMMENCEMENT OF SYSTEMIC THERAPY) AMONG MEDICAID ENROLLEES

Charles Leath Iii¹, Jessica Nysenbaum², Tony Fiori³, Jie Ting⁴, Yitong Zhang⁴, Nathan Pauly⁵

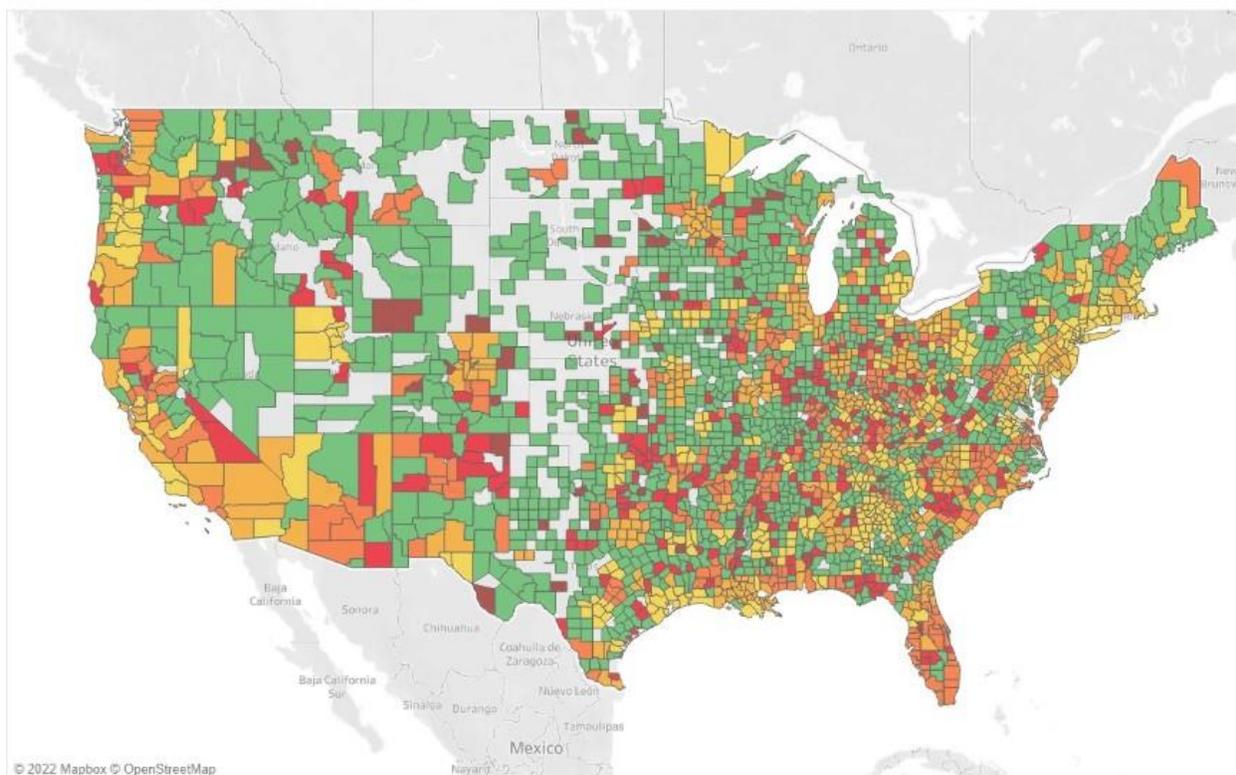
¹The University of Alabama at Birmingham, Division Of Gynecologic Oncology, Birmingham, United States of America, ²Mathematica, Mathematica, Washington, United States of America, ³Manatt Health Strategies, Business Strategy, Policy & Analytics, New York, United States of America, ⁴Seagen, Health Economics And Outcomes Research, Bothell, United States of America, ⁵Manatt Health Strategies, Business Strategy, Policy, And Analytics, Chicago, United States of America

Objectives: Cervical cancer disproportionately impacts patients insured through Medicaid. Of the recurrent or metastatic cervical cancer (r/mCC) population in the US, ~30% are enrolled in Medicaid. Understanding the geographic distribution of new r/mCC patients may identify areas needing intervention, and further inform r/mCC geography-specific risk factors. This study assesses the geographic variation of r/mCC among Medicaid enrollees.

Methods: Retrospective analyses of nationwide Medicaid claims data were used to identify adult r/mCC patients from 2016-2019. Rates of r/mCC were estimated by dividing the number of patients with cervical cancer diagnosis who initiated a systemic treatment beyond surgery or radiation associated with chemotherapy, by the total number of enrollees with cervical cancer diagnosis in each metropolitan statistical area (MSA).

Results: The analytic cohort included 3,375 r/mCC patients from 2016-2019. Overall r/mCC burden among Medicaid enrollees in metropolitan MSAs ranged from lows of 0% in many MSAs to highs of 27.3% in The Villages, Florida and 50% in Cheyenne, Wyoming (Figure 1). Meanwhile, state-level r/mCC burden ranged from a low of 1% in Vermont to a high of 7.7% in Arizona. Annual rates for the five states with the highest overall rates are shown in Table 1.

Figure 1- Overall Rates of r/mCC Burden Among Medicaid Enrollees at the Metropolitan Statistical Area (MSA) Level, 2016 - 2019



Note: Gray counties did not have any individuals with cervical cancer diagnoses from 2016 – 2019. Green counties with rates of 0 had some individuals with cervical cancer diagnoses but no individuals with r/mCC.

Rate

- 0
- 0.1% - 4%
- 4.1% - 6%
- 6.1% - 10%
- 10.1% - 25%
- >25%

Table 1- States With Highest Overall Rates of r/mCC Burden Among Medicaid Enrollees, 2016-2019

State	Overall Rate	2016 Rate	2017 Rate	2018 Rate	2019 Rate
Arizona	7.7%	7.9%	4.7%	2.8%	3.9%
Kentucky	7.0%	7.7%	3.2%	4.6%	2.7%
Florida	6.9%	6.1%	4.1%	4.3%	4.5%
New Mexico	6.9%	9.2%	2.7%	4.2%	1.7%
Colorado	6.7%	6.5%	2.3%	5.0%	3.1%

Conclusions: This study found substantial variability in r/mCC burden at the state and MSA level. Results highlight areas in the US with disproportionately high r/mCC burden and indicate a potential gap in preventative care for women, and unmet need for education and healthcare resource allocation. Future research should evaluate associations between community-level factors and rates of r/mCC burden.

EP072 / #875

EPOSTER VIEWING: AS03 CERVICAL CANCER

PATIENT-DERIVED ORGANOIDS AS A PRECLINICAL PLATFORM FOR PRECISION MEDICINE IN PATIENTS WITH CERVICAL CANCER

Young Joo Lee¹, Hyang Sook Seol², Eunhye Choi², Yong Jae Lee³, Jung-Yun Lee³, Sang Wun Kim³, Sunghoon Kim³, Young Tae Kim³, Eun Ji Nam³

¹Institute of women's Life Medical Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ³Institute of Women's Life Medical Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: To date, scant attention has been paid to patient-derived organoids of cervical cancer, even though organoids have been utilized to study of patient-specific cancer therapy. The purpose of this study was to establish cervical cancer-derived organoids (CCO) and assess the ability to predict response to radiation.

Methods: Cervical tissue samples from therapy-naive cervical cancer patients diagnosed between May 2019 and April 2022 were obtained. Based on our long-term culturing protocol, we established various types of CCOs, such as Squamous cell carcinoma (SCC), adenocarcinoma (AC), and neuroendocrine carcinoma (NEC). Using CCOs, we assessed the radiosensitivity in a suitable preclinical manner.

Results: We successfully generated CCOs in 15 of 30 cancer tissues (50%), of which were SCC (60.0%), AC (33.3%), and NEC (6.7%). The success rate of establishing CCOs varied with cell types; 45.0% and 83.3% for SCC and AC, respectively. Additionally, a radiation sensitivity test was performed on 4 different cell types of organoids: SCC, AC, NEC, and Villoglandular papillary adenocarcinoma (VPA). After exposure to radiation (0, 2, 6, and 12Gy) and culture for 7 days, dramatical apoptotic cell death was confirmed especially in SCC and VPA organoids, whereas less apoptotic cell death was observed in AC.

Conclusions: Patients-derived cervical cancer organoid have been successfully created and can recapitulate the patients tumor. This is a first study to date that explored the effects of radiosensitivity in patient-derived organoids in cervical cancer. Organoids could serve as a useful preclinical platform to implement of personalized therapy including radiotherapy in cervical cancer patients.

EP073 / #1109

EPOSTER VIEWING: AS03 CERVICAL CANCER

TUMOR INFILTRATING IMMUNE CELLS AND CLINICOPATHOLOGIC FEATURES IN CERVICAL CANCER.

Seungmee Lee, Chi-Heum Cho, Sojin Shin
School of Medicine, Keimyung University, Obstetrics And Gynecology, Daegu, Korea, Republic of

Objectives: To demonstrate characteristics of tumor-infiltrating immune cells and association with clinical feature and outcome in cervical cancer.

Methods: Fresh patient tumor tissue samples were obtained from cervical cancer patients with informed consent. From fresh samples, immune cell infiltration was evaluated via flow cytometry. Association between clinicopathologic features, clinical outcome, and status of tumor-infiltrating Immune cells (CD3-CD19+ B Cells, CD3-CD16+CD56+ NK Cells, CD4+CD25+ regulatory T cells (Treg) and CD3+CD8+ cytotoxic T cell) was analyzed.

Results: CD3-CD19+ B cell increased in histologic type of adenocarcinoma compared to squamous cell carcinoma. Increased CD4+CD25+ Treg was associated with recurrence before 6 month after initial treatment. In subgroup of Human papilloma virus positive patients, CD4+25+ Treg was elevated in advance clinical stage. In 6 patients, change of immune cell infiltration after concurrent chemoradiation was analyzed. Only Treg decreased after treatment, and other immune cell showed no change.

Conclusions: Tumor-infiltrating immune cells were relevant to clinicopathologic features in cervical cancer. Treg showed possibility as a biomarker for prognosis.

EP074 / #619

EPOSTER VIEWING: AS03 CERVICAL CANCER

SINGLE MOLECULE ARRAY (SIMOA) FOR THE DETECTION OF CERVICAL DYSPLASIA AND CANCER

Zoe Swank¹, David Walt¹, Shuk On Annie Leung²

¹Harvard University, Wyss Institute, Boston, United States of America, ²McGill University Health Center, Obstetrics And Gynecology, montreal, Canada

Objectives: The appropriate triage of abnormal cervical cancer screening results can limit colposcopy to those at highest risk. The objective of this study was to incorporate antibodies associated with cervical dysplasia and carcinoma onto the Single Molecule Array (Simoa) platform and to identify the optimal combination of biomarkers.

Methods: Patient samples were collected from colposcopy, gynecologic oncology or gynecology and radiation oncology. Antibody-coated capture beads with biomarkers of interest were added to the cervical sample, incubated with a biotinylated detection antibody to form an enzyme-labeled immunocomplex, then loaded onto an array of microwells. A fluorogenic substrate was added and single molecule quantitation was performed by counting active wells with the Simoa HD-X Analyzer.

Results: 138 patient samples were collected (normal=77, low-grade=14, high-grade=24, ACIS/CIS=8, Cancer=15). Eight Simoa assays were developed and calibrated for the biomarkers CA125, CEACAM1, CDKN2A, CEA, HPV16E7, Ki67, ORF1, and VEGF. AUC-ROC curves for the detection of high-grade cervical dysplasia or carcinoma were obtained: Ki67 0.80, CEACAM1 0.78, CDKN2A 0.72, ORF1 0.71, VEGF 0.71, CA125 0.52, and HPV16E7 0.51. A logistic regression model combining multiple markers demonstrated that the addition of CDKN2A and CEACAM1 to Ki67 resulted in a modest improvement of AUC to 0.83 with an accuracy of 80%.

Conclusions: Detection of cervical biomarkers using Simoa is feasible with Ki67, CDKN2A, and CEACAM1 demonstrating good test performance. This assay has the potential to triage patients with abnormal cytology and/or positive human papillomavirus test results. Future work will validate this biomarker panel and platform with an external cohort.

EP075 / #714

EPOSTER VIEWING: AS03 CERVICAL CANCER

SURVIVAL OUTCOMES FROM LAPAROSCOPIC RADICAL HYSTERECTOMY WITHOUT PREOPERATIVE CERVICAL CONIZATION IN 2018 FIGO STAGE IB1-IB2 CERVICAL CANCER

Hyunji Lim¹, Se Ik Kim^{1,2}, Hee Seung Kim^{1,2}, Hyun Hoon Chung^{1,2}, Jae-Weon Kim^{1,2}, Noh Hyun Park^{1,2}, Yong-Sang Song^{1,2}, Chel Hun Choi³, Maria Lee^{1,2}

¹Seoul National University Hospital, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Seoul National University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ³Samsung Medical Center, Sungkyunkwan University School of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: To compare survival outcomes between minimally invasive surgery (MIS) for radical hysterectomy (RH) and open RH in 2018 FIGO stage IB1-IB2 cervical cancer patients who did not receive preoperative conization.

Methods: We identified pathologically-confirmed 2018 FIGO stage IB1-IB2 cervical cancer patients who received primary Type C RH between 2006 and 2020. Patients who received cervical conization before RH were excluded. The study population was divided into MIS group (n=196) and open group (n=156).

Results: Between the two groups, no differences were observed in histologic type, cervical tumor size, and depth of invasion. Despite similar proportions of patients with IB1 (23.5% vs. 19.2%; P=0.337) and those received adjuvant treatment (55.7% vs. 44.3%; P=0.429), lymphovascular space invasion was more commonly observed in the MIS group (35.7% vs. 24.4%; P=0.022). After a median follow-up of 63.5 months, the two groups showed similar overall survival, while the MIS group showed worse disease-free survival (DFS; 5-year rate, 79.4% vs. 91.1%; P=0.011). In multivariate analysis, MIS was identified as an independent poor prognostic factor for DFS (adjusted HR, 2.027; 95% CI, 1.1130-3.635; P=0.018). However, among stage IB1 patients (n=107), no difference in DFS was observed between the MIS and open groups: multivariate analysis revealed that MIS did not influence the disease recurrence rate (P=0.142).

Conclusions: In 2018 FIGO stage IB1 cervical cancer, MIS RH without preoperative conization might not increase the disease recurrence rate after RH. Accurate preoperative identification of clinical stage is essential for early cervical cancer patients in deciding the surgical approach of RH.

EP076 / #303

EPOSTER VIEWING: AS03 CERVICAL CANCER

IMMUNE AND INFLAMMATION-RELATED FACTORS ALTERATION AS A BIOMARKER FOR PREDICTING PROGNOSIS AND RESPONSIVENESS TO PD-1 MONOCLONAL ANTIBODY IN PATIENTS WITH RECURRENT CERVICAL CANCER

Xihan Liu, Beihua Kong, Kun Song, Jin Peng
Qilu hospital of Shandong University, Gynaecology And Obstetrics, Jinan, China

Objectives: We aimed to elucidate the potential mechanisms of effective responsiveness to anti-PD-1 and evaluate more reliable biomarkers for improving the predictive utility of the dominant populations of recurrent cervical cancer (RCC) to receive PD-1 monoclonal antibody.

Methods: Peripheral blood RNA of PD-L1 positive patients with RCC receiving PD-1 monoclonal antibody were collected. Transcriptome analysis was applied to partial response (PR) patient and progressive disease (PD) patients before and after treatments. A novel prognostic immune-related response genes (IRRGs) model was constructed and correlated with the tumor immune characteristics. Its prognostic role was evaluated.

Results: The number of differentially expressed genes (DEGs) in PR patient after treatments was much greater than that in PD patients, indicating high sensitivity to anti-PD-1 therapy in PR patient. Among PR specific pathways, tumor immunity, leukocyte migration, cytokine activity, NF-kappa B and interleukin-17 signaling pathway were prominently enriched. In addition, a IRRGs signature comprising CTLA4, AZU1, C5, LAT, CXCL2, GDF7, MPL, PPARG and CELA1 was established and validated to predict prognosis of RCC with great accuracy and specificity. This signature could monitor the immune status of tumor microenvironment (TME). Besides, we substantiated that stimulated adaptive immunity and downregulated inflammation in pre-treatment patients with sensitivity to anti-PD-1 treatment.

Conclusions: We verified IRRGs signature as an independent prognostic factor for survival and response to PD-1 monoclonal antibody, which plays a non-negligible role in the TME of RCC. Further investigations are warranted to confirm patients with stimulated adaptive immunity and downregulated inflammation could achieve a better survival benefit from PD-1 monoclonal antibody.

EP077 / #342

EPOSTER VIEWING: AS03 CERVICAL CANCER

EXPLORATORY STUDY FOR PRECISION MEDICINE IN CERVICAL ADENOCARCINOMA

Hiroko Machida, Mariko Miyazawa, Miwa Yasaka, Testuji Iida, Masae Ikeda, Hiroshi Yoshida, Takeshi Hirasawa, Mikio Mikami

Tokai University School of Medicine, Obstetrics And Gynecology, Kanagawa, Japan

Objectives: Cervical adenocarcinoma is known to have poorer survival compared to squamous type. However, the survival outcome is different each histological subtype. Exploratory study was conducted to examine the genome of cervical cancer treated at our institution and compared these with TCGA data in the US.

Methods: Our study explored the simultaneous testing for multiple mutations targeted adenocarcinoma in cervical cancer using the NGS. Cervical cancer initially treated at Tokai university hospital from 2010 to 2021 (50 specimens) was compared with the registered data in TCGA database (133 specimens).

Results: Following genome sequences were analyzed; BCAR4, CD274, PDCD1LG2, KRAS, ARID1A, PTEN, ALK, EGFR, ROS1, BRAF, PIK3CA, EP300, FBXW7, SHKBP1, TGFBR2, SMAD4, ERBB3, ERBB2, and KLF5 genes. Cervical cancer cells in our institution had more abnormalities of ALK, ROS1, EGFR, TGFBR2, ARID1A, and BRAF gene compared to these in TCGA database. ALK, ROS1, ERBB2, and EGFR gene abnormalities were frequently observed in cervical adenocarcinoma tumor cells. Comparing the gene mutation profiles of cervical adenocarcinoma cells by subtype, EP300, PTEN, FBXW7 and KRAS genes were found in Minor type (mucinous cancer, clear cell cancer, serous cancer) cervical adenocarcinoma cells.

Conclusions: Genetic abnormalities for cervical cancer in Japan could be different compared to the US. For cervical adenocarcinoma in Japan, ALK, ROS1 gene may be targeted by molecular-targeted drugs. Considering heterogeneity in ethnicity, further study is warranted.

EP078 / #260

EPOSTER VIEWING: AS03 CERVICAL CANCER

THE STATE OF PALLIATIVE CARE FOR CERVICAL CANCER IN THE OSH REGION OF THE KYRGYZ REPUBLIC

Emil Makimbetov¹, Minovar Burgoeva², Baktygul Sultangazieva¹, Aman Zhumabaev¹

¹National Center of oncology and hematology, Medical Faculty, Bishkek, Kyrgyzstan, ²Osh Medical University, Oncology, Osh, Kyrgyzstan

Objectives: To study the state of palliative care for CC at the Osh region of Kyrgyzstan

Methods: The data of 83 patients with CC at the Osh Interregional Oncology Center (2015-2017) were studied. The average age was 56.2 years. According to the stages, there were: IIIa – 36 (43.4%), IIIb – 40 (48.1%), IV – 7 (8.5%) patients. The diagnosis in all was verified histologically (93.9% squamous cell carcinoma). A consistent design of explanatory mixed methods with two cross-surveys (patients and medical workers) was used.

Results: According to the ethnicity, there were Kyrgyzs – 48 (58.7%), Uzbeks – 27 (32.5%) and other 8 (8.6%). Forty-six patients were married (55,4%), 22 (26,5%) were widows, 13 (15.7%) of patients were divorced and 2 (2.4%) were never married. Only 16 (19.3%) patients had higher education. Most of the patients did not work, were housewives (37 or 44.6%). The patients' awareness of CC was mainly via the Internet (39 or 47.0%) and through health service staff (37 or 44.6%). Only 16 (19.3%) women knew the information that CC is curable. About 50% had a monthly income of less than \$ 200, 15% of patients considered their financial situation as poor. Twenty-six women (41.3%) had access to palliative care, but the majority of patients (57 or 58.7%) did not receive palliative and psychological care at all.

Conclusions: Palliative care of CC in the Osh region is limited due to insufficient development of the oncogynecological service, lack of medical personnel, social workers and inadequate pain control.

EP079 / #276

EPOSTER VIEWING: AS03 CERVICAL CANCER

ANXIETY AND DEPRESSION IN PATIENTS WITH CERVICAL CANCER

Emil Makimbetov¹, Minovar Burgoeva², Adel Toktonaliev³

¹National Center of oncology and hematology, Medical Faculty, Bishkek, Kyrgyzstan, ²Osh Medical University, Oncology, Osh, Kyrgyzstan, ³National Center of Oncology and Hematology, Gynecologic Oncology, Bishkek, Kyrgyzstan

Objectives: The aim of the study was to study anxiety and depression in patients with cervical cancer.

Methods: On the basis of the Medical Faculty of Osh University, 83 patients of cervical cancer (CC) who were admitted for palliative treatment were studied. Psychological status was detected using the hospital Anxiety and Depression Scale (HADS) and Spielberg scale. Statistical processing was carried out using the z criterion. .

Results: Of 83 patients with advanced forms of CC, subclinically expressed anxiety (8-10 points) and clinically expressed anxiety (11 points and higher) were detected in 35 (42.3%) and 39 (46.9%) patients, respectively. There were 9 (10.8%) patients in the "norm" gradation on this scale. Subclinically type of depression (8-10 points) was detected in 45 (54.2%) patients, and clinically type of depression – in 30 (36.1%) patients. There were only 8 (9.6%) patients with the relatively normal psychological state. Subclinically expressed anxiety was statistically significant and more common in patients with CC compare with a "norm" rating (criterion $z = 4,572$, $p < 0.001$). According to the Spielberg self-assessment scale, reactive (situational) anxiety was noted in 12.0% (low), 45.2% (moderate) and 45.2% (high) patients.

Conclusions: Thus, in general, 75 (90.4%) of 83 patients with advanced stages of the tumor had symptoms of depression in the form of subclinically and clinically expressed forms.

EP080 / #940

EPOSTER VIEWING: AS03 CERVICAL CANCER

VOLUMETRIC DOSE PRESCRIPTION IN CERVICAL CANCER BRACHYTHERAPY- A MOVE AWAY FROM 'POINT A'

Susan Mathews¹, Kiran Paskalice², Jagathnath Krishna³

¹Regional Cancer Centre, Trivandrum, Department Of Radiation Oncology, Trivandrum, India, ²Regional Cancer Centre, Trivandrum, Department Of Radiation Oncology,, Trivandrum, India, ³Regional Cancer Centre, Trivandrum, Epidemiology And Biostatistics, Trivandrum, India

Objectives: Excellent local control(>90%) and improved outcomes are reported with Image guided adaptive brachytherapy (IGABT) relative to traditional 'Point A brachytherapy'. In majority of the developing world, even though Computed tomography (CT) has replaced X-rays for brachytherapy planning, dose prescription continues to be point based. In a move away from Point A, this study tested the feasibility of volumetric dose prescription on CT for cervical cancer patients. Patterns of failure and survival with volumetric dose prescription were analysed.

Methods: All cervical cancer patients treated with curative intent, between December 2014- 2018, for whom brachytherapy dose was prescribed to the isodose covering the outer contour of the target (entire cervix and distal part of the corpus) on CT, instead of 'Point A' were included in this retrospective analysis. The prescription doses and ICRU bladder and rectal point doses were chosen from the equivalent dose tables for HDR brachytherapy. For 3 fractions brachytherapy after 45 Gy EBRT, doses between 8-9.5 Gy/fraction were selected keeping bladder point <7.5 Gy/fx and rectal point < 6.5 Gy/fx.

Results: 152 patients met study eligibility. At a median follow-up of 57 months, 24 patients relapsed. 8 patients (5.2%) experienced isolated central failures, 6 patients (3.95%) had regional nodal failures (inguinal, pelvic, paraaortic lymph nodes) and 5 patients each (3.29%) had distant failures and combined loco regional and distant failures. Local relapse free survival was 94.7% and overall survival was 77% at 4 years.

Conclusions: Volumetric dose prescription instead of dose to Point A yielded excellent local control and comparable overall survival.

EP081 / #1043

EPOSTER VIEWING: AS03 CERVICAL CANCER

CERVICAL CANCER TREATED BY NEOADJUVANT CHEMOTHERAPY FOLLOWED BY RADICAL SURGERY: A CASE SERIES FROM MIREBALAIS, HAITI

Christophe Millien¹, Rebecca Henderson², Jean Joel Saint Hubert¹, Jean-Claude Ulysse¹, Scott Tiedman³, Temidayo Fadelu³, Sarah Slater³, Nathalie Mckenzie⁴, Alex Mutombo⁵, Joarly Lormil⁶, Tom Randall⁷

¹University Hospital Mirebalais, Department Of Obstetrics And Gynecology, Mirebalais, Haiti, ²University of Florida, School Of Medicine, Gainesville, United States of America, ³Dana Farber Cancer Institute, Center For Global Cancer Medicine, Boston, United States of America, ⁴AdventHealth Orlando, Gynecologic Oncology, Orlando, United States of America, ⁵Kinshasa University Hospital, Department Of Obstetrics And Gynecology, Kinshasa, Congo, Republic of, ⁶University Hospital Mirebalais, Oncology, Mirebalais, Haiti, ⁷Massachusetts General Hospital, Obstetrics, Gynecology And Reproductive Biology, Boston, United States of America

Objectives: In Haiti, a low-resource setting where radiotherapy is unavailable, significant numbers of women present with locally advanced cervical cancer in need of treatment. We built a multidisciplinary team to collaboratively implement neoadjuvant chemotherapy followed by surgery, and aimed to retrospectively assess the efficacy and feasibility of this approach.

Methods: We implemented paclitaxel/carboplatin neoadjuvant chemotherapy (NACT) followed by radical surgery for women with stage IB2-IIA cervical cancer at the Hospital Universitaire de Mirebalais (HUM). Three Haitian gynecologists worked remotely with expert clinicians to pilot the program. We aimed to determine the feasibility and safety of this approach in this resource limited setting.

Results: Between January of 2021 and May of 2022, 26 of 310 women diagnosed with cervical cancer at HUM received NACT followed by radical surgery. Women in the pilot sample were ages 38 to 69 years. Twenty-three received six cycles of chemotherapy, while the remainder received three cycles. As of May 2022, 16 had undergone radical surgery, three were lost to follow-up during chemotherapy, two were inoperable, and five were receiving chemotherapy. Of women undergoing radical surgery, two were found to have metastatic disease during surgery and one was found to have a recurrence of disease. There were no perioperative deaths. One woman experienced sepsis and developed a vesicovaginal fistula.

Conclusions: Preliminary results suggest that NACT followed by radical surgery is feasible and safe in a resource limited setting, and may improve the chance for cure for women who otherwise might be offered comfort measures only.

EP082 / #839

EPOSTER VIEWING: AS03 CERVICAL CANCER

ISO-PROGNOSTIC CLUSTERS IN ADVANCED CERVIX CANCER TREATED WITH CURATIVE INTENT

Kailash Narayan¹, Ming-Yin Lin¹, Linda Mileshekin², Srinivas Kondalsamy-Chennakesavan³, Orla McNally⁴
¹Peter MacCallum Cancer Centre, Radiation Oncology, Melbourne, Australia, ²Peter MacCallum Cancer Center, Medical Oncology, Melbourne, Australia, ³The University of Queensland,, Rural Clinical School, Toowoomba, Australia, ⁴Royal Womens Hospital, Obstetrics And Gynecology, Melbourne, Australia

Objectives: The new (2018) FIGO staging has led to a total of 11 categories of loco-regionally advanced cervix cancer (LRACC). While incorporating imaging in an improvement to pure clinical staging (2009 FIGO) this had led to more categories which are not necessarily prognostically discrete groups. We aimed to analyse survival according to 2018 FIGO staging in curatively treated cervix cancer patients and identify iso-prognostic groups based on primary tumour volume and nodal status.

Methods: Patients referred for radiotherapy with curative intent between 1996-2014 were eligible. Baseline clinico-pathological and follow up information was retrieved from an ethics- approved institutional prospective database. Patients were classified to FIGO 2018 staging based on histopathology, MRI (for tumour volume and local compartmental spread) and PET (for nodal spread). Kaplan-Meier method was used to estimate survival at five years. Following survival analysis using recognised prognostic factors, iso-prognostic categories were identified and merged to form 5 iso-prognostic clusters.

Results: Seven hundred and forty-four LRACC patients met eligibility criteria were analysed. Median follow-up was 6 years. Iso-prognostic groups (Clusters) cross-tabulated against 2018 FIGO stages shows heterogenous 5 years survival (last column; Table 1) across the FIGO stages, as compared with progressively worsening prognosis in the iso-prognostic clusters (last row; Table

1).

Table 1 Cross tabulation of iso-prognostic clusters against 2018 FIGO stages

% of total	FIGO 2018 (12 Groups)	Cluster 1 =<3cm	Cluster 2 >3cm	Cluster 3 =<3a N+	Cluster 4 3b-4a, Pelvic N-/+	Cluster 5 Para -aortic N+	5-Year Overall Survival %
7%	(<2 cm) 1b1	2*/55#					96%
16%	(2- <4 cm) 1b2	10/66	14/55				82%
05%	(>4 cm) 1b3		6/36				74%
04%	2a1	2/16	2/11				81%
01%	2a2		2/6				67%
17%	2b	3/25	23/104				77%
01%	3a (N-)	0/1	2/7				54%
03%	3b (N-)				11/19		47%
35%	3c1 (Pelvic N+)			90/241	12/19 (3b)		61%
10%	3c2 (PA N+)					52/74	37%
01%	4a				4/8	1/1	42%
100% (744)	5-Year Overall Survival %	90%	75%	63%	43%	37%	68%

Group 1, Tumour 3a or less and up to 3 cm diameter or up to 14cc volume and node negative.

Group 2, Tumour 3a or less and > 3 cm diameter or > 14cc volume and node negative.

Group 3, Tumour 3a or less and Pelvic node positive.

Group 4, Tumour 3b or 4a either node negative or pelvic node positive.

Group 5, Any tumour with para-aortic nodes positive.

*Numbers of patients relapsed.

Total number of patients in that category.

Conclusions: Prognosis in LRACC depends on the interplay between primary tumour characteristics; type of local spread and nodal disease. A study of survival and patterns of failure according to iso-prognostic clusters would be useful in selection of appropriate treatment modality; estimating survival as well as better patient selection for clinical trials.

EP083 / #954

EPOSTER VIEWING: AS03 CERVICAL CANCER

DIAGNOSTIC ACCURACY OF PRETREATMENT IMAGING REGARDING LYMPH NODE METASTASIS IN EARLY STAGE CERVICAL CANCER

Ester Olthof^{1,2}, Brenda Voorthuis³, Hans Wenzel¹, Jacobus Van Der Velden², Lukas Stalpers⁴, Constantijne Mom², Maaïke Van Der Aa¹

¹Netherlands Comprehensive Cancer Organization, Department Of Research & Development, Utrecht, Netherlands, ²Amsterdam University Medical Centre, Centre for Gynecological Oncology Amsterdam, Department Of Gynecological Oncology, Amsterdam, Netherlands, ³University of Twente, Technical Medical Centre, Department Of Health Technology And Services Research, Enschede, Netherlands, ⁴Amsterdam University Medical Centre, Department Of Radiotherapy, Amsterdam, Netherlands

Objectives: Imaging modalities are increasingly used to assess lymph node involvement in early-stage cervical cancer patients even though there is a paucity of evidence on the diagnostic accuracy. This retrospective study aims to evaluate the accuracy of MRI, CT, and PET-CT in detecting nodal metastases.

Methods: Women diagnosed between 2009-2017 with a pretreatment CT, MRI, or PET-CT were selected from the Netherlands Cancer Registry. The pelvic +/- para-aortic nodal status was registered according to radiological judgement (i.e. negative, inconclusive or positive); inconclusive nodes were categorized as positive. Pathological results were considered the gold standard in calculating accuracy indices for FIGO 2009 IA-IIA. If pathological results were missing, multiple imputation was applied to limit verification bias risk.

Results: Of 1,955 patients included, the gold standard was available in 84%. Nodal evaluation was assessed in 1,431, 685, and 288 patients by MRI, CT, and PET-CT, respectively. Analyses of original and imputed data are presented in Table 1. With an AUC of 0.746, PET-CT was more accurate than MRI (0.717) and CT (0.677) in detecting nodal metastases, but not regarding specificity: 64%, 91%, and 90%,

respectively.

Table 1. Accuracy indices for MRI, CT, and PET-CT in early-stage cervical cancer, before and after data imputation.

	Original data			Imputed data		
	MRI	CT	PET-CT	MRI	CT	PET-CT
n	1191	558	137	1431	685	288
Incidence of LNM*, %	20	25	44	28	32	62
Sensitivity, %	34	37	73	52	45	85
Specificity, %	93	91	75	91	90	64
PPV, %	55	59	70	69	68	79
NPV, %	85	81	78	83	77	73
AUC	0.636	0.640	0.743	0.717	0.677	0.746

*Incidence of lymph node metastases (LNM) based on pathological results.

Conclusions: In early-stage cervical cancer, the accuracy of PET-CT was superior to MRI and CT in the detection of nodal metastases. Although, this might be related to its use as a second verification modality. Limiting verification bias by multiple imputation positively influences the diagnostic accuracy of pretreatment imaging and increases the incidence of nodal metastases, given that data on positive-imaging with pathologic evaluation in early-stages are often missing.

EP084 / #1140

EPOSTER VIEWING: AS03 CERVICAL CANCER

LAPAROTOMY VERSUS LAPAROSCOPY FOR THE MANAGEMENT OF EARLY STAGE CERVICAL CANCER. HOSPITAL DR SOTERO DEL RIO. CHILE

Oscar Puga¹, Javier Retamales², Victoria Perez³, Emiliano Pertossi³, Miguel Urzúa³

¹Clinica las Condes / Hospital Sotero del Rio, Oncología Ginecológica, Santiago, Chile, ²Hospital Dr Sotero del Rio, Radiotherapy, Santiago, Chile, ³Pontificia Universidad Católica de Chile / Hospital Sotero del Rio, Oncología Ginecológica, Santiago, Chile

Objectives: The treatment of early stage cervical cancer is surgical, radical hysterectomy with bilateral pelvic lymphadenectomy is the standard recommendation. LACC trial shows that open radical hysterectomy was associated with better disease free survival than minimally invasive radical hysterectomy. The aim of our study is to compare overall survival between laparoscopic surgery and open laparotomy in early stage cervical cancer.

Methods: We performed a retrospective review of patients with early stage cervical cancer treated with radical hysterectomy and pelvic lymphadenectomy between 2013 and 2019 at the department of Obstetric and Gynecology of Hospital Dr Sótero del Rio, Santiago de Chile. We analyzed clinical reports and statistical studies was performed

Results: We performed 100 radical hysterectomies, 50 by laparoscopy and 50 laparotomy. FIGO stage included IA2 (4), IB1 (46), IB2 (45), II A1(5) Both groups were similar; age (mean 46 years, range 27-77), associated pathology, histology (squamous 69%, adenocarcinoma 30%, adenosquamous carcinoma 1%) and surgical stage. There were no statistical differences between body mass index, pelvic lymph nodes removed and operative time. No differences in adjuvant chemoradiation 38%. Laparoscopic Surgery was associated with significantly better results in terms of estimated blood loss ($p=0.002$) and discharge from hospital ($p=0.002$). There were no differences in overall survival when analyzing both surgeries.

Conclusions: Laparoscopic radical surgery has similar therapeutic efficacy compared to open radical hysterectomy without differences in overall survival, but has more favorable surgical outcomes including fewer estimated blood loss and shorter hospital stay.

EP085 / #989

EPOSTER VIEWING: AS03 CERVICAL CANCER

BRAIN , VERTEBRAL AND PARAVERTEBRAL RECURRENCES IN CARCINOMA CERVIX—SINGLE INSTITUTION STUDY

Rupinder Sekhon, Amita Naithani, Priyanka Makkar, Raj Pratima
RGCIRC, Gynecologic Oncology, DELHI, India

Objectives: The occurrence of brain and central nervous system (CNS) metastasis from gynaecological malignancy is rare, occurring in only 1% of all female genital tract malignancy and even rarer is the metastasis to brain from primary carcinoma cervix. There is minimal data on these “neuro-phobic tumours”.

Methods: All patients of Carcinoma Cervix treated at Rajiv Gandhi Cancer Institute and Research Centre (RGCIRC) between January 2007 till January 2021 were included. A retrospective analysis of incidence, pattern of recurrence and survival rates was done.

Results: A total of 3440 patients of carcinoma cervix were treated at RGCIRC during the study period. The median age of CNS recurrence in carcinoma cervix was 55 years. A total of 4 CNS, 3 vertebral and 4 paravertebral soft tissue deposits were reported. The commonest site of recurrence in CNS was cerebral hemisphere, a total of 3 cases (0.12%) followed by cerebellum in 1 case. Median time of CNS recurrence from the diagnosis of primary disease was 22.75 months, with the longest time duration of recurrence being 41 months. Overall survival post-CNS recurrence was approximately 7 months with all patients succumbing to disease during the further follow-up. Longest survival being 11 months 13 days and shortest being 1 month 20 days post-brain metastasis.

Conclusions: Rare metastatic recurrence of an otherwise common gynaecological cancer has been reported in this study. The recurrence is not related to the tumour histology and has a poor prognosis uniformly.

EP086 / #167

EPOSTER VIEWING: AS03 CERVICAL CANCER

POTENTIAL SUPERIORITY OF RADICAL HYSTERECTOMY OVER RADIOTHERAPY IN LOCALLY ADVANCED NON-SQUAMOUS CELL CARCINOMA OF THE CERVIX BUT NOT GASTRIC-TYPE ADENOCARCINOMA (SANKAI GYNECOLOGIC STUDY GROUP)

Toshiyuki Seki¹, Atsumi Kojima², Shinichi Okame³, Satoshi Yamaguchi⁴, Aikou Okamoto¹, Hideki Tokunaga⁵, Shin Nishio⁶, Yuji Takei⁷, Yoshihito Yokoyama⁸, Manabu Yoshida⁹, Norihiro Teramoto¹⁰, Yoshiki Mikami¹¹, Muneaki Shimada⁵, Junzo Kigawa¹², Kazuhiro Takehara³

¹The Jikei University School of Medicine, Department Of Obstetrics And Gynecology, Tokyo, Japan, ²Iwate Medical University, Department Of Obstetrics And Gynecology, Morioka, Japan, ³National Hospital Organization Shikoku Cancer Center, Department Of Gynecologic Oncolog, Matsuyama, Japan, ⁴Hyogo Cancer Center, Department Of Gynecologic Oncology, Akashi, Japan, ⁵Tohoku University, Department Of Obstetrics And Gynecology, Sendai, Japan, ⁶Kurume University School of Medicine, Department Of Obstetrics And Gynecology, Kurume, Japan, ⁷Jichi Medical University, Department Of Obstetrics And Gynecology, Shimotsuke, Japan, ⁸Hirosaki University, Department Of Obstetrics And Gynecology, Hirosaki, Japan, ⁹Matsue City Hospital, Department Of Clinical Pathology, Matsue, Japan, ¹⁰Shikoku Cancer Center, Department Of Clinical Pathology, Matsuyama, Japan, ¹¹Kumamoto University, Department Of Diagnostic Pathology, Kumamoto, Japan, ¹²Matsue City Hospital, Department Of Obstetrics And Gynecology, Matsue, Japan

Objectives: The treatment strategy for locally advanced non-squamous cell cervical cancer (non-SCC) remains controversial, with the existence of human papillomavirus (HPV)-independent adenocarcinoma, particularly the gastric-type (GAS), provoking this controversy in recent years given its aggressive nature. We conducted a multi-institutional retrospective study to explore the optimal treatment strategy for non-SCC.

Methods: Clinical records of patients with stage IB2 to IIB (FIGO2008) non-SCC who underwent primary treatment between 2004 and 2009 were retrieved to analyze treatment outcomes, such as loco-regional progression-free survival (loco-PFS), progression-free survival (PFS), and overall survival (OS). Central pathological review was performed by a panel of gynecologic pathologists.

Results: A total of 168 patients were enrolled, with the most common histological type being usual-type adenocarcinoma (UEA; n = 87), followed by gastric-type adenocarcinoma (GAS; n = 43). Treatment options included surgery in 147 patients and definitive radiation or concurrent chemoradiotherapy (RT/CCRT) was administered in 21 patients. Older patients tended to receive RT/CCRT ($p < 0.001$). Surgery promoted greater loco-PFS (HR: 0.47 0 95% CI 0.23–0.96 $p = 0.04$) and OS (HR: 0.38, 95%CI; 0.20–0.72 $p = 0.003$) compared to RT/CCRT. Subgroup analysis for UEA with propensity score matching showed that patients with UEA exhibited significantly higher loco- PFS, PFS, and OS with surgery than with RT/CCRT. Patients with GAS showed some radiosensitivity but unsatisfying outcomes regardless of treatment.

Conclusions: Surgery can be an optimal treatment option for locally advanced non-SCC cancer of the uterine cervix, except for GAS, suggesting the need for establishing a novel treatment strategy for the disease.

EP087 / #838

EPOSTER VIEWING: AS03 CERVICAL CANCER

PET-CT FINDINGS OF PARA-AORTIC ADENOPATHY PREDICT SURVIVAL IN WOMEN LIVING WITH HIV AND CERVICAL CANCER

Hannah Simonds^{1,2}, Matthys Botha³, Annare Ellmann², James Warwick², Alex Doruyter², Frederick Van Der Merwe⁴, Judith Jacobson⁵

¹University Hospitals Plymouth, Oncology, Plymouth, United Kingdom, ²Stellenbosch University, Medical Imaging And Clinical Oncology, Cape Town, South Africa, ³University of Stellenbosch, Obstetrics & Gynaecology, Unit For Gynaecologic Oncology, Stellenbosch, South Africa, ⁴Stellenbosch University and Tygerberg Academic Hospital, Gynaecologic Oncology Unit, Cap Town, South Africa, ⁵Columbia University, Mailman School Of Public Health, New York, United States of America

Objectives: PET-CT imaging is an ideal staging modality to identify nodal involvement in locally advanced cervical carcinoma (LACC). Previous work from this group has shown that PET-CT findings did not differ by HIV status and that PET-CT was a useful tool in this setting. The cohort was subsequently followed for survival outcomes.

Methods: Patients with LACC FIGO Stage IIb or IIIB were referred for fluorine-18 fluorodeoxyglucose PET-CT based on stage and booking availability between January 2015 and December 2018. Descriptive statistics and Kaplan-Meier estimates were generated to evaluate overall survival (OS) after 2 years of follow-up. All patients were censored by December 2020.

Results: Of the 278 patients included in the cohort, 86 (30.9%) were HIV-positive. 105 (37.8%) had pelvic nodal lesions, and 77 (27.7%) had additional para-aortic adenopathy (PAN). Overall survival (OS) for the cohort, including those found to have distant disease, was 52.9% (HIV-negative) and 42.4% (HIV-positive) ($p=0.12$). For the 192 patients who received radical treatment, 2-year OS by stage and HIV status (negative vs. positive) was as follows: IIIB 75% vs 62.5% ($p=0.86$); IIIc1r 72.5% vs 54.2% ($p=0.09$) and IIIc2r 43.9% vs 41.2% ($p=0.86$). Survival rates were (marginally) associated with HIV status only in stage IIIc1r. PAN involvement conferred a poor prognosis.

Conclusions: PET-CT findings of para-aortic lymphadenopathy in LACC were prognostic for a poor outcome at 2 years, irrespective of HIV status. PET-CT remains a valuable tool in the HIV-positive patient group.

EP088 / #904

EPOSTER VIEWING: AS03 CERVICAL CANCER

PREVALENCE AND RISK FACTORS FOR CERVICAL SQUAMOUS INTRAEPITHELIAL LESIONS AMONG HIV-INFECTED WOMEN AT A UNIVERSITY TEACHING HOSPITAL IN LAGOS, NIGERIA.

Kehinde Okunade¹, Adaiah Soibi-Harry¹, Sunusi Garba¹, John Ogunyemi¹, Austin Okoro¹, Olufemi Thomas-Ogodo¹, Ephraim Ohazurike², Adeyemi Okunowo¹, Rose Anorlu¹

¹University of Lagos, Obstetrics And Gynaecology, Lagos, Nigeria, ²Lagos University Teaching Hospital, Department Of Obstetrics And Gynaecology, Lagos, Nigeria

Objectives: HIV-infected women are at higher risk of developing cervical cancer, however, due to limited resources, it may not be feasible to provide screening services to all HIV-infected women, and thus there is a need to identify those who are most at risk. This study, therefore, determined the prevalence and risk factors of cervical squamous intraepithelial lesions (SIL) among HIV infected women in Lagos, Nigeria.

Methods: This was a descriptive cross-sectional study conducted among HIV-infected women at the Colposcopy clinic of the Lagos University Teaching Hospital (LUTH) as part of the Nigeria U54 Study. A Papanicolaou (Pap) test was used as a screening tool for the detection of cervical squamous intraepithelial lesions (SIL). From October 2008 to December 2021, 1879 HIV-infected women received cervical screening. Statistical analyses were carried out using SPSS version 27.0 for Windows. Descriptive statistics were computed for all relevant data and the association between categorical variables was tested using the X^2 test or Fisher's exact test where applicable. Multivariate analyses were performed to identify the risk factors of cervical SIL. A P-value <0.05 was considered statistically significant.

Results: The prevalence of cervical SIL was 6.7% (126/1879). In the multivariate analyses, coitarche at <20 years of age (AdjOR, 2.25; 95% CI, 1.11–4.54, P=0.024) was associated with an increased risk of cervical SIL.

Conclusions: We found a relatively lower prevalence of cervical SIL among HIV-infected women in this study. Greater efforts should be made to focus on the identification and scaling-up of cervical cancer screening services among women at an early age of sexual debut.

EP089 / #784

EPOSTER VIEWING: AS03 CERVICAL CANCER

LOW USE OF HORMONE THERAPY IN WOMEN WITH EARLY MENOPAUSE ARISING FROM TREATMENT FOR CERVICAL CANCER

Renata Sousa-Lima, Isabella Machado, Luiz-Francisco Freitas, Gilson Veloso, Angelica Rodrigues
Federal University of Minas Gerais, Oncology, Belo Horizonte, Brazil

Objectives: Many cervical cancer patients are premenopausal at diagnosis, and the treatment induces early menopause. The aim of this study was to evaluate the frequency of hormone replacement therapy (HRT) in patients with iatrogenic menopause due to cervical cancer treatment and the impact on clinical and social outcomes on the quality of life.

Methods: Observational, retrospective cohort study, carried out in public health Brazilian institutions, from February to December 2021. Women aged 18 to 50 years, diagnosed with menopause initiated after treatment were selected and interviewed.

Results: One hundred and thirty patients were included. Only 33% of them had been advised about menopause symptoms, 23% about HRT, and only 20% received hormone replacement. Data analysis, using Fisher's or Pearson's chi square test, has shown that earlier age and higher education were associated with a greater probability of receiving HRT ($p=0.021$ and 0.001 , respectively). Other important data were the return to work after treatment, from a social point of view and the lack of information about bone health.

Conclusions: A small percentage of cervical cancer survivors have adequate information about menopause and HRT, and a smaller proportion receive hormone replacement therapy. These data show the need for attention to these young women who have menopause arising from treatment, and reinforce the importance for survivorship guidelines for cervical cancer patients.

EP090 / #894

EPOSTER VIEWING: AS03 CERVICAL CANCER

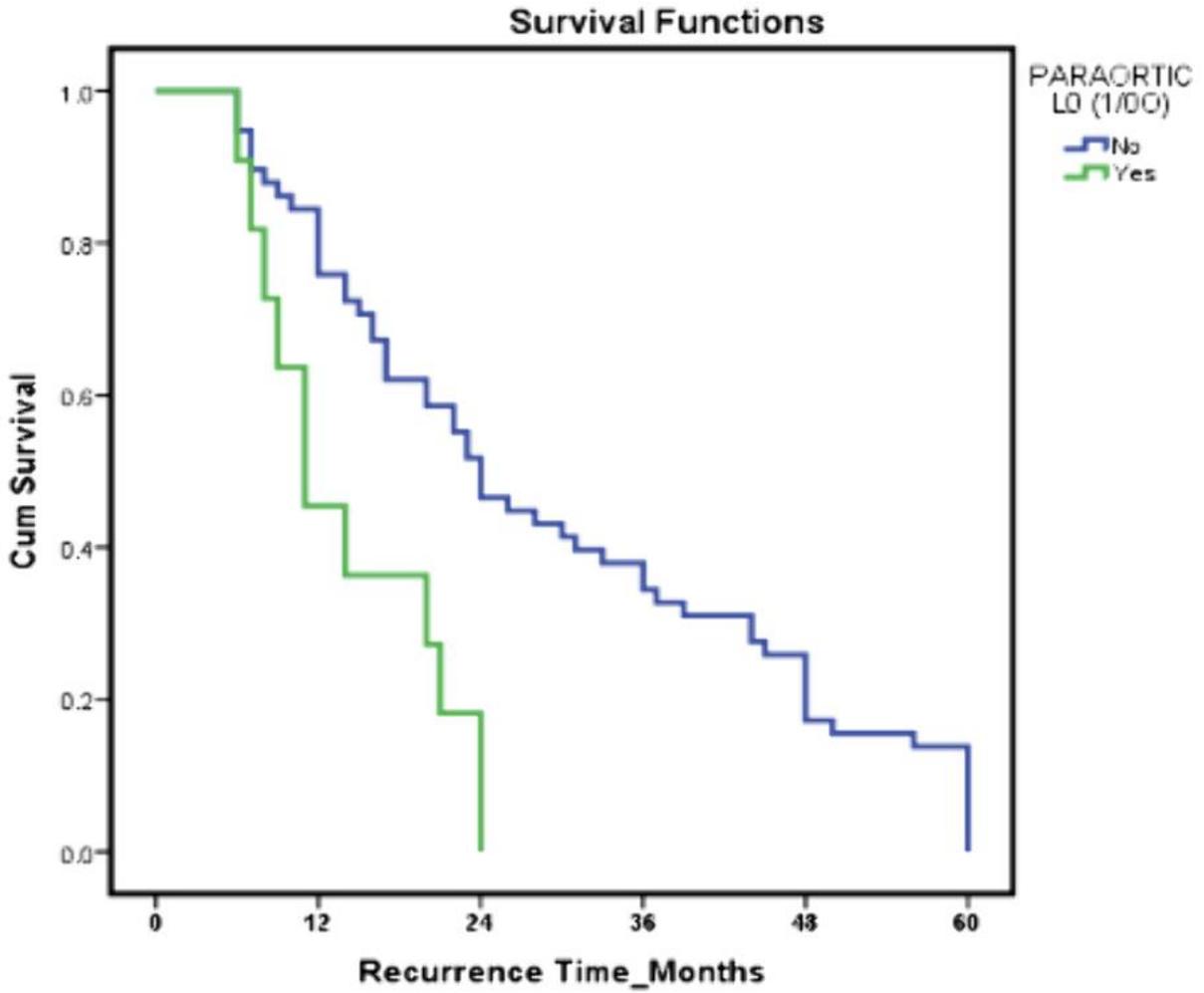
THE UNMET NEED FOR CERVICAL CANCER RECURRENT CASES IN LMIC : A REPORT FROM TERTIARY CANCER INSTITUTE OF NORTH EAST INDIA

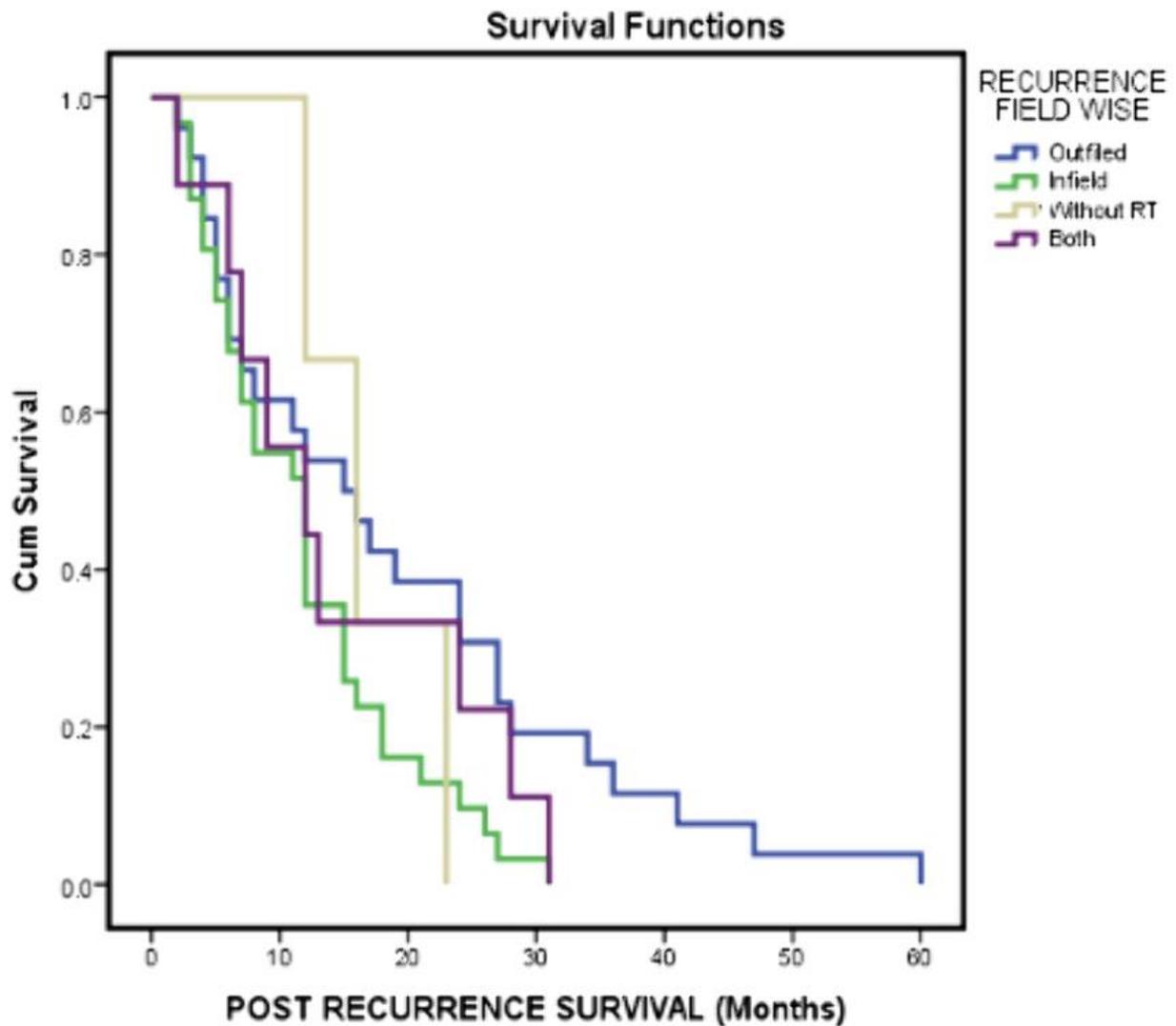
Apoorva Tak, Debabrata Barmon, Upasana Baruah, Ac Katakai
DR B. BOROOAH CANCER INSTITUTE (UNIT OF TATA MEMORIAL CENTRE ,MUMBAI),
Gynaecologic Oncology, GUWAHATI, India

Objectives: LACK OF FOLLOW UP CAN BE A MAJOR CONTRIBUTING FACTOR FOR TREATMENT FAILURE ESPECIALLY IN A DEVELOPING COUNTRY LIKE INDIA WHERE CANCER CERVIX RANKS SECOND HIGHEST IN MALIGNANCY AMONG FEMALES. PRIMARY OBJECTIVE : TO ANALYSE FACTORS AFFECTING RECURRENCE, TYPE OF FAILURE AND THE FOLLOW UP PATTERN OF PATIENTS WHO COMPLETED TREATMENT WITH A MINIMUM FOLLOW-UP PERIOD OF 6 MONTHS
SECONDARY : TO STUDY THE THE EFFICIENCY OF VARIOUS TECHNIQUES FOR CERVICAL CANCER POST-TREATMENT SURVEILLANCE .

Methods: A SINGLE INSTITUTIONAL RETROSPECTIVE ANALYSIS WITH A PERIOD OF 3 YEARS FROM JANUARY 2019 TO JANUARY 2022 PATIENTS WHO RECEIVED TREATMENT IN FORM OF DEFINITIVE OR ADJUVANT RADIATION WITH ADEQUATE FOLLOW UP REPORTS OF MINIMUM OF SIX MONTHS.

Results: COX REGRESSION ANALYSIS REVEALED ADVERSE IMPACT ERRACTIC FOLLOW UP (HR = 3.8) AND PELVIC SIDE WALL DISEASE (HR=1.33) ON SURVIVAL PATIENTS WITH POSITIVE PARAORTIC NODES HAD SIGNIFICANTLY SHORTER DISEASE FREE INTERVAL OF 11 MONTHS.SO ADDING SYSTEMIC THERAPY TO ADJUVANT TREATMENT SHOULD BE INVESTIGATED FURTHER. SURVIVAL FOR PATIENTS WITH REGULAR FOLLOW UP WAS 61.6 MONTHS. OUT OF 69 ,IN 57 PATIENTS SYMPTOMS ALONE WERE THE INDEX DIAGNOSTIC METHOD .NEITHER OF THE METHODS OF RECURRENCE DETECTION HAVE IMPACT ON OS





Conclusions:

THIS STUDY WAS UNDERTAKEN IN A DEVELOPING NATION THAT HARBOURS MAJORITY OF GLOBAL BURDEN OF CERVICAL CANCER . THOROUGH EXAMINATION OF CLINICAL SYMPTOMS COULD DIAGNOSE RECURRENCE EARLY .ALSO THE RECURRENCE DETECTION OUTCOMES WERE NOT LINKED TO SPECIFIC DIAGNOSTIC PROCEDURES. INTERESTINGLY , THERE WAS A TREND OF BETTER SURVIVAL PERIOD IN PATIENTS WHO FOLLOWED UP REGULARLY.

EP091 / #76

EPOSTER VIEWING: AS03 CERVICAL CANCER

UTILIZATION OF LYMPH NODE EVALUATION AT TIME OF HYSTERECTOMY FOR CERVICAL CARCINOMA IN-SITU

Amin Tavakoli¹, Kelly Donovan¹, Rachel Mandelbaum¹, Maximilian Klar², Lynda Roman¹, Jason Wright³, Koji Matsuo^{1,4}

¹LAC+USC, Ob/gyn, Los Angeles, United States of America, ²University of Freiburg Faculty of Medicine, Department Of Obstetrics And Gynecology, Freiberg, Germany, ³Columbia University, Obstetrics And Gynecology, New York, United States of America, ⁴University of Southern California, Gynecologic Oncology, Los Angeles, United States of America

Objectives: To examine the utilization and characteristics of lymph node evaluation at time of hysterectomy for carcinoma in-situ of the cervix.

Methods: This retrospective cohort study queried the National Inpatient Sample, evaluating 7,395 patients with cervical carcinoma in-situ who underwent hysterectomy from 2016-2019. A multivariable binary logistic regression model was fitted to identify independent characteristics related to lymph node evaluation at hysterectomy. A classification-tree was constructed with recursive partitioning analysis to examine utilization patterns of nodal evaluation.

Results: Lymph node evaluation was done during hysterectomy in 4.6% of the study population. In a multivariable analysis, older age, higher household income, use of robotic-assisted hysterectomy, and surgery at large bed capacity or urban teaching centers in Northeast U.S. region were associated with increased likelihood of lymph node evaluation (all, $P < 0.05$). Of those independent factors, robotic-assisted surgery exhibited the largest effect size (adjusted-odds ratio 3.23, 95% confidence interval 2.54-4.10), followed by urban teaching hospital (adjusted-odds ratio 2.96, 95%CI 2.13-4.10). Utilization pattern analysis identified 9 unique characteristics, of which robotic-assisted surgery was the primary indicator for cohort allocation (12.4% versus 3.2%, $P < 0.001$). Three of nine patterns had the lymph nodal evaluation rate exceeding 10% and all were associated with robotic-assisted surgery. The rate difference between the highest and lowest groups were 33.3% (range, 0% to 33.3%).

Conclusions: Overall, one in approximately 22 patients with cervical carcinoma in-situ underwent lymph node evaluation during hysterectomy in this population. Marked association between robotic-assisted surgery and lymph node evaluation at time of hysterectomy for cervical carcinoma in-situ warrants further investigation to determine the long-term risks and benefits of the procedure in this setting.

EP092 / #966

EPOSTER VIEWING: AS03 CERVICAL CANCER

THE CLINICAL IMPLICATIONS AND IMPACT OF HYDRONEPHROSIS IN CERVICAL CANCER AT REGIONAL CANCER CENTRE IN EASTERN INDIA

Manisha Vernekar¹, Puja Chatterjee¹, Sreeya Bose¹, Arpita Mandal¹, Ranajit Mandal¹, Asima Mukhopadhyay^{1,2}

¹Chittaranjan National Cancer Institute, Gynecological Oncology, kolkata, India, ²Chittaranjan National Cancer Institute, Kolkata Gynecological Oncology Trials And Translational Research Group, Kolkata, India

Objectives: The current study sought (1) to analyze the prognostic effect of hydronephrosis and associated morbidity (2) To determine the clinical profile of patients with urinary complications of advanced cancer cervix and the clinical outcome of the various therapeutic options administered.

Methods: The study data were acquired by prospective analysis of the patient records from the Dept of gynecological oncology, from January 2021 to January 2022. In this study, 47 patients with advanced cancer cervix previously treated or untreated, who had obstructed uropathy were evaluated to know the type of urological complications, their management and their effect on the primary disease. Various methods of urinary reconstruction were tried and the clinical outcomes of these approaches were analyzed.

Results: A total of 47 patients included in the study, 16 (34%) were uraemic at presentation, majority of them being in stage IIIB of carcinoma cervix with 21 cases (44.7%) having bilateral obstruction. Of the 47 patients, 18 (38.3%) underwent surgical urinary diversion. Stenting was done in 6 cases, 12 cases had percutaneous nephrostomy. Hemodialysis was required in 3 cases. 5 patients (10.6%) died before or during intervention. 3 patients underwent surgery only, 21 cases required CCRT, 8 cases RT only, 7 received NACT followed by CCRT/RT, 6 cases received palliative chemotherapy, and 1 patient for palliative and best supportive care.

Conclusions: Advanced cancer of the cervix leads on to obstructive uropathy, presenting as uraemia. Various urinary diversion procedures are useful in improving renal function, followed by definitive treatment options.

EP093 / #664

EPOSTER VIEWING: AS03 CERVICAL CANCER

AUTOMATIC MULTIMODAL CLASSIFICATION USING TRANSFORMER FOR CERVICAL CANCER

Shaojun Xia, Hai-Tao Zhu, Bo Zhao, Kun Cao, Ying-Shi Sun
Peking University Cancer Hospital & Institute, Department Of Radiology, Beijing, China

Objectives: In cervical cancer diagnosis, automatic classification and identification can effectively reduce the workload of radiologists and gynecologists. Due to that T2-MR and DWI-MR images are complementary in lesion information, it is necessary to combine medical images with the two modalities. In this study, we proposed a automatic classification pipeline for cervical cancer based on Swin-Transformer and verified the classification potential on multimodality.

Methods: Fifty-eight T2-MR images and eighty DWI-MR images of patients with cervical cancer were retrospectively enrolled. Totally 1858 slices were annotated by radiologists to four classes, including T2-tumor, T2-notumor, DWI-tumor and DWI-notumor. 1489 slices were used for training and 369 images for validation. In addition, images of ten patients containing 184 DWI slices and 200 T2 slices were not participated in modeling as test set. All the gray slices(512×512) with single channel were repeated to three channels and resized to 224×224 pixels. Finally, the mixed 1858 slices(892 DWI, 966 T2) were put into the classification network based on Swin-Transformer (optimizer: AdamW, batchsize = 8, lr = 0.0001).

Results: Four typical metrics were applied to evaluate the classification result, including accuracy, F1-score, sensitivity and specificity. Regarding to the 184 DWI test slices, the accuracy, F1-score, sensitivity, specificity were 91.85%, 90.15%, 88.52% and 93.50%, respectively. And the accuracy of 200 T2 test slices was 83.00% . Besides, there was no error in the distinguishment between the two modalities.

Conclusions: This work confirmed that the tumor of cervical cancer on multimodal MRI images can be automatically classified with high accuracy.

EP094 / #738

EPOSTER VIEWING: AS03 CERVICAL CANCER

EVALUATION OF LYMPHEDEMA AFTER TREATMENT OF CERVICAL CARCINOMA-HOSPITAL BASED STUDY

Dilruba Yeasmin¹, Shahana Pervin²

¹National Institute of Cancer Research and Hospital, Gynaecological Oncology, Dhaka, Bangladesh, ²National Institute of Cancer Research & Hospital, Gynecological Oncology, Dhaka, Bangladesh

Objectives: Background: Lower limb lymphedema following treatment of cervical cancer is a significant cause of morbidity and has a negative impact on quality of life. Lymphedema presents typically within the first 12 months post-treatment. With appropriate preventive therapy and education quality of life in cancer survivor will be better. Objective: To evaluate the incidence, risk factors and treatment modalities in cervical carcinoma patients with lymphedema and impact of lymphedema symptom on their quality of life.

Methods: This observational study was conducted in gynae oncology department of National Institute of Cancer Research and Hospital, Dhaka in between 2018-2020. Total 3164 cervical carcinoma patients were attended in GOPD and treated either by surgery or radiotherapy. Patient who died of cancer or lost in follow up were excluded. The International Society of Lymphology staging of lymphedema severity used as a diagnostic criteria for lower limb lymphedema.

Results: During follow up 189 cervical cancer patients (9.95%) were diagnosed with lymphedema. Lymphedema were more prevalent (74.04%) among patients underwent surgery with adjuvant radiotherapy. In 42.32% patients bilateral pelvic lymphadenectomy was done. Lymphedema was present in 33.86% patients in both legs. 40.8% patients present with numbness in lower limb followed by tightness(22.5%) and limited movement of knee (21.1%). Among them 63% patient was anxious, 55% was depressed and sexual dysfunction was present in 35% cases.

Conclusions: Lymphedema is a significant morbidity among cervical cancer survivor. Unfortunately, there is no consensus about a uniform evaluation. Standardization in lymphedema evaluation is required to better compare the outcome of different types of treatment.

EP095 / #856

EPOSTER VIEWING: AS03 CERVICAL CANCER

COMPARISON OF SURVIVAL OUTCOME OF OPEN, TOTAL LAPAROSCOPIC, AND LAPAROSCOPY-ASSISTED VAGINAL RADICAL HYSTERECTOMY FOR STAGE IB2 CERVICAL CANCER PATIENTS: A MULTICENTER RETROSPECTIVE STUDY

Hyung Joon Yoon¹, Eun Taeg Kim^{1,2}, Ha Eun Jeong², Dong Soo Suh²

¹Pusan National University Hospital, Obstetrics And Gynecology, Busan, Korea, Republic of, ²Pusan national university hospital, Obstetrics And Gynecology, Pusan, Korea, Republic of

Objectives: The aim of this study was to compare survival outcomes of three different radical hysterectomy(RH) types, namely total abdominal radical hysterectomy(TARH), total laparoscopic radical hysterectomy(TLRH), and laparoscopy-assisted radical vaginal hysterectomy(LARVH), in patients with FIGO stage IB2 cervical cancer.

Methods: The study cohort was retrospectively recruited from three institutions in Korea—two Pusan National University Hospital (Pusan and Yangsan) and Ulsan University Hospital—between 2010 and 2017. Patients with stage IB2 cervical cancer were included and classified into TARH, TLRH, and LARVH treatment groups. Survival outcomes were estimated by the Kaplan–Meier and compared with the log-rank test. Cox proportional hazards models were fit to estimate the independent association of RH technique with outcome.

Results: 194 patients were included in this study. No significant difference was found in the clinicopathological characteristics in each group. On comparing survival outcomes with TARH, both TLRH and LARVH showed no significant difference in terms of five-year overall survival (OS) (TARH vs. TLRH, $p=0.121$ and TARH vs. LARVH, $p=0.436$). Conversely, compared to the TARH group, five-year progression-free survival (PFS) was significantly worse in the TLRH group ($p=0.034$) but not in the LARVH group ($p = 0.288$). Multivariate analysis showed that TLRH surgical approach (HR, 3.232; 95% CI, 1.24–8.44; $p=0.017$) was an independent prognostic factor for PFS in patients with IB2 cervical cancer.

Conclusions: Our study suggests that in patients with FIGO stage IB2 cervical cancer, among the minimally invasive RH approaches, TLRH and LARVH, only TLRH approach was associated with worse PFS when compared with the TARH approach.

EP096 / #271

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

CELL CYCLE REGULATORY MARKER AS A POTENTIAL PROGNOSTIC BIOMARKER IN UTERINE CARCINOSARCOMA

Min-Hyun Baek¹, Jeong-Yeol Park², Yangsoon Park³

¹Hallym University Sacred Heart Hospital, Obstetrics And Gynecology, Anyang, Korea, Republic of, ²University of Ulsan College of Medicine, Asan Medical Center, Obstetrics And Gynecology, Seoul, Korea, Republic of, ³University of Ulsan College of Medicine, Asan Medical Center, Pathology, Seoul, Korea, Republic of

Objectives: The relevance of cell cycle regulatory markers with uterine carcinosarcoma was investigated.

Methods: The immunohistochemical expression of p16, p53, and cyclin D1 were assessed using tissue microarray of 55 eligible patients.

Results: p16 and p53 showed a high rate of strong (+3) immune reaction in carcinomatous/sarcomatous components (61.8%/70.9% and 52.7%/56.4%, respectively). Cyclin D1 showed a 14.5%/7.3% of strong immune reaction in the carcinomatous/sarcomatous components. Strong expression of p16 was related to a higher rate of lymph node metastasis and a bigger tumor size. Strong expression of cyclin D1 was related to the lower International Federation of Gynecology and Obstetrics (FIGO) stage. In univariate regression analysis, FIGO stage, lymph node metastasis, p16, and cyclin D1 were prognostic factors for disease-free survival. FIGO stage, p16, p53, and cyclin D1 were prognostic factors for overall survival. In a multivariate regression analysis, FIGO stage and p16 in carcinomatous component were independent factors for both disease-free survival (odds ratio [OR], 95% confidence interval [CI]; 3.5 [1.2–10.3] and 3.5 [1.3–9.9]; P = 0.026 and 0.016) and overall survival (OR, 95% CI; 2.3 [1.0–5.1] and 2.9 [1.1–7.8]; P = 0.042 and 0.037).

Conclusions: p16 was a predictor of lymph node metastasis, tumor size, and prognostic outcome in uterine carcinosarcoma.

EP097 / #652

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

SENTINEL NODE MAPPING DECREASES THE PREVALENCE OF ISOLATED POSITIVE PARA-AORTIC LYMPH NODE IN ENDOMETRIAL CANCER

Jacqueline Menezes¹, Thiago Diniz¹, Carlos Faloppa¹, Henrique Mantoan¹, Lillian Kumagai¹, Levon Badiglian-Filho¹, Grazielle Bovolim², Bruna Goncalves¹, Andrea Guimaraes³, Louise De Brot², Glauco Baiocchi¹

¹AC Camargo Cancer Center, Gynecologic Oncology, Sao Paulo, Brazil, ²AC Camargo Cancer Center, Pathology, Sao Paulo, Brazil, ³AC Camargo Cancer Center, Medical Oncology, Sao Paulo, Brazil

Objectives: Isolated positive para-aortic lymph node (PALN) in endometrial cancer is an uncommon event. Our aim was to evaluate the impact of sentinel lymph node (SLN) mapping in the risk of isolated positive PALN.

Methods: We retrospectively evaluated a series of 426 patients submitted to SLN mapping from January 2013 to December 2021 (Group A) compared to a historical series of 210 cases submitted to systematic pelvic and para-aortic lymphadenectomy from June 2007 to April 2015 (Group B) in AC Camargo Cancer Center. Isolated PALN recurrence was considered as positive.

Results: For Group A, 234 (54.9%) cases had blue dye and 192 (45.1%) ICG. The overall and bilateral detection rate was 90.4% and 80.8%, respectively. SLN only and SLN + pelvic ± para-aortic lymphadenectomy was performed in 258 (60.6%) and 168 (39.4%) of cases, respectively. Fifty-two (12.2%) patients had positive SLN, recording a sensitivity, NPV and FNPV of 92.9%, 98.9% and 1.1%, respectively. Moreover, 35 (16.7%) patients had positive LN in Group B. In Groups A and B, pelvic positive LN were noted in 55 (12.9%) and 28 (13.3%) cases ($p=0.82$), and positive PALN in 12 (2.8%) and 18 (8.6%) cases ($p=0.001$), respectively. Of the cases with bilateral SLN mapping, we found 2 cases (0.47%) with isolated positive PALN. Conversely, 7 (3.8%) cases of isolated positive PALN were noted in Group B ($p=0.007$).

Conclusions: SLN protocol can accurately predict LN status. Moreover, isolated PALN involvement after bilateral SLN detection is a rare event and even lower compared to systematic lymphadenectomy.

EP098 / #769

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

ENDOMETRIAL CANCER: ASSESSMENT OF INCIDENCE, STAGING AND SURVIVAL IN A UNIVERSITY HOSPITAL

Lyliana Barbosa¹, Eduarda Silveira², Bruno Napoleao¹, Marcio Ribeiro¹, Marieli Pagani¹, Vivian Silveira¹
¹VALE DO SAPUCAÍ UNIVERSITY, Gynecology, POUSO ALEGRE, Brazil, ²UNIVAS, Gynecology, POUSO ALEGRE, Brazil

Objectives: The objective was to evaluate the histology, age, staging and survival of women with endometrial cancer treated at a university hospital.

Methods: Evaluation of medical records of women with endometrial cancer, followed at a University Hospital in Brazil, from Jan/2018 to Dec/2021. The variables evaluated: age/histological type/staging/recurrence.

Results: 58 women between 42 and 79 years (mean of 62.8 years) were treated. The most common histological type was endometrioid adenocarcinoma with 50 cases (86.2%), degree of differentiation: G1: One case (1.7%); G2: 25 cases (43.1%) and G3: 24 cases (41.3%). The second most common histological type was carcinosarcoma with four cases (6.9%), followed by serous adenocarcinoma with two cases (3.4%) and clear cell adenocarcinoma with two cases (3.4%). 17 patients (29.3%) were in stage Ia, 17 (29.3%) stage Ib, six patients (10.3%) stage II. Three patients (5.2%) in stage IIIB, three (5.2%) stage IIIC, and six patients (10.3%) stage IIIC1. In stage IV, one patient (1.7%) in the IVA and three (5.2%) in the IVB. Recurrence occurred in 9 patients (15.5%), four endometrioid adenocarcinoma G3, two serous subtypes and two carcinosarcomas. There were five deaths (two due to postoperative complications and three not related to the disease). To date, 41 patients have no evidence of disease and three have lost follow-up.

Conclusions: The mean age was 62.8 years. 58.6% of the neoplasms were in early stages (I). The survival rate was 91.3%. The results are compatible with the current literature.

EP099 / #460

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

3 YEARS SURVIVAL AND RISK OF CANCER PROGRESSION AND DEATH CAUSED BY ENDOMETRIAL CANCER IN GEORGIA

Tina Beruchashvili¹, Vasil Tkeshelashvili¹, Dina Kurdiani², Tamuna Gogoladze³

¹University of Georgia, School Of Health Sciences, Tbilisi, Georgia, ²Tbilisi Cancer Center, Oncogynecologist, Tbilisi, Georgia, ³Zhordania Institute, Gynecology, Tbilisi, Georgia

Objectives: Yet endometrial cancer survival rates, cancer progression and risk of death with this cause have not been studied in Georgia. Conducting the study based on population registry data has been possible since 2015. 5 years registry dBase allowed us to study 3 years survival and risks.

Methods: 1,800 (6.1%) cases of endometrial cancer were registered in the Georgia in 2015-2019. Using dBase SPSS of the registry, 3-year survival of endometrial cancer and risks of cancer progression were studied; Risks of cancer progression and death were assessed 36 months after the incidence.

Results: Average 3-year survival of endometrial cancer in Georgia made up 75.0%, in Tbilisi - 78.2%. Risk of endometrial cancer progression 36 months after the incidence was 4.5% in Georgia and 6.3% in Tbilisi. The risk of endometrial cancer progression in Tbilisi is 1.9 times higher compared to the regions of Georgia. This is probably due to the high incidence of endometrial cancer in Tbilisi. Among gynecological cancer sites endometrial cancer ranks 1st in Tbilisi.

Conclusions: Research should be continued and study 5 years survival and risks of cancer progression and death, according to its treatment methods and schemes, as well as cytological, ultrasound (3D), hysteroscopy, histological, histochemical and molecular characteristics of cancer. Study of 5-year survival, in addition should determine ECOG Adjusted Survival, for which it is recommended that the Registry add ECOG follow-up to the registration variables. The latter will give us an additional opportunity to assess the cancer burden with both DALYs and QALYs index.

EP100 / #1073

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

SURVIVAL OUTCOMES AND RECURRENCE PATTERNS OF LAPAROTOMY VERSUS MINIMAL INVASIVE SURGERY IN WOMEN WITH FIGO 2009 STAGE II UTERINE CANCER

Ane Gerda Eriksson¹, Pernille Bjerre Trent², Yun Wang¹, Milada Småstuen³

¹Oslo University Hospital, Radium Hospital, Department Of Gynecologic Oncology, Division Of Cancer Medicine, Oslo, Norway, ²Oslo University Hospital, Norwegian Radium Hospital, Department Of Gynecological Oncology, Division Of Cancer Medicine, Oslo, Norway, ³Oslo Metropolitan University, Fakultet For Helsevitenskap, Oslo, Norway

Objectives: A randomized trial has demonstrated that minimally invasive surgery (MIS) resulted in poorer survival compared with open surgery in early-stage cervical cancer. There is paucity of data in regards to surgical approach and survival in women with stage II uterine cancers with cervical stromal involvement. We aim to describe survival and recurrence patterns in women with FIGO2009 stage II uterine cancers stratified by surgical approach.

Methods: Women diagnosed with stage II uterine cancer 2006-2021 were identified in our institutional database. Progression free and overall survival (PFS and OS) amongst patients after laparotomy or MIS was compared.

Results: Of 132 patients, 92 (70%) underwent laparotomy and 40 (30%) underwent MIS. Median OS was 10.1 years (95%CI 6.3-13.9), PFS at 1 and 5 years was 81.6% (95% CI 73.7-87.4) and 68.3% (95% CI-75.0-75.9), respectively, figure1. When adjusting for age at surgery, histology and adjuvant therapy there was no difference in overall mortality risk or risk of recurrence between the two surgical approaches ($p=0.66$ for OS, $p=0.405$ for RFS). Patient and tumor characteristics described in table1. Anatomic distribution of recurrences was similar in both groups, table2. In regards to adjuvant therapy 39% received none, 55% received chemotherapy and 5% received radiotherapy. Of the 14 women with isolated vaginal recurrences, 10 were salvaged, 3 are dead of disease and 1 is alive with disease.

Conclusions: Laparotomy and MIS appear to have comparable risks of recurrence and overall mortality in women with stage II uterine carcinoma. Isolated vaginal recurrences can be salvaged in this mainly radiotherapy-naïve population.

PFS (Kaplan Meier estimates)

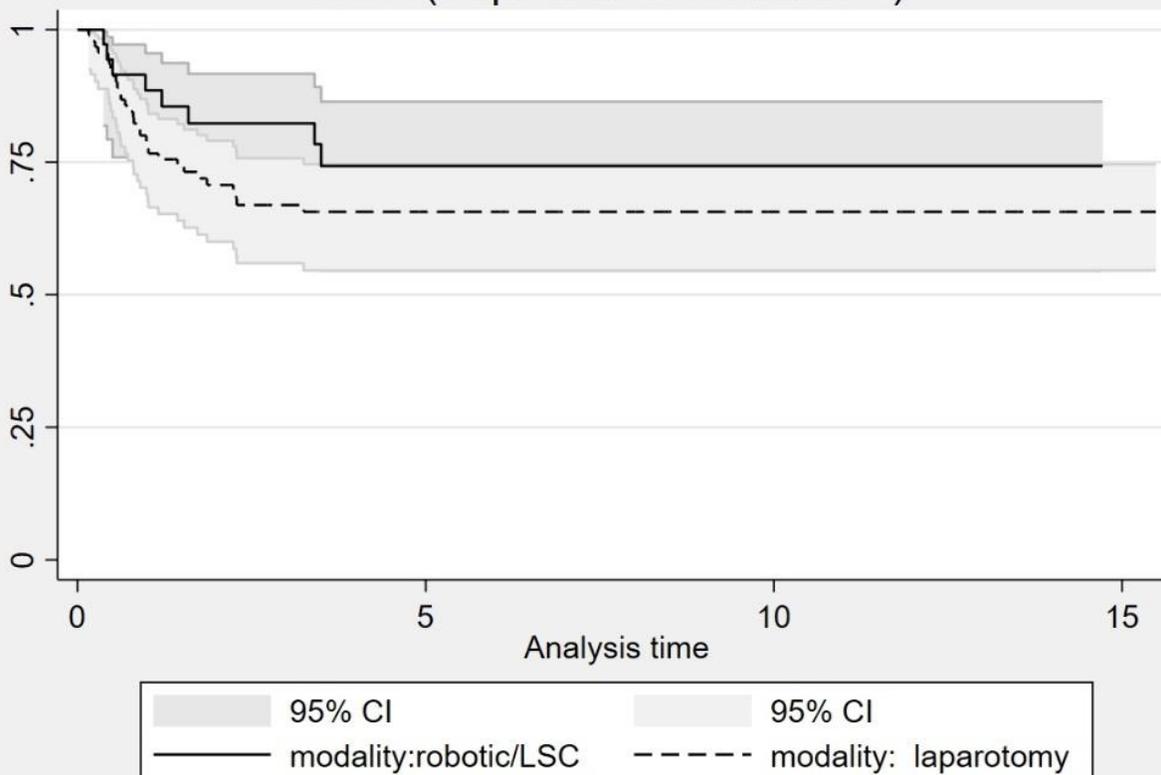


Table 1 Patient and tumor characteristics

Characteristic	Laparotomy N (%)	MIS N (%)	P value
Number of cases	92 (70)	40 (30)	
Age at diagnosis Median (min-max)	70.3 (43.0-97.4)	67.6 (46.3-93.2)	0.19
BMI Median (min-max)	26.4 (18.0-57.3)	26.7 (18.2-57.3)	0.92
ASA			0.72
1-2	47 (51.1)	21 (52.5)	
3-4	26 (28.3)	13 (32.5)	
missing	19 (20.6)	6 (15)	
Hysterectomy type			< 0.00001
Simple	53 (57.6)	39 (97.5)	
Radical	39 (42.4)	1 (2.5)	
Medial assessment			< 0.00001
None	20 (21.7)	13 (32.5)	
PLND +/- PPALND	71 (77.2)	15 (37.5)	
LN	1 (1.1)	12 (30)	
Omentectomy			0.07
No	54 (58.7)	30 (75.0)	
Yes	38 (41.3)	10 (25.0)	
Histology			0.54
Endometrioid	53 (57.6)	30 (75)	
Serous	12 (14.1)	4 (10)	
Clear Cell	8 (8.7)	2 (5)	
Carcinosarcoma	1	2 (5)	
Undifferentiated	1 (1.1)	0	
Mixed	8 (8.7)	2 (5)	
EndometrioidG1	27 (29.3)	19 (47.5)	0.48
EndometrioidG2	14 (15.2)	7 (17.5)	
EndometrioidG3	12 (13.0)	4 (10.0)	
LVI			0.83
Negative	58 (63)	25 (62.5)	
Positive	33 (35.9)	14 (35)	
Not reported	1 (1.1)	1 (2.5)	

Table 2 Treatment and recurrence

Characteristic	Laparotomy N (%)	MIS N (%)
Number of cases	92 (70)	40 (30)
Adjuvant Treatment		
None	39 (42.4)	12 (30.0)
Chemotherapy alone	47 (51.1)	26 (65)
Radiotherapy alone (EBRT)	5 (5.4)	2 (5.0)
Chemo/RT	1 (1.1)	0
Cycles adjuvant chemotherapy	6 (3-6)	6 (3-6)
Median (min-max)		
Recurrence site		
Not recurred	62 (67.4)	32 (80.0)
Vaginal	11 (12.0)	3 (7.5)
Pelvic	1 (1.1)	0
Distant	4 (4.3)	1 (2.5)
Multiple sites	14 (15.2)	4 (10.0)

EP101 / #503

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

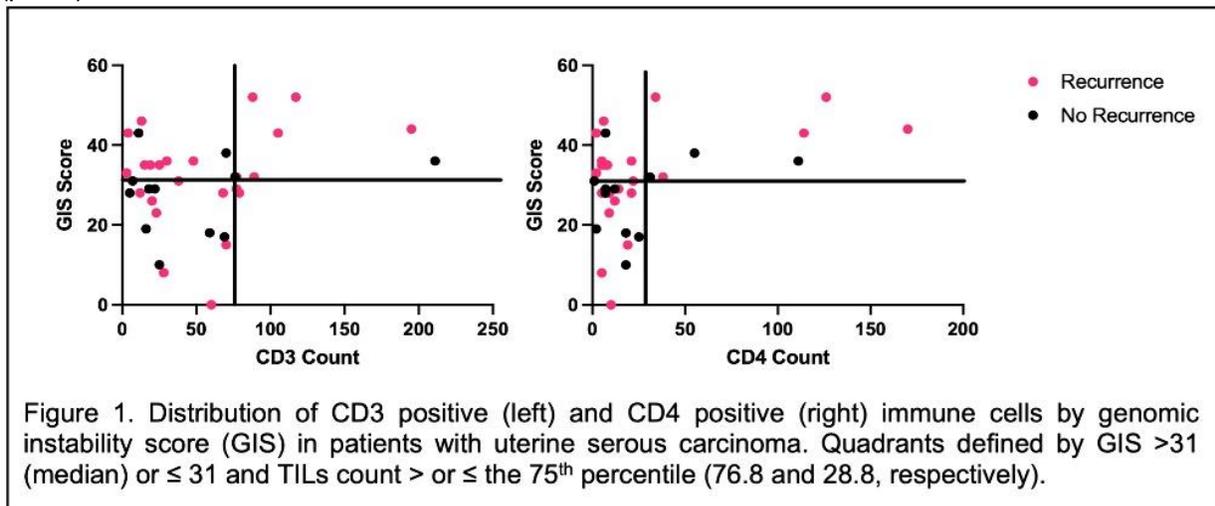
RELEVANCE OF GENOMIC INSTABILITY SCORE, TUMOR MUTATIONAL BURDEN, AND TUMOR INFILTRATING LYMPHOCYTES AS BIOMARKERS IN UTERINE SEROUS CARCINOMA

Elizabeth Bloom¹, Pamela Peters¹, Regina Whitaker¹, Rebecca Previs¹, Kyle Strickland², Kristen Timms³, Shelly Cummings³, Thomas Slavin³
¹Duke University, Obstetrics And Gynecology, Durham, United States of America, ²Duke University School of Medicine, Pathology, Durham, United States of America, ³Myriad Genetics, Genetics, Salt Lake City, United States of America

Objectives: Uterine serous carcinomas (USC) represent 10% of endometrial carcinomas but nearly 40% of deaths. We characterized genomic instability (GIS), tumor mutational burden (TMB), and density of tumor infiltrating lymphocytes (TILs) in patients with USC.

Methods: A single institution, retrospective cohort study analyzed patients with USC following hysterectomy. In collaboration with Myriad Genetics, we determined GIS score and TMB from archived specimens. Cox proportional hazards models evaluated associations of molecular factors with survival. Using immunohistochemistry, we evaluated tumoral expression of CD3, CD4, CD8. T-tests were conducted to evaluate associations of TILs with GIS and tumor recurrence.

Results: We evaluated 53 patients with USC; 66% (n=35/53) presented with advanced disease (stage III-IV). Median GIS was 31 (range: 0-52) and not associated progression-free survival (PFS) or overall survival (OS). Median TMB was 1.35; patients whose tumors exhibited TMB >1.35 mutations/megabase (median) had improved PFS and OS (p=0.005, 0.002). Two tumors had elevated CD3+ TILs (>75th percentile) and low GIS (<=31). Tumors with elevated CD3+ and CD4+ immune cells had significantly higher mean GIS (p=0.013, p=0.002). Tumors with both low GIS and low-normal TILs (<=75th percentile) had lower recurrence rates (p=0.2).



Conclusions: TMB >1.35 mutations/megabase was associated with improved survival. Alternate TMB thresholds may provide prognostic value for less immunogenic tumors, like USC. In this limited data set, GIS was not associated with survival or recurrence. Patients with low GIS and low-normal TIL infiltration had lower recurrence rates, unlike other solid tumors. Additionally, the presence of CD3/CD4+ immune cells may be a marker of GIS.

EP102 / #380

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

SENTINEL LYMPH NODE MAPPING IN ENDOMETRIAL CANCER USING INDOCYANINE GREEN. PRELIMINARY EXPERIENCE AT HOSPITAL DE TALCA, CHILE.

Cesar Paredes¹, Yesica Sagredo¹, Ivan Castillo², Francisco Herrera¹, Juan Leiva¹

¹Universidad Catolica del Maule, Ginecologia Y Obstetricia, Talca, Chile, ²Universidad Catolica del Maule, Centro Oncológico-facultad De Medicina, Talca, Chile

Objectives: To validate sentinel lymph node (SLN) mapping using indocyanine green (ICG), in endometrial cancer staging.

Methods: A prospective study was conducted between january and december of 2021 at hospital de Talca, Chile. All patients with clinical stage 1 endometrial cancer of all grades and histologies, were included. At the beginning of the procedure, 1 ml of ICG was injected superficially and 1 ml deep at 3 and 9 o'clock of uterine cervix of all patients. Subsequently, SLN mapping was performed followed by standard staging with pelvic lymphadenectomy (PLND) with or without paraaortic lymphadenectomy (PALND). Identified sentinel nodes were processed with ultrastaging technique in our pathology department.

Results: Thirty-three patients were enrolled. Histology was endometrioid in 81.8% (27 cases) and non-endometrioid in 18.2% (6 cases). Nine patients had high-grade endometrioid histology. All patients underwent complete PLND and in 20% PALND was also done. At least one SLN was detected in 100% of patients. Bilateral detection occurred in 30 of 33 patients (90.9%). The most frequent localizations were obturator fossa and external iliac artery. Lymph node metastases were identified in 10 patients and in 9 of them at least one positive SLN was detected at ultrastaging. Sensitivity was 91% to detect node-positive disease and negative predictive value 95.8%

Conclusions: To our knowledge, this is the first experience of SLN mapping using ICG in Chile. The sensitivity and negative predictive value of our study, allows us to analyze the option of performing less aggressive procedures in endometrial cancer staging.

EP103 / #355

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

COMPARISON OF MINIMALLY INVASIVE VERSUS OPEN SURGERY IN TREATMENT OF ENDOMETRIAL CANCER WITH HIGH RISK OF RECURRENCE – RETROSPECTIVE COHORT STUDY IN KOREA AND TAIWAN

Chi-Son Chang¹, Yen-Ling Lai^{2,3}, Chel Hun Choi¹, Tae-Joong Kim¹, Jeong-Won Lee¹, Byoung-Gie Kim¹, Yu-Li Chen³, Yoo-Young Lee¹

¹Samsung Medical Center, Sungkyunkwan University School of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²National Taiwan University Hospital, Hsin-Chu Branch, Department Of Obstetrics And Gynecology, Hsin-Chu, Taiwan, ³College of Medicine, National Taiwan University, Department Of Obstetrics And Gynecology, Taipei, Taiwan

Objectives: The aim of this study was to compare oncologic outcomes between minimally invasive surgery (MIS) and open surgery in the treatment of endometrial cancer with high risk of recurrence.

Methods: This retrospective study included patients with endometrial cancer with high risk factor who underwent primary surgery in two tertiary centers in Korea and Taiwan. Stage III-IVA endometrial cancer with grade 1-2 endometrioid type, stage I-IVA endometrial cancer with grade 3 endometrioid type or non-endometrioid type were considered as factors of high risk of recurrence. We conducted 1:1 propensity score matching between MIS and open surgery group to adjust the baseline characteristics. Oncologic outcomes were compared according to surgical approach.

Results: A total of 284 patients were included after propensity score matching. Among them, 32 (11.3%) cases were patients with low grade endometrioid carcinoma with advanced stage, 109 (38.4%) patients were grade 3 endometrioid carcinoma, and 143 (50.3%) were patients with non-endometrioid carcinoma. Compared to patients who underwent open surgery, MIS did not show difference in disease-free survival (HR 1.09, 95% CI 0.67-1.77, P=0.717) and overall survival (HR 0.67, 95% CI 0.36-1.24, P=0.198). In multivariate analysis, non-endometrioid histology, tumor size, tumor in cytology, depth of invasion, and lympho-vascular space invasion were risk factors for recurrence. There was no association between surgical approach in either recurrence or mortality in subgroup analysis according to stage and histologic type.

Conclusions: Minimally invasive surgery did not compromise survival outcomes for endometrial cancer with high risk of recurrence when compared to open surgery.

EP104 / #389

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

GENOMIC PROFILING OF CIRCULATING TUMOR DNA FROM PERITONEAL FLUID IN ENDOMETRIAL CANCER

Youn Jin Choi¹, Mi-Ryung Han², Hye-Yeon Ju²

¹Seoul St. Mary's Hospital, Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Incheon National University, Life Science, Incheon, Korea, Republic of

Objectives: Endometrial cancer (EC) is one of the most common gynecological cancers. It is recommended to obtain peritoneal fluid during the surgery. However, there are limited information about the relationship between tumor gDNA and ctDNA isolated from peritoneal fluid in EC. In this study, we aim to disclose the genomic characteristics of ctDNA from peritoneal fluid in EC.

Methods: We conducted whole-exome sequencing of 8 paired samples of tissue and peritoneal fluid from 4 EC patients to analyze somatic mutations.

Results: Remarkably, TP53 and POLE mutations, which are highly related to the molecular classification of EC, were identified in our study with several significant observations. The ctDNA of EC1 patient with negative peritoneal fluid presented TP53 mutations that were concordant with the tumor tissues. ctDNA in the peritoneal fluid of a patient with positive cytology (EC4) harbored both TP53 and POLE somatic mutations, although none of them were detected in the tumor tissue. We also found that mutant allele frequency of shared somatic mutations between tumor tissue and peritoneal fluid has significant positive correlation with $r=0.648$ and $p\text{-value}<2.2e-16$.

Conclusions: Taken together, our study found a strong mutational concordance between peritoneal fluid samples and tumor tissue samples. Our results demonstrate that ctDNA from the peritoneal fluid might be a suitable biomarker to identify the mutational landscape of EC and can be used to interpret the tumor heterogeneity of endometrial cancer.

EP105 / #578

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

ADDED VALUE OF SENTINEL LYMPH NODE BIOPSY IN PATIENTS WITH NEGATIVE LYMPH NODE ON TRIPLE PRE-OPERATIVE IMAGES

Yunsoo Chung, Jung-Yun Lee, Yong Jae Lee, Eun Ji Nam, Sang Wun Kim, Sunghoon Kim, Young Tae Kim

Institute of Women's Medical Life Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: Since less than 5% in low-grade endometrial cancer (EC) has lymphatic spread, lymphadenectomy in low-risk EC is not recommended. The aim of this study is to determine the importance of sentinel lymph node (SLN) biopsy to detect lymph node (LN) metastasis when pre-operative images indicate negative LN.

Methods: This is a single institution, retrospective study. Inclusion criteria were over 18 years old, endometrioid type, clinical stage I with negative lymph node by triple images (magnetic resonance imaging (MRI), abdominopelvic computed tomography (APCT), positron emission tomography computed tomography (PET-CT)) between 2015 January and 2019 December. The median and range of preoperative parameters such as CA 125 was compared to inspect proper preoperative predictors for LN involvement.

Results: Based on inclusion criteria 301 were eligible for this study. 82 participants underwent only SLN biopsy and 219 underwent both SLN biopsy and lymphadenectomy. Among those, 10 patients had either SLN and/or non-SLN positive, and one had only non-SLN positive. Since there was one false positive, overall, 3.33% (10/300) had positive SLNs when negative LNs on triple pre-operative images. The median of pre-operative CA-125 of SLN positive group was 31.2 and range was 5.8-460.1.

Conclusions: Since about 3.33% (10 out of 300) of those who had negative LNs on triple pre-operative images, turned out to have positive SLNs and no other single parameter could predict LNs meta other than pathologic confirm, SLN biopsy has an added value to detect LNs metastasis.

EP106 / #301

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

THE EXPRESSION OF BHLHE22 IN ENDOMETRIAL CANCER

Darmawi Darmawi^{1,2,3,4}, Lin Chen^{1,2}, Po Su^{1,2}, Phui Liew⁵, Hung Lai^{1,2}

¹Taipei Medical University, Translational Epigenetic Center, Taipei, Taiwan, ²Taipei Medical University, Obstetrics And Gynecology, Shuang Ho Hospital, Taipei, Taiwan, ³Faculty of Medicine, Universitas Riau, Histology, Pekanbaru, Indonesia, ⁴College of Medicine, Taipei Medical University, International Phd Program In Medicine, Taipei, Taiwan, ⁵Taipei Medical University, Pathology, Shuang Ho Hospital, Taipei, Taiwan

Objectives: DNA methylation arrays and MethylCap-sequencing data of endometrial tissues from our previous study found that BHLHE22 gene promoter was hypermethylated in endometrial cancer (EC) and combine with CDO1 promoter hypermethylation had been approved by Taiwan FDA to detect EC in early stage using endocervical sample. BHLHE22 is literally a basic helix loop helix transcription factor family member class E. There was limited study about BHLHE22 in EC, but it was reported as a transcriptional repressor in neuron cell differentiation. The objective of this study was to investigate the clinical characteristics of the BHLHE22 expression in EC.

Methods: We collected 108 EC patients with 54 paired tissues of normal endometrium and endometrial cancer. We also collected BHLHE22 protein data from the human protein atlas (HPA), mRNA-seq and clinical characteristics data of 373 uterine corpus endometrial cancer (UCEC) from TCGA database. BHLHE22 mRNA expression of normal endometrium was downloaded from GTEX database. Xena browser was used to analyze survival outcome and validated using Kaplan-Meier Plooter web tool.

Results: BHLHE22 protein expression was significantly downregulated in endometrial cancer compared to paired normal endometrium in patient tissues as well as in HPA database and it was associated with endometrioid and grade. We validated these finding in mRNA TCGA and GTEx database. We also found that high BHLHE22 expression was associated with endometrioid type, grade and microsatellite instability (MSI) in TCGA UCEC. High-expressed mRNA level of BHLHE22 associated with significant favourable survival compared to low-expressed samples.

Conclusions: Expression of BHLHE22 is downregulated and associated with a better prognosis in EC.

EP107 / #235

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

DEFINING PROGNOSTIC RISK GROUPS AMONGST PATIENTS WITH ENDOMETRIAL CANCER: RESPECTIVE ROLE OF 2009 FIGO STAGE AND MOLECULAR PROFILE

Adriane Dheur¹, Vincent Bours², Marjolein De Cuypere¹, Katty Delbecque³, Christine Gennigens⁴, Frédéric Goffin¹, Élodie Gonne⁴, Johanne Hermesse⁵, Athanasios Kakkos¹, Pierre Lovinfosse⁶, Clémence Pleyers⁵, Alixe Salmon⁴, Frédéric Kridelka¹

¹Centre Hospitalier Universitaire (CHU), Gynaecology And Obstetrics, Liège, Belgium, ²Centre Hospitalier Universitaire (CHU), Genetics, Liège, Belgium, ³Centre Hospitalier Universitaire (CHU), Pathology, Liège, Belgium, ⁴Centre Hospitalier Universitaire (CHU), Medical Oncology, Liège, Belgium, ⁵Centre Hospitalier Universitaire (CHU), Radiotherapy, Liège, Belgium, ⁶Centre Hospitalier Universitaire (CHU), Nuclear Medicine, Liège, Belgium

Objectives: Endometrial cancer (EC) is the most common gynaecological neoplasia in developed countries. Though most patients have a favourable prognosis, 15-20% suffer from a disease with a high risk of relapse and distant metastases, responsible for the majority of cancer-related deaths. While total hysterectomy remains the first-line treatment, pelvic lymph node staging is performed routinely. In recent years, the implementation of molecular classification has changed the approach of risk stratification for EC patients. Herein, we assess the respective impact of histological variables including lymph node status (i.e FIGO stage) and molecular biology in the definition of high-risk patients.

Methods: We conducted a monocentric retrospective study of 166 consecutive patients treated for EC at the University Hospital of Liège, between January 2019 and December 2021. Twenty-seven patients were excluded. Of the remaining 139, 23 patients were allocated to the high-risk group on the basis of histological variables including nodal status or p53 alterations in immunohistochemistry and/or TP53 mutations in molecular biology.

Results: All histological types and grades were represented. Four patients were classified as high-risk due to p53 mutation alone; 10 by FIGO stage III alone and 3 by both. Three patients were defined as high-risk because of myometrial invasion in non-endometrioid endometrial carcinomas (NEEC). The remaining three patients had a p53 mutation associated with myometrial invasion in NEEC.

Conclusions: In our cohort, histological variables define a high-risk patient six times more frequently than molecular biology. FIGO stage remains dominant in our decision making for adjuvant treatment of EC patients.

EP108 / #805

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

RACIAL DISPARITIES IN ENDOMETRIAL CANCER PATIENTS AT A SINGLE ACADEMIC INSTITUTION

Savannah Elrod¹, Alfonsus Harsono², Jaclyn Wall³, Teresa Boitano³, Jhalak Dholakia³, Elizabeth Evans³, Jennah Moore³, Mckenzie Foxall³, Rebecca Arend³

¹University of Alabama at Birmingham, Heersink School Of Medicine, Birmingham, United States of America, ²University of Alabama at Birmingham, School Of Public Health, Birmingham, United States of America, ³University of Alabama, Obstetrics And Gynecology, Birmingham, United States of America

Objectives: Historically, black patients with endometrial cancer (EC) have worse survival than non-black patients. Obesity has been associated with poor survival in many cancers, though a relationship between race/obesity and survival is not well understood. We sought to investigate the relationship between these factors and survival in EC patients.

Methods: EC patients between 2007-2021 were included. Demographic/death information was collected from the EMR and public records. Effect of BMI/race on overall survival was analyzed using Kaplan-Meier survival methods and Cox hazard ratios.

Results: 1042 women were included. Black women had higher death rates than non-black women (17.4% v. 11.3%, $p < 0.01$) and decreased five-year cancer-specific survival (68.6% vs 83.4%, $p < 0.001$). Black women were more likely to be morbidly obese (35.7% v 23.5%, $p < 0.001$), but there was no difference in presentation of obese/overweight/normal BMI patients (HR=0.66, 95% CI:0.35-1.24; HR=0.61, 95% CI:0.36-1.02; HR=0.65, 95% CI:0.39-1.10). There was no difference in risk of EC death in morbidly obese/obese/overweight patients compared to normal BMI patients (95% CI: 0.35-1.24; 0.36-1.20; 0.39-1.10). There was no difference in age at diagnosis between black and non-black women, although age at diagnosis increased risk of death in populations 60-69, 70-79, and >80 years compared to <49 years (HR=8.76, 95% CI:1.16-66.00; HR=10.51, 95% CI:1.35-81.78; and HR=22.00, 95% CI:2.75-176.14).

Conclusions: Black women at our institution had higher EC-specific mortality than non-black women. This disparity cannot be contributed to differences in BMI or age; investigation into other contributing factors is warranted to diminish disparities and improve survival of black women with EC.

EP109 / #517

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

CXCR4 EXPRESSION AND CANCER-ASSOCIATED FIBROBLASTS MAY PLAY AN IMPORTANT ROLE IN THE INVASION PROCESS IN LOW-GRADE ENDOMETRIOID CARCINOMA

Sakiko Sanada¹, Chihiro Fukumitsu², Naotake Tsuda³, Sachiko Ogasawara¹, Kimio Ushijima³, Hirohisa Yano¹, Jun Akiba²

¹Kurume University School of Medicine, Pathology, Fukuoka, Japan, ²Kurume University Hospital, Diagnostic Pathology, Fukuoka, Japan, ³Kurume University School of Medicine, Gynecology And Obstetrics, Fukuoka, Japan

Objectives: Introduction: Low-grade endometrioid carcinoma (LGEC) usually behaves in an indolent course, although some cases show a high tendency for infiltration and metastasis. Previously, we have pointed out chemokine CXCR4-CXCL12 axis plays an important role in MELF type endometrioid carcinoma (EC). Under these circumstances, the functional activity of cancer-associated fibroblasts (CAFs) affects tumor microenvironments. In the present study, we focused on LGEC and non-tumorous conditions and investigated the clinicopathological correlation of CXCR4 expression including the relation between biopsy and surgically resected samples, and invasion processes under CAF co-cultured conditions in vitro.

Methods: Immunohistochemical staining of CXCR4 was performed in 72 cases of LGEC and 57 cases of non-cancerous conditions. The expression was analyzed semi-quantitatively regarding the correlation between biopsy and surgically resected specimen, cancer and non-cancerous conditions, the morphological pattern of myometrial invasion, and clinical characteristics, respectively. Using the LGEC cell lines, invasion assay and wound healing assay were performed under co-cultured with CXCR4 antagonist (AMD 3465), CAF, and normal fibroblast cell lines.

Results: EC showed significantly higher expression of CXCR4 than in non-neoplastic conditions ($p < 0.05$), although no correlation was identified between the biopsy and surgically resected groups and the clinicopathological characteristics. On the other hand, AMD3465 suppressed cell invasion and migration, and it enhanced under the condition of CAF co-culture compared to normal fibroblast.

Conclusions: From the results of the invasive process of LGEC seemed to depend on the tumor microenvironment, CXCR4 expression can be an indicator of tumor aggressiveness.

EP110 / #1019

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

FACTORS ASSOCIATED WITH SUCCESSFUL BILATERAL SENTINEL LYMPH-NODES MAPPING IN ENDOMETRIAL CANCER

Migle Gedgaudaite, Arturas Sukovas, Saulius Paskauskas, Arnoldas Bartusevicius, Daiva Vaitkiene, Adrius Gaurilcikas
Lithuanian University of Health Sciences, Obstetrics And Gynaecology, Kaunas, Lithuania

Objectives: Sentinel lymph-node biopsy (SLB) with indocyanine green (ICG) could be an alternative for the systematic pelvic lymphadenectomy (LND) to stage lymph-nodes in endometrial cancer (EC). The success of SLB depends on the bilateral identification of sentinel lymph-nodes (SLs) in the pelvis. The aim of this study was to evaluate factors that may impact successful bilateral SL mapping.

Methods: Prospective study was performed in Lithuanian University of Health Sciences Hospital. 180 patients with histologically confirmed EC were included into the study. SLs were mapped with intracervical ICG injection

Results: Bilateral SL mapping rate was 69.4%. The factors associated with mapping failure were as follows: older age (63.0 vs. 65.0, $p=0.021$), higher BMI (29.4 vs. 30.9, $p=0.026$), decreased lymphatic flow (16.0% vs. 29.1%, $p=0.043$), deep myometrial invasion (37.6% vs. 56.4%, $p=0.019$) and adhesiolysis performed during surgery (10.4% vs. 27.3%, $p=0.004$). After binary logistic regression analysis, the only independent factor associated with the bilateral SL mapping failure was the adhesiolysis during surgery (OR 2.888; 95% CI 1.81 – 7.063, $p=0.020$).

Conclusions: The removal of adhesions in the pelvis was the only independent factor associated with the lower rates of successful bilateral SL mapping

EP111 / #458

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

SECTIONING AND EXTENSIVELY EXAMINING THE FIMBRIATED END OF FALLOPIAN TUBES FOR ENDOMETRIAL CANCER

Sushmita Gordhandas¹, Anjelica Hodgson², Ryan Kahn¹, Tiffany Sia¹, Rajmohan Murali², Mario Leitao³, Nadeem Abu-Rustum¹, Britta Weigelt², Lora Ellenson²

¹Memorial Sloan Kettering Cancer Center, Surgery, New York, United States of America, ²Memorial Sloan Kettering Cancer Center, Pathology, New York, United States of America, ³Memorial Sloan Kettering Cancer Center, Surgery, Kinnelon, United States of America

Objectives: We sought to determine if Sectioning and Extensively Examining the FIMbriated End (SEE-FIM) of fallopian tubes (FTs) identifies more clinically significant tubal pathology in endometrial cancer (EC) compared to routine sectioning (RS).

Methods: From 7/2020-12/2020, FTs from patients undergoing surgical management of EC were variably processed with SEE-FIM protocol or RS. Specimens with no residual EC or gross adnexal involvement were excluded. Medical records were reviewed for clinical variables. Data were summarized using descriptive statistics, and SEE-FIM vs. RS groups were compared.

Results: Of 191 patients with EC, 130 (68%) underwent SEE-FIM and 61 (32%) underwent RS. The most common histology types were endometrioid (n=143, 75%), serous (n=15, 8%), and carcinosarcoma (n=11, 6%). There were 154 (81%) stage I, 12 (6%) stage II, 17 (9%) stage III, and 8 (4%) stage IV ECs. On microscopic evaluation, benign adnexal findings included cysts/hydrosalpinx (n=24), endometriosis (n=15), and tubal hyperplasia (n=2). Six precursor lesions were found—3 endometrioid glandular proliferations and 3 serous tubal intraepithelial lesion/carcinomas (STIL/STIC). There was 1 microscopic metastasis from primary EC to the adnexa. All STIL/STIC and microscopic metastasis to the adnexa were discovered on SEE-FIM specimens. There were 7 concurrent ovarian primary tumors (5 endometrioid, 2 high-grade serous). Carcinoma or precursor lesions were identified in 8% of both SEE-FIM and RS specimens.

Conclusions: The SEE-FIM protocol to evaluate FTs in patients with EC did not increase diagnosis of clinically significant tubal pathology compared to RS. Validation of these findings in larger cohorts is warranted.

EP112 / #621

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

LAPAROSCOPIC PELVIC SENTINEL LYMPH NODE DISSECTION USING NEAR INFRARED FLUORESCENCE WITH INDOCYANINE GREEN IN CARCINOMA ENDOMETRIUM

Saumya Gupta, Priya Bhati, Anupama Rajanbabu
Amrita Institute of medical sciences, Gynaecological Oncology, Ernakulam, India

Objectives: Laparoscopic pelvic SLNB using ICG, is a viable option, especially in LMICs where access to robot or its prohibitive cost are limiting factors. We looked into the feasibility, detection rate and location of sentinel nodes in laparoscopic staging for carcinoma endometrium using real time ICG fluorescence mapping of SLN.

Methods: In this single institution study, 50 patients with endometrial cancer who underwent laparoscopic staging with SLNB from April 2021 to March 2022, were included .

Results: Mean age was 55 years, and mean BMI- 29 kg/m²(range 21-39.5). 8(16%) patients had high risk histopathology with p53 positivity in preoperative endometrial biopsy. 8(16%) patients had >50% MI on MRI. Overall sentinel detection rate was 88% with bilateral sentinel detection rate being 86%. Most common location for first sentinel node was external iliac (46.59%), followed by obturator (26.1%), internal iliac (25%) and common iliac(2.27%). Mean number of nodes removed were 2 on either side. For the 6 patients with bilateral failed mapping, pelvic lymphadenectomy was done. One patient with unilateral sentinel detection had side specific hemipelvic lymphadenectomy. Mean duration of surgery was 82.5min. 84% patients had Stage IA disease. 7(14%) patients had stage IB disease. 1(2%) patient was Stage II. 80% patients were Low risk. 16% were high intermediate/high risk. No nodes were positive on ultrastaging.

Conclusions: Laparoscopic staging with SLNB using ICG is a practicable approach for uterine limited disease on preoperative evaluation. It extends the benefits of minimally invasive surgery to these patients, while overcoming the limitations of prohibitive cost or availability of expensive equipment.

EP113 / #78

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

MALIGNANT PERITONEAL CYTOLOGIC CONTAMINATION WITH ROBOTIC HYSTERECTOMY FOR ENDOMETRIAL CANCER

Nnamdi Gwacham¹, Karolina Kilowski¹, Fernando Recio¹, Ahmad Awada¹, Ameya Patel², Jackson Holloway³, Nathalie Mckenzie¹, Sarfraz Ahmad¹, James Kendrick¹, Robert Holloway¹
¹AdventHealth Orlando, Gynecologic Oncology, Orlando, United States of America, ²Trinity Preparatory School, Stem, Winter Park, United States of America, ³Winter Park High School, Wphs, Winter Park, United States of America

Objectives: The aim of this study was to determine the prevalence of peritoneal cytologic contamination following robotic hysterectomy for EC.

Methods: Peritoneal cytologies from the pelvis and diaphragm were obtained at the initiation of surgery, and from the pelvis only at the completion of robotic hysterectomy and sentinel lymph node mapping. Cytology specimens were processed and evaluated for the presence of malignant cells. Pre- and post-hysterectomy specimens were compared

Results: 162 patients underwent robotic hysterectomy with sentinel lymph node mapping for EC with the use of a uterine manipulator. Mean age and body mass index were 65.9 ± 9.7 yr, and 34.1 ± 7.8 kg/m². 34/162 (20.9%) cases had positive cytologies including 33 (20.4%) pelvic, 2 (1.2%) diaphragm. Pre-hysterectomy (+) washings were 12 pelvic, 0 diaphragm, and 2 both. Twenty (12.3%) patients had (+) cytology at hysterectomy completion after initially negative pre-hysterectomy cytologies. Six (3.7%) had conversion of positive cytology to negative following hysterectomy. Pelvic contamination was associated with deeper invasion (48.6% vs 29.7%, $p=0.008$), lesion size (4.71cm vs 3.69cm, $p=0.03$), positive pelvic lymph nodes (35.7% vs 10.4%, $p=0.001$), and presence of LVSI (50% vs 30.6%, $p=0.03$)

Conclusions: Malignant peritoneal contamination occurred during robotic surgery for EC in 12% of cases. There was an association with lesion size, depth of invasion, positive pelvic lymph nodes, and LVSI. Whether or not peritoneal contamination leads to disease recurrence should be studied, including evaluation of patterns of recurrence and the potential impact of adjuvant therapies. Methods to reduce peritoneal contamination are likely warranted

EP114 / #506

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

MOLECULAR CLASSIFICATION OF ENDOMETRIAL CARCINOSARCOMA SHOWS UNIFORMLY P53ABN SUBTYPE AND PROVIDE OPPORTUNITIES FOR DIAGNOSTIC IMPROVEMENT.

Jutta Huvila¹, Amy Jamieson², Emily Thompson³, Jessica Mcalpine², Blake Gilks⁴

¹University of Turku, Turku University Hospital, Department Of Pathology, Turku, Finland, ²University of British Columbia, Gynecologic Oncology, Vancouver, Canada, ³University of British Columbia, Department Of Molecular Oncology, Vancouver, Canada, ⁴University of British Columbia, Department Of Pathology And Laboratory Medicine, Vancouver, Canada

Objectives: Carcinosarcoma is a high-grade endometrial carcinoma (EC) that consists of a carcinomatous component juxtaposed with a malignant metaplastic stromal component. Our aim was to assess the molecular subtype(s) of carcinosarcomas in a population-based cohort.

Methods: We assessed IHC and NGS data on all cases diagnosed as carcinosarcoma and undertook expert pathology review.

Results: Of 1221 ECs identified across 29 centers, 41 carcinosarcomas were diagnosed. 37 (91.2%) were p53abn, 2 (4.9%) were NSMP and 1 each (2.4%) were POLEmut and MMRd, respectively. All cases were reviewed by 2 expert pathologists blinded to molecular data. In 22 cases (53.7%) histology was confirmed as carcinosarcoma on review and all of these were p53abn. Of the remaining 19 cases where diagnosis of carcinosarcoma was not verified, 3 showed an undifferentiated or dedifferentiated morphology, 6 showed corded and hyalinized (CHEC) features, 3 showed prominent reactive spindle cell stroma, and 1 showed features of adenosarcoma. For the remaining 6 cases, the submitted representative slide available for review 5 cases and 1 case had only the epithelial and sarcomatous component, respectively. Of the non-p53abn tumors, on review all had only epithelial component, one NSMP tumors was CHEC pattern endometrioid EC (EEC), MMRd tumor was a grade 1 EEC and the POLEmut tumor was grade 3 EEC with spindle cell growth.

Conclusions: In this series, all pathology confirmed endometrial carcinosarcomas were p53abn; the finding of any other molecular subtype warrants pathology review. Endometrioid carcinoma with corded and hyalinized growth pattern, de-differentiated/undifferentiated carcinoma and sarcomatous overgrowth of adenosarcoma can all mimic carcinosarcoma.

EP115 / #640

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

ARE ALL STAGE IA P53ABN ENDOMETRIAL CANCERS THE SAME? SEEKING CLARITY IN THE MANAGEMENT OF STAGE IA P53ABN AND/OR NON-ENDOMETRIOID ENDOMETRIAL CANCERS WITHOUT MYOMETRIAL INVASION

Amy Jamieson¹, Samuel Leung², Emily Thompson³, Amy Lum², Marcel Grube⁴, Janice Kwon¹, Blake Gilks⁵, Stefan Kommos⁶, Jessica Mcalpine¹

¹University of British Columbia, Gynecologic Oncology, Vancouver, Canada, ²University of British Columbia, Molecular Oncology, Vancouver, Canada, ³University of British Columbia, Department Of Molecular Oncology, Vancouver, Canada, ⁴Department of Women's Health, Tuebingen University Hospital, Department Of Women's Health, Tuebingen, Germany, ⁵University of British Columbia, Department Of Pathology And Laboratory Medicine, Vancouver, Canada, ⁶University of Tuebingen, Department Gynecology & Gynecologic Oncology, Tübingen, Germany

Objectives: Optimal management of stage IA p53abn and/or high-grade non-endometrioid endometrial cancer(EC) without myometrial invasion is unclear, classified as intermediate risk in new 2020 ESGO-ESTRO-ESP guidelines. Current practice varies from surgery alone to adjuvant vault brachytherapy (VB)+/-chemotherapy. Our aim was to assess the risk of disease recurrence within three subcategories of stage IA ECs without myoinvasion compared to IA with myoinvasion(<50%).

Methods: Stage IA p53abn and high-grade non-endometrioid ECs of other molecular subtypes were identified from a retrospective EC cohort (2005-2016). Cases were segregated into IA with no myoinvasion, including i) tumor restricted to a polyp, ii) tumor confined to the endometrium, and iii) no residual tumor, vs. stage IA with myoinvasion(<50%), with treatment and outcomes assessed.

Results: 169 stage IA p53abn and 49 stage IA non-endometrioid ECs of other molecular subtypes were identified (7 POLEmut, 24 MMRd and 18 NSMP). Table 1 shows the subcategories, adjuvant treatment, and disease recurrences. 12 patients(15%) with stage IA no myoinvasion recurred; 1 had received chemotherapy, 3 VB, 1 EBRT, 7 no adjuvant therapy. 35 patients with disease confined to the endometrium had received no adjuvant therapy with 6 (17.1%) recurrences (2 additional recurrences with VB). Stage IA patients not receiving chemotherapy had a ~17% recurrence rate, whether with myoinvasion (17.1%) or without (16.7%).

Table 1. Stage IA p53abn and/or high-grade non-endometrioid endometrial carcinomas +/- myoinvasion (MI) showing adjuvant treatment given and disease recurrence rates

	Total	Surgery alone	VB	EBRT	Chemo+/-RT	Disease recurrence n (%)
Stage IA, no MI	80	57	8	1	14	12/80 (15%)
--polyp	25	17	1	0	7	2/25 (8%)
--endometrium	48	35	6	1	6	9/48 (18.8%)
--no residual	2	1	1	0	0	1/2*
--unknown	5	4	0	0	1	0/5 *
Stage IA, MI <50%	138	44	22	10	62	20/138 (14.5%)

*numbers small/NA

Conclusions: Rates of recurrence were the same in patients with stage IA p53abn and/or non-endometrioid EC regardless of myoinvasion. Optimal treatment for the diverse spectrum of stage IA

p53abn disease remains a challenge but these recurrence rates should prompt consideration of adjuvant therapy.

EP116 / #725

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

LOW-GRADE P53ABN ENDOMETRIAL CARCINOMAS EXIST AND ARE ASSOCIATED WITH A HIGH RISK OF RECURRENCE, EVEN IN LOW-STAGE DISEASE.

Amy Jamieson¹, Lisa Vermij², Joseph Carlson³, Brooke Howitt⁴, Phillip Ip⁵, Siguard Lax⁶, Glenn Mccluggage⁷, Naveena Singh⁸, Jessica Mcalpine¹, Remi Nout⁹, Carien Creutzberg⁹, Blake Gilks¹⁰, Nanda Horeweg⁹, Tjalling Bosse²

¹University of British Columbia, Gynecologic Oncology, Vancouver, Canada, ²Leiden University, Pathology, Leiden, Netherlands, ³University of Southern California, Pathology, Los Angeles, United States of America, ⁴Stanford University School of Medicine, Pathology, Palo Alto, United States of America, ⁵University of Hong Kong, Pathology, Pokfulam, Hong Kong PRC, ⁶University of Graz, Pathology, Graz, Austria, ⁷Queens University, Pathology, Belfast, Ireland, ⁸University of British Columbia, Pathology, Vancouver, Canada, ⁹Leiden University, Radiation Oncology, Leiden, Netherlands, ¹⁰University of British Columbia, Department Of Pathology And Laboratory Medicine, Vancouver, Canada

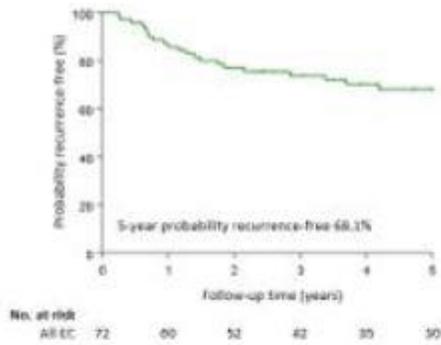
Objectives: p53abn endometrial cancer (EC) is associated with a high risk of recurrence. Molecular classification of EC cohorts has shown that ~5% of low-grade endometrioid EC (EEC) are p53abn. There is debate whether these are misclassified glandular variants of serous EC, and whether the risk of recurrence justifies adjuvant therapy. Here, we aim to determine if blinded expert pathology review classifies p53abn EC as low-grade EEC and assess risk of recurrence.

Methods: p53abn low-grade EEC from retrospective cohorts and the PORTEC-1&2 trials were included. Review of histotype and grade was performed by six expert gynaecopathologists, blinded to molecular class and study aim. Cases were considered low-grade p53abn EEC if ≥ 1 expert assigned it as such. Kaplan-Meier's method and the log-rank test were used for survival analysis.

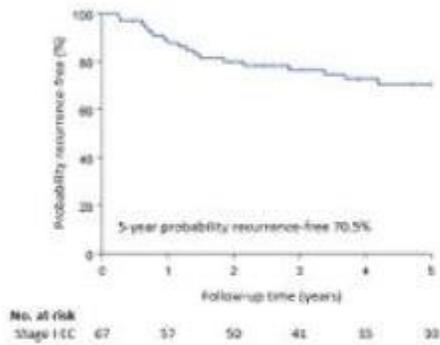
Results: 72 low-grade p53abn EEC were included. ≥ 1 pathologists assigned low-grade EEC in 53 (73.6%), and $\geq 50\%$ of pathologists in 36 (50%) cases. The 5-year recurrence-rate was 31.9% (95%CI: 19.4-42.5%) and 29.5% (95%CI 16.9-40.3%) among those (N=67) with stage I disease. Within stage I and those assigned by ≥ 1 pathologist as low-grade p53abn EEC, the 5-year recurrence-rate was 22.9%

(95%CI: 9.2-34.6%); 21.2% (95%CI: 2.3%-36.4%) in stage IA and 26.3% (95%CI: 3.6-43.7%) in stage IB

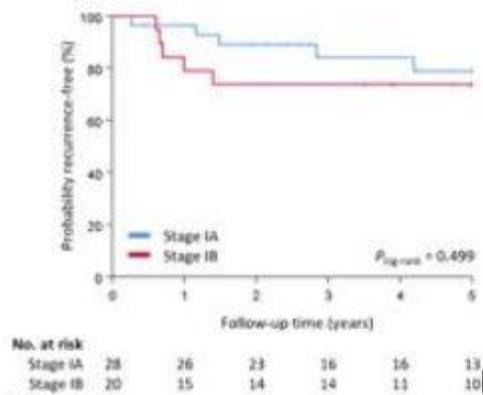
Figure 1. Time to overall recurrence in all low-grade p53abn EEC (N=72).



Time to overall recurrence in stage I low-grade p53abn EEC (N=67).



Time to overall recurrence of stage IA versus IB p53abn cases, assigned as low-grade EEC by at least one expert pathologist.



(Figure 1).

Conclusions: We show the p53abn molecular subtype of EC encompasses a subset of low-grade EEC which are associated with a substantial risk of disease recurrence. Assessment of molecular classification

in all low-stage low-grade ECs will enable detection of patients with p53abn EC who may benefit from adjuvant therapy.

EP117 / #763

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

APPLICATION OF SHALLOW WHOLE GENOME SEQUENCING TO IDENTIFY THERAPEUTIC OPPORTUNITIES IN P53ABN ENDOMETRIAL CANCERS

Amy Jamieson¹, Juliana Sobral De Barros², Dawn Cochrane², Maxwell Douglas², Samuel Leung², Emily Thompson³, Janine Senz², Amy Lum², Martin Kobel⁴, Blake Gilks⁵, David Huntsman², Jessica Mcalpine¹
¹University of British Columbia, Gynecologic Oncology, Vancouver, Canada, ²University of British Columbia, Molecular Oncology, Vancouver, Canada, ³University of British Columbia, Department Of Molecular Oncology, Vancouver, Canada, ⁴University of Calgary, Pathology, Calgary, Canada, ⁵University of British Columbia, Department Of Pathology And Laboratory Medicine, Vancouver, Canada

Objectives: Shallow whole genome sequencing (sWGS) has been successfully used to derive copy number (CN) signatures in high grade serous ovarian cancer (HGSOC), recognizing two signatures associated with homologous recombination deficiencies (HRD). p53abn ECs share genomic features with HGSOC, supporting application of this platform to stratify this aggressive EC molecular subtype.

Methods: DNA was extracted from formalin fixed paraffin embedded (FFPE) tumor cores of 203 p53abn ECs and sWGS performed. CN signatures were derived from absolute copy numbers using Rascal (relative to absolute copy number scaling tool). CN amplification of CCNE1 and ERBB2 was called based on CN alterations ≥ 5 , and comparisons were made to CCNE1 and HER2 immunohistochemistry (IHC).

Results: HRD-related signatures 3 and 7 were found in 42 p53abn ECs (30 and 12 respectively) encompassing 26% of the 161 cases where CN signatures could be assigned. CN amplification in CCNE1 was identified in 26/203 (13%) with CCNE1 IHC overexpression (2/3+) found in 64% of cases. ERBB2 amplification was observed in 22/203 (11%) with HER2 IHC overexpression (2/3+ on whole stained sections) in 21% and significant intratumor heterogeneity was noted.

Conclusions: sWGS is a relatively inexpensive tool that can be performed on FFPE, and may be used to identify opportunities for PARPi therapy, with 26% of p53abn EC identified as having HRD signatures. Opportunities for anti-HER2 therapy and targeting CCNE1 (Wee1i) were also identified, although IHC detected a significantly greater proportion of p53abn ECs overexpressing HER2 and CCNE1 compared to CN amplification calls on sWGS. This may, in part, be explained by intratumor heterogeneity.

EP118 / #744

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

PROGRESS IN UTERINE CANCER SURVIVAL IN THE UNITED STATES FROM 2004-2016: WHO WAS LEFT BEHIND?

Allyson Jang¹, Cheng-I Liao², Caitlin Johnson³, Amandeep Mann⁴, Kathleen Darcy⁵, Chunqiao Tian⁵, Stefanie Ueda¹, Daniel Kapp⁶, John K Chan⁷

¹University of California San Francisco, Department Of Obstetrics & Gynecology, San Francisco, United States of America, ²Kaohsiung Veterans General Hospital, Ob Gyn, Kaohsiung, Taiwan, ³California Pacific Medical Center Research Institute, Gynecologic Oncology, San Francisco, United States of America, ⁴Palo Alto Medical Foundation Research Institute, Gynecologic Oncology, Palo Alto, United States of America, ⁵Henry M Jackson Foundation for the Advancement of Military Medicine, Inc., Gynecologic Cancer Center Of Excellence Program, Bethesda, United States of America, ⁶Stanford University School of Medicine, Radiation Oncology, Palo Alto, United States of America, ⁷California Pacific/Palo Alto Medical Foundation/Sutter Health, Gynecologic Oncology, Palo Alto, United States of America

Objectives: To establish trends in uterine cancer survival rates based on histology and race in the U.S. over a 13-year period.

Methods: Data for patients with uterine cancer were acquired from the National Cancer Database from 2004-2016. Demographics, clinicopathologic factors, and survival information were extracted and tested using Kaplan-Meier and Cox proportional-hazard models for each time interval.

Results: Of 487,385 women with uterine cancer, 467,258 (95.9%) had epithelial and 17,184 (3.5%) mesenchymal tumors. The study period was divided into three time intervals from 2004-2007, 2008-2012, and 2013-2016. The survival rate over time increased from 49.9 to 50.7 to 51.1% ($p < 0.001$). Younger patients (<50 years old) had no improvement in survival (55.4 to 55.4 to 55.5%; $p = 0.9$), whereas older patients had slight improvement (49.1 to 50.0 to 50.6%; $p < 0.001$). There was a marginal clinical increase in Blacks from 41.6 to 43.1 to 44.2% ($p < 0.001$), Whites 50.8 to 51.5 to 51.86% ($p < 0.001$), and Hispanics from 51.0 to 52.02 to 52.86% ($p < 0.001$); however, no change observed in Asians (52.4 to 52.3 to 52.9%; $p = 0.16$). Furthermore, there was a lack of improvement in clear cell carcinomas (41.5 to 41.8 to 42.9%; $p = 0.099$) and mesenchymal tumors (37.0 to 37.2 to 36.8%; $p = 0.27$). Survival of those with serous carcinomas has the largest increase (38.6 to 40.8 to 42.6%; $p < 0.001$).

Conclusions: In this large population study, the overall survival of uterine cancer patients had improved statistically, but may not be clinically meaningful. Moreover, there was a lack of improvement among young patients, Asians, clear cell and mesenchymal tumors.

EP119 / #992

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

A CASE-CONTROL STUDY OF ADIPOKINES IN ENDOMETRIAL CANCER AND CORRELATION WITH PROGNOSTIC FACTORS

Aarathi S Jayraj¹, Kallol Roy¹, Neeta Singh¹, Lalit Kumar², Daya Nand Sharma³, Vanamail Perumal⁴, Sandeep Mathur⁵, Seema Singhal¹, Jyoti Meena¹, Rajesh Khadgawat⁶, Sunesh Kumar¹
¹All India Institute of Medical Sciences, Department Of Obstetrics & Gynaecology, New Delhi, India, ²All India Institute of Medical Sciences, Medical Oncology, New Delhi, India, ³All India Institute of Medical Sciences, Radiation Oncology, Dr. Brairch, New Delhi, India, ⁴All India Institute of Medical Sciences, Biostatistics, Department Of Obstetrics & Gynaecology, New Delhi, India, ⁵AIIMS, Pathology, New Delhi, India, ⁶All India Institute of Medical Sciences, Department Of Endocrinology, New Delhi, India

Objectives: Adipokines like leptin and adiponectin play an important role in inflammation, angiogenesis, apoptosis and tumourigenesis. Such adipokines are postulated to play a role in development of obesity related cancers like endometrial cancers. We aimed to study the serum levels of leptin and adiponectin in cases of endometrial cancers and normal controls.

Methods: A prospective case control study was conducted to study the serum levels of leptin and adiponectin in endometrial cancer patients and normal controls over a period of 24 months.

Results: Fifty-five cases of endometrial cancers and 25 controls were included in this study. Median serum levels of leptin among cases and controls were 59.7 (16.0-485.5) ng/ml and 38.0 (4.7-107.2) ng/ml, respectively (p=0.015). Median serum adiponectin levels among cases and controls were 8481.4 (1700.7-24956.28) and 9547.5 (3015.0-24257.0) ng/ml, respectively (p=0.906). Leptin:adiponectin (L:A) ratio was significantly higher in cases than in controls (0.0086 v 0.0042, p=0.014). Due to high standard deviation of values from mean, leptin, adiponectin and L:A ratio were analysed in tertiles among cases and controls. Only age and BMI were significantly correlated with higher tertile of serum leptin and L:A ratio. Prognostic indicators like grade, stage and myometrial invasion were not correlated with leptin and adiponectin tertiles. Since lymph node metastasis was less common in our cohort, correlation with adipokines was not possible.

Conclusions: Higher levels of serum leptin and lower levels of serum adiponectin seem to be positively correlated with cases of endometrial cancer. Adipokine levels did not show a correlation to histological prognostic markers.

EP120 / #1082

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

COMPARE THE SURGICAL OUTCOMES OF ROBOTIC VERSUS LAPAROSCOPIC SURGERY IN THE TREATMENT OF ENDOMETRIAL CANCER FOR MORBIDLY OBESE PATIENTS.

Peter Lim¹, Lauren Kennedy¹, Keanu McMurray², Fawaaz Siddiqui³

¹Center of Hope, Gynecologic Oncology, Reno, United States of America, ²University of Nevada School of Medicine, Obstetrics And Gynecology, Reno, United States of America, ³University of Nevada School of Medicine, Department Of Obstetrics And Gynecology, Reno, United States of America

Objectives: Compare the surgical outcomes of robotic versus laparoscopic surgery in the treatment of endometrial cancer for morbidly obese patients.

Methods: A prospective analysis of obese patients who underwent robotic assisted hysterectomy with lymphadenectomy (RHLND) was compared to patients who underwent a total laparoscopic hysterectomy with lymphadenectomy (LHLND) for treatment of endometrial cancer. Estimated blood loss (EBL), operative times, intraoperative and postoperative outcomes, number of pelvic (PLN) and paraaortic (PALN) lymph nodes retrieved and rate of conversion to open laparotomy were analyzed. Fisher Exact tests or two tailed t-tests was performed to evaluate for difference.

Results: Total of 330 patients underwent minimally invasive surgical treatment for endometrial cancer between 1999-2019. 254 (77%) patients underwent RHLND and 76(23%) underwent LHLND. The mean age and BMI were similar. RHLND average operative time (123 minutes) vs LHLND (169 minutes) and RHLND EBL (50cc) vs LHLND EBL (198cc) was less. However, the average number of PLN (18) and PALN (9) in RHLND was found to be significantly less than LHLND PLN (24) and PALN (17). The rate of conversion was less for RHLND (0%) and LHLND (7/76) (9.2%) group. No difference in postoperative 17/254 (7%) RHLND vs 4/76 (5%) LHLND and intraoperative complication rate 5/254 (2%) for RHLND vs 2/76 (3%) LHLND respectively.

Conclusions: Surgical outcomes for treatment of endometrial cancer in obese patients with RHLND compared to LHLND is associated with less blood loss, shorter operative time, less conversion to open laparotomy with no difference in rate of intraoperative and postoperative complication.

EP121 / #79

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

CHARACTERIZING ISOLATED TUMOR CELLS IN REGIONAL LYMPH NODES OF EARLY ENDOMETRIAL CANCER

Varun Khetan¹, Neda Jooya², Laurie Brunette², Maximilian Klar³, Jason Wright⁴, Lynda Roman², Koji Matsuo^{1,2}

¹University of Southern California, Obstetrics And Gynecology, Los Angeles, United States of America, ²University of Southern California, Gynecologic Oncology, Los Angeles, United States of America, ³University of Freiburg Faculty of Medicine, Department Of Obstetrics And Gynecology, Freiburg, Germany, ⁴Columbia University, Obstetrics And Gynecology, New York, United States of America

Objectives: To examine isolated tumor cell (ITCs) characteristics in regional lymph nodes of early-stage endometrial cancer.

Methods: This is a retrospective cohort study examining the Surveillance, Epidemiology, and End Result Program. The study population was 6,472 women with non-metastatic, node-negative T1 endometrial cancer who underwent primary hysterectomy and surgical nodal evaluation. Multivariable binary logistic regression model was used to identify independent characteristics for ITCs. Postoperative therapy according to ITCs status was also assessed with propensity score weighting.

Results: ITCs were seen in 111 (1.7%) cases. In a multivariable analysis, ITCs were largely associated with deep myometrial invasion (T1b versus T1a, 4.0% versus 1.0%, adjusted-odds ratio [aOR] 3.42, $P < 0.001$) and large tumor size (>4 versus ≤ 4 cm, 3.0% versus 1.6%, aOR 1.55, $P = 0.037$). Moreover, women undergoing sentinel lymph node (SLN) biopsy had a higher likelihood of identifying ITCs compared to those undergoing lymphadenectomy (LND): 2.7% for SLN alone, 3.7% for SLN/LND, and 1.2% for LND alone (aOR ranged 2.60-2.99, $P < 0.001$). Women who had ITCs identified were more likely to receive postoperative therapy (81.8% versus 31.7%, $P < 0.001$), including external beam radiotherapy (EBT) alone (25.1% versus 3.2%) and chemotherapy/EBT (16.3% versus 1.9%). Similar associations were observed in the low-risk group (stage IA, grade 1-2 endometrioid, 78.4% versus 9.2%, $P < 0.001$), including EBT alone (35.3% versus 0.6%).

Conclusions: This study suggests that a SLN protocol can identify more ITCs in the regional lymph nodes of early endometrial cancer which impacts postoperative therapy with variable treatment patterns. Deep myometrial invasion and large tumor size were associated with increased risk of ITCs.

EP122 / #80

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

UPTAKE IN SENTINEL LYMPH NODE BIOPSY FOR ENDOMETRIAL CANCER WITH T3 CLASSIFICATION

Varun Khetan¹, Andrew Vallejo¹, Caroline Violette¹, Amin Tavakoli¹, Maximilian Klar², Lynda Roman³, Jason Wright⁴, Koji Matsuo³

¹University of Southern California, Obstetrics And Gynecology, Los Angeles, United States of America, ²University of Freiburg Faculty of Medicine, Department Of Obstetrics And Gynecology, Freiburg, Germany, ³University of Southern California, Gynecologic Oncology, Los Angeles, United States of America, ⁴Columbia University, Obstetrics And Gynecology, New York, United States of America

Objectives: Current practice guidelines for endometrial cancer specify sentinel lymph node biopsy for intra-uterine disease, now with increasing utilization in T2 extra-uterine disease. The objective of this study was to examine trends and outcomes related to SLN biopsy for endometrial cancer with T3 classification, another extra-uterine disease.

Methods: A population-based retrospective cohort study was conducted to examine 7,004 women with T3 endometrial cancer who underwent primary surgery between 2010-2018, identified in the National Cancer Institute's Surveillance, Epidemiology, and End Results Program. Trends and characteristics related to SLN biopsy were assessed by multinomial regression analysis, and inverse probability of treatment weighting propensity score was used to assess overall survival related to SLN biopsy.

Results: Nodal evaluation type included lymphadenectomy (n=5,276, 75.3%), SLN biopsy (n=287, 4.1%), and none (n=1,441, 20.6%). The utilization of SLN biopsy increased from 0.4% to 12.9% between 2010-2018 (P<0.001) that this association remained independent in multivariable analysis (adjusted-odds ratio compared to 2010-2012, 2.63 for 2013-2015 and 10.1 for 2016-2018). When compared to the lymphadenectomy group, the SLN biopsy group was less likely to have T3b disease (adjusted-odds ratio 0.69, 95% confidence interval 0.51-0.94) but had similar postoperative chemotherapy and radiotherapy (both, P>0.05). In a weighted model, the 3-year overall survival rate was 66.3% for the SLN biopsy group and 64.7% for the lymphadenectomy group (hazard ratio 0.85, 95% confidence interval 0.69-1.05). Similar association was observed in subcohorts for young, old, endometrioid, non-endometrioid, T3a, T3b, and N0 cases.

Conclusions: Utilization of SLN biopsy in T3 endometrial cancer is increasing in the United States.

EP123 / #81

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

ASSOCIATION BETWEEN SENTINEL LYMPH NODE BIOPSY AND MICROMETASTASIS IN ENDOMETRIAL CANCER

Varun Khetan¹, Neda Jooya², Maximilian Klar³, Lynda Roman², Koji Matsuo²

¹University of Southern California, Obstetrics And Gynecology, Los Angeles, United States of America, ²University of Southern California, Gynecologic Oncology, Los Angeles, United States of America, ³University of Freiburg Faculty of Medicine, Department Of Obstetrics And Gynecology, Freiburg, Germany

Objectives: The landscape of surgical nodal evaluation is shifting from lymphadenectomy to sentinel lymph node (SLN) biopsy for early endometrial cancer in the recent years. This study examined the association between SLN biopsy and micrometastasis in early endometrial cancer.

Methods: This is a retrospective cohort study examining the National Cancer Institute's Surveillance, Epidemiology, and End Result Program. The study population was 6,414 women with T1-2 endometrial cancer who underwent primary hysterectomy and surgical nodal evaluation. Exposure assignment was per surgical nodal evaluation (SLN biopsy or lymphadenectomy). Main outcome measure was micrometastasis, assessed by inverse probability of treatment weighting propensity score in a stage-specific fashion.

Results: In T1a disease (n=4,608), SLN biopsy was performed in 1,164 (25.3%) cases. SLN biopsy was associated with a 90% increased likeliness of identifying micrometastasis compared to lymphadenectomy (1.3% versus 0.7%, odds ratio [OR] 1.90, 95% confidence interval [CI] 1.02-3.55, P=0.040). In T1b disease (n=1,369), 270 (19.7%) cases had SLN biopsy. The incidence of micrometastasis was significantly higher in the SLN biopsy group compared to the lymphadenectomy group (8.4% versus 5.0%, OR 1.74, 95%CI 1.06-2.86, P=0.028). In T2 disease (SLN biopsy 57 [13.0%] of 437 cases), the incidence of micrometastasis was similar between the two groups (7.9% versus 7.0%, OR 0.88, 95%CI 0.30-2.60, P=0.818).

Conclusions: SLN biopsy protocol can identify more micrometastasis by 74-90% in the regional lymph nodes of T1 endometrial cancer. Recent increase in the utilization of SLN biopsy in early endometrial cancer may therefore result in stage-shift to advance disease in the future.

EP124 / #117

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

PREOPERATIVE NEUTROPHIL-TO-LYMPHOCYTE, PLATELET-TO-LYMPHOCYTE AND MONOCYTE-TO-LYMPHOCYTE RATIO AS A PROGNOSTIC FACTOR IN NON-ENDOMETRIOID ENDOMETRIAL CANCER

Sang Il Kim

St. Vincent's Hospital, College of Medicine, The Catholic University of Korea, Obstetrics And Gynecology, Suwon, Korea, Republic of

Objectives: Evaluate the prognostic value of neutrophil-lymphocyte ratio (NLR), platelet-lymphocyte ratio (PLR), and monocyte-lymphocyte ratio (MLR) in patients with non-endometrioid endometrial cancer.

Methods: Laboratory and clinicopathological data from 118 patients with non-endometrioid endometrial cancer who underwent surgical resection between January 2010 and December 2019 were reviewed. NLR, PLR and MLR were analyzed for correlations with recurrence and survival. The receiver operating characteristic (ROC) curves were generated for the NLR, PLR, and MLR. Optimal cut-off values were determined as the points at which the Youden index (sensitivity + specificity - 1) was maximal. Based on the results of the ROC curve analysis, the patients were grouped into high MLR and low MLR groups. Recurrence rate, disease-free survival, and overall survival were compared between the two groups. The prognostic factors were investigated using univariate and multivariate Cox proportional hazards model.

Results: The optimal cut-off value of MLR was 0.191 (AUC, 0.718; $p < 0.001$). Significantly more patients in the high MLR group experienced recurrence (60.3% vs. 15.6%, $p < 0.0001$) and cancer-related deaths (46.6% vs. 13.3%, $p = 0.003$). In multivariate analysis, advanced stage and high MLR were independent prognostic factors for disease-free survival and overall survival.

Conclusions: Elevated MLR was significantly associated poor clinical outcomes in patients with non-endometrioid endometrial cancer. Our findings suggest that MLR may be clinically reliable and useful as an independent prognostic marker for patients with non-endometrioid endometrial cancer.

EP125 / #679

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

DO MMR AND P53 STATUS IN CHEMO-NAÏVE ENDOMETRIAL CANCER PATIENTS INFLUENCE RESPONSE TO CHEMOTHERAPY?

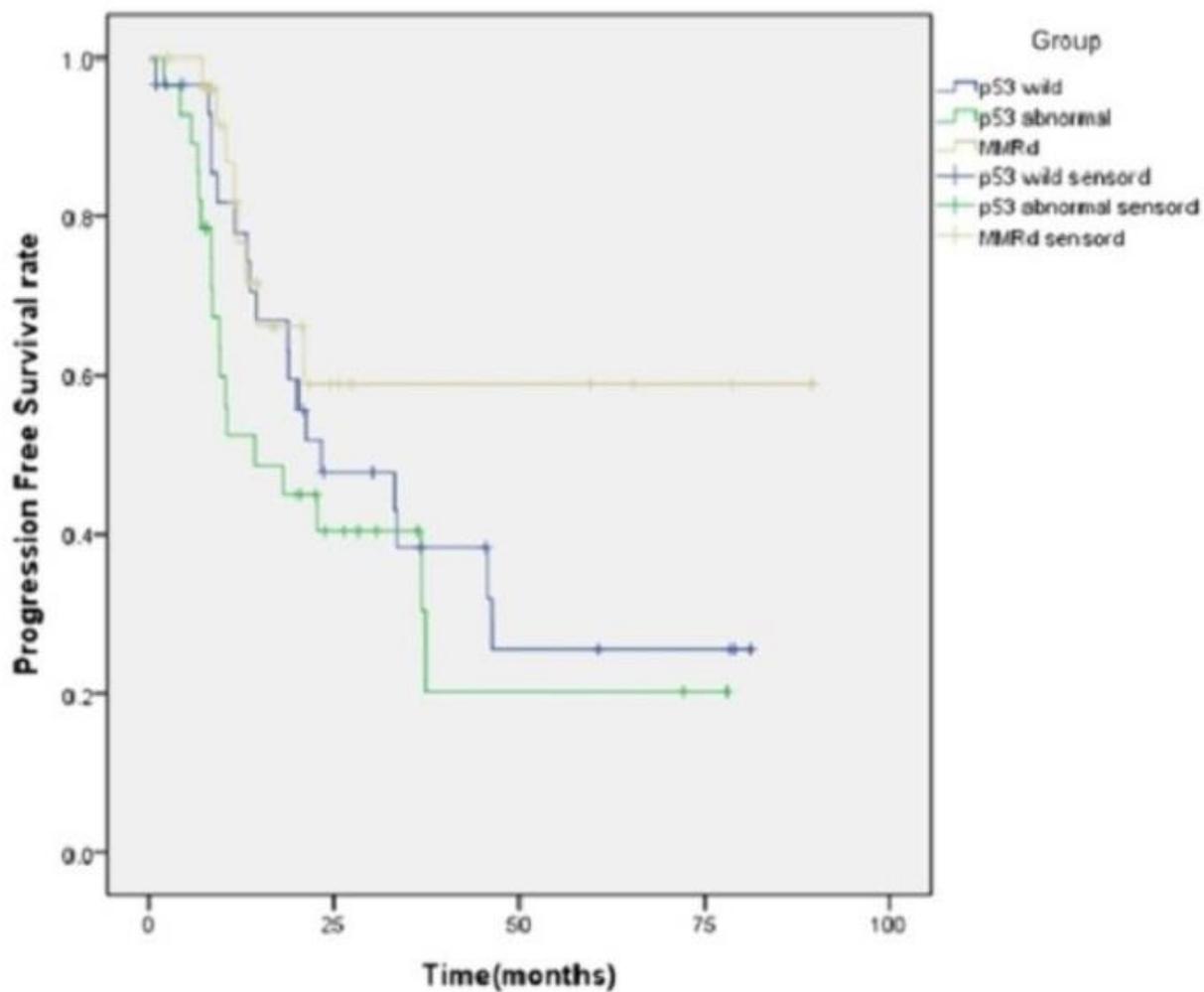
Jung Chul Kim, Jung-Yun Lee, Eun Ji Nam, Sunghoon Kim, Young Tae Kim, Sang Wun Kim, Yong Jae Lee

Institute of Women's Life Medical Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: After molecular classification of endometrial cancer subgroups using IHC called 'ProMisE' was announced, it was confirming the difference in the prognosis of these subgroups. However, it has a limitation on confirming the prognosis of chemo-naïve patients with advanced and recurrent endometrial cancer after chemotherapy. This study is to find the progression free survival(PFS) and overall survival(OS) rate according to Mismatch repair(MMR) and p53 status in chemo-naïve patients with advanced and recurrent endometrial cancer after chemotherapy

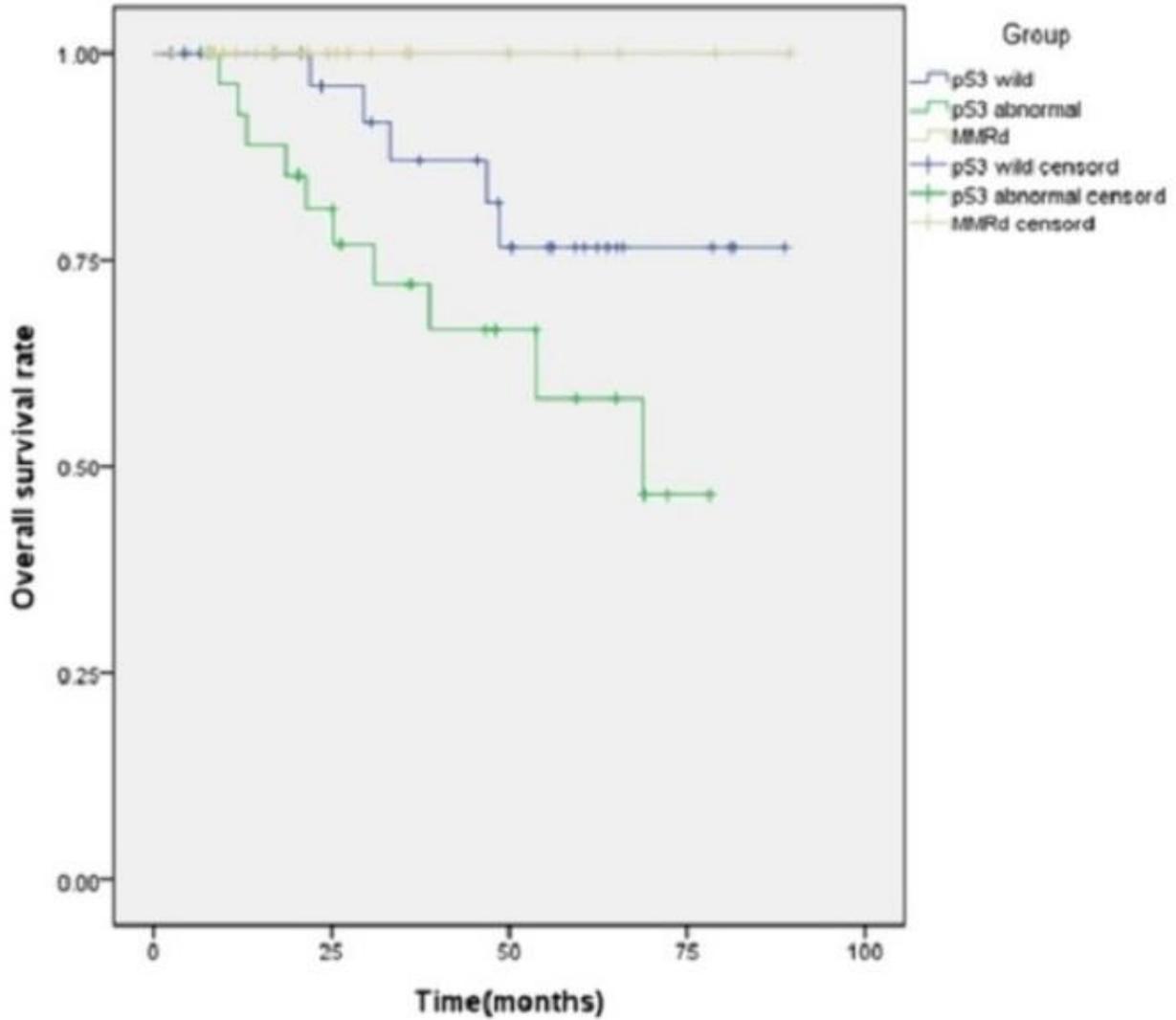
Methods: This was a retrospective population-based cohort study of advanced -stage III and IV- endometrial cancer and recurrent endometrial cancer with first recurrence after diagnosis in single institution from 2015 to 2021, for which chemotherapy as adjuvant therapy or a treatment after recurrence was administered. Primary outcome measure was PFS and OS. PFS and OS rates were compared using Kaplan-Meier method and log-rank tests.

Results: There were 81 patients including 30(35.3%), 28(32.9%), 27(31.8%) with p53 wild, p53 abnormal and MMR-deficiency(MMRd) tumors, respectively. Demographic variables were similar except pathological grade in each group($p = 0.037$). PFS and OS were longer in the order of MMRd, p53 wild, p53 abnormal tumors and there were a statistically difference between MMRd and p53 abnormal tumors.(Figure 1. PFS : $p=0.034$, Figure 2. OS : $p=0.016$)



		p-value
p53 abnormal	VS MMRd	0.034
p53 wild	VS p53 abnormal	0.336
p53 wild	VS <u>MMRd</u>	0.259

Figure 1. PFS



		p-value
p53 abnormal	VS <u>MMRd</u>	0.016
p53 wild	VS p53 abnormal	0.091
p53 wild	VS <u>MMRd</u>	0.182

Figure 2. OS

Conclusions: In chemotherapy-naïve patients with advanced and recurrent endometrial cancer, after chemotherapy, patients with MMRd tumors have a lower rate of recurrence and higher overall survival compared to patients with p53 tumors.

EP126 / #770

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

EARLY OCTREOTIDE THERAPY AND MEDIUM-CHAIN TRIGLYCERIDE DIET IN ENDOMETRIAL CANCER PATIENTS FOLLOWING HIGH PARA-AORTIC LYMPHADENECTOMY

Tae-Wook Kong, Junghoe Kim, Jeeyeon Kim, Joo-Hyuk Son, Suk-Joon Chang, Hee-Sug Ryu
Ajou University Hospital, Obstetrics And Gynecology, Suwon, Korea, Republic of

Objectives: This study evaluates the feasibility of early octreotide therapy and medium-chain triglyceride (MCT) diet in endometrial cancer patients following high para-aortic lymphadenectomy

Methods: A total of 34 endometrial cancer patients who had high-risk for lymph node metastasis on preoperative imaging and underwent para-aortic lymphadenectomy up to the level of renal vein was identified between July 2007 and January 2022. The patients were divided into two groups according to whether early octreotide therapy and MCT diet were performed (Group A, no treatment; Group B, early octreotide therapy and MCT diet). Octreotide therapy and MCT diet were started 3 days after surgery. Clinical courses between group A (n=17) and B (n=10) were compared.

Results: There were no differences in clinicopathologic characteristics including dissected para-aortic lymph node counts between the two groups. The median duration of pelvic drain (14.0 days, 8.0 – 21.0 days vs. 7.0 days, 6.0 – 8.0 days, $p < 0.001$) and hospital stay (15.0 days, 10.0 – 22.0 days vs. 10.0 days, 8.0 – 13.0 days, $p = 0.002$) were significantly different between the two groups. There was no recurrence of lymphatic ascites after early octreotide therapy and MCT diet.

Conclusions: Early octreotide therapy and MCT diet in gynecological cancer patient who underwent para-aortic lymphadenectomy up to the level of renal vein may be attempted to shorten hospital stay and prevent lymphatic ascites. However, the timing of initiation of early octreotide therapy and MCT diet should be determined through further studies in more patients.

EP127 / #410

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

CHARACTERISTICS OF ENDOMETRIAL CARCINOMA PROGRESSED TO EXTRAUTERINE LESIONS FOLLOWING FERTILITY PRESERVING THERAPY USING MPA

Shoko Kitazawa¹, Kensuke Sakai¹, Wataru Yamagami¹, Takuma Yoshimura¹, Takuro Hirano¹, Tatsuyuki Chiyoda¹, Kouji Banno¹, Nobuyuki Susumu², Daisuke Aoki¹

¹Keio University School of Medicine, Obstetrics And Gynaecology, Shinnanomachi, Japan, ²International University of Health and Welfare, Gynecology, Narita, Chiba, Japan

Objectives: Although medroxyprogesterone acetate (MPA) for early endometrial carcinoma and atypical endometrial hyperplasia (AEH) is effective as fertility preserving treatment, it is rare to progress to extrauterine lesions (EL). This study is aimed to clarify the characteristics of patients who had EL following MPA treatment.

Methods: We analyzed the clinicopathological factors and prognosis of 367 patients with grade 1 endometrioid carcinoma (EMG1) treated with MPA at our institution. All patients had performed imaging tests before MPA treatment to rule out EL.

Results: Five patients (1.3%) with EMG1 had EL following MPA treatment. Two patients had EL during initial treatment, 2 patients had during repeated treatment, and 1 patient had 5 months after repeated treatment. Two patients had peritoneal dissemination, 3 patients had regional lymph nodes metastasis, and 1 patient had distal metastasis at Virchow lymph node. EL were diagnosed with imaging tests for 4 patients and elevated tumor marker for 3 patients (overlapping). Except a patient during follow-up, EL were found at 7 months (3-13 months) after MPA treatment started. Each patient was performed standard treatment including hysterectomy and chemotherapy when diagnosed of EL, which finally resulted in the diagnosis of EMG1 for 4 patients and EMG3 for 1 patient. One patient died 6 months later since initial treatment, while others have survived without recurrence.

Conclusions: As a few patients had EL following MPA treatment, it is essential to examine image tests and tumor markers relatively frequently during MPA treatment or when cancer progression is suspected.

EP128 / #847

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

NEO-ADJUVANT CHEMOTHERAPY IN THE TREATMENT OF ADVANCED ENDOMETRIAL CANCER: A RETROSPECTIVE COHORT STUDY EXAMINING AN AUSTRALIAN EXPERIENCE.

Nicole Krzys¹, Jim Nicklin²

¹Royal Hobart Hospital, Gynaecology, Hobart, Australia, ²Royal Brisbane and Women's Hospital, Gynaecology, Brisbane, Australia

Objectives: Neoadjuvant chemotherapy (NACT) prior to interval surgery for advanced endometrial cancer has been proposed as an alternative to primary cytoreduction (PC). We aimed to assess the oncological and surgical outcomes for women treated with NACT compared to PC for advanced EC in our unit.

Methods: We performed a retrospective cohort study of women with advanced EC over a 15 year period in Queensland. NACT and PC cohorts with bulky FIGO stage IVB disease were 1:1 propensity matched for patient health status and disease histology. An ITT analysis to assess the safety and efficacy of NACT versus PC was performed.

Results: 34 PC cases were 1:1 propensity matched to NACT cases. Median PFS for NACT vs PC was similar (8.6 vs 8.8 months, p=0.2) but median OS was higher in the PC cohort (16 vs 21.4 months, p=0.03), despite a trend to increased RO resection in the NACT cohort (58 vs 42%, p=0.17). PC patients had higher 90 day post-operative mortality (6.5 vs 14.7%, p=0.04) and accordingly NACT was associated with decreased mortality initially before survival curves crossed at 12 months. Post operative mortality in PC was offset by long-term survivors and 5 year OS (0 vs 26.5%).

Conclusions: NACT was found to be inferior to PC for bulky FIGO stage IVB disease. Radical upfront surgery is associated with increased post operative mortality but also increased OS and long term cure. The prognosis of this disease is poor in both treatment groups, however, the 5 month overall survival benefit with PC was thought clinically meaningful.

EP129 / #635

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

DOES ORDER OF ADJUVANT TREATMENT MATTER? RETROSPECTIVE REVIEW OF HIGH-RISK ENDOMETRIAL CANCER PATIENTS TREATED WITH ADJUVANT CHEMOTHERAPY FOLLOWED BY RADIATION.

Anjali Kulkarni¹, Mustafa Babadagli², Michael Fung-Kee-Fung¹, Rajiv Samant², Tien Le¹
¹University of Ottawa, Gynecologic Oncology, Ottawa, Canada, ²University of Ottawa, Radiation Oncology, Ottawa, Canada

Objectives: To review progression-free survival (PFS) and recurrence rates in patients with high-risk endometrial cancer treated with adjuvant chemotherapy followed by radiation, which is in contrast to previous literature where adjuvant radiation is given first, followed by chemotherapy.

Methods: A retrospective chart review was performed on patients diagnosed with endometrial cancer who received adjuvant chemotherapy and radiation between 2005-2017 at The Ottawa Hospital. Inclusion criteria were: stage III endometrial cancers of any histology, stage I-II serous or clear cell endometrial cancers and stage IV endometrioid adenocarcinomas. PFS was defined as the time from surgery to disease recurrence or death by any cause.

Results: 140 patients were included. 52 (37.1%) had endometrioid histology, 75 (53.6%) serous, and 11 (7.9%) clear cell. 41 (29.3%) were stage 1 at diagnosis, 24 (17.1%) were stage 2, 68 (48.6%) were stage 3 and 7 (5.0%) were stage 4. 130 (92.9%) completed a total of 6 cycles of chemotherapy and 92% completed radiation following chemotherapy. The median follow-up time was 63.9 months. 7 (5%) of patients were diagnosed with locoregional recurrence alone, while 25 (17.9%) had a distant recurrence alone. The estimated mean 5 year PFS was 70.1% and OS was 67.9%.

Conclusions: Our sample was predominantly serous and clear cell histology. When compared to the serous subgroup analysis of the PORTEC3 trial, our sample demonstrated an improved 5 year PFS, with a similar OS. In addition, we demonstrate that delaying radiation to after completion of chemotherapy results in low locoregional recurrence rates.

EP130 / #1060

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

TREATMENT PATTERNS FOR LEIOMYOSARCOMAS, ENDOMETRIAL STROMAL SARCOMAS AND ADENOSARCOMAS: A NATIONAL CANCER DATABASE STUDY

Jessica Kunzman¹, Ryan Hutten², Kristen Kelley³, Kate Harris⁴, David Gaffney², Cristina Decesaris², Gita Suneja², Lindsay Burt²

¹University of Utah, School Of Medicine, Salt Lake City, United States of America, ²UNIVERSITY OF UTAH, Radiation Oncology, SALT LAKE CITY, United States of America, ³UNIVERSITY OF UTAH, Medical Oncology, SALT LAKE CITY, United States of America, ⁴UNIVERSITY OF UTAH, Gynecologic Oncology, SALT LAKE CITY, United States of America

Objectives: Uterine sarcomas are a rare, heterogenous, group of cancers with limited data on optimal adjuvant treatment. We examined patterns of care for leiomyosarcomas, endometrial stromal sarcomas (ESS), adenosarcomas, and mixed uterine sarcomas using the National Cancer Database (NCDB).

Methods: The NCDB was queried for patients with non-metastatic uterine sarcoma diagnosed between 2004 and 2018 treated with surgery. Uterine carcinosarcomas were excluded. Adjuvant patterns of care and temporal treatment trends were evaluated, stratified by histology. Multivariable logistic regression model was constructed to identify predictors of receipt of radiation.

Results: Among 12,806 patients, 88% received a total hysterectomy and bilateral salpingo-oophorectomy (TH-BSO) and 42% received lymph node sampling (LNS). Adjuvant patterns of care are reported in Table 1. The utilization of adjuvant chemotherapy in uterine sarcomas has increased over time from 10% in 2004 to 28% in 2018, while radiation therapy (RT) use has been decreasing from 25% in 2004 to 5% in 2018 (Figure 1, $p < 0.05$). This trend is particularly pronounced in leiomyosarcomas with utilization of RT decreasing from 27% to 3% and chemotherapy increasing from 14% to 33% from 2004 to 2018 ($p < 0.05$). Predictors of receiving adjuvant RT varied by histology but included stage II or III, high grade, and ≥ 7 lymph nodes removed.

Table 1. Adjuvant treatment patterns of care for leiomyosarcomas (n=7,825), low-grade ESS (n=837), high-grade ESS (n=612), adenocarcinoma (n=2,507), mixed sarcomas (n=903) and all uterine sarcomas excluding carcinosarcomas (n=12,387)

	Leiomyosarcoma	Low-grade ESS	High-grade ESS	Adenocarcinoma	Mixed	Total
Treatment Modality	%	%	%	%	%	%
Surgery alone	50.4%	85.9%	86.1%	73.7%	47.5%	59.0%
Surgery+RT	9.8%	11.9%	10.8%	11.8%	13.2%	10.6%
Surgery+Chemo	33.1%	1.7%	2.6%	9.7%	29.6%	24.5%
Surgery+Chemo+RT	6.7%	0.5%	0.5%	4.8%	9.7%	5.8%
Total						
Radiation Modality						
EBRT	59.1%	58.5%	49.4%	46.1%	59.1%	56.1%
Brachy	26.3%	22.8%	30.6%	37.8%	27.6%	28.7%
Unknown	14.6%	18.7%	20.0%	16.1%	13.4%	15.2%
Total						
Chemotherapy						
Single agent	8.2%	16.7%	10.5%	6.6%	11.8%	8.4%
Multiagent	87.0%	77.8%	73.7%	88.7%	82.0%	86.6%
Unknown type	4.8%	5.6%	15.8%	4.7%	6.2%	5.0%
Total						
Hormone Therapy						
None	98.2%	83.4%	77.7%	97.5%	98.1%	96.1%
Yes	1.8%	16.6%	22.3%	2.5%	1.9%	3.9%

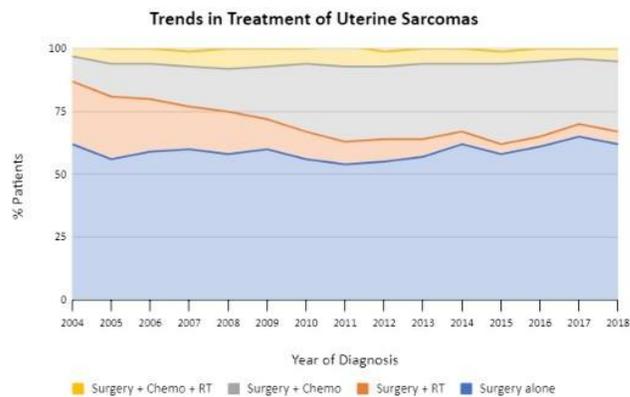


Figure 1. Trends in treatment of uterine sarcomas over time

Conclusions: For uterine sarcomas, TH+BSO without LNS was the main surgical modality. We identified high-risk features predictive of receiving RT, including stage II/III, high grade, and more extensive LNS. Overall, adjuvant RT utilization is decreasing over time for uterine sarcomas, particularly in leiomyosarcomas.

EP131 / #268

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

**ONCOLOGIC SAFETY OF MINIMALLY INVASIVE SURGERY IN NON-ENDOMETRIOID
ENDOMETRIAL CANCER**

Jiwoo Lee, Sang Il Kim, Joo Hee Yoon

St. Vincent's Hospital, College of Medicine, The Catholic University of Korea., Department Of Obstetrics & Gynecology, Suwon, Gyeonggi-Do, Korea, Republic of

Objectives: This study was aimed to compare the oncologic outcomes of patients with non-endometrioid endometrial cancer who underwent minimally invasive surgery with the outcomes of patients who underwent open surgery.

Methods: This is a retrospective, multi-institutional study of patients with non-endometrioid endometrial cancer who were surgically staged by either minimally invasive surgery or open surgery. Oncologic outcomes of the patients were compared according to surgical approach.

Results: 113 patients met the inclusion and exclusion criteria. 57 underwent minimally invasive surgery and 56 underwent open surgery. Patients who underwent minimally invasive surgery had smaller tumors (median size, 3.3 vs. 5.2%, $p=0.0001$) and a lower lymphovascular space invasion rate (29.8% vs. 48.2%, $p=0.045$). In the overall population, the numbers and rate of recurrence were significantly higher in the open surgery group ($p = 0.016$). In multivariate analysis, disease stage and tumor size were associated with DFS in contrast to surgical procedure.

Conclusions: Minimally invasive surgery showed similar survival outcomes when compared to open surgery in non-endometrioid endometrial cancer patients, irrespective of disease stage. When minimally invasive surgery is managed by expert surgeons, non-endometrioid histological subtypes should not be considered a contraindication for minimally invasive surgery.

EP132 / #323

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

CLINICAL RELEVANCE OF RED BLOOD CELL DISTRIBUTION AS PROGNOSTIC MARKER IN ENDOMETRIAL CARCINOMA

Taekyung Lee, Kyung Jin Eoh, Eun Ji Nam, Sunghoon Kim, Sang Wun Kim, Young Tae Kim
Institute of Women's Medical Life Science, Yonsei University College of Medicine, Department Of
Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: Increasing evidence is focused on the relationship between hematologic biomarkers and gynecologic malignancies. Red blood cell distribution width (RDW) is a standard parameter of the complete blood count and indicates variability in red blood cell size. The purpose of this study was to detect whether the preoperative RDW can be used to predict the prognosis of endometrial carcinoma.

Methods: Medical records of patients diagnosed with endometrial carcinoma were registered from May 2006 to June 2018. In addition to RDW, the clinicopathological factors, survival curves and prognosis of the patients with endometrial carcinoma were compared between the high and low groups according to the median RDW value (12.8%).

Results: The patients with high RDW had significantly higher body mass index (BMI) (25.0 ± 6.34 vs. 24.6 ± 3.82 ; $p=0.00$), pelvic lymph node metastasis (36.0 ± 16.9 vs. 19.0 ± 8.7 ; $p=0.01$) and recurrence (37.0 ± 17.4 vs. 20.0 ± 9.2 ; $p=0.01$) compared to the low group. There was an upward trend in RDW value according to advanced surgical stage. In the univariate analysis with DFS as the endpoint, surgical stage, type II histology, grade, RDW and lymph node metastasis were independently associated with survival. Although patients with high RDW did not show longer overall survival (log-rank $p=0.11$), they had significantly shorter disease free survival than the low group (log-rank $p=0.03$).

Fig 1. Disease-free survival (DFS) (A) and overall survival (OS) (B). 5-year DFSs were 96% and 87% in the low and high RDW cohorts, respectively. 5-year OSs were 92% and 89% in the low and high RDW cohorts, respectively.

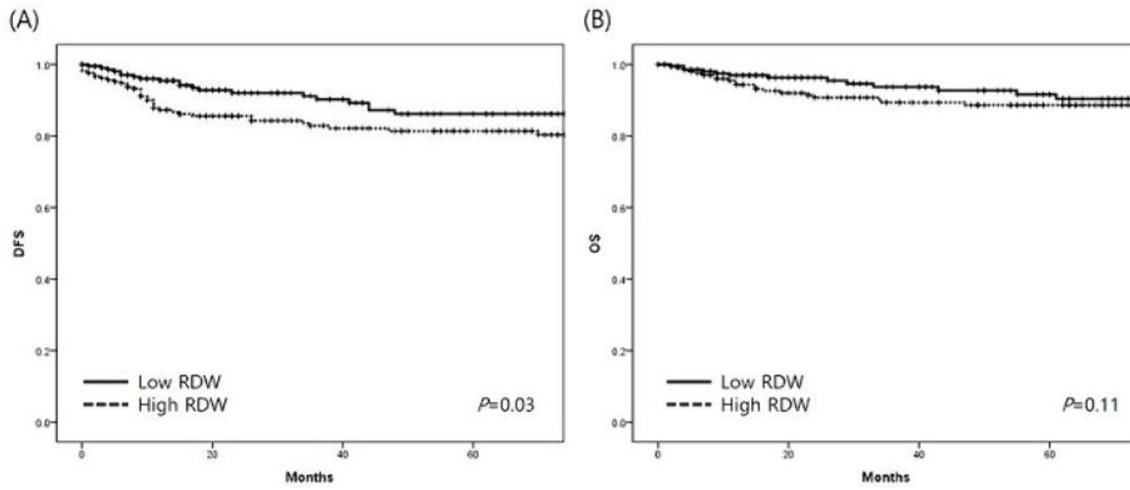


Table 1. Patient characteristics of the study population

Characteristics	Total patients	RDW		P-value
		Low (n=218)	High (n=213)	
Age, mean (SD)	0	55.9 (8.05)	51.7 (10.46)	0.01
BMI, kg/m² (SD)		24.6 (3.82)	25.0 (6.34)	0.00
Preoperative Hb (SD)		12.67 (1.63)	11.6 (1.59)	0.11
FIGO stage n, (%)				0.03
I	331	177 (81.2)	154 (72.3)	
II	22	13 (6.0)	9 (4.2)	
III	56	21 (9.6)	35 (16.4)	
IV	22	7 (3.2)	15 (7.0)	
Cell type, n (%)				0.61
Endometrioid	317	158 (72.5)	159 (74.6)	
Other	114	60 (27.5)	54 (25.4)	
Grade, n (%)				0.34
1	186	91 (41.7)	95 (44.6)	
2	134	75 (34.4)	59 (27.7)	
3	111	52 (23.9)	59 (27.7)	
Metastatic LN, n (%)				
Pelvic LN	55	19 (8.7)	36 (16.9)	0.01
Paraortic LN	32	16 (7.3)	16 (6.1)	0.61
EBL, ml (SD)		162.6 (217.9)	320.4 (612.9)	0.00
Adjuvant therapy				
Radiation	84	49 (22.5)	35 (16.4)	0.18
Chemotherapy	89	37 (17.0)	52 (24.4)	
Both	29	15 (6.9)	14 (6.6)	
None	229	117 (53.7)	112 (52.6)	
Recurrence, n (%)				0.01
No	374	198 (90.8)	176 (82.6)	
Yes	57	20 (9.2)	37 (17.4)	
Vital status, n (%)				0.05
Alive	394	205 (94.0)	189 (88.7)	
Dead	37	13 (6.0)	24 (11.3)	

RDW, red blood cell distribution width; SD, standard deviation; BMI, body mass index; LN, lymph node; EBL, estimated blood loss

Conclusions: Our results were consistent with the concept that RDW can be a simple and convenient indicator for recurrence in endometrial carcinoma. Further study is necessary to investigate impact of RDW on overall survival.

EP133 / #395

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

USEFULNESS OF PRE-OPERATIVE PET-CT IN PATIENTS WITH ENDOMETRIAL CANCER UNDERGOING SENTINEL LYMPH NODE MAPPING: DO NEGATIVE FINDINGS ON PET-CT NEGATIVITY REALLY INDICATE NODE NEGATIVITY?

Dahye Lee, Yoo-Na Kim, Yong Jae Lee, Jung-Yun Lee, Eun Ji Nam, Sunghoon Kim, Young Tae Kim, Sang Wun Kim

Yonsei university College of Medicine, Department Of Obstetrics And Gynecology, Women's Cancer Center, Yonsei Cancer Center, Institute Of Women's Life Medical Science, Seoul, Korea, Republic of

Objectives: We investigated the utility of Positron emission tomography-Computed tomography (PET-CT) in the setting of two different sentinel lymph node (SLN) mapping techniques; the conventional cervical injection method (one-step) and the fundal injection followed by cervical injection (two-step).

Methods: Patients with endometrial cancer undergoing FDG PET-CT followed by laparoscopic or robotic surgical staging with SLN mapping at the Yonsei Cancer Center between July 2014 and April 2021 were stratified into the PET-positive group (with suspected or likely lymph nodes metastasis) and PET-negative group. A chart review was performed to assess the number of SLNs harvested, patterns of SLN metastases, and recurrence.

Results: Among 466 patients undergoing one-step (n=276) and two-step (n=190) SLN mapping, LN metastasis was identified in 18 of 32 PET-positive patients. The sensitivity and specificity of PET-CT for diagnosing nodal metastasis were 46.2% and 96.7%, respectively. Among PET-positive patients with LN metastasis, anatomical distribution was concordant in 77.8% of patients. Among PET-negative patients, four (2.3%) had metastatic para-aortic SLNs, including three (1.7%) with isolated para-aortic metastases. Metastatic para-aortic SLNs were not seen in one-step patients. Among PET-positive patients, para-aortic SLN metastasis was identified in 35.7% of two-step and 16.7% of one-step patients. Among the 21 false PET-negative patients, recurrence was seen in four (19%) after a median follow-up of 34 months (range: 7-70).

Conclusions: PET-CT showed moderate sensitivity and high specificity. The SLN metastasis pattern, especially at the para-aortic level, indicates that the two-step SLN technique might be useful in both PET-negative and PET-positive patients.

EP134 / #257

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

COMBINING CHEMOTHERAPY WITH RADIOTHERAPY IN RESECTED ENDOMETRIAL CARCINOMA: A REAL ADDED VALUE? A META-ANALYSIS.

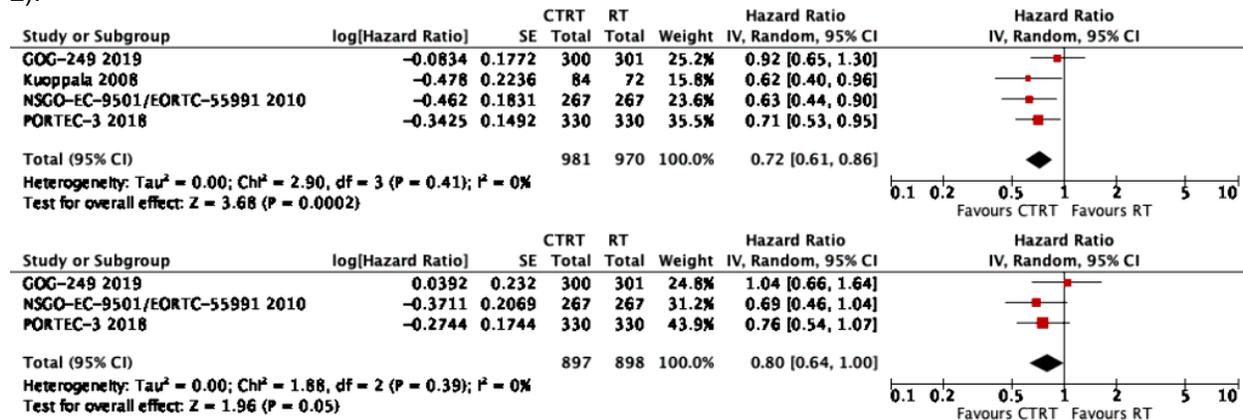
Brigida Anna Maiorano¹, Mauro Maiorano², Evaristo Maiello¹

¹Foundation Casa Sollievo della Sofferenza IRCCS, Oncology, San Giovanni Rotondo, Italy, ²University of Bari "Aldo Moro", Biomedical And Human Oncological Sciences, Division Of Obstetrics And Gynecology, Bari, Italy

Objectives: Although endometrial carcinoma (EC) has a favorable prognosis in the localized stages, recurrence can occur either locally or in distant sites. Aiming to reduce the relapse risk of EC, pelvic radiotherapy (RT) or systemic chemotherapy (CT) is usually administered, and recently the combination of these two options has been investigated. With our meta-analysis, we ought to address the real benefit of CTRT in delaying the relapse risk and prolonging survival.

Methods: We systematically searched the PubMed, EMBASE, and Cochrane databases for randomized clinical trials (RCTs) concerning the combination of chemotherapeutic regimens and radiotherapy (CTRT) compared with RT alone. We extracted hazard ratios (HRs) for relapse-free survival (RFS) and overall survival (OS).

Results: 4 phase III RCTs were selected. 1,951 patients received CTRT (n=981) or RT alone (n=970). Compared to RT, the CTRT combination significantly improved RFS in older patients (HR=0.72; 95% CI: 0.61-0.86; P=0.0002) (Figure 1). However, OS was not clearly prolonged (HR=0.80; 95% CI: 0.64-1.00; P=0.05) (Figure 2).



Conclusions: Our meta-analysis demonstrates that the addition of chemotherapy to radiotherapy significantly delays relapse in patients with endometrial carcinoma in the post-operative setting. However, the advantage of overall survival is not clear. A more accurate stratification for risk factors will help an appropriate patients selection. More studies are warranted.

EP135 / #747

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

A RETROSPECTIVE ANALYSIS OF CLINICAL AND PATHOLOGIC CHARACTERISTICS OF ENDOMETRIAL CANCER CASES ACCORDING TO MISMATCH REPAIR PROTEIN STATUS

Ran Matot¹, Daliah Tsoref², Bar Narkis¹, Anat From¹, Yosef Landman², Ariella Jakobson-Setton¹, Gad Sabah¹, Ram Eitan¹

¹Rabin Medical Center Petah Tikva, affiliated with Sackler Faculty of medicine, Tel Aviv University, Department Of Obstetrics And Gynecology, TEL AVIV, Israel, ²Rabin Medical Center Petah Tikva, affiliated with Sackler Faculty of medicine, Tel Aviv University, Israel, Department Of Oncology, TEL AVIV, Israel

Objectives: Since 2016 our institution has performed reflex immunohistochemistry assessment of mismatch repair (MMR) protein expression in all newly diagnosed endometrial cancer patients. In this study we assessed the impact of MMR status on clinical and pathologic tumor characteristics

Methods: We retrospectively analyzed 248 cases according to MMR deficient (MMRd) and proficient (MMRp) status for the following clinical and pathologic characteristics: Age and stage at presentation, histology, depth of invasion, lymph-vascular space invasion (LVSI), lower uterine segment involvement (LUSI) and adjuvant therapy received. A sub-analysis of endometrioid cancer cases was also undertaken

Results: 72 (29%) of tumors exhibited loss of MMR protein expression. Most women were diagnosed with stage 1 disease (69.1% of MMRd and 73.8% of MMRp cases). Average age at presentation was 66 years in both groups. No statistically significant difference was seen with respect to depth of invasion, LVSI, LUSI or adjuvant treatment. Differences in the use of radiation ($P=0.15$) and chemotherapy ($P=0.19$) between the groups did not reach statistical significance. All patients with MMRd had endometrioid histology except 1 patient with serous histology. Subgroup analysis of endometrioid cancers revealed statistically significant higher stage at diagnosis ($p<0.01$), more LUSI ($p<0.05$), and consequently increased rates of adjuvant radiation ($p<0.05$) for patients with MMRd

Conclusions: MMRd tumors are universally of endometrioid histology. MMRd in endometrioid tumors correlated with a more aggressive subtype which presented at a higher stage requiring more aggressive adjuvant treatment

EP136 / #823

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

ABERRANT BETA-CATENIN DISTRIBUTION AS POTENTIAL PROGNOSTIC BIOMARKER IN ENDOMETRIAL CANCER

Ashley S Moon¹, Isabel Beshar¹, Kj Jennings¹, Brooke Howitt², Malte Renz¹

¹Stanford University School of Medicine, Obstetrics And Gynecology, Gynecologic Oncology, Palo Alto, United States of America, ²Stanford University School of Medicine, Pathology, Palo Alto, United States of America

Objectives: Based on the TCGA results for endometrial cancer, aberrant beta-catenin distribution may be a predictive biomarker for recurrence in early stage, low grade endometrioid endometrial cancer.

Methods: This retrospective single institution cohort study reviewed 316 patients with endometrial cancer from 2017 to 2021. Uterine serous, carcinosarcoma, clear cell endometrial histologies were excluded. Stage, FIGO grade, beta-catenin status by immunohistochemistry (aberrant nuclear distribution vs. wild-type plasma membrane distribution), recurrence status (local vs. distant) were obtained from the medical records. Stage was classified as early (stage IA/IB) or advanced (stage II/IIIA/IIIB/IIIC/IVB). X2 test, Fisher test, and logistic regressions were performed.

Results: 213 patients were included. The majority had stage IA (50.0%, n=106) or FIGO grade I disease (69.8%, n=148). Recurrences were observed in 40 patients (18.9%) vs. no recurrences in 172 patients (81.3%). Recurrences did not correlate with beta catenin distribution: 20% (n=19) of aberrant beta-catenin recurred vs. 17.9% (n=21) of wild-type beta-catenin recurred (p=0.70). Local and distant recurrences did not vary significantly by beta-catenin status (p=0.36). Most recurrences occurred in the vaginal cuff (37.50%, n=15), followed by lung (17.50%, n=7). The odds ratio (OR) for beta-catenin aberrant distribution on recurrence risk was non-significant at 1.17 (0.59, 2.32). In a sensitivity analysis of early-stage, low-grade patients (n=109), recurrence also did not vary significantly by beta-catenin distribution (p=0.64).

Conclusions: Aberrant beta-catenin distribution did not significantly correlate with recurrence in early stage, low grade endometrioid uterine cancer. Further research is warranted to evaluate the effect of aberrant beta-catenin distribution on endometrial cancer prognosis.

EP137 / #843

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

ANTI-LIPOLYSIS-STIMULATED LIPOPROTEIN RECEPTOR MONOCLONAL ANTIBODY INDUCES APOPTOSIS AND SHOWS AN ANTITUMOR ACTIVITY IN ENDOMETRIAL CANCER

Yoshikazu Nagase¹, Kosuke Hiramatsu¹, Mamoru Kakuda¹, Satoshi Nakagawa¹, Toshihiro Kimura¹, Satoshi Serada², Yutaka Ueda¹, Tetsuji Naka², Tadashi Kimura¹

¹Osaka University, Obstetrics And Gynecology, Suita, Japan, ²Iwate Medical University, Institute For Biomedical Sciences Molecular Pathophysiology, Iwate, Japan

Objectives: Advanced endometrial cancer (EC) has a poor prognosis. Since the efficacy of current chemotherapy is limited, new therapeutic agents are needed. We focused on lipolysis-stimulated lipoprotein receptor (LSR), a membrane protein highly expressed in EC cells, and developed a new anti-LSR monoclonal antibody (mAb). In this study, we aimed to investigate the function of LSR and the antitumor activity of anti-LSR mAb in EC.

Methods: The relationship between LSR expression and clinical outcomes was investigated using immunohistochemistry in 230 clinical samples of EC. We newly developed a chimeric chicken-mouse anti-LSR mAb and investigated its antitumor activity in EC cell xenograft mouse model. To clarify the function of LSR, we conducted in vitro assays using EC cell lines (HEC1 and HEC116).

Results: High-LSR expression was significantly associated with poor overall survival, deep myometrial invasion, and metastasis in EC patients ($p < 0.05$, respectively). LSR-knockdown suppressed the activation of the MEK/ERK signaling pathway and subsequent matrix metalloproteinases (MT1-MMP and MMP2), which downregulated cell proliferation, invasion, and migration in HEC1 and HEC116. Our anti-LSR mAb suppressed the phosphorylation of ERK1/2, increased the expression of cleaved caspase-3, and significantly inhibited the tumor growth in EC cell xenograft mouse model (tumor volume, 407.1 mm³ versus 726.3 mm³, $p = 0.019$). Moreover, anti-LSR mAb also suppressed the activation of the MEK/ERK signaling pathway in vitro.

Conclusions: LSR is associated with tumor growth, invasion, metastasis, and poor prognosis in EC. Anti-LSR mAb is a potential therapeutic agent which induces apoptosis and shows a significant antitumor effect in EC.

EP138 / #375

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

INCIDENCE AND CHARACTERISTICS OF OVARIAN CANCER FOLLOWING ENDOMETRIAL CANCER – IMPLICATIONS FOR COUNSELING IN THE ERA OF CONSERVATIVE MANAGEMENT - A SEER ANALYSIS

Chen Nahshon¹, Yakir Segev¹, Meirav Schmidt¹, Ludmila Ostrovsky¹, Eden Gerszman², Ofer Lavie¹
¹Carmel Medical Center, Gynecological Oncology, haifa, Israel, ²Carmel Medical Center, Department Of Surgery B, haifa, Israel

Objectives: Ovarian preservation in young endometrial cancer (EC) patients is controversial and requires further consideration. We aimed to assess the risk for ovarian cancer (OC) following EC in patients who underwent ovarian preservation as part of the initial EC staging and to characterize this group of patients.

Methods: With permission of the Surveillance, Epidemiology and End Results (SEER) program of the United States National Cancer Institute, clinicopathological and prognosis information of women diagnosed with EC and following OC were analyzed. Patients were divided into groups: Group A – EC patients that had BSO performed; Group B – EC patients that had ovarian preservation performed. Incidence of OC and survival rates were compared.

Results: 383 patients diagnosed with OC following EC were documented. Of them 260 patients had a known BSO performance status. Incidence of OC did not differ between groups (IRR 1.07, CI 0.83-1.39, p=0.59). Survival rates were significantly shorter in ovarian preservation patients compared to patients with BSO performed as part of their EC staging and treatment. However, when analyzing by age, in women diagnosed with EC up to age of 49 years old, no differences in survival rates were found comparing the two groups.

Conclusions: Ovarian preservation in EC patients under the age of 49 years may be considered safe, with no impact on OC incidence or survival, benefiting a longer natural hormonal status. In EC patients who went through ovarian preservation a close follow-up for at least 7 years from the EC diagnosis is recommended.

EP139 / #416

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

OUTCOMES OF SENTINEL LYMPH NODE MAPPING FOR PATIENTS WITH ENDOMETRIAL CARCINOMA AND CERVICAL OR EXTRA-UTERINE INVOLVEMENT (T2, T3A, OR T3B).

Dimitrios Nasioudis, Emily Ko, Ashley Haggerty, Lori Cory, Robert Giuntoli li, Sarah Kim, Mark Morgan, Nawar Latif
University of Pennsylvania, Division Of Gynecologic Oncology, Philadelphia, United States of America

Objectives: Investigate the oncologic outcomes of patients with endometrial carcinoma and extra-uterine tumor spread who underwent sentinel lymph node biopsy (SLNBx).

Methods: Patients diagnosed between 2012-2015 with endometrial carcinoma, who underwent minimally-invasive hysterectomy and had cervical (T2), serosal/adnexal (T3A), or vaginal/parametrial involvement (T3B) were identified in the National Cancer Database. Patients who underwent SLNBx (with or without LND) or systematic LND alone (defined as at least 20 LNs removed) were identified. Overall survival (OS) was compared with the log-rank test. A Cox model was constructed to control for confounders.

Results: A total of 2108 patients were identified; 1090 (51.7%) with cervical, 745 (35.3%) with serosal/adnexal, 246 (11.7%) with parametrial/vaginal involvement and 27 (1.3%) with T3 not specified. A total of 1786 (84.7%) patients had sLND (78.1% with para-aortic LND), while 322 (15.3%) underwent SLNBx. Rate of LN metastases was 35.8% in the sLND and 32.6% in the SLNBx group, $p=0.27$. Rates of chemotherapy ($p=0.36$) and radiotherapy ($p=0.34$) were comparable. There was no OS difference between patients who had SLNBx or sLND ($p=0.60$; 4-yr OS rates 71.5% and 73.9%) even after controlling for confounders (HR 1.10, 95% CI: 0.84, 1.45). OS was comparable for patients with T2 ($p=0.60$), T3A ($p=0.34$), T3B ($p=0.38$). Patients who had SLNBx alone ($n=103$), had lower incidence of LN metastases (22.3%, $p=0.005$), but did not have worse OS compared to those who had sLND ($p=0.87$; 4-yr OS rate 72.2% and 73.9%).

Conclusions: Patients with extra-uterine involvement have a high incidence of LN metastases. SLNBx is associated with similar OS compared to LND.

EP140 / #780

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

**VAGINAL HYSTERECTOMY FOR THE TREATMENT OF LOW-RISK ENDOMETRIAL CANCER:
INTERIM SURGICAL AND ONCOLOGICAL ANALYSIS**

Fernando Nobrega, Luisa Martins, Vanessa Bezerra, Vinicius Campos, Bruna Bottura, Sergio Podgaec, Renato Moretti-Marques
Hospital Municipal Vila Santa Catarina; Hospital Israelita Albert Einstein, Ginecologia Oncológica, São Paulo, SP, Brazil

Objectives: The purpose of this study was to evaluate the role of vaginal hysterectomy for the treatment of patients with low-risk endometrial cancer.

Methods: We retrospectively reviewed the medical records of patients who underwent vaginal hysterectomy for treatment of endometrial cancer or its precursor lesions at a single center in São Paulo, Brazil. Medical data obtained included comorbidities, pre and postoperative histological diagnosis, perioperative outcomes, adjuvant treatments and oncological and surgical follow-up.

Results: Medical records from 34 consecutive patients who underwent vaginal hysterectomy for endometrial cancer or its precursor lesions between April 2019 and November 2021 were analyzed. Mean age was 61.9 years and body mass index (BMI) was 34; 76.5% of patients were obese (BMI \geq 30). Medical comorbidities including hypertension (67.7%) and diabetes (35.3%) were commonly noted. Sixty-one percent of patients had two or more comorbidities. Mean operative time and hospital stay were 109 minutes and 1.2 days, respectively. Four (11.8%) patients had conversion of surgical route to laparotomy due to vascular trauma (2 cases) or anatomical difficulties (2 cases). No other major complications were found. Patients undergoing surgical conversion had greater uterine volume (226.8 vs 110.4 ml, $p=0.036$), longer operative time (116 vs 98 min, $p<0.0075$) and hospital stay (56.8 vs 23.2 hours, $p<0.0001$). Twenty-eight patients had low-grade endometrioid carcinoma; three (10.7%) of them received adjuvant radiotherapy. Mean follow up was 14.6 months. No patient relapsed or died during the study period.

Conclusions: Vaginal hysterectomy could be an appropriate and cost-beneficial treatment for well-selected patients with low-risk endometrial cancer.

EP141 / #791

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

DOES POSITIVE PERITONEAL CYTOLOGY ALTER ONCOLOGIC OUTCOMES OF PATIENTS WITH CLINICAL EARLY STAGE LOW-GRADE ENDOMETRIOID ENDOMETRIAL CARCINOMA?

Dimitrios Nasioudis¹, Gabrielle Gossner², William Burke², Theofano Orfanelli²

¹University of Pennsylvania, Division Of Gynecologic Oncology, Philadelphia, United States of America, ²Stony Brook University, Division Of Gynecologic Oncology, Department Of Obstetrics, Gynecology And Reproductive Medicine, Stony Brook, United States of America

Objectives: Investigate the prevalence and outcomes of positive peritoneal cytology among patients with clinical early stage low-grade endometrioid endometrial carcinoma (EEC).

Methods: Patients with no history of another tumor diagnosed between 2010-2015 with clinical early-stage grade 1 or 2 EEC after hysterectomy with lymphadenectomy and known peritoneal cytology, as well as data on depth of myometrial invasion, lymph node and lymph-vascular invasion (LVSI) status were included. Overall survival (OS) was compared with log-rank test following generation of Kaplan-Meier curves. Cox model was constructed to control for confounders.

Results: 33161 patients met inclusion criteria; 1553 (4.7%) had positive peritoneal cytology. Patients with positive peritoneal cytology were younger (median 61 vs 62 years, $p < 0.001$), more likely to have grade 2 tumors (52.2% vs 42.1%, $p < 0.001$), outer half myometrial invasion (38.4% vs 23.3%, $p < 0.001$), positive lymph nodes (14.6% vs 3.9%) and LVSI (28.7% vs 11.9%, $p < 0.001$). They were more likely to receive radiation therapy (36.4% vs 19.4%, $p < 0.001$), and chemotherapy (22.6% vs 4%, $p < 0.001$). There was no difference in OS between patients with negative and positive peritoneal cytology ($p = 0.10$; 4-year OS rates were 94.5% vs 93.2% respectively). Positive peritoneal cytology was not associated with worse OS when controlling for confounders (HR: 1.06, 95% CI: 0.86, 1.30) neither when excluding lymph node metastases (HR 1.23, 95% CI: 0.99, 1.53). Negative lymph nodes and positive peritoneal cytology ($n = 1322$), radiation therapy ($p = 0.59$) and chemotherapy ($p = 0.83$) were not associated with better OS.

Conclusions: For patients with clinical early-stage low-grade EEC, positive peritoneal cytology was rare and not associated with worse overall survival.

EP142 / #1021

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

SENTINEL LYMPH NODE MAPPING IN ENDOMETRIAL CANCER- A COMPARISON OF FIVE NATIONAL GUIDELINES.

Aharon Dick¹, Gabriel Levin¹, Tamar Perri¹, Liron Kogan¹, Benny Brandt¹, Raanan Meyer²
¹hadassah medical center, Gynecologic Oncology, jerusalem, Israel, ²Chaim Sheba Medical, Obgyn, tel aviv, Israel

Objectives: To compare national guidelines regarding sentinel lymph node (SLN) mapping in endometrial cancer (EC).

Methods: A descriptive comparative study of: The National Comprehensive Cancer Network (NCCN) (United States), The Society of Gynecologic Oncology (SGO)(United States), The European Society of Gynecological Oncology (ESGO),The British Gynecological Cancer Society (BGCS) and the Japan Society of Gynecologic Oncology (JSGO).

Results: There is a broad consensus that SLN is an appropriate alternative to pelvic lymphadenectomy for uterine-confined endometrioid EC. It is broadly accepted that a full lymphadenectomy should be performed in case of failed SLN mapping and that fluorescent dye indocyanine green mapping is superior to other methods. It is agreed that the cervix is the preferable site for dye injection, and pathology ultrastaging is advocated by most guidelines. Regarding high-risk patients (i.e. high grade histology and non-endometrioid carcinomas) some accept yet other guidelines do not currently advocate SLN as a sole method for lymph node evaluation. There is no consensus regarding para-aortic LN evaluation in pelvic SLN positive patients:

Conclusions: National guidelines for SLN are comparable with regard to most principles in SLN mapping in low-risk EC, with some variations regarding high-grade histology and positive pelvic LN

EP143 / #1065

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

HIGH-GRADE ENDOMETRIAL CANCER BEHAVIOR AND OUTCOMES AT HOSPITAL SOTERO DEL RIO, SANTIAGO, CHILE

Emiliano Pertossi¹, Miguel Urzúa¹, Oscar Puga², Victoria Perez¹, Javier Retamales³

¹Pontificia Universidad Católica de Chile / Hospital Sotero del Rio, Oncología Ginecológica, Santiago, Chile, ²Clinica las Condes / Hospital Sotero del Rio, Oncología Ginecológica, Santiago, Chile, ³Hospital Dr Sotero del Rio, Radiotherapy, Santiago, Chile

Objectives: Describe behavior, management and outcomes of high-grade endometrial cancer at our center.

Methods: Surgical staging (with no SLN mapping) privileging minimally invasive approach of candidates (those with no evidence of disease of CT or MRI) with HG histologies and adjuvant treatment for those who required. Inverted PORTEC III consisted in 4 cycles of chemotherapy (carboplatin plus paclitaxel) followed by radiotherapy with weekly cisplatin during treatment.

Results: 197 patients with endometrial cancer were surgically treated at our center between 2018 and 2021. Histologies described on table1. Clinical features on table2. Hence, 65% of patients had nodal staging. The reasons why there is a group without nodal dissection were on table3. After surgery 9,7% had positive LN (FIGO IIIC), 24,3% were FIGO IVB. 26,8% received an inverted PORTEC III, 41,4% chemotherapy alone, 12,1% EBRT +- VBT, 4,8% chemotherapy follow by EBRT, 1 died after surgery (mesenteric ischemia). FIGO IIIC patients who completed adjuvancy had 32,6 months of OS and those FIGO IVB 15,1 months. No severe adverse effects were recorded. Hormonal therapy was initiated on patients with progression.

Conclusions: More than 30% of patients with HG histologies were on advanced stages at diagnosis. There is a considerable difference on OS between patients with nodal compromise against peritoneal implants. Inverted PORTEC III did not show more adverse effects than those described in the original publication. It should be considered as an alternative scheme for those centers which can not carry out standard regimen.

EP144 / #481

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

SENTINEL LYMPH NODE MAPPING AND DISSECTION USING METHYLENE BLUE: THE DANANG ONCOLOGY HOSPITAL EXPERIENCE OF THE FIRST 31 CASES

Ngoc Phan¹, Trinh Duong¹, Quynh Tran¹, Quy Tran¹, Joseph Ng², Linda Van Le³, Tri Dinh⁴, Peter Lim⁵
¹Da Nang Oncology Hospital, Gynecologic Oncology, Danang, Viet Nam, ²National University Cancer Institute, Division Of Gynaecologic Oncology, Singapore, Singapore, ³University of North Carolina at Chapel Hill, Division Of Gynecologic Oncology, Chapel Hill, United States of America, ⁴Mayo Clinic Florida, Department Of Medical And Surgical Gynecology, Jacksonville, United States of America, ⁵Center of Hope, Gynecologic Oncology, Reno, United States of America

Objectives: Endometrial cancer is the most commonly diagnosed gynecological malignancy in Vietnam, after breast cancer. The primary treatment is based on surgical and pathologic staging including hysterectomy, bilateral salpingo-oophorectomy and pelvic lymphadenectomy. Sentinel lymph node (SLN) mapping for endometrial cancer (EC) is a contemporary technique that could provide benefits over traditional lymphadenectomy. The aim of this study was to describe the results of sentinel node biopsy, and analyze the factors that affect sentinel lymph node mapping.

Methods: We collected data from the first 31 cases of patients with endometrial cancer who underwent sentinel lymph nodes by using methylene blue from September 2019 to September 2021. We reported the detection rate and the accuracy of the SLN biopsy.

Results: The overall detection rate of sentinel lymph node mapping of at least one site was included in 31 patients was 54.8%, bilateral sentinel node detection rate was 19.3%. The sensitivity and the specificity of the sentinel lymph node was 100%. The detection rate of sentinel lymph node in the first 20 cases was 40% and was 82% in the last 11 cases. Adoption of the SLN technique spared 34.1% hemi pelvic LND from a full lymphadenectomy.

Conclusions: Sentinel lymph node sampling by using methylene blue is feasible and accurately predicts lymph node status in patients with endometrial cancer in low resource settings. There is a learning curve to the technique. SLN mapping was more successful after we have done 20 cases.

EP145 / #106

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

APPLICATION OF MACHINE LEARNING IN ENDOMETRIAL CANCER: A SYSTEMATIC REVIEW

Sabrina Piedimonte¹, Gabriela Rosa², Brigitte Gerstl², Ana Coronel², Mars Sopocado², Danielle Vicus³, Salvador Lleno²

¹University of Toronto, Gynecologic Oncology, Toronto, Canada, ²The Rosa Institute, Epidemiology, Marboursa, Australia, ³Sunnybrook Odette Cancer Center, Division Of Gynecologic Oncology, Toronto, Canada

Objectives: Objective: To review the literature on the application of machine learning(ML) in endometrial cancer(EC) and report the most commonly used algorithms and their performance

Methods: This is a systematic review of the literature from January 1985-March 2021 on the use of ML in EC. Four independent reviewers screened the articles initially by title then full text. Quality was assessed using the MINORS criteria. P-values were derived using the Pearson's Chi-squared(x2) test.

Results: Among 4,295 articles, 30 studies were included. The mean age of EC patients was 61.3 years(SD:6.6). The most frequent applications of ML were in: patient datasets(n=10), preoperative diagnostics(n=9), genomics(n=7), and serum biomarkers(n=4). The most commonly used ML models were Neural Networks(n=10) and Support Vector Machines(n=6). Over the past two decades, the number of publications on ML in EC increased from 1(2010) to 29(2021). Only 8/30 studies compared ML techniques to traditional statistics. Among 10 clinical database studies, two ML models(20%) performed better than LR(accuracy: 0.85 vs. 0.82, p=0.16), although not significant. In pre-operative diagnostic studies, ML algorithms tended to improve the detection of EC on MRI images(accuracy: 0.87 vs. 0.82, p=0.24) compared to traditional statistics. In one serum biomarker study, ML outperformed LR in predicting extrauterine disease(accuracy: 0.81 vs. 0.61). For survival outcomes, one study reported no difference in concordance index scores between Ensemble Algorithm for Clustering(EACCD) and traditional statistics(EACCD with KM: 83.8% vs. EACCD: 83.1%).

Conclusions: ML algorithms generally performed similarly to traditional regression models. More studies and larger datasets are needed to assess its future role in endometrial cancer.

EP146 / #724

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

THE ROLE OF IMMUNOHISTOCHEMICAL MARKERS IN RISK STRATIFICATION IN PATIENTS WITH ENDOMETRIAL CANCER

Raj Pratima¹, Rupinder Sekhon¹, Amita Naithani¹, Meenakshi Kamboj², Anurag Mehta²
¹RGCIRC, Gynaecologic Oncology, Delhi, India, ²RGCIRC, Pathology, Delhi, India

Objectives: Introduction The purpose of preoperative risk assessment among Endometrial cancer (EC) patients is to categorise patients into low and high risk for lymphnode invasion, recurrence, and to aid in planning surgical staging and extent. Even though there has been a steady progress in the imaging techniques, the preoperative accuracy of EC staging remains an unsettled subject even today. Earlier published studies have demonstrated a discrepancy between preoperative risk assessment, and the actual risk on final pathological finding. These discrepancies may either overestimate the diagnosis resulting in aggressive surgery or could result into understaging. Aim- To stratify ECs into high and low risk based on imaging, histotype, IHC markers (ER, PR, HER2, p53, L1CAM) in preoperative diagnostic endometrial curettings, and to correlate with final resected specimen

Methods: Prospective observational study of 80 patients diagnosed with endometrial cancers between September 2019- September 2021 at tertiary cancer centre. The cases were stratified into low and high risk group based on preoperative imaging, histo-typing, IHC markers and were correlated with the final resected specimen (final surgical-pathological staging)

Results: We demonstrated good concordance between the preoperative and postoperative risk groups, suggesting that addition of IHC to imaging, histotype and grading can refine risk stratification in preoperative setting. The sensitivity, specificity, accuracy, PPV, NPV results of our model for detection of risk preoperatively (high/low) were 92%, 83.3%, 90%,95%,and 75%, respectively.

Conclusions: Larger studies are further needed to establish preoperative guidelines in risk stratification to limit the extent and aggressiveness of the surgery as well as limiting the morbidity.

EP147 / #165

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

OVEREXPRESSION OF THE ORPHAN NUCLEAR RECEPTOR NR2F6 IS ASSOCIATED WITH AN IMPROVED SURVIVAL IN ENDOMETRIAL CANCER PATIENTS

Louisa Proppe¹, Tobias Jagomast¹, Julika Ribbat-Idel¹, Sophie Beume¹, Georgios Gitas², Franziska Hemptenmacher¹, Achim Rody¹, Sven Perner¹, Lars Hanker¹

¹University Hospital Schleswig-Holstein, Campus Luebeck, Gynecology And Obstetrics, Luebeck, Germany, ²Charité, Gynecology And Obstetrics, Berlin, Germany

Objectives: NR2F6 (nuclear receptor subfamily 2 group F member 6, also called Ear-2) is known to be an orphan nuclear receptor being an intracellular immune checkpoint in effector T cells. It might play an essential role for tumor development and growth. Therefore, the prognostic impact of NR2F6 in endometrial cancer is evaluated in this study.

Methods: Expression analysis of NR2F6 in 142 endometrial cancer patients was performed by immunohistochemistry. Staining intensity of tumor cells was computerized assessed semi-quantitatively, and results were correlated with clinicopathological characteristics and survival.

Results: 46 of 117 evaluable samples (39.3 %) showed an overexpression of NR2F6, leading to an improvement of the overall (OS) and disease-free survival (DFS). In NR2F6 positive patients, the mean OS was 156.6 months (95% confidence interval (CI): 142.4 - 170.8) compared to 105.8 months in NR2F6 negative patients (95% CI: 85.6 - 125.9; $p = 0.025$). The disease-free survival differed by 58.4 months (156 months (95% CI: 142.2 – 169.9) vs. 97.6 months (95% CI: 74.7 - 120.6), $p = 0.004$). Furthermore, we found significant associations between NR2F6 positivity, MMR status, and PD1 status. A multivariate analysis suggests NR2F6 to be an independent factor influencing the disease-free survival ($p = 0.037$).

Conclusions: This is the first report on the prognostic impact of NR2F6 in endometrial cancer patients. We could demonstrate that there is a significant better progression-free and overall survival for patients with overexpression of NR2F6 in patients with endometrial cancer. Further studies are required to validate its prognostic impact.

EP148 / #437

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

COMBINATION OF NIRAPARIB AND ANLOTINIB IN PATIENTS WITH RECURRENT OR METASTATIC ENDOMETRIAL CANCER: AN OPEN-LABEL, SINGLE-ARM, TWO-STAGE, PHASE II STUDY

Yulan Ren^{1,2}, Jing Lu^{2,3}, Wenjuan Tian^{1,2}, Haiming Li^{2,3}, Huaying Wang^{1,2}

¹Fudan University Shanghai Cancer Center, Department Of Gynecologic Oncology, Shanghai, China, ²Fudan University Shanghai Cancer Center, Shanghai Medical College, Department Of Oncology, Shanghai, China, ³Fudan University Shanghai Cancer Center, Department Of Radiology, Shanghai, China

Objectives: Treatment options for patients with recurrent endometrial cancer remain limited with few targeted drugs available for selected patients. Previous studies have shown synergistic antitumor activity of anlotinib, a tyrosine kinase inhibitor with niraparib, a PARP inhibitor in solid tumors. This study aimed to evaluate the efficacy and safety of niraparib with anlotinib for recurrent or metastatic endometrial cancer.

Methods: Patients with histopathologically confirmed recurrent or metastatic endometrial cancer, receiving at least one systemic chemotherapy were enrolled between February 2021 and April 2022. Patients were orally administered with niraparib 200 mg QD; anlotinib 12 mg QD from days 1-14 for 21-days until disease progression, death or intolerant toxicity. Primary endpoint was objective response rate (ORR) and secondary endpoint included duration of response (DOR), disease control rate (DCR), progression-free survival (PFS) and safety.

Results: Out of 13 enrolled patients, 12 was evaluable for efficacy. The median age was 60 (range, 32-70 years) with a median follow-up time of 7.8 months. The complete response, partial response, stable disease and progression disease was achieved by 0%, 66.7%, 25.0%, 8.3% patients, respectively. The ORR and DCR was 66.7% and 91.7%, respectively. The median PFS was not reached. Most common any-grade treatment-related adverse events (TEAEs) were proteinuria (9[69.2%]), thrombocytopenia (4[30.8%]), leukopenia (4[30.8%]) and hypertension (4[30.8%]). Two patients had grade 3 TEAE of hypertension, one patient had grade 3 vomiting and anemia.

Conclusions: Niraparib combined with anlotinib showed promising efficacy and well tolerable safety in patients with recurrent, metastatic endometrial cancer. Clinical trial information: ChiCTR2000035853

EP149 / #657

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

PROSPECTIVE ANALYSIS OF LEARNING CURVE IN ROBOTIC ASSISTED TYPE-I EXTRAFASCIAL PAN-HYSTERECTOMY WITH PELVIC AND PARAAORTIC LYMPHADENECTOMY FOR ENDOMETRIAL CANCER IN AN INDIAN TERTIARY CARE CENTER

Elroy Saldanha, Sp Somashekhar, Ashwin Rajagopal, Rohit Kumar
Manipal Comprehensive Cancer Centre, Gynec And Surgical Oncology, Bangalore, India

Objectives: Prospective non-randomized observational study was designed to analyze the proficiency and efficiency of robotic assisted type-1 extrafascial pan hysterectomy with pelvic and para-aortic lymphadenectomy in treatment of endometrial cancer patients in an Indian tertiary care center. We intended to assess the pace in which surgeons gain proficiency using cumulation summation(CUSUM) technique.

Methods: 262 consecutive proven endometrial cancer patients underwent type-1 extra fascial pan hysterectomy with pelvic and high para-aortic lymphadenectomy using the daVinci® X at single tertiary care center. Data was analyzed under these parameters, docking time, surgeons console time, total operative time and number of lymph nodes retrieved. The surgery team maintained the same in all cases.

Results: Surgeons console time of 180 minutes was achieved at 12th case and thereby consistently maintained 180 minutes or less. Target docking time of 7 minutes was achieved at 29th case. CUSUM line direction changes at 12th case and maintained the downward trend. Target number of pelvic lymph node 12 was achieved by 9th case and para-aortic lymph node harvest of 10 nodes was achieved at 18th case.

Conclusions: daVinci® robotics technology in our practice enabled us to offer minimal invasive surgery to endometrial cancer patients in a short time. The robotic-assisted procedures seems to offer a safe and useful alternative to conventional surgical techniques & would be a tool in armamentarium of gynec-oncologist. Learning curve can be shortened with constant self auditing of the surgeon and team with each surgeries performed, reviewing the steps and by improvising techniques

EP150 / #325

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

ENDOMETRIAL CANCER: AGREEMENT BETWEEN P53 IMMUNOHISTOCHEMISTRY AND TP53 MUTATIONAL ANALYSIS ?

Alixé Salmon¹, Adriane Dheur², Vincent Bours³, Katty Delbecque⁴, Élodie Gonne¹, Clémence Pleyers⁵, Marjolein De Cuypere², Frédéric Goffin², Pierre Lovinfosse⁶, Athanasios Kakkos², Frédéric Kridelka², Christine Gennigens¹

¹Centre Hospitalier Universitaire (CHU), Medical Oncology, Liège, Belgium, ²Centre Hospitalier Universitaire (CHU), Gynaecology And Obstetrics, Liège, Belgium, ³Centre Hospitalier Universitaire (CHU), Genetics, Liège, Belgium, ⁴Centre Hospitalier Universitaire (CHU), Pathology, Liège, Belgium, ⁵Centre Hospitalier Universitaire (CHU), Radiotherapy, Liège, Belgium, ⁶Centre Hospitalier Universitaire (CHU), Nuclear Medicine, Liège, Belgium

Objectives: Endometrial carcinoma (EC) is the most common cancer of the female genital tract in developed countries. TP53 mutation is the most significant predictive biomarker for poor prognosis in EC patients. In immunohistochemistry (IHC), overexpression and complete absence of p53 protein are interpreted as mutation-type. We aimed to compare the agreement between the results of p53 in IHC and TP53 mutational analysis.

Methods: Between January 2019 and December 2021, we conducted a monocentric retrospective study of 166 patients treated for EC (all stages) at the CHU of Liège. Sixty-two patients were excluded. The remaining 104 patients had both p53 IHC and mutational analysis. McNemar's test and Kappa of Cohen coefficient were used to evaluate the agreement between the 2 methods.

Results: The McNemar's test demonstrated 28.9% and 23.1% of p53 mutation-type in IHC and mutational analysis, respectively ($p=0.16$). There were twelve tumours with false-positive staining p53 IHC and no TP53 mutation detected (specificity of 75.0%). Moreover, there were six tumours with false-negative IHC but TP53 mutation detected (sensitivity of 85.0%). The agreement between p53 IHC and TP53 mutation analysis was 86/104 (82.7%) patients. The Kappa of Cohen coefficient was 0.55 (IC95%: 0.37-0.73), confirming the similarity between both techniques.

Conclusions: Abnormal expression of p53 in IHC can be considered as a reliable surrogate test for TP53 mutation. Moreover, p53 IHC is quicker, easier to perform and less expensive. Nevertheless, based on a 25% rate of false positivity, consideration should be given to confirm TP53 status for all patients with abnormal p53 IHC.

EP151 / #917

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

THE STATUS OF MMR PROTEIN AND PDL-1 EXPRESSION IN PATIENTS WITH ENDOMETRIAL CANCERS

Rupinder Sekhon¹, Raj Pratima¹, Amita Naithani¹, Anurag Mehta², Meenakshi Kamboj²
¹RGCIRC, Gynaecologic Oncology, Delhi, India, ²RGCIRC, Pathology, Delhi, India

Objectives: Mismatch repair (MMR)-deficient endometrial carcinomas (ECs) are highly immunogenic and may represent excellent candidates for therapies targeting the programmed cell death (PD)/programmed cell death ligand-1 (PD-L1) immune checkpoint pathway. Aim- To evaluate the Status of MMR proteins and PD-L1 expression in patients with EC

Methods: Prospective observational study of 80 patients diagnosed with endometrial cancers between September 2019- September 2021 at tertiary cancer centre. Evaluation of Mismatch repair proteins (MMR) was done using IHC (MLH1, PMS2, MSH2, MSH6) and PDL-1 analysis was done using clone SP263 on Ventana platform on endometrial curettings

Results: Our study showed MMR deficiency rate was 32.5%. Loss of MLH1 and PMS2 was frequently seen (73.1%). MMR deficient was seen among 63.6% mixed ECs, 33% Endometrioid ECs, 25% serous ECs, 20% MMT ECs and among clear cell ECs no loss of MMR proteins were seen. Expression patterns of PD-L1 tumor proportion score (TPS) and immune cell score (IC) did not show any significant association with MMR proficient or deficient cases. However, combined positive score (CPS) of >1 was associated with 50% of MMR deficient EC cases with $p=0.052$. PD-L1 expression CPS >1 was detected in 57.1%, 37.5%, 34.61% and 16.7% of Mixed ECs, MMT, EECs and clear cell ECs respectively. There was no PD-L1 expression detected in serous ECs.

Conclusions: MMR status may be biomarker for response to PD-1/PD-L1 immunotherapy in EC. PD-L1 expression may predict the response to anti-PD-1/PD-L1 monoclonal antibodies. Expression of PD-L1 varies between different subhistotypes and grades. Prospective studies are in need to further evaluate the predictive value of PDL1 expression.

EP152 / #348

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

PROPENSITY SCORE-MATCHED COMPARISON OF PERIOPERATIVE OUTCOMES USING DA VINCI XI AND SP SURGICAL SYSTEM IN ENDOMETRIAL CANCER SURGICAL STAGING

Kieun Seon, Yong Jae Lee, Jung-Yun Lee, Eun Ji Nam, Sunghoon Kim, Young Tae Kim, Sang Wun Kim
Institute of Women's Medical Life Science, Yonsei University College of Medicine, Department Of
Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: We aimed to compare perioperative surgical outcomes of endometrial cancer surgical staging using da Vinci Xi and SP system.

Methods: In this study, 42 consecutive patients who underwent endometrial cancer surgical staging with da Vinci SP system (SP) since 2018 and propensity score-matched 124 patients who underwent surgery with da Vinci Xi system (Xi) were included. We compared operation time, postoperative complications and postoperative hospital stay of each group. Considering learning curve of SP robotic surgery, we also compared Xi group with each 10 cases of SP group respectively.

Results: The console time and total operation time were shorter in Xi group than SP group (83.7 ± 37.3 minutes vs. 133.4 ± 56.3 min; and 178.5 ± 58.7 min vs. 245.9 ± 80.5 min, respectively). Total console time of the first 10 cases of SP group was 195.2 ± 63.3 min and it decreased to 110.8 ± 47.4 min in the 4th 10 SP cases. Postoperative hemoglobin change was 0.64 ± 0.69 g/dL in SP group and 1.79 ± 0.87 g/dL in Xi group ($P < 0.001$). The overall postoperative complication rate was not different in two groups (10.5% in Xi and 11.9% in SP group). The median postoperative hospital stay was shorter in SP group (2 days) compared to Xi group (5 days). The median number of harvested lymph nodes were 12 (IQR: 6-20) in SP group and 6 (IQR: 3-11) in Xi group.

Conclusions: Robotic endometrial cancer staging using da Vinci SP system was feasible and comparable to Xi system.

EP153 / #321

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

MODIFICATIONS IN LOCAL EXPRESSION OF INSULIN-LIKE GROWTH FACTOR 1 (IGF1)-RELATED COMPONENTS MIGHT INFLUENCE THE PROGNOSIS OF ENDOMETRIOID ENDOMETRIAL CANCER (EEC)

Mohamad Nasir Shafiee, Ahmad Muzhill Hannaan Abdul Hafizz, Reena Rahayu Md Zin, Nor Haslinda Abd Aziz, Muaatamarulain Mustangin, Nirmala Kampan, Norfilza Mokhtar
UKM, Obstetrics And Gynaecology, CHERAS, Malaysia

Objectives: To investigate the expression of IGF1, IGFBP1, PTEN, and SGK2 in endometrium tissue among EEC patients and correlate with the clinicopathological characteristics and the prognosis.

Methods: A total of 121 participants were recruited from 2014 to 2020 in Universiti Kebangsaan Malaysia Medical Centre (UKKMC), including the EEC (n=96) and control (n=25) cases. The protein expression of IGF1, IGFBP1, PTEN, and SGK2 in endometrium samples were analyzed using the immunohistochemistry (IHC) staining technique on the tissue microarray (TMA) blocks.

Results: The expression of IGF1, IGFBP1, PTEN and SGK2 were significantly different between both groups, EEC vs control ($P < 0.05$). Several clinicopathological characteristics are significantly associated with respective biomarkers ($P < 0.05$). High IGF1 and SGK2 expressions significantly decreased the progression-free survival (PFS) and overall survival (OS) in EEC patients with advanced-stage (stage II, III and IV) and grades 2&3 ($P < 0.05$). While, negative expression of PTEN and IGFBP1 were significantly associated with a poor prognosis ($P < 0.05$) in EEC patients with advanced-stage and grade. Multivariable Cox regression analysis revealed that the advanced stage of EEC was the only factor independently associated with a shorter PFS and OS among EEC patients ($P < 0.05$). There was no significant association with survival trends between the investigated biomarkers, even though there was a tendency to predict shorter survival in cases with higher IGF1 and negative PTEN expression.

Conclusions: The expression modifications in the IGF1, IGFBP1, PTEN, and SGK2 influence EEC development. IGF1 and PTEN expression might be affecting the shorter PFS and OS among the advanced stage EEC

EP154 / #912

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

COMPLIANCE OF SURGICAL CARE IN PATIENTS WITH CARCINOMA ENDOMETRIUM IN A TERTIARY CARE CENTRE, TO EUROPEAN SOCIETY OF GYNAECOLOGIC ONCOLOGY (ESGO) QUALITY INDICATORS

Monica Thiagarajan¹, Anitha Thomas¹, Vinotha Thomas², Ajit Sebastian², Dhanya Thomas², Rachel George¹, Sharon Milton³, Sherin Daniel⁴, Neenu John⁵, Divya Thumaty⁶, Anuradha Chandramohan⁷, Thomas Ram⁵

¹Christian Medical College & Hospital, Dept. Of Gynaecologic Oncology, Vellore, India, ²Christian Medical College & Hospital, Dept. Of Gynaecologic Oncology, VELLORE, India, ³Christian Medical College, Department Of Pathology, Vellore, India, ⁴Christian Medical College, Department Of Pathology, vellore, India, ⁵Christian Medical College, Radiation Oncology, Vellore, India, ⁶Christian Medical College, Department Of Medical Oncology, Vellore, India, ⁷Christian Medical College, Department Of Radiology, Vellore, India

Objectives: Endometrial cancer treated surgically followed by tailored adjuvant treatment has shown to have very good prognosis. The quality of surgical care should be optimal for attaining the maximum survival benefit. To standardize surgical management, ESGO has put forth quality indicators. To audit the surgical care provided at our centre we wanted to assess the compliance to these indicators and find areas of improvement.

Methods: This is a retrospective audit done in the Department of Gynaecologic Oncology. Electronic medical records of patients who underwent surgical management of carcinoma endometrium from Jan2020-Dec2021 were assessed.

Results: A total of 163 patients had undergone primary surgery and 2 patients for recurrence. The audit showed that the target for categories of general indicators and pre-operative work-up were met. There was lack in compliance of the intraoperative management, with only 34% among presumed early-stage disease undergoing successful MIS, 31% undergoing sentinel lymph node procedure and 53% among them being done using indocyanine green with 18% bilateral mapping rate. None of the patients had complete molecular classification. Compliance of adjuvant treatment provided was adequate. Minimal required elements in surgical reports were in 81% and pathological reports in 91% of patients falling short of the set target.

No	Indicators	Target required	Result	Achieved
GENERAL INDICATORS				
1	No of newly diagnosed endometrial carcinoma cases treated per centre per year	Optimal target: ≥ 90 Minimum required target: ≥ 50	2020- 75 2021- 90	✓
2	No of endometrial carcinoma primary surgeries performed per centre per year	Optimal target: ≥ 80 Minimum required target: ≥ 50	2020- 71 2021- 83	✓
3	Surgery performed by a gynecologic oncologist or a trained surgeon	$\geq 95\%$	100%	✓
4	Treatment and/or follow-up plan discussed at a multi-disciplinary team meeting	Primary treatment: 90% Relapse treatment: 99%	94.5% (154/163) 100% (2/2)	✓ ✓
5	Centre participating in ongoing prospective studies in gynaecological oncology	Optimal: Endometrial Ca	1	✓
PRE-OPERATIVE WORK UP				
6	Proportion of patients with preoperative work-up according to ESGO guidelines	90%	99.5% (162/163)	✓
7	Proportion of presumed FIGO stage I-II upstaged to IVB disease	$< 5\%$	1.5% (2/129)	✓
COMPLIANCE OF THE INTRAOPERATIVE MANAGEMENT WITH THE STANDARDS OF CARE				
8	Proportion of early stage cases with non ruptured uterus after hysterectomy	99%	98.4% (127/129)	X
9	Proportion of patients with early stage carcinoma who underwent successful MIS	Optimal $\geq 80\%$; Minimum: 60%	34% (44/129)	X
10	Proportion of patients with BMI > 35 kg/m ² who underwent successful MIS	$> 60\%$	55% (11/20)	X
11	Proportion of conversions from minimally invasive surgery to open surgery	$< 10\%$	11.7% (6/51)	X
12	Proportion of patients with intraoperative injuries	$< 2\%$	0.6%	✓
13	Proportion of ICO in presumed early stage serous, undifferentiated, carcinosarcoma	$\geq 90\%$	100%	✓
14	Proportion of lymph node staging performed in patients with presumed early stage HIR or high or high risk endometrial carcinoma	$> 85\%$	86.2% (25/29)	✓
15	Proportion of sentinel lymph node procedures in patients undergoing lymph node staging	90%	31% (38/122)	X
16	No of sentinel lymph node procedures performed or supervised per surgeon per year	≥ 20	NA	X
17	Proportion of indocyanine green cervical injection	$\geq 95\%$	53% (20/38)	X
18	Proportion of HIR/high-risk patients with side-specific systematic pelvic lymphadenectomy in case of failed sentinel lymph node detection	$> 90\%$	100%	✓

NO	INDICATORS	TARGET	RESULT	ACHIEVED
19	Proportion of patients who underwent ultra-staging of sentinel lymph nodes	$\geq 99\%$	78.5% (11/14)	X
20	Proportion of bilateral mapping rate of sentinel lymph node procedures	$\geq 75\%$	18.4% (7/38)	X
21	Proportion of complete macroscopic resection for curative intent in patients with primary advanced endometrial carcinoma	$\geq 75\%$	97% (33/34)	✓
22	Proportion of patients who underwent salvage surgery for locoregional recurrent disease in whom complete macroscopic resection is achieved	$\geq 85\%$	50% (1/2)	X
MOLECULAR CLASSIFICATION AND ADJUVANT TREATMENT				
23	Proportion of patients undergoing complete molecular classification of their tumour according to ESGO-ESTRO-ESP guidelines	Optimal $\geq 90\%$ Minimum $> 50\%$	Nil	X
24	Compliance with the ESGO-ESTRO-ESP adjuvant treatment guidelines	$\geq 90\%$	93% (152/163)	✓
RECORDING PERTINENT INFORMATION TO IMPROVE QUALITY OF CARE				
25	Minimum required elements in surgical reports	$\geq 99\%$	81% (131/163)	X
26	Minimum required elements in pathology reports	$\geq 99\%$	91% (148/163)	X
27	Structured morbidity and mortality conference per year for quality assurance of surgical care	Optimal: 4 Minimum: 2	12	✓
28	Proportion of reoperations within 30 days for complications after primary surgery	$\leq 2\%$	Nil	✓
29	Structured prospective reporting of recurrences/deaths	\geq once a year	Yes	✓

Conclusions: The audit helped us identify the need to increase MIS, use and adapt sentinel lymph node procedure with ICG dye more aggressively. There also is a need for improvement in documentation of pertinent information on surgical and pathology reporting. Molecular classification should be routinely incorporated into the diagnostic algorithm to aid in adjuvant therapy.

EP155 / #329

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

DEEP CERVICAL INJECTION: A NOVEL TECHNIQUE TO INCREASE BILATERAL SENTINEL LYMPH NODE DETECTION RATE IN ENDOMETRIAL CANCER PATIENTS WITH INDOCYANINE GREEN (TRSGO-SLN-008)

Dogan Vatanserver¹, Duygu Altin², Burak Giray¹, Salih Taskin³, Emin Donmez¹, Nedim Tokgözoglu⁴, Abdul Hamid Guler⁵, Tolga Tasci⁶, Tugan Bese⁷, Hasan Turan⁸, Ilker Kahramanoglu⁹, Ibrahim Yalcin¹⁰, Cetin Celik¹¹, Fuat Demirkiran¹², Mete Gungor¹³, Firat Ortac³, Faruk Köse¹³, Macit ArvAS14 , Ali Ayhan¹⁵, Cagatay Taskiran¹

¹Koc University, Gynecologic Oncology, Istanbul, Turkey, ²Ankara University School of Medicine, Gynecologic Oncology, Ankara, Turkey, ³Ankara University Faculty of Medicine, Gynecologic Oncology, Ankara, Turkey, ⁴Istanbul Prof.Dr. Cemil Tascioglu City Hospital, Gynecologic Oncology, Istanbul, Turkey, ⁵Selcuk University Medicine Faculty, Gynecologic Oncology, Konya, Turkey, ⁶Medical Park Goztepe Hospital, Gynecologic Oncology, Istanbul, Turkey, ⁷Faculty of Medicine, Istanbul University-Cerrahpasa, Gynecologic Oncology, Istanbul, Turkey, ⁸Mersin City Hospital, Gynecologic Oncology, Mersin, Turkey, ⁹Emsay Hospital, Gynecologic Oncology, Istanbul, Turkey, ¹⁰University of Health Sciences, Ankara Zekai Tahir Burak Women's Health Training and Research Hospital, Gynecologic Oncology, Ankara, Turkey, ¹¹Selcuk University Medicine Faculty, Gynecologic Oncology, Konya, Turkey, ¹²Istanbul University-Cerrahpasa, Faculty Of Medicine, Department Of Obstetrics And Gynecology, Division Of Gynecologic Oncology, Istanbul, Turkey, ¹³Acibadem Mehmet Ali Aydinlar University, Gynecologic Oncology, Istanbul, Turkey, ¹⁴American Hospital, Gynecologic Oncology, Istanbul, Turkey, ¹⁵Baskent University, Gynecologic Oncology, Ankara, Turkey

Objectives: Lymph node assessment provides information that may influence decisions regarding adjuvant treatment in endometrial cancer patients. However, systematic lymphadenectomy may cause significant morbidity. In recent years, the use of sentinel lymph node (SLN) mapping with indocyanine green (ICG) has been accepted to avoid the morbidity of lymphadenectomy. We aimed to assess the diagnostic accuracy of a novel injection technique in detection of sentinel lymph nodes in women with endometrial cancer.

Methods: A total of 214 patients with endometrial cancer underwent sentinel lymph node mapping using ICG. ICG was injected into the uterine cervix at the 3 and 9 o'clock positions, submucosally and to the level of junction between uterine cervix and isthmus in group 1 (n=107) and to the uterine cervix at the 3 and 9 o'clock positions according to conventional Memorial Sloan Kettering algorithm in group 2 (n=107). All the patients in group 2 selected by propensity matching. None of the patients underwent a re-injection neither in group 1 nor group 2.

Results: There was no significant difference between baseline characteristics of two groups. The groups were similar in terms of stage, type of tumor, BMI and lymphovascular space invasion (Table 1). The bilateral detection rates were 94.4% and 76.6% in group 1 and group 2, respectively (p=0.003). No lymph node or lymphatic vessels were identified in only one patient with a history of chronic lymphocytic leukemia in group 1.

Conclusions: Deep cervical injection technique significantly increases bilateral SLN detection rate in endometrial cancer patients.

EP156 / #955

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

VARIABILITY IN HIGH RISK ENDOMETRIAL CANCER RISK IN NATIVE VERSUS US ASIANS - A POPULATION ANALYSIS OF US AND ASIA

Deanna Wong¹, Cheng-I Liao², Daniel Kapp³, Kathleen Darcy⁴, Chunqiao Tian⁴, Chloe Chan⁵, Caitlin Johnson⁶, Joshua Cohen¹, John K Chan⁵

¹University of California Los Angeles, Obstetrics And Gynecology, Los Angeles, United States of America, ²Kaohsiung Veterans General Hospital, Ob Gyn, Kaohsiung, Taiwan, ³Stanford University School of Medicine, Radiation Oncology, Palo Alto, United States of America, ⁴Henry M Jackson Foundation for the Advancement of Military Medicine, Inc., Gynecologic Cancer Center Of Excellence Program, Bethesda, United States of America, ⁵Palo Alto Medical Foundation Research Institute, Gynecologic Oncology, Palo Alto, United States of America, ⁶California Pacific Medical Center Research Institute, Gynecologic Oncology, San Francisco, United States of America

Objectives: To identify trends associated with incidence of high risk endometrial cancers in native versus US Asians.

Methods: Data were obtained from the United States Cancer Statistics and Republic of China Cancer Registry from 2001-2017. We defined high risk cancers as grade 3 endometrial (G3E), serous, clear cell, and carcinosarcoma. SEER*Stat 8.3.9.2 and Joinpoint regression program 4.9.0.0 were used to calculate trends.

Results: Of 55,031 endometrial cancer patients, 28,204 (51%) were US and 26,827 (49%) were native Asians. In subset, serous cancer incidence (per 100,000) in 2017 was highest in US Asians (serous 1.25, G3E 1.15, carcinosarcoma 0.82) whereas G3E was over four fold higher than other cells types in native Asians (G3E 2.63, serous 0.64, carcinosarcoma 0.51). Over the 17 year study period, the incidence of high risk cancers increased annually at 2.3% in US Asians (serous increase: 6.3%) compared to 21.9% in native Asians (G3E increase: 14.8%) ($p < 0.001$). In analyzing mortality trends, US Asians had a higher annual increase in mortality compared to native Asians (+2.11% vs -2.99%). US Asians had an over two fold higher risk of death for ages 70+ at 22.9 (per 100,000) compared to 10.6 in native Asians.

Conclusions: The incidence for high risk uterine cancer is increasing significantly more in the Republic of China vs. US. However, mortality rates are higher in the US. Further research is needed to better understand the social determinants and regional differences that may contribute to these trends.

EP157 / #822

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

ABX-1431 INHIBITS THE DEVELOPMENT OF ENDOMETRIAL ADENOCARCINOMA AND REVERSES PROGESTERONE RESISTANCE BY REGULATING THE MGLL-ROS/AKR1C1 PATHWAY

Ma Xiaohong, Jiang Jie, Qiu Chunping
Qilu Hospital of Shandong University, Obstetrics And Gynecology, Jinan, China

Objectives: Progesterone resistance of endometrial adenocarcinoma(EAC) is a huge challenge, and it is urgent to propose a potential target to clarify the mechanism of progesterone resistance so as to inhibit the development of swollen EAC and progesterone resistance. As an important factor involved in lipid mobilization, MGLL is overexpressed in a variety of tumors, the aim of this study was to clarify the role of MGLL in the development of endometrial cancer and the process of progesterone resistance, preliminarily reveal its mechanism, and verify the anti-tumor effect of MGLL inhibitors.

Methods: Expression of gene was performed by IHC, Western Blot and RT-qPCR assays. Bioinformatic analysis was performed in R/R studio. Proliferative activity was measured by MTT, EDU and colony formation assays. Cell apoptosis analysis were performed by flow cytometry. A xenograft tumor assay was performed in vivo.

Results: First, we found that MGLL is key gene high expressed and correlated to the progesterone resistance in EAC. MGLL promoted the proliferation, enhanced the invasion and migration and inhibits the apoptosis of EAC cells. Subsequently, we verified that MGLL overexpressed inhibits the effect of progesterone to EAC cells and MGLL knockdown renders EAC cells more sensitive to progesterone. Based on the above, we tentatively revealed the mechanism, that is MGLL regulated AKR1C1 by mediating the generation of ROS to induce the progesterone resistance in EAC. Finally, we clarified that ABX-1431 inhibited the growth of EAC and reversed progesterone resistance by inhibiting the expression of MGLL.

Conclusions: ABX-1431 inhibits the development of endometrial adenocarcinoma and reverses progesterone resistance by regulating the MGLL-ROS/AKR1C1 pathway.

EP158 / #254

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

THE EXPRESSION AND AMPLIFICATION OF HER2/NEU HAS A SIGNIFICANT IMPACT ON OVERALL SURVIVAL IN KOREAN PATIENTS WITH ENDOMETRIAL CARCINOMAS

Eun Jung Yang¹, Sun Joo Lee², A Jin Lee², Kyeong A So³, Tae Jin Kim², Seung Hyuk Shim², Wook Youn Kim⁴

¹Soonchunhyang University Cheonan Hospital, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Konkuk University School of Medicine, Obstetrics And Gynaecology, Seoul, Korea, Republic of, ³Konkuk University School of Medicine, Obstetrics And Gynecology, Seoul, Korea, Republic of, ⁴Konkuk University School of Medicine, Pathology, Seoul, Korea, Republic of

Objectives: The purpose of this study was to analysis [오전1] the protein overexpression and gene amplification of HER2/neu in endometrial carcinoma (EC) and to evaluate its role as a prognostic factor in Korean women.

Methods: The tissue microarray was constructed of 191 patients with EC of diverse histologic type and tested. HER2/neu expression and amplification status were analyzed using immunohistochemistry (IHC) and silver in situ hybridization (SISH), respectively. All cases had been treated and followed up at a single tertiary medical center in Seoul, Korea between July 2009 and October 2020.

Results: According to the histology type, 191 EC patients consisted of 157 endometrioid carcinoma , nine uterine serous papillary carcinoma (USPC), one clear cell carcinoma, one squamous cell carcinoma , eight mixed, and 15 uterine carcinosarcoma (UC). HER2/neu protein overexpression was observed in eight of 191 (4.2%) EC. The overexpression rates of USPC, UC and endometrioid carcinomas were 33.3%, 26.6% and 0.6%, respectively. HER2/neu protein overexpression was significant in USPC (P < 0.000) and associated with a poor overall survival (OS) (P < 0.000). HER2/neu gene amplification was confirmed in seven of 184 (3.8%), except for seven cases that were not applied, which was detected in three cases of USPC and four cases of UC. OS was significantly shorter in patients who showed amplification of HER2/neu (P < 0.000).

Conclusions: HER2/neu protein overexpression and gene amplification in Korean women were significantly correlated with a worse OS. HER2/neu can be considered as an important predictor of survival outcome in EC patients.

EP159 / #428

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

REAL-WORLD EXPERIENCE AND COMMON ADVERSE EVENTS WHEN USING COMBINATION LENVATINIB AND PEMBROLIZUMAB FOR THE TREATMENT OF RECURRENT UTERINE CANCER

William Zammarrelli¹, Kevin Espino², Effi Yeoshoua¹, Sarah Ehmann¹, Maria Rubinstein³, Angela Green³, Vicky Makker³

¹Memorial Sloan Kettering Cancer Center, Gynecologic Surgery, New York, United States of America, ²NYU Langone Hospital, Obstetrics And Gynecology, Mineola, United States of America, ³Memorial Sloan Kettering Cancer Center, Medicine, New York, United States of America

Objectives: To evaluate the toxicity of combination lenvatinib plus pembrolizumab for the treatment of recurrent uterine cancer in a real-world setting.

Methods: We retrospectively reviewed patients with a diagnosis of uterine cancer who were treated with lenvatinib plus pembrolizumab at our institution between 9/1/21-1/31/22. Adverse events were manually extracted through chart review and graded according to Common Terminology Criteria for Adverse Events Version 5.0.

Results: Forty-three patients were treated with combination lenvatinib plus pembrolizumab with a median age of 67 years (range, 54-85). The most common histologies were serous (35%), endometrioid (23%), and carcinosarcoma (21%). Lenvatinib plus pembrolizumab was second-line treatment in 13 patients (30%), third-line treatment in 15 patients (35%), and fourth-line treatment or beyond in 15 patients (35%). The median number of cycles received was 8 (range, 1-37). Nineteen patients (44%) had a primary dose reduction and 17 patients (40%) required at least one lenvatinib dose reduction during treatment. Three patients (7%) discontinued lenvatinib and 1 patient (2%) discontinued pembrolizumab for intolerance or adverse event. Forty-one patients (98%) experienced an adverse event; 36 (86%) experienced a grade 3 or higher adverse event. The most common grade 3 or higher adverse events were hypertension, anemia, weight loss, fatigue, and thrombocytopenia.

Conclusions: In clinical practice, adverse events associated with combination lenvatinib plus pembrolizumab are common and comparable to the experience in KEYNOTE-775. Primary dose reductions were common and most patients continued treatment. Efficacy results are

Characteristic	Overall (n=43) N (%)
Age at treatment initiation	
Median (range)	67 (54-85)
<65 years	16 (37)
Race	
White	23 (53)
Black	12 (28)
Asian	5 (12)
Unknown	3 (7)
Median BMI at treatment initiation – no. (range)	29 (16-45)
ECOG performance status	
0	11 (26)
1	28 (65)
2	1 (2)
Unknown	3 (7)
Stage at diagnosis, FIGO 2009	
I	12 (28)
II	1 (2)
III	21 (49)
IV	9 (21)
Histology at diagnosis	
Serous	15 (35)
Endometrioid	10 (23)
Carcinosarcoma	9 (21)
Mixed	7 (16)
Poorly differentiated	1 (2)
Dedifferentiated	1 (2)
MMR status	
pMMR	39 (91)
dMMR	0
Unknown/indeterminate	4 (9)
PDL-1 status	
Positive	1 (2)
Negative	4 (10)
Unknown	37 (88)
Molecular subtype	
CN-H	29 (67)
CN-L	10 (23)
MSI	0
POLE	0
Unable to classify	4 (9)
Surgical staging	
Yes	39 (91)
No	4 (9)
Prior pelvic radiation	
Yes	27 (63)
No	16 (37)
Treatment line	
First line	0
Second line	13 (30)
Third line	15 (35)
Fourth line or later	15 (35)
Median cycles received – no. (range)	8 (1-37)
Starting Lenvatinib dose	
10mg	10 (23)
14mg	9 (21)
20mg	24 (56)
Discontinued Lenvatinib	3 (7)
Discontinued Pembrolizumab	1 (2)

Table 1. Demographic and clinicopathologic characteristics.

BMI, body mass index; ECOG, Eastern Cooperative Oncology Group; MMR, mismatch repair; pMMR, mismatch repair proficient; dMMR, mismatch repair deficient; PDL-1, programmed death-ligand 1; CN-H, copy number high; CN-L, copy number low; MSI, microsatellite unstable; POLE, polymerase epsilon; LLI, lymph node.

forthcoming.

Adverse Event	Any grade	Grade ≥ 3	Median time to onset, days (range)
Any adverse event	41 (98)	36 (86)	-
Hypertension	41 (95)	21 (48)	21 (7-387)
Anemia	39 (91)	11 (26)	63 (7-385)
Weight loss	36 (84)	2 (5)	42 (13-880)
Fatigue	24 (56)	6 (14)	21 (6-366)
Thrombocytopenia	25 (58)	5 (12)	28 (4-385)
Anorexia	20 (47)	0	40 (7-147)
Neutropenia	19 (44)	1	21 (7-164)
Nausea	17 (40)	1	31 (17-351)
Hypothyroidism	15 (35)	0	48 (21-155)
Creatinine elevation	14 (33)	5	-
Diarrhea	12 (28)	3	-
Hypomagnesemia	12 (28)	0	-
Oral mucositis	10 (23)	3	-
Hyponatremia	8 (19)	1	-
Constipation	7 (16)	0	-
Arthralgia	6	2	-
Hyperkalemia	6	0	-
Hypokalemia	5	4	-
Colitis	5	2	-
PPES	5	1	-
Hypernatremia	5	0	-
Vomiting	4	0	-
Dry skin	4	0	-
Myalgia	3	1	-
Rash	3	1	-
Dry mouth	3	0	-
Epistaxis	3	0	-
LFT elevation	3	0	-
Weakness	3	0	-
Cough	2	1	-
Thromboembolic event	2	1	-
Hyponatremia	2	1	-
Immune hepatitis	2	1	-
Pain in extremity	2	0	-
Wound dehiscence	2	0	-
Headache	2	0	-
Hoarseness	2	0	-
Hypophosphatemia	2	0	-

Table 2. Adverse events during lenvatinib and pembrolizumab therapy of any grade and for grade 3 or above. Common Terminology Criteria for Adverse Events Version 5.0 used for grading. *PPES, palmar-plantar erythrodysesthesia; LFT, liver function tests; PRES, posterior reversible encephalopathy syndrome; CKD, chronic kidney disease.*

EP160 / #632

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

PREDICTIVE FACTORS OF LYMPH NODE INVOLVEMENT IN ENDOMETRIAL CANCER: A RETROSPECTIVE STUDY OF 44 PATIENTS

Ines Zemni^{1,2}, Houyem Mansouri³, Nedja Boujelbene^{1,4}, Leila Achouri³, Safia Yahyaoui⁵, Riadh Chargui², Khaled Rahal²

¹University of Tunis El Manar, Sciences Faculty of Tunis, Laboratory Of Microorganismes And Active Biomolecules, Tunis, Tunisia, ²Salah Azaiez Institute of oncology, Surgical Oncology Department, Tunis, Tunisia, ³Regional Hospital of Jendouba, Surgical Oncology Department, Jendouba, Tunisia, ⁴Salah Azaiez Institute, Pathology Department, Tunis, Tunisia, ⁵Salah Azaiez Institute of Oncology, Radiotherapy Department, Tunis, Tunisia

Objectives: To analyze the clinical and histological factors correlated with LN invasion.

Methods: We retrospectively included 44 patients treated for EC at the Salah Azaiez Institute over a period of 2 years (2019-2021).

Results: The mean age of our patients was 60.20years (range, 24-81years). All patients underwent complete resection with combined pelvic and paraaortic lymphadenectomy in 23 cases (52.3%) and isolated pelvic lymphadenectomy in 21 cases (47.7%). Positive LN was assessed in 11 patients (25%). On univariate analysis, LN invasion was significantly correlated to the histological type ($p=0.036$), tumor grade ($p=0.009$), depth of myometrial invasion ($p=0.018$), serous invasion ($p=0.003$), cervical invasion ($p=0.013$), lymphovascular space invasion (LVI) (<0.0001) and tumor necrosis (<0.0001). On multivariate analysis, independent factors of LN metastasis were, the presence of LVS (OR=0.312, 95%CI=0.012- 0.533, $p=0.041$), tumor necrosis (OR=0.431, 95%CI=0.111-0.668, $p=0.041$) and serous invasion (OR=0.264, 95%CI=0.028-0.690, $p=0.034$)

Conclusions: Since LN metastasis represent an independent prognostic factor for survival, a nomogram based on histological and clinical characteristics could lead to a better detection of patients with high risk of LN metastasis

EP161 / #735

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

THE ACCURACY OF MAGNETIC RESONANCE IMAGING FOR PRE-OPERATIVE ASSESSMENT OF MYOMETRIAL AND CERVICAL INVASION AND LYMPH NODE STATUS IN ENDOMETRIAL CARCINOMA

Ines Zemni^{1,2}, Houyem Mansouri³, Leila Achouri³, Mohamed Ali Ayadi², Safia Yahyaoui⁴, Nedja Boujelbene^{1,5}, Riadh Chargui²

¹University of Tunis El Manar, Sciences Faculty of Tunis, Laboratory Of Microorganismes And Active Biomolecules, Tunis, Tunisia, ²Salah Azaiez Institute of oncology, Surgical Oncology Department, Tunis, Tunisia, ³Regional Hospital of Jendouba, Surgical Oncology Department, Jendouba, Tunisia, ⁴Salah Azaiez Institute of Oncology, Radiotherapy Department, Tunis, Tunisia, ⁵Salah Azaiez Institute, Pathology Department, Tunis, Tunisia

Objectives: To evaluate the accuracy of preoperative magnetic resonance imaging (MRI) to detect cervical extension, depth of myometrial invasion, and lymph node involvement in patients with endometrial cancer

Methods: We retrospectively reviewed 50 cases of women with endometrial cancer, who underwent preoperative MRI assessment and surgical staging over a period of 2 years (2019-2021). The MRI findings were then compared with the postoperative histopathological findings that served as reference standards

Results: The sensitivity, specificity, positive (PPV) and negative predictive values (NPV) of MRI for differentiation between deep myometrial invasion and superficial myometrial invasion were 100%, 58.33%, 72.22%, and 100% respectively. The sensitivity, specificity, PPV and NPP were 17.39%, 85.19%, 50% and 54.75% for cervical invasion and 72.73%, 60.61%, 38.1 and 86.96% for lymph node metastasis, respectively. There was a significant correlation between preoperative FIGO-MRI staging and FIGO-histological staging ($p < 0.0001$).

Conclusions: Pre-operative MRI has the advantage of making the pretreatment information about myometrium invasion and lymph node status allowing planning for the scale of surgery and preoperative counseling.

EP162 / #1008

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

IMMUNE T CELLS EXPRESSION IN ENDOMETRIAL CARCINOMA

Nadia Boujelbene¹, Ines Zemni², Hamza Ben Yahia³, Safia Yahyaoui⁴, Ines Ben Safta², Sabine Dhouioui³, Hamza Gara³, Hadda-Imene Ouzari³, Karima Mrad¹, Ines Zidi³

¹Salah Azaiez Institute, Department Of Pathology, Tunisia, Tunisia, ²Salah Azaiez Institute, Surgical Oncology, Tunis, Tunisia, ³Laboratory Microorganismes and Active Biomolecules, Sciences Faculty Of Tunis, Tunis, Tunisia, ⁴Salah Azaiez Institute of Oncology, Radiotherapy Department, Tunis, Tunisia

Objectives: Although endometrial carcinoma (EC) is generally considered to have a good prognosis, quarter of patients will present with extrauterine disease. This variability of evolution may be due to interaction between tumor cells and the tumor microenvironment. This study specifically provided an overview of the expression of immune T cells in EC.

Methods: We retrospectively analyzed by immunohistochemistry 24 patients with EC. Membranous expression of CD4 and CD8 and nuclear expression of FOXP3 were analyzed in T cells infiltrating the tissues in three independent high-power representative microscopic fields of the stained slides. Clinicopathological characteristics were recorded.

Results: Patients mean age range was 63.9 years. CD4, CD8 and FOXP3 markers were significantly expressed in EC tissues in both the tumor nests and the surrounding stroma. Interestingly, high CD8 positive cells were reported in EC (median 17) compared to CD4 and FOXP3 (not exceeding a median of 2) suggesting a high cytotoxic T cell infiltration. CD8 high expression was found in patients with early stages (I+II), those with low grades (1+2), and in patients without metastatic nodes.

Conclusions: Our preliminary results showed a high expression of T cells infiltrating the tumor in EC. High tumoral density of CD8⁺ T infiltrating tumor in early stages and low grades emphasizes the role of CD8⁺ T cells in the control of tumor progression. Our study should be consolidated in a larger cohort and completed by further functional analysis to establish the implication of infiltrating T cells in EC.

EP163 / #1029

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

EXPRESSION OF HUMAN LEUCOCYTE ANTIGEN G (HLA-G) IS ASSOCIATED WITH DEEP MYOMETRIAL INVASION AND WORSE SURVIVAL IN ENDOMETRIAL CARCINOMA

Nadia Boujelbene¹, Hamza Ben Yahia², Ines Zemni³, Wafa Babay², Sabrine Dhouioui², Mohamed Ali Ayadi³, Hadda-Imene Ouzari², Karima Mrad¹, Safia Yahyaoui⁴, Ines Zidi²

¹Salah Azaiez Institute, Department Of Pathology, Tunisia, Tunisia, ²Laboratory Microorganismes and Active Biomolecules, Sciences Faculty Of Tunis, Tunis, Tunisia, ³Salah Azaiez Institute, Surgical Oncology, Tunis, Tunisia, ⁴Salah Azaiez Institute of Oncology, Radiotherapy Department, Tunis, Tunisia

Objectives: Human leukocyte antigen G (HLA-G) is a non-classical class I molecule that regulates many immune functions. This molecule has been proposed to be involved in tumor escape mechanisms. We aimed to investigate immunohistochemical expression of HLA-G molecules in endometrial carcinoma (EC) and its association with myometrial invasion and overall survival rate.

Methods: Immunohistochemical analysis using the 4H84 anti-HLA-G monoclonal antibody was performed on a total of 31 patients with EC. Tumor cells that exhibited granular cytoplasmic brown staining were considered to be positive. The association between HLA-G status and myometrial invasion was analyzed using Chi-square test. The survival analysis was evaluated by Kaplan-Meier method.

Results: Immunohistochemical analysis of EC revealed HLA-G protein immunoreactivity in 38.7% (12/31) of specimens. We identify 58% (18/31) of patients with more than 50% myometrial invasion. Statistically significant association was found between HLA-G expression and depth of myometrial invasion ($p=0,02$). Patients with HLA-G positive tumors had a shorter survival time than those patients with tumors that were HLA-G negative (mean survival = 48 and 84 months, respectively) with significance trend (log-rank $p=0.09$).

Conclusions: Our preliminary data suggest that HLA-G expression in EC may be potentially predictive of extrauterine metastases which are more observed in patients with more than 50% myometrial invasion. Likewise, this expression should be considered as prognostic indicator. This parameter should be evaluated to ensure better management of these patients.

EP164 / #182

EPOSTER VIEWING: AS04 ENDOMETRIAL/UTERINE CORPUS CANCERS

THE EFFECT OF UTERINE ENDOMETRIAL ADENOCARCINOMA DIAGNOSIS ON PATIENT'S WEIGHT-RELATED OUTCOME.

Ayala Zilberman¹, Nadav Michaan², Lihie Maltz-Yacobi¹, Dan Grisaru², Ido Laskov²

¹Lis Maternity Hospital, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel, affiliated to the Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel, Obs & Gyn, Tel Aviv, Israel, ²Tel Aviv Sourasky medical center, Tel Aviv University, Israel, Gynecologic Oncology, Tel Aviv, Israel

Objectives: To follow the BMI change during the routine surveillance of endometrial cancer patients with its effect on the oncological outcome.

Methods: Data on patients with endometrial adenocarcinoma that had staging procedure and continued oncologic follow up was retrospectively collected. BMI at time of surgery and during the last clinic follow-up were compared. Univariate and multivariate analysis were performed to examine the effect of predictors on BMI change and the chance of recurrence.

Results: 211 patients met the inclusion criteria. The majority of patients had stage I disease (n=176, 83%) and endometrioid histology (n=178, 84%), Median follow-up time was 52.5 (SD 40) months. The mean BMI was 30.6 (IQR 25-34) kg/m² at surgery compared to 31.2 (IQR 26-36) kg/m² at last follow up (p<0.001). The BMI change in patients with non-endometrioid histology was not significant. The BMI increase was most pronounced in patients with endometrioid histology that were diagnosed with recurrence during follow up, 30.6 (IQR 24-35) kg/m² at surgery compared to 32.7 (IQR 27-36) kg/m² at last follow-up (p=0.016). On multivariate analysis, age OR 1.07 (1.001-1.141), p=0.04 and Delta BMI OR 1.37 (1.123-1.68), p=0.002 were the only predictors to have an effect on recurrence.

Conclusions: Patients with endometrioid endometrial cancer that increased their weight during follow up were at an increased risk for cancer recurrence compared to patients that did not change or decreased their weight. Active lifestyle intervention should be advocated.

EP165 / #859

EPOSTER VIEWING: AS05 FERTILITY/PREGNANCY

PREGNANCY ASSOCIATED BREAST CANCER (PABC) : MANAGEMENT AND OBSTETRICAL OUTCOMES

Rim Bouchahda, Ons Kaabia, Rihab Dahleb, Fatma Bouguila, Insaf Morjène, Samir Hidar
Université de Sousse, Faculté de Médecine de Sousse, Gynecology Obstetrics, Sousse, Tunisia

Objectives: We aim to study the impact of the diagnosis of the PABC on the pregnancy outcome and to report the characteristics of the management of breast cancer during the pregnancy.

Methods: It is a retrospective study. We included all patients diagnosed, at our institution, during a 10-year- period (2011- 2020), with PABC defined as breast cancer diagnosed during pregnancy or in the first postpartum year. We collected the data regarding the epidemiological, clinical, imaging, pathological, obstetrical, and oncological management strategies and outcomes.

Results: PABC was confirmed in 33 patients. The average age at the diagnosis was 35.58 years [23-47]. The average term of pregnancy at the time of PABC diagnosis was 19.35 weeks of amenorrhea (WA) [6-38]. The mean tumor size was 48 mm [10-130], and 21.21% had more than one lump. Axillary lymph nodes were present in 46.9%. The most common histological type is invasive ductal carcinoma no specific type (IDC-NST) (75.8%). The luminal B (53.1%) and the triple-negative (28.1%) were the two most expressed profiles. The pregnancy was terminated in 44.6%, and the average term of delivery was 36 WA [26-39]. We report a case of stillbirth prior to any therapy. The mean weight of newborns was 3045g [870- 3880] and no malformation was reported after chemotherapy. Five patients started chemotherapy during pregnancy. Breast surgery was performed after the delivery in 90.9% (66.66% mastectomy).

Conclusions: PABC is a particular entity among breast cancer that needs a multidisciplinary team to ensure the best outcome for both the patient and the pregnancy.

EP166 / #880

EPOSTER VIEWING: AS05 FERTILITY/PREGNANCY

A GYNAECOLOGICAL ONCOFERTILITY SERVICE – THE SINGAPOREAN EXPERIENCE

Felicia Chin¹, Tat Xin Ee², Wai Loong Wong¹, Ieera Aggarwal¹, Jessie Phoon²

¹KK Women's and Children's Hospital, Gynaecological Oncology, Singapore, Singapore, ²KK Women's and Children's Hospital, Reproductive Medicine, Singapore, Singapore

Objectives: Increasingly, gynaecological cancers are diagnosed in young women who desire future fertility. In light of this trend, KK Women's and Children's Hospital, Singapore's largest women's hospital, established a first-of-its-kind oncofertility service for gynaecological malignancies in Singapore in September 2020. This service aims to provide women with gynaecological cancers individualized treatment options with a focus on fertility preservation.

Methods: Women diagnosed with or suspected to have gynaecological malignancies were seen in the OncoFertility Clinic (OFC). Through joint consultation with a gynaecological oncologist and fertility specialist, holistic counselling on fertility sparing cancer treatment and fertility preservation options was provided. Early referrals to endocrinologists, weight management clinics, psychologists and medical social workers ensured that comorbidities such as diabetes mellitus and obesity were controlled and adequate psychosocial support was given.

Results: 92 women were reviewed in the OFC over a 20-month period. The median age was 33 (range 15 to 45). 42 women had endometrial/uterine pathology, 48 ovarian masses, and 2 had cervical disease. 8 patients eventually underwent definitive non-fertility sparing surgery. Of the 19 patients who were actively trying to conceive, 14 were referred for assisted reproduction. However, only 6 patients have embarked on in-vitro fertilization (IVF). 4 patients conceived, 2 via IVF and 2 spontaneously. There are 3 singleton and 1 DCDA twin pregnancy with 4 live births to date.

Conclusions: The growing number of referrals to the OFC reflects a demand for such a service locally. Outreach and education, further streamlining of processes, building a database and management guidelines are areas that can be built upon in the years to come.

EP167 / #438

EPOSTER VIEWING: AS05 FERTILITY/PREGNANCY

ONCOLOGIC AND REPRODUCTIVE OUTCOMES WITH FERTILITY SPARING TREATMENT IN OVARIAN CANCER PATIENTS

Poonam Lama, Jitendra Pariyar, Samir Neupane, Srijana Koirala, Simit Sapkota, Subhas Pandit
Civil Service Hospital, Gynecologic Oncology, Kathmandu, Nepal

Objectives: Fertility-sparing approaches in ovarian cancer treatment represent remarkable advances in gynecologic oncology. However, the number of ovarian cancer survivors becoming pregnant after such treatment remains unknown. The objective of this study is to find out the oncologic and fertility outcome of young ovarian cancer patients treated with fertility sparing approach.

Methods: A descriptive study was done on ovarian cancer patients with fertility concerns attending Civil Service Hospital of Nepal from 2015 to 2021. Clinical data were collected from hospital registry and telephonic inquiry followed by in-person interviews were done in all the participants regarding their present status, oncologic and fertility outcome.

Results: Twenty-six ovarian cancer patients with fertility needs were included in the study. Age range was 8 - 35 years, 11 were married and 15 were unmarried. Histologically, 15% were epithelial origin, 15% were Sex Cord-Stromal tumor and 70% were Germ cell tumor among which 92% had early-stage. Twenty-seven percentage patients underwent fertility sparing surgery (FSS) only, 46% underwent adjuvant chemotherapy after FSS and 27% underwent NACT followed by FSS and adjuvant chemotherapy also. Three had menstrual issue of few months of amenorrhea. Nine patients (35%) conceived and had term delivery after treatment. Eighty-five percent are in complete remission. Among four that had recurrence one died during chemotherapy, one defaulted treatment, one is on remission after chemotherapy, and one had completion surgery followed by chemotherapy.

Conclusions: The present study supports fertility-sparing treatment to be safe for ovarian cancer patients with favorable histology in terms of both oncologic as well as fertility outcome.

EP168 / #478

EPOSTER VIEWING: AS05 FERTILITY/PREGNANCY

OUTCOMES OF PREGNANCIES AND DELIVERIES IN PATIENTS WHO UNDERWENT FERTILITY PRESERVATION SURGERY FOR EARLY-STAGE EPITHELIAL OVARIAN CANCER

Shin Nishio¹, Takayo Takeno², Takeshi Fukuda³, Ayumi Shikama⁴, Hidekatsu Nakai⁵, Hiroko Nakamura⁶, Hideki Tokunaga⁷, Kazuaki Takahashi⁸, Emi Okuma⁹, Masahiko Mori¹⁰, Yasuhisa Terao¹¹, Kimio Ushijima¹, Nobuo Yaegashi¹²

¹Kurume University School of Medicine, Department Of Obstetrics And Gynecology, Kurume, Japan, ²Kagoshima City Hospital, Department Of Obstetrics And Gynecology, Kagoshima, Japan, ³Osaka Metropolitan University Graduate School of Medicine, Department Of Obstetrics And Gynecology, Osaka, Japan, ⁴Faculty of Medicine, University of Tsukuba, Department Of Obstetrics And Gynecology, Tsukuba, Japan, ⁵Kindai University, Faculty of Medicine, Department Of Obstetrics And Gynecology, Sayama, Japan, ⁶National Hospital Organization Kure Medical Center and Chugoku Cancer Center, Department Of Obstetrics And Gynecology, Kure, Japan, ⁷Tohoku University, Department Of Obstetrics And Gynecology, Sendai, Japan, ⁸The Jikei University School of Medicine, Department Of Obstetrics And Gynecology, Tokyo, Japan, ⁹Faculty of Medicine, Saga University, Department Of Obstetrics And Gynecology, Saga, Japan, ¹⁰Aichi Cancer Center Hospital, Department Of Gynecologic Oncology, Nagoya, Japan, ¹¹Faculty of Medicine, Juntendo University, Department Of Obstetrics And Gynecology, Tokyo, Japan, ¹²Tohoku University Graduate School of Medicine, Department Of Obstetrics And Gynecology, Miyagi, Japan

Objectives: To evaluate the outcomes of pregnancies and deliveries in patients who underwent fertility preservation surgery for early-stage epithelial ovarian cancer (EOC) and examine the perinatal prognosis of these patients.

Methods: We performed a retrospective study of women with a history of stage IA or IC ovarian cancer reported in our previous study. The primary outcome was preterm birth, and only the first pregnancy after cancer diagnosis was considered. Secondary outcomes were neonatal morbidity and severe maternal morbidity.

Results: A total of 54 of 84 (64.3%) patients who tried to conceive became pregnant, and 56 healthy children were born. Of these, information was available on 31 children. The mean maternal age at delivery was 31.7 ± 2.1 years. The mean number of weeks of delivery was 38.7 ± 0.7 weeks, and the mean birth weight of infants was $3,021 \pm 160$ g. The outcome of pregnancy was preterm labor in five patients and full-term labor in 26 patients. The mode of delivery was vaginal delivery in 18 patients and cesarean section in 13 patients. The indications for cesarean section were delivery arrest in six patients, a previous cesarean section in two patients, twin pregnancy in two patients, placenta previa in one patient, maternal infection in one patient, and fetal dysfunction in one patient. There were no other perinatal abnormalities, except for three preterm infants with low birth weight.

Conclusions: Pregnancy after fertility preservation in EOC has an excellent perinatal prognosis, although the cesarean section rate is high.

EP169 / #289

EPOSTER VIEWING: AS06 GENETICS AND EPIDEMIOLOGY

TRENDS IN UTERINE CANCER MORTALITY IN UNITED STATES: A 50-YEAR POPULATION-BASED ANALYSIS

Susan Lang¹, Cheng-I Liao², Sahana Somasegar³, Caitlin Johnson⁴, Kathleen Darcy⁵, Chunqiao Tian⁵, Daniel Kapp⁶, John K Chan⁷

¹Stanford University, Gyn Onc, Palo Alto, United States of America, ²Kaohsiung Veterans General Hospital, Ob Gyn, Kaohsiung, Taiwan, ³University of Chicago, Ob Gyn, Chicago, United States of America, ⁴California Pacific Medical Center Research Institute, Gynecologic Oncology, San Francisco, United States of America, ⁵Henry M Jackson Foundation for the Advancement of Military Medicine, Inc., Gynecologic Cancer Center Of Excellence Program, Bethesda, United States of America, ⁶Stanford University School of Medicine, Radiation Oncology, Palo Alto, United States of America, ⁷Palo Alto Medical Foundation Research Institute, Gynecologic Oncology, Palo Alto, United States of America

Objectives: To analyze mortality trends in uterine cancer in the United States over 50 years.

Methods: Mortality data for uterine cancer from 1969-2018 were collected from the National Center for Health Statistics. Mortality rates were extracted using SEER*Stat 8.3.9. Trends (average annual percent change, AAPC) were calculated with Joinpoint 4.9.0.0. Age-adjusted mortality rate was adjusted by the US 2000 standard population. Mortality rates were adjusted by hysterectomy and pregnancy from 2001 to 2018.

Results: Uterine cancer mortality decreased from 1969-1997 but increased from 1997-2018. From 2001-2018, mortality rates increased across all age groups after adjusting for hysterectomy and pregnancy. Specifically in 2018, compared to younger patients (50-59 years) the mortality of older (60-69 and 70+ years) was 3x and 7x higher. Mortality rate for non-Hispanic Black (NHB) women was at least 2.2x higher than other races/ethnicities (NHB 17.6/100,000; non-Hispanic White (NHW) 7.82/100,000; Hispanic 6.54/100,000; non-Hispanic Asian/Pacific Islander 4.24/100,000). Current AAPC in NHB women shows greater annual change than some prior reports (1.87%). Intersection analysis of age and race in the over 60 age group shows NHB women had 3x higher mortality than NHW (72 vs 24/100,000). Notably, young NHB and Hispanic women (30-39 years) had a higher increase in mortality at 3.3% and 3.8% annually compared to 2.2% in NHW women.

Conclusions: Uterine cancer mortality has increased from 1997 to 2018. Older NHBs had the highest mortality rates, and mortality is increasing rapidly in younger minorities. Further studies of molecular, social, and environmental factors are needed to explain and reduce these trends and disparities.

EP170 / #317

EPOSTER VIEWING: AS06 GENETICS AND EPIDEMIOLOGY

FACILITATED CASCADE TESTING FOR FAMILIES WITH IDENTIFIED MUTATIONS ASSOCIATED WITH HEREDITARY GYNECOLOGIC CANCERS

Sarah Lee¹, Hannah Karpel¹, Ashley Brown¹, Maria Smith¹, Julia Smith², Bhavana Pothuri¹

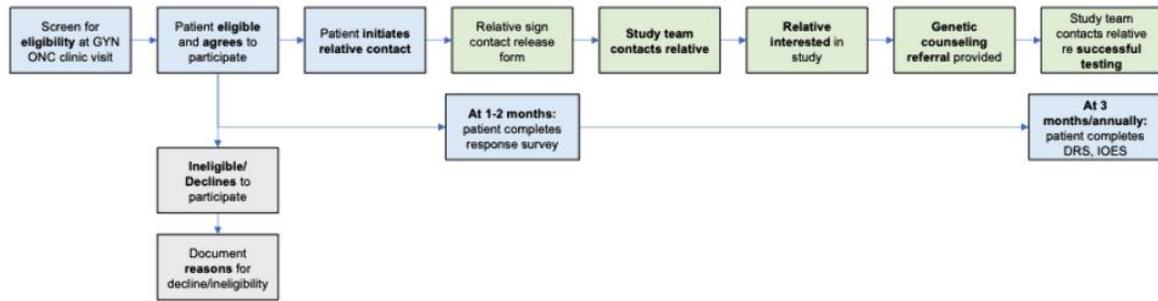
¹New York University School of Medicine, Obstetrics And Gynecology, New York, United States of America, ²New York University School of Medicine, Medicine, New York, United States of America

Objectives: We evaluated the feasibility of a facilitated referral pathway for cascade genetic testing (GT) for patients with mutations associated with gynecologic cancers.

Methods: This is a prospective cohort study of patients with BRCA1, BRCA2, BRIP1, MSH2, MLH1, MSH6, PMS2, EPCAM, RAD51C, and RAD51D mutations from March 2019-March 2022. Eligible patients were offered a facilitated referral pathway for GT for first and second-degree relatives (Figure 1). Decision Regret Scale and Impact of Events Scale assessed psychological impact at 3-months. The primary outcome was the proportion of patients with a relative who successfully completed GT.

Results: Of 583 eligible patients, 73 (13%) enrolled in our study. Reasons for declining participation were: no eligible relatives or previously tested (235, 40%), lost to follow-up (105, 18%), does not want to discuss GT with family (55, 9%), relatives not interested (50, 9%), language (38, 7%), and other (27, 5%). Of 73 enrolled patients, 45 (62%) contacted at least one relative to discuss GT within two months of enrollment. Twelve patients had at least one relative who participated in our facilitated referral pathway, but only 2 (3%) relatives completed GT through our pathway. Two additional relatives underwent GT separately. Of 20 patients who completed 3-month psychological impact questionnaires, 13 (65%) had no regret, and 19 (95%) had none to subclinical range stress.

Figure 1. Facilitated referral pathway for cascade genetic testing



DRS, Decision Regret Scale; IOES, Impact of Events Scale

Table 1. Characteristics of patients enrolled in the study

Characteristic	N (%)
Age (median, range)	43 (29-72)
Race/ethnicity	
Non-Hispanic White	47 (68.1)
Non-Hispanic Black	8 (11.6)
Hispanic/Latino	6 (8.7)
Asian	6 (8.7)
Other/Unknown	2 (2.8)
Education	
High school or less	2 (2.9)
Trade/vocational	2 (2.9)
Some college	6 (8.7)
College degree	26 (37.7)
Advanced degree	27 (39.1)
Unknown	6 (8.7)
Income	
<\$49,999	3 (4.3)
\$50,000 - \$99,999	15 (21.7)
\$100,000-\$149,999	7 (10.1)
\$150,000-\$199,999	5 (7.2)
>\$200,000	16 (23.2)
Prefer not to disclose/ unknown	23 (33.3)
Personal cancer history	
None	40 (58.0)
Breast	16 (23.2)
Ovary/Peritoneal/Fallopian tube	9 (13.0)
Uterine	2 (2.9)
Renal	1 (1.4)
Thyroid	1 (1.4)
Bladder	1 (1.4)
Other	3 (4.3)
Mutation	
BRCA1	36 (52.2)
BRCA2	26 (37.7)
BRIP1	3 (4.3)
EPCAM	1 (1.4)
MLH1	2 (2.9)
MSH2	2 (2.9)
MSH6	3 (4.3)
PMS2	3 (4.3)
Other	1 (1.4)

Conclusions: Although over 50% of patients contacted family members regarding GT, only 3% had a relative undergo GT via our facilitated referral pathway. Comprehensive novel efforts to simplify access to GT for relatives are desperately needed.

EP171 / #1044

EPOSTER VIEWING: AS06 GENETICS AND EPIDEMIOLOGY

BESIDE BREAST/OVARIAN MALIGNANCY: OTHER CANCER RISK PROFILE IN BRCA1 AND BRCA2 PATHOGENIC VARIANTS

Gabriel Levin¹, Tamar Peretz², Liron Kogan¹, Benny Brandt¹, Tamar Hamburger², Tamar Perri¹
¹hadassah medical center, Gynecologic Oncology, jerusalem, Israel, ²hadassah medical center, Oncology, jerusalem, Israel

Objectives: The clinical significance of genetic testing of BRCA1 and BRCA2 Pathogenic Variants (PV) in women with breast and ovarian cancers is widely recognized. However, there is paucity of evidence to include other cancer types in clinical management guidelines. We aim to study the prevalence of different types of cancers in BRCA 1 AND BRCA2 PV carriers and to associate those with the mutation type.

Methods: This is a cross-sectional study of women carriers of BRCA1 and BRCA2 PV, who attended our designated carrier clinic in a tertiary medical center We compared cancer incidence among the three most prevalence PVs in Israel: 185del, 6174del and 5382insc.

Results: A total of 2,230 women were included. BRCA1 mutation comprised 62.6% of the cohort, BRCA2 36.6% and 0.8% were carriers of both genes. Breast and ovarian/fallopian tube/peritoneal cancer was prevalent in 106 women(4.7%). Most prevalent other cancers were: cutaneous, 1.1%, colon, endometrial and cervical –0.6% each and thyroidal and pancreatic cancers, 0.4% each. The risk of any cancer was higher in 5382insc than 6174del and 185 del; 54.8% vs. 46.3% vs. 36.0% respectively, $p < 0.001$. When excluding breast and ovarian/fallopian tube/peritoneal cancer, the risk of other cancer was similar among the three mutations: 9.3% in 5382insc, 7.2% in 6174del and 7.3% in 185del, ($p = 0.521$).

Conclusions: The results of this large-scale study suggest that pathogenic variants in BRCA1 and BRCA2 were associated with non-negligible risk of other cancers. This risk seems not to be associated with the type of mutation, however larger studies are warranted.

EP172 / #350

EPOSTER VIEWING: AS06 GENETICS AND EPIDEMIOLOGY

INTEGRATED MOLECULAR PROFILE OF PLATINUM RESISTANT EPITHELIAL OVARIAN CARCINOMA

Karolina Seborova^{1,2}, Viktor Hlavac^{1,2}, Petr Holy^{1,2}, Sunniva Bjørklund³, Thomas Fleischer⁴, Alzbeta Spalenkova^{1,2}, Lukas Rob⁵, Martin Hruda⁵, Petr Cernaj⁶, Jiri Bouda⁶, Vessela N. Kristensen³, Pavel Soucek^{1,2}, Radka Vaclavikova^{2,7}

¹National Institute of Public Health, Toxicogenomics Unit, Praha, Czech Republic, ²Biomedical Center, Laboratory Of Pharmacogenomics, Pilsen, Czech Republic, ³Institute of Clinical Medicine, Faculty of Medicine, University of Oslo, Department Of Medical Genetics, Oslo, Norway, ⁴Institute of Cancer Research, Norwegian Radium Hospital Oslo University Hospital, Department Of Cancer Genetics, Oslo, Norway, ⁵University Hospital Kralovske Vinohrady and Third Faculty of Medicine, Department Of Gynecology And Obstetrics, Prague, Czech Republic, ⁶University Hospital in Pilsen, Department Of Gynecology And Obstetrics, Pilsen, Czech Republic, ⁷National Institute of Public Health, Toxicogenomics Unit, Praha , Czech Republic

Objectives: Epithelial ovarian carcinoma (EOC) is a serious malignancy with high mortality due to late diagnosis and drug resistance development. Drug resistance is one of the major obstacles to successful anticancer therapy. The main aim of our study was to analyze molecular profile based on gene expression, DNA methylation level, and genetic variability in EOC patients stratified by the platinum therapy resistance status.

Methods: For the present study, we selected 72 EOC patients with sensitive (N=43) or resistant (N=30) status. Whole genome expression of protein-coding genes was profiled by mRNA sequencing technology (N=60), lncRNA expression by whole transcriptome RNA sequencing (N=23), global methylation by DNA microarrays (N=50), and somatic mutation rate by whole exome sequencing (N=50).

Results: Molecular profile of platinum resistant EOC patients differed from sensitive EOC patients in upregulation of five protein-coding genes (NEURL1, FCGBP, MMP11, NCAM1, and ARMC3) and five lncRNA (ADAMTS9-AS1, TCF21-AS1, ARMC3-AS1, LINC-HIST2H3PS2-35, and LINC-BCR-4), higher methylation of seven protein-coding genes (ABCC4, ABCB10, SLC1A7, SLC19A2, SLC50A1, XPC, and FOXO1) and three lncRNA (LIN00263, LINC00460, NEAT1) and higher frequency of mutations in TP53 gene. On the other hand, three protein-coding genes (LPL, CD36, FABP4), and three lncRNA (LINC-IGGL5, LINC-TMEM121-12, CHST6-AS1) were downregulated, lower methylation was observed for ATP1A1 gene, and the Hippo pathway genes were less mutated in resistant patients.

Conclusions: Our study shows a complex network of dysregulated genes and gene expression products connected with the resistance status of EOC patients which should be further characterized. Supported by INTER-ACTION LTAUSA19032, GACR no. 21-14082S, AZV no. NU20-09-00174 and GAUK no.1074120.

EP173 / #392

EPOSTER VIEWING: AS06 GENETICS AND EPIDEMIOLOGY

HIGH-GRADE SEROUS CARCINOMA IN RISK-REDUCING SALPINGO-OOPHORECTOMY SPECIMENS OF ASYMPTOMATIC CARRIERS OF A BRCA1/2 GERMLINE PATHOGENIC VARIANT

Iris Stroot¹, Jan Brouwer¹, Joost Bart², Harry Hollema², Matti Rookus³, Marise Wagner¹, Hebon Investigators³, Geertruida De Bock⁴, Marian Mourits⁵

¹University Medical Center Groningen, Gynecologic Oncology, Groningen, Netherlands, ²University Medical Center Groningen, Pathology, Groningen, Netherlands, ³Netherlands Cancer Institute, Epidemiology, Amsterdam, Netherlands, ⁴University Medical Center Groningen, Epidemiology, Groningen, Netherlands, ⁵University Medical Center Groningen, Obstetrics & Gynaecology, Groningen, Netherlands

Objectives: We investigated the prevalence and reproductive and clinical factors associated with high-grade serous carcinoma (HGSC) at risk-reducing salpingo-oophorectomy (RRSO) in asymptomatic BRCA1/2 germline pathogenic variant (gPV) carriers.

Methods: BRCA1/2 gPV carriers who underwent RRSO between 1995 and 2018 were identified in the Hereditary Breast and Ovarian cancer in the Netherlands (HEBON) study. Pathology reports were screened and RRSO specimens with any reported epithelial abnormality and of women with HGSC after normal RRSO were histologically reviewed. Clinical characteristics of women with and without HGSC at RRSO were compared to estimate the association between risk factors and HGSC at RRSO.

Results: 2557 women of which 1624 BRCA1, 930 BRCA2 and 3 women with both BRCA1/2 gPV, were included. Median age at time of RRSO was 43.0 years (range: 25.3-73.8) for BRCA1 gPV carriers and 46.8 years (range: 27.6-77.9) for BRCA2 gPV carriers. At RRSO 24 (1.5%) BRCA1 and 6 (0.6%) BRCA2 gPV carriers had HGSC. In 73.3% the primary site of HGSC was the fallopian tube. For both BRCA1 gPV and BRCA2 gPV carriers, older age at RRSO was associated with an increased risk of HGSC at RRSO, while long-term use of oral contraceptive pill (OCP) was protective.

Conclusions: HGSC was detected in 1.5% (BRCA1 gPV) and 0.6% (BRCA2 gPV) of RRSO specimens from asymptomatic carriers, with most HGSC lesions found in the fallopian tube. Our results support the fallopian tube hypothesis, highlight the importance of timely RRSO and total removal of fallopian tubes and show protective effects of OCP on HGSC.

EP174 / #1009

EPOSTER VIEWING: AS07 GLOBAL HEALTH/ECONOMIC CHALLENGES

WOMEN LEADERSHIP IN GYNECOLOGIC ONCOLOGY DEPARTMENTS IN ISRAEL AND IN THE UNITED STATES

Roie Alter¹, Tamar Perri², Benny Brandt², Liron Kogan², Gabriel Levin²

¹Hadassah Ein Kerem, Obygn Dept., Jerusalem, Israel, ²Hadassah Medical Center, Gynecologic Oncology, Jerusalem, Israel

Objectives: In Israel there is a scarcity of women in leadership positions in academic medicine despite their increasing numbers in medical training. We aim to study the proportion of women in leadership roles in Gynecologic Oncology in Israel in comparison to other places of practice.

Methods: A cross-sectional study of Gynecologic Oncology departments in Israel and the United States (USA) in 2022. We accessed internet websites information regarding personnel staff and leadership positions in Gynecologic Oncology departments. We searched all hospitals in Israel which claim to have a Gynecologic Oncology service and all USA medical centers which carry a Fellowship program in Gynecologic Oncology reported by the Society for Gynecologic Oncology (SGO). Data was compared using univariate analysis.

Results: Overall, we included 21 medical centers in Israel and 49 Gynecologic Oncology departments in the USA. The representation of women in leadership positions in Israel was lower as compared to the USA: 4 (19.0%) vs. 23 (46.9%), Odds Ratio 95% Confidence Interval 0.26 (0.07-0.90), p=0.028.

Conclusions: The proportion of women in senior Gynecologic Oncology positions in Israel is significantly lower compared to the USA. Reasons for this gender bias should be thoroughly investigated and addressed. An effort should be made to overcome gender barriers and to reach gender equality in Gynecologic Oncology as well as all other fields of medicine.

EP175 / #1112

EPOSTER VIEWING: AS07 GLOBAL HEALTH/ECONOMIC CHALLENGES

COMPARISON OF U.S. AND ZAMBIAN OB/GYN RESIDENCY TRAINING PROGRAMS

Michael Hicks¹, Maya Hicks², Kenneth Chanda³, Mulindi Mwanahamuntu³, Monica Jones², Anissa Mattison⁴, Groesbeck Parham³

¹Michigan Cancer Institute, Gynecologic Oncology, Pontiac, United States of America, ²Anne Arundel Medical Center, Ob/gyn, Annapolis, United States of America, ³University Teaching Hospital – Women and Newborn Hospital, Ob/gyn, Lusaka, Zambia, ⁴St. Joseph Mercy Oakland, Ob/gyn, Pontiac, United States of America

Objectives: In order to explore perceived inequities in post-graduate medical education between high and low income countries, we evaluated the average minimal procedural requirements between a U.S. and Zambian Ob/Gyn residency programs.

Methods: Each respective program's metrics related to their minimum procedural requirements were recorded, and included the following indicators: vaginal deliveries; C-sections; abdominal hysterectomies; laparoscopic hysterectomies; laparoscopic procedures; hysteroscopies; cancer cases; vaginal hysterectomies; abortions; obstetrical ultrasounds; cystoscopies; incontinence and pelvic floor surgery. We also included the presence or absence of an official ultrasound rotation; time on obstetrics and gynecologic clinical services exclusively; the presence or absence of protected didactic time; subspecialty and off service rotations. A comparison was made related to these various categories and the average procedural numbers at each level to determine differences in trends and degree of exposure to surgical procedures during training.

Results: Minimal procedural requirements were met by both the U.S. and Zambian programs. The Zambian program had higher minimal standards for open surgical cases and the U.S. program had higher minimal standards for procedures that were associated with high end technology such as ultrasound and minimally invasive surgery. (Table1 and 2

Table 1 U.S. program procedure averages per year

Metrics	1st year	2nd year	3rd year	4th year
Number of vaginal deliveries	78	152	260	258
Number of C-sections	15	55	114	151
Number of abdominal hysterectomies	0.4	0.25	6.25	30
Number of laparoscopic hysterectomies	0.4	0	7.25	38
Number of laparoscopic procedures	1.4	16.5	26.75	82
Number of hysteroscopies	10	36.25	64.50	87
Number of cancer cases	0	0	1.5	34
Number of vaginal hysterectomies	0.2	0.25	3.5	17
Number of abortions	9	11.75	21	20
Number of Obstetrical ultrasound	35	164	290	103
Number cystoscopies	2	5	11.25	34
Number of incontinence and pelvic floor surgery	0.6	5.5	10.75	43

)

Table 2 Zambian program procedure averages

Metrics	1st year	2nd year	3rd year	4th year
Number of vaginal deliveries	120	50	20	20
Number of C-sections	20	180	120	80
Number of abdominal hysterectomies	-	5	10	20
Number of laparoscopic hysterectomies	-	-	-	-
Number of laparoscopic procedures	-	-	-	-
Number of hysteroscopies	-	-	-	-
Number of cancer cases	5	10	40	10
Number of vaginal hysterectomies	-	-	-	5
Number of abortions (MVA- Manual vacuum aspirations)	20	20	10	5
Number of Obstetrical ultrasound	-	-	40	-
Number cystoscopies	-	-	5	-
Number of incontinence and pelvic floor surgery	-	-	-	-

Conclusions: There were no significant differences in the Zambian and U.S. Ob/Gyn post-graduate training programs relative to their respective metrics. A more extensive analysis is required to determine the actual competency levels that are produced by the respective training systems.

EP176 / #1052

EPOSTER VIEWING: AS07 GLOBAL HEALTH/ECONOMIC CHALLENGES

GLOBAL ASSESSMENT OF BRCA1/2 GENETIC TESTING GUIDELINES: INVESTIGATING GEOGRAPHIC AND REGIONAL DISPARITIES IN HEALTH EQUITY FOR WOMEN AND FAMILIES AT RISK FOR HEREDITARY OVARIAN CANCER

Brittany Hughes¹, Kirsten Jorgensen², Shelly Cummings³, J. Alejandro Rauh-Hain², Mary Eiken⁴, Thomas Herzog¹

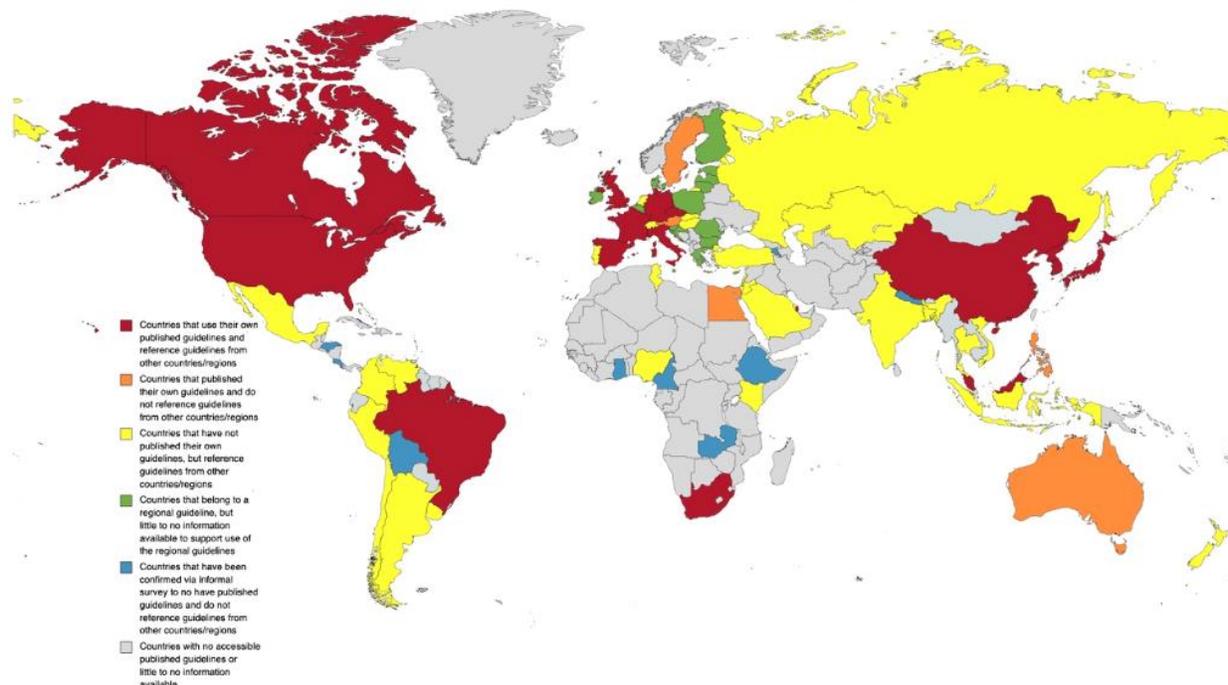
¹University of Cincinnati, Medical Oncology, Cincinnati, United States of America, ²The University of Texas MD Anderson Cancer Center, Department Of Gynecologic Oncology & Reproductive Medicine, Houston, United States of America, ³Myriad Genetics, Genetics, Salt Lake City, United States of America, ⁴International Gynecologic Cancer Society, Head Office, Atlanta, United States of America

Objectives: Identification of persons at risk for hereditary syndromes through genetic testing prior to cancer diagnosis may proactively reduce cancer burden morbidity and mortality. Using a framework of health equity, this study characterizes the global landscape of publication and references to BRCA1/2 genetic testing guidelines (GTG).

Methods: This mixed-method study included a systematic literature review; an International Gynecologic Cancer Society (IGCS) informal survey; and cross-reference with Myriad Genetics records, to identify published GTG, their country of origin, and countries referencing them.

Results:

Figure 1: Geographical Distribution of BRCA1 and BRCA2 Genetic Testing Guidelines by Country



Of 1,011 identified publications, 166 met inclusion criteria, from which 46 unique guidelines were identified, published by 18 countries and 2 regions (Europe and United Kingdom). Authorship from the United States accounted for 63% of publications. Systematic review revealed 34 countries, IGCS survey revealed 22 additional countries, and coordination with Myriad Genetics revealed additional information for 2 countries and primary information 1 country with published and/or referenced guidelines. Of the 57

countries evaluated, 33% published their own guidelines and reference guidelines from another country/region, 5% published their own guidelines, without referencing another country/region, 61% only reference a guideline from another country/region (Figure 1). No data was available for 138 of 195 countries, disproportionately from Africa, the Middle East, Eastern Europe, and Southeast Asia.

Conclusions: Global geographic disparities in the publication and referencing of guidelines exist, with a heavy emphasis on North American and European guidelines in the published literature. These disparities highlight a need for uniform BRCA GTG and testing infrastructure to improve global health equity.

EP177 / #433

EPOSTER VIEWING: AS07 GLOBAL HEALTH/ECONOMIC CHALLENGES

PATTERNS OF CARE AND OUTCOMES FOR ENDOMETRIAL AND OVARIAN CANCERS IN BOTSWANA 2015-2021

Christian Lumley*¹, Samantha Batman*², Leatile Sedabadi^{3,4}, Tlotlo Ralefala^{3,5}, Barati Monare⁶, Lisa Bazzett-Matabele^{4,7}, Peter Vuylsteke⁸, Rebecca Luckett^{4,9,10}, Surbhi Grover^{6,11}

¹The University of Texas Southwestern Medical Center, School Of Medicine, Dallas, United States of America, ²The University of Texas MD Anderson Cancer Center, Department Of Gynecologic Oncology And Reproductive Medicine, Houston, United States of America, ³Government of Botswana, Ministry Of Health And Wellness, Gaborone, Botswana, ⁴University of Botswana, Department Of Obstetrics And Gynecology, Faculty Of Medicine, Gaborone, Botswana, ⁵Princess Marina Hospital, Department Of Adult Oncology, Gaborone, Botswana, ⁶Botswana-University of Pennsylvania Partnership, Princess Marina Hospital, Gaborone, Botswana, ⁷Yale University, Department Of Obstetrics And Gynecology, New Haven, United States of America, ⁸University of Botswana, Department Of Internal Medicine, Gaborone, Botswana, ⁹The Government of Botswana & Harvard University, Botswana Harvard Aids Institute Partnership, Gaborone, Botswana, ¹⁰Beth Israel Deaconess Medical Center, Department Of Obstetrics And Gynecology, Boston, United States of America, ¹¹Hospital of The University of Pennsylvania, Department Of Radiation Oncology, Philadelphia, United States of America

Objectives: Endometrial and ovarian cancers are leading causes of cancer death among women globally. However, there is little published data on patterns of care and outcomes on these patients from low- and middle-income countries including Botswana, a country in sub-Saharan Africa. We describe and analyze patterns of care and outcomes for a cohort of ovarian and endometrial cancer patients in Botswana.

Methods: This study included all patients with endometrial or ovarian cancer who presented to Princess Marina or Gaborone Private Hospital between May 2015 and May 2021. Demographic, treatment, and survival data were analyzed.

Results: 99 endometrial and 38 ovarian cancer patients were included. Median age at diagnosis was 64 (IQR 58.5-70) for endometrial cancer patients and 57 (IQR 50-69.5) for ovarian cancer patients. Just over half of endometrial cancer patients (n=52, 52.6%) presented with FIGO stages I and II, whereas most ovarian cancer patients (n=25, 65.8%) presented with stages III and IV. 23.2% (n=23) of endometrial cancer patients received chemotherapy, 29.3% (n=29) received radiotherapy, and 61.6% (n=61) received surgical treatment; of ovarian patients, 42.1% (n=16) received chemotherapy, 5.3% (n=2) received radiotherapy, and 47.4% (n=18) received surgical treatment. 1- and 2-year overall survival probabilities were 76.9% and 59.7% for endometrial cancer patients and 62.8% and 43.7% for ovarian cancer patients, respectively.

Table 1. Ovarian cancer treatment modality by stage

<i>Stage Group</i>	Surgery Only	Radiotherapy only	Chemotherapy Only	Surgery + Chemotherapy	Surgery + Radiotherapy	No Therapy
I	2	0	2	2	1	0
II	2	0	1	0	0	2
III	3	0	3	5	0	3
IV	1	1	3	2	0	4
Unknown	0	0	0	0	0	1
Total	8	1	9	9	1	10

Table 2. Endometrial cancer treatment modality by stage

<i>Stage Group</i>	Surgery Only	Surgery + Radiotherapy	Surgery + Chemotherapy	Surgery + Chemotherapy + Radiotherapy	Radiotherapy Only	Chemotherapy Only	No Treatment
I	14	11	3	2	3	1	11
II	2	3	0	0	0	1	1
III	8	4	0	3	1	5	4
IV	3	1	3	0	1	4	1
Unknown	3	0	0	0	0	1	5
Total	30	19	6	5	5	12	22

Conclusions: Our results suggest that survival outcomes for patients with ovarian and endometrial cancer in Botswana are far worse than those in the United States, likely due to late stage presentation and challenges in care delivery.

EP178 / #397

EPOSTER VIEWING: AS07 GLOBAL HEALTH/ECONOMIC CHALLENGES

MENTAL HEALTH AND WELL-BEING OF FELLOWS AND RESIDENTS HANDLING CANCER PATIENTS IN THE THE CORONA VIRUS PANDEMIC

Martha Isabel J. Parroco Parroco

Jose Reyes Memorial Medical Center, Obstetrics And Gynecology, Manila, Philippines

Objectives: To identify factors that brought about by COVID-19 pandemic that affected the training program, mental health and well-being of the residents and fellows handling cancer patients.

Methods: This study was approved by the Institutional review board last February 4, 2021. The questions focused during the peak of the pandemic in the country which is from March to December 2020. Trainees were encouraged in accredited training program nationwide involved in particular field to complete the survey through answering via electronic mail by completing the google form. Letters were send to each department head of the specialty to conduct survey questions to their trainees.

Results: The survey was completed by 42 trainees all over the Philippines who had accredited training institutions comprising 57.1% (24/42) residents and 42.9% (18/42) fellows.

Conclusions: Residents and fellows who specialized in cancer are vulnerable during this pandemic as they serve as both learners and employees. They also cater to vulnerable population since it is known that people with cancer had complicated cases and some with poor outcomes if not treated in a reasonable amount of time. Residents and fellows are dependent on what the training program has to offer for their independent practice to facilitate progression towards their career goals. Awareness of the impact of caring for patients with cancer during the pandemic on trainee safety, health, wellness, education and future preparedness were essential in maintaining physicians workforce during this pandemic.

EP179 / #1170

EPOSTER VIEWING: AS07 GLOBAL HEALTH/ECONOMIC CHALLENGES

**HIGH TREATMENT DEFAULT AND LOW COMPLIANCE CREATES OVARIAN CANCER CARE GAP :
SNAPSHOT ANNUAL AUDIT OF OVARIAN CANCERS AT A TERTIARY CENTRE IN A LMIC**

Swapnil Patel, Amar Prem, Durgatosh Pandey
MPMMCC & HBCH, Tata Memorial Centre,, Department Of Surgical Oncology, Varanasi, India

Objectives: While the developed world debates on advanced treatment modalities for ovarian cancers, LMICs continue to be plagued by lack in cancer care delivery. The study was done to highlight the prevailing standards of care delivery for ovarian cancers in LMICs.

Methods: This is a retrospective analysis of prospectively maintained database of department of gynaecology for the year 2021. Variables pertaining to diagnosis and management of ovarian cancers were recorded from online electronic medical records system.

Results: Amongst the 1438 patients registered in the gynae-oncology department, 184 ladies were diagnosed with ovarian cancer. The median age was 49 years. The stage wise distribution was as follows: I (67,36.4), II (9, 4.9), III (72, 39.1), IV (36, 19.6). The average time for work up was 3.3 weeks. Majority of ladies had serous epithelial ovarian cancers (62.1%) followed by. Mucinous tumors in 5 % and germ cell histology in 6.4%. While 21.2% patients defaulted during work-up, remaining patients were planned for upfront surgery (32.1%), neoadjuvant chemotherapy (44%) and supportive care in 3.2% cases. Another 43 patients (23.4%) defaulted prior to treatment initiation and 17 (9.2%) patients defaulted after neoadjuvant chemotherapy. Only 78 patients (42.4%) completed the entire gamut of treatment.

Conclusions: With very high treatment default rates, the cancer care delivery system in LMICs has an unmet need of reinforcing compliance during the various stages of treatment. Patient advocacy, need for insurance schemes and superior patient-physician interaction are required to achieve overall superior outcomes.

EP180 / #431

EPOSTER VIEWING: AS07 GLOBAL HEALTH/ECONOMIC CHALLENGES

FACTORS ASSOCIATED WITH EMERGENCY ROOM READMISSION AFTER ELECTIVE SURGERY FOR OVARIAN CANCER.

Rosa Angélica Salcedo-Hernandez¹, David Cantu², David Isla-Ortiz¹, Salim Barquet-Muñoz¹, Leonardo S Lino-Silva¹, Lucely Cetina-Perez¹, Florencia Lucero-Serrano¹

¹National Cancer Institute Mexico, Gynecology Oncology, Tlalpan, Mexico, ²INSTITUTO NACIONAL DE CANCEROLOGIA, Gynecologic Oncology, MEXICO CITY, Mexico

Objectives: Our objective was to measure emergency room (ER) readmission, analyzing the consequent rate of hospital readmission, their causes and associated factors, and the morbidity and mortality of surgery in patients with ovarian cancer.

Methods: a retrospective study of 592 patients with ovarian carcinoma who underwent primary, interval or recurrence surgery were reviewed. An analysis of variables associated with ER readmission, hospital readmission and surgical complications were evaluated.

Results: Form 592 patients, median age was 51 years, the predominant type of surgery was interval laparotomy (52.9%); 46% underwent primary surgeries, and only 6 for recurrence. Complex surgeries resulted in a higher proportion of intraoperative complications (11.7%). The proportion of patients readmitted to ER was 11.8% (70 patients) of whom 12 patients were admitted more than once. The variables associated with ER readmission were prolonged time of surgery, intraoperative bleeding, longer hospital stay, the time of the day when the surgery was performed and postsurgical complications. The hospital readmissions were 4.2% and overall morbidity was 17.6%. In the multivariate analysis, the only variable associated with ER readmission was the presence of surgical complications (OR = 39.01). The variables independently associated with hospital readmission were entrance to the ICU (OR = 1.37), presence of surgical complications (OR = 2.85) and ER readmission (OR = 1.45).

Conclusions: ER readmission is an adverse event that represents the presence of symptoms/complications in patients. The evaluation of the ER readmission independently of the readmission to the hospital is important because it will allow modifying medical care behaviors.

EP181 / #465

EPOSTER VIEWING: AS07 GLOBAL HEALTH/ECONOMIC CHALLENGES

RADIATION UPTAKE AMONG PATIENTS WITH BREAST CANCER IN BOTSWANA

Chinmayee Venkatraman¹, Sidrah Shah¹, Barati Monare², Jessica George³, Memory Bvochora-Nsingo⁴, Yehoda Martei⁵, Doreen Ramogola-Masire⁶, Peter Vuylsteke⁷, Surbhi Grover⁸

¹University of Texas Southwestern Medical Center, Medical School, Dallas, United States of America, ²Botswana-UPenn Partnership, Princess Marina Hospital, Gaborone, Botswana, ³University of California Irvine, Donald Bren School Of Information And Computer Sciences, Irvine, United States of America, ⁴Gaborone Private Hospital, Radiation Oncology, Gaborone, Botswana, ⁵University of Pennsylvania, Hematology-oncology, Philadelphia, United States of America, ⁶University of Botswana, Department Of Obstetrics And Gynecology, Gaborone, Botswana, ⁷University of Botswana, Internal Medicine, Gaborone, Botswana, ⁸Hospital of University of Pennsylvania, Department Of Radiation Oncology, Philadelphia, United States of America

Objectives: This study aims to determine what proportion of patients with breast cancer in Botswana who were eligible for radiation therapy (RT) initiated treatment.

Methods: We reviewed patient files from January 2015 to December 2019 from the Princess Marina Hospital in Gaborone. Our curative RT eligibility criteria were TNM Stage T ≥ 3 , N ≥ 1 ; AJCC Stage IIB to IIIC; and undergoing lumpectomy. This study received domestic and international Institutional Review Board approval.

Results: We reviewed 441 patient records. The mean age was 53.0 years and 56.0% of patients presented with Stage IIIA-C breast cancer. The median distance traveled for RT was 155 km (range = 3.3–1082 km). We had surgery data on 313 patients (71%) with 41.0% of patients undergoing mastectomies and 11.3% undergoing lumpectomies. Most patients presented with a Karnofsky Performance Status of 90-100 (84.1%). The majority of patients were eligible for curative RT (340; 77.1%), however, only 150 (44.1%) went on to initiate radiation treatment. The median dose received was 4500 cGy and the median boost dose was 900 cGy. Univariate logistic regression analysis revealed the following variables as significantly associated with initiating RT: Mastectomy ($p < 0.001$) and Karnofsky Performance Status > 90 ($p = 0.04$).

Conclusions: This study identified a sizable gap in RT uptake among patients with breast cancer in Botswana, with only 44.1% of eligible patients initiating treatment. Since radiation therapy is covered by the government, it is imperative to consider other factors that could contribute to the lack of treatment initiation, including health literacy and RT schedules with downtime.

EP182 / #1149

EPOSTER VIEWING: AS08 GYNECOLOGIC PATHOLOGY/CYTOLOGY AND DISEASE PATHOGENESIS

SLN PERFORMED BY SURGEONS IN TRAINING IS A FEASIBLE AND REPRODUCIBLE TECHNIQUE

Rossini Lyria¹, Fernanda Schamne², Reitan Ribeiro^{2,3}, Adrielle Munhoz², Gustavo Dos Santos⁴, Eduardo Wilczek^{5,6}, Taiza Zulovski⁷, Luana Santiago⁸, José Linhares⁸, Audrey Tsunoda³

¹Erasto Gaertner, Gynecologic Oncology Department, Curitiba, Brazil, ²Hospital Erasto Gaertner, Gynecologic Oncology Department, Curitiba, Brazil, ³Erasto Gaertner Hospital, Gynecologic Oncology Department, Curitiba, Brazil, ⁴Hospital Erasto Gaertner, Radiology, Curitiba, Brazil, ⁵Hospital Erasto Gaertner, Radiology Department, Curitiba, Brazil, ⁶Erasto Gaertner Hospital, Radiology Department, Curitiba, Brazil, ⁷Hospital Erasto Gaertner, Nuclear Medicine Department, Curitiba, Brazil, ⁸Erasto Gaertner Hospital, Gynecologic Oncology, Curitiba, Brazil

Objectives: To evaluate the results of sentinel lymph node research performed by physicians in training under the supervision of a qualified preceptor.

Methods: This is a prospective Phase II trial including all consecutive early endometrial and cervical cancer patients, older than 18yo, from January 2016 to May 2022. All surgical procedures were performed by surgeons in training, under the supervision of a qualified preceptor. SLN detection was performed with blue dye or ICG, preferably combined with a radiotracer/Technetium (availability).

Results: 284 patients were included (130 cervical and 154 endometrial cancer). 185 (65.1%) underwent laparoscopy, 88 (31%) laparotomy, and 11 (3.9%) robotic surgery. Lymphadenectomy was performed in 149 (52.4%) cases: 122 (82%) bilateral and 16 (11%) unilateral pelvic, and 11 (7%) pelvic and paraaortic. Lymphoscintigraphy was performed in 122 patients (122/284), with a 75% detection rate with the gamma probe (91/122). Detection rate was 73.3% (208/284) with blue dye, 69.7% (145/208) bilateral. ICG was introduced in May/2021, and 38 patients were included, 31 in combination with Technetium, with 95% (36/38) bilateral and 5% (2/38) unilateral detection rates. There were no Grade 3-4 complications in 30 POD.

Conclusions: In this Phase II trial, SLN biopsy performed by surgeons in training is feasible, reproducible, and may achieve excellent detection rates, mainly when ICG was combined with Technetium.

EP183 / #304

**EPOSTER VIEWING: AS08 GYNECOLOGIC PATHOLOGY/CYTOLOGY AND DISEASE
PATHOGENESIS**

**LOW GRADE ENDOMETRIAL STROMAL SARCOMA – A CLINICOPATHOLOGICAL CASE SERIES
FROM A TERTIARY ONCOLOGY CENTER**

Santosh Menon¹, Kedar Deodhar¹, Bharat Rekhi¹, Amita Maheshwari², Jaya Ghosh³, Sudeep Gupta³
¹Tata Memorial Centre, Department Of Pathology, Mumbai, India, ²TATA MEMORIAL CENTRE,
Gynecologic Oncology, MUMBAI, India, ³Tata Memorial Centre, Department Of Medical Oncology,
Mumbai, India

Objectives: Endometrial stromal sarcoma (ESS) is an uncommon mesenchymal neoplasm of uterine/extra- uterine origin. Low grade ESS (LG-ESS) have characteristic morphology, growth pattern and biologic behaviour.

Methods: Institutional and referral cases were retrieved from pathology database of our institute by using key word search (Endometrial and stromal and sarcoma) over a period of nine years. The histopathology slides of cases were retrieved and reviewed along with the immunohistochemistry (IHC). Clinical details and follow-up were obtained from the clinical files in the available cases.

Results: Eighty-four cases of LG- ESS were studied. Mean age was 49.5 years (range 15 -84 years). Primary site distribution of LG- ESS was: Site distribution was: uterine -74, cervix -4, ovarian -2, extra-uterine -3, ESS on endometriosis-1. Limited staging details were as follows; Stage I-25 cases (64%); Stage II -6 cases (15%); Stage III- 7 cases (18%) and Stage IV- one case. Immunohistochemical (IHC) diagnosis utilizing CD10, smooth muscle actin, desmin was required in only in 58 cases (61%). Estrogen receptor (ER) was positive in 20 cases and progesterone receptor (PR) was positive in 24 cases. Limited follow- up was available in 33 patients. Median follow up was 35 months (range 6-252 months).18 out of these 33 patients had one or more recurrences. In stage I patients the recurrence rates were 35.6%. Majority of the recurrences were loco- regional followed by peritoneal and lung metastasis.

Conclusions: The clinical behaviour of LG-ESS is punctuated by clinical recurrences. Panel of IHC and assessment of hormonal receptors aid in diagnosis and direct management.

EP184 / #40

EPOSTER VIEWING: AS08 GYNECOLOGIC PATHOLOGY/CYTOLOGY AND DISEASE PATHOGENESIS

DEFINING THE LONGITUDINAL RISK OF CIN3+ IN PATIENTS WITH LESS THAN CIN2 COLPOSCOPY FOLLOWING INDEX HIGH GRADE CYTOLOGY

Sabrina Piedimonte¹, Nathaniel Jembere², Kyle Tsang², Julia Gao², Rachel Kupets³

¹University of Toronto, Gynecologic Oncology, Toronto, Canada, ²Cancer Care Ontario, -, toronto, Canada, ³Sunnybrook Health Sciences Center, Gynecologic Oncology, Toronto, Canada

Objectives: To determine the baseline and cumulative risk of CIN3 and invasive cervical cancer in patients with <CIN2 colposcopy following a high-grade screening cytology

Methods: By linking administrative databases including cytology, pathology, cancer registries and physician billing history, a population-based cohort study was performed on women with <CIN2 initial colposcopy between January 2012- December 2013 including only women with antecedent high grade cytology (ASC-H, HSIL, invasive squamous cell carcinoma(SCC), adenocarcinoma, AGC or AIS. Three and five-year risks of CIN 3 and invasive cervical cancer were generated using Kaplan Meier survival analysis.

Results: Among 4168 women with ASC-H, HSIL, SCC or adenocarcinoma on screening cytology, the 3/5-year CIN3 incidence rates were 17.7%/20.0%(no biopsy), 13.0/15.1%(negative biopsy) and 18.9%/20.0%(LSIL biopsy) while for AGC/AIS(n=944) cytology, the respective 3- and 5-year rates of CIN3 were 7.42%/8.39%(no biopsy), 7.41%/9.26%(negative biopsy) and 7.69%/7.69%(LSIL biopsy). The 3 and 5-year invasive cancer rates were: 1.25%/1.68% (no biopsy), 0.78%/1.04% (negative biopsy) and 0%/0%(LSIL biopsy) for ASC-H, HSIL, SCC or adenocarcinoma and 1.12%/1.54% (no biopsy), 0.46%/0.46%(negative biopsy) and 0.0%/0.0% (LSIL biopsy) after AGC/AIS screening cytology. By screening cytology, participants referred for HSIL had the highest 3- and 5-year rates of CIN3(18.9% and 21%), compared to AGC (7.22%/8.28%) and ASC-H(15.5%/18%). The 3- and 5-year invasive cancer were 1.38%/1.75% for HSIL, 0.85%/1.17% for AGC and 0.91%/1.36% for ASC-H.

Conclusions: In patients referred for high grade cytology where colposcopy shows <CIN2, the subsequent risk of invasive cancer at 5 years is sufficiently elevated to warrant closer surveillance in colposcopy. Risk is slightly less significant for AGC or AIS cytology.

EP185 / #391

EPOSTER VIEWING: AS08 GYNECOLOGIC PATHOLOGY/CYTOLOGY AND DISEASE PATHOGENESIS

ROLE OF EXTENSIVE PROCESSING OF RISK-REDUCING SALPINGO-OOPHORECTOMY SPECIMENS IN BRCA1/2 GERMLINE PATHOGENIC VARIANT CARRIERS

Iris Stroot¹, Jan Brouwer¹, Geertruida De Bock², Harry Hollema³, Marise Wagner¹, Hebon Investigators⁴, Marian Mourits¹, Joost Bart³

¹University Medical Center Groningen, Gynecologic Oncology, Groningen, Netherlands, ²University Medical Center Groningen, Epidemiology, Groningen, Netherlands, ³University Medical Center Groningen, Pathology, Groningen, Netherlands, ⁴Netherlands Cancer Institute, Epidemiology, Amsterdam, Netherlands

Objectives: We assessed the importance of extensive processing of risk-reducing salpingo-oophorectomy (RRSO) specimens with regard to 1) detecting serous tubal intra-epithelial carcinoma (STIC) or high-grade serous carcinoma (HGSC) at RRSO and 2) development of HGSC in the follow-up after normal RRSO in BRCA1/2 germline pathogenic variant (gPV) carriers.

Methods: From Hereditary Breast and Ovarian cancer in the Netherlands (HEBON) study, BRCA1/2 gPV carriers who underwent RRSO between 1995 and 2018 were included. Pathology reports of RRSOs were retrieved from the Dutch pathology registry and extent of processing was assessed. To confirm diagnoses of STIC/HGSC at RRSO or HGSC after normal RRSO, tissue slides of RRSO specimens with (pre)malignancy and from women who developed HGSC after RRSO were reviewed. Fisher's exact and Mann-Whitney U test were used to compare the extent of processing between the groups.

Results: In total 2557 women, of which 1624 BRCA1, 930 BRCA2, and 3 with both BRCA1/2 gPV with 10.5 years of median follow-up were included. 8 isolated STICs and 30 HGSCs at RRSO were found, with 16 HGSCs after normal RRSO. Women with STIC/HGSC at RRSO more often had totally embedded fallopian tubes and ovaries (81.6 and 84.2 versus 61.1 and 65.9% respectively; $p=0.01$ and $p=0.02$). Women who did not have their RRSO specimen totally embedded had a 6 times higher risk to develop HGSC during follow-up.

Conclusions: Extensive processing of RRSO specimens of BRCA1/2 gPV carriers increased detection of STIC/HGSC at RRSO and subsequently resulted in a risk-reduction for developing HGSC after normal RRSO.

EP186 / #742

**EPOSTER VIEWING: AS08 GYNECOLOGIC PATHOLOGY/CYTOLOGY AND DISEASE
PATHOGENESIS**

IS IT TIME TO TEST ALL ENDOMETRIAL CARCINOMAS FOR P53 MUTATION?

Elmira Vaziri Fard¹, Sara Imboden², Tilman Rau³, Elisabeth Epstein⁴, Tirzah Petta¹, Saloni Walia¹, Joseph Carlson¹

¹University of Southern California, Keck School of Medicine, Pathology, Los Angeles, United States of America, ²Insel University Hospital, Gynecologic Oncology, Bern, Switzerland, ³University of Düsseldorf, Pathology, Düsseldorf, Germany, ⁴Karolinska Institutet, Obstetrics And Gynecology, Stockholm, Sweden

Objectives: Historically, p53 mutation has been considered a diagnostic marker for serous endometrial carcinoma. Of the recently adopted molecular subtypes, p53 abnormal (copy number high) is the most aggressive. The aim of this study was to explore the histologic and clinical characteristics of p53 abnormal endometrial carcinoma regardless of their histologic subtype or grade.

Methods: A total of 146 p53 mutated endometrial carcinoma cases were included (44 cases from the Karolinska Institute, 37 cases from Bern University Hospital and 65 cases from the TCGA database). Based on availability, 1-2 representative digital slides from each case were reviewed. Morphologic, molecular, clinical and follow up data were recorded if available. Survival analysis was performed only on p53 abnormal molecular subtypes.

Results: A significant number of p53 abnormal cases (24.2%) classified as low grade (FIGO 1 and 2) endometrioid carcinomas. There was no significant difference in survival among different histologic subgroups ($p=0.60$). There was no significant difference in survival among low grade (FIGO1 or 2) vs high grade (FIGO3) tumors ($p=0.98$). Low stage (stage I), low grade tumors showed no significant survival advantage over low stage, high grade tumors ($p=0.16$). Although not statistically significant, the high-grade tumors even showed a trend towards better survival. Low stage patients with high-grade tumors had received more adjuvant treatment than low stage patients with low-grade tumors ($p=0.03$).

Conclusions: The findings of our study support the routine practice of testing all endometrial carcinomas for p53 mutation due significant impact on patients' prognosis and relevance to therapeutic approaches.

EP187 / #614

**EPOSTER VIEWING: AS08 GYNECOLOGIC PATHOLOGY/CYTOLOGY AND DISEASE
PATHOGENESIS**

**EXTRACELLULAR MATRIX LEVELS MODULATE OUTGROWTHS DYNAMICS IN OVARIAN
CANCER**

Sarah Alshehri¹, Tonja Pavlovic¹, Sadaf Farsinejad¹, Panteha Behboodi², Li Quan², Daniel Centeno¹, Douglas Kung¹, Marta Rezler³, Woo Lee², Piotr Jasiński⁴, Elżbieta Dziabaszevska⁴, Ewa Nowak-Markwitz³, Dilhan Kalyon², Mikołaj Zaborowski³, Marcin Iwanicki¹

¹Stevens Institute of Technology, Department Of Chemistry And Chemical Biology, Hoboken, United States of America, ²Stevens Institute of Technology, Department Of Chemical Engineering, Hoboken, United States of America, ³Poznan University of Medical Sciences, Department Of Gynecology, Obstetrics And Gynecologic Oncology, Division Of Gynecologic Oncology, Poznan, Poland, ⁴Poznan University of Medical Sciences, Department Of Pathology, Poznań, Poland

Objectives: Ovarian carcinoma (OC) form outgrowths that extend from the outer surface of an afflicted organ into the peritoneum. OC outgrowth formation is poorly understood because there is a limited availability of OC cell culture models to examine the behavior of cell assemblies that form outgrowths.

Methods: Prompted by immuno-chemical evaluation of extracellular matrix (ECM) components, laminin $\gamma 1$ and collagens, in human tissues representing untreated and chemotherapy-recovered OC, we developed laminin and collagen-rich ECM-reconstituted cell culture models amenable to studies of cell assemblies that can form outgrowths.

Results: We demonstrate that ECM promotes outgrowth formation in fallopian tube non-ciliated epithelial cells (FNE) expressing mutant p53^{R175H} and various OC cell lines. Outgrowths were initiated by cell assemblies that had undergone outward translocation and, upon mechanical detachment, could intercalate into mesothelial cell monolayers. Electron microscopy, optical coherence tomography (OCT) and small- amplitude oscillatory shear experiments revealed that elevating ECM levels increased ECM fibrous network thickness and led to high shear elasticity of ECM environment. These physical characteristics were associated with suppression of outgrowths. Culture environment with low ECM content mimicked viscoelasticity and fibrous networks of ascites and supported cell proliferation, cell translocation and outgrowth formation.

Conclusions: These results highlight the importance of ECM microenvironments in modulating OC growth and could provide additional explanation of why primary and recurrent ovarian tumors form outgrowths that protrude into the peritoneal cavity containing ascites as opposed to breaking through the basement membrane and invading collagen-dense tissues.

EP188 / #651

EPOSTER VIEWING: AS09 NURSING AND HEALTH CARE

COMBINED NURSING AND MEDICAL QUALITY IMPROVEMENT INITIATIVE TO INCORPORATE GYNAECOLOGICAL ONCOLOGY TUMOR BOARD SUMMARIES INTO ELECTRONIC HEALTH RECORDS AT A TERTIARY CANCER CENTRE IN SINGAPORE

Na Wei¹, Shirley Cheng², Xiaohui Lin², Jeera Aggarwal³

¹KK Hospital, Nursing Clinical Service, Singapore, Singapore, ²KK Hospital, Department Of Obstetric And Gynaecology, Singapore, Singapore, ³KK Women's and Children's Hospital, Department Of Gynaecological Oncology, Singapore, Singapore

Objectives: Weekly Tumor Board multidisciplinary meeting proceedings include gynaecologists, medical and radiation oncologists, palliative care physician, radiologists and pathologists and outline case summary, investigations, operative findings, staging and treatment recommendation. These summaries were previously filed in patients' casenotes as a printout limiting a smooth workflow for patients that need cross institutional care for radiotherapy and chemotherapy at our sister institutions. Emailing and faxing the summary printouts was time consuming with a potential risk of compromising secure patient data. Hence, we initiated a quality improvement (QI) project to incorporate these summaries into electronic health records.

Methods: This was a single institution QI project conducted at a tertiary hospital in Singapore, aimed at incorporating TB summaries into electronic records. The current workflow, opportunities, stakeholders and their roles were identified. A root cause analysis was performed to identify barriers and a survey was conducted among the tumour board members for further improvement suggestions.

Results: Plan-Do-Study-Act (PDSA) cycles were carried out after creating new workflow. Various options were explored to overcome limiting factors like different alignments in the gynaecological cancer database and electronic health records. To ensure continuity of care and facilitate communication, all patients with electronic copy of TB summary had an ink-stamp on their casenotes to indicate the date the case was discussed in tumour board.

Conclusions: Availability of these summaries electronically has brought more convenience and enhanced security to patient care. We achieved time saving of 1 hour per week, paper saving of 100 sheets per week, and high staff satisfaction.

EP189 / #251

EPOSTER VIEWING: AS09 NURSING AND HEALTH CARE

KOREAN SCHOOL NURSES' ATTITUDE TOWARD BOYS IN THE NATIONAL HUMAN PAPILLOMA VIRUS VACCINE IMMUNIZATION PROGRAM

Hae Won Kim¹, Young Jin Lee²

¹Seoul National University college of nursing, Center for Human-Caring Nurse Leaders for the Future by Brain Korea 21 (BK 21) Four Project, the Research Institute of Nursing Science, College Of Nursing, Seoul, Korea, Republic of, ²Eulji University, college of nursing, College Of Nursing, Euijungbu, Korea, Republic of

Objectives: In 2016, Korea introduced HPV vaccination as a national immunization program for early adolescent girls. This study explored that the school nurses' thought about boys' inclusion into national HPV vaccine program and perceived importance of HPV vaccine

Methods: Participant were conveniently recruited, school nurses (n= 181). The differences in the agreement of boys' inclusion, the best age for HPV vaccination of boy, and importance of HPV vaccine by nurses' HPV vaccination status were compared. The data were analyzed using the chi-square test, and the t-test in IBM SPSS version 25.

Results: 55.2% school nurses agreed to boys' HPV vaccination inclusion national program. 34.1% answered the best aged for boy's age for vaccination as 16-18 age. HPV vaccinated nurses more agreed (73.7%) to Boys inclusion than non- vaccinated did (46.8%) (p=.001). In the perceived importance of HPV vaccine, vaccine safety was most (4.60 ±0.52). The least importance was Asian vaccine policy (3.88 ±0.73).

Conclusions: School nurses' acceptance of boys' HPV vaccination into national immunization were low. School nurses' perceived importance of HPV vaccine in terms of safety, STI prevention, cervical cancer prevention. Role of the nurses' HPV vaccination would be further explored in HPV vaccine education and dissemination in the community Funding: This study was supported by the National Research Foundation of Korea (NRF) grant funded by the Korea government (Grant No. 2018-R1A2B2- 001231) and supported by the BK21 four project (Center for Human-Caring Nurse Leaders for the Future) funded by the Ministry of Education (MOE, Korea) and National Research Foundation of Korea (NRF).

EP190 / #579

EPOSTER VIEWING: AS09 NURSING AND HEALTH CARE

EVALUATION OF A JOURNAL CLUB HOSTED BY THE RESEARCH NURSE COMMITTEE IN A JAPANESE GYNECOLOGIC CANCER CLINICAL TRIALS GROUP

Izumi Kohara¹, Noriko Fujiwara², Hiroko Nakahama³, Kojiro Shimozuma⁴, Hiroyuki Fujiwara⁵, Keiichi Fujiwara⁶, Mitsuaki Suzuki⁷

¹Jichi Medical University, School Of Nursing, Tochigi, Japan, ²The Institute of Medical Science, The University of Tokyo, Department Of Palliative Medicine And Advanced Clinical Oncology, Tokyo, Japan, ³National Cancer Center Hospital, Department Of Nursing, Tokyo, Japan, ⁴Ritsumeikan University, College Of Life Sciences, Shiga, Japan, ⁵Jichi Medical University, Obstetrics And Gynecology, Tochigi, Japan, ⁶Saitama Medical University International Medical Center, Gynecologic Oncology, Saitama, Japan, ⁷Shinyurigaoka General Hospital, Obstetrics And Gynecology, Kanagawa, Japan

Objectives: of the Gynecologic Oncology Trial and Investigation Consortium (GOTIC) Research Nurse Committee (RNC) is to facilitate communication between nurses and other professionals to promote care for research participants and appropriate implementations of clinical research. The purpose of this report is to evaluate activities of the Journal Club initiated by the RNC.

Methods: Data on the background of the attendees and the contents of the papers and discussions were used in the evaluation.

Results: The Journal Club was held online once a month for one hour, and attendees were invited from GOTIC members, supporting members, and other interested parties. Immediate topic was the patient and public involvement (PPI) in clinical research. Attendees at the three Journal Club meetings held through the end of April 2022 averaged 16 per meeting, most attended all three meeting. Attendees included physicians, pharmacists, and nurses working at medical institutes, academic research organizations, or pharmaceutical companies. The articles covered included systematic reviews and key guidance on PPIs in general, and PPI in gynecologic oncology. After being introduced to the articles, attendees exchanged opinions, each based on their own perspectives.

Conclusions: The activity of hosting a journal club, taking up PPI articles and ensuring the opportunity to exchange ideas within a diverse group of attendees is important for strengthening the GOTIC's system for conducting clinical trials and promoting PPI. Making practical suggestions for GOTIC activities while taking advantage of the positions of the RNC are the next challenges.

EP191 / #1094

EPOSTER VIEWING: AS10 ONCOLOGIC CARE DURING & POST PANDEMIC

ESTABLISHING A GYNECOLOGY ONCOLOGY SATELLITE CLINIC IN A LOW RESOURCE SETTING DURING THE PANDEMIC

Shamanique Bodie¹, Patraneka Watson¹, Sheryl Miranda¹, Saida Bowe²

¹Grand Bahama Health Services, Obstetrics And Gynecology, Freeport, Bahamas, ²Princess Margaret Hospital, Department Of Gynecologic Oncology, Nassau, Bahamas

Objectives: The healthcare system in Grand Bahama is challenged to provide cancer care. The addition of economic strains from the COVID-19 pandemic have exposed this deficiency. The objective of this paper is to assess the data of the patient characteristics of a new satellite oncology clinic, and to show the feasibility of a gynecologic oncology clinic in a low resource setting.

Methods: Data was collected from medical records of the 44 patients seen at the Gynae Oncology Clinic at Pearce Plaza, Freeport Grand Bahama since its initiation in July 2021 to February 2022.

Results: Thirty percent of these patients were diagnosed with a gynecologic cancer, with endometrial cancer being the most common. While 18% have pre-invasive cervical lesions, that require close monitoring to prevent progression. Care in terms of cancer is coordinated by a team of experts in surgical oncology, radiation oncology and medical oncology in association with specialist gynecological nurse consultants, psychologists, social workers and palliative care professionals, of which most of these disciplinary which are lacking in Grand Bahama. Provision of these human resources, while not the only factor, is one of the major obstacles to providing the healthcare required.

Conclusions: The recently implemented gynecology clinic is a great initiative for Grand Bahama for cancer patients during the pandemic. It may improve the outcome of local gynecologic cancer patients by providing efficient and timely investigations, initiating effective treatments for each diagnosis, and providing a facility to follow-up care for patients who have completed their cancer treatments. A reduction in the financial and emotional burdens in the midst of the pandemic.

EP192 / #270

EPOSTER VIEWING: AS10 ONCOLOGIC CARE DURING & POST PANDEMIC

ENHANCED RECOVERY AFTER SURGERY FOR GYNECOLOGIC ONCOLOGY PATIENTS UNDERGOING LAPAROTOMY DURING THE COVID-19 PANDEMIC

Julia Boucher¹, Innie Chen¹, Abdul Jamil², Tien Le³

¹The Ottawa Hospital, Obstetrics And Gynecology, Ottawa, Canada, ²Ottawa Hospital Research Institute, N/a, Ottawa, Canada, ³The Ottawa Hospital, Gynecologic Oncology, Ottawa, Canada

Objectives: Enhanced recovery after surgery (ERAS) is an evidence-based surgical quality improvement program that has been shown to improve patient outcomes, while reducing overall resource costs. The aim of this study was to evaluate the impact of implementation of ERAS for gynecologic oncology patients undergoing laparotomy during the COVID-19 pandemic.

Methods: We conducted a pre-post study that included women admitted for gynecological oncology abdominal surgery. Outcomes of interest included post-operative LOS, readmission, and return to ED within 30 days of discharge. Outcomes were compared for the pre (June 2019-June 2020) and post (July 2020-June 2021) intervention periods, using Chi-square for categorical variables and t-test for continuous variables.

Results: A total of 364 patients were included, among whom 217 were admitted in the pre and 147 were admitted in post intervention period. It was observed that patients had higher BMI ($p < 0.01$), higher ASA category ($p = 0.71$), and higher Charlson comorbidity index ($p = 0.07$) in the post compared with pre intervention period. There was a trend towards decreasing mean post-operative LOS from 104.1 to 91.4 hours ($p = 0.12$). However, there was a slight non-significant increase in hospital readmission from 6.0% to 8.2% ($p = 0.42$), with no notable differences in ED visits (13.8% to 12.9%, $p = 0.81$).

Conclusions: Despite the challenges associated with the COVID-19 pandemic, including delays in surgical care access and associated increase in patient morbidity, we were able to successfully implement ERAS as routine medical care for gynecologic oncology patients. Future directions include auditing compliance and in-depth cost analysis.

EP193 / #340

EPOSTER VIEWING: AS10 ONCOLOGIC CARE DURING & POST PANDEMIC

**REMOTE GYNECOLOGIC ONCOLOGY PERIOPERATIVE CARE THROUGH MOBILE APPLICATION:
A PROSPECTIVE COHORT STUDY TO ASSESS FEASIBILITY AND PATIENT ENGAGEMENT**

Soyoun Rachel Kim¹, Stephane Laframboise², Jodi-Ann Manhertz¹, Marcus Bernardini², Sarah Ferguson¹, Taymaa May², Liat Hogen², Paulina Cybulska³, Genevieve Bouchard-Fortier³
¹Princess Margaret Cancer Centre/University Health Network/Sinai Health Systems, Gynecology Oncology, Toronto, Canada, ²Princess Margaret Cancer Center, Gynecologic Oncology, Toronto, Canada, ³Princess Margaret Cancer Center, Gynecologic Oncology, Toronto, Canada

Objectives: Mobile applications (apps) may increase patient-provider interactions in the perioperative setting and reduce preventable complications. We conducted a prospective cohort study to evaluate the feasibility and patient engagement for a comprehensive mobile app designed for remote gynecologic oncology perioperative care.

Methods: We designed a mobile app for those undergoing minimally invasive hysterectomy at a tertiary cancer center. Patients had access to the app from their initial consultation up to 30 days after their surgery. The app sent out instructions in the pre- and post-operative setting, provided educational videos, sent out daily queries about postoperative symptoms, and allowed patients to initiate text messages or video calls during their recovery. All patients completed a survey at enrollment and at 30-day follow-up.

Results: Of 37 patients who were approached, 24 (65%) participated and 17 (71%) have fully completed the pathway with 7 (29%) still in the process of completing their perioperative journey. The median age at enrolment was 65 (50-84). Participant engagement and compliance was high (75%), as measured by the response rate to the daily queries and completion of surveys. Of those who completed the survey, 100% would recommend the app to other patients, and found that the app improved their engagement with their care providers. All participants found that the educational components were helpful for their recovery at home. Overall, 91% were satisfied with the remote monitoring process and 91% felt empowered through use of the

app.

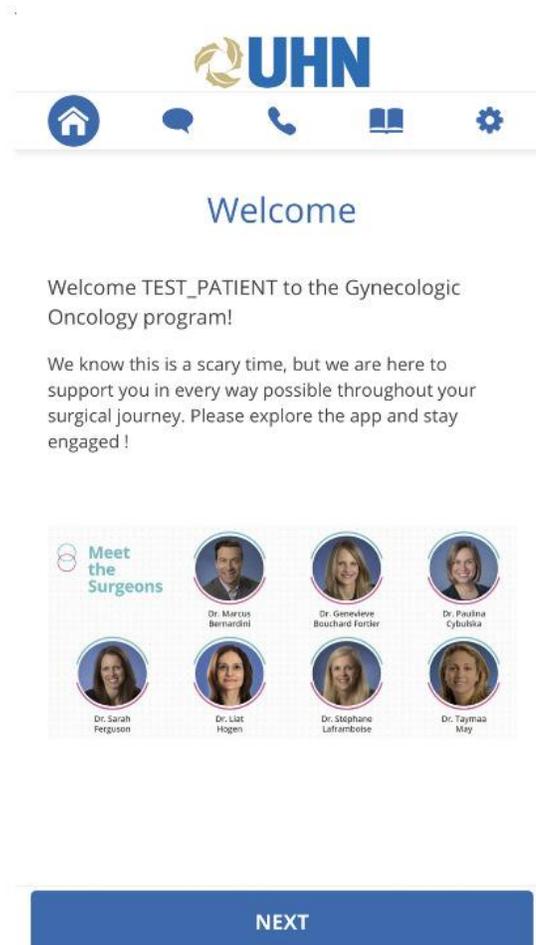


Figure 1. Welcome page of our custom-designed comprehensive mobile application for patients undergoing surgery.

Conclusions: Mobile app in perioperative care of gynecology oncology patients is well accepted and feasible.

EP194 / #277

EPOSTER VIEWING: AS10 ONCOLOGIC CARE DURING & POST PANDEMIC

CLINICAL CHARACTERISTICS OF CORONAVIRUS INFECTION IN CANCER PATIENTS

Emil Makimbetov, Polina Denisova

National Center of oncology and hematology, Medical Faculty, Bishkek, Kyrgyzstan

Objectives: Cancer patients are considered a very vulnerable group of the population to SARS-CoV-2 infection and the development of more severe COVID-19 symptoms, which may be due to a systemic immunosuppressive condition caused directly by tumor growth and indirectly by the effects of antitumor treatment. The aim of the study was to study the clinical, laboratory characteristics of coronavirus infection in patients with oncogynecological pathology.

Methods: There were analyzed 60 cancer patients and 60 patients with benign lesions. The frequency of clinical, radiological and laboratory characteristics in both groups of patients was studied.

Results: Similar clinical symptoms were revealed: fever (88.7% in non-cancerous and 78% in cancer patients), cough (67.8% and 76%, respectively), nausea and vomiting (5.1% and 5.7%), diarrhea (3.8% and 12.2%). Symptoms differed in shortness of breath (21.9% in non-oncological and 50% in cancer), and weakness (38.1% and 64.3%, respectively). Radiologically, the symptom of "frosted glass" was determined in both groups (in 65% and 71%), heterogeneous consolidations (50% and 46%), bilateral involvement of the lungs (51% and 86%). In the laboratory, lymphopenia (82%), leukopenia (32%), increased CRP (82%), D-dimer (36%), hypoalbuminemia (89-98%) were detected with approximately the same frequency in both groups, but anemia was more pronounced in cancer patients (75%) versus 51%. And the increase in LDH and ESR was more characteristic of non-cancer patients than cancer patients (76% and 50% and 86% and 57%, respectively).

Conclusions: The obtained results of the study allow us to develop adequate tactics during special treatment, in particular, performing surgical interventions for oncogynecological diseases.

EP195 / #447

EPOSTER VIEWING: AS10 ONCOLOGIC CARE DURING & POST PANDEMIC

CAREGIVER EXPERIENCE DURING THE COVID-19 PANDEMIC IN THE NETHERLANDS

Eline Oymans^{1,2}, Cornelis De Kroon³, Joost Bart⁴, Hans Nijman¹, Maaïke Van Der Aa²

¹University of Groningen, Department Of Obstetrics And Gynecology, Groningen, Netherlands, ²Netherlands Comprehensive Cancer Organization, Department Of Research & Development, Utrecht, Netherlands, ³Leiden University Medical Center, Department Of Gynecology, Leiden, Netherlands, ⁴University Medical Center Groningen, Pathology, Groningen, Netherlands

Objectives: We evaluated the experience of caregivers on the healthcare of gynaecological cancer patients during the first wave (March-June) of the COVID-19 pandemic in 2020 in the Netherlands.

Methods: An online questionnaire was sent to gynaecologists, gynaecological oncologists, medical- and radiation oncologists throughout the Netherlands. The self-developed questionnaire consisted of questions about gynaecological cancer in general and endometrial, ovarian, cervical and vulvar cancer specifically.

Results: Sixty-four (63%) physicians participated: 33 gynaecologists (52%), 13 gynaecological oncologists (20%), 7 medical oncologists (11%) and 11 radiation oncologists (17%). Fifty-nine percent of the respondents (35/59) reported a change in the way of contact with patients during the 'diagnostic phase': patients were more often contacted by telephone during the pandemic (80%, 28/35, e.g. first consult or discussing results). For ovarian cancer 17% (4/23) reported a change in type of surgery and 22% (11/49) in (neo)adjuvant treatment (e.g. delay, more cycles, referral). For endometrial 21% (12/56), cervical 26% (7/27) and vulvar cancer 32% (6/19) longer waiting times for surgery were reported (3% <1 week, 58% 1-3 weeks, 39% >3 weeks). Eighty-nine percent of the respondents (46/52) reported a change in follow-up: 91% (42/46) reported follow-up consultation by telephone or video, 63% (32/51) reported postponed follow-up appointments.

Conclusions: The questionnaire showed that during the first wave of the COVID-19 pandemic, most caregivers experienced a different way of contact during the diagnostic and follow-up phase. Consultation by telephone could be a good alternative in the follow-up phase, e.g. for low risk patients without symptoms, even after the pandemic.

EP196 / #887

EPOSTER VIEWING: AS10 ONCOLOGIC CARE DURING & POST PANDEMIC

IMPACT OF THE COVID-19 PANDEMIC ON THE CARE OF PATIENTS WITH OVARIAN CANCER

Eline Oymans^{1,2}, Cornelis De Kroon³, Joost Bart⁴, Hans Nijman¹, Maaïke Van Der Aa²

¹University of Groningen, Department Of Obstetrics And Gynecology, Groningen, Netherlands, ²Netherlands Comprehensive Cancer Organization (IKNL), Department Of Research & Development, Utrecht, Netherlands, ³Leiden University Medical Center, Department Of Gynecology, Leiden, Netherlands, ⁴University Medical Center Groningen, Pathology, Groningen, Netherlands

Objectives: We studied the impact of the COVID-19 pandemic on the care of patients with epithelial ovarian cancer (EOC) in the Netherlands.

Methods: Data of the Netherlands Cancer Registry was used to perform a retrospective cohort study on women of 18+ years diagnosed with EOC in the period 2017-2020 who were treated in the Netherlands. Waiting times and treatment characteristics were compared for the period before the COVID-19 pandemic (2017-2019) with the period during the COVID-19 pandemic (2020).

Results: During the pandemic, more women were diagnosed with FIGO stage IV (28.7%) compared to the period before the pandemic (23.7%, $p=0.034$). Mean time between first hospital consultation and first treatment did not differ significantly between both periods; for stage I-IIA it was 34 days during the pandemic and 36 days before the pandemic, for stage IIB-IIIC it was 35 vs 37 days and for stage IV 37 vs 35 days, respectively. Time between cytoreductive surgery (CRS) and adjuvant chemotherapy was significantly shorter during the pandemic for stage IIB-IIIC (24 days vs 30 days before the pandemic, $p<0.001$).

Conclusions: In the Netherlands during the COVID-19 pandemic (2020), an increase in FIGO stage IV EOC was observed compared to the period before the pandemic (2017-2019). This might be due to patient-delay and/or delay in referral or to the introduction of HIPEC for stage IIIC. A decrease in the interval between CRS and adjuvant chemotherapy was observed. A decrease in elective procedures and treatments may be an important cause of the reduction in waiting time for chemotherapy.

EP197 / #293

EPOSTER VIEWING: AS10 ONCOLOGIC CARE DURING & POST PANDEMIC

ENDOMETRIAL CANCER RECURRENCES IN THE ERA OF COVID

Jenna Patterson, Md¹, Courtney Riedinger, Md², Floor Backes², David O'Malley³, Kristin Bixel, Md², Larry Copeland, Md², David Cohn, Md², Paul Goodfellow, Phd², Casey Cosgrove, Md²

¹The Ohio State University Wexner Medical Center, Department Of Obstetrics And Gynecology, Columbus, United States of America, ²Arthur G. James Cancer Hospital, The Ohio State University Wexner Medical Center, Department Of Obstetrics And Gynecology, Division Of Gynecologic Oncology, Columbus, United States of America, ³The Ohio State University, James Cancer Center, Department Of Obstetrics And Gynecology, Division Of Gynecologic Oncology, Columbus, United States of America

Objectives: Endometrial cancer (EC) is the most common gynecologic malignancy and surveillance includes symptom assessment and physical examination. During the COVID pandemic, access to care was limited and telemedicine was frequently utilized. Our objective was to evaluate the effects of the pandemic on the presentation and diagnosis of EC recurrence.

Methods: A retrospective review of women with EC recurrence diagnosis between January 2015 and December 2021 was performed. Clinicopathologic data about presentation and diagnosis of recurrence was collected from the electronic health record. The first COVID case in Ohio was reported March 2020 and recurrence diagnosis after this date was considered "after COVID." Statistical analysis was performed using JMP Statistical Software.

Results:

Clinical factor	Pre-COVID N = 135	Post-COVID N = 66	P
Time to recurrence			
Mean, (SD)	14.78, (11.28)	17.64, (10.99)	0.212
Median, (range)	11.56, (2.73-81.81)	14.08, (3.09-47.51)	
Presentation			
Symptomatic	81 (60.0%)	39 (59.1%)	0.902
Asymptomatic	54 (40.0%)	27 (40.9%)	
Location of Diagnosis			
Oncology	85 (63.0%)	44 (66.7%)	0.517
ED	35 (25.9%)	18 (27.3%)	
PCP	15 (11.1%)	4 (6.1%)	
Location of Recurrence			
Localized	39 (28.9%)	17 (25.8%)	0.641
Distant	96 (71.1%)	49 (74.2%)	
Received treatment for recurrent disease			
Yes	111 (82.2%)	55 (83.3%)	0.845
No	24 (17.8%)	11 (16.7%)	
Follow-up			
Compliant	119 (88.2%)	63 (95.5%)	0.102
Noncompliant	13 (9.6%)	1 (1.5%)	
Unknown	3 (2.2%)	2 (3.0%)	

During the timeframe, 201 patients were diagnosed with recurrent EC; 135 (67.2%) prior to COVID and 66 (32.8%) after COVID. There was no difference in the average time (in months) from diagnosis to EC recurrence (14.78 vs 17.64, $p = 0.212$) prior to or after COVID. The majority of EC recurrences were symptomatic (60.0% vs 59.1%, $p = 0.902$) and nonlocalized in both groups (71.1% vs 74.2%, $p = 0.641$). Most recurrences were diagnosed by oncologic providers (63.0% vs 66.7%, $p = 0.517$). Lastly, no difference in the percentage of patients receiving treatment (82.2% vs 83.3%, $p = 0.845$) nor the follow-up compliance rate (88.2% vs 95.5%, $p = 0.102$) between the two groups was detected (Table 1).

Conclusions: Clinicopathologic presentation of EC recurrence did not change in our population after COVID. This suggests that health care adaptations utilized during the pandemic, including telemedicine, warrant further investigation.

EP198 / #938

EPOSTER VIEWING: AS10 ONCOLOGIC CARE DURING & POST PANDEMIC

ACCESS TO TREATMENT FOR ENDOMETRIAL CANCER PATIENTS DURING THE COVID-19 PANDEMIC IN ONTARIO, CANADA

Brenna Swift¹, Joshua Mazuryk², Olga Yermakhanova², Bo Green², Rachel Kupets^{1,3}

¹University of Toronto, Department Of Obstetrics And Gynecology, Division Of Gynecologic Oncology, Toronto, Canada, ²Ontario Health, Cancer Care Ontario, Toronto, Canada, ³Sunnybrook Odette Cancer Centre, Division Of Gynecologic Oncology, Toronto, Canada

Objectives: During the first year of the COVID-19 pandemic in Ontario, biopsies for cancer diagnosis decreased by over 40% and surgical cancer treatment decreased by over 25% during the first pandemic wave¹. This study aims to assess the impact of the COVID-19 pandemic on endometrial cancer diagnosis and surgical treatment in Ontario, Canada.

Methods: Cases were identified from January 1, 2017 to December 31, 2022 from endometrial cancer hysterectomy specimens in Ontario Health – Cancer Care Ontario, ePath system. Endometrial biopsy records were matched to surgical specimens by provincial health card number. System performance was compared before (2017-2019) and during (2020-2021) the COVID-19 pandemic.

Results: There were 10 446 women treated with hysterectomy for endometrial cancer in Ontario from 2017-2021. The majority were low grade (74%) compared to high grade (18%) with 8% unspecified. In April and May 2020 corresponding with the provincial state of emergency, there was a 56% relative reduction in endometrial biopsies. The median time to surgery was 57 days (IQR 41-73) for low grade and 57 days (IQR 42-76) for high grade endometrial cancer. There was no difference in time to surgery and no change in surgical stage at presentation before (2017-2019) or during the pandemic (2020-2021).

Conclusions: Despite significant increase in virtual care and decreased operating room time during the COVID-19 pandemic in Ontario, the healthcare system continued to prioritize service delivery to endometrial cancer patients. Importantly, there were no significant surgical delays or upstaging of endometrial cancer, particularly of high-grade histology. ¹Walker et al., JAMA Network Open. 2022;5(4):e228855. doi:10.1001/jamanetworkopen.2022.8855

EP199 / #186

EPOSTER VIEWING: AS11 OVARIAN CANCER

CASE-MIX ADJUSTMENT IN ORDER TO ACCURATELY COMPARE HOSPITALS REGARDING COMPLICATIONS AFTER CYTOREDUCTIVE SURGERY FOR ADVANCED-STAGE OVARIAN CANCER IN THE NETHERLANDS.

Marc Algera^{1,2}, Nishita Baldewpersad Tewarie³, Willemien Van Driel⁴, Maaïke Van Ham³, Brigitte Slangen¹, Roy Kruitwagen¹, Michel Wouters⁵

¹Maastricht University Medical Center (MUMC), Department Of Obstetrics And Gynecology, Maastricht, Netherlands, ²GROW- School for Oncology and Reproduction, Department Of Obstetrics And Gynecology, Maastricht, Netherlands, ³Radboud University Medical Center, Department Of Obstetrics And Gynecology, Nijmegen, Netherlands, ⁴Netherlands Cancer Institute, Department Of Gynecology, Amsterdam, Netherlands, ⁵Netherlands Cancer Institute, Department Of Surgery, Amsterdam, Netherlands

Objectives: Case-mix factors are patient and tumor characteristics that can influence hospital outcomes. An important gynecological-oncology hospital outcome is the complication rate after cytoreductive surgery (CRS) for patients with advanced-stage ovarian cancer (OC). No case-mix adjustment model currently exists. Therefore, this study aims to develop the first case-mix model to accurately compare hospital outcomes regarding complications after CRS for advanced-stage OC.

Methods: This retrospective, population-based study included all patients undergoing curative CRS for advanced-stage OC, registered in the Dutch Gynecological Oncology Audit, between 2017-2019. Case-mix variables were identified and assessed using logistic regression analyses. Primary outcome was the composite outcome measure 'complicated course'. Inter-hospital variation was analyzed using logistic regressions and visualized using funnel plots.

Results: In total, 1822 patients were included from twenty-one hospitals, of which 10.7% (n=195) had a complicated course after CRS (Table1). Comorbidity and FIGO-stage significantly impacted complicated course rates in multivariable logistic regression (Table1). Inter-hospital variation was not significant for case-mix factors. Unadjusted complicated course rates ranged from 2.2% to 29.1%, case-mix adjusted observed/expected ratios ranged from 0.20 to 2.67 between hospitals (Figure1). One hospital had significantly higher complicated course rates and remained an outlier after case-mix adjustment. This hospital had the highest proportion of complete CRS and performed inside confidence intervals regarding 30-day-mortality.

Table 1: Patient, tumor, and treatment characteristics of patients undergoing CRS for advanced-stage ovarian cancer in 2017-2019, registered in the Netherlands. Multivariable logistic regression analysis: association of case-mix factors with complicated course[§].

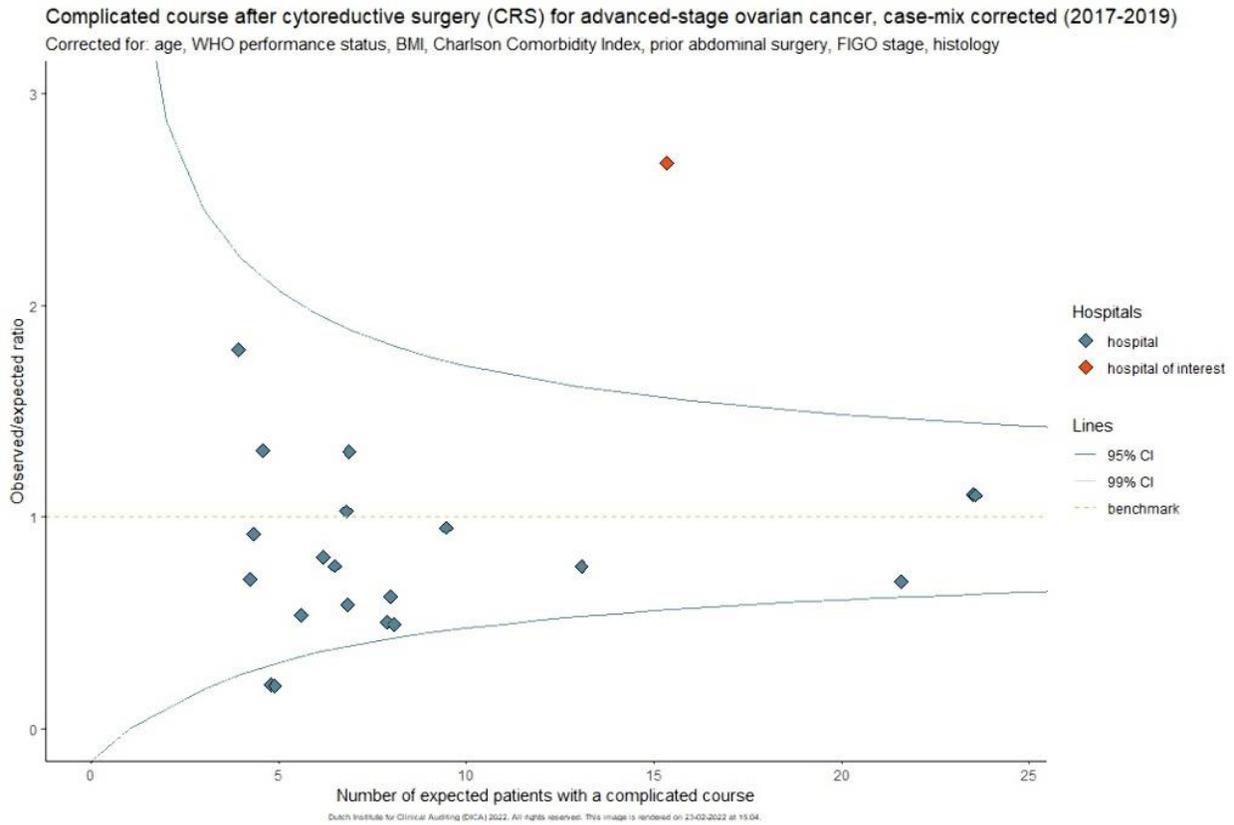
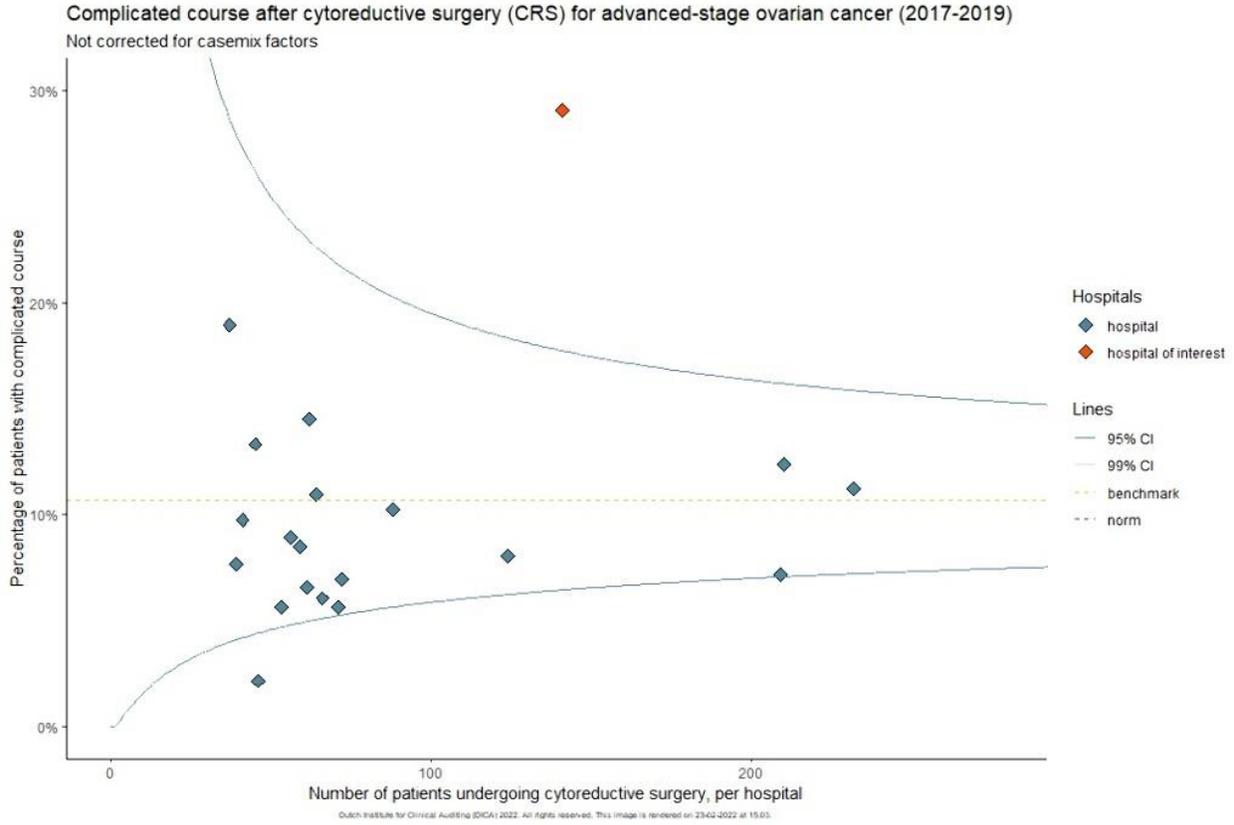
	No complicated course (n=1627)	Complicated course [§] (n=195)	Total (n=1822)	Multivariable logistic regression [¶]		
				OR	95% CI	p-value
Patient and tumor characteristics						
Age				1.05*	0.92-1.21*	0.463*
Median [Q1,Q3]	67.0 [58.0, 73.0]	69.0 [60.0, 74.0]	67.0 [58.0, 73.0]			
< 70 years	959 (58.9%)	106 (54.8%)	1065 (58.5%)			
≥ 70 years	668 (41.1%)	89 (45.6%)	757 (41.5%)			
WHO performance score						
WHO 0-1	1291 (79.3%)	152 (77.8%)	1443 (79.2%)	1		
WHO 2-4	98 (6.0%)	12 (6.2%)	110 (6.0%)	0.87	0.43 - 1.60	0.689
Unknown	238 (14.8%)	31 (15.9%)	269 (14.8%)	1.09	0.71 - 1.63	0.689
Body Mass Index (BMI)						
< 25	837 (51.4%)	95 (48.7%)	932 (51.2%)	1		
≥ 25	772 (47.4%)	99 (50.8%)	871 (47.8%)	1.08	0.80 - 1.47	0.615
Missing [^]	18 (1.1%)	1 (0.5%)	19 (1.0%)			
Charlson Comorbidity Index						
CCI = 0	1071 (65.8%)	110 (56.4%)	1181 (64.8%)	1		
CCI ≥ 1	556 (34.2%)	85 (43.6%)	641 (35.2%)	1.47	1.07 - 2.01	0.016
FIGO pathology (2014)						
Stage IIB	172 (10.6%)	13 (6.7%)	185 (10.2%)	1		
Stage III	1038 (63.8%)	149 (76.4%)	1187 (65.1%)	1.95	1.12 - 3.69	0.028
Stage IV	417 (25.8%)	33 (16.9%)	450 (24.7%)	1.11	0.58 - 2.25	0.760
Histology						
Epithelial	1545 (95.0%)	181 (92.8%)	1726 (94.7%)	1		
Non-epithelial	82 (5.0%)	14 (7.2%)	96 (5.3%)	1.49	0.79 - 2.83	0.186
Previous abdominal surgery						
No	685 (54.4%)	107 (54.8%)	792 (54.4%)	1		0.472
Yes	739 (45.4%)	88 (45.1%)	827 (45.4%)	0.88	0.66 - 1.21	
Unknown [^]	3 (0.2%)	0 (0%)	3 (0.2%)			
Treatment characteristics						
Type of CRS						
Primary CRS	638 (39.2%)	99 (45.8%)	727 (39.9%)			
Interval CRS (neoadjuvant chemotherapy)	989 (60.8%)	106 (54.4%)	1095 (60.1%)			
Result of CRS						
Complete (no macroscopic disease)	1138 (69.9%)	127 (65.1%)	1265 (69.4%)			
Optimal (macroscopic disease <10mm)	173 (10.6%)	23 (11.8%)	196 (10.8%)			
Incomplete (macroscopic disease >10mm)	301 (18.5%)	45 (23.1%)	346 (19.0%)			
Missing	15 (0.9%)	0 (0%)	15 (0.8%)			
Year of surgery						
2017	517 (31.8%)	60 (30.8%)	577 (31.7%)			
2018	528 (32.5%)	56 (28.7%)	584 (32.1%)			
2019	582 (35.8%)	79 (40.5%)	661 (36.3%)			

[§] Complicated course: complications rated ≥ grade 3 on the Clavien-Dindo scale, and/or any complication combined with a prolonged length of hospital stay (>14 days), and/or death within 30 days after the procedure, and/or death during hospital admission following surgery.

[¶] Multivariable logistic regression analysis for case-mix factors. Odds ratios, 95% Confidence Intervals and P-values were calculated with the case-mix factors as dependent variables and the complicated course as independent variable.

* Multivariable logistic regression analysis for age, continuous, per 10 years.

[^] Not analyzed in multivariable logistic regression analysis.



Conclusions: Comorbidity and FIGO-stage were case-mix factors that significantly affected complicated course rates after CRS for patients with advanced-stage OC. However, the effect of case-mix adjustment on hospital outcomes was less than expected. Other quality indicators should be considered while comparing hospital outcomes.

EP200 / #1081

EPOSTER VIEWING: AS11 OVARIAN CANCER

INCREASING INCIDENCE OF SEX CORD STROMAL OVARIAN CANCERS IN BLACK WOMEN IN THE UNITED STATES

Cheng-I Liao¹, [Chinmayi Aryasomayajula](#)², Caitlin Johnson³, Kathleen Darcy⁴, Chunqiao Tian⁴, Ava Chan⁵, Daniel Kapp⁶, John K Chan⁷

¹Kaohsiung Veterans General Hospital, Ob Gyn, Kaohsiung, Taiwan, ²Kaiser Permanente Santa Clara, Obgyn, Santa Clara, United States of America, ³California Pacific Medical Center Research Institute, Gynecologic Oncology, San Francisco, United States of America, ⁴Henry M Jackson Foundation for the Advancement of Military Medicine, Inc., Gynecologic Cancer Center Of Excellence Program, Bethesda, United States of America, ⁵Palo Alto Medical Foundation Research Institute, Obgyn, Palo Alto, United States of America, ⁶Stanford University School of Medicine, Radiation Oncology, Palo Alto, United States of America, ⁷California Pacific/Palo Alto Medical Foundation/Sutter Health, Gynecologic Oncology, Palo Alto, United States of America

Objectives: To identify trends associated with incidence of sex cord stromal tumors among Non-Hispanic Black women in the United States.

Methods: Data was obtained from the United States Cancer Statistics (USCS) between 2001 and 2017. SEER*Stat 8.3.9 and Joinpoint regression programs 4.9.0.0 were used to calculate the incidences and trends.

Results: Of 7,310 patients with sex-cord stromal tumors, 4,377 (59.9%) were Non-Hispanic White, 1,744 (23.9%) were Non-Hispanic Black, 852 (11.7%) were Hispanic, 215 (2.9%) were Asian, and 122 (1.7%) were other/unknown. The highest incidence of sex cord stromal tumors was seen in the 65-69 year age group at 0.60 (per 100,000). Based on race, Black women were found to have an over two-fold higher incidence at 0.62 vs. 0.22 and 0.27 for Whites and Hispanics, respectively. Overall the incidence of sex-cord stromal tumors has been increasing, and the most common histology was granulosa cell. The highest annual increase was in the younger age group of 35-45 years (average annual percent change (AAPC)=3.44%, p=0.001). The highest increase was observed in Black women with granulosa cell tumors increasing at 2.60% per year (p=0.001) vs. Whites at 1.88% (p=0.002).

Conclusions: Black women were found to more likely be diagnosed with sex-cord stromal tumors compared to White and Hispanic women. Further studies are warranted to determine potential genetic and social determinant factors associated with the rise in incidence in younger black women with sex-cord stromal tumors.

EP201 / #565

EPOSTER VIEWING: AS11 OVARIAN CANCER

PATTERNS OF RECURRENCE AFTER COMPLETE CYTOREDUCTION AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN OVARIAN CANCER PATIENTS WITH NEOADJUVANT CHEMOTHERAPY OR UPFRONT SURGERY

Philipp Barakat¹, Armando Sardi¹, Andrei Nikiforchin¹, Mary Caitlin King¹, Luis Felipe Falla Zuñiga¹, Felipe Lopez-Ramirez¹, Carol Nieroda¹, Ekaterina Baron², Vadim Gushchin¹, Teresa Diaz-Montes²

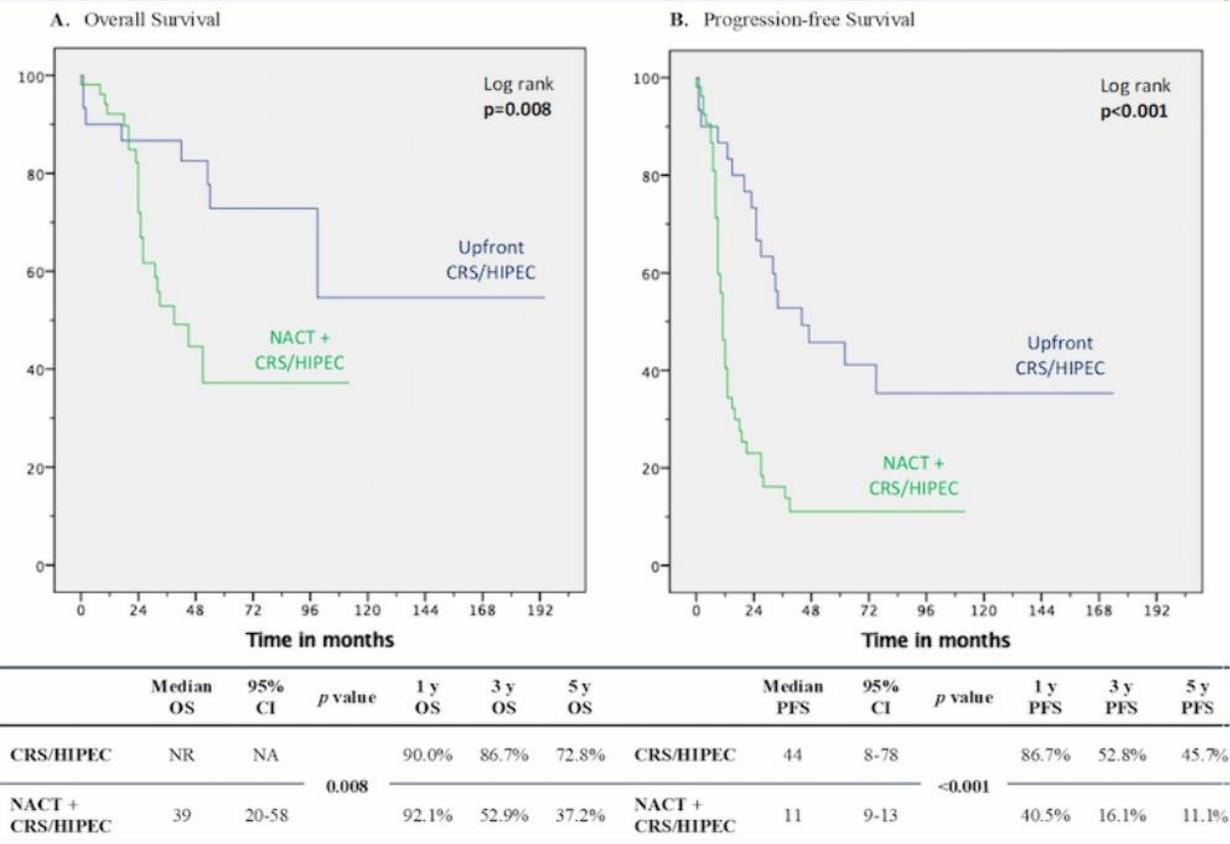
¹Mercy Medical Center, Surgical Oncology, Baltimore, United States of America, ²Mercy Medical Center, Gynecologic Oncology, Baltimore, United States of America

Objectives: Compared to upfront cytoreductive surgery and hyperthermic intraperitoneal chemotherapy (CRS/HIPEC), ovarian cancer patients treated with neoadjuvant chemotherapy (NACT) have higher recurrence rates. It is debated whether this is due to more aggressive disease biology or the quality of surgery. We hypothesized that high extra-abdominal recurrence rate signifies worse disease biology and compared patterns of recurrence in these treatment groups.

Methods: A retrospective single-center study was performed using a prospective database (2003-2021). Stage III-IV newly diagnosed high-grade serous ovarian cancer patients who underwent CRS/HIPEC with completeness of cytoreduction score 0/1 were divided by treatment: NACT+CRS/HIPEC and upfront CRS/HIPEC. Common indications for NACT were feasibility of complete cytoreduction, massive ascites/pleural effusion, intraparenchymal metastases, and poor performance status. Recurrence patterns were classified as: extraperitoneal, intraperitoneal, and mixed. Kaplan-Meier survival was analyzed.

Results: Overall, 83 patients were included: 53 NACT and 30 upfront. Median age was 65 (IQR: 60-70) vs 61 (IQR: 56-65) years in NACT vs upfront ($p=0.015$). Median PCI was 19 (IQR: 12-26) in NACT vs 26 (IQR: 19-30) in upfront ($p=0.003$). Recurrence occurred in 81% NACT and 50% upfront patients ($p=0.003$). NACT had more extraperitoneal recurrences (53% vs 20%, $p=0.003$). Other groups were similar. Median follow-up was 48 months (95%CI: 42-54). Median progression-free survival was 11 months (95%CI: 9-13) in NACT and 44 (95%CI: 9-79) in upfront ($p<0.001$).

FIGURE 1. Survival by treatment groups



CI, confidence interval; CRS, cytoreductive surgery; HIPEC, hyperthermic intraperitoneal chemotherapy; NA, not available; NR, not reached; OS, overall survival; PFS, progression-free survival

TABLE 1. Patient perioperative characteristics

Variable	Upfront CRS+HIPEC (n = 30)	NACT followed by CRS+HIPEC (n = 53)	<i>p</i> value
Age at surgery, years, median (IQR)	61 (56-65)	65 (60-70)	0.015
Age ≥65 years, n (%)	11 (37)	32 (60)	0.038
PSS-2/3, n (%)	1 (3)	2 (38)	1.000
Preoperative CA-125, U/mL, median (IQR)	317 (115-1418)	23 (10-62)	< 0.001
PCI at exploration, median (IQR)	26 (19-30)	19 (12-26)	0.003
PCI ≥20, n (%)	22 (73)	26 (49)	0.031
Length of surgery, min, median (IQR)	561 (480-630)	460 (409-500)	< 0.001
Total lymph nodes harvested, median (IQR)	18 (5-33)	11 (2-23)	0.045
Positive lymph nodes on pathology, median (IQR)	3 (0-6)	1 (0-3)	0.203
Positive lymph node status prior to surgery, n (%)	18 (60)	28 (53)	0.528
ICU days, median (IQR)	2 (1-2)	1 (1-1)	< 0.001
Length of stay, median (IQR)	12 (10-15)	10 (8-12)	0.004
100-day CDC grade III/IV complications, n (%)	8 (27)	6 (11)	0.073
100-day mortality, n (%)	3 (10)	1 (2)	0.132
Adjuvant chemotherapy, n (%)	25 (83)	42 (79)	0.650
Recurrence, n (%)	15 (50)	43 (81)	0.003
Extraperitoneal metastases, n (%)	6 (20)	28 (53)	0.003
Intraperitoneal metastases, n (%)	2 (7)	8 (15)	0.316
Extraperitoneal and intraperitoneal metastases, n (%)	7 (23)	7 (13)	0.237

p values in bold denote statistical significance

CA 125, cancer antigen 125; CDC, Clavien-Dindo classification; CRS, cytoreductive surgery; HIPEC, hyperthermic intraperitoneal chemotherapy; ICU, intensive care unit; IQR, interquartile range; LN, lymph node; NACT, neoadjuvant chemotherapy; PSS, prior surgical score; PCI, peritoneal cancer index

Conclusions: With unresectable disease at presentation, NACT patients had earlier, predominantly extraperitoneal recurrence. In the setting of complete cytoreduction with HIPEC, this may be explained by more aggressive disease biology.

EP202 / #77

EPOSTER VIEWING: AS11 OVARIAN CANCER

UTILIZATION OF SENTINEL LYMPH NODE BIOPSY IN EARLY STAGE OVARIAN CANCER SURGERY

Syem Barakzai¹, Varun Khetan¹, Neda Jooya¹, Lynda Roman¹, Jason Wright², Koji Matsuo¹
¹University of Southern California, Obstetrics And Gynecology, Los Angeles, United States of America, ²Columbia University, Obstetrics And Gynecology, New York, United States of America

Objectives: Sentinel lymph node (SLN) biopsy is utilized in the surgical care of many malignancies; however, its utility has not been examined in ovarian cancer. This study examined population-level trends, characteristics, and outcomes related to SLN biopsy in early-stage ovarian cancer.

Methods: This is a retrospective observational cohort study querying the Surveillance, Epidemiology, and End Result Program from 2003-2018. The study population consisted of 11,512 women with stage I ovarian cancer who had adnexectomy-based surgical staging including lymph node evaluation. Exposure allocation was based on SLN biopsy use. Main outcomes measured were (i) trends and characteristics associated with SLN biopsy use, assessed by multivariable logistic regression modeling, and (ii) overall survival, assessed with inverse probability of treatment weighting propensity scores.

Results: A total of 83 (0.7%) women underwent SLN biopsy during surgery. Recent surgery (2011-2018 versus 2003-2010, odds ratio [OR] 1.64, 95% confidence interval [CI] 1.03-2.59), small tumor size (<10 versus ≥10cm, OR 3.07, 95%CI 1.20-7.84), and Eastern United States registry area (OR 2.74, 95%CI 1.73-4.36) were independent characteristics for SLN biopsy use. The 5-year overall survival rate was 90.5% for the SLN biopsy group and 88.6% for the lymphadenectomy group (hazard ratio 0.96, 95%CI 0.54-1.73).

Conclusions: SLN biopsy was rarely performed in early-stage ovarian cancer surgery during the study period and has insufficient evidence to interpret the survival effect. SLN biopsy in early-stage ovarian cancer appears to be in the early development phase, warranting further study and careful evaluation to assess feasibility and oncologic outcome.

EP203 / #344

EPOSTER VIEWING: AS11 OVARIAN CANCER

EVALUATION OF THE EFFECTIVENESS OF THE INTERNATIONAL OVARIAN TUMOR ANALYSIS SOFTWARE (IOTA)

Lyliana Barbosa¹, Rafael Almeida², Vivian Silveira¹, Marieli Pagani¹, Marcio Ribeiro¹, Bruno Napoleao¹
¹VALE DO SAPUCAÍ UNIVERSITY, Gynecology, POUZO ALEGRE, Brazil, ²Univas, Gynecology, Pouso Alegre, Brazil

Objectives: The aim of this study was to evaluate the concordance of the ADNEX software model provided by IOTA regarding the diagnosis of benign or malignant ovarian lesions, comparing the results obtained in surgical practice at a university hospital.

Methods: Were evaluated medical records of 102 patients who underwent surgical treatment of adnexal mass between Jan/2016 and Jan/2020, Ambulatory of Gynecology/Obstetrics of Hospital Samuel Libânio, located in Pouso Alegre, Minas Gerais.

Results: Among the 102 medical records evaluated, 38 had complete information about the items needed to use the ADNEX software. Among the 38 patients, 92% showed consistency regarding the ADNEX result compared to the anatomopathological one, which corresponds to 35 cases. There was a disagreement in 8% in the result of the software, which indicated a response opposite to that expected. The mean age was 50.65 years, with a mean CA125 of 47.23. In addition, the most common neoplasms were cystadenoma and teratoma

Conclusions: The use of technologies to help the medical field is increasingly being used, especially programs dedicated to the aid of diagnosis. Thus, this project aimed to evaluate the effectiveness of ADNEX software for the correct use of health professionals. Among the difficulties encountered in the development, the lack of complete information in the medical records can be highlighted, as occurred in 62% of the research, as some variables are indispensable for a correct analysis. We concluded that the ADNEX software, made available by IOTA, has a coherent and safe result, which justifies its application in the clinical environment.

EP204 / #929

EPOSTER VIEWING: AS11 OVARIAN CANCER

SYNCHRONOUS CANCERS ARISING IN THE ENDOMETRIUM AND ADNEXA – A CLINICO-PATHOLOGIC STUDY

Katharina Bischof, Kristina Lindemann

Oslo University Hospital/University of Oslo, Department Of Gynecological Oncology, Oslo, Norway

Objectives: Treatment of women with synchronous cancers arising in the endometrium and adnexa remains a clinical challenge. An unambiguous identification of the disease origin is not always possible but this impacts on staging and therapeutic options in the frontline- maintenance and relapsed setting. Phenotypical and genotypical characteristics of endometrioid and serous gynecological carcinomas overlap independent of the primary site and we here aimed to study the clinico-pathologic characteristics of these patients and the adherence to treatment patterns.

Methods: This single-center, retrospective cohort study reviewed cases treated for synchronous endometrioid and serous cancers between 2006 and 2021 at Oslo University Hospital, Norway. Clinicopathologic characteristics and data on treatment were derived from the institutional quality assurance database.

Results: A total of 70 cases were identified. Synchronous endometrioid cancers (n=41, 59%) showed a high level of concordance of grade of differentiation and were associated with the presence of endometriosis or adenomyosis in 19 (46%) of the cases. Recommendations for adjuvant treatment were varying. Serous carcinomas n=14 (20%) were regularly disseminated at the time of diagnosis (n=6, 43%) and treated with platinum-based chemotherapy. A third group n=14 (20%) was diagnosed with low-grade intrauterine endometrioid carcinomas and serous adnexal carcinomas.

Conclusions: Our study confirms the association of synchronous endometrioid cancers with endometriosis and highlights the need to examine the underlying mechanisms of malignant transformation of endometriosis. There were distinct differences in patterns of spread dependant on histology. Synchronous serous carcinoma may represent disseminated disease from the same origin and this warrants investigations of clonality.

EP205 / #663

EPOSTER VIEWING: AS11 OVARIAN CANCER

BRCA TESTING IN KAZAKHSTANI WOMEN WITH HIGH-GRADE SEROUS OVARIAN CANCER

Alima Satanova¹, Dilyara Kaidarova², Raikhan Bolatbekova³, Yerlan Kukubassov¹, Orazgaliyeva Madina⁴, Saniya Ossikbayeva⁴, Anar Kurmanova¹, Askar Aydarov³, Orynassar Bertleuov¹, Dauren Kaldybekov¹

¹Kazakh Institute of Oncology and Radiology, Oncogynecology, Almaty, Kazakhstan, ²Kazakh Institute of Oncology and Radiology, Head Of Kazior, Almaty, Kazakhstan, ³Almaty Oncology Center, Oncogynecology, Almaty, Kazakhstan, ⁴KazIOR, Molecular Genetic Research, Almaty, Kazakhstan

Objectives: Up to 25-40% of cases high grade serous ovarian cancer (OC) associated with mutations in the BRCA genes. The knowledge of the BRCA mutation allows determining the prognosis of the disease and a personalized treatment using PARP inhibitors. More than 1,000 new cases and 500 deaths from ovarian cancer are detected annually in Kazakhstan (KZ). The aim of this study was to examine the rate of BRCA1/2 in a retrospective cohort of kazakhstani women with high-grade serous ovarian carcinoma.

Methods: GynOnc- genetic counselors initiated retrospective genetic testing was implemented at a KazIOR. DNA isolation from tumor tissue was performed using the cobas® DNA sample preparation kit (Roche Diagnostics, Basel, Switzerland). Genomic DNA was amplified using the AmpliSeq BRCA1 and BRCA2 panel. The DNA Libraries were pooled, barcoded, and sequenced. Data was analyzed using SPSS 23.0 and medians were reported

Results: 42 patients diagnosed with SOC after January 2018 were included to genetic testing for a panel of ovarian cancer susceptibility genes. The prevalence of BRCA pathogenic variants was 45.2% (19/42). Study of history of OC women showed that the majority (78%) of patients with BRCA associated OC had sensitivity to platinum-based chemotherapy and 36.8% of cases had a hereditary burden of breast cancer or OC.

Conclusions: BRCA1/2 mutations are common in women with high grade serous OC. All womendiagnosed with high grade serous OC should be considered to be candidates for genetic testing and in the result of this should be candidates to personalized treatment using PARP inhibitors .

EP206 / #804

EPOSTER VIEWING: AS11 OVARIAN CANCER

RATES OF GENETIC TESTING IN HIGH GRADE SEROUS OVARIAN CANCER PATIENTS IN THE ERA OF PARP INHIBITOR THERAPY: A POPULATION-BASED STUDY.

Shannon Brent¹, Jacob Mcgee², Danielle Vicus^{1,3}, Raymond Kim⁴, Andrea Eisen⁵, Winnie Yu⁶, Drew Wilton⁶, Lilian Gien^{1,3}

¹University of Toronto, Department Of Obstetrics And Gynaecology, Toronto, Canada, ²Western University, Department Of Obstetrics And Gynaecology, London, Canada, ³Sunnybrook Odette Cancer Center, Division Of Gynecologic Oncology, Toronto, Canada, ⁴University Healthy Network, Medical Genetics, Toronto, Canada, ⁵Sunnybrook Health Sciences Centre, Odette Cancer Centre, Toronto, Canada, ⁶ICES, Research, Toronto, Canada

Objectives: All patients with high grade serous ovarian carcinoma (HGSC) should undergo germline genetic testing. Genetic consultations in Ontario, Canada only reached 13.3% in 2011. In 2016, PARP inhibitor maintenance therapy became available in Ontario for BRCA-positive HGSC patients. Given expanding treatment options, we re-examined genetic consultation rates among HGSC patients.

Methods: This retrospective cohort study identified patients diagnosed with HGSC between 2012-2019 using population-based administrative data. Genetics consultations were identified using Ontario Health Insurance Plan billing codes. Rates over time were determined. Multivariate analysis identified factors associated with genetics consults.

Results: This study included 4,645 HGSC patients from the provincial cancer registry. Mean age was 64.2 years (+/-SD 12.3) and 56.3% had stage 3-4 disease. Overall, approximately 35% attended genetics consultation. Genetics consult rate per year increased significantly from 21.6% to 42.6% ($p < 0.0001$). Shorter times between diagnosis and genetics consult were observed after PARP inhibitors became available (68.1 vs. 34.1 weeks, $p < 0.0001$). At institutions where medical geneticist billing was confirmed ($n = 2255$), 55.7% attended a genetics consult, with a significant increase per year (32-68.9%, $p < 0.0001$). Patients treated at designated cancer centres (OR 2.11, $p < 0.0001$), diagnosed in later years (OR 1.33, $p < 0.0001$), and from higher income groups ($p < 0.05$) were more likely to attend genetics consultation, whereas older patients were less likely (OR 0.98, $p < 0.0001$). After PARP inhibitors became available, genetics consultation rates plateaued ($p = 0.0001$).

Conclusions: Between 2012-2019, genetic consultation rates improved significantly among HGSC patients; however there remains a significant proportion missing consults. Further exploration of modifiable factors that could improve consultation rates is warranted.

EP207 / #318

EPOSTER VIEWING: AS11 OVARIAN CANCER

A RETROSPECTIVE STUDY OF OVARIAN CANCER AMONG ELDERLY – EVALUATION AND PROGNOSIS

Miriam Brezis¹, Shira Peleg Hasson¹, Eliya Shachar¹, Dan Grisaro², Ido Laskov³, Nadav Michaan³, Lyri Adar¹, Avigail Harpaz¹, Adi Diner¹, Bar Levy¹, Ido Wolf¹, Tamar Safra¹
¹ICHILOV / SOURASKY MEDICAL CTR, Division Of Oncology, Tel Aviv-Jaffa, Israel, ²ICHILOV / SOURASKY MEDICAL CTR, Gynecologic Oncology Unit, Tel Aviv-Jaffa, Israel, ³Tel Aviv Sourasky medical center, Tel Aviv University, Israel, Gynecologic Oncology, Tel Aviv, Israel

Objectives: Half of epithelial ovarian cancer (EOC) are diagnosed above age 65. Women over 70 have higher morbidity and mortality. Our real-life retrospective study evaluates elderly with EOC.

Methods: Women above 70 were classified as “elderly” (N=233) (71-93), and below 70 - “control cohort” (N=755) (24-70). Treatment schedule used (6-8 cycles) were 3-weekly regimen (PC-3W) – carboplatin AUC-6 + Paclitaxel 175 mg/m² on day 1 of a 21-day cycle, and weekly regimen (PC-1W) – carboplatin AUC-2 + paclitaxel 80 mg/m² on days 1, 8, and 15 of a 28-day cycle

Results: When comparing elderly to control median overall survival (mOS) was 41.26 (33.05-63.87) vs. 69.78 (50.07-75.01) months respectively (p<0.0001). No statistical differences were shown when comparing toxicities except for grade 2 anemia – 36.49% vs. 19.67% respectively (p<0.0001) and grade 2 alopecia – 44.81% vs. 60.52% respectively (p<0.0001). The use of PC-1W vs. PC-3W was 44.29% vs 47.14% in the elderly compared to 39.03% vs. 60.3% in the control (p<0.0001). Among the elderly mOS was 57.17 vs. 30.00 months for PC-1W and PC-3W respectively (p = 0.0075). No differences in toxicity were shown, when comparing PC-1W to PC-3W in elderly except for grade 2 alopecia – 26.21% vs. 65.18% respectively (p<0.0001), and grade 2 neuropathy – 20.19% vs. 36.61% respectively (p=0.0119)

Conclusions: mOS is reduced in elderly, though better than expected, furthermore toxicity is tolerable in elderly. PC-1W was both more abundant and had better mOS in elderly. Therefore PC-1W regimen may offer advantages for elderly in terms of tolerance while retaining efficacy

EP208 / #677

EPOSTER VIEWING: AS11 OVARIAN CANCER

COMBINATION OF IGF1R INHIBITION WITH PD-1 BLOCKADE RESULTS IN SIGNIFICANT ANTI-TUMORAL ACTIVITY IN EPITHELIAL OVARIAN CANCER

Lina Somri-Gannam, Shilhav Meisel Sharon, Shay Hantisteanu, Hallak Mordechai, Haim Werner, Ilan Bruchim
Hillel Yaffe Medical Center, Obstetrics And Gynecology, Hadera, Israel

Objectives: The insulin-like growth factor (IGF) system plays a key role in regulating growth and invasiveness in epithelial ovarian cancer (EOC), therefore, is regarded as a promising therapeutic target. Recently, it has been shown that the IGF1 axis can regulate dendritic cells (DC) maturation and T cell activation. Our study aims to investigate the combination effect of IGF1 receptor (IGF1R) inhibition along with anti-PD-1 on EOC. We believe that this combination may reverse immune escape in EOC patients.

Methods: EOC cell lines were co-cultured with IGF1R inhibitor (AEW-541)-treated-DCs. DC differentiation and EOC proliferation levels were evaluated by Flow Cytometry Assay (FACS). C57BL/6 mice with established peritoneal ID8 OC were injected with single or combined anti-PD-1 and AEW-541, and their survival was evaluated. Myeloid DCs and T-cell population levels were analyzed by FACS. Finally, RNA from tumors was extracted and submitted for RNAseq analysis (results are pending).

Results: IGF1R inhibitor treatment induced DC differentiation. In addition, (AEW-541)-treated-DCs significantly decreased EOC cell proliferation. Combined anti-PD-1/IGF1R treatment decreased tumor weight compared to single treatments. Moreover, the anti-PD-1/IGF1R treatment significantly increased the Myeloid DC1 frequencies by 34% and 40%, and DC2 frequencies by 10% and 24% compared to AEW-541 and anti-PD-1 treatments, respectively. Additionally, the combined treatment increased CD8+ T-cells levels (115%) compared to AEW-541 treatment.

Conclusions: IGF1R pathway inhibition in differentiated DCs suppressed EOC cell proliferation. IGF1R inhibitor combined with anti-PD-1 may result in enhanced anti-tumor activity. Thus, restoring the anti-tumor immune response by IGF1R targeting in combination with immunotherapy may be an effective therapy for EOC.

EP209 / #686

EPOSTER VIEWING: AS11 OVARIAN CANCER

BCAM-AKT2 FUSION PROTEIN AND THE IGF1 SIGNALING PATHWAY IN EPITHELIAL OVARIAN CANCER

Hala Khazem, Dvir Reder, Shilhav Meisel Sharon, Shay Hantisteanu, Hallak Mordechai, Haim Werner, [Ilan Bruchim](#)
Hillel Yaffe Medical Center, Obstetrics And Gynecology, Hadera, Israel

Objectives: The IGF axis has been identified as an important molecular pathway in the development of epithelial ovarian cancer (EOC); hence mutations or fusion genes associated with the IGF axis are candidates to play a role in diagnosis and treatment. A constitutively active fusion protein BCAM-AKT2 was recently identified in high grade serous ovarian carcinoma. We aim to investigate the role of BCAM-AKT2 fusion protein in the IGF1 signaling pathway in EOC and whether it influences ovarian cancer cell proliferation and activity.

Methods: In-vitro experiments were established in HGSC cell lines. RNA was extracted from BCAM-AKT2 transfected cells and expression levels of altered genes were validated by qRT-PCR experiments. Protein expression levels of BCAM-AKT2, IGF1R, and the downstream key factors were measured by western blots. XTT assay was used to measure the effect of the BCAM-AKT2 fusion protein on proliferation and biological activity of EOC cell lines.

Results: Overexpression of BCAM-AKT2 in EOC cells resulted in alterations of several genes which exhibit tumor-promoting properties (CYBB (NOX2), NPY). qRT-PCR validation experiments confirmed that the NPY gene was highly expressed in BCAM-AKT2 transfected cells, while CYBB (NOX2) expression levels showed ambiguous results. Moreover, XTT assays suggest that BCAM-AKT2 induces proliferation in EOC cell lines.

Conclusions: Implications: Our results suggest a possible effect of the BCAM-AKT2 fusion protein on expression of key genes and on EOC proliferation. We believe that revealing the mechanism of this fusion protein will help identify new biomarkers and possibly targeted therapy for ovarian cancer.

EP210 / #961

EPOSTER VIEWING: AS11 OVARIAN CANCER

TEN-YEAR FOLLOW-UP OF CONSOLIDATION HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN OVARIAN CANCER

Sung-Jong Lee¹, Jimin Cha¹, Myong Cheol Lim², Ji Hyun Kim², Jigeun Yoo¹, Jae Yeon Woo¹
¹Seoul St. Mary's Hospital/The Catholic University of Korea, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²National Cancer Center, Korea, Gynecologic Cancer Center, Goyang-si, Gyeonggi-do, Korea, Republic of

Objectives: A survival benefit of consolidation hyperthermic intraperitoneal chemotherapy (HIPEC) for patients with primary epithelial ovarian cancer has been reported. However, long-term studies on survival outcomes are lacking. The purpose of this study is to assess the long-term efficacy of consolidation HIPEC for patients with primary epithelial ovarian cancer.

Methods: Patients who underwent second-look surgery either with or without consolidation HIPEC after having a complete or partial response to primary cytoreductive surgery and adjuvant platinum-based chemotherapy between January 1991 and December 2003 were identified. The 10-year progression-free survival (PFS), overall survival (OS), and toxicity within postoperative 28 days were investigated.

Results: The 10-year PFS and OS were significantly longer in the HIPEC group compared with the control group (PFS, 53.6% vs. 34.9%, $p = 0.009$; OS, 57.0% vs. 34.5%, $p = 0.025$). In a subgroup of patients with stage III, the HIPEC group showed significantly longer 10-year PFS and OS compared with the control group (PFS, 42.6% vs. 14.8%, log-rank $p < 0.001$; OS, 46.7% vs. 19.6%, $p = 0.036$). Patients who underwent HIPEC with paclitaxel showed a longer PFS and OS trend compared with subjects who underwent HIPEC with carboplatin. The more common adverse events in the HIPEC group were thrombocytopenia, elevated liver enzymes, and wound complications.

Conclusions: The consolidation HIPEC demonstrated a significant improvement in 10-year PFS and OS with acceptable toxicity in patients with primary epithelial ovarian cancer. Further randomized controlled trials are warranted to confirm these results.

EP211 / #794

EPOSTER VIEWING: AS11 OVARIAN CANCER

OPTIMUM SELECTION CRITERIA FOR SECONDARY CYTOREDUCTIVE SURGERY IN PATIENTS WITH RECURRENT OVARIAN CANCER: A MULTICENTER STUDY

Joo-Hyuk Son¹, Tae-Wook Kong¹, Soo Jin Park², Eun Ji Lee², Hee Seung Kim², Nam Kyeong Kim³, Yeorae Kim³, Woo Yeon Hwang³, Dong Hoon Suh³, Tae Hun Kim⁴, Eun Jung Yang⁵, Seung Hyuk Shim⁵, Suk-Joon Chang¹

¹Ajou University School of Medicine, Department Of Obstetrics And Gynecology, Suwon, Korea, Republic of, ²Seoul National University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ³Seoul National University Bundang Hospital, Department Of Obstetrics And Gynecology, Seongnam, Korea, Republic of, ⁴Seoul Metropolitan Government Seoul National University Boramae Medical Center, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ⁵Konkuk University School of Medicine, Department Of Obstetrics And Gynaecology, Seoul, Korea, Republic of

Objectives: Optimum selection criteria for secondary cytoreductive surgery (SCS) in recurrent ovarian cancer is often dependent on the multiple confounding factors. This study aimed to evaluate the survival outcomes of recurrent ovarian cancer and investigated the factors identifying patients most likely benefit from the SCS.

Methods: We retrospectively reviewed medical records of recurrent ovarian cancer patients from 5 referral hospitals in Korea from 2010 to 2021. Recurrent characteristics, treatment methods and potential factors for survivals were evaluated between the chemotherapy and surgery groups.

Results: A total of 670 patients with recurrent ovarian cancer were identified. The patient's median age was 55(24-83) and 88.1% of patients had initial stage III/IV disease. Of all patients, 215 (32.1%) patients received SCS for the disease recurrence and others received 2nd line chemotherapy. The median survival was 85 months (95% CI, 65.0 – 105.0) in chemotherapy group and the median survival time was not reached in SCS group ($p < 0.001$). Among the patients received SCS, only patients received complete resection showed improved survival. Patients with any gross residual disease after SCS had no survival benefit compared to patients received chemotherapy ($p = 0.942$). In multivariate cox analysis, residual disease at primary surgery, PFI, recurrent sites, ascites and SCS was significant prognostic factors for the survival. Meanwhile, predicting factor for complete resection after SCS was only recurrent sites (≤ 3 lesions or regional carcinomatosis, $P < 0.001$).

Conclusions: Platinum-sensitive recurrence with limited regional diseases (< 3 regions or limited carcinomatosis without ascites) can be considered as optimum criteria for SCS in recurrent ovarian cancer.

EP212 / #1141

EPOSTER VIEWING: AS11 OVARIAN CANCER

CLINICAL AND GENOMIC LANDSCAPE OF OVARIAN CLEAR CELL CARCINOMA

Hongbing Cai¹, Mengyuan Dai¹, Yuying Shi², Hong Ye³, Si-Si Wu³, Guangwen Yuan⁴, Lingying Wu⁴
¹Zhongnan Hospital of Wuhan University, Department Of Gynecologic Oncology, Wuhan, China, ²Zhongnan Hospital of Wuhan University, Department Of Gynecologic Oncology, wuhan, China, ³The Central Hospital of Yichang, Department Of Gynecology, Yichang, China, ⁴National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Department Of Gynecologic Oncology, National Cancer Center/national Clinical Research Center For Cancer/cancer Hospital, Beijing, China

Objectives: The genetic landscape of Ovarian clear cell carcinoma (OCCC) is poorly described. We sought to identify genomic characterization of OCCC and correlate findings with clinical outcomes.

Methods: We performed a multi-center prospective clinical sequencing program of OCCC patients (n=95) using tumor-normal massively parallel sequencing that included 688 cancer-related genes, and comprehensively analyze the clinical and genomic characteristics of OCCC.

Results: In the 95 samples, the most frequently mutated genes were ARID1A(61.1%), PIK3CA(61.1%), TP53(24.2%), MUC16(22.1%), KMT2C(20%). KMT2C, MECOM, SMARCA4, PDGFRB and CDC27 were significantly related to platinum resistance ($P < 0.05$). The Progression-free survival (PFS) was shorter among patients with tumors harboring ARID2, CDKN2A, CUL4A, DAXX and DDR1 mutations ($P < 0.05$) compared to patients without these mutations. The overall survival (OS) was significantly shorter among patients harboring CASP8, IDH2, LZTR1, MDM4 and PI3KR2 mutations ($P < 0.05$). The OS was longer among patients with tumors harboring RYR2 ($P < 0.05$) and driver gene POLE ($P < 0.05$) mutations. Patients with POLE mutation showed extremely high TMB. An increasing trend of CD8+ cytotoxic T lymphocytes (CTL) ($P < 0.05$) in POLE mutation was observed compared with POLE wild-type in immunohistochemical multiplex analysis. Immunohistochemistry detection revealed about 15.8% of patients had decreased mismatch repair (MMR) expression.

Conclusions: Our study revealed the correlation of the characteristics of somatic mutations in OCCC with its clinical outcomes, and identified high-frequency mutated genes related to prognosis, recurrence and platinum resistance, which provided important implications for future molecular diagnosis and targeted therapy for OCCC.

EP213 / #937

EPOSTER VIEWING: AS11 OVARIAN CANCER

PARP INHIBITOR MAINTENANCE IN PLATINUM-SENSITIVE OVARIAN CANCER: A SINGLE-CENTER REAL-WORLD EXPERIENCE

Chandan Das¹, Gaurav Prakash¹, Rashmi Bagga², Bhavna Rai³, Grv Prasad², Sc Saha², V Suri², V Jain², Jaswinder Kalra², Sushmita Ghoshal³, Radhika Srinivasan⁴

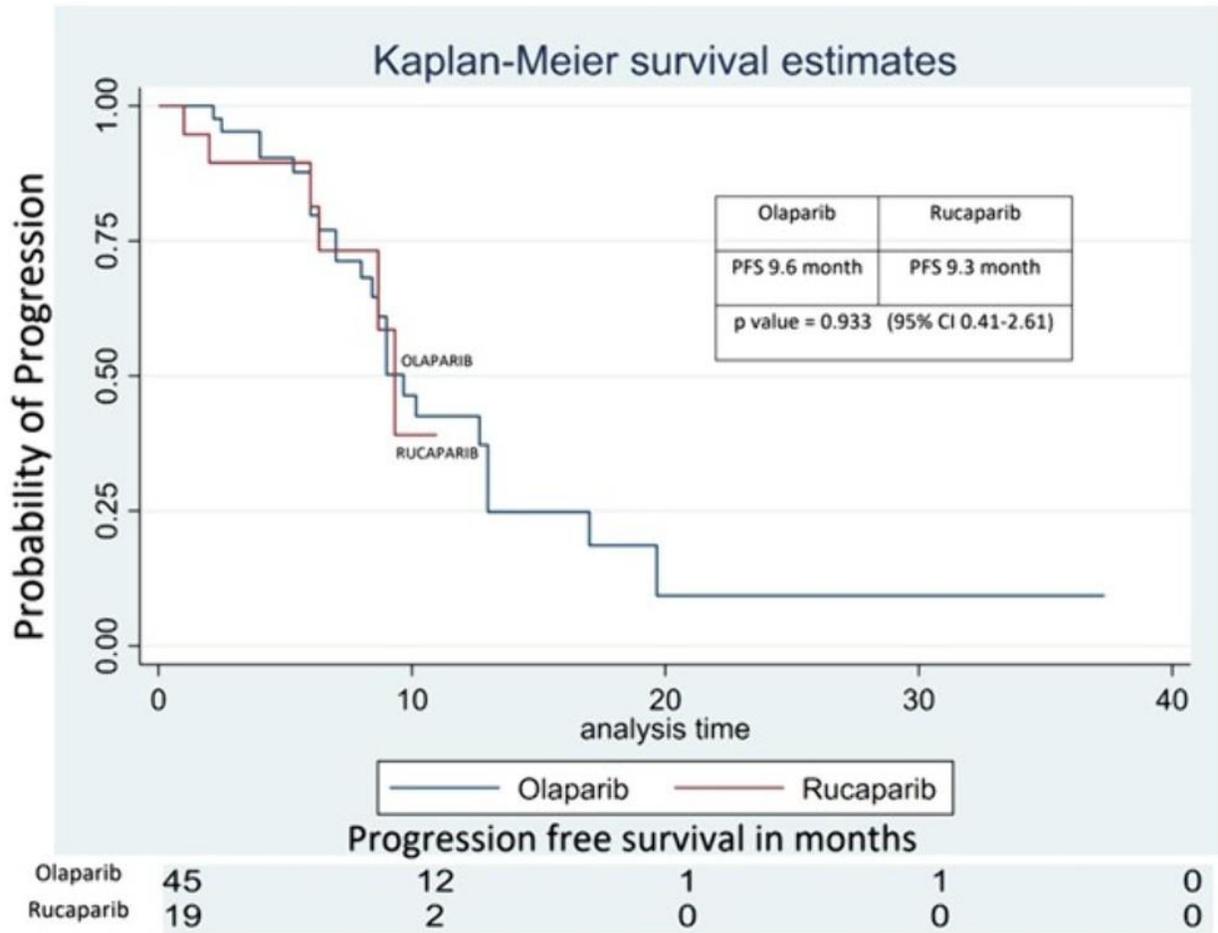
¹Postgraduate Institute of Medical Education and Research, Department Of Clinical Hematology & Medical Oncology, Chandigarh, India, ²Postgraduate Institute of Medical Education and Research, Gynaecology And Obstetrics, Chandigarh, India, ³Postgraduate Institute of Medical Education and Research, Radiotherapy, Chandigarh, India, ⁴Postgraduate Institute of Medical Education and Research, Cytology & Gynecological Pathology, Chandigarh, India

Objectives: Poly(ADP-ribose) polymerase (PARP) Inhibitors are used as a maintenance strategy and significantly improve PFS in platinum-sensitive ovarian cancer (PSOC) maintenance. There is a paucity of clinical data from the Indian subcontinent regarding the Olaparib in the PSCO setting

Methods: This is a retrospective analysis of PSOC patients treated with PARPi maintenance at the Medical Oncology Clinic. Data analyzed by SPSS statistics software, IBM Corp.

Results: Between Sep 2017 and Jan 2022, 64 patients were analyzed. And 15(23%) are still on PARPi therapy at cutoff. The median age was 50.0 years (range 25.0-66.0). Baseline stage at diagnosis stage IB 1(1%), IC 2 (3%) IIB 1 (1%) , IIIC 25(39%), IV 35 (54%). A majority of the patients were assessed for homologous recombinant repair gene (HRR) mutation status, and 19 (29.6%) were mutated. Median progression-free survival was (9.3 months [IQR 7-13.3m]). The median PFS of patients receiving one and >1 line of therapies is 12.6 (IQR 9-19.6) and 8.6 (IQR 6-13) months, respectively. Anemia 14 (21%), Vomiting 10(16%), fatigue eight (12%), and thrombocytopenia 10 (15%) were the most common adverse events of grade 3 or more severity. Two patients developed MDS/AML. Results of patients on PARPi therapy for PSOC

Variable	Olaparib n=45(70.3%)
Age in year	50+/-8
Previous Bevacizumab use	40(88.8%)
Number of therapies before PARPi 1 >1	25(55.5%) 20(44.5%)
HRR/BRCA+ mutation	15(33%)
Median PFS (IQR)	9.6(7-13)



Conclusions: This analysis suggests that oral PARPi therapy significantly improved survival benefits with an acceptable adverse effect profile.

EP214 / #508

EPOSTER VIEWING: AS11 OVARIAN CANCER

OUTCOMES AND LONG-TERM FOLLOW-UP BY TREATMENT TYPE FOR PATIENTS WITH ADVANCED-STAGE OVARIAN CANCER MANAGED AT A TERTIARY CANCER CENTER

Sarah Ehmann¹, Kelly Shay², Qin Zhou³, Alexia Iasonos³, Yukio Sonoda¹, Ginger Gardner¹, Kara Long Roche¹, William Zammarrelli¹, Roisin O’Cearbhaill⁴, Oliver Zivanovic¹, Dennis Chi¹

¹Memorial Sloan Kettering Cancer Center, Gynecologic Oncology, New York, United States of America, ²Walter Reed National Military Medical Center, Department Of Obstetrics & Gynecology, Bethesda, United States of America, ³Memorial Sloan Kettering Cancer Center, Epidemiology And Biostatistics, New York, United States of America, ⁴Memorial Sloan Kettering Cancer Center, Gynecologic Medical Oncology, Department Of Medicine, New York, United States of America

Objectives: To perform a detailed analysis of all treatment given to patients with advanced-stage ovarian cancer at a tertiary cancer center from the time of diagnosis to death or minimum 5 years follow-up.

Methods: Newly diagnosed, stage III-IV ovarian cancer patients who underwent upfront treatment at our institution between 01/01/2015 and 12/31/2015 were included. We reviewed electronic medical records for clinicopathological, treatment, and survival characteristics.

Results: One hundred fifty-three patients were included; 88 (58%) had stage III and 65 (42%) stage IV disease. Median follow-up was 65.8 months (3.6-75.3). Eighty-nine patients (58%) underwent primary debulking surgery (PDS), 50 (33%) received neoadjuvant chemotherapy followed by interval debulking surgery (IDS), and 14 (9%) had no surgery (NSx) and were treated with chemotherapy alone. Median PFS (months) to first recurrence was: 26.2 (20.1-36.2) for PDS; 13.5 (12-15.1) for IDS; and 4.2 (1.1-5.8) for NSx ($p < 0.001$). At time of first recurrence/progression, 80 (72.7%) were treated with chemotherapy, 28 (25.5%) underwent secondary cytoreductive surgery followed by chemotherapy, and 2 (1.8%) had no treatment. Four (4.9%) of 82 underwent tertiary cytoreductive surgery. Seven (4.6%) underwent palliative surgery for malignant bowel obstruction. Five-year OS was 53.2% (44.7-61) for the entire cohort and 71.5% (60.2-80) for PDS. Median OS was not reached for PDS or the entire cohort. Median OS was 41.7 (26.7-57.6) for IDS and 14.6 months (1.1-27.8) for NSx ($p < 0.001$).

Table 1. Clinicopathologic characteristics of the cohort

Clinicopathologic characteristic	Overall (n=153)
Age at diagnosis	
Median (range)	65 years (30-80)
Median BMI at diagnosis – (range)	25.3 kg/m ² (16-65.4 kg/m ²)
FIGO stage at diagnosis	N (%)
II	88 (58)
IV	65 (42)
BRCA mutation (germline or somatic)	N (%)
BRCA 1	20 (13.1)
BRCA 2	6 (3.9)
Wildtype	96 (62.7)
unknown	31 (20.3)
Histology	N (%)
High grade serous	126 (82.3)
Low grade serous	4 (2.6)
Clear cell	5 (3.2)
Mucinous	2 (1.3)
Low grade endometrioid	1 (0.7)
Carcinosarcoma	6 (3.9)
Other*	9 (5.9)

BMI, body mass index, FIGO, International Federation of Gynecology and Obstetrics
 *(mixed histology, treated with cytology only, subtype not classified)

Table 2. Treatment characteristics

Treatment characteristic	N (%)
Initial treatment (n=153)	
Primary debulking surgery (PDS)	89 (58)
Interval debulking surgery (IDS)	50 (33)
No surgery, chemotherapy alone	14 (9)
Reason for neoadjuvant chemotherapy (n=50)	
Extent of disease	37 (74)
Recent pulmonary embolism	6 (12)
Poor performance status	6 (12)
Synchronous diagnosis of ovarian and breast cancer	1 (2)
Complete gross resection (CGR)	
CGR for PDS (n=89)	58 (75.4)
CGR for IDS (n=50)	33 (55)
Residual disease (RD) (n=38)	
1-10 mm RD PDS	18 (47.4)
1-10 mm RD IDS	10 (26.3)
>10 mm RD PDS	3 (7.8)
>10 mm RD IDS	7 (18.4)
Time from surgery to chemotherapy (days)	
Median time (range)	36 (15-37)
Intraperitoneal chemotherapy (n=139)	

Yes	55 (39.6)
No	81 (58.2)
Unknown	3 (2.2)
Bevacizumab first line treatment (n=153)	
Yes	5 (3.3)
No	145 (94.8)
Unknown	3 (1.9)
Study medication: PARP Inhibitor first line (n=153)	
Yes	5 (3.3)
No	145 (94.8)
Unknown	3 (1.9)
Treatment at first recurrence/Progression of disease (n=111, 1 lost to follow up)	
Chemotherapy alone (n=110)	80 (72.7)
No treatment (n=110)	2 (1.8)
Secondary cytoreductive surgery (n=110)	28 (25.5)
CGR (n=28)	25 (89.3)
Any RD (n=28)	3 (10.7)
Bevacizumab in second line (n= 110)	
Yes	22 (20)
No	85 (78.2)
Unknown	2 (1.8)
PARP inhibitor second line maintenance (n=110)	
Yes	23 (20.9)
No	84 (76.4)
Unknown	3 (2.7)
Second recurrence/progression of disease (n=84, 2 lost to follow-up)	
Chemotherapy alone (n=82)	77 (93.9)
No further treatment (n=82)	1 (1.2)
Tertiary cytoreductive surgery (n=82)	4 (4.9)
CGR (n=4)	4 (100)
Systemic treatment lines (n=153)	
0	1 (0.7)
1	42 (27)
2	25 (17)
3	28 (18)
4	15 (10)
5	10 (7)
6	14 (9)
7	9 (6)
8	3 (2)
9	1 (0.7)
unknown	4 (3)
Palliative surgery for malignant bowel obstruction	7 (4.6)

PDS, primary debulking surgery; IDS, interval debulking surgery;
PARP, Poly (ADP-ribose) polymerase

Conclusions: Given that the 5-year OS rate compares favorably to that described in the literature, these data can be a useful reference for patient counseling, long-term planning, and future studies.

EP215 / #1007

EPOSTER VIEWING: AS11 OVARIAN CANCER

EVALUATION OF PATIENT DECISION AID FOR OPPORTUNISTIC SALPINGECTOMY AND SALPINGECTOMY AS STERILIZATION METHOD TO PREVENT OVARIAN CANCER PREVENTION

Malou Gelderblom¹, Jurgen Piek², Justine Briet³, Lauren Bullens⁴, Sjors Coppus⁵, Inge Ebisch⁶, Alexandra Van Ginkel⁷, Rafli Van De Laar⁸, Natascha De Lange⁹, Marloes Maassen¹⁰, Huy Ngo¹¹, Angele Oei¹², Brenda Pijlman¹³, Brigitte Slangen¹⁴, Dineke Smedts¹⁵, Caroline Vos¹⁶, Joanne De Hullu¹, Rosella Hermens¹⁷

¹Radboudumc, Obstetrics And Gynecology, Nijmegen, Netherlands, ²Catharina Hospital, Eindhoven, Department Of Obstetrics And Gynecology And Catharina Cancer Institute, Eindhoven, Netherlands, ³ZGT, Obstetrics And Gynecology, Almelo, Netherlands, ⁴Beatrix Winterswijk, Obstetrics And Gynecology, Winterwijk, Netherlands, ⁵Maxima medical centre, Obstetrics And Gynecology, Veldhoven, Netherlands, ⁶Canisius Wilhelmina Hospital, Obstetrics And Gynecology, Nijmegen, Netherlands, ⁷Rijnstate Hospital, Obstetrics And Gynecology, Arnhem, Netherlands, ⁸Viecuri, Obstetrics And Gynecology, Venlo, Netherlands, ⁹Isala, Obstetrics And Gynecology, Zwolle, Netherlands, ¹⁰Medical Spectrum Twente, Obstetrics And Gynecology, Enschede, Netherlands, ¹¹Elkerliek Hospital, Obstetrics And Gynecology, Helmond, Netherlands, ¹²Bernhoven, Obstetrics And Gynecology, Bernhoven, Netherlands, ¹³Jeroen Bosch Hospital, Obstetrics And Gynecology, 's Hertogenbosch, Netherlands, ¹⁴Maastricht University Medical Center, Gynaecology, Maastricht, Netherlands, ¹⁵Amphia Hospital, Obstetrics And Gynaecology, Breda, Netherlands, ¹⁶Elisabeth Tweesteden Hospital, Obstetrics And Gynecology, Tilburg, Netherlands, ¹⁷Radboudumc, Iq Healthcare, Nijmegen, Netherlands

Objectives: The fallopian tubes play an important role in the pathogenesis of epithelial ovarian cancer. This has led to recommendations for performing bilateral salpingectomy as primary prevention of ovarian cancer, opportunistic salpingectomy(OS). OS has gained territory, however with unwanted practice variation. Since women have the right to be informed on OS, a patient decision aid(PtDA) on OS and salpingectomy as sterilization has been developed to provide uniform counseling and reduce practice variation. The study aim was to evaluate the effect of the PtDA on the decision-making.

Methods: As part of the STOPOVCA-implementation-study we conducted a multicenter observational prospective study between July 2020 until now. Women who were eligible for OS were invited to use the PtDA while they considered whether or not to undergo OS during gynecological surgery. Evaluation was performed using questionnaires regarding their decision, the decision process, and the PtDA.

Results: (Preliminary) In total 84 women participated to the questionnaire of which 71 used the PtDA. The majority chose to undergo OS (90%). Main reasons for women choosing OS were the risk reducing effect of ovarian cancer and the unnecessary preservation of fallopian tubes after childbearing. After using the PtDA, from patients perspective the extent to which they were involved in the decision-making process was high, and the decisional conflict low. Patients thought it a usable aid and recommend other women who face the decision regarding OS to use it with an 8.4.

Conclusions: The PtDA supports the decision-making on OS among patients who have completed childbearing and undergo abdominal gynecological surgery.

EP216 / #881

EPOSTER VIEWING: AS11 OVARIAN CANCER

SAFETY AND TOLERABILITY OF OLAPARIB IN INDIAN PATIENTS WITH OVARIAN CANCER: THE PROSPECTIVE, SINGLE-ARM, PHASE 4 SOLI TRIAL

Joydeep Ghosh¹, Chandan Das², Ajay Gogia³, Ghanashyam Biswas⁴, Chirag Desai⁵, Sajjan Rajpurohit⁶, Prashant Mehta⁷, Keechilat Pavithran⁸, Chanchal Goswami⁹, Krishna Rathnam¹⁰, Sewanti Limaye¹¹, Vineet Talwar¹², Ashish Singh¹³, Amit Dutta¹⁴, Rohit Kodagali¹⁵, Sudeep Gupta¹⁶

¹Tata Medical Center, Medical Oncology, Kolkata, India, ²PGIMER, Department Of Clinical Hematology & Medical Oncology, Chandigarh, India, ³Dr B.R.A-I.R.C.H, AIIMS, Department Of Medical Oncology, New Delhi, India, ⁴Sparsh Hospital, Medical Oncology, Bhubaneswar, India, ⁵Hemato – Oncology Clinic, Medical Oncology, Ahmedabad, India, ⁶BLK Superspeciality Hospital, Medical Oncology, New Delhi, India, ⁷Asian Institute of Medical Sciences, Department Of Medical Oncology, Hematology And Bmt, Faridabad, India, ⁸Amrita Institute of Medical Sciences, Department Of Medical Oncology And Hematology, Kochi, India, ⁹Medica Superspeciality Hospital, Medical Oncology, Kolkata, India, ¹⁰Meenakshi Mission Hospital & Research Centre, Medical Oncology & Bmt, Madurai, India, ¹¹Kokilaben Dhirubhai Ambani Hospital, Medical Oncology, Mumbai, India, ¹²RGCI, Medical Oncology, NEw Delhi, India, ¹³Christian Medical College, Medical Oncology, Vellore, India, ¹⁴NECHRI, Medical Oncology, Guwahati, India, ¹⁵AstraZeneca Pharma India Ltd., Medical Affairs - Oncology, Bengaluru, India, ¹⁶Tata Memorial Centre, Department Of Medical Oncology, Mumbai, India

Objectives: Background: Olaparib is approved as maintenance therapy in patients with platinum-sensitive relapsed (PSR) ovarian cancer (OC). Currently, sparse information is available on the safety of maintenance olaparib in Indian patients

Methods: In this prospective, single-arm, multicentre, phase 4 study in India (ClinicalTrials.gov Identifier: NCT04330040), eligible females (≥ 18 years) with PSR OC, in complete response (CR) or partial response (PR) to preceding platinum-based chemotherapy, received olaparib (300 mg BD) for 182 days or until its discontinuation. Patients had post-trial access to olaparib per investigator judgment. Key study endpoints included adverse events (AE), serious AEs and death. Continuous and categorical data were presented as mean (SD) and proportion (%), respectively.

Results: Between May 2020 and March 2022, 142 patients were included. The median age was 52.0 years (range 33.0-73.0), mean BMI was 26.1 kg/m², 136 (95.8%) had PS of 0, and 122(85.9%) received ≥ 2 previous cancer therapies. Of 63 patients with known BRCA mutations, BRCA1 mutation was found in 39 (61.9%) patients. CR plus PR plus stable disease (SD) at 24 weeks (clinical benefit rate, CBR) was seen in 73 (53.7%, 95% CI 44.9%-62.3%) patients. Grade 3+, related, treatment emergent AEs (TEAE) were seen in 51 (37.5%, 95% CI 29.4–46.2%) patients (Table). Overall, olaparib dose was reduced in 56 (41.2%, 95% CI 32.8–49.9%) patients. Dose discontinuations were reported in 12(8.8%) patients. One

patient (0.7%) developed acute myeloid leukemia.

Table 2: Safety of Olaparib

	Olaparib, n (%), (N=136)	95% Confidence Interval
Dose reduction	56 (41.2)	32.81, 49.93
To 250 mg	54 (39.7)	31.42, 48.45
To 200 mg	17 (12.5)	7.45, 19.26
Drug interruption	77 (56.6)	47.85, 65.09
Drug discontinuation	12 (8.8)	4.64, 14.91
AE	124 (91.2)	85.09, 95.36
Non-TEAE	10 (7.4)	3.58, 13.11
TEAE	124 (91.2)	85.09, 95.36
Related	77 (56.6)	47.85, 65.09
Serious TEAEs	23 (16.9)	11.03, 24.29
Related	16 (11.8)	6.88, 18.40
≥Grade 3 TEAEs	66 (48.5)	39.88, 57.25
Related	51 (37.5)	29.35, 46.21
TEAEs of special interest	1 (0.7)	0.02, 4.03
Non-serious	1 (0.7)	0.02, 4.03
Haematological AEs		
Anaemia	54 (39.7)	31.42, 48.45
Thrombocytopaenia	10 (7.4)	3.58, 13.11
Neutropaenia	3 (2.2)	0.46, 6.31
Fatal TEAEs	2 (1.5)	0.18, 5.21
Related	0	

AE = adverse events; TEAE = treatment-emergent adverse events

Conclusions: SOLI study confirms the safety profile of olaparib in Indian patients with PSR OC. Olaparib was well-tolerated with no new safety concerns

EP217 / #328

EPOSTER VIEWING: AS11 OVARIAN CANCER

BRCA1 AND BRCA2 MUTATIONS LEAD TO DIFFERENTIAL WNT SIGNALING IN OVARIAN CANCER CELLS

Ayesha Alvero¹, Ramandeep Rattan², Zhanjun Hou³, Sandra Galoforo¹, Alexandra Fox¹, Seongo Kim³, Rouba Ali-Fehmi⁴, Mira Kheil⁴, Robert Morris¹, Larry Matherly³, Gil Mor¹, Radhika Gogoi¹
¹Wayne State University, Obstetrics And Gynecology, Detroit, United States of America, ²Henry Ford Health, Women's Health Services, Detroit, United States of America, ³Wayne State University, Oncology, Detroit, United States of America, ⁴Wayne State University, Pathology, Detroit, United States of America

Objectives: The association of BRCA1 and BRCA2 mutations in epithelial ovarian cancer (EOC) is well established. However, the observed differences in disease outcome are unexplained. We hypothesize that BRCA1/BRCA2 mutations may have differential effect on signaling pathways. Our objective is to identify these pathways to elucidate relevant targets.

Methods: Transcriptomic and Pathway analysis were performed comparing BRCA1 mutant (BRCA1mt; n=15), BRCA2 mutant (BRCA2mt; n=16) and homologous recombination wild-type (HRwt; n=626) ovarian tumors. Findings were validated on ID8 mouse EOC lines.

Results: Wnt/ β -catenin pathway was one of the differentially regulated pathways ($p=0.004$). The perturbation in Wnt signaling was predicted to be "inhibited" in BRCA2mt tumors with significant upregulation of genes known to prevent Wnt signaling. The differential response to Wnt was also observed in isogenic mouse ovarian cancer cell lines. Treatment with Wnt3A induced a persistent 12-fold increase in phosphorylation of LRP6 in ID8 $p53^{-/-}$ mouse ovarian cancer cells, which is accompanied by an 80% increase in β -catenin and upregulation of genes associated with canonical Wnt signaling (Enpp2, Tcf7, Tcf4, Fgf9, Fst, Klf5, Id2 and Pitx2). In contrast, in ID8 $p53^{-/-}$ BRCA1 $^{-/-}$ cells, we observed an increase in Antxr1, which diverts Wnt signaling towards the TGF- β pathway. Interestingly, in ID8 $p53^{-/-}$ BRCA2 $^{-/-}$ cells, Wnt3A did not induce a significant change in any of the tested Wnt targets.

Conclusions: While further studies are required to identify distinct tumor phenotypes downstream of these effects, our study suggests that differential Wnt signaling may be a key determinant for patient survival in the context of BRCA mutation.

EP218 / #480

EPOSTER VIEWING: AS11 OVARIAN CANCER

FEASIBILITY OF RADIOTHERAPY IN PLACE OF SECONDARY DEBULKING SURGERY FOR PATIENTS WITH RECURRENT OVARIAN CANCER

Nana Gomes^{1,2}, Desmond Barton², Xin Constance Du¹, Alexandra Taylor^{1,2}

¹The Institute of Cancer Research, Gynaecologic Oncology, London, United Kingdom, ²The Royal Marsden Hospital, Gynaecologic Oncology, London, United Kingdom

Objectives: Optimal management of recurrent ovarian cancer remains uncertain. Randomised trials with secondary debulking surgery have suggested a survival advantage with local therapy. Radiotherapy has traditionally been used for palliation, but recent advances enable higher doses with less toxicity. Options include treating only macroscopic disease or regional RT to encompass microscopic spread. Aims: To assess feasibility of delivering radical radiotherapy for oligo-recurrent ovarian cancer and compare conventionally-fractionated VMAT with stereotactic radiotherapy.

Methods: Retrospective analysis of 134 patients with recurrent ovarian cancer who underwent secondary surgical debulking identified three groups: Group_A pelvic mass <4 cm, nodal disease, ≤ 3 lesions (38 patients); Group_B tumour 4.1-8cm, 3-5 lesions (42 patients); Group_C tumour >8cm, >5 lesions (54 patients). CT scans from 25 patients (10 Group_A, 10 group_B, 5 group_C) were used for the dosimetric study. Four plans were produced: SBRT 30Gy/3 fractions, SBRT 30Gy/5 fractions, VMAT 60Gy/25fractions, SIB-VMAT Regional CTV 45Gy/25fractions with integrated boost 55Gy/25fractions. Plans acceptance required target volume coverage while meeting all QUANTEC and SABR-C normal tissue tolerances.

Results: Thirteen (52%) patients had pelvic, 4 (16%) nodal and 8 (32%) abdominal disease. SBRT 30Gy/3 was feasible in 70% Group_A patients but only 30% Group_B, while 30Gy/5 fractions was 100% in both groups. VMAT feasibility was 90%, 100%, 80% and SIB-VMAT 80% 90%, 80% for Groups A,B,C respectively.

Conclusions: Definitive radiotherapy is feasible for oligo-recurrent ovarian cancer. While stereotactic radiotherapy is effective for nodes and small volume disease, tumoricidal doses can be delivered for even bulky disease with conventionally-fractionated approaches.

EP219 / #675

EPOSTER VIEWING: AS11 OVARIAN CANCER

IN VITRO SAFETY EVALUATION OF OVARIAN TISSUE SUCCESSFULLY TRANSPLANTED IN AN OVARIECTOMIZED PATIENT WITH BILATERAL BORDERLINE OVARIAN TUMOR.

Christina Goudeli¹, Emmanouil Terzakis¹, Maria Sakellariou², Theofani Gavrese³, Demetrios Vassilakos⁴, Vasileios Athanasiou²

¹Attiko Therapeutirio, Gynecologic, Athens, Greece, ²IVF Athens Center, Gynecologic, Athens, Greece, ³Iaso, Pathology, Athens, Greece, ⁴Mikroskopisi, Molecular Biology, Athens, Greece

Objectives: Borderline ovarian tumors (BOT) are found bilaterally in 15-40% with one-third of the patients less than 40 years of age. We report a nulliparous 36 years- old woman with suspicious tumors in right (52X30mm) and left (83X53mm) ovary (Ca125=79,6).

Methods: She underwent bilateral salpingo-oophorectomy (frozen sections of both ovaries and abdominal wash cytology positive for serous BOT), omentectomy, sentinel lymph node dissection and appendectomy. According to the pre-surgical consent we retrieved a piece of ovarian cortex from a macroscopically healthy portion of the left ovary. In the IVF lab they cut it in 18 microsamples 2by2mm and kept them in 4 vials following slow-freezing protocol. After eight months one vial with 9 slices was thawed rapidly, 3 were directly embedded in paraffin for immunohistochemical analysis, 3 were placed in 2D culture and 3 were placed in 3D culture conditions.

Results: No malignant cell was observed and microscopically the slice concerned part of ovarian cortex with stroma including one oocyte. One year after uneventful follow-up we thawed 2 vials giving 1 of 8 slices for frozen section (negative). We took abdominal wash cytology (negative) and created a left lateral peritoneal pocket inducing a graft of Surgicel© with the ovary-slices with no sutures. Three months after we noticed the first endocrine restoration (pre-op E2<5 and then E2=54) and five months post-op her menstrual period came.

Conclusions: In vitro cyto-culture is a new approach to control the ovarian tissue re-implanted in cancer survivors. Until now there are no clinicopathological findings to contraindicate stimulation and proceed to IVF.

EP220 / #471

EPOSTER VIEWING: AS11 OVARIAN CANCER

HIGH EXPRESSION OF PHOSPHODIESTERASE 1 (PDE1A) PROMOTES POOR PROGNOSIS AND ASSOCIATED WITH PLATINUM BASED CHEMOTHERAPY RESISTANCE IN EPITHELIAL OVARIAN CANCER

Gwan Hee Han¹, Hee Yun², Hyosun Kim², Joon-Yong Chung³, Sunghoon Kim⁴, Jae-Hoon Kim⁴, Hanbyoul Cho⁴

¹Kyunghee University Hospital at Gangdong, Obstetrics And Gynecology, Gangdong-gu, Korea, Republic of, ²Gangnam Severance Hospital, Yonsei University, Department Of Obstetrics And Gynecology, Gangnam-gu., Korea, Republic of, ³National Institutes of Health, 4 Molecular Imaging Branch, Center For Cancer Research, National Cancer Institute, Bethesda, United States of America, ⁴Institute of Women's Medical Life Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: Phosphodiesterase 1A (PDE1A) belongs to phosphohydrolytic enzymes resulting integration of Ca²⁺ and cyclic nucleotide mediate signaling in various cancers. However, its role in epithelial ovarian cancer (EOC) has not been clarified yet. Therefore, in this study we aim to evaluate the functional role and clinicopathological significance of PDE1A in EOC

Methods: Expression level of PDE1A was screened by RNA sequencing of EOCs and normal ovarian epithelial tissues, GEO dataset and immunohistochemistry of EOCs. Associations of clinicopathological features and prognosis with PDE1A in EOC patients were analyzed and the its functional roles were evaluated in EOC cell lines.

Results: Significantly overexpression of PDE1A was observed in EOCs compared to borderline, benign and normal nonadjacent ovarian epithelial tissues by IHC. Also, overexpression of PDE1A was significantly associated with serous, high grade, and advanced FIGO stage. Importantly, overexpression of PDE1A was associated poor overall survival and disease free survival compared with low expression of PDE1A in EOCs, and was associated with platinum based chemotherapy resistance. In vitro results demonstrated the knockdown of PDE1A was significantly associated with decreased cell invasion, migration, proliferation, and colony forming abilities supporting the oncogenic role in EOC. Also, FACS annexin V double staining assay revealed significant increased apoptosis in PDE1A knockdown EOC cell lines.

Conclusions: Our study is the first work to identify an oncogenic role and association with chemotherapy resistance of PDE1A in EOC which may provide insights into the application of PDE1A as a novel predictive biomarker for prognosis and chemotherapy and a potential therapeutic target in EOC patients

EP221 / #521

EPOSTER VIEWING: AS11 OVARIAN CANCER

HIGH EXPRESSION OF VACUOLAR-ATPASE SUBUNIT ATP6V1B1 PROMOTES POOR PROGNOSIS AND TUMORIGENIC CHARACTERISTICS IN EPITHELIAL OVARIAN CANCER

Hee Yun¹, Gwan Hee Han², Hyosun Kim³, Joon-Yong Chung⁴, Sunghoon Kim⁵, Jae-Hoon Kim⁵, Hanbyoul Cho¹

¹Gangnam Severance Hospital, Yonsei University, Department Of Obstetrics And Gynecology, Gangnam-gu,, Korea, Republic of, ²Kyunghee University Hospital at Gangdong, Obstetrics And Gynecology, Gangdong-gu, Korea, Republic of, ³Gangnam Severance Hospital, Yonsei University, Obestetrics And Gynecology, Gangnam-gu,, Korea, Republic of, ⁴National Institutes of Health, Molecular Imaging Branch, Center For Cancer Research, National Cancer Institute, Bethesda, United States of America, ⁵Institute of Women's Medical Life Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: Vacuolar-ATPase subunit ATP6V1B1 belongs to the ATP6V1s which participates in the biological process of transporting hydrogen ions and are associated with various cancers, while its role its role in epithelial ovarian cancer (EOC) has not been clarified yet. Therefore, we aim to evaluate the function, molecular mechanism and clinicopathological significance of ATP6V1B1 in EOC.

Methods: Expression level of ATP6V1B1 was screened by RNA sequencing of 10 EOCs and normal epithelial ovarian tissues. Expression levels of ATP6V1B1 were evaluated by immunohistochemistry staining of EOC, borderline, benign and normal epithelial tissues. Associations of clinicopathological features and prognosis with ATP6V1B1 in EOC patients were analyzed both our recruited cohort and GEO datasets. Also, the functional roles of ATP6V1B1 were evaluated in EOC cell lines.

Results: ATP6V1B1 protein was elevated in EOCs according to a GEO and TCGA datasets. High mRNA and protein levels of ATP6V1B1 were observed in EOCs compared to borderline, benign and normal nonadjacent ovarian epithelial tissues. High expression level of ATP6V1B1 was associated poor overall survival and disease-free survival. In vitro results demonstrated the knockdown of ATP6V1B1 was associated with decreased cell proliferation and colony forming abilities, supporting the oncogenic role in EOC. Also, cell cycle analysis revealed a higher proportion of cells in G1 phase after knockdown of ATP6V1B1.

Conclusions: Our study is the first work to identify an oncogenic role of ATP6V1B1 in EOC tissues and cell lines which may provide insights into the application of ATP6V1B1 as a novel predictor of clinical outcome and a potential therapeutic target in EOC patients.

EP222 / #606

EPOSTER VIEWING: AS11 OVARIAN CANCER

ACID CERAMIDASE (ASAH1) EXPRESSION IS ASSOCIATED WITH IMPROVED OVERALL SURVIVAL IN PATIENTS WITH HIGH-GRADE SEROUS OVARIAN CANCER FROM THE ICON-7 TRIAL

Lars Hanker¹, Ahmed El-Balat², Thomas Karn², Uwe Holtrich², Benedikt Decker¹, Jacobus Pfisterer³, Heide Gevensleben⁴, Stefan Kommoss⁵

¹University Hospital Schleswig-Holstein, Campus Luebeck, Gynecology And Obstetrics, Luebeck, Germany, ²University Hospital Johann Wolfgang Goethe-University, Department Of Gynecology And Gynecologic Oncology, Frankfurt, Germany, ³Gynecologic Oncology Center, Gynecologic Oncology, Kiel, Germany, ⁴Institute of Pathology, University Hospital, Bonn, Germany, ⁵University of Tuebingen, Department Gynecology & Gynecologic Oncology, Tübingen, Germany

Objectives: Despite recent progress in the treatment of epithelial ovarian cancer the cure of this disease remains a challenge. Therefore new treatment options along with new prognostic and predictive makers are urgently needed. The enzyme acid ceramidase (AC) plays a central role in the sphingolipid network which is involved in tumorigenesis and progression. Furthermore AC directed therapies are currently under development. We investigated the expression of AC and its prognostic impact on ovarian cancers.

Methods: Patients of the AGO-cohort of the ICON-7 trial were analysed. In this randomized trial patients with advanced EOC received carboplatin+paclitaxel vs. carboplatin+paclitaxel+bevacizumab. Tissue micro arrays (TMAs) were constructed for performing immunohistochemical analysis of AC. The results were correlated with clinico-pathological characteristics and survival data.

Results: Kaplan-Meier analysis (n=351) revealed that high levels of AC were associated with improved progression-free survival (PFS; 24.12 months [95% confidence interval (CI): 19.36 – 28.86] vs. 16.69 months [95% CI: 14.91 – 18.71], $p < 0.0001$) and overall-survival (OS; 66.83 months [95%CI: –] vs. 44.12 months [95%CI: 37.37 – 50.87], $p < 0.0001$). Subsequently, the prognostic value of AC expression together with clinical factors (i.e. FIGO stage, grading, histological subtype, bevacizumab medication and residual tumour burden after surgery) was further confirmed in multivariate Cox regression analysis in n= 426 patients (PFS: hazard ratio (HR) = 0.69 [95% CI: 0.550 – 0.877], $p = 0.002$; OS: HR = 0.67 [95%CI: 0.504 – 0.881], $p = 0.004$).

Conclusions: Our data identify high levels of AC expression as a strong favorable prognostic marker in ovarian cancer patients.

EP223 / #762

EPOSTER VIEWING: AS11 OVARIAN CANCER

DISTINCT VAGINAL MICROBIOME IN NEWLY DIAGNOSED OVARIAN CANCER PATIENTS

Ronli Hershkovitch Neiterman, Lina Salman, Shilhav Meisel Sharon, Shay Hantisteanu, Raphy Zarecki, Leah Reshef, Hallak Mordechai, Haim Werner, Ilan Bruchim
Gynecology Laboratory, Department of Obstetrics and Gynecology, Hillel Yaffe Medical Center, Department Of Obstetrics And Gynecology, HADERA, Israel

Objectives: Microbiome plays an important role in the development of different cancer types. Vaginal microbiome constitutes a new study field. We aim to examine the vaginal microbiome profile in patients with newly diagnosed epithelial ovarian cancer (EOC) compared to healthy women.

Methods: A prospective cohort study was conducted for evaluating the vaginal microbiome in patients with newly diagnosed EOC who are chemotherapy-naïve, compared to healthy controls. Samples were collected using a swab. DNA was extracted and amplified by PCR using universal primers of the prokaryotic 16S ribosomal RNA gene. Next-generation sequencing and taxonomical classification of bacterial species was performed.

Results: Vaginal swab samples were collected from 18 EOC patients, and 22 controls. Higher rates of menopausal status were demonstrated in cancer patient (77.8% to 41% $P=0.041$). The microbiome profile analysis revealed statistically significant differences between groups; *Peptoniphilus coxii* and *Veillonella dispar/parvula* were found to be more abundant in the cancer patients ($p=0.034$ and $p=0.022$, respectively). One bacterial family was also prominent- *Lachnospiraceae* ($p=0.024$).

Conclusions: In this innovative study, we demonstrated a significant difference in vaginal microbiome of ovarian cancer patients compared to healthy controls. Interestingly, these bacterial species that were prominent in ovarian cancer patients were previously linked to other malignancies such as lung and colon cancer. As described in previous studies, lactic acid producing bacteria were associated with a healthy microbiome. A possible mechanism that can be suggested here is lactic acid consumption by these bacteria. Expanding research in this field may lead to early diagnosis, disease prevention, and targeted therapy in patients with EOC.

EP224 / #531

EPOSTER VIEWING: AS11 OVARIAN CANCER

OPTIMIZATION OF ASSESSMENT OF DISEASE PROGRESSION BETWEEN BLINDED CENTRAL INDEPENDENT REVIEW AND INVESTIGATOR ASSESSMENT IN THE PRIMA/ENGOT-OV26/GOG-3012 TRIAL

Thomas Herzog¹, Shaun A Wahab², Mansoor Mirza³, Bhavana Pothuri⁴, Ignace Vergote⁵, Whitney S Graybill⁶, Izabela A Malinowska⁷, Whitney York⁸, Jean A Hurteau⁹, Divya Gupta¹⁰, Antonio Gonzalez-Martin¹¹, Bradley Monk¹²

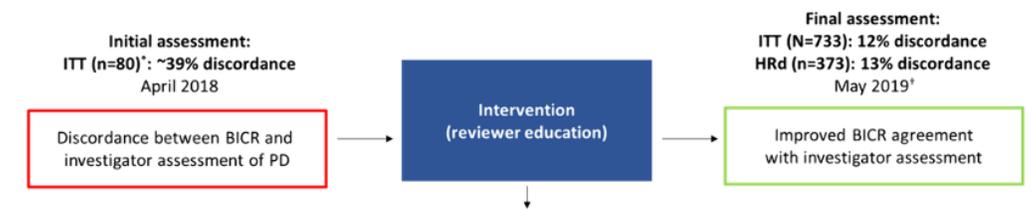
¹University of Cincinnati Cancer Center, Medical Oncology, Cincinnati, United States of America, ²University of Cincinnati Medical Center, Department Of Radiology, Cincinnati, United States of America, ³Nordic Society of Gynaecological Oncology Clinical Trial Unit (NSGO-CTU) and Rigshospitalet–Copenhagen University Hospital, Department Of Oncology, København, Denmark, ⁴Gynecologic Oncology Group (GOG), NYU Langone Health, Department Of Obstetrics/gynecology, New York City, United States of America, ⁵Leuven Cancer Institute, University Hospitals Leuven, Department Of Obstetrics And Gynaecology And Gynaecologic Oncology, Leuven, Belgium, ⁶GOG, Medical University of South Carolina, Obstetrics & Gynecology, Charleston, United States of America, ⁷GlaxoSmithKline, Clinical Science, Waltham, United States of America, ⁸GlaxoSmithKline, Oncology Statistics, Upper Providence, United States of America, ⁹GlaxoSmithKline, Women's Oncology Program, Waltham, United States of America, ¹⁰GlaxoSmithKline, Clinical Development, Waltham, United States of America, ¹¹Grupo Español de Investigación en Cáncer de Ovario (GEICO), Program in Solid Tumors, Center for Applied Medical Research (CIMA), Pamplona, and Clínica Universidad de Navarra, Medical Oncology, Madrid, Spain, ¹²HonorHealth Research Institute, University of Arizona College of Medicine/Creighton University School of Medicine, Division Of Gynecologic Oncology, Phoenix, United States of America

Objectives: Progression-free survival (PFS) is a rational surrogate primary endpoint in ovarian cancer (OC) trials. However, PFS is subject to biases, with validity dependent upon proper methodologic assessment. Therefore, blinded independent centralized radiologic review (BICR) is often recommended. We evaluated BICR and investigator-assessed evaluation of progressive disease (PD) in the PRIMA/ENGOT-ov26/GOG-3012 trial examining niraparib monotherapy in intent-to-treat (ITT) and homologous recombination deficient (HRd) populations.

Methods: In the randomized, double-blind, placebo-controlled phase 3 PRIMA/ENGOT-ov26/GOG-3012 trial, patients with newly diagnosed stage III/IV OC were assigned to receive either niraparib or placebo. The primary endpoint was PFS (per RECIST v.1.1) by BICR. Discordance between BICR and investigator assessments of PD ($[\#BICR \text{ reviews with unconfirmed PD assessment}] / [\text{total} \# \text{ investigator-triggered reviews}]$) was monitored throughout the study. A training intervention was developed for BICR reviewers based on PD determination in OC.

Results: In an initial patient subset (n=80), a 39% discordance rate was identified between BICR and investigator-assessed PD by the sponsor, most commonly due to peritoneal carcinomatosis or fluid collections arising from new non-target lesions. After reviewer intervention, final discordance rate between BICR and investigator improved to 12% and 13% for ITT (N=733) and HRd (n=373) populations, respectively (Figure). Across the entire study population, median PFS and hazard ratios for the ITT and HRd populations were comparable between BICR and investigator (Table).

Conclusions: PRIMA/ENGOT-ov26/GOG-3012 highlights the need to optimize BICR and investigator concordance using early, specialized OC-specific training to maximize trial validity.



Radiology Best Practices

1. Readers should be familiar with the patterns of metastatic disease in ovarian cancer: direct extension, peritoneal, lymphatic, and hematologic
2. Peritoneal spread is the most common mode of metastatic disease in ovarian cancer and knowledge of the flow and collection of peritoneal fluid can help guide a disease specific search pattern
3. Coronal and sagittal reconstructions should be routinely obtained and can aid in the detection of peritoneal metastases, particularly along the diaphragm
4. RECIST 1.1 should be applied in the context of ovarian cancer. If measurable, peritoneal lesions may serve as target lesions and the peritoneum should be treated as a single organ with a maximum of two target lesions
5. Peritoneal and omental lesions need to be carefully selected and may be present as only non-measurable disease
6. Beware of choosing target lesions near the diaphragm as they may change orientation with differences in respiration
7. Ascites can drive progression if substantially increasing (e.g. trace to large) and fits the overall disease burden
8. Pleural fluid does not necessarily indicate progression unless there are unequivocal signs of thoracic metastatic disease or cytology
9. Visceral peritoneal metastases should not be mistaken for parenchymal metastases. They can invade into the parenchyma but have a different prognosis than hematogenous metastases
10. If a new finding is equivocal and could be explained by another process, then it is better to annotate/comment and review at the next time point rather than indicate progression. An assessment of progression can be backdated, if necessary, when a lesion becomes unequivocal

*Initial discordance was assessed on a subset of 80 patients; †Data cutoff for primary data analyses. Discordance rates were calculated as the number of BICR reviews with unconfirmed PD or unconfirmed non-PD divided by the total number of investigator-triggered BICR reviews; investigators could trigger BICR by determining PD or discontinuing treatment. Discordance rates were not evaluated statistically, and they have been shown to vary across other OC studies (Loreen A, et al. *Gynecologic Oncology* 2021;161(2):491-495)

Assessment	Median PFS (95% CI), months		P value	HR (95% CI)
	Niraparib (N=487)	Placebo (N=246)		
ITT population				
BICR	13.8 (11.5, 14.9)	8.2 (7.3, 8.5)	<0.0001	0.62 (0.502, 0.755)
Investigator*	13.8 (11.3, 14.2)	8.2 (7.6, 9.8)	<0.0001	0.63 (0.514, 0.763)
HRd population	Niraparib (N=247)	Placebo (N=126)		
BICR	21.9 (19.3, NE)	10.4 (8.1, 12.1)	<0.0001	0.43 (0.310, 0.588)
Investigator*	21.9 (16.5, NE)	11.2 (8.4, 13.1)	<0.0001	0.46 (0.342, 0.626)

*Investigator includes both clinician and radiologist assessments

BICR, blinded independent central review; CI, confidence interval; HR, hazard ratio; HRd, homologous recombination deficient; ITT, intention-to-treat; NE, not evaluable; PFS, progression-free survival

Funding: GlaxoSmithKline (GSK) study. Editorial support provided by Fishawack Health, funded by GSK.

EP225 / #402

EPOSTER VIEWING: AS11 OVARIAN CANCER

FACTORS CONTRIBUTING TO SURGEON'S DECISION FOR DIVERTING ILEOSTOMY AT THE TIME OF CYTOREDUCTIVE SURGERY IN PATIENTS WITH ADVANCED OVARIAN CANCER

Liat Hogen^{1,2}, Lina Salman¹, Thirushi Siriwardena³, Marcus Bernardini¹, Sarah Ferguson¹, Stephane Laframboise¹, Genevieve Bouchard-Fortier¹, Eshetu G. Atenafu⁴, Taymaa May¹

¹University of Toronto, Department Of Obstetrics And Gynecology, Division Of Gynecologic Oncology, Toronto, Canada, ²Princess Margaret Cancer Center, Sinai Health System, Gynecologic Oncology, Toronto, Canada, ³University of Toronto, Temerty Faculty Of Medicine, Toronto, Canada, ⁴Princess Margaret Cancer Center, University Health Network, Toronto, ON, Biostatistics, TORONTO, Canada

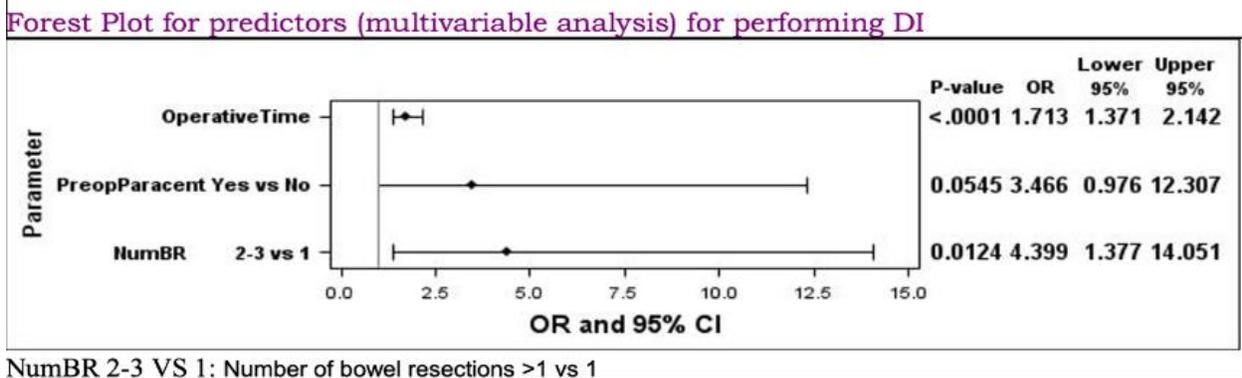
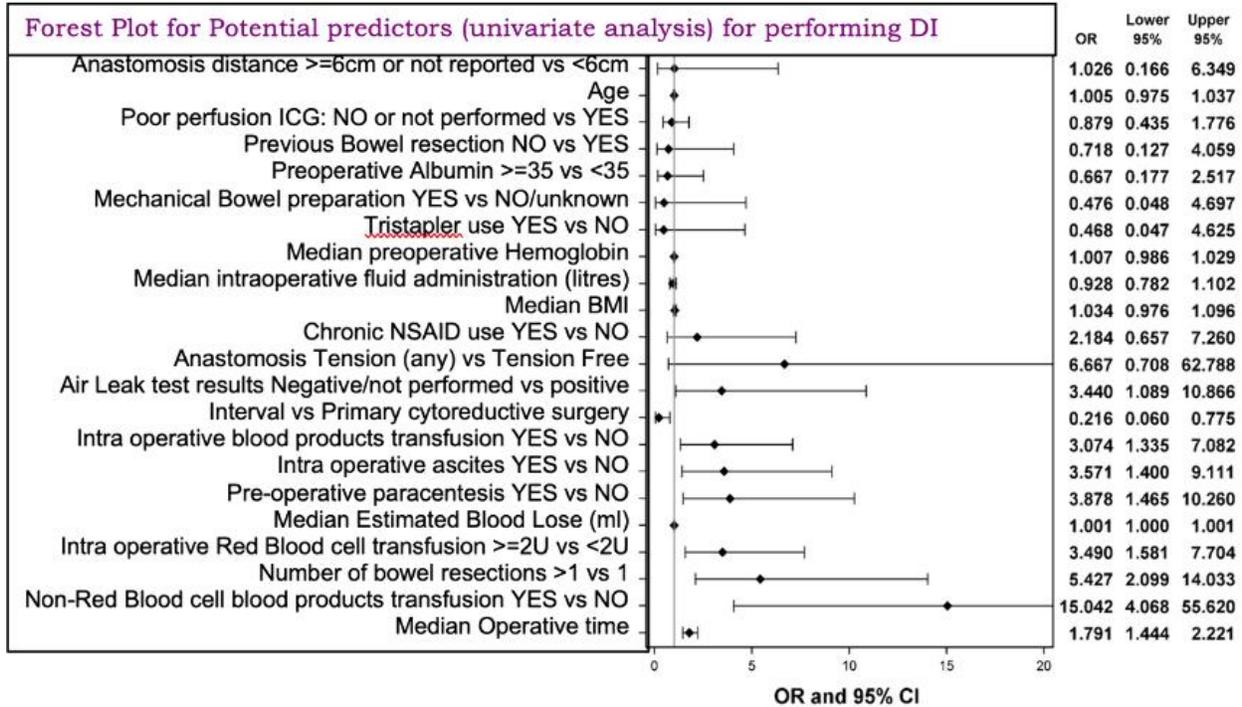
Objectives: Anastomotic leak (AL) occurs in 1.2-9% following cytoreductive surgery with large bowel resection (LBR) for advanced ovarian cancer (AOC). Diverting ileostomy (DI) can mitigate the consequences of AL, however, is associated with compromised quality-of-life. Objectives: 1. Assess factors contributing to surgeon's decision to perform DI in AOC cytoreduction with LBR. 2. To study complications rates and survival outcomes.

Methods: Retrospective cohort study, AOC patients, undergoing cytoreductive surgery with LBR and re-anastomosis between 01-Jan-2010-01-July-2020. Multivariable analysis was performed on factors contributing to DI on univariate analysis.

Results: 140 patients met inclusion criteria; 57 patients (41%) had DI. Median follow-up was 32.1 months (0.3-59.74), median age 52 (26-86) Longer operative time (600 vs. 390 minutes), multiple bowel resections (>1 vs 1), pre-operative paracentesis, intra-operative ascites, positive air-leak-test were found to contribute to surgeons' decision for DI on univariate analysis. Multivariable analysis confirmed longer operative time (OR=1.71, p<0.0001), paracentesis (OR=3.47, p=0.05) and more than 1 bowel resection (OR=4.40, p=0.01) to be significant for this decision. AL rate was 3.65% (n=5). Patients with DI had higher rates of dehydration(41.5% vs 8.4%), acute kidney injury(17% vs 1.2%) and post-operative fever (26.4% vs 12%). Progression-free-survival (PFS) was similar (23.9 vs 21.3, no vs yes DI,

	Total (N=140)
Age	
Median	58.0
Range	26.0, 86.0
BMI	
Median	25.4
Range	16.6, 53.3
Age-adjusted Charlson comorbidity index	
Median	7.0
Range	2.0, 12.0
Histology, n (%)	
High grade serous	116 (82.86%)
Low grade serous	9 (6.43%)
Clear cell	1 (0.71%)
Grade 3 endometrioid	1 (0.71%)
Grade 2 endometrioid	2 (1.43%)
Grade 1 endometrioid	2 (1.43%)
Mucinous	1 (0.71%)
Carcinosarcoma	2 (1.43%)
Mixed histology	6 (4.29%)
Stage, n (%)	
II	6 (4.76%)
III	98 (77.78%)
IV	22 (17.46%)
Missing	14
Neoadjuvant Chemotherapy, n (%)	
Yes	22 (15.71%)
No	118 (84.29%)
Coronary Artery Disease, n (%)	
Yes	6 (4.29%)
No	134 (95.71%)
Diabetes Mellitus, n (%)	
Yes	14 (10.00%)
No	126 (90.00%)
ECOG, n (%)	
0	47 (41.96%)
1	51 (45.54%)
2	14 (12.50%)
Missing	28

p=0.61).



NumBR 2-3 VS 1: Number of bowel resections >1 vs 1

Conclusions: Paracentesis, >1 bowel resection and longer operative time contributed to surgeon's decision to performed DI. Patients with DI had similar PFS to the non-DI group but experienced more post-operative complications. Developing prospective model to predict risk of AL may enable safe reduction in DI rates while maintaining acceptable AL rates.

EP226 / #923

EPOSTER VIEWING: AS11 OVARIAN CANCER

ECONOMIC BURDEN IN PLATINUM-RESISTANT OVARIAN CANCER

Nikhila Indukuri¹, Mihaela Musat², Gordon Chavez¹, Christina Proescholdt¹

¹Novocure Limited, Global Value, New York City, United States of America, ²Cytel Inc., Value Communications, Cambridge, United States of America

Objectives: Introduction Platinum-resistant ovarian cancer (PROC) is associated with a substantial economic burden. An economic SLR was conducted to evaluate the economic burden and cost-effectiveness analyses (CEA) of therapies used in advanced ovarian cancer resistant or refractory to platinum-based chemotherapy.

Methods: The scope of the SLR was defined using the Patient population, Intervention, Comparators, Outcomes measures and Study design (PICOS) statement, and performed in accordance with PRISMA guidelines. Medical Literature Analysis and Retrieval System Online [MEDLINE®] and Excerpta Medica Database [Embase®], EconLit and Cochrane were searched for records dated up to the search date of July 6, 2021. Relevant congresses (2017-2021), previous HTA submissions, and bibliographies of previously conducted SLRs were searched to capture all relevant data.

Results: Seventeen publications out of 1,092 records from the Ovid search were deemed relevant for the analysis. Of 17 included studies, 12 were CEAs and 5 were observational studies evaluating cost and healthcare resource use in US, Iran, Canada, Belgium, Spain, Thailand, Portugal, and Australia. Healthcare costs for ovarian cancer increase with disease progression to more advanced stages of disease and by increased lines of chemotherapy treatment. The average annual per patient cost was €24,111, increasing from €8,641 in stage I to €42,547 in stage IV. Advanced chemotherapy, hospitalizations, and surgery accounted for 87.2% of direct healthcare costs (Delgado-Ortega et al. 2019). Indirect costs were estimated at €1,002 per patient annually.

Conclusions: Conclusion There is a need for more affordable and tolerable treatment options for patients with ovarian cancer resistant or refractory to platinum-based chemotherapy.

EP227 / #617

EPOSTER VIEWING: AS11 OVARIAN CANCER

THROMBOCYTOSIS CONTRIBUTE TO INCREASED EX-VIVO AGONIST-INDUCED PLATELET AGGREGATION IN OVARIAN CANCER PATIENTS

Zitha Redempta Isingizwe¹, Doris Benbrook²

¹University of Oklahoma Health Sciences Center, Pharmaceutical Sciences, Oklahoma City, United States of America, ²University of Oklahoma Health Sciences Center, Gynecologic Oncology, Stephenson Cancer Center, Oklahoma City, United States of America

Objectives: Thrombocytosis in ovarian cancer patients directly correlates with disease burden and increased risk of thrombosis and death caused by thrombosis. The objective of the current study was to test the hypothesis that agonist-induced platelet aggregation differs between healthy controls compared to ovarian cancer patients based on platelet count or cancer-altered platelet biology.

Methods: Venous blood was collected from healthy controls or ovarian cancer patients (N>25 each) in acid citrate dextrose anticoagulant. Complete blood counts (CBCs) in whole blood samples were determined using a HemaVet HM5 and compared between cancer and controls using Sika's multiple comparisons test. Platelet rich plasma (PRP) was separated from the whole blood and used to measure agonist-induced platelet aggregation using a Platelet Aggregation Profiler (PAP-8E) and t-tests. Agonists used were: arachidonic acid (AA: 0.5 mg/ml), adenosine diphosphate (ADP: 2 μ M and 20 μ M) and collagen (0.19 mg/ml).

Results: The only CBC parameter that significantly differed between the two groups was a higher platelet count in ovarian cancer patients compared to controls. Platelet aggregation rates and maximum aggregation positively correlated with platelet count. The rate and maximum degree of platelet aggregation were higher in ovarian cancer patients compared to healthy controls for whether the same number of platelets or volume of PRP was used.

Conclusions: Both platelet count and cancer-associated platelet biology contribute to platelet hypercoagulability in ovarian cancer patients, consistent with their increased thrombosis risk. This finding supports studies repurposing antiplatelet agents for prevention of thrombosis in ovarian cancer patients.

EP228 / #913

EPOSTER VIEWING: AS11 OVARIAN CANCER

PROGNOSTIC ROLE OF PATHOLOGICAL CHEMOTHERAPY RESPONSE SCORE IN PATIENTS RECEIVING NEOADJUVANT CHEMOTHERAPY FOR EPITHELIAL OVARIAN CANCER.

Ariella Jakobson Setton¹, Gabriel Levin², Oded Raban¹, Gad Sabah¹, Daliah Tsoref³, Anat From⁴, Tamar Perri², Ram Eitan⁴

¹Rabin Medical Center, Petah Tikva, affiliated with the Sackler Faculty of Medicine, Tel Aviv University, Obstetrics And Gynecology, Tel Aviv, Israel, ²Hadassah University Hospital, Obstetrics And Gynecology, Jerusalem, Israel, ³Rabin Medical Center Petah Tikva, affiliated with Sackler Faculty of medicine, Tel Aviv University, Israel, Department Of Oncology, TEL AVIV, Israel, ⁴Rabin Medical Center Petah Tikva, affiliated with Sackler Faculty of medicine, Tel Aviv University, Department Of Obstetrics And Gynecology, TEL AVIV, Israel

Objectives: Following neo-adjuvant chemotherapy, patients with advanced Epithelial Ovarian Cancer (EOC) undergo interval cytoreduction. Response to treatment varies widely. Our objective was to study the prognostic role of the pathologic chemotherapy response score (CRS) on final pathology in this group of patients.

Methods: A retrospective study was conducted of patients with advanced high-grade EOC diagnosed between 2005-2017, and treated with neoadjuvant chemotherapy. After interval cytoreductive surgery (ICS), pathological tumor regression was determined in the omentum, according to the 3-tier CRS, while CRS 1+2 were defined as poor response and CRS3 was defined as good response. Results were compared with standard clinicopathological variables (demographical data, tumor characteristics, CA-125, surgical outcome), and progression free survival (PFS). Standard statistics were used as required.

Results: Fifty eight patients were eligible for analysis, CRS 1-2 was found in 33(56.9%) and CRS 3 in 25 (43.1%) patients. In the CRS 3 group, more patients achieved no macroscopic disease at ICS than in the CRS 1-2 group (22 (91.7%) vs. 15(46.9%), $p<0.001$). Bowel resection rates were lower in the CRS3 group (0 (0%) vs. 6 (18.8%), $p=0.035$). There was no difference in PFS and OS between the two groups (log rank test =0.282 and 0.664, respectively).

Conclusions: In this study, a 2 tier pathological CRS of the omental tumor was found to be associated with the rate of complete cytoreduction at ICS. Interestingly, this difference did not translate into an advantage in PFS for these patients.

EP229 / #754

EPOSTER VIEWING: AS11 OVARIAN CANCER

**LONG-TERM SURVIVAL AMONG PATIENTS WITH VARIOUS HISTOLOGIC SUBTYPES OF
ADVANCED OVARIAN CANCER ENROLLED IN NCI CLINICAL TRIALS**

Allyson Jang¹, Caitlin Johnson², Amandeep Mann³, Sahana Somasegar⁴, Kathleen Darcy⁵, Chunqiao Tian⁵, Stefanie Ueda¹, Daniel Kapp⁶, John K Chan³

¹University of California San Francisco, Department Of Obstetrics & Gynecology, San Francisco, United States of America, ²California Pacific Medical Center Research Institute, Gynecologic Oncology, San Francisco, United States of America, ³Palo Alto Medical Foundation Research Institute, Gynecologic Oncology, Palo Alto, United States of America, ⁴University of Chicago, Ob Gyn, Chicago, United States of America, ⁵Henry M Jackson Foundation for the Advancement of Military Medicine, Inc., Gynecologic Cancer Center Of Excellence Program, Bethesda, United States of America, ⁶Stanford University School of Medicine, Radiation Oncology, Palo Alto, United States of America

Objectives: To determine extended long-term survival of ovarian cancer patients after standard surgery and chemotherapy enrolled in NCI clinical trials

Methods: Data on stage III epithelial ovarian cancer patients were obtained from three prospective randomized Gynecologic Oncology Group clinical trials (114, 158, 172). Chi-squared, multivariate Cox models, and log-rank tests were employed to determine overall survival.

Results: Of 1,526 patients enrolled, 75.7% had serous, 10.6% endometrioid, and 8.1% mixed epithelial, 3.3% clear cell, 2.3% mucinous histologies. Extended long-term OS (>15 years) was lowest in mucinous at 14.3% compared to clear cell (23.5%), serous (23.5%), mixed epithelial (25.8%), and endometrioid (34.2%) histologies ($p < 0.0001$). On multivariate analysis, older age (>57 median age) (HR 1.23; 95%CI [1.09,1.39]; $p = 0.0006$), worse ECOG performance status (HR 1.42; 95%CI [1.14-1.77]; $p = 0.002$), mucinous histology (HR 3.3; 95% CI [2.25,4.86]; $p < 0.0001$) predicted worse OS. On subanalysis of 35 patients with mucinous tumors, those who underwent intraperitoneal chemotherapy did not have an improved survival compared to intravenous therapy ($p = 0.22$). Furthermore, those with low grade serous tumors had the highest long-term survival at 42.7% compared to only 20.9% in those with high-grade tumors ($p < 0.0001$).

Conclusions: Histology remains as an independent predictor for long term survival in ovarian cancer patients enrolled in clinical trials with central pathology review and after receiving standardized surgery and chemotherapy. Specifically, mucinous tumors demonstrated the worst survival of all histologies. Low grade serous had best prognosis after treatment.

EP230 / #1083

EPOSTER VIEWING: AS11 OVARIAN CANCER

CORRELATION BETWEEN CT SCAN AND PER-OPERATIVE FINDINGS IN SECOND-LOOK SURGERY FOR OVARIAN CANCER

Amani Jellali¹, Malek Bouhani¹, Mehdi Mbarek¹, Saida Sakhri¹, Takoua Chalouati¹, Ghada Sahraoui^{1,2}, Riadh Chargui¹, Khaled Rahal¹

¹Salah Azaiez Institute of Oncology, Surgical Oncology Department, Tunis, Tunisia, ²Salah Azaiez Institute, Anatomopathology Department, Tunis, Tunisia

Objectives: The aim of this study is to correlate computerized tomography (CT) scans with clinical findings during second-look surgery.

Methods: This study was conducted on twenty-five patients with epithelial ovarian cancers undergoing second-look operations in our hospital between 2019 and 2021.

Results: The average age of patients was 59.2 years (46-73 years old). Twenty-one cases are staged as stage III (84%) and 4 cases of stage VI (16%) high serous ovarian carcinoma. All patients underwent multiple courses of combined neoadjuvant chemotherapy. The evaluation of response was clinically, radiologically and biologically. Computed tomography (CT scan) was performed prior and after chemotherapy. Second-look laparotomy was used to determine disease status, restage and debulk tumor. CT scans were correlated with the results obtained at subsequent second-look laparotomy. It consistently failed to detect intraperitoneal spread except when disease was gross (>2cm) or when it could be predicted by the presence of ascites. The correlation with intraoperative findings in this situation was only 7.2%. Sensitivity was poor for mesenteric and lymph nodal involvement, good for omental and abdominal mass and decisively good for pelvic metastases of ovarian cancer.

Conclusions: Due to a still high false-negative rate a normal CT scan does not provide sufficiently accurate diagnostic information to replace a second-look laparotomy.

EP231 / #1099

EPOSTER VIEWING: AS11 OVARIAN CANCER

DISCREPANCIES BETWEEN FROZEN AND FINAL DIAGNOSIS IN THE EVALUATION OF MUCINOUS BORDERLINE OVARIAN TUMORS

Ghada Sahraoui¹, Malek Bouhani², Asma Fitouri¹, Lamia Charfi¹, Amani Jellali³, Saida Sakhri², Maher Slimane⁴, Monia Hechiche³, Karima Mrad¹, Raoudha Doghri¹

¹Salah Azaiez Institute, Anatomopathology Department, Tunis, Tunisia, ²Salah Azaiez Institute of oncology, Surgical Oncology Department, Tunis, Tunisia, ³Salah Azaiez Institute of Oncology, Surgical Oncology Department, Tunis, Tunisia, ⁴Salah Azaiz Institute, Surgery Oncology, tunisia, Tunisia

Objectives: The distinction of ovarian Mucinous Borderline Tumors (MBT) from carcinomas remains the greatest challenge for pathologists. The aim of the work was to assess concordance between the response of extemporaneous examination (EE) and the final diagnosis of MBT.

Methods: Our study was retrospective including 37 cases of primary ovarian MBT, diagnosed at the Pathology Department of Salah Azaiez Institute from 1992 to 2019. We included in our study all patients who presented with a primary MBT on a surgical specimen and who had an EE of the tumor.

Results: The EE showed a borderline tumor in 27 cases (the exact diagnosis), a benign tumor in six cases, and a carcinoma in one case. In two cases, it was necessary to wait for the final result after inclusion in paraffin. Finally, in one case, the EE could not be concluded due to extensive necrosis. The EE/definitive examination concordance rate was about 73%.

Conclusions: The EE is a valuable aid in guiding the therapeutic decision, but it is difficult due to the bulky and heterogeneous nature of these tumours. According to the literature, the concordance between the EE and the final diagnosis of borderline tumors varies from 44 to 70%. This examination is quite effective in excluding the diagnosis of benign tumor and often responds that the tumor is "at least" borderline.

EP232 / #82

EPOSTER VIEWING: AS11 OVARIAN CANCER

BRCA1/2 MUTATIONS AND SECONDARY CYTOREDUCTIVE SURGERY AS GOOD PROGNOSTIC FACTORS IN PARP INHIBITOR USERS WITH RECURRENT OVARIAN CANCER

Da Eun Jeong^{1,2}, Nam Kyeong Kim^{1,2}, Dong Hoon Suh^{1,2}, Ki Dong Kim^{1,2}, Jae Hong No^{1,2}, Yong Beom Kim^{1,2}

¹Seoul National University Bundang Hospital, Obstetrics And Gynecology, Seongnam, Korea, Republic of, ²Seoul national University College of Medicine, Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: Although poly (ADP-ribose) polymerase (PARP) inhibitors improved survival outcomes of ovarian cancer, the benefit of PARP inhibitor seems limited to the patients who had either BRCA1/2 mutation or homologous recombination deficiency (HRD). Purpose of this study was to evaluate risk factors of disease progression in ovarian cancer patients who received PARP inhibitor.

Methods: Medical records of the ovarian cancer patients who received PARP inhibitor in Seoul National University Bundang Hospital were retrospectively reviewed. Clinicopathologic variables including somatic and germline BRCA1/2 mutations, HRD, and use of PARP inhibitors, were collected (Table 1). Primary endpoint was progression-free survival (PFS) after PARP inhibitor. Regression analysis with Cox-proportional hazard model was used.

Results: A total of 78 patients were identified. BRCA mutation was found in 52 (66.6%): 36 BRCA1 and 17 BRCA2 including both in one. PARP inhibitor was used as frontline and second or later-line maintenance in 26(33.3%) and 52(66.7%), respectively. Disease progression during PARP inhibitor use was observed more frequently in second or later line (50.0%, 26/52) than in frontline (23.1%, 6/26) ($p=0.023$). In second or later-line PARP inhibitor users, BRCA1 mutation (HR, 0.42; 95% CI, 0.18-0.96; $p=0.041$), BRCA2 mutation (HR, 0.17; 0.07-0.45; $p<0.001$), and operation at recurrence (HR, 0.25; 0.07-0.87; $p=0.030$) were independent prognostic factors for longer PFS (Table 2). BRCA1/2 mutations retained the statistical significance as good prognostic factors only when included variant of unknown significance (VUS).

Conclusions: Our results suggest that BRCA1/2 mutation including VUS and secondary cytoreductive surgery might be associated with longer PFS in ovarian cancer patients who use PARP inhibitor.

EP233 / #541

EPOSTER VIEWING: AS11 OVARIAN CANCER

PATTERNS OF INITIAL OVARIAN CANCER RECURRENCE ON NIRAPARIB MAINTENANCE MONOTHERAPY IN PATIENTS WITH NO BASELINE EVIDENCE OF DISEASE FOLLOWING FIRST-LINE CHEMOTHERAPY: PRIMA/ENGOT-OV26/GOG-3012 POST-HOC SUBGROUP ANALYSIS

M Kamavra¹, Antonio Gonzalez-Martin², Bhavana Pothuri³, Ignace Vergote⁴, Whitney S Graybill⁵, Mansoor Mirza⁶, Colleen McCormick⁷, D Lorusso⁸, G Freyer⁹, David O'Malley¹⁰, Whitney York¹¹, Izabela A Malinowska¹², Bradley Monk¹³

¹Samuel Oschin Cancer Center and Cedars-Sinai Medical Center, Department Of Radiation Oncology, Los Angeles, United States of America, ²Grupo Español de Investigación en Cáncer de Ovario (GEICO) Program in Solid Tumors, Center for Applied Medical Research (CIMA), Pamplona, and Clínica Universidad de Navarra, Medical Oncology Department, Madrid, Spain, ³Gynecologic Oncology Group (GOG) and NYU Langone Health, Department Of Obstetrics/gynecology, Perlmutter Cancer Center, New York City, United States of America, ⁴Leuven Cancer Institute and BGOG (Belgium and Luxembourg Gynaecological Oncology Group), University Hospitals Leuven, Leuven, Belgium, ⁵Medical University of South Carolina, Gog, Gynecologic Oncology, Charleston, United States of America, ⁶Nordic Society of Gynaecological Oncology Clinical Trial Unit (NSGO-CTU) and Rigshospitalet–Copenhagen University Hospital, Clinical Trial Unit, Copenhagen, Denmark, ⁷GOG and University of New Mexico, Health Sciences, Albuquerque, United States of America, ⁸Fondazione IRCCS National Cancer Institute of Milan, Gynaecology Oncology Unit, Milan, Italy, ⁹Groupe d'Investigateurs Nationaux pour l'Etude des Cancers Ovariens and Centre Hospitalier Lyon-Sud, Service D'oncologie Médicale, Lyon, France, ¹⁰Ohio State University, James Comprehensive Cancer Center, Columbus, United States of America, ¹¹GlaxoSmithKline, Oncology Medical Market Access – Development Biostatistics, Upper Providence, United States of America, ¹²GlaxoSmithKline, Oncology Research & Development, Waltham, United States of America, ¹³University of Arizona, Creighton University, Honorhealth Research Institute, Phoenix, United States of America

Objectives: Patterns of recurrence on PARP inhibitor maintenance therapy are unclear and may affect treatment choices for subsequent therapy, including secondary cytoreductive surgery (SCS). This analysis of PRIMA/ENGOT-OV26/GOG-3012 evaluated patterns of recurrence on niraparib maintenance therapy.

Methods: This post hoc subgroup analysis included 314 patients treated with niraparib maintenance monotherapy following first-line chemotherapy and who had no lesions identified by CT/MRI (or by investigator assessment) at baseline. Number and site(s) of initial recurrent lesions at the time of investigator-assessed RECIST-defined progressive disease (PD) were evaluated.

Results: As of the primary data cut, May 17, 2019, with a median follow-up of 13.8 months (range <1–28), 141/314 (45%) patients developed investigator-assessed PD, with an average 1.9 (standard deviation 0.9) lesions at PD. At the time of recurrence, 62 patients (44%) had 1 lesion, 46 (33%) had 2 lesions, 24 (17%) had 3 lesions, and 9 (6%) had 4–5 lesions. The five most common sites with ≥1 lesion at PD were the peritoneum (n=45), lymph nodes (n=36), liver (n=34), other (n=26), and pelvis (n=20).

Conclusions: For patients who received niraparib maintenance monotherapy after first-line chemotherapy and had no lesions at baseline, <50% had recurrent disease after a median 13.8 months of follow-up and >75% of patients with recurrence progressed in 1–2 sites. Prospective evaluation is required to determine whether patients with oligoprogressive disease have improved outcomes with local therapies, like SCS, in addition to systemic therapy.

Funding: GSK (NCT02655016). Editorial support provided by Fishawack Health, funded by GSK.

EP234 / #215

EPOSTER VIEWING: AS11 OVARIAN CANCER

PREDICTORS FOR CLAVIEN-DINDO CLASSIFICATION GRADE \geq IIIA AFTER CYTOREDUCTIVE SURGERY FOR ADVANCED STAGE OVARIAN CANCER: A PROSPECTIVE COHORT STUDY

Malika Kengsakul¹, Gatske Nieuwenhuyzen-De Boer², Suwasin Udomkarnjananun³, Stephen Kerr⁴, Helena Van Doorn², Heleen Van Beekhuizen²

¹Panyanantaphikkhu Chonprathan Medical Center, Srinakharinwirot University, Obstetric And Gynecology, Nonthaburi, Thailand, ²Erasmus MC Cancer institute, University Medical Center Rotterdam, Gynecologic Oncology, Rotterdam, Netherlands, ³King Chulalongkorn Memorial Hospital, Chulalongkorn University, Division Of Nephrology, Department Of Medicine, Faculty Of Medicine, Bangkok, Thailand, ⁴King Chulalongkorn Memorial Hospital, Chulalongkorn University, Biostatistics Excellence Centre, Faculty Of Medicine, Bangkok, Thailand

Objectives: The study aimed to evaluate factors associated with 30-day severe post-operative morbidity classified by Clavien-Dindo classification (CDC) \geq grade IIIa and time to adjuvant chemotherapy (TTC) after cytoreductive surgery for primary advanced stage epithelial ovarian cancer (AEOC).

Methods: Patients undergoing cytoreductive surgery for primary AEOC were enrolled from February 2018 to September 2020. Post-operative complications were graded according to the CDC. Logistic regression analysis was used to evaluate risk predicting CDC grade \geq IIIa and TTC > 42 days.

Results: Three hundred eligible patients were included for analysis. CDC grade \geq IIIa occurred in 51 (17%) patients. In multivariable analysis, age ($p=0.019$), cardiovascular comorbidity ($p=0.011$), diaphragmatic surgery ($p=0.001$), intraoperative urinary tract injury ($p=0.008$) and other visceral injury e.g., pancreas, stomach, liver and spleen ($p=0.011$) were factors related to CDC grade \geq IIIa. Thirty percentage of patients received chemotherapy > 42 days. Median TTC in patients with CDC grade \geq IIIa was 39 (29-50) days while median TTC in patients without CDC grade \geq IIIa was 33 (25-41) days, $p=0.008$. Patients with the following factors: WHO grade ≥ 2 ($p=0.043$), presence of ascites ($p=0.012$), para-aortic lymph node resection ($p=0.001$), intra-operative bowel injury ($p=0.007$), other visceral injury ($p=0.008$), pneumothorax ($p=0.030$), post-operative visceral organ leakage ($p=0.012$), delirium ($p=0.034$) and pneumonia ($p=0.001$) had a higher adjusted odds of developing TTC >42 days.

Conclusions: Patients with CDC grade \geq IIIa had a significant longer median TTC compared to those without CDC grade \geq IIIa. Intra-operative visceral injury was the significant factor related to both severe complications and delayed time to chemotherapy.

EP235 / #216

EPOSTER VIEWING: AS11 OVARIAN CANCER

COMPARISON OF THE COMPREHENSIVE COMPLICATION INDEX AND CLAVIEN-DINDO CLASSIFICATION IN PREDICTING POST-OPERATIVE OUTCOMES FOLLOWING CYTOREDUCTIVE SURGERY IN OVARIAN CANCER

Malika Kengsakul¹, Gatske Nieuwenhuyzen-De Boer², Suwasin Udomkarnjananun³, Stephen Kerr⁴, Helena Van Doorn², Heleen Van Beekhuizen²

¹Panyanantaphikkhu Chonprathan Medical Center, Srinakharinwirot University, Obstetric And Gynecology, Nonthaburi, Thailand, ²Erasmus MC Cancer institute, University Medical Center Rotterdam, Gynecologic Oncology, Rotterdam, Netherlands, ³King Chulalongkorn Memorial Hospital, Chulalongkorn University, Division Of Nephrology, Department Of Medicine, Faculty Of Medicine, Bangkok, Thailand, ⁴King Chulalongkorn Memorial Hospital, Chulalongkorn University, Biostatistics Excellence Centre, Faculty Of Medicine, Bangkok, Thailand

Objectives: The comprehensive complication index (CCI) is an instrument for reporting the cumulative post-operative complications while Clavien-Dindo classification (CDC) reports the most serious event. This study aims to validate the CCI for advanced stage epithelial ovarian cancer (AEOC) after cytoreductive surgery and compare its diagnostic performance with CDC.

Methods: Complications after cytoreductive surgery for primary AEOC were classified using CDC and CCI. Logistic regression was used to determine the association between CDC and CCI with prolonged length of hospital stays (PLOS), intensive care unit (ICU) admission, readmission and time to chemotherapy (TTC). Area under the receiver operating characteristic (AUC) was used to establish the diagnostic performance of each classification.

Results: Totally, 300 patients were included from February 2018 to September 2020. Thirty days post-operative complications occurred in 146 patients of whom 30% had multiple complications (range 2-6 events). Severe complications were diagnosed in 17% of patients when using the CDC while the percentage increased to 30% when using the CCI. In regression analysis, both CDC and CCI presented as predictors for PLOS (>9 days), TTC >42 days, ICU admission and readmission (all $p < 0.05$). AUC demonstrated that CCI (0.843, 95% CI 0.79-0.90) performed better than CDC (0.813, 95% CI 0.75-0.88) for PLOS. Both systems equally showed a fair diagnostic performance for TTC >42 days (both AUC 0.630, 95%CI 0.55-0.71).

Conclusions: The cumulative score of CCI had shown a superior diagnostic performance for PLOS than CDC in AEOC. The use of the CCI should be considered in other gynecological evaluations.

EP236 / #587

EPOSTER VIEWING: AS11 OVARIAN CANCER

PROTEOMIC PROFILING OF PROTEIN SIGNATURES ASSOCIATED WITH RESPONSE TO PARP INHIBITOR MAINTENANCE THERAPY IN OVARIAN CANCER

Se Ik Kim¹, Cheol Lee², Hee Seung Kim¹, Hyun Hoon Chung¹, Jae-Weon Kim¹, Noh Hyun Park¹, Yong-Sang Song¹, Maria Lee¹

¹Seoul National University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Seoul National University College of Medicine, Department Of Pathology, Seoul, Korea, Republic of

Objectives: Despite the substantial clinical use of PARP inhibitors, the development of resistance contributes to mortality. Thus, we aimed to discover protein signatures associated with response to PARP inhibitors in high-grade serous ovarian carcinoma (HGSOC) through proteomic analysis.

Methods: We conducted an in-depth proteomic analysis of FFPE tissues of patients with platinum-sensitive recurrent HGSOC who received PARP inhibitor maintenance therapy (n=24). The proteomic strategy was as follows: removal of paraffin, isolation of tumor via examination by a pathologist, protein extraction, filter-aided sample preparation, tandem mass tags based labeling, off-line high-pH peptide fractionation, and high-resolution quadruple Orbitrap LC-MS/MS. Patients who discontinued PARP inhibitors due to disease progression within nine months were assigned to the poor prognosis group (n=9). Dysregulated proteins between the good and poor response groups were investigated.

Results: In total, 7,825 proteins were quantified. There were 56 proteins significantly expressed in the good response group, whereas 131 proteins were in the poor response group. Proteins significantly upregulated in the good response group included ribosomal- and infection-related proteins. Proteins significantly upregulated in the poor response group included extracellular matrix receptor- and coagulation-related proteins. To identify a protein signature that stratifies good and poor responders to PARP inhibitors, we performed four feature selection algorithms with leave-one-out cross-validation to improve the accuracy. High expression of Proteins A and B were associated with worse and better progression-free survival, respectively.

Conclusions: We successfully identified protein signatures associated with response to PARP inhibitors. This study was the most extensive proteomic analysis to predict PARP inhibitor response in ovarian cancer.

EP237 / #590

EPOSTER VIEWING: AS11 OVARIAN CANCER

ROLE OF SECONDARY CYTOREDUCTIVE SURGERY AND BEVACIZUMAB IN PLATINUM-SENSITIVE RECURRENT OVARIAN CLEAR CELL CARCINOMA

Se Ik Kim¹, Sunyoung Kim², Ki Dong Kim³, Jeong-Yeol Park⁴, Myong Cheol Lim⁵, Jeong-Won Lee⁶, Jae-Weon Kim¹

¹Seoul National University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Seoul National University Hospital, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ³Seoul National University Bundang Hospital, Department Of Obstetrics And Gynecology, Seongnam, Korea, Republic of, ⁴University of Ulsan College of Medicine, Asan Medical Center, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ⁵National Cancer Center, Center For Gynecologic Cancer, Goyang-si, Korea, Republic of, ⁶Samsung Medical Center, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: Ovarian clear cell carcinoma (OCCC) is associated with a higher recurrence rate and tends to develop chemoresistance. Currently, optimal management of recurrent OCCC has not yet been established. Thus, we aimed to investigate survival according to the treatment methods in platinum-sensitive relapsed OCCC.

Methods: From five institutions, we identified OCCC patients with platinum-sensitive recurrence who received secondary treatment between 2007 and 2021. Patient characteristics and survival outcomes were compared according to the use of bevacizumab (BEV) during second-line chemotherapy and secondary cytoreductive surgery (CRS).

Results: In total, 138 patients were included. The BEV group (n=36) showed improved progression-free survival (PFS; median, 15.4 vs. 7.5 months; P=0.042) and overall survival (OS; P=0.043) compared to the non-BEV group (n=102). In multivariate analyses, BEV was identified as an independent prognostic factor for PFS (aHR, 0.571; 95% CI, 0.354–0.921; P=0.022) and OS (aHR, 0.435; 95%CI, 0.195–0.970; P=0.042). The secondary CRS group (n=42) had multi-site metastasis (P<0.001) at recurrence less frequently than the no surgery group (n=96). The secondary CRS group showed significantly better PFS (median, 33.7 vs. 7.2 months; P<0.001) and OS (P<0.001). Secondary CRS was associated with a significantly improved PFS (aHR, 0.297; 95% CI, 0.183–0.481; P<0.001) and OS (aHR, 0.276; 95% CI, 0.133–0.576; P=0.001). The BEV and non-BEV groups showed similar PFS and OS among the patients who underwent secondary CRS. The BEV group showed improved PFS and OS among patients who did not undergo surgery.

Conclusions: Our study results demonstrate the survival benefits of BEV and secondary CRS in patients with platinum-sensitive relapsed OCCC.

EP238 / #618

EPOSTER VIEWING: AS11 OVARIAN CANCER

HIGH FKBPL EXPRESSION CONTRIBUTES TO CELL PROLIFERATION BY REGULATING THE CELL CYCLE AND AFFECTS PROGNOSIS IN OVARIAN CANCER PATIENTS

Hyosun Kim¹, Gwan Hee Han², Hee Yun¹, Jae-Hoon Kim¹, Hanbyoul Cho¹

¹Gangnam Severance Hospital, Yonsei University, Department Of Obstetrics And Gynecology, Gangnam-gu, Seoul, Korea, Republic of, ²Kyunghee University Hospital at Gangdong, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: About 70% of ovarian cancer patients experience recurrence, and resistance is induced by repeated chemotherapy. So, research for novel therapeutic approach is urgently needed. FK506-binding protein like (FKBPL) is involved in immune & inflammatory responses, and signaling pathways regulating various cancers. However, the role of FKBPL in epithelial ovarian cancer (EOC) has not been elucidated.

Methods: Immunohistochemical analysis of FKBPL expression using tissue microarray was performed on 398 epithelial ovarian tissues (186 cancer, 49 borderline, 84 benign, and 79 normal tissues). The clinicopathological parameters and those data were compared. It was also performed in vitro to investigate the functional role of FKBPL in ovarian cancer cell lines.

Results: The expression of FKBPL in ovarian cancer tissue was upregulated than other epithelial tissues (all $p < 0.001$). Importantly, FKBPL expression was associated with stage, tumor grade, cell type, and chemotherapy response ($p \leq 0.05$). Multivariate survival analysis showed that overexpression of FKBPL was associated with poor overall survival (HR = 3.58; 95% CI: 1.87-6.84, $p < 0.001$) and disease-free survival (HR = 3.1; 95% CI: 1.97-4.87, $p < 0.001$). In-vitro results also showed that knockdown of FKBPL was associated with decreased cell proliferation, inhibited colony formation, and induction of G1 phase cell cycle arrest, supporting an oncogenic role of FKBPL in ovarian cancer cell lines.

Conclusions: Overexpression of FKBPL could be a significant biomarker for predicting poor survival after chemotherapy. In addition, future research that reveals the mechanism of FKBPL on the cancer cell cycle will lead to the development of new anticancer drugs.

EP239 / #800

EPOSTER VIEWING: AS11 OVARIAN CANCER

PROGNOSTIC ANALYSIS OF SPLENIC METASTASIS IN ADVANCED OVARIAN CANCER: DOES PARENCHYMAL METASTASIS MATTER?

Jeeyeon Kim, Joo-Hyuk Son, Tae-Wook Kong, Suk-Joon Chang, Hee-Sug Ryu
Ajou University School of Medicine, Department Of Obstetrics And Gynecology, Suwon, Korea, Republic of

Objectives: Splenic metastasis is a part of peritoneal seeding with multi-organ involvement in advanced ovarian cancer. Although splenic parenchymal lesion is classified into FIGO stage IVB disease, it is usually surgically resectable. The aim of this study was to evaluate the patterns and prognostic value of splenic parenchymal metastasis in advanced ovarian cancer.

Methods: We retrospectively reviewed medical records of patients who received splenectomy as part of cytoreductive surgery in advanced ovarian cancer from 2007-2022. Patients were divided into the parenchymal invasion group and capsular/hilar invasion group. Clinical characteristics including histologic invasion patterns and survival outcomes were analyzed.

Results: A total of 100 ovarian cancer patients received splenectomy; 55(55%), 40(40%) and 5(5%) cases were performed during primary debulking surgery, interval debulking surgery and at the time of disease recurrence respectively. The median age was 54.5 yrs, and all patients had FIGO stage IIIC-IV disease. 27(27%) patients had parenchymal invasions and all the lesions were accompanied by capsular or hilar metastasis without solitary parenchymal invasion. Among the patients with primary disease(n=95), 42(44.2%) patients had stage IV disease including 17(17.8%) patients with splenic parenchymal metastasis. There was no difference in residual disease(p=0.392), progression-free survival (p=0.339) and overall survival(p=0.841) between the patients with parenchymal invasion and capsular/hilar metastasis.

Conclusions: Although splenic parenchymal metastasis reflected widespread tumor dissemination, all the lesions were followed by hilar or capsular involvement and surgically treatable disease. The prognosis of splenic parenchymal metastasis was not inferior to the capsule or hilar invasion, therefore, it needs to be considered as FIGO stage IIIC disease.

EP240 / #814

EPOSTER VIEWING: AS11 OVARIAN CANCER

PROGNOSTIC SIGNIFICANCE OF CLINICAL FACTORS, INCLUDING BRCA MUTATION STATUS, IN EPITHELIAL OVARIAN, PERITONEAL, AND FALLOPIAN TUBE CANCERS.

Jiyoung Kim, Dae Woo Lee, Hae Nam Lee
Bucheon St, Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Obgy,
Bucheonsi, Korea, Republic of

Objectives: We analyzed the survival outcomes of patients with epithelial ovarian, peritoneal, or fallopian tube cancer (EOPFTC) with BRCA1/2 mutations and the clinical factors associated with the prognosis of these cancers.

Methods: Based on the data collected from Clinical Data Warehouse of Catholic university of Korea, we investigated patients who had been diagnosed and treated for EOPFTC, and undergone germline BRCA test in 6 hospitals between January 2012 and December 2019.

Results: In total, 378 patients were identified and 76 (20.1%) women carried BRCA 1/2 mutation. There was no significant difference in progression-free survival (PFS; $p = 0.562$) and overall survival ($p = 0.677$) between BRCA 1/2 mutation and wild-type groups. In multivariate analysis, however, PFS of BRCA 1/2 mutation group for 18 month from primary treatment was significantly superior to wild-type group ($p = 0.024$). In subgroup analysis for high grade serous carcinoma patients, BRCA 1/2 mutation was an independent favorable prognostic factor for PFS ($p = 0.035$). Subgroup analysis for stage III to IV disease also demonstrated an independent PFS gain in patients with BRCA 1/2 mutation ($p = 0.015$). Neoadjuvant chemotherapy as primary treatment was related with poor PFS ($p < 0.001$) and reduced OS ($p = 0.005$).

Conclusions: Germline BRCA 1/2 mutation improved short-term PFS in patients with EOPFTC. Elevated initial CA125 level and primary neoadjuvant chemotherapy were related to poor prognosis.

EP241 / #853

EPOSTER VIEWING: AS11 OVARIAN CANCER

HIGH EXPRESSION OF TRAFFICKING PROTEIN TRANSMEMBRANE P24 TRAFFICKING PROTEIN9 PROMOTES POOR PROGNOSIS OF EPITHELIAL OVARIAN CANCER

Mikyong Kim¹, Gwan Hee Han², Jae-Hoon Kim³, Hanbyoul Cho⁴, Bowook Kim⁵

¹CHA Gangnam Medical Center, Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Kyunghee University Hospital at Gangdong, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ³Institute of Women's Medical Life Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ⁴Gangnam Severance Hospital, Yonsei University, Department Of Obstetrics And Gynecology, Gangnam-gu., Korea, Republic of, ⁵Catholic Kwandong University International St. Mary's Hospital, Obstetrics And Gynecology, Incheon, Korea, Republic of

Objectives: Transmembrane emp24 domain-containing protein9 (TMED9) belongs to the TMED/p24 family which regulates the innate immune and protein transport via the ER-Golgi cargo pathway. TMED9 role in epithelial ovarian cancer (EOC) has not been clarified yet. Therefore, in this study we aim to evaluate the function, molecular mechanism and clinicopathological significance of TMED9 in EOC.

Methods: Expression levels of functional role of TMED9 were respectively evaluated by Immunohistochemistry staining of EOC, borderline, benign and normal epithelial tissues, qPCR, western blotting, and public data sets. The functional roles of TMED9 were evaluated by MTS, colony formation, and transwell migration/invasion assays in EOC cell lines.

Results: TMED protein was elevated in EOCs according to a GEO and TCGA datasets. High mRNA and protein levels of TMED9 were observed in EOCs. Importantly, high expression level of TMED9 was associated poor overall survival and disease free survival compared with low expression of TMED0 in EOCs ($p = 0.006$, $p < 0.001$, respectively). In vitro results also demonstrated the knockdown of TMED9 was associated with decreased cell invasion ($p < 0.001$), migration ($p < 0.001$), proliferation ($p < 0.001$), and colony forming abilities ($p < 0.001$) supporting the oncogenic role in EOC.

Conclusions: Our study is the first work to identify an oncogenic role of TMEd9 in EOC tissues and cell lines which may provide insights into the application of TMED9 as a novel predictor of clinical outcome and a potential therapeutic target in EOC patients.

EP242 / #861

EPOSTER VIEWING: AS11 OVARIAN CANCER

HUMAN EPIDERMAL GROWTH FACTOR RECEPTOR-2 (HER2) RECEPTOR EXPRESSION AND ITS DYNAMIC CHANGE IN OVARIAN CANCER PATIENTS

Yoo-Na Kim, Yunsoo Chung, Junsik Park, Yong Jae Lee, Jung-Yun Lee, Eun Ji Nam, Sang Wun Kim, Young Tae Kim, Sunghoon Kim
Yonsei university College of Medicine, Department Of Obstetrics And Gynecology, Women's Cancer Center, Yonsei Cancer Center, Institute Of Women's Life Medical Science, Seoul, Korea, Republic of

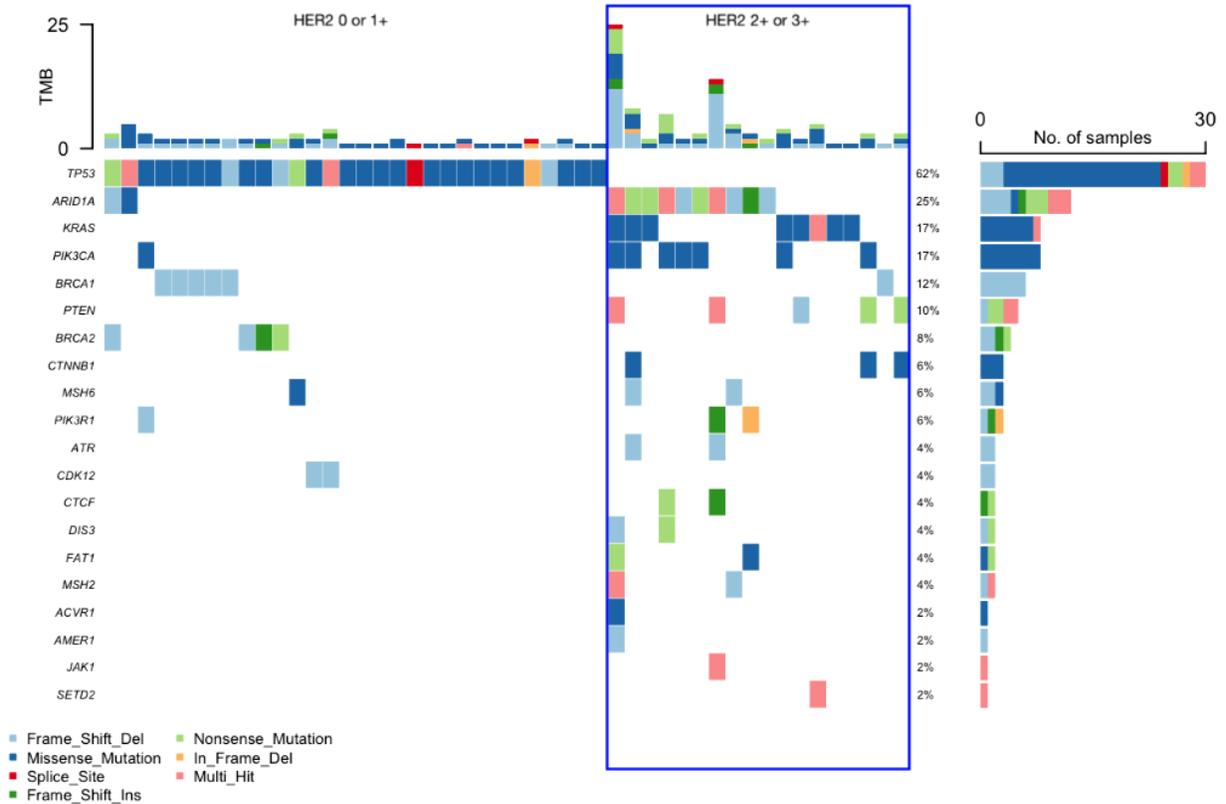
Objectives: HER2 targeted drugs are increasingly introduced in non-breast cancers, yet studies on HER2 expression in ovarian cancer patients is lacking. Therefore, we studied HER2 receptor status and its dynamic change in ovarian cancer patients, a subset of whom also underwent tumor next generation sequencing.

Methods: Ovarian cancer patients who underwent HER2 testing were identified. Clinical information, including histology, germline BRCA status, and immunohistochemistry (IHC) profile were noted. For patients receiving multiple biopsies, each anatomical location, timing, and HER2 expression were counted.

Results: Among 193 patients, expression of 2+ and 3+ were found in 28% and 6%, respectively, and 18 patients received HER2 targeted drug. HER2 3+ rate was 23% in mucinous, 11% in endometrioid, 9% in clear cell, and 5% in high grade serous type. HER2 3+ was exclusively identified in BRCA wildtype, MMR proficient, or PD-L1 low expressing patients. Genomic analysis showed that the TP53 mutation rate was lower and other mutations such as ARID1A, KRAS, and PIK3CA were relatively more common in HER2 2+ or 3+, compared to HER2 0+ or 1+ patients. CNV analysis showed that 4 out of 5 HER2 3+ patients showed ERBB2 amplification. Out of 20 patients with multiple time-lagged biopsy, 9 patients showed an increase in HER2 expression in the later biopsy

sample.

Genomic landscape of patients with HER2 receptor overexpression



Conclusions: Ovarian cancer patients with HER2 overexpression show a distinct histological, IHC, and genomic profile. HER2 targeting agent may serve as a potential option for BRCA wildtype patients, especially in the later lines of treatment.

EP243 / #1167

EPOSTER VIEWING: AS11 OVARIAN CANCER

RELATIVE EXTENSIVENESS OF PERITONEAL SEEDING VERSUS LYMPH NODE METASTASIS AS A PROGNOSTIC FACTOR IN ADVANCED-STAGE OVARIAN CANCER

Dong Hoon Suh, Nam Kyeong Kim, Ki Dong Kim, Jae Hong No, Yong Beom Kim
Seoul National University Bundang Hospital, Obstetrics And Gynecology, Seongnam, Korea, Republic of

Objectives: To evaluate the prognostic impact of relative extensiveness of peritoneal seeding versus lymph node metastasis in advanced stage ovarian cancer.

Methods: Medical records of consecutive patients with advanced stage ovarian cancer who were treated in Seoul National University Bundang Hospital between 2013.1~2021.12 were retrospectively reviewed. The impact of clinicopathologic factors including relative extensiveness of peritoneal seeding versus lymph node metastasis on recurrence-free survival was evaluated.

Results: A total of 241 patients was identified and analyzed. Median age was 59 years (35-81). Peritoneal seeding was grouped into three according to the area: none (8.7%, n=21) pelvis (5.8%, n=14), and above pelvis (85.5%, n=206). The extensiveness of lymph node metastasis was grouped into five according to the involved areas among pelvis, abdomen, chest, and neck: none (44.8%, n=108), single metastasis (15.3%, n=37), double metastasis (17.0%, n=41), and triple or more metastasis (22.8%, n=55). Relative extensiveness of peritoneal seeding versus lymph node metastasis was set as three categories according to the different combinations of the two groups: severe (44.8%, n=108), moderate (51.0%, n=123), and mild (4.1%, n=10). Relative extensiveness of peritoneal seeding versus lymph node metastasis did not have a significant prognostic impact on recurrence-free survival (mean, 67.8 months [95% CI, 58.7-75.5]; 56.5 [48.6-64.3]; 80.0 [46.3-113.6]; p=0.255). However, severe level of peritoneal seeding had poor prognostic impact on recurrence-free survival (mean, 77.8 months [95% CI, 63.9-91.8]; 67.3 [37.7-96.8]; 59.2 [53.1-65.4]; p=0.036).

Conclusions: Relative extensiveness of peritoneal seeding versus lymph node metastasis did not have a significant prognostic impact on recurrence-free survival in advanced stage ovarian cancer.

EP244 / #718

EPOSTER VIEWING: AS11 OVARIAN CANCER

POLY-(ADP-RIBOSE)-GLYCOHYDROLASE LOCALIZES TO THE CYTOPLASM FOLLOWING NEOADJUVANT CHEMOTHERAPY IN OVARIAN SEROUS CARCINOMA

David Knigin^{1,2}, Bo Wen Yang^{1,3}, Emad Matanes^{1,2}, Amber Yasmeen¹, Walter Gottlieb^{1,2}

¹Sir Mortimer B. Davis Institute of Medical Research, Jewish General Hospital, McGill University, Segal Cancer Center, Montreal, Canada, ²Jewish General Hospital, Gynecologic Oncology, Montreal, Canada, ³West China Second University Hospital, Sichuan University, Gynecology And Obstetrics, Chengdu, China

Objectives: Poly-(ADP-ribose)-glycohydrolase (PARG) regulates the parylation of DNA and poly(ADP-ribose)-polymerases (PARPs) during the single-strand DNA repair process. PARG deregulation causes resistance to PARP inhibitors in several cancer cell lines. We studied the clinical significance of PARG expression in ovarian carcinomas.

Methods: Epithelial ovarian cancer tissue microarrays including 86 high-grade serous carcinomas were stained with anti-PARG antibody. PARG expression was classified as cytoplasmic (cPARG) or nuclear (nPARG). Demographic and survival data was collected from the medical records. We compared overall survival, DNA damage response (gamma-H2AX, RAD51) and proliferation (Ki-67) between the PARG groups. Ovarian cancer cell lines were treated with cisplatin for 24-48 hours and their nuclear and cytoplasmic extracts were assessed for PARG levels by western blot and immunofluorescence.

Results: While normal and borderline histologies expressed PARG exclusively in the cytoplasm, tissues from cancer patients expressed nuclear PARG in up to 57% of the cases. Interestingly, we detected a shift from nucleus to cytoplasm between chemo-naïve to chemo-exposed patients (Figure 1, cPARG: 23.8% vs. 78.4%, $p < 0.001$). cPARG was associated with a decreased proliferation score (Ki-67 8.0% vs. 19.5%, $p = 0.03$) and decreased overall survival (Figure 2). PARG expression could be induced by chemotherapy in chemo-sensitive cells but not in isogenic chemo-resistant cells.

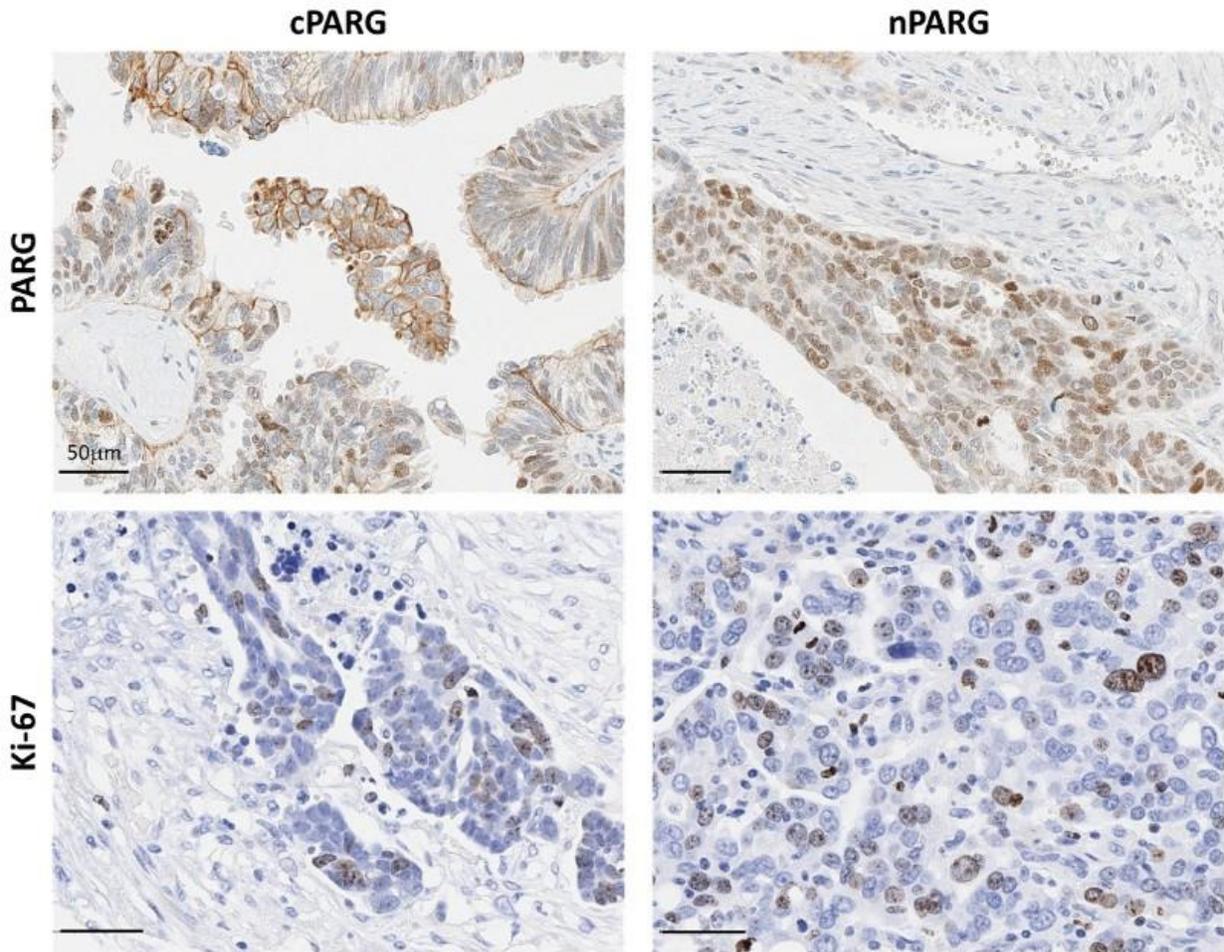


Figure 1. Representative micrographs of serous carcinomas stained with anti-PARG and anti-Ki-67 antibodies.

Abbreviations: cPARG, PARG localized to the cytoplasm; nPARG – PARG localized to the nucleus; Scale - 50µm

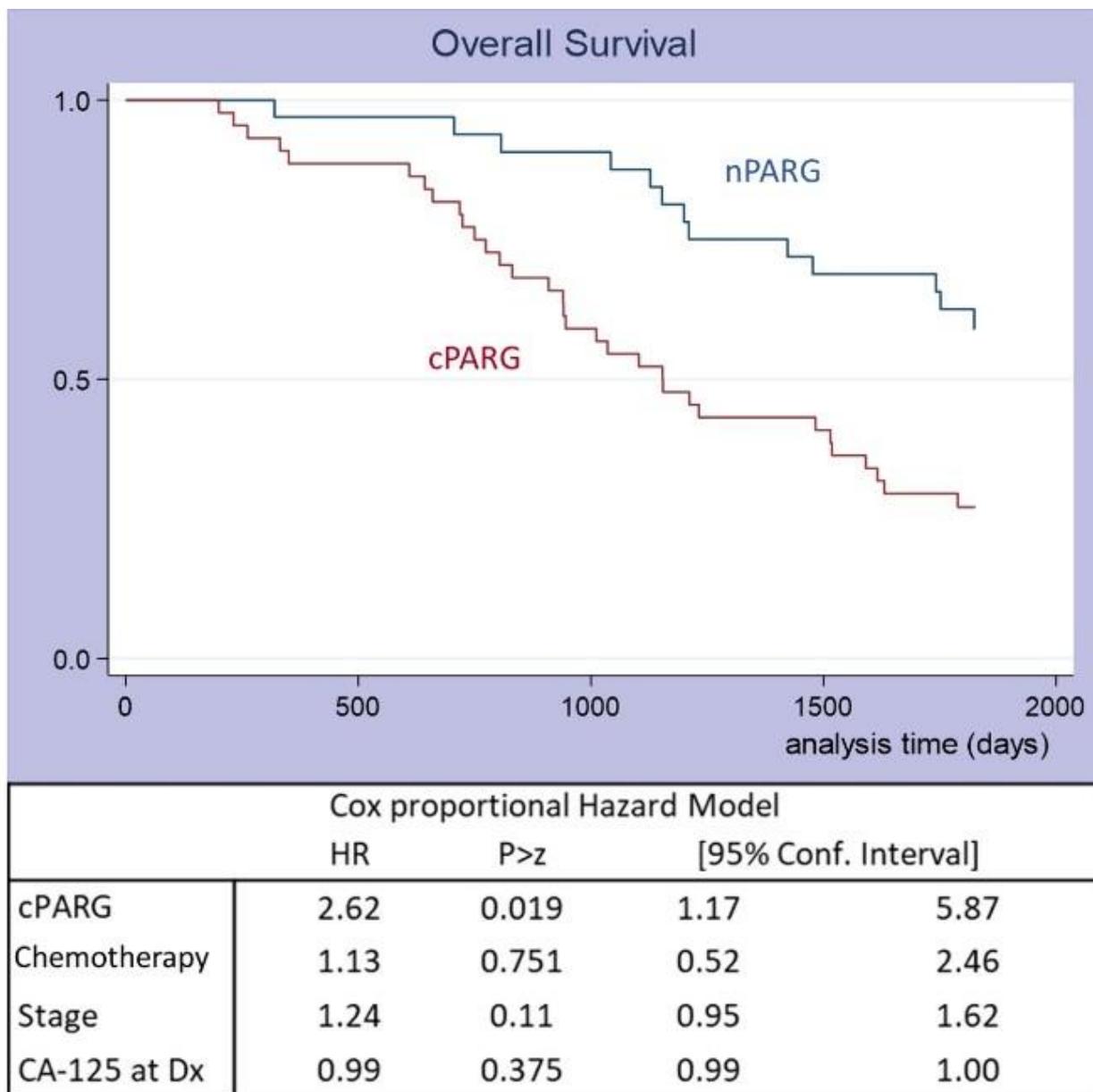


Figure 2. Kaplan-Meier survival curve and Hazard Ratio for death in cPARG compared to nPARG patients.

Abbreviations: cPARG, PARG localized to the cytoplasm; nPARG – PARG localized to the nucleus; Dx, diagnosis.

Conclusions: PARG localizes to the nucleus in ovarian cancer cells but shifts to the cytoplasm following chemotherapy. Localization of PARG to the cytoplasm is associated with poor survival. The association between PARG expression and resistance to chemotherapy or PARP inhibitors warrants further investigation.

EP245 / #993

EPOSTER VIEWING: AS11 OVARIAN CANCER

NIRAPARIB INDUCES OVARIAN CANCER CELL APOPTOSIS REGARDLESS OF HOMOLOGOUS RECOMBINATION STATUS THROUGH DOWNREGULATION OF THE ONCOGENIC SRC/STAT3 AXIS.

Adrian Kohut¹, Qianqian Zhao², Yi-Jia Li², Antons Martincuks², Theresa Austria², Chunyan Zhang², Nicole Lugo¹, Rosemarie Martinez Borrero², Mihae Song¹, Lorna Rodriguez-Rodriguez¹, Hua Yu²

¹City of Hope National Medical Center, Department Of Surgery, Duarte, United States of America, ²City Of Hope National Medical Center - - Duarte, CA, Department Of Immuno-oncology, Duarte, United States of America

Objectives: To elucidate an off-target mechanism by which niraparib induces ovarian cancer cell apoptosis regardless of homologous recombination (HR) status through downregulation of the oncogenic SRC/STAT3 axis.

Methods: A variety of techniques were used to determine the underlying mechanisms by which niraparib regulates the SRC/STAT3 axis including tumor organoid formation, cell viability assays, colony formation assays, real-time PCR, western blot, apoptosis assays, cell transfections, in-cell and in-vitro thermal shift assays, and confocal microscopy.

Results: Niraparib exhibited more potent antitumor effects than olaparib in both HR deficient and proficient models. In addition to inhibiting PARP catalytic function, niraparib-promoted cell death in ovarian cancer cells was found to be mediated by its inhibitory effects on activated STAT3 (p-STAT3). Niraparib altered the expression of STAT3 downstream target genes, specifically those involved in apoptosis. The anti-apoptotic gene BCL-XL (BCL2L1), usually induced by STAT3 activation, was significantly reduced while the proapoptotic CASP3, CASP8, and CASP9 genes, which are suppressed by STAT3 activity, were markedly upregulated. Niraparib-mediated inhibition of the STAT3 pathway was found to be at least partially attributed to the downregulation of SRC kinase activity as demonstrated in all tested ovarian cancer cell lines and patient tumor-derived organoid models.

Conclusions: Niraparib inhibits the growth of ovarian cancer cells, regardless of HR status, more effectively than olaparib. Unlike olaparib, which is known to activate STAT3, niraparib inhibits STAT3 activity by interfering with SRC tyrosine kinase. These findings provide a potential off-target mechanism by which niraparib may provide benefit to ovarian cancer patients regardless of HR biomarker status.

EP246 / #636

EPOSTER VIEWING: AS11 OVARIAN CANCER

THE EFFICACY OF MEK INHIBITORS (MEKi) IN THE TREATMENT OF LOW-GRADE SEROUS OVARIAN CANCER (LGSC): A SYSTEMATIC REVIEW.

Anjali Kulkarni¹, Carly Cooke¹, Michael Fung-Kee-Fung¹, Taymaa May², Tiffany Zigras³

¹The Ottawa Hospital - General Campus, Gynecologic Oncology, Ottawa, Canada, ²Princess Margaret Cancer Centre/University Health Network/Sinai Health Systems, Gynecologic Oncology, Toronto, Canada, ³Trillium Health Partners, Gynecologic Oncology, Mississauga, Canada

Objectives: Low response rates of LGSC to traditional systemic therapies prompts the need for novel therapies. LGSC have a high frequency of mutations in the MAPK cascade, which is targeted by MEKi. The primary objective of this systematic review was to assess the overall response rate (ORR) of LGSC to MEKi.

Methods: Pubmed, EMBASE, Medline and the Cochrane Database were searched from inception to March 2022. Inclusion criteria were studies assessing the treatment of LGSC with a MEKi in the primary or recurrent setting, published in English. Case reports, case series, conference proceedings, in vitro studies and animal studies were excluded. Studies were screened and assessed for eligibility by two independent reviewers (AK, CC), with conflicts resolved by a third reviewer (TZ). Data was extracted using pre-established criteria.

Results: Initial literature search identified 1815 papers; four met eligibility criteria. Three were randomized clinical trials and one was a phase II single-arm prospective cohort study. A total of 680 patients were included, of which 416 were treated with a MEKi alone. All patients were treated for recurrent LGSOC. ORR ranged from 12.1 to 26% and median progression-free survival (PFS) ranged from 7.2 to 13 months.

Conclusions: While one study demonstrated significantly improved efficacy of MEKi over physician-choice systemic therapy, another did not show benefit. Two additional studies did not compare MEKi to traditional therapies, limiting their clinical relevance. LGSC with BRAF and KRAF mutations have higher ORR to MEKi. Further prospective and randomized trials are needed to determine the efficacy of MEKi in treating LGSC.

EP247 / #668

EPOSTER VIEWING: AS11 OVARIAN CANCER

ENDOMETRIOSIS IN CLEAR CELL AND ENDOMETRIOID CARCINOMA OVARY: ITS IMPACT ON CLINICOPATHOLOGICAL CHARACTERISTICS AND SURVIVAL OUTCOMES

Mythili Kundur, Priya Bhati, Anupama Rajanbabu
Amrita Institute of Medical Sciences, Gynaecological Oncology, Ernakulam, India

Objectives: This study aimed to assess the impact of endometriosis on clinical characteristics and survival outcomes in Endometrioid (EC) and clear cell (CCC) ovarian carcinoma.

Methods: This study investigated 78 cases of EC and CCC diagnosed between 2010 and 2021. Demographic and clinical presentation data were obtained from medical records. Patients were followed up till March 2022.

Results: Of the 78 cases of CCC and EC ovary, 38 had histopathologically proven endometriosis, ovary being the most common site. There was no difference in mean age (50.97 and 50.05years), BMI, parity, menopausal status and CA 125 levels at presentation. Ascites was more frequent in the absence of endometriosis (30% vs 8%, $p=0.020$). However, this did not translate to a statistical difference in the stage, with majority presenting in early stage. (94% vs 83%). Progesterone receptor positivity on IHC was more likely in the presence of endometriosis (47% vs 18%, $p=0.005$). All 78 patients underwent primary cytoreduction with equal rates of optimal resection (97% and 98%). 74% with endometriosis and 83% without received adjuvant chemotherapy. 13% and 15% respectively received radiation, all of whom had CCC. There was no difference in the disease free interval (93.4 vs 97.3 months, $p=0.587$) and overall survival (100.2 vs 106.6 months, $p=0.716$) in the patients with and without endometriosis. Recurrences were predominantly pelvic in both groups.

Conclusions: In the Indian population, endometriosis did not have any impact on the age at presentation, CA 125 levels, stage of the disease and survival outcomes in EC and CCC ovary.

EP248 / #494

EPOSTER VIEWING: AS11 OVARIAN CANCER

3 YEARS SURVIVAL AND RISK OF CANCER PROGRESSION AND DEATH CAUSED BY OVARIAN CANCER IN GEORGIA

Dina Kurdiani¹, Vasil Tkeshelashvili², Tamar Beruchashvili³

¹MD,Ph.D Tbilisi Cancer Center, Gynecology, Tbilisi, Georgia, ²MD, JD, PhD, ScD, professor; University of Georgia, Tbilisi,, Public Health, Tbilisi, Georgia, ³PhD Program: Public Health, School of Health Sciences, The University of Georgia, Ph Program, Tbilisi, Georgia

Objectives: Ovarian cancer survival rates, cancer progression and risk of death with this cause have not been studied in Georgia yet. Conducting the study based on population registry data has been possible since 2015. 5 years registry dBase allowed us to study 3 years survival and risks.

Methods: 1,467 (5.0%) cases of ovarian cancer were registered in the Georgia in 2015-2019. Using dBase SPSS of the registry, 3-year survival of ovarian cancer and risks of cancer progression were studied; Risks of cancer progression and death were assessed 36 months after the incidence.

Results: Compared to other cancer sites, 3-year survival rate of ovarian cancer is low in both Georgia (55.4%) and Tbilisi (55.2%). Risk of ovarian cancer progression, 36 months after the incidence was 3.3 times higher than cervical and 1.4 higher than endometrial cancer in Tbilisi. Among gynecological cancers both in Tbilisi and in Georgia, No1 killer is ovarian cancer. The risk of ovarian cancer death in Tbilisi is 2.1 times higher compared to cervical and 2.4 times higher than endometrial cancer death.

Conclusions: Research should be continued and study 5 years survival and risks of cancer caused death, according to treatment methods and schemes, as well as cytological, ultrasound (3D), cytological, histological, histochemical and molecular characteristics of cancer. Study of 5-year survival, in addition should determine ECOG Adjusted Survival, for which it is recommended that the Registry add ECOG follow-up to the registration variables.

EP249 / #909

EPOSTER VIEWING: AS11 OVARIAN CANCER

MANAGEMENT OF ELDERLY PATIENTS WITH OVARIAN CANCER: FROM SURGERY TO MEDICAL THERAPY

Maria Elena Laudani¹, Martina Barboni¹, Luca Fuso², Annamaria Ferrero², Francesco Moro³, Roberta Nastruzzo¹, Giulia Parpinel¹, Francesca Petey¹, Alice Tomasi Cont¹, Irene Vanacore¹, Paolo Zola¹
¹Sant'Anna Hospital, University of Turin, Department Of Gynecology And Obstetrics, Turin, Italy, ²Mauriziano Hospital, Gynecology And Obstetrics, Turin, Italy, ³Molinette Hospital, University of Turin, Department Of General Surgery, Turin, Italy

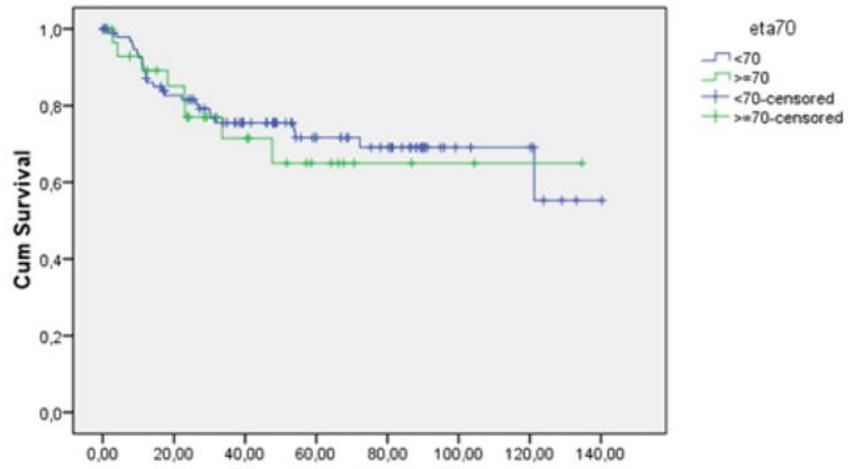
Objectives: Incidence of ovarian cancer increases with advancing age and reaches a peak at 70 years. The aim of this study is to analyse the surgical and pharmacological approach to elderly patients affected by ovarian cancer evaluating different outcomes and complications in different groups of patients.

Methods: We have conducted a multicenter retrospective study including patients treated in Sant'Anna Hospital and Mauriziano Hospital in Turin. Patients diagnosed with ovarian cancer were included and divided according to age at diagnosis in group A (≥ 70 years) and group B (< 70 years). For each patient are considered: co-morbidities, performance status, FIGO stage, grading, histotype, surgical treatment (divided in standard, radical and ultra-radical) and chemotherapy details.

Results: 457 patients were included in the study, 138 (30.2%) in group A and 319 (69.8%) in group B. Optimal cytoreduction was achieved in 84.3% of the younger patients and in 73.2 % of the older patients ($p=0.005$), although the surgical extension is not statistically significant different in the two groups ($p=0.64$). Disease free survival (DFS) was not statistically different in the two groups even in early and advanced stages (Fig.1 and 2). The residual tumour (OR=2.286; $p=0.0005$) and the ultraradical surgery (OR=1.434; $p=0.015$) resulted as independent survival prognostic factors according to the multivariate Cox analysis.

Survival Functions

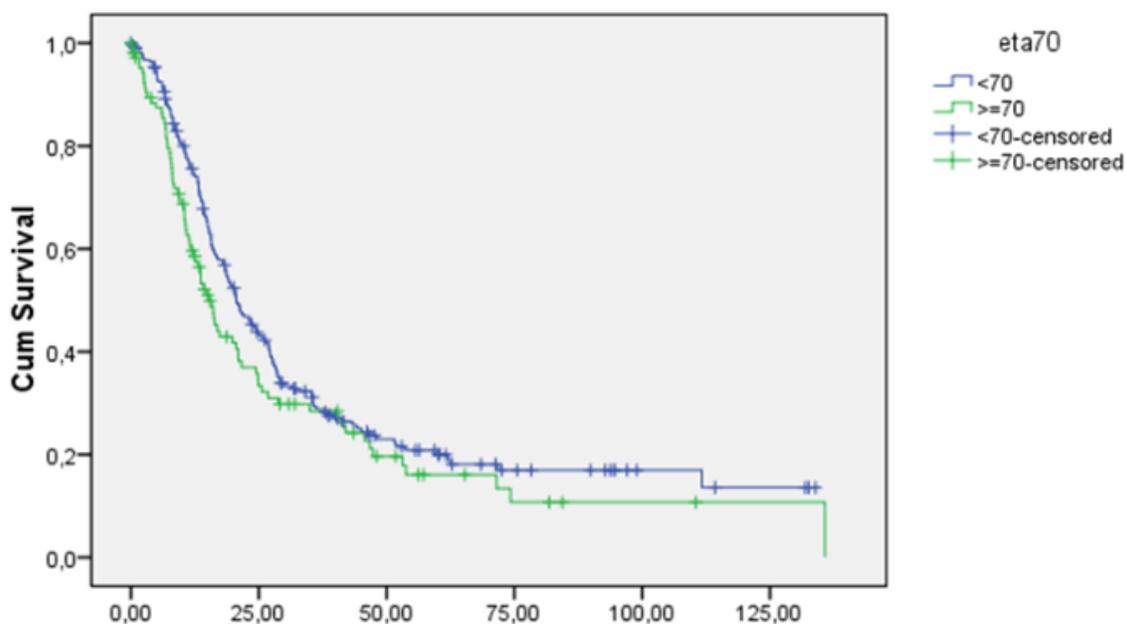
FIGO I/II



	Mean	95 % CI	
		Lower bound	Upper bound
<70 years	102,061	89,681	114,441
≥70 years	95,717	73,336	118,098
Overall	101,346	90,297	112,394

Survival Functions

FIGO III/IV



	DFS		
	Median	95 % CI	
		Lower bound	Upper bound
<70 years	20,618	17,046	24,190
≥70 years	15,192	12,143	18,242
Overall	19,204	16,463	21,945

Conclusions: Our data suggest that elderly patients can tolerate radical surgical treatments without a significant increase in morbidity, so an optimal cytoreduction should be considered the gold standard without ignoring the importance of managing these patients within Gynecologic Oncology units equipped with a multidisciplinary team.

EP250 / #199

EPOSTER VIEWING: AS11 OVARIAN CANCER

INTRAOPERATIVE PREDICTORS OF APPENDICEAL ABNORMALITIES IN MUCINOUS OVARIAN NEOPLASMS

Melissa Lavecchia¹, Anisha Dubey², Lua Eiriksson¹

¹Juravinski Cancer Centre, Gynecologic Oncology, Hamilton, Canada, ²Queen's University, Obstetrics & Gynecology, Kingston, Canada

Objectives: The aim of this study was to evaluate intraoperative factors associated with pathological abnormalities of the appendix at time of gynecologic oncology surgery for mucinous ovarian neoplasms (MONs).

Methods: We conducted a retrospective cohort study of 225 patients with pathology confirmed MON (cystadenoma, borderline tumor, and adenocarcinoma). Eligible patients underwent surgery for an adnexal mass with concurrent appendectomy between 2000–2018. Pathological findings of the appendix were categorized and intraoperative factors, such as tumor frozen section and surgeon's impression of the appendix were analyzed using descriptive statistics and logistic regression.

Results: Most patients' appendixes were unremarkable on final pathology (77.8%). One patient with adenocarcinoma had metastatic spread to the appendix. Twenty-three patients (10.2%) had low-grade appendiceal mucinous neoplasms, where 22/23 were in the setting of malignancy, and one patient had a mucinous borderline ovarian tumor. Both abnormal intraoperative surgical impression of the appendix and malignant frozen section were independent predictors of abnormal appendix on final pathology, OR 11.19 (95%CI 4.38-28.60) and OR 3.23 (95%CI 1.35-7.76), respectively. When combining normal intraoperative appearance of the appendix and benign ovarian tumor on frozen section, specificity was found to be 86%, with seven (14%) patients being misclassified.

Conclusions: Frozen section of the ovary suggesting malignancy and abnormal surgical appearance of the appendix were highly associated with abnormal appendix on final pathology. However, benign frozen section and normal appearing appendix are poor predictors of pathological findings of the appendix. Appendectomy should be considered in all cases of MONs, regardless of intraoperative findings.

EP251 / #311

EPOSTER VIEWING: AS11 OVARIAN CANCER

COMPARISON OF SURVIVAL OUTCOMES ACCORDING TO BRCA1/2 VARIANT TYPE IN HIGH-GRADE SEROUS OVARIAN CANCER

Juhun Lee¹, Jong Mi Kim¹, Yoon Hee Lee¹, Gun Oh Chong¹, Dae Gy Hong¹, Nan Young Lee², In Hee Lee³, Ji Young Park⁴

¹Kyungpook National University Chilgok Hospital, Department Of Obstetrics And Gynecology, Daegu, Korea, Republic of, ²Kyungpook National University Chilgok Hospital, Department Of Clinical Pathology, Daegu, Korea, Republic of, ³Kyungpook National University Chilgok Hospital, Department Of Hemato/oncology, Daegu, Korea, Republic of, ⁴Kyungpook National University Chilgok Hospital, Department Of Pathology, Daegu, Korea, Republic of

Objectives: Mutations of BRCA1/2 improve cancer prognosis due to their better response to platinum-based chemotherapy. To appropriately evaluate the influence of pathogenic BRCA1/2 mutations on survival outcomes, various clinical factors related to chemotherapy should be controlled because those mutations are correlated with platinum-based chemotherapy agents. However, few previous studies have considered factors, such as delivered dose intensity (DDI) of chemotherapy agents, relative dose intensity (RDI), or treatment delay. This study evaluated OS and PFS under similar conditions of first-line adjuvant chemotherapy within seven years in HGSOV.

Methods: A total of 160 patients with HGSOV were enrolled. All patients underwent chemotherapy with a combination of taxane and platinum drugs. A germline BRCA1/2 genetic test was conducted by two methods: NGS and PCR with direct sequencing. The pathogenic BRCA1/2 variant group included PV and LPV, while the non-pathogenic group included wild-type and VUS. For first-line chemotherapy, DDI, RDI, and delay of duration were calculated in all patients.

Results: Of the tested variants, 108 (67.5%) were non-pathogenic and 52 (32.5%) were pathogenic. No significant difference was found in various clinical factors of cancer stage, surgery. In chemotherapy, there was no significant difference for the number of cycles, DDI, RDI, delayed period. There was no significance for OS or PFS within five or seven years.

Conclusions: In patients with HGSOV, the OS and PFS for germline BRCA1/2 pathogenic and non-pathogenic variants were not significantly different under similar conditions of first-line adjuvant chemotherapy within seven years.

EP252 / #515

EPOSTER VIEWING: AS11 OVARIAN CANCER

PREDICTION OF SURGICAL OUTCOMES OF INTERVAL DEBULKING SURGERY (IDS) USING IN ADVANCED OVARIAN CANCER: A NOVEL SCORING SYSTEM USING POST-NEOADJUVANT CHEMOTHERAPY (NAC) COMPUTED TOMOGRAPHY (CT)

Taekyung Lee¹, Na Young Kim², Kyung Hwa Han^{2,3}, Junsik Park⁴, Yong Jae Lee¹, Jung-Yun Lee¹, Dae Chul Jung^{2,3}

¹Institute of Women's Medical Life Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Research Institute of Radiological Science, Yonsei University College of Medicine, Department Of Radiology, Seoul, Korea, Republic of, ³Severance Hospital, Yonsei University College of Medicine, Center For Clinical Image Data Science, Seoul, Korea, Republic of, ⁴Yonsei University, Severance Biomedical Science Institute, Seoul, Korea, Republic of

Objectives: Residual disease after interval debulking surgery (IDS) is the most critical prognostic predictor in advanced ovarian cancer. Predicting complete resection is important to reduce futile surgery and improve survival rate. The aim of this study is to create new radiologic scoring system in preoperative computed tomography (CT) for prediction of optimal cytoreduction.

Methods: CT scans of 72 patients who underwent IDS were retrospectively reviewed. Residual disease measuring ≥ 0.5 cm was presented suboptimal cytoreduction. All surgical record and new radiologic scoring model were made according to Sugarbaker's Peritoneal Cancer Index (PCI). This system scored the degree of tumor extent from 0 to 5 points for each region and the larger the number, the more severe it is.

Results: The complete cytoreduction rate of the total study population was 59.7% (n =43). The patients with optimal cytoreduction after IDS had significantly longer progressive free survival than other patients (p value = 0.04). CA125 levels after NAC did not affect optimal resectability (the area under the ROC curve(AUC) = 0.584, 95% CI : 0.450, 0.719). Using univariate and multivariate analysis, in prediction model including the greater omentum, ascending colon and right paracolic, AUC was 0.651 (95% CI: 0.539, 0.763). Using random forest, top 3 CT features were selected with a threshold of 0.1; greater omentum, pelvis, lesser sac and lesser omentum. The top 3 features achieved the AUC of 0.729 (95% CI: 0.622, 0.833).

Figure 1. Importance of features in the prediction of optimal cytoreduction.

LNE = lymph node enlargement, IMA = inferior mesenteric artery

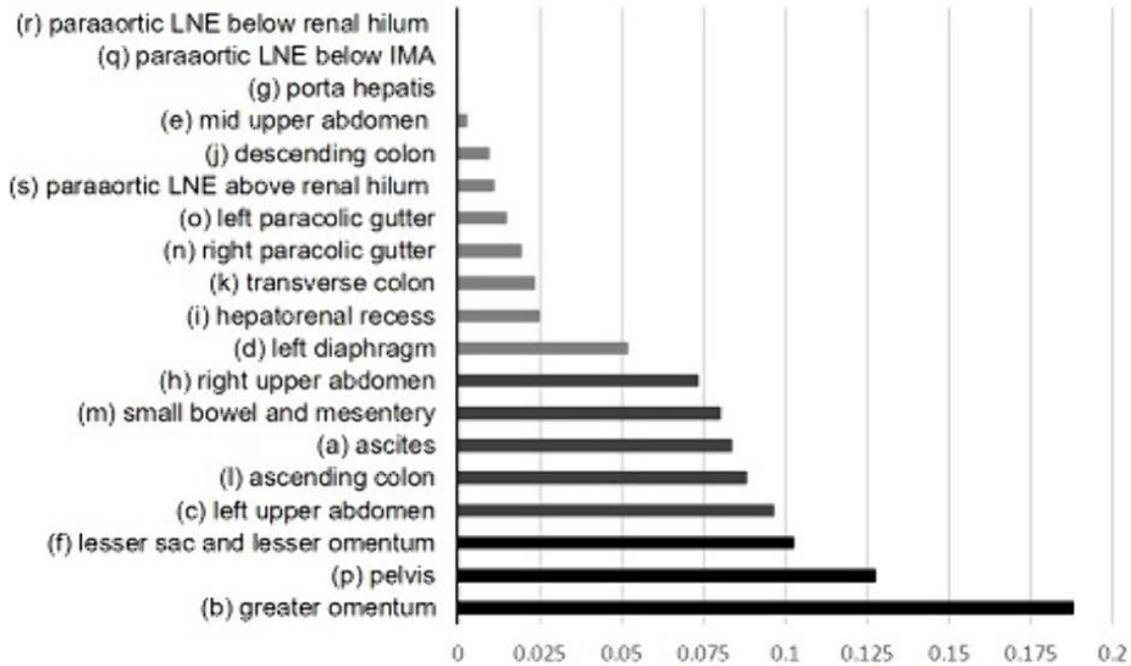
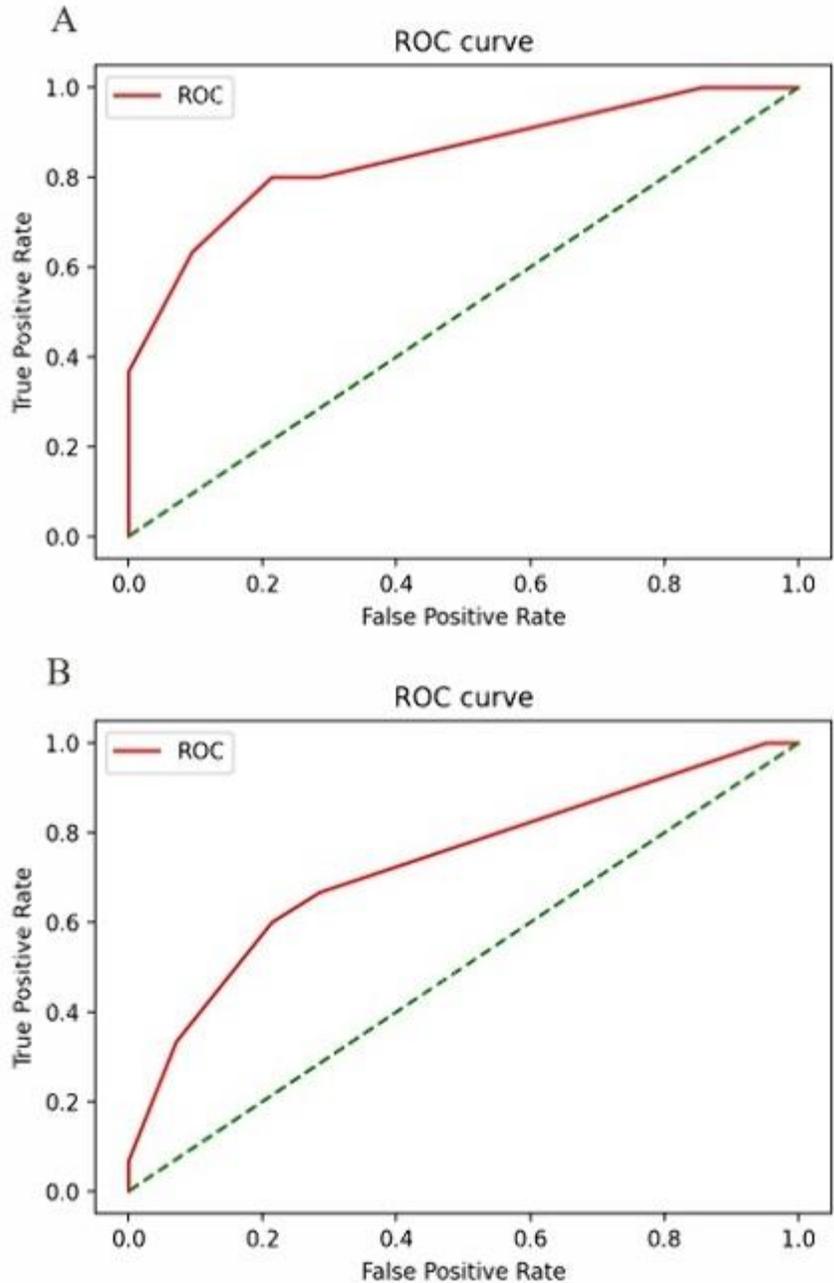


Figure 2. A: Graphs show area under receiver operating characteristic curve (AUC) of random forest model with top 8 features. AUC (95% CI) = 0.847 (0.759, 0.929)

B: Graphs show AUC of random forest model with top 3 features. AUC (95% CI) = 0.729 (0.622, 0.833)



Conclusions: Low CT score of disease at top 3 features on preoperative CT scan can be strong predictor for optimal cytoreduction.

EP253 / #593

EPOSTER VIEWING: AS11 OVARIAN CANCER

PROTEOMIC DISCOVERY OF BLOOD BIOMARKERS PREDICTING PROGNOSIS OF HIGH-GRADE SEROUS OVARIAN CARCINOMA

Seung Jun Lee¹, Se Ik Kim^{1,2}, Hee Seung Kim^{1,2}, Hyun Hoon Chung^{1,2}, Jae-Weon Kim^{1,2}, Maria Lee^{1,2}
¹Seoul National University Hospital, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Seoul National University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: Investigate novel prognostic blood biomarkers of high-grade serous ovarian carcinoma (HGSOC) through mass spectrometry-based proteomics.

Methods: We conducted label-free liquid chromatography-mass spectrometry using fresh-frozen plasma samples (n=20) obtained from patients with HGSOC. Based on progression-free survival (PFS), samples were divided into two groups: good (PFS \geq 18 months) and poor prognosis groups (PFS <18 months). Proteomic profiles were compared between two groups. Referring to the proteomics data, which we previously produced using chemotherapy-naïve, fresh frozen HGSOC cancer tissues, the overlapped protein biomarkers were selected as candidate biomarkers. Validation of biomarkers were conducted using an independent set of HGSOC plasma samples (n=202) via enzyme-linked immunosorbent assay (ELISA). To construct models predicting 18-month PFS rate, we performed stepwise-selection based on the area under the receiver operating characteristic curve (AUC) with 5-fold cross-validation.

Results: Differentially expressed protein analysis in plasma samples revealed that 38 proteins were upregulated in good prognosis group, 59 proteins were upregulated in poor prognosis group. Through bioinformatics analyses, GSN, SND1, VACN, CD163, SIGLEC14, and PRMT1 were selected as candidate biomarkers and underwent ELISA. Among them, high level of GSN and low level of SND1 were associated with worse PFS. Combining clinical variables and ELISA results, we constructed several models. Among them, the model consisting of four predictors (FIGO stage, residual tumor after surgery, GSN, and SND1) showed the best performance in predicting the 18-month PFS rate and outperformed the CA-125 model.

Conclusions: Through proteomics analyses, we identified novel blood protein biomarkers associated with the prognosis of HGSOC and successfully developed the prediction model.

EP254 / #715

EPOSTER VIEWING: AS11 OVARIAN CANCER

EXPRESSION PROFILES OF ID AND E2A IN OVARIAN CANCER AND SUP-PRESSION OF OVARIAN CANCER BY THE E2A ISOFORM E47

Yong Jae Lee¹, Eun Ji Nam², Sunghoon Kim¹, Young Tae Kim¹, Pamela Itkin-Ansari³, Sang Wun Kim¹
¹Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Yonsei University College of Medicine, Obstetrics And Gynecology, Seoul, Korea, Republic of, ³Sanford Burnham Prebys Medical Discovery Institute, Aging And Regeneration Program, San Diego, United States of America

Objectives: The E2A and inhibitor of DNA binding (ID) proteins are transcription factors involved in cell cycle regulation and cellular differentiation. Imbalance of ID/E2A activity is associated with oncogenesis in various tumors, but their expression patterns and prognostic values are still unknown. We evaluated ID and E2A expression in ovarian cancer cells and assessed the possibility of reprogramming ovarian cellular homeostasis by restoring the ID/E2A axis.

Methods: We analyzed copy number alterations, mutations, methylations, and mRNA expressions of ID 1 - 4 and E2A using The Cancer Genome Atlas data of 570 ovarian serous cystadenocarcinoma patients. We also determined the effect of E2A induction on ovarian cancer cell growth in vitro and in vivo using SKOV-3/Luc cells transduced with tamoxifen-inducible E47, a splice variant of E2A.

Results: Incidentally, 97.2% cases exhibited gain of ID 1 - 4 or loss of E2A. Predominantly, ID 1 - 4 were hypomethylated, while E2A was hypermethylated. Immunohistochemical analysis revealed that ID-3 and ID-4 expressions were high while E2A expression was low in cancerous ovarian tissues. Correlation analysis of ID and E2A levels with survival outcomes of ovarian cancer patients indicated that patients with high ID-3 levels had poor overall survival. Interestingly, E47 induced SKOV-3 cell death in vitro and inhibited tumor growth in SKOV-3 implanted mice.

Conclusions: Therefore, restoring ID/E2A balance is a promising approach for treating ovarian cancer.

EP255 / #721

EPOSTER VIEWING: AS11 OVARIAN CANCER

INTERVAL DEBULKING SURGERY WITH OR WITHOUT HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN ADVANCED-STAGE OVARIAN CANCER: SINGLE-INSTITUTION COHORT STUDY

Yong Jae Lee¹, Kieun Seon¹, Jung Chul Kim², Eun Ji Nam¹, Sang Wun Kim¹, Sunghoon Kim¹, Young Tae Kim¹, Jung-Yun Lee¹

¹Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Yonsei University College of Medicine, Department Of Radiology, Seoul, Korea, Republic of

Objectives: To evaluate the additive effects of hyperthermic intraperitoneal chemotherapy (HIPEC) to interval debulking surgery (IDS) in patients with advanced-stage ovarian cancer.

Methods: From January 2015 to February 2019, 123 patients with stages IIIC-IV ovarian cancer treated with neoadjuvant chemotherapy (NAC) followed by IDS with optimal cytoreduction. 43 patients received IDS with HIPEC and 80 patients had IDS without HIPEC. The median follow-up period was 34.4 months.

Results: No differences in baseline characteristics in patients were found between the 2 groups. The IDS with HIPEC group had fewer median cycles of chemotherapy ($P = 0.002$) than IDS group. The IDS with HIPEC group had higher rate of high surgical complexity score ($P = 0.032$) and higher rate of complete resection ($P = 0.041$) compared to IDS group. The times to start adjuvant chemotherapy were longer in IDS with HIPEC group compared to IDS group ($P < 0.001$). Postoperative grade 3 or 4 complications were similar in the two groups ($P = 0.237$). Kaplan-Meier analysis showed that HIPEC with IDS group had better progression-free survival (PFS) ($P = 0.010$), while there was no difference in overall survival between two groups ($P = 0.142$). In the multivariate analysis, HIPEC was significantly associated with better PFS (HR, 0.60; 95% CI, 0.39 - 0.93).

Conclusions: The addition of HIPEC to IDS resulted in longer PFS than IDS without HIPEC not affecting safety profile. Further research is needed to evaluate the true place of HIPEC in the era of targeted treatments.

EP256 / #931

EPOSTER VIEWING: AS11 OVARIAN CANCER

RE-VALIDATION OF CHEMOTHERAPY RESPONSE SCORE (CRS) AS A PROGNOSTIC FACTOR IN OVARIAN CANCER: THE EFFECT OF BEVACIZUMAB AND HIPEC ON SURVIVAL

Young Joo Lee¹, Yong Jae Lee², Eun Ji Nam², Sang Wun Kim², Sunghoon Kim², Young Tae Kim², Jung-Yun Lee²

¹Institute of women's Life Medical Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Institute of Women's Life Medical Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: The aim of the study is to re-verify CRS as a prognostic factor for ovarian cancer patients who received front-line maintenance therapy or intra-operative chemotherapy.

Methods: The medical records from tubo-ovarian HGSC patients who received neoadjuvant chemotherapy followed by interval debulking surgery between August 2009 to April 2020 underwent retrospective analysis. Progression-free survival (PFS) and overall survival (OS) were obtained using Kaplan-Meier analysis; the aforementioned was used to evaluate the effect of bevacizumab, hyperthermic intraperitoneal chemotherapy (HIPEC) and CRS.

Results: A total 233 patients were analyzed. 34 (14.6%) patients were treated with bevacizumab as a front-line maintenance therapy and 42 (18.0%) patients underwent IDS with HIPEC. CRS 3 in patients without bevacizumab maintenance therapy was associated with improved PFS (28.0 vs 21.1 months, $p=0.047$) and OS (87.2 vs 79.0 months, $p=0.036$) compared to CRS 1 or 2. However, there is no significant PFS or OS prolongation in bevacizumab-treated patients ($p=0.254$, $p=0.505$, respectively). Similarly, CRS 3 in HIPEC-naïve patients improved PFS significantly longer than CRS 1 or 2 (43.8 vs 19.7 months, $p=0.015$), whereas CRS 3 in HIPEC-treated patients were not significantly associated with prolongation of PFS nor OS ($p=0.492$, $p=0.241$, respectively).

Conclusions: Contrary to bevacizumab or HIPEC-naïve patients, CRS system may not predict survival in patients who were already treated with bevacizumab or HIPEC as an additional front-line therapy.

EP257 / #1025

EPOSTER VIEWING: AS11 OVARIAN CANCER

DOES GENETIC STATUS INFLUENCE TIME TO DEATH AFTER DIAGNOSIS WITH BRAIN METASTASIS IN OVARIAN CANCER?

Monica Levine, Paulina Haight, Brandon Fox, Brenna Espelien, Vincent Wagner, Leigha Senter, Floor Backes
The Ohio State University Comprehensive Cancer Center, Gynecologic Oncology, Columbus, United States of America

Objectives: The purpose of this study was to evaluate the impact of BRCA mutation status on survival among patients with epithelial ovarian, primary peritoneal or fallopian tube cancer (EOC) and brain metastasis (BM).

Methods: Single institution retrospective study of EOC patients who had access to germline and somatic genetic testing from 2017-2020. Genetic status, oncologic data and demographics were abstracted from medical records. Descriptive statistics were performed.

Results: From 2017-2020, 449 patients underwent germline genetic testing, and 308 patients underwent somatic testing. BM incidence was 2.04% (1/49) among germline BRCA (gBRCA) mutated cases, 14.58% (7/48) among somatic BRCA (sBRCA) mutated cases, and 3.41% (12/352) among patients without germline or somatic BRCA mutations (non-BRCA) ($p=.001$). Median time from initial diagnosis to diagnosis with BM was 38 months for gBRCA, 29 months for sBRCA, and 23 months for non-BRCA cases. Two cases were diagnosed with BM at initial diagnosis. Median time to death after BM diagnosis is not reached for gBRCA, 27 months for sBRCA, and 12.5 months for non-BRCA cases. There was no difference in the number of isolated BM between groups; systemic disease was present at the time of BM diagnosis for 16/20 (80%).

Conclusions: This is the first report describing outcomes of EOC with BM incorporating germline and somatic genetic data. BMs were most frequent in sBRCA patients. Survival after BM diagnosis was longest for the gBRCA, followed by sBRCA, and shortest for non-BRCA cases. The presence of BRCA mutations, germline or somatic, may represent a favorable prognostic factor if BM are diagnosed.

EP258 / #760

EPOSTER VIEWING: AS11 OVARIAN CANCER

PEGYLATED LIPOSOMAL DOXORUBICIN DOES NOT AFFECT CARDIAC FUNCTION IN PATIENTS TREATED FOR GYNECOLOGIC MALIGNANCIES

Khrystyna Levytska¹, Robert Naumann², Miranda Benfield², Erin Crane²

¹Atrium Health, Obstetrics And Gynecology, Charlotte, United States of America, ²Atrium Health Carolinas Medical Center, Levine Cancer Institute, Gynecologic Oncology, Charlotte, United States of America

Objectives: Pegylated liposomal doxorubicin (PLD) has a more favorable side-effect profile compared to doxorubicin. While the FDA label for PLD includes a black box warning concerning cardiac toxicity, the actual risk of cardiotoxicity is unknown and it may be substantially less than that of doxorubicin.

Methods: All gynecologic malignancy cases with PLD use were reviewed over a 10-year period. Cardiac studies were aligned to PLD chemotherapy treatment and ejection fractions were compared pre- and post-treatment.

Results: A total of 453 patients were identified; 216 (48%) had pre-treatment testing. Predictors of pre-chemotherapy testing were diabetes ($p=0.015$), higher ECOG score ($p=0.004$), and cardiac disease ($p=0.032$). Hypertension, BMI, and prior/concurrent bevacizumab treatment did not influence the likelihood of pre-treatment evaluation. Eighty-three (18.3%) patients had pre- and post-treatment testing. Predictors of pre- and post- testing were number of cycles of PLD ($p<0.0001$) and total dose of PLD ($p<0.0001$). Seventy-five (90%) patients had $<10\%$ change in EF, 2 (2.4%) had improvement in EF $>10\%$, and 6 (7.2%) had a decrease in EF $>10\%$. Initial EF in patients with $>10\%$ decrease was higher than those without change or improvement ($p=0.0004$). BMI, obesity, hypertension, DM, cardiac disease, total PLD dose, number of cycles, and use of bevacizumab predicted changes in EF. One (1.2%) patient had a clinically significant decrease in EF (32.5%) resulting in interruption of treatment.

Conclusions: Risk of cardiac toxicity from administration of PLD for patients undergoing treatment for gynecologic cancers appears to be low and routine screening does not appear to be warranted, even in the presence of cardiac risk factors.

EP259 / #928

EPOSTER VIEWING: AS11 OVARIAN CANCER

BRCA GENETIC STATUS DOES IMPACT THE TOXICITY OF RARP INHIBITORS IN PATIENTS WITH EPITHELIAL OVARIAN CANCER

Hongqi Li, Yuewen Gao, Tiange Zhang, Minxue Gai, Hongyang Zhang
 Shandong Provincial Hospital, Gynecology, Jinan, China

Objectives: Although PARP inhibitors prolongates PFS survival of ovarian cancer, it also causes corresponding side effects of hematological and gastrointestinal (GI). It is important to determine whether genetic status impacts toxicity of PARPi .Therefore we explore BRCA genetic status whether impacts the toxicity of parpi and determine if PARPi indication impacts the relationship between genetic status and PARPi toxicity.

Methods: We conducted a single institution retrospective review of 76 patients with epithelial ovarian cancer receiving PARP inhibitors between August 2018 and April 2022. Medical records were reviewed for demographics, clinicopathologic data, BRCA genetic status, Previous treatment history, maintenance treatment line number and toxicity (rate, severity, category).

Results: In BRCA mutant patients, the incidence of GI and hematologic adverse reactions was respectively 52.7% and 47.3% while these two rates were 63.3% and 36.7% in BRCA wild-type patients(Table1). The incidence of grade 3 adverse events was 36.8% in BRCA mutant patients and 13.3% in BRCA wild-type patients. The incidence of grade 3 adverse events was significantly higher in BRCA mutant patients. Overall, the incidence of adverse events was higher and more severe in the BRCA mutant than in the BRCA wild type (P<0.05)(Table2).

Table1

Adverse reactions	BRCA (+) (N=38)	BRCA (-) (N=30)	BRCA (unknown) (N=8)
GI adverse reactions	20(52.7%)	19(63.3%)	5(62.5%)
hematologic adverse reactions	18(47.3%)	11(36.7%)	3(37.5%)

Table2

Grade of adverse effects— no. (%)	BRCA (+) (N=38)	BRCA (-) (N=30)	BRCA (unknown) (N=8)
1	3(7.9%)	18(60%)	4(50%)
2	21(55.3%)	8(26.7)	2(25%)
3	14(36.8%)	4(13.3%)	2(25%)

Conclusions: The occurrence of overall and G3 toxicity of BRCA+ patients was significantly higher than BRCA- patients with epithelial ovarian cancer. Patients with BRCA+ may predict worse toxicity to PARPi maintenance or late-line treatment which could provide early intervention signals to support treatment of patients.

EP260 / #796

EPOSTER VIEWING: AS11 OVARIAN CANCER

ROBOTIC PRIMARY CYTOREDUCTIVE SURGERY FOR ADVANCED STAGE OVARIAN CANCER: A PILOT STUDY, FEASIBILITY AND OUTCOMES.

Peter Lim, Kathryn Haran
Center of Hope, Gynecologic Oncology, Reno, United States of America

Objectives: To determine the feasibility and outcomes of patients undergoing primary robotic cytoreductive surgery (PRCS) for the treatment of advanced stage ovarian cancer (ASOC).

Methods: Patients with ASOC who underwent PRCS from April 2020 to April 2022 were prospectively reviewed. Demographic data, preoperative CT scan imaging studies evaluating presence of ascites, omental caking and size of the ovarian mass and CA125 were collected. The type, number, and success of cytoreductive surgical procedure were recorded. The rate of open conversion was determined. The intraoperative and postoperative outcomes and complications were analyzed.

Results: A total of 30 patients underwent PRCS. The average age was 63.4, average BMI was 24.8. Preoperative evaluation CA 125 was elevated in 90% (3/30). Average preoperative CT imaging pelvic mass was 6.5 cm and 73.4% (22/30) of patients had ascites and/or omental caking present. Optimal cytoreductive surgery was achieved in 73.4% (22/30) of patients. The conversion from robotic surgery to open laparotomy was 20% (6/30). The average intended procedures successfully performed was 3.8. Mean blood loss was 204cc, the average OR time was 215min [50, 700], and no intraoperative complications. There were no admissions to the Intensive Care Unit. The average length of stay was 5.5 days.

Conclusions: In our pilot study, Primary Robotic Cytoreductive Surgery for the treatment of ASOC is feasible. Majority of patients underwent successful variety of procedures without the requirement for conversion to open laparotomy and minimal complications.

EP261 / #394

EPOSTER VIEWING: AS11 OVARIAN CANCER

IDENTIFICATION AND CHARACTERIZATION OF CA-125, IL-2, IL-13 AND HE4 IN VAGINAL FLUID IN OVARIAN CANCER

Revital Linder, Ido Mick, Geula Klorin, Ari Reiss, Gali Levy, Maria Dolinski, Inbal Zafir-Lavie, Shiri Blumenfeld Kan, Shlomit Reshef, Amnon Amit
Rambam, Gynecological Oncology, Haifa, Israel

Objectives: The need for a sensitive and specific biomarker to detect early disease is essential to revolutionize ovarian cancer treatment. In this study we compared between the levels of CA125 in the serum and in the vaginal secretions of women with and without ovarian cancer. We also compared between the levels of CA125, IL2, IL13, and HE4 in the vaginal fluid in 3 groups: healthy women, patients after chemotherapy before surgery (neoadjuvant) and patients before treatment or surgery

Methods: In this study we analyzed sixty-five women in our Gynecological Oncology Unit. CA-125 levels in the serum were measured using Human CA125/MUC16 ELISA and Luminex. IL-2, IL-13 and HE4 were analyzed using Luminex.

Results: CA-125 levels were significantly higher in vaginal secretions than in the serum of all groups. There was no statistical difference between the neoadjuvant subgroup compared to the healthy group. We therefore, investigated three additional biomarkers; IL-2, IL-13 and HE4, using only vaginal secretions. Of these, IL-2 and IL-13 showed promising results with statistical significance in differentiating between healthy and ovarian cancer patients. HE4 showed decreased levels in patients that received neoadjuvant treatment that were not significant when compared to the healthy group

Conclusions: This study demonstrates the promise of using vaginal secretions for detection of ovarian cancer. Further research is required.

EP262 / #507

EPOSTER VIEWING: AS11 OVARIAN CANCER

ADOPTION OF NEW FIRST-LINE MAINTENANCE STRATEGIES AMONG PATIENTS WITH PRIMARY ADVANCED OVARIAN CANCER AFTER FOOD AND DRUG ADMINISTRATION APPROVAL

Jinan Liu¹, Premal Thaker², Jinlin Song³, Cheryl Xiang⁴, Eric Wu⁴, Linda Kalilani⁵, Jean A Hurteau⁶, Michael Richardson⁷, John K Chan⁸

¹GlaxoSmithKline, Veo, Collegeville, United States of America, ²Washington University School of Medicine, Department Of Gynecologic Oncology, St Louis, United States of America, ³Analysis Group, Heor, Los Angeles, United States of America, ⁴Analysis Group, Veo, Boston, United States of America, ⁵GlaxoSmithKline, Veo, Durham, United States of America, ⁶GlaxoSmithKline, Veo, Waltham, United States of America, ⁷University of California, Oncology, Los Angeles, United States of America, ⁸California Pacific/Palo Alto Medical Foundation/Sutter Health, Gynecologic Oncology, Palo Alto, United States of America

Objectives: The US FDA approved 2 first-line maintenance treatments for primary advanced ovarian cancer (AOC) in 2020: niraparib, regardless of tumor biomarker status, on April 29, and olaparib+bevacizumab combination for homologous recombination–deficient tumors on May 8. We looked at adoption of these strategies 1 year after approval.

Methods: This retrospective study included patients diagnosed with AOC who completed first-line chemotherapy between April 29, 2019, and May 7, 2021, from the Flatiron Health electronic health record–derived deidentified database. Patient demographics, clinico-pathological characteristics, and maintenance treatment patterns were summarized descriptively.

Results: We identified 470 patients with primary AOC, 51.1% before April 29, 2020, and 48.9% after May 8, 2020. Within 1 year after May 8, first-line maintenance therapy increased from 53.3% to 60.0%. PARP inhibitor (PARPi) monotherapy increased from 22.9% to 28.3%; olaparib+bevacizumab increased from 2.9% to 7.4%. During the same period, olaparib monotherapy decreased from 15.0% to 9.6%, while niraparib monotherapy increased from 6.7% to 17.8%. In BRCAm, PARPi use (monotherapies and combination) increased from 75.0% to 81.8%; olaparib+bevacizumab increased from 3.1% to 22.7%. Olaparib monotherapy decreased from 53.1% to 50.0%. In BRCAwt, PARPi use (monotherapies and combination) increased from 26.3% to 39.8%; olaparib+bevacizumab increased from 3.0% to 6.6%. PARPi monotherapy increased from 18.6% to 29.5%; specifically, niraparib increased from 8.4% to 21.7%.

Conclusions: With approvals in 2020, PARPi maintenance use, both monotherapy and combination, has increased. Although PARPi use is increasing, nearly 13.6% of BRCAm patients did not receive maintenance therapy despite multiple trials showing significant benefits in primary AOC.

EP263 / #849

EPOSTER VIEWING: AS11 OVARIAN CANCER

OLAPARIB TREATMENT IN PATIENTS WITH PLATINUM-SENSITIVE RELAPSED OVARIAN CANCER BY BRCA MUTATION AND HOMOLOGOUS RECOMBINATION DEFICIENCY STATUS: CHARACTERIZATION OF LONG-TERM/SHORT-TERM TREATMENT DURATION IN LIGHT

Ying Liu¹, Cara Mathews², Fiona Simpkins³, Karen Cadoo¹, Diane Provencher⁴, Colleen McCormick⁵, Adam Einaggar⁶, Alon Altman⁷, Lucy Gilbert⁸, Destin Black⁹, Nashwa Kabil¹⁰, Rosie Taylor¹¹, Alan Barnicle¹², Jiefen Munley¹³, Carol Aghajanian¹

¹Memorial Sloan Kettering Cancer Center, Department Of Medicine, New York, United States of America, ²Program in Women's Oncology, Women and Infants Hospital, Brown University, Department Of Obstetrics And Gynecology, Providence, United States of America, ³Jordan Center for Gynecologic Oncology at the Abramson Cancer Center, University of Pennsylvania, Department Of Obstetrics And Gynecology, Philadelphia, United States of America, ⁴Centre Hospitalier de l'Université de Montréal (CHUM), Division Of Gynecologic Oncology, Montreal, Canada, ⁵Legacy Medical Group Gynecologic Oncology, Gynecologic Oncology, Portland, United States of America, ⁶West Cancer Center and Research Institute, Division Of Gynecologic Oncology, Memphis, United States of America, ⁷CancerCare Manitoba, Research Institute of Oncology and Hematology, University of Manitoba, Department Of Obstetrics, Gynecology And Reproductive Sciences, Winnipeg, Canada, ⁸McGill University Health Centre, Division Of Gynecologic Oncology, Montreal, Canada, ⁹Willis-Knighton Cancer Center, Gynecologic Oncology, Shreveport, United States of America, ¹⁰AstraZeneca, Us Medical Affairs, Oncology Medical, Gaithersburg, United States of America, ¹¹AstraZeneca, Gma Payer Biometrics, Oncology R&d, Cambridge, United Kingdom, ¹²AstraZeneca, Translational Medicine, Oncology R&d, Cambridge, United Kingdom, ¹³AstraZeneca, Us Patient Safety, Biopharmaceuticals Medical, Wilmington, United States of America

Objectives: The LIGHT study (NCT02983799) demonstrated the activity of olaparib treatment in patients with platinum-sensitive relapsed ovarian cancer (PSROC) and known BRCA mutation (BRCAm) and homologous recombination deficiency (HRD) status (Mathews C et al. ASCO 2021). We analyzed characteristics of patients with long-term and short-term olaparib treatment duration in LIGHT.

Methods: Patients with PSROC and ≥ 1 prior line of platinum-based chemotherapy (PBC) received olaparib monotherapy (300 mg bid; tablets) until investigator-assessed disease progression. Patients were assigned to four cohorts: germline BRCAm, somatic BRCAm, HRD-positive (non-BRCAm), and HRD-negative, and were grouped by treatment duration at the final data cutoff (August 27, 2020): >18 months for long-term and <3 months for short-term. Clinical and molecular characteristics were analyzed.

Results: Of the 258 evaluable patients with confirmed BRCAm and HRD status, 45 (17%) had long-term treatment duration (31 BRCAm [germline or somatic], 11 HRD-positive [non-BRCAm] and three HRD-negative) and 48 (19%) had short-term treatment duration (eight BRCAm [germline or somatic], 15 HRD-positive [non-BRCAm] and 25 HRD-negative). Reasons for olaparib discontinuation and dose modification are shown in Table 1. Overall, compared with short-term treatment duration, patients with long-term treatment duration showed a longer time since diagnosis, less advanced tumor stage at diagnosis, better ECOG status, and fewer prior lines of chemotherapy (Table 2).

Conclusions: Patients with long-term treatment duration more commonly had BRCAm or HRD-positive (non-BRCAm) tumors relative to HRD-negative tumors when compared with patients with short-term treatment duration. Long-term treatment duration was observed in all molecular groups, reinforcing the benefit of olaparib treatment in PSROC.

Table 1. Major reasons for olaparib discontinuation and dose modifications*

	Long-term treatment duration N=45	Short-term treatment duration N=48
Discontinued olaparib treatment, n (%)	19 (42)	48 (100)
Disease progression	12 (63) [†]	30 (63) [†]
AE	1 (5) [†]	6 (13) [†]
Olaparib dose interruption, [‡] n (%)	12 (27)	11 (23)
AE related	11 (92) [†]	11 (100) [†]
Olaparib dose reduction, [‡] n (%)	18 (40)	8 (17)
AE related	14 (78) [†]	5 (63) [†]

*Percentages may not total 100 because of rounding; [†]Percentages calculated using the number of patients who discontinued olaparib, had a dose interruption or dose reduction as a denominator; [‡]Some patients had more than one reason for dose interruption or reduction recorded. AE, adverse event.

Table 2. Baseline patient characteristics

	BRCAm		HRD-positive		HRD-negative[†]		Total	
	(germline + somatic)*		(non-BRCAm)[†]					
	LT	ST	LT	ST	LT	ST	LT	ST
	n=31	n=8	n=11	n=15	n=3	n=25	n=45	n=48
Median time since primary diagnosis, months	35.0	27.3	46.4	30.1	32.2	24.7	36.2	29.1
FIGO stage, n (%)								
I-II	5 (16)	1 (13)	1 (9)	0 (0)	0 (0)	2 (8)	6 (13)	3 (6)
III	21 (68)	4 (50)	10 (91)	13 (87)	2 (67)	17 (68)	33 (73)	34 (71)
IV	5 (16)	3 (38)	0 (0)	2 (13)	1 (33)	6 (24)	6 (13)	11 (23)
ECOG status, n (%)								
0	25 (81)	3 (38)	9 (82)	10 (67)	1 (33)	16 (64)	35 (78)	29 (60)
1	6 (19)	5 (63)	2 (18)	5 (33)	2 (67)	9 (36)	10 (22)	19 (40)
Median number of prior lines of chemotherapy, n (range)	1 (1-4)	1 (1-4)	2 (1-4)	2 (1-3)	2 (1-2)	2 (1-5)	1 (1-4)	2 (1-5)
Median number of prior PBCs, n (range)	1 (1-4)	1 (1-3)	2 (1-3)	2 (1-2)	2 (1-2)	2 (1-3)	2 (1-4)	2 (1-3)

*Germline or somatic BRCAm status was determined by central tumor and germline testing performed at Myriad Genetics or based on known germline BRCAm status at screening; [†]HRD status was determined by central tumor tissue testing performed at Myriad Genetics. HRD-positive and HRD-negative status was determined based on a predefined genomic instability score cut-off of ≥ 42 and < 42 , respectively. ECOG, Eastern Cooperative Oncology Group; FIGO, International Federation of Gynecology and Obstetrics; LT, long-term treatment duration; PBC, platinum-based chemotherapy; ST, short-term treatment duration.

EP264 / #556

EPOSTER VIEWING: AS11 OVARIAN CANCER

PHYSICIAN-REPORTED PATIENT INVOLVEMENT IN 1L OVARIAN CANCER TREATMENT, INCLUDING MAINTENANCE, IN THE US AND EUROPE: A REAL-WORLD CHART REVIEW ANALYSIS (2017–2020)

Domenica Lorusso¹, Bradley Monk², Jalid Sehoul³, Mansoor Mirza⁴, Kathleen Moore⁵, Talal Ali⁶, Stanislav Lechpammer⁷, Jeanne Schilder⁸, Anabel Ferreras⁹, Marie-Laure Louis⁹, Nathalie D'Esquermes⁹, Antonio Gonzalez-Martin¹⁰

¹Fondazione Policlinico Gemelli IRCCS and Catholic University of Sacred Heart, Department Of Women And Child Health, Rome, Italy, ²HonorHealth Research Institute, University of Arizona College of Medicine, Division Of Gynecologic Oncology, Phoenix, United States of America, ³Charité-Universitätsmedizin Berlin, Department Of Gynecology With Center For Oncological Surgery, Campus Virchow Klinikum, Berlin, Germany, ⁴Rigshospitalet–Copenhagen University Hospital, Department Of Oncology, Copenhagen, Denmark, ⁵Stephenson Cancer Center, Division Of Obstetrics And Gynecology, Department Of Gynecologic Oncology, University Of Oklahoma Health Science Center, Oklahoma City, United States of America, ⁶GlaxoSmithKline (at the time of study design and initiation), Oncology Medical Affairs, Philadelphia, United States of America, ⁷GlaxoSmithKline (at the time of study design and initiation), Oncology Medical Affairs, Waltham, United States of America, ⁸GlaxoSmithKline, Oncology Medical Affairs, Philadelphia, United States of America, ⁹Genactis, Advanced Solutions, Mougins, France, ¹⁰Clínica Universidad de Navarra, Medical Oncology Department, Madrid, Spain

Objectives: Ovarian cancer (OC) treatment options include VEGF inhibitors (VEGFi) and PARP inhibitors (PARPi) as first-line maintenance (1Lm) treatments. There is interest in understanding patient contribution in treatment selection. We describe physician-reported patient involvement in treatment decisions in the 1L setting.

Methods: Retrospective chart review study of electronic medical records (EMRs) in Italy/France/Germany/Spain/UK/US, conducted for patients diagnosed with OC (June 1, 2017–May 31, 2020) in line with Healthcare Market Research guidelines. Eligible oncologists extracted data from EMRs by completing standardized patient record forms (PRFs), including questions on patient involvement in treatment decisions. Data were descriptively summarized.

Results: PRFs for 7072 patients with OC were completed by 416 oncologists; 4986 patients received 1L adjuvant treatment. Higher rates of patient involvement were seen in Germany/UK/US; treatments selected differed when patient input was considered for 1L adjuvant (n=754) or 1Lm treatment (n=521; Table 1). Timing of patient involvement in 1L treatment decisions varied (Table 2). For 1Lm treatment, most patients (44%) discussed options with their physician at treatment initiation (36%–49% across countries), 16% after surgery, 24% at chemotherapy initiation, and 16% when chemotherapy response was evaluated.

Conclusions: Rates of physician-reported patient involvement in treatment decisions were consistent between 1L (15%) and 1Lm (16%); <50% of patients discussed 1Lm with their physician at treatment initiation, highlighting a need for early discussion with patients. Funding: GSK study OneCDP#214555. Editorial support provided by Fishawack Health, funded by GSK.

Table 1. Frequency of patients whose input was considered by physicians in treatment choices, overall and by country

Patient group, n (%)	Total	US	UK	Germany	Italy	Spain	France
Patients who received adjuvant 1L treatment	754/4986 (15%) ¹	203/630 (32%)	189/804 (24%)	240/1011 (24%)	25/824 (3%)	65/855 (8%)	32/862 (4%)
Patients who received 1Lm treatment	521/3331 (16%) ²	210/559 (38%)	93/430 (22%)	127/637 (20%)	12/503 (2%)	53/483 (11%)	26/719 (4%)
Patients who did not receive any anti-cancer treatment	78/176 (44%)	33/75 (44%)	9/13 (69%)	11/15 (73%)	14/48 (29%)	4/12 (33%)	7/13 (54%)

¹When patient input for 1L adjuvant treatment was considered (n=754), 48% received chemotherapy (CT), 47% received CT + VEGFI, and 5% received other treatment.

²When patient input for 1Lm treatment was considered (n=521), 5% received CT, 7% received VEGFI + PARPi, 33% received PARPi only, and 53% received VEGFI only; 2% received other 1Lm treatment.

Table 2. 1L adjuvant treatment selected by timing of discussion with patients (N=4986)

Treatment selection	Timing of treatment discussion		
	Treatment prescribed before options were discussed with the patient (n=2319 [47%])	Treatment options discussed with patient upfront and their input factored into decision (n=2506 [50%])	Patient came to the consultation prepared with treatment options (n=161 [3%])
Chemotherapy	47%	50%	64%
Chemotherapy + VEGFI	48%	45%	28%
Other	5%	5%	8%

EP265 / #432

EPOSTER VIEWING: AS11 OVARIAN CANCER

TOLERABILITY AND TOXICITY OF PARP INHIBITORS IN WOMEN WITH EPITHELIAL OVARIAN CANCER – A REAL WORLD COMPARISON BETWEEN OLDER AND YOUNGER WOMEN.

Samantha Low, Christine Crearie, Jennifer Brown, Manreet Randhawa, Rosalind Glasspool, Patricia Roxburgh
The Beatson West of Scotland Cancer Centre, Medical Oncology, Glasgow, United Kingdom

Objectives: The peak incidence rate of ovarian cancer (OC) falls within ages 75 to 79. Patients who respond favourably to platinum-based chemotherapy are offered maintenance PARP inhibitor (mPARPi). This study compares the tolerability and toxicity of mPARPi between older (≥ 70 years) and younger (< 70 years) patients in a real-world cohort.

Methods: A single centre retrospective analysis was carried out on all high-grade epithelial OC patients commenced on mPARPi (niraparib (n), olaparib (o) or rucaparib (r)) in first or subsequent line setting between January and November 2021.

Results: 74 patients commenced mPARPi between January and November 2021 (49n, 11o, 14r). 37 patients were < 70 years (median 60) and 37 patients were ≥ 70 years (median 74). In the younger group (Y), 75.7% experienced haematological toxicities (32.1%, G3-4), 37.8% nausea/vomiting (0%, G3-4), 24.3% hypertension (66.7%, G3-4) and 21.6% fatigue (0%, G3-4). In the older group (O), 59.5% experienced haematological toxicities (G3-4 36.4%), 40.5% fatigue (0%, G3-4), 40.5% nausea/vomiting (0%, G3-4) and 29.7% hypertension (54.5%, G3-4). There were no significant differences in starting doses between Y and O (full dose 73.0% vs 75.7% $p=0.45$, reduced dose 27.0% vs 24.3% $p=0.21$). There was a non-significant trend to more dose reductions but fewer dose interruptions in Y than O patients (65.8% vs 54.1% $p=0.5$, 56.8% vs 62.2% $p=0.18$). Median number of PARPi cycles delivered in the Y and O was 5 and 4 respectively with a median follow up time of 7.0 months.

Conclusions: There is no significant difference in tolerability and toxicity of mPARPi between older and younger women. Age alone cannot predict tolerability of mPARPi.

EP266 / #300

EPOSTER VIEWING: AS11 OVARIAN CANCER

ROBOTIC-ASSISTED LAPAROSCOPIC OVARIAN CANCER STAGING IS ASSOCIATED WITH HIGHER NODAL YIELD IN EARLY-STAGE OVARIAN CANCER: A NATIONAL CANCER DATABASE STUDY

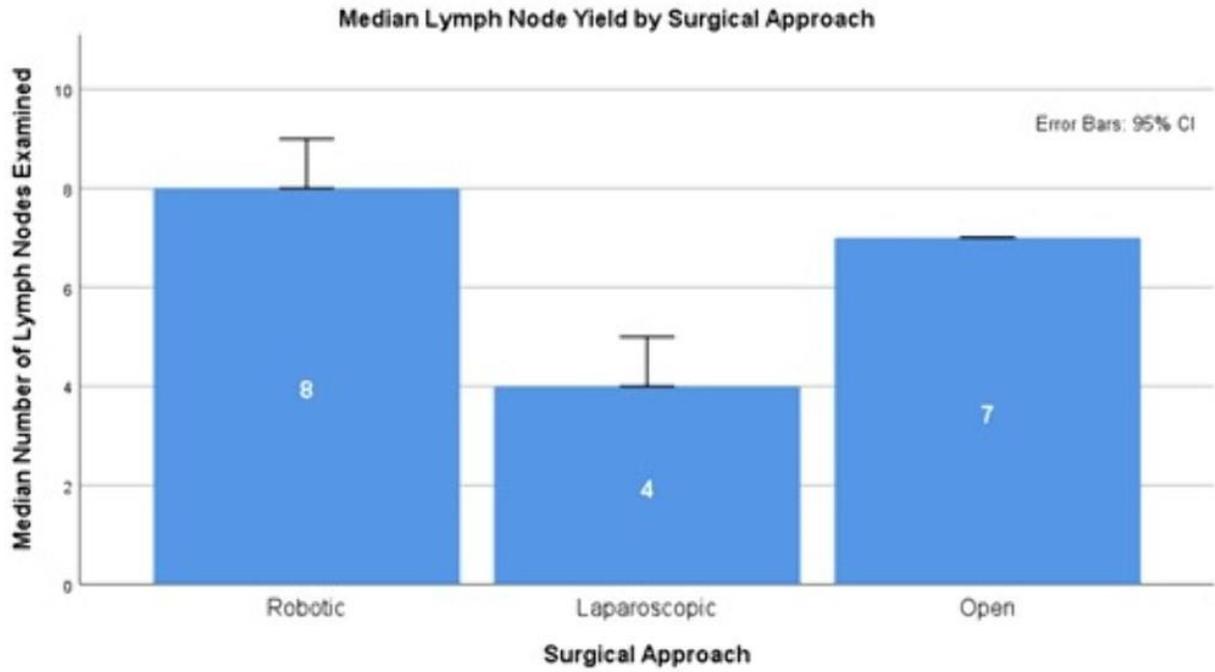
Nicole Lugo, Adrian Kohut, Mihae Song, Ana Tergas, Stephen Lee, Amy Hakim, Mehdi Kebria, Maria De Leon, Wei-Chien Lin, Thanh Dellinger, Ernest Han, Lorna Rodriguez-Rodriguez, Jeff Lin
City of Hope, Department Of Surgery, Duarte, United States of America

Objectives: Compare nodal yield by minimally-invasive surgical approach in early-stage (I-II) ovarian cancer.

Methods: The National Cancer Database (NCDB) was queried for patients with early stage (I-II) ovarian cancer between 2004 and 2017 who underwent minimally-invasive staging to compare adequate nodal yield by surgical approach.

Results: A total of 93,605 early-stage ovarian cancer cases were identified: 49,169 (52.5%) were stage I and 18,747 (20.0%) were stage II. Data was evaluable for 36,440 cases (38.9%). 12.4% (4,529) of lymph node assessments were performed robotically, 17.7% (6,434) were performed laparoscopically, and 69.9% (25,477) were performed via laparotomy. Conversion rates were 0.7% from robotic to open and 3.4% from laparoscopic to open. The most common histologic type was non-epithelial ovarian cancer (67.8%, 24,695). 57.2% of cases reviewed were privately insured, 43.1% received care at academic programs. The odds of sampling more than 10 lymph nodes with a laparoscopic approach was 76% that of open approach [OR 0.758 (95% CI 0.712-0.807), $p < 0.001$] but similar between robotic and open [OR 1.062 (95% CI 0.991-1.138), $p = 0.091$]. Robotic approach was associated with a higher median number of lymph nodes (median: robotic = 8, open = 7, laparoscopic = 4, all $p < 0.001$). Open and robotic approaches were associated with higher LN yield ($p < 0.001$), as was private insurance ($p < 0.001$). Figure 1. Nodal yield by surgery Robotic approach leads to a higher yield of pelvic lymph nodes (8) as compared to

laparoscopic (4) and open (7).



Conclusions: Robotic-assisted laparoscopy is associated with the highest number of lymph nodes removed in early-stage ovarian cancer patients.

EP267 / #1048

EPOSTER VIEWING: AS11 OVARIAN CANCER

PRECLINICAL EVALUATION OF A NOVEL NEAR INFRARED FLUORESCENT ANTI-TAG72-IR800 MONOCLONAL ANTIBODY FOR IDENTIFICATION OF OVARIAN CANCER IN A MOUSE MODEL

Nicole Lugo, Wei Wen, Adrian Kohut, John Yim, Paul Yazaki, Ernest Han
City of Hope, Department Of Surgery, Duarte, United States of America

Objectives: Determine whether ovarian cancer cells can be detected using, a novel monoclonal antibody (mAB) to TAG72 conjugated to a near infrared (NIR) dye (anti-TAG72-IR800) in a preclinical mouse model.

Methods: Athymic mice were subcutaneously (SQ) or intraperitoneally (IP) injected with 5 million cells of OVCAR3-ffLuc, a human ovarian cancer cell line expressing the reporter luciferase. After tumors developed, mice were injected with anti-TAG72-IR800 retroorbitally (75 µg/100ug). Mice were euthanized 72 hours post-injection and fluorescence imaging was obtained using Pearl Imaging system. Signal-to-background ratio (SBR) was determined using muscle signal as background.

Results: Development of ovarian cancer tumors in mouse models was confirmed by identification of luciferase activity by bioluminescence imaging. When anti-TAG-72-IR800 fluorescence activity was examined, we were able to visualize ovarian tumors in both SQ and IP mouse models. The fluorescence signal corresponded to the luciferase activity thus confirming that the ovarian cancer cells were specifically identified. There was overall high SBR noted for SQ tumors (SBR 50.6), and IP tumors (SBR

50.8) as compared to the peritoneum (SBR 0.6 for SQ and 0.7 for

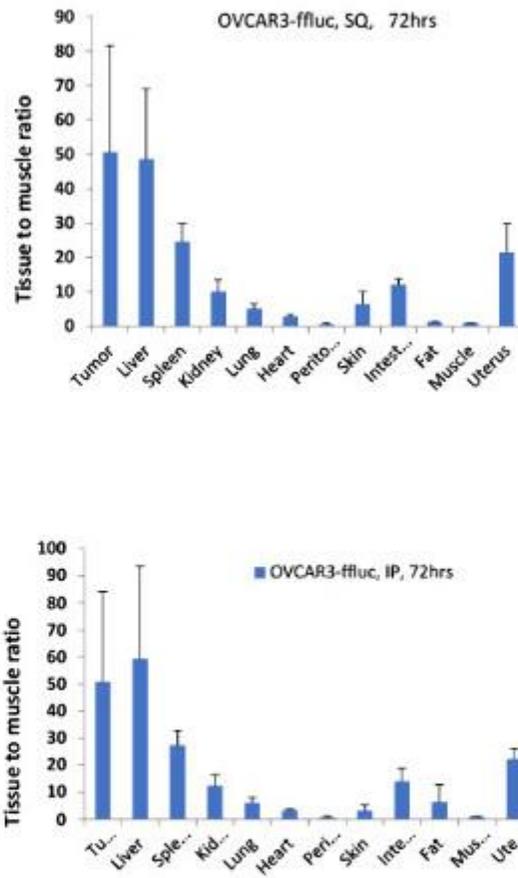


Figure 1. Tissue to muscle ratio averages of bioluminescence of anti-TAG72-IR800 in organs and tumor of subcutaneously and intraperitoneally injected mice with ovarian cancer cell line OV1CAR3-ffluc.

IP).

Conclusions: Anti-TAG-72-IR800 is a NIR fluorescent mAb probe that can identify ovarian cancer cells with a high signal-to-background ratio as compared to the peritoneum. Further studies to examine the clinical utility of anti-TAG-72-IR800 in the detection of ovarian cancer in humans is warranted.

EP268 / #553

EPOSTER VIEWING: AS11 OVARIAN CANCER

SIDE EFFECTS AND DECISION-MAKING FACTORS ASSOCIATED WITH MAINTENANCE THERAPY: PATIENT PREFERENCES USING A VISUAL SCALE ANALOG (VAS) ASSESSMENT

Larissa Meyer, M. Sol Basabe, Amy Schneider, Shannon Westin, Lisa Lowenstein, Robert Volk, Charlotte Sun

The University of Texas, MD Anderson Cancer Center, Gynecologic Oncology And Reproductive Medicine, Houston, United States of America

Objectives: Women with advanced stage ovarian cancer (OC) have several options for maintenance therapy (MT). Given the extended time over which MT is given, we assessed patient preferences for potential side effects (SEs) and decision-making (DM) factors associated with MT.

Methods: We assessed preferences of patients with advanced stage OC using the VAS during in-person interviews. Patients were asked to rate SEs associated with MT and chemotherapy (0=most bothersome, 100=least bothersome), and to evaluate DM factors associated with consideration of MT (0=least important, 100=most important).

Results: Table 1 shows patients characteristics. Table 2 shows median VAS scores. Patients were most bothered by the possibility of bowel perforation and severe nausea and vomiting (median VAS= 0.0 and 7.0, respectively). The least bothersome side effects were changes in how food tastes, thyroid problems, and peripheral neuropathy (median VAS= 66.5, 60.0 and 60.0, respectively). DM factors rated most important by patients were physician's recommendation, treatment efficacy, potential SEs, and the need for routine monitoring (median VAS= 100.0, 100.0, 84.0 and 80.0, respectively). Out of pocket costs, treatment modality, length of treatment visits and the indirect costs (median VAS= 63.5, 50.0, 40.0 and 38.5, respectively) were considered less important by patients.

Table 1. Demographic characteristics (N=80 pts)	
Median Age (years), (range)	61.5 (36.9-90.5)
	n (%)
Disease status at time of study	
Never recurred	40 (50.0)
Diagnosed with recurrent disease	40 (50.0)
Receipt of maintenance therapy at time of study	
Yes	53 (66.3)
No	27 (33.8)
Hispanic, Latina or Spanish	
Yes	10 (12.5)
No	70 (87.5)
Race	
White	66 (82.5)
Black or African American	5 (6.3)
Asian	4 (5.0)
Other	5 (6.3)
Marital Status	
Married/Partnered	63 (78.8)
Not married/not partnered	17 (21.4)
Education Level	
High school graduate	13 (16.3)
Some college or technical school	15 (18.8)
College graduate	52 (65.0)
Employment status	
Employed	25 (31.3)
Homemaker	11 (13.8)
Retired	32 (40.0)
Unemployed/Disabled	9 (11.3)
Did not respond	3 (3.8)
Annual income	
Less than \$50K and under	9 (11.3)
Greater than \$50K	50 (62.6)
Preferred not to answer	21 (26.3)

Side effects (100=least bothersome, 0=most bothersome)	VAS score	Decision Factors (100=most important, 0=least important)	VAS Score
No side effects*	100.0	Physician's recommendation	100.0
Changes in how food tastes	66.5	Treatment efficacy	100.0
Thyroid problems	60.0	Potential side effects	84.0
Peripheral neuropathy	60.0	Need for routine monitoring	80.0
Alopecia	58.5	Other issues ¹	68.0
Diarrhea	50.0	Need to additional medications ²	63.0
Skin rash	50.0	Treatment schedule	63.0
Difficulty concentrating	50.0	Out of pocket costs	63.5
Leg cramps	50.0	Treatment modality	50.0
Thrombocytopenia	45.0	Length of treatment visits	40.0
Nausea	45.0	Indirect costs ³	38.5
Hypertension	44.0	¹ Time away from work or regular household activities due to treatment ² Medications needed to manage side effects associated with treatment ³ Costs associated with receiving treatment such as parking fees, meals at clinic or hospital, gasoline/transportation costs	
Chronic wound	32.0		
Anemia	30.0		
Fatigue	30.0		
Pneumonitis	30.0		
Stomatitis	29.5		
Vomiting	23.5		
Severe nausea/vomiting	7.0		
Bowel perforation	0.0		
*Used as control to assess tool understanding			

Conclusions: SEs that are considered temporary in nature or manageable with additional medications were rated as the less bothersome by patients. Potentially life-threatening and other serious SEs impacting quality of life were considered the most bothersome by patients. When considering MT, physician's recommendation and treatment efficacy were consistently rated as by far the most important by patients.

EP269 / #1005

EPOSTER VIEWING: AS11 OVARIAN CANCER

BRCA1/2 TESTING RATES IN EPITHELIAL OVARIAN CARCINOMA: A FOCUS ON THE UNTESTED PATIENTS

Lieke Lanjouw¹, Marian Mourits², Joost Bart³, Arja Ter Elst³, Lieke Berger⁴, Annemieke Van Der Hout⁴, Naufil Alam⁵, Geertruida De Bock¹

¹University of Groningen, University Medical Center Groningen, Epidemiology, Groningen, Netherlands, ²University of Groningen, University Medical Center Groningen, Obstetrics & Gynaecology, Groningen, Netherlands, ³University of Groningen, University Medical Center Groningen, Pathology And Medical Biology, Groningen, Netherlands, ⁴University of Groningen, University Medical Center Groningen, Genetics, Groningen, Netherlands, ⁵AstraZeneca Pharmaceuticals LP, Epidemiology And Real World Evidence, Cambridge, United Kingdom

Objectives: To evaluate BRCA1/2 testing rates in epithelial ovarian cancer (EOC) patients and to compare rates of germline testing (performed until mid 2018) versus tumor-first testing with germline testing only in those with a positive tumor test (implemented mid 2018). Additionally, we aimed to delineate characteristics of patients who were less likely to receive BRCA1/2 testing.

Methods: A consecutive series of 250 patients diagnosed with EOC between 2016 and 2019 was included from the OncoLifeS Databiobank of the University Medical Center Groningen. Testing rates were analyzed for the overall study population and by period of diagnosis to evaluate rates of germline testing (period I) and tumor-first testing (period II) separately. Characteristics of tested and untested patients were compared using the appropriate test.

Results: Median age was 67.0 years (IQR 59.0-73.0) and 69.2% was diagnosed with high-grade serous carcinoma (HGSC). Overall, 80.0% of all patients had a known germline pathogenic variant (GPV) status. In period I, 79.5% had a known GPV status and in period II this was 81.0%. Overall, as well as in period I and II separately, the proportion of patients diagnosed with non-HGSC was significantly greater in the untested group compared to the tested group (overall: 51.0% versus 23.5%; $P < 0.001$).

Conclusions: The results show that BRCA1/2 testing rates are suboptimal and suggest that clinicians may deliberately choose not to test EOC patients with non-HGSC, although guidelines recommend BRCA1/2 testing in all EOC patients. Suboptimal testing rates limit the optimization of care for EOC patients and counseling of potentially affected relatives.

EP270 / #824

EPOSTER VIEWING: AS11 OVARIAN CANCER

WHY WOMEN DO NOT HAVE SURGICAL TREATMENT FOR ADVANCED STAGE OVARIAN CANCER: COHORT STUDY FROM EAST LONDON CANCER CENTRE

Roisin Mulholland¹, Saurabh Phadnis², Ellen Nelissen²

¹NHS Barts Health, The Royal London Hospital, London, United Kingdom, ²Royal London Hospital, Gynaecologic Oncology, London, United Kingdom

Objectives: The Ovarian Cancer Audit Feasibility Pilot found that nearly 40% of patients diagnosed with ovarian cancer in the United Kingdom did not have surgical treatment with a large degree of geographical variation, highlighting the need to look at these discrepancies within each cancer centre. This audit set out to identify women within Barts Health NHS Foundation Trust with stage 3 or 4 ovarian cancer who did not have surgical management, determine their demographics and the reasons for not having surgery.

Methods: Data was collected retrospectively from MDT proformas over a 5-year period (2016-2021) and analysed using Microsoft Excel and SPSS software.

Results: 92 women who were diagnosed with stage 3/4 ovarian cancer did not have surgical treatment. 59.7% (55/92) had chemotherapy. The mean age was 76.2 years (55-100, n=92) and the mean Charlson Comorbidity Index was 9.9 (6-14, n=92). The majority of women had stage 4 disease (58.7%, 55/92) and high-grade serous pathology (83.7%, 77/92). The most common reason for not having surgery was unresectable disease (63%, 58/92) followed by "poor performance status" (40.2%, 37/92) as detailed in MDT recommendations. Of those who did not have chemotherapy, the most common reason was poor performance status (59.3%, 16/27). 6.5% (6/92) had their treatment impacted by the COVID-19 pandemic.

Conclusions: Although this reflects the correlation between poor performance status and likelihood of treatment, unresectability of disease may reflect geographical variation in timely diagnosis. Further work is needed to determine the impact of these factors on local 5-year survival rates.

EP271 / #695

EPOSTER VIEWING: AS11 OVARIAN CANCER

ANTITUMOR IMMUNE RESPONSES INDUCED BY STEM CELL-DERIVED DENDRITIC CELLS IN SYNGENEIC AND ORTHOTOPIC MURINE OVARIAN CANCER MODELS

Sohyun Nam¹, Shin-Wha Lee¹, Yong Jae Lee², Yong Man Kim¹

¹Asan Medical Center, University of Ulsan, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ²GangNeung Asan Hospital, University of Ulsan College of Medicine, Department Of Obstetrics And Gynecology, GangNeung, Korea, Republic of

Objectives: The aim of this study is to evaluate the antitumor immune responses of mouse stem cell-derived dendritic cells (stem-DCs), corresponding to human CD141⁺ DCs, derived from bone marrow hematopoietic stem cells (BM-HSCs) in syngeneic and orthotopic murine ovarian cancer models.

Methods: Stem-DCs from HSCs and mono-DCs from monocytes were obtained from the bone marrow mononuclear cells of C57BL/6 mice, followed by antigen pulsing with ID8 tumor cell lysates. C57BL/6 mice were intraperitoneally injected with 5×10^6 ID8 cells to generate orthotopic models. They were divided into 6 groups for 3-week treatments: vehicle, low/medium/high-dose pulsed stem-DCs, mono-DCs, and unpulsed stem-DCs. At 8 to 9 weeks, antitumor and immune responses were evaluated after sacrificing the treated mice.

Results: Stem-DCs and mono-DCs characterized by CD8 α ⁺Clec9a⁺ and CD11c⁺CD80⁺CD86⁺ expression, respectively. Despite a lower dose compared with mono-DCs, pulsed stem-DC group showed lower body weight (Figure 1) and reduced ascites volume compared with those of vehicle group (P=0.0021 and P=0.0092, respectively). When comparing the representative images and H-E stained images, pulsed stem-DC group appeared to have fewer tumor implants, which were mostly restricted to the epithelium of ovaries, diaphragm and peritoneum. In the pulsed stem-DC group, enhanced immune responses were confirmed by significantly different levels of immunosuppressive and immunostimulatory markers. (Figure 2)

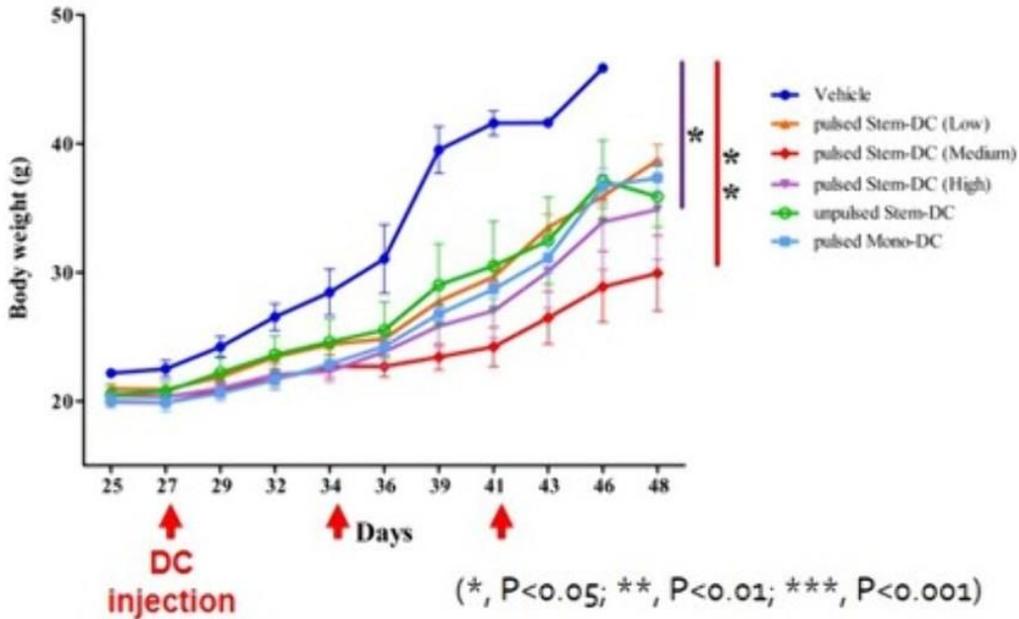


Figure 1. Changes in body weight of mice according to DC treatments.

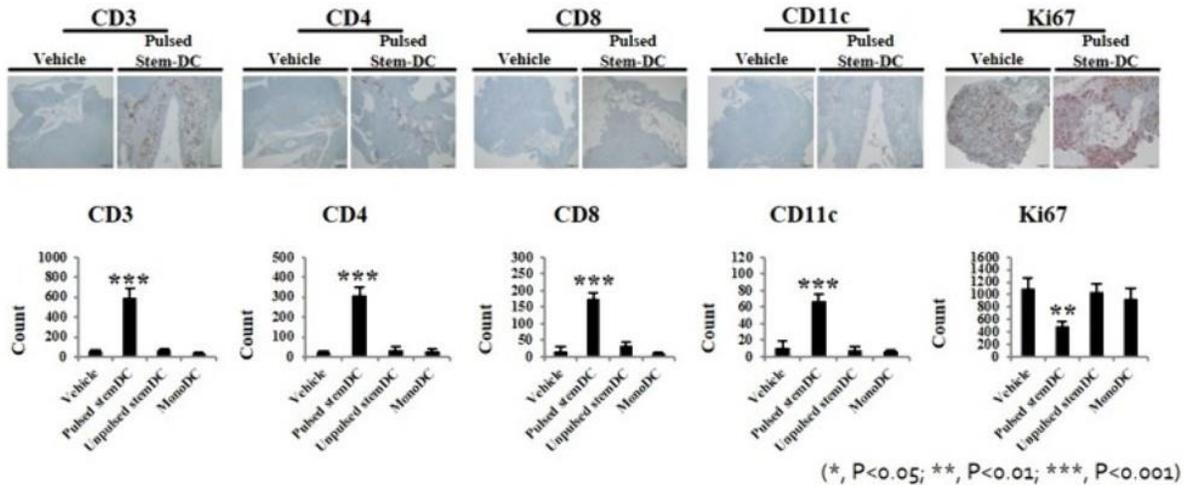


Figure 2. IHC staining to compare the amount of representative immune cells that were recruited in response to the tumor.

Conclusions: This study demonstrated that mouse stem-DCs derived from BM-HSCs could inhibit tumor growth and enhance antitumor immune responses against syngeneic and orthotopic ovarian cancer models. Further studies are needed to develop DC-based immunotherapy using human CD141⁺ DCs in ovarian cancer patients.

EP272 / #1143

EPOSTER VIEWING: AS11 OVARIAN CANCER

PARTNER AND LOCALIZER OF BRCA2 (PALB2) PATHOGENIC VARIANTS AND OVARIAN CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS

Priyanka Narayan¹, Muhammed Ahsan¹, Shanice Beaumont¹, Jenny Lin¹, Luiza Perez¹, Leslie Bull¹, Isabel Wolfe¹, Andy Hickner², Eloise Chapman-Davis¹, Evelyn Cantillo³, Kevin Holcomb¹, Ravi Sharaf⁴, Melissa Frey¹

¹Weill Cornell Medicine, Gynecologic Oncology, New York, United States of America, ²Weill Cornell, Samuel J Wood Library, New York, United States of America, ³Weill Cornell Medicine, Obstetrics And Gynecology, New York, United States of America, ⁴Weill Cornell Medicine, Gastroenterology, New York, United States of America

Objectives: Approximately 20% of ovarian cancers are due to an underlying germline pathogenic variant. While several genes have been well-established in the development of hereditary ovarian cancer (e.g. BRCA1/2, RAD51C, RAD51D, BRIP1, mismatch repair genes), the role of partner and localizer of BRCA2 (PALB2) remains uncertain. We sought to evaluate the association between PALB2 germline pathogenic mutations and ovarian cancer in the first meta-analysis on this topic.

Methods: We conducted a systematic review and meta-analysis in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines (PROSPERO no.: CRD42021281325). We searched key electronic databases to identify studies evaluating multigene panel testing in patients with ovarian cancer. Eligible trials were subjected to meta-analysis.

Results: Thirty studies met inclusion criteria. We found 55,137 cases of ovarian cancer with information available on germline PALB2 pathogenic variant status. Among ovarian cancer cases with PALB2 sequencing data available, 0.4% demonstrated a germline pathogenic variant in the PALB2 gene and the pooled odds ratio (OR) for having a PALB2 mutation was 2.31 (95% CI 0.89- 5.98). Among 94 patients with a germline PALB2 pathogenic variant, the pooled odds ratio (OR) for developing ovarian cancer was 2.85 (95% CI 1.58-5.15) relative to 33,855 patients without PALB2 mutations.

Conclusions: Our meta-analysis demonstrates that the pooled OR for developing ovarian cancer with an underlying PALB2 germline pathogenic variant was 2.85 (95% CI 1.58-5.15), exceeding the baseline population risk of 1-2%. Further studies related to PALB2 mutations and cancer family history are needed to improve management recommendations for patients.

EP273 / #307

EPOSTER VIEWING: AS11 OVARIAN CANCER

QUALITY-OF-LIFE OUTCOMES AFTER CYTOREDUCTIVE SURGERY FOR ADVANCED STAGE OVARIAN CANCER

Gatske Nieuwenhuyzen-De Boer^{1,2}, Hanane Aamran¹, Caroline Van Den Berg¹, Heleen Van Beekhuizen¹
¹Erasmus MC Cancer institute, University Medical Center Rotterdam, Gynecologic Oncology, Rotterdam, Netherlands, ²Albert Schweitzer Hospital, Gynecology And Obstetrics, Dordrecht, Netherlands

Objectives: This study aims to describe the quality-of-life (QoL) outcomes of patients with advanced-stage ovarian cancer after cytoreductive surgery until two year after surgery.

Methods: Data is derived from the PlaComOv-study, a single blinded randomized controlled trial with inclusions between 2018 and 2020. Women with FIGO stage IIIB–IV epithelial ovarian cancer were randomly allocated to have a CRS with or without the use of neutral argon plasma device. The QoL is measured pre-operatively, 4 weeks, 6, 12 and 24 months after CRS. Questionnaires of the European Organization for Research and Treatment of Cancer (EORTC) QLQ-C30 and OV-28 and EQ-5D-5L are used.

Results: 326 women were assigned to this trial. At baseline 286 (88%) women had completed QoL questionnaires. At 12 months 228 (80% of the patients alive) and at 24 months 137 (61% of all patients alive) provided QoL data. Complete CRS was the most independent predictor for a higher QoL at 12 months (76.4 vs 62.8 points; $p < 0.001$). The mean global QoL score at 12 months was significantly higher in the PlasmaJet group than in the control group, corrected for surgical outcome (77.1 vs 70.7 points; $p = 0.023$). The use of HIPEC or getting a stoma do not explain these differences.

Conclusions: Adjuvant use of the PlasmaJet during CRS for advanced-stage ovarian cancer resulted in a significantly higher QoL at 12 months after surgery. Complete CRS as surgical outcome is the most independent predictor for a higher QoL.

EP274 / #330

EPOSTER VIEWING: AS11 OVARIAN CANCER

PREOPERATIVE CANCER ANTIGEN 125 LEVEL AS A PREDICTOR FOR COMPLETE CYTOREDUCTION IN OVARIAN CANCER? A PROSPECTIVE COHORT STUDY AND SYSTEMATIC REVIEW

Gatske Nieuwenhuyzen-De Boer^{1,2}, Puck Brons¹, Christian Ramakers³, Sten Willemsen⁴, Malika Kengsakul¹, Heleen Van Beekhuizen¹

¹Erasmus MC Cancer institute, University Medical Center Rotterdam, Gynecologic Oncology, Rotterdam, Netherlands, ²Albert Schweitzer Hospital, Gynecology And Obstetrics, Dordrecht, Netherlands, ³Erasmus Medical Center, Department Of Clinical Chemistry, Rotterdam, Netherlands, ⁴Erasmus Medical Center, Department Of Epidemiology And Biostatistics, Rotterdam, Netherlands

Objectives: The amount of residual tumor after cytoreductive surgery (CRS) for advanced-stage ovarian cancer is correlated with overall survival. This study aims to describe the predictive value of pre-treatment serum cancer antigen 125 (CA-125) and the normalization of serum CA-125 after neoadjuvant chemotherapy (NAC) on surgical outcome.

Methods: A systematic review and a prospective clinical study were performed. The Embase, Medline, Web of science, Cochrane Library and Google Scholar databases were searched from database inception to April 2022. The clinical study is part of a randomized controlled trial, the PlaComOv-trial. Patients with FIGO stage IIIB-IV ovarian cancer who underwent CRS were enrolled from 2018 to 2020. A regression analysis was performed to demonstrate correlations between preoperative serum CA-125, reduction of serum CA-125 after NAC and surgical outcome.

Results: Fourteen relevant articles were analyzed of which eleven reported that the lower preoperative serum CA-125 the higher the probability of achieving complete CRS. In the prospective clinical study, patients who underwent interval CRS with preoperative serum CA-125 ≤ 35 kU/L had a higher probability of achieving complete CRS than patients with serum CA-125 >35 kU/L (85% vs 67%, OR 2.791, 95%CI 1.439-5.414, P=0.002). In multivariable analysis, absence of ascites and peritoneal carcinomatosis, FIGO stage and use of PlasmaJet during surgery appeared to be independent predictive factors for complete CRS.

Conclusions: In literature, preoperative serum CA-125 ≤ 35 kU/L was associated with a significant higher percentage of complete CRS. In the present study, preoperative serum CA-125 ≤ 35 kU/L did not present as an independent predictor for complete CRS in multivariable analysis.

EP275 / #524

EPOSTER VIEWING: AS11 OVARIAN CANCER

RETROSPECTIVE ANALYSIS OF TOTAL PARIETAL PERITONECTOMY WITHOUT SYSTEMATIC LYMPHADENECTOMY FOR ADVANCED EPITHELIAL OVARIAN CANCER

Suguru Odajima^{1,2}, Hiroshi Tanabe^{1,2}, Yuki Koike^{1,2}, Kota Yokosu^{1,2}, Aikou Okamoto²

¹National Cancer Center Hospital East, Gynecology, Chiba, Japan, ²The Jikei University School of Medicine, Department Of Obstetrics And Gynecology, Tokyo, Japan

Objectives: It is widely known that residual tumor after cytoreductive surgery is an important prognostic factor for advanced epithelial ovarian cancer. Total parietal peritonectomy (TPP) is a surgical procedure used to achieve the complete resection of microscopic peritoneal dissemination. However, TPP with systematic lymphadenectomy increases the rate of perioperative intra-abdominal infection associated with lymphatic ascites. This study analyzed the perioperative complications that developed when omitting systematic lymphadenectomy from TPP.

Methods: We retrospectively analyzed perioperative complications in epithelial ovarian cancer patients with stage IIIB–IVB who underwent TPP during primary and interval cytoreductive surgeries between April 2018 and October 2021.

Results: Thirty-three patients were enrolled in the study. The median patient age was 62 years. Of 31 patients (94%) with stage IIIC/IV disease, 24 (73%) had high-grade serous carcinoma. The median operative time and blood loss were 447 min and 2,831 mL. Complete tumor resection was performed in 30 patients (91%). Only five patients underwent partial lymphadenectomy for clinical metastatic lymph nodes. Further, grade 3 complications were seen in seven (21%) patients, and there were no fatal events in this study. Three patients (9%) had ureteric injuries, which was the most frequent complication in this study. Only one patient developed an intra-abdominal infection due to ascites. In this case, partial para-aortic and pelvic lymphadenectomies were performed.

Conclusions: This study revealed that TPP without systematic lymphadenectomy reduces the frequency of perioperative complications associated with ascites.

EP276 / #774

EPOSTER VIEWING: AS11 OVARIAN CANCER

OPTIMAL CYTOREDUCTION AND PLATINUM-FREE INTERVAL AFFECTING THE DURATION OF BEVACIZUMAB-BASED MAINTENANCE THERAPY AND PROGNOSIS IN THE FIRST PLATINUM-SENSITIVE RECURRENCE OF OVARIAN CANCER

Soo Hyun Oh¹, Soo Jin Park², Min Young Park², Jae-Weon Kim³, Noh Hyun Park³, Seungho Lee⁴, Hee Seung Kim³

¹Gil medical center, Department Of Obstetrics And Gynecology, Incheon, Korea, Republic of, ²Seoul National University hospital, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ³Seoul National University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ⁴Gachon university College of Medicine, Department Of Obstetrics And Gynecology, Incheon, Korea, Republic of

Objectives: Even though bevacizumab-based maintenance therapy (BMT) reportedly improved overall survival in the first platinum-sensitive recurrence of ovarian cancer, there was a lack of factors for predicting how long it will last. Thus, we investigated factors affecting the duration of BMT and their effect on the prognosis of the disease.

Methods: We included patients diagnosed with the first platinum-sensitive recurrence of ovarian cancer in two tertiary centers from January 2015 till August 2021. All patients received six cycles of paclitaxel-carboplatin-bevacizumab followed by BMT. We retrospectively collected data such as age, histologic type, status of BRCA mutation, platinum-free interval (PFI), extent of secondary cytoreduction, presence of extra-abdominal disease, number of recur lesions, duration of BMT, progression-free survival (PFS) and cancer-specific survival after the first recurrence (CSS).

Results: A total of 103 patients were included, and the median cycles of BMT was 13 (range, 1-108). Among them, 25 (24.3%) underwent optimal cytoreduction, whereas 4 (3.9%) and 74 (71.8%) received suboptimal cytoreduction or no surgery. PFI >12 months and optimal cytoreduction were factors for predicting 13 or more cycles of BMT (adjusted odds ratios, 3.334 and 4.675; 95% confidence intervals [CIs], 1.253-8.869 and 1.242-17.601), and improving CSS (adjusted hazard ratios [HRs], 0.064 and 0.121; 95% CIs, 0.011-0.355 and 0.181-0.837). Additionally, PFI >12 months was associated with better PFS (adjusted HR, 0.489; 95% CIs, 0.291-

Table 1. Characteristics of 103 patients with the first platinum-sensitive recurrence of ovarian cancer

Characteristics	Cycles of maintenance bevacizumab		P value
	<13 (n=49, %)	>13 (n=64, %)	
Age at recurrence (y)			0.080
<57	17 (37.8)	28 (62.2)	
≥57	32 (55.2)	26 (41.8)	
Histology			0.460
HGSC	37 (75.5)	44 (81.5)	
Non-HGSC	12 (24.5)	10 (18.5)	
Status of BRCA mutation			0.708
Wild	34 (69.4)	39 (72.2)	
BRCA1 mutation	6 (12.2)	8 (14.8)	
BRCA2 mutation	3 (6.1)	1 (1.9)	
Unknown	6 (12.2)	6 (11.1)	
PFI (mons)			0.002
6-12	29 (59.2)	15 (28.3)	
>12	20 (40.8)	38 (71.7)	
Secondary cytoreduction			0.004
Suboptimal or not performed	44 (89.8)	34 (63)	
Optimal	5 (10.2)	20 (37)	
Extra-abdominal lesion			0.924
No	34 (69.4)	37 (68.5)	
Yes	15 (30.6)	17 (31.5)	
No. of recur lesions			0.010
1-3	11 (22.4)	25 (46.3)	
4-19	26 (53.1)	25 (46.3)	
≥20			
Tumor response			<0.001
Complete response	10 (20.4)	30 (55.6)	
Partial response	31 (63.3)	23 (42.6)	
Stable disease	8 (16.3)	1 (1.9)	
Reasons for stopping			<0.001
PD	34 (69.4)	22 (40.7)	
Other than PD	15 (30.7)	10 (18.6)	
On medication	0 (0)	22 (40.7)	

Abbreviation: HGSC, high-grade serous carcinoma; PFI, platinum-free interval; PD, progressive disease

0.822).

Table 2. Factors affecting 13 or more cycles of bevacizumab-based maintenance therapy for the first platinum-sensitive recurrence of ovarian cancer

Characteristics	OR	95% CI	P value	Adjusted OR	95% CI	P value
<i>All patients</i>						
Age ≥ 57 y	0.493	0.223 – 1.092	0.081	–	–	–
Non-HGSC	0.701	0.272 – 1.805	0.461	0.232	0.065 – 0.825	0.024
BRCA1 or 2 mutation	0.889	0.321 – 2.459	0.820	–	–	–
PFI > 12 mons	3.673	1.609 – 8.388	0.002	3.334	1.253 – 8.869	0.016
Optimal cytoreduction	5.176	1.763 – 15.203	0.003	4.675	1.242 – 17.601	0.023
Extra-abdominal metastasis	1.041	0.451 – 2.403	0.924	–	–	–
No. of recur lesions						
4-19	0.423	0.173 – 1.037	0.060	–	–	–
≥ 20	0.147	0.039 – 0.558	0.005	–	–	–
<i>Except for patients who discontinued due to reasons other than PD</i>						
Age ≥ 57 y	0.433	0.177 – 1.061	0.067	–	–	–
Non-HGSC	0.833	0.279 – 2.487	0.744	–	–	–
BRCA1 or 2 mutation	0.833	0.279 – 2.487	0.744	–	–	–
PFI > 12 mons	8.145	3.011 – 22.038	<0.001	12.454	3.1814 – 48.757	<0.001
Optimal cytoreduction	7.346	1.950 – 27.666	0.003	7.420	1.132 – 48.622	0.037
Extra-abdominal metastasis	0.980	0.398 – 2.412	0.964	–	–	–
No. of recur lesions						
4-19	0.263	0.084 – 0.825	0.022	–	–	–
≥ 20	0.053	0.009 – 0.322	0.001	–	–	–

Abbreviation: CI, confidence interval; HGSC, high-grade serous carcinoma; OR, odds ratio; PFI, platinum-free interval; PD, progressive disease

Table 3. Factors affecting progression-free survival after the first recurrence

Characteristics	HR	95% CI	P value	Adjusted HR	95% CI	P value
<i>All patients</i>						
Age ≥ 57 y	1.799	1.098 – 2.947	0.020	–	–	–
Non-HGSC	0.833	0.455 – 1.525	0.553	–	–	–
BRCA1 or 2 mutation	1.072	0.584 – 1.968	0.821	–	–	–
PFI > 12 mons	0.420	0.261 – 0.675	<0.001	0.489	0.291 – 0.822	0.007
Optimal cytoreduction	0.414	0.221 – 0.774	0.006	–	–	–
Extra-abdominal metastasis	1.215	0.736 – 2.004	0.447	–	–	–
No. of recur lesions						
4-19	2.779	1.553 – 4.973	0.001	2.891	1.603 – 5.215	<0.001
≥ 20	4.734	2.291 – 9.779	<0.001	3.303	1.538 – 7.095	0.002
<i>Except for patients who discontinued due to reasons other than PD</i>						
Age ≥ 57 y	1.568	0.914 – 2.690	0.102	–	–	–
Non-HGSC	0.873	0.425 – 1.794	0.713	–	–	–
BRCA1 or 2 mutation	0.955	0.492 – 1.854	0.892	–	–	–
PFI > 12 mons	0.394	0.230 – 0.676	0.001	0.421	0.237 – 0.749	0.003
Optimal cytoreduction	0.376	0.183 – 0.772	0.008	–	–	–
Extra-abdominal metastasis	1.166	0.679 – 2.003	0.578	–	–	–
No. of recur lesions						
4-19	2.497	1.262 – 4.942	0.009	2.814	1.400 – 5.659	0.004
≥ 20	6.375	2.565 – 15.843	<0.001	4.895	1.928 – 12.430	0.001

Abbreviation: CI, confidence interval; HGSC, high-grade serous carcinoma; HR, hazard ratio; PFI, platinum-free interval; PD, progressive disease

Table 4. Factors affecting cancer-specific survival after the first recurrence

Characteristics	HR	95% CI	P value	Adjusted HR	95% CI	P value
<i>All patients</i>						
Age ≥ 57 y	1.799	1.098 – 2.947	0.020	–	–	–
Non-HGSC	0.833	0.455 – 1.525	0.553	11.360	2.350 – 54.926	0.003
BRCA1 or 2 mutation	1.072	0.584 – 1.968	0.821	–	–	–
PFI >12 mons	0.420	0.261 – 0.675	<0.001	0.064	0.011 – 0.355	0.002
Optimal cytoreduction	0.414	0.221 – 0.774	0.006	0.121	0.181 – 0.837	0.032
Extra-abdominal metastasis	1.215	0.736 – 2.004	0.447	–	–	–
No. of recur lesions				–	–	–
4-19	2.779	1.553 – 4.973	0.001	–	–	–
≥ 20	4.734	2.291 – 9.779	<0.001	–	–	–
<i>Except for patients who discontinued due to reasons other than PD</i>						
Age ≥ 57 y	1.674	0.528 – 5.307	0.382	–	–	–
Non-HGSC	3.904	1.168 – 13.042	0.027	12.114	2.267 – 64.737	0.004
BRCA1 or 2 mutation	1.137	0.248 – 5.224	0.869	–	–	–
PFI >12 mons	0.246	0.066 – 0.911	0.036	0.080	0.012 – 0.526	0.009
Optimal cytoreduction	0.424	0.092 – 1.953	0.271	0.115	0.014 – 0.946	0.044
Extra-abdominal metastasis				–	–	–
No. of recur lesions						
4-19	5.233	0.660 – 41.482	5.233	–	–	–
≥ 20	23.998	1.794 – 320.942	0.016	26.382	1.263 – 551.151	0.035

Abbreviation: CI, confidence interval; HGSC, high-grade serous carcinoma; HR, hazard ratio; PFI, platinum-free interval; PD, progressive disease

Conclusions: PFI >12 months and optimal cytoreduction potentially predicted 13 or more cycles of BMT and were related to improved survival in the first platinum-sensitive recurrence of ovarian cancer.

EP277 / #369

EPOSTER VIEWING: AS11 OVARIAN CANCER

ABDOMINAL TISSUE CONCENTRATIONS CARBOPLATIN AND INFLAMMATORY PROTEIN IN A HIPEC PROCEDURE - ASSESSMENT IN A NOVEL EXPERIMENTAL PORCINE MODEL.

Elisabeth Petersen^{1,2}, Mats Bue^{1,2}, Christina Harlev^{1,2}, Andrea Jørgensen^{1,2}, Anne Schmedes³, Pelle Hanberg^{1,2}, Lone Petersen⁴, Maiken Stilling^{1,2}

¹Aarhus University Hospital, Department Of Orthopaedic Surgery, Aarhus N, Denmark, ²Aarhus University Hospital, Department Of Clinical Medicine, Aarhus N, Denmark, ³Lillebaelt Hospital, Department Of Biochemistry And Immunology, Vejle, Denmark, ⁴Odense University Hospital, Department Of Clinical Medicine, University Of Southern Denmark, Odense C, Denmark

Objectives: Peritoneal dissemination from ovarian cancers is associated with poor prognosis and rapid disease progression. Hyperthermic intraperitoneal chemotherapy (HIPEC) is an antineoplastic treatment, which has improved survival and recurrence-free survival, but little is known about the acquired chemotherapy concentrations in local tissues. The aim of this study was to assess concentrations of carboplatin and inflammatory protein markers during and after HIPEC treatment dynamically and simultaneously in various abdominal organ tissues by means of microdialysis in a novel porcine model.

Methods: 8 pigs underwent imitation cytoreductive surgery followed by HIPEC (90 min) using a carboplatin dosage of 800 mg/m². Microdialysis catheters were placed for sampling of drug concentrations in various tissues: peritoneum, liver, bladder wall, mesentery, and in different depths of one mm and four mm in the hepatoduodenal ligament and rectum. During and after HIPEC, dialysates and blood samples were collected over eight hours.

Results: No significant differences in mean carboplatin AUC_{0-last} (range: 2657-5176 min x µg/mL), mean carboplatin C_{max} (range: 10.6-26.0 µg/mL) and mean carboplatin T_{max} (range: 105-206 min) were found between the compartments. In plasma there was a tendency towards lower measures. Inflammatory protein marker analysis is in progress, and there are no available results at the time of submission.

Conclusions: Equal carboplatin distribution in abdominal organ tissues, detectable concentrations for at least six hours after HIPEC completion, and a carboplatin penetration depth of minimum four mm were found. There are no available conclusions for the inflammatory protein marker results at the time of submission.

EP278 / #101

EPOSTER VIEWING: AS11 OVARIAN CANCER

APPLICATIONS OF MACHINE LEARNING IN OVARIAN CANCER: A SYSTEMATIC REVIEW

Sabrina Piedimonte¹, Gabriela Rosa², Brigitte Gerstl², Ana Coronel², Salvador Llenno², Danielle Vicus³
¹University of Toronto, Gynecologic Oncology, Toronto, Canada, ²The Rosa Institute, Epidemiology, Marboura, Australia, ³Sunnybrook Health Science Center, Gynecologic Oncology, Toronto, Canada

Objectives: Machine learning(ML) may play a crucial role in ovarian cancer prediction.The objective was to review the literature on the application of ML in OC and report the most commonly used algorithms and their performance compared to existing prediction tools and traditional statistics.

Methods: This is a systematic review of published literature from January 1985-March 2021 on the use of ML in OC. An extensive search of electronic library databases was conducted. Four independent reviewers screened the articles initially by title then full text. Quality was assessed using the MINORS criteria.

Results: Applications of ML were in clinical datasets(33%), preoperative diagnostics(30.7%), serum biomarkers(21.6%), genomics(12.5%), and cytoreductive outcomes(2.3%). Most commonly applied algorithms were Support Vector Machine[SVM](28%)and Neural Networks[NN] (25.28%). The number of publications on ML in OC increased three-fold from 20(1994-2010) to 67(2011–2021). Only 9 studies compared ML to traditional statistics. Among 29 clinical dataset studies, 4 compared ML with logistic regression(LR). Two studies reported better performance with ML compared to LR(accuracy: 0.88 vs 0.84, p=0.15), one study performed similarly and one study performed worse. Only one preoperative diagnostic study compared ML with LR. SVMs outperformed LR in classifying ovarian masses as benign or malignant(sensitivity: 0.88 vs. 0.70). five studies reported overall survival outcomes. One study found that NN classifiers outperformed LR in predicting overall survival(AUC: 0.72 vs. 0.62).

Conclusions: Most ML models outperformed existing prediction tools and traditional regression models. However, larger datasets would be required to validate findings for future use in this area and identify the areas in which ML can improve OC care.

EP279 / #434

EPOSTER VIEWING: AS11 OVARIAN CANCER

RESULTS OF A CROSS-SECTIONAL STUDY: PREVALENCE AND ASSOCIATED RISK FACTORS OF DEPRESSION IN HOSPITALIZED PATIENTS WITH OVARIAN CANCER

Juan Xu, Xinmei W Wang, [Pengpeng Qu](#)
Tianjin Central Hospital of Gynecology Obstetrics, Dept. Gynecologic Oncology, Tianjin, China

Objectives: The aim of this study was to determine the prevalence of depression in women with ovarian cancer and investigate its relationship with the clinicopathological and epidemiological characteristics of ovarian cancer.

Methods: This cross-sectional study recruited 228 patients. The state of depression was assessed via self-evaluation using Patient Health Questionnaire-9. Pathohistological and immunohistochemical analyses was used on the material obtained after the surgical removal of ovarian tumors, determining all significant clinical and morphological parameters.

Results: The overall prevalence of depression in patients with ovarian cancer (45.78%) was higher than those with non-malignant tumors (9.17%) ($p < 0.05$). Univariate analysis showed that age, marital status, histological type, clinical stage, serum CA125 and HE4 levels, lymph node metastasis, ascites, and Ki-67 expression level ($p < 0.05$) were risk factors for depression. After entering these variables into a stepwise logistic regression model (backward LR method), the multivariate analysis identified age, histological type ($p < 0.05$), and high serum CA125 level ($p < 0.05$) as risk factors for depression in patients with ovarian cancer.

Conclusions: Ovarian cancer patients have a high risk of depression. Age, histological type, and high serum CA125 level were risk factors associated with the presence of depression symptoms in Chinese women with ovarian cancer.

EP280 / #559

EPOSTER VIEWING: AS11 OVARIAN CANCER

REAL-WORLD PROGRESSION-FREE SURVIVAL AND OVERALL SURVIVAL FOR PATIENTS WITH ADVANCED OVARIAN CANCER UTILIZING PARP INHIBITOR SECOND-LINE MAINTENANCE THERAPY VS ACTIVE SURVEILLANCE

Robert Reid¹, Junxin Shi², Alisha Monnette², Katrine L. Wallace³

¹US Oncology, Virginia Cancer Specialists, Medical Oncology, Fairfax, United States of America, ²Ontada, Real World Research, The Woodlands, United States of America, ³Clovis Oncology, Inc., Health Economics And Outcomes Research, Boulder, United States of America

Objectives: Since 2017, the National Comprehensive Cancer Network has recommended PARP inhibitors (PARPi) as second-line (2L) maintenance treatment for patients with BRCA+/- ovarian cancer (OC). We present recent estimates of real-world PFS and OS for patients on 2L PARPi maintenance therapy vs active surveillance (AS).

Methods: From an electronic health record database of US Oncology Network (~1,200 physicians from >470 sites), adult females were included if diagnosed with advanced OC, received a 2L platinum-containing regimen for advanced OC, and had ≥2 visits between 1/1/2016 and 12/1/2020. A subset of charts was further reviewed to confirm eligibility and assess PFS. Patients were followed until earliest of: 3/31/2021, last patient record, or death. Kaplan-Meier survival methods and log-rank tests were used to estimate and compare OS and PFS of the groups to 24 months.

Results:

Figure 1. Progression-free survival from initiation of second-line maintenance

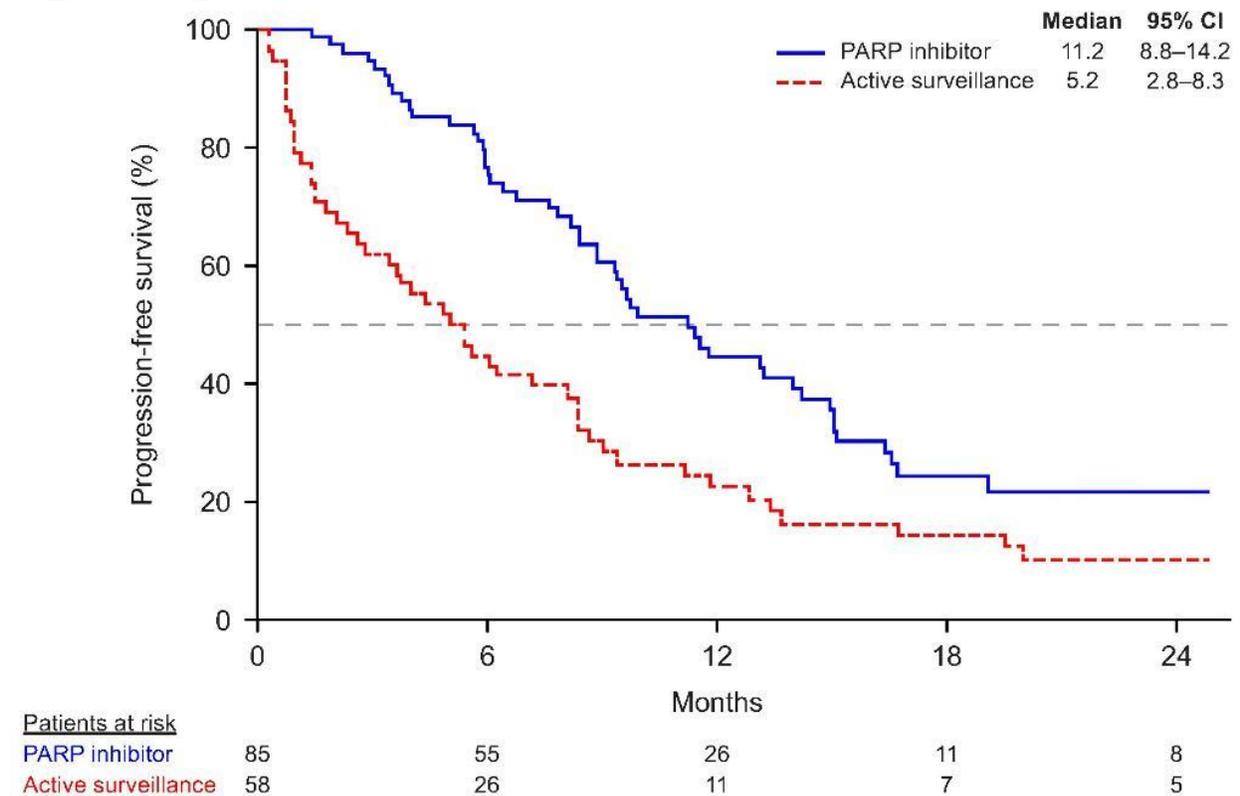
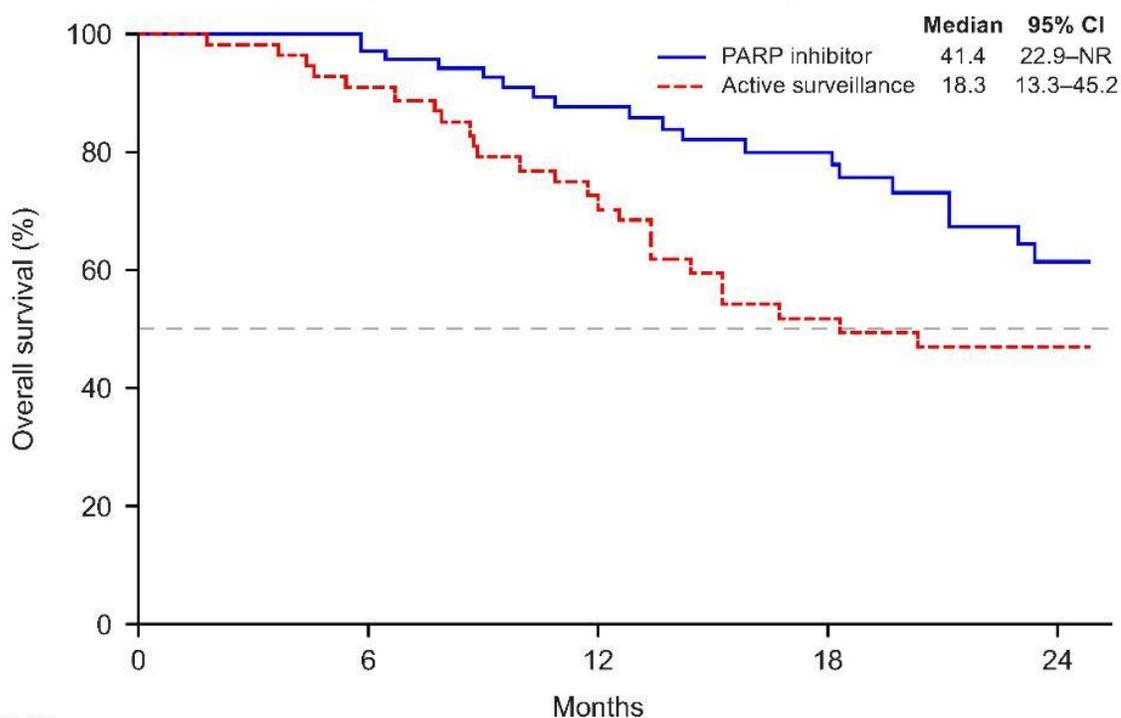


Figure 2. Overall survival from initiation of second-line maintenance



Patients at risk

	0	6	12	18	24
PARP inhibitor	85	69	48	37	20
Active surveillance	58	49	33	21	17

1154 patients met inclusion criteria for advanced OC and PARPi therapy or AS during the 2L maintenance period. Of these, 143 patient charts were manually reviewed (85 PARPi, 58 AS). PFS probability from initiation of 2L maintenance to 24 months was higher in the PARPi group vs AS (22% vs 10%; $P=0.0004$) (Figure 1). OS probability was also significantly higher in the PARPi group vs AS (62% vs 47% at 24 months; $P=0.0364$) (Figure 2).

Conclusions: This study of PARPi therapy vs AS confirms the efficacy benefits demonstrated in randomized studies of PARPis vs placebo, and provides evidence of the real-world effectiveness of PARPi maintenance therapy to improve survival in a population with advanced OC.

EP281 / #1130

EPOSTER VIEWING: AS11 OVARIAN CANCER

CONSOLIDATION HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN PATIENTS WITH ADVANCED STAGE OVARIAN CANCER: REVIEW OF A SINGLE CENTER EXPERIENCE

Rodolfo Riege¹, Maria Victoria Vivas^{1,2}, Martina Salvai¹, Gabriela Santillan¹

¹Hospital Privado de Rosario, Gynecology, Rosario, Argentina, ²Hospital Privado de Rosario, Gynecology, Cordoba Capital, Argentina

Objectives: Advanced ovarian cancer benefits from a multimodal approach to treatment; standard of care is a combination of surgery and platinum-based chemotherapy. Hyperthermic intraperitoneal chemotherapy (HIPEC) is not standardized, and its use remains controversial. The purpose of this study is to present our experience with consolidation HIPEC, and explore its association to progression-free survival and overall survival, as well as surgical benefits.

Methods: This is a retrospective, observational, descriptive study. Patients with advanced ovarian cancer who underwent 6 cycles of neoadjuvant or adjuvant chemotherapy, as well as cytoreductive surgery, followed by consolidation HIPEC were included. Information on tumor histology and stage, systemic treatment, surgery, complications and hospital-stay were analyzed, as well as PFS and overall OS. Our series was compared with published literature.

Results: 33 patients were included, with stage IIIb and IIIc disease. The most common histologic type was high-grade serous carcinoma. Serious treatment-related complications were observed in 9(27.3%) patients, and length of hospital stay was a median of 6 days. We had an average PFE survival time of 23 months and an overall survival at 5 years of 50.1%.

Conclusions: Our progression-free survival is comparable to literature reporting statistically significant differences with standard treatment. While some patients appeared to benefit with the addition of consolidation HIPEC, there is great heterogeneity in its application still. Randomized trials evaluating patient selection, timing and best drug-combination for hyperthermic intraperitoneal chemotherapy are therefore warranted.

EP282 / #1105

EPOSTER VIEWING: AS11 OVARIAN CANCER

EXTERNAL VALIDATION OF PREDICTION MODELS FOR EARLY RELAPSE IN ADVANCED EPITHELIAL OVARIAN CANCER USING AUSTRALIAN POPULATION-BASED DATA

Sherin Said¹, Hendrik Koffijberg², Joanne De Hullu³, Simon Hyde⁴, Maaïke Van Der Aa¹, Anne Van Altena³

¹Netherlands Comprehensive Cancer Organization (IKNL), Department Of Research And Development, Utrecht, Netherlands, ²University of Twente, Department Of Health Technology And Services Research, Enschede, Netherlands, ³Radboud Institute for Health Sciences, Radboud University Medical Center,, Department Of Obstetrics And Gynecology, Nijmegen, Netherlands, ⁴Mercy Hospital for Women, Department Of Gynecological Oncology, Heidelberg, Australia

Objectives: Before using a prediction model in clinical practice, it is essential to externally validate it on data not used during model development. The objective was to externally validate two risk prediction models developed in the Netherlands for early relapse in advanced stage EOC patients using an Australian nationwide cohort.

Methods: Advanced stage EOC patients diagnosed between 01-01-2002 and 01-06-2006 were identified from the Australian Ovarian Cancer Study cohort. Outcomes of advanced stage EOC patients who underwent cytoreductive surgery and platinum-based chemotherapy as primary EOC treatment were used for external validation of the previously developed postoperative and BRCA models. Updating methods considered were: recalibration-in-the-large, recalibration, and model revision. A closed testing procedure was followed to select the most appropriate method for external validation. Model performance was assessed on calibration, discrimination, and the Brier score.

Results: A total of 475 early relapsers and 859 late or non-relapsers were identified. The discriminative ability of the postoperative and BRCA model was adequate (c-statistics of 0.70 and 0.72, respectively) in this validation cohort. The original postoperative and BRCA models demonstrated overall poor calibration which required updating of both models. The closed testing procedure selected recalibration-in-the-large as the preferred updating method for both models. After updating, the postoperative and BRCA model were well-calibrated with calibration intercepts of 0 for both models and slopes of 0.95 and 0.98, respectively.

Conclusions: The postoperative and BRCA models demonstrated good model performance in external validation. The updated postoperative and BRCA models are ready for implementation in daily clinical practice to support patient counselling.

EP283 / #999

EPOSTER VIEWING: AS11 OVARIAN CANCER

METABOLOMICS SHOWED THAT LIPID METABOLISM CONTRIBUTED TUMOR GROWTH OF EOC VIA LSR

Hitomi Sakaguchi¹, Kosuke Hiramatsu¹, Yoshikazu Nagase¹, Masashi Funauchi^{1,2}, Mamoru Kakuda¹, Satoshi Nakagawa¹, Ai Miyoshi¹, Eiji Kobayashi¹, Toshihiro Kimura¹, Yutaka Ueda¹, Tetsuji Naka², Tadashi Kimura¹

¹Osaka University, Obstetrics And Gynecology, Suita, Japan, ²Iwate Medical University, Institute For Biomedical Sciences Molecular Pathophysiology, Iwate, Japan

Objectives: Previously, we identified lipolysis-stimulated lipoprotein receptor (LSR) as a new target of epithelial ovarian cancer (EOC), and we reported anti-tumor effect of our newly developed monoclonal antibody (mAb) against LSR-positive EOC cells in vitro and in vivo. We also demonstrated that LSR promoted uptake of lipid metabolite in EOC cells, however, that pathway is still unclear. In this study, we performed metabolomic analysis and investigated the metabolic pathway of EOC via LSR using high-fat diet (HFD) mouse.

Methods: We established HFD mouse model and evaluated the tumor growth of LSR-positive EOC cell line and anti-tumor effect of anti-LSR mAb in this model. Moreover, we obtained serum samples from normal-diet (ND) and HFD mouse, and performed metabolomic analysis. Finally, we analyzed lipid metabolites profile of HFD mouse compared to ND mouse.

Results: Tumor growth of LSR-positive EOC cells was significantly promoted in HFD mouse ($p < 0.05$) and anti-LSR mAb showed stronger anti-tumor effect in HFD mouse than that in ND mouse (57.2% and 26.6%, respectively). Metabolomic analysis using HFD and ND mouse serum detected 210 metabolites and The Human Metabolome Database provided comprehensive information of 83 metabolites. Principal component analysis and cluster analysis using these metabolites showed obviously different metabolic properties between ND and HFD mouse. Partial Least Squares-Discriminant Analysis showed significantly high score of lipid metabolites in HFD mouse including α -Tocopherol and cholesterol.

Conclusions: Metabolomics showed the activation of lipid metabolism in HFD mouse and suggested that LSR contributed tumor growth via lipid metabolism.

EP284 / #1118

EPOSTER VIEWING: AS11 OVARIAN CANCER

DISTRIBUTION OF HOMOLOGOUS RECOMBINATION DEFICIENCY AND BRCA MUTATIONS DETECTED BY HRD-ONE TEST AMONG BRAZILIAN PATIENTS WITH NEWLY DIAGNOSED EPITHELIAL OVARIAN, FALLOPIAN TUBE, OR PERITONEAL CANCER.

Mariana Scaranti¹, Guilherme Lopes Yamamoto², Rodrigo Guarischi Sousa², Ana Carolina J Paniza², Fernanda Milanezi², Cristovam Scapulatempo-Neto²

¹Hospital 9 de Julho/DASA, Centro De Oncologia, São Paulo, Brazil, ²Gene One/ DASA, Patologia, São Paulo, Brazil

Objectives: The addition of a poly(ADP-ribose) polymerase (PARP) inhibitor as maintenance therapy led to a significant progression-free survival benefit in patients (pts) with newly diagnosed advanced ovarian cancer who were homologous recombination deficiency (HRD) positive detected by Myriad's myChoice which is economically inaccessible for a significant fraction of the Brazilian population. We updated the analysis of the distribution of HRD and tumor (t) BRCAm in Brazilian pts using the HRD-One test that detects not only sequence variants in genes involved in homologous recombination repair (HRR) but also the genomic scars due to HRD.

Methods: The accuracy of the HRD-One score was established both by correlation with Myriad's myChoice score and an internal validation considering that most of the samples that carry a pathogenic variant in BRCA1 or BRCA2 should have HRD. We then tested stage III and IV HGSOC and high-grade endometrioid ovarian cancer pts' tumor samples with HRD-One test.

Results: Of the 616 pts, 304(49%) had HRD positive tumors, 277(45%) were HRD negative, and 35(6%) had inconclusive results. 128 pts had tBRCAm, 127(99%) of them had a genomic instability score compatible with HRD, and 79(62%) had BRCA1m. BRCA1c.5266dupC was the most prevalent pathogenic variant. The most prevalent BRCA2m were c.8488-1G > A, c.5216dupA, and c.5073dupA. 49,8% of the HGSOC were HRD positive, whereas 27% of the high-grade endometrioid ovarian cancer were HRD positive.

Conclusions: This study reports HRD prevalence in a cohort of Brazilian pts using HRD-One test. HRD-One might help us select pts to receive PARP inhibitors noticeably in a low-resource setting.

EP285 / #110

EPOSTER VIEWING: AS11 OVARIAN CANCER

CIRCULATING T-CELL RECEPTOR DIVERSITY AS PROGNOSTIC BIOMARKER FOR PARP INHIBITORS MAINTENANCE THERAPY IN HIGH-GRADE SEROUS OVARIAN CANCER

Tong Shu¹, Hong Zheng¹, Yunong Gao¹, Min Gao¹, Zhipeng Zhou², Jing Bai²

¹Beijing Cancer Hospital & Institute, Gynecologic Oncology, Beijing, China, ²Geneplus-Beijing Institute, Bioinformatics Analysis, Beijing, China

Objectives: T-cell receptor (TCR) repertoire diversity is getting increasing attention as prognostic biomarker in cancer patients. However, the characteristics of the TCR together with its prognostic significance and impact on high grade serous ovarian cancer (HGSOC) patients receiving poly (ADP-ribose) polymerase (PARP) inhibitor maintenance therapy remain unknown.

Methods: We investigated the TCR repertoire diversity by high-throughput sequencing in peripheral blood samples from 27 patients at three timepoints of each case before, one month and three months after the exposure to PARP inhibitors respectively.

Results: Our results revealed that PARP inhibitors could maintain the stability of TCR repertoire compared to the untreated cases in the maintenance setting. And the rising trend of TCR repertoire diversity in blood after 3-month PARPi maintenance was associated with a longer PFS while low repertoire diversity change was linked with poor prognosis. Furtherly, the significant reduction of the high-frequency clone of TCR was found to be the leading characteristic and hold the potential to be a prognostic biomarker for PARP inhibitors maintenance therapy in HGSOC.

Conclusions: Interestingly, we found the dynamic monitoring of circulating TCR repertoire diversity has predictive value on the benefit of PARP inhibitor maintenance therapy in high-grade serous ovarian cancer.

EP286 / #91

EPOSTER VIEWING: AS11 OVARIAN CANCER

EXPRESSION OF CD44⁺/CD24⁻, RAD6 AND DDB2 IN CHEMORESISTANCE OVARIAN CANCER

Unedo Sihombing, Andrijono Andrijono, Dzicky Fuady
Universitas Indonesia, Obstetrics Gynecology, Central Jakarta, Indonesia

Objectives: Ovarian cancer is one of the deadliest women cancers around the world with many cases of chemoresistance after cytoreductive surgery and platinum-based chemotherapy. The overexpression of Cancer Stem Cells (CSCs) CD44⁺/CD24⁻, RAD6, and underexpression of DDB2 are believed to be associated with chemoresistance. We aimed to analyze the expression of CD44⁺/CD24⁻, RAD6 and DDB2 in chemoresistance ovarian cancer tissue and patients' blood circulation

Methods: This study was conducted with an ambispective cohort of 32 people in each group with a total of two groups at the Obstetrics-gynecology and pathology clinic, pathology anatomy department of Cipto Mangunkusumo, Tarakan, Dharmais, and Fatmawati Hospital. All suspected ovarian cancer patients underwent cytoreductive surgery and histopathological examination. Chemotherapy was given for six series followed by six months of observation. After the observation, we determined the therapy's response with the RECIST Criteria (Response Criteria in Solid Tumors). Immunohistochemistry (retrospective) tests to ovarian cancer tissue and flow cytometry (prospective) blood tests then were performed to examine the expression of CD44⁺/CD24⁻, RAD6 and DDB2.

Results: There were significant overexpression of CD44⁺/CD24⁻, RAD6 and underexpression of DDB2 ($p < 0.05$) in chemoresistance ovarian cancer tissue with significant AUC value ($p < 0.05$). There were significant overexpression of CD44⁺/CD24⁻ and RAD6 ($p < 0.05$) in blood circulation of chemoresistance ovarian cancer patients while CD44⁺/CD24⁻ has significant AUC value ($p < 0.05$)

Conclusions: We conclude that there were overexpression of CD44⁺/CD24⁻, RAD6, underexpression of DDB2 in ovarian cancer tissue, and overexpression of CD44⁺/CD24⁻ in blood circulation and these proteins were good predictors of ovarian cancer chemoresistance.

EP287 / #314

EPOSTER VIEWING: AS11 OVARIAN CANCER

OVARIAN CANCER MANAGEMENT AND SURVIVAL OUTCOME - 10 YEARS STUDY FROM A TERTIARY CARE CENTRE IN INDIA

Nisha Singh¹, Abhilasha Srivastava¹, Shyama Pyari Jaiswar¹, Suresh Babu²

¹King George's Medical University, Obstetrics And Gynecology, Lucknow, India, ²King George's Medical University, Pathology, Lucknow, India

Objectives: Ovarian cancer (OC) is the second most common gynecological cancer in India but there is paucity of Indian data regarding its treatment and survival outcome. This study is a ten year audit of the disease characteristics, treatment protocols and survival outcomes of OC cases managed at our centre over 10 years

Methods: This prospective and retrospective cohort study was conducted in the department of Obstetrics and gynaecology in collaboration with department of pathology over a period of one year. Ethical clearance was obtained from the institutional ethics committee and informed consent from all patients. Total 360 cases of OC were diagnosed between January 2010 to December 2019 as per the hospital records. Details of disease characteristics, type of treatment, recurrence and its treatment were tabulated. Survival outcomes of 191 contactable patients were analysed through SPSS 21.0.

Results: Out of 360 cases, maximum were epithelial type (86.3%) and presented in stage III/IV (78.8%). Almost half were treated by primary surgery and half by neoadjuvant chemotherapy. Out of 191 contactable cases 57% had complete response by first treatment, 32.9% developed recurrence and 9.9% had a refractory /resistant disease. About 51.5% were alive and 48.5% had expired. The median overall survival duration was 48months, and disease free survival duration was 29.94 months. The OS ($p = 0.005$) and DFS ($p=0.012$) were significantly more with primary surgery as compared to NACT.

Conclusions: Early stage of disease and complete surgical debulking have significantly better survival outcomes.

EP288 / #278

EPOSTER VIEWING: AS11 OVARIAN CANCER

COMPARATIVE ASSESSMENT OF PATTERNS OF RECURRENCE BETWEEN PRIMARY AND INTERVAL DEBULKING SURGERY IN ADVANCED EPITHELIAL OVARIAN CANCER: ANALYSIS FROM A TERTIARY REFERRAL CENTRE

Kehinde Okunade¹, Adeyemi Okunowo¹, Ephraim Ohazurike², Rose Anorlu¹, [Adaiah Soibi-Harry](#)¹
¹University of Lagos, Obstetrics And Gynaecology, Lagos, Nigeria, ²Lagos University Teaching Hospital, Department Of Obstetrics And Gynaecology, Lagos, Nigeria

Objectives: This study assessed the differences in the pattern and timing of recurrence in women with advanced epithelial ovarian cancer (EOC) who had primary debulking surgery (PDS) followed by chemotherapy or interval debulking surgery (IDS) after neoadjuvant chemotherapy (NACT).

Methods: Retrospective data on the sociodemographic and clinical characteristics and laboratory parameters together with the recurrence status after a 3-year follow-up of 126 women with advanced EOC who had undergone standard treatment between January 2008 and December 2017 were collected and analysed.

Results: There were 46 (68.7%) recurrences in the IDS group compared to 37 (62.7%) in the PDS group (P=0.88). The Kaplan-Meier curve comparing the progression-free survival (PFS) between PDS and IDS in women with advanced EOC showed no statistically significant difference (P=0.38). There was also no statistically significant association between type of surgical treatment and PFS after adjustments for covariates such as age and pre-existing medical morbidity in the multivariate analysis (HR=1.46, 95%CI: 0.90–2.37, P=0.12).

Conclusions: We found no conclusive evidence to suggest that IDS between cycles of chemotherapy compared with conventional treatment using PDS followed by adjuvant chemotherapy (ACT) improved the PFS of women with advanced EOC. We, therefore, suggest a need to further evaluate the potential benefit of an individualised treatment selection rather than a blind extrapolation of all women with advanced EOC to NACT and IDS.

EP289 / #608

EPOSTER VIEWING: AS11 OVARIAN CANCER

TIMING OF RECURRENCE AND OVERALL SURVIVAL IN EPITHELIAL OVARIAN CANCER: A 10-YEAR RETROSPECTIVE REVIEW IN A TEACHING HOSPITAL

Kehinde Okunade, Adaiah Soibi-Harry, John Ogunyemi, Olufemi Thomas-Ogodo, Austin Okoro, Benedetto Osunwusi, Sunusi Garba, Rose Anorlu
University of Lagos, Obstetrics And Gynaecology, Lagos, Nigeria

Objectives: The timing of recurrence of epithelial ovarian cancer (EOC) after a standard primary treatment is an important indicator of the degree of response of the tumour to treatment. It, however, remains unclear if the timing of recurrence will predict survival outcomes.

Methods: Data was extracted from patients who underwent standard primary treatment and follow-up after EOC diagnosis between January 2011 and December 2020. Descriptive statistics were computed for all patients' data and Kaplan-Meier survival estimates and Cox proportional hazards model adjusted for covariates were used for analyses.

Results: The risks of recurrence of EOC increased steadily with increasing time from the start of primary treatment from 13.6% in 6-months to 71.0% after 12-months. In the final multivariate analyses, recurrence within 6 months of treatment was a significant independent predictor of poor OS in EOC patients (HR=7.23, 95%CI: 3.87–13.51, P<0.01).

Conclusions: Our study suggests that recurrence within 6-months is an important prognostic factor that predicts poor OS in EOC. Early tumour recurrence may be a useful surrogate of overall survival and thus this information should be considered in the design of future tailored randomized controlled trials. Future strategies to improve OS in EOC patients should focus on identifying effective measures to prevent early tumour recurrence.

EP290 / #660

EPOSTER VIEWING: AS11 OVARIAN CANCER

FIRST REPORT OF CLINICAL OUTCOMES WITH ESCALATED DOSES OF CISPLATIN AND DOXORUBICIN IN PIPAC FOR PERITONEAL CARCINOMATOSIS OF EPITHELIAL OVARIAN CANCER

Sp Somashekhar¹, Rohit Kumar¹, Priya Kapoor¹, Susmita Rakshit², Aaron Fernandes¹, Karthik H K¹, Ashwin Rajagopal¹

¹Manipal Comprehensive Cancer Centre, Gynec And Surgical Oncology, Bangalore, India, ²Manipal Hospital, Oncopathology, Bangalore, India

Objectives: PIPAC in inoperable recurrent ovarian cancer has showed better oncological outcomes at existing doses. However the maximum dose that can be used and its clinical outcomes is not defined yet.

Methods: PIPAC was done at dose of cisplatin 15mg/m² and doxorubicin 3mg/m². The patient demographics, perioperative findings, adverse events, and outcomes were prospectively recorded. Response rate was graded as Peritoneal Regression Grading Score (PRGS). QoL of the patients was studied according to the EORTC QLQ - C30 score.

Results: 18 PIPAC administrations were performed in 6 patients. The median hospital stay was 1.5 day (1-3 day). CTCAE grade 2 was observed in 3 patients, for abdominal pain and nausea, grade 3 fatigue in 2 patients. Transient increase in C- reactive protein was seen in 3 patients, haematological, renal and hepatic functions were not impaired in any patients except for mild transient elevation in AST and ALT levels in 3 patients. All patients completed 3 cycles of PIPAC. Of the 6 patients, 3 had complete response (PRGS 1) and remaining 2 had major (PRGS 2), 1 had minor response (PRGS 3). There was improvement in functional scale, symptom scale and overall global health status for all patients.

Conclusions: PIPAC can be performed safely at doses of cisplatin 15mg/m² and doxorubicin 3mg/m². There is better objective & pathological response with this dose with no major complications or side effects to the patients. There is also improvement in quality of life. This dose should be new standard of care for further studies.

EP291 / #607

EPOSTER VIEWING: AS11 OVARIAN CANCER

VALIDATION OF MULTI-GENE PANEL NEXT-GENERATION SEQUENCING FOR THE DETECTION OF BRCA MUTATION IN FORMALIN-FIXED, PARAFFIN-EMBEDDED EPITHELIAL OVARIAN CANCER TISSUES

Eun Taeg Kim, Ha Eun Jeong, Hyung Joon Yoon, Ki Hyung Kim, Dong Soo Suh
Pusan national university hospital, Obstetrics And Gynecology, Pusan, Korea, Republic of

Objectives: The therapeutic effect of poly(ADP-ribose) polymerase inhibitors in patients with epithelial ovarian cancer (EOC) with somatic BRCA mutations is consistent with that observed in patients with germline BRCA mutations, indicating the importance of detecting both germline and somatic BRCA mutations concurrently. We compared the efficacy of multi-gene panel next generation sequencing (NGS) in EOC patients' formalin-fixed, paraffin-embedded (FFPE) tissue to that of conventional Sanger sequencing in blood samples.

Methods: This study included 48 patients with EOC, and both blood Sanger sequencing and FFPE tissue NGS were conducted in all of them. Clinical and pathological data were reviewed, including age at diagnosis, histology, and stage. Blood Sanger sequencing was performed using peripheral blood leukocytes. The target regions of 90 cancer-related genes were identified using FFPE tissue.

Results: The median age of patients was 56.1 years, with serous carcinoma (n=40, 83.3%) and stage III (n=37, 77.1%) being the most common histology and International Federation of Gynecology and Obstetrics stage, respectively. FFPE tissue NGS identified ten pathogenic variants, including all eight pathogenic variants identified by blood Sanger sequencing as well as two additional pathogenic variants. In addition, FFPE tissue NGS identified 19 variants of uncertain significance (VUS), including all ten VUS identified by blood Sanger sequencing as well as nine additional VUS.

Conclusions: The FFPE tissue multi-gene panel NGS had 100% sensitivity for detecting BRCA germline mutations and could detect additional somatic mutations. Furthermore, performing FFPE tissue multi-gene panel NGS followed by blood Sanger sequencing sequentially may help differentiate germline from somatic BRCA mutations for genetic counseling.

EP292 / #552

EPOSTER VIEWING: AS11 OVARIAN CANCER

HOPE AND CHOICES: DIRECT PATIENT PREFERENCE ELICITATION FOR DURABLE VERSUS FIXED SURVIVAL GAINS IN WOMEN WITH RECURRENT OVARIAN CANCER (ROC).

Charlotte Sun, Amy Schneider, Sarah Huepenbecher, Shannon Westin, Larissa Meyer
The University of Texas, MD Anderson Cancer Center, Gynecologic Oncology And Reproductive
Medicine, Houston, United States of America

Objectives: Hope in oncology can be defined as the desire to be a statistical outlier (tail of the curve). We examined preferences of ROC patients for tail of the curve survival.

Methods: Patients chose between a clinical trial (chance at durable survival (DS)) and best supportive care (SC) or hospice. In a 3-year scenario, clinical trial survival outcomes were 1-yr=50%, 4-5-yr=40%; 6-yr=10%. SC was initially set to a 3-year fixed survival (FS). In a 6-mos scenario, clinical trial survival outcomes were 2-mos=50%, 9-mos=40%, 14+mos=10%. Hospice was initially set to 6-month FS. If patients initially chose clinical trial, FS was systematically increased. If patients initially chose SC or hospice, FS was systematically decreased. Sequential testing was used to identify when patients were indifferent between FS of SC or hospice, and clinical trials.

Results: 30 patients completed interviews (Table). In the 3-year scenario patients had strong preferences for clinical trials with DS. 23 patients (77%) initially chose clinical trial; 7 patients chose SC. Mean survival=36-mos, and patients' indifference point between SC and clinical trial=44.4-mos, demonstrating patients preferred clinical trial unless SC survival=8.4-mos longer than 36-mos survival (23.3% increase). In the 6-mos scenario, patients had moderate preferences for clinical trials with DS. 17 patients (57%) initially chose the clinical trial; 13 chose hospice. Mean survival=6-mos, and patients' indifference point between hospice and clinical trials= 6.67-mos, demonstrating patients preferred clinical trial unless hospice survival increased by 20-days

(11.1%).

Demographic characteristics (N=30)

Median age at time of interview, years (range)	62.4 (41.2, 79.0)
Median time since diagnosis, years (range)	6.1 (1.0, 17.8)
	n (%)
Stage	
II	3 (10.0)
III	20 (66.7)
IV	5 (16.7)
unstaged	2 (6.7)
Race	
White	24 (80.0)
Non-white	6 (20.0)
Hispanic, Latina or Spanish	
Yes	28 (93.3)
No	2 (6.7)
Marital/partner status	
Married/partnered	25 (83.3)
Other	5 (16.7)
Employment status	
Employed	14 (46.7)
Homemaker	4 (13.3)
Retired/other	12 (40.0)
Education	
High school graduate	3 (10.0)
Some college or technical school	11 (36.7)
College graduate	16 (53.3)
Annual income	
Less than \$50K and under	4 (13.3)
Greater than \$50K	24 (80.0)
Preferred not to answer	2 (6.7)

Conclusions: Patients preferred a chance at DS over FS. Length of FS influences strength of preferences for clinical trial options.

EP293 / #574

EPOSTER VIEWING: AS11 OVARIAN CANCER

DO PATIENTS PREFER MAINTENANCE THERAPY OR SURVEILLANCE? WEIGHING GAIN IN PROGRESSION-FREE SURVIVAL AND RISKS OF ADVERSE EVENTS VIA TIME TRADE-OFF AND STANDARD GAMBLE ASSESSMENTS

Charlotte Sun, Amy Schneider, M. Sol Basabe, Shannon Westin, Lisa Lowenstein, Robert Volk, Larissa Meyer

The University of Texas, MD Anderson Cancer Center, Gynecologic Oncology And Reproductive Medicine, Houston, United States of America

Objectives: Maintenance therapy (MT) offers improved PFS for women with ovarian cancer (OC). Patients face a trade-off between potential gain in PFS and risk of adverse events (AEs). We assessed preferences for MT using direct elicitation methods.

Methods: OC patients were interviewed using time trade-off (TTO) and standard gamble (SG) instruments. For the TTO, patients chose between MT (w/side-effects) vs surveillance in 4 hypothetical scenarios incorporating MT and potential AEs, and control arms in SOLO1, SOLO2, GOG-0213 and GOG-0218. For each TTO scenario, PFS for MT was varied until patients considered MT PFS equivalent to surveillance PFS. For the SG, patients evaluated 3 hypothetical health states consisting of MT+risk of developing a severe AE (secondary leukemia; ruptured bowel; or adrenal insufficiency) vs surveillance. Risk of each AE was varied until patients were indifferent between MT and surveillance.

Results: 80 patients participated. Tables 1 and 2 show demographics and TTO results. In SOLO1 and SOLO2-based scenarios, more patients were willing to choose MT over surveillance, citing need to “do something for extra time” without disease. In GOG-0218 and GOG-0213-based scenarios, more patients preferred surveillance over MT, citing insufficient gain in PFS given AEs and treatment modality. SG results showed patients chose surveillance if median risks of secondary leukemia, ruptured bowel, or adrenal insufficiency exceeded 25%, 20%, or 40%, respectively.

Table 1. Demographics, (N=80 pts)	
Median Age (years) (range)	61.5 (36.9-90.5)
	n (%)
Disease status	
Never recurred	40 (50.0)
Recurrent disease	40 (50.0)
Had maintenance therapy at time of interviews	
Yes	53 (66.3)
No	27 (33.8)
Hispanic, Latina or Spanish origin	
Yes	10 (12.5)
No	70 (87.5)
Race	
White	66 (82.5)
Black or African American	5 (6.3)
Asian	4 (5.0)
Other	5 (6.3)
Marital Status	
Married/Partnered	63 (78.8)
Not married/not partnered	17 (21.4)
Education Level	
High school graduate	13 (16.3)
Some college or technical school	15 (18.8)
College graduate	52 (65.0)
Employment status	
Employed	25 (31.3)
Homemaker	11 (13.8)
Retired	32 (40.0)
Unemployed/Disabled	9 (11.3)
Did not respond	3 (3.8)
Annual income	
Less than \$50K and under	9 (11.3)
Greater than \$50K	50 (62.6)
Preferred not to answer	21 (26.3)

Table 2. TTO Results					
Scenario (PFS MT vs. Surveillance)	Disease setting	MT agent	Always chose MT	Never chose MT	# Patients who initially chose MT but switched to surveillance if median PFS dropped below X ¹ mos
SOLO1 trial (50 mos vs 14 mos)	Primary	Olaparib (oral)	16	6	58 patients (18 mos)
GOG-0218 trial (14 mos vs 10 mos)	Primary	Bevacizumab (IV)	9	40	31 patients (11 mos)
SOLO2 trial (20 mos vs. 6 mos)	Recurrent	Olaparib (oral)	14	8	58 patients (8 mos)
GOG-0213 trial (14 mos vs. 10 mos)	Recurrent	Bevacizumab (IV)	9	37	34 patients (11 mos)
¹ X = threshold for median PFS of MT MT=maintenance therapy					

Conclusions: Patients weighed gain in PFS against side-effects and treatment modality when choosing MT vs surveillance in primary and recurrent disease settings. Patients preferred MT with 20%-40% chance of developing serious AEs before opting for surveillance.

EP294 / #883

EPOSTER VIEWING: AS11 OVARIAN CANCER

ELIMUSERTIB, AN ORAL ATAXIA TELANGIECTASIA AND RAD3-RELATED INHIBITOR, IN ADVANCED GYNECOLOGIC CANCERS WITH DNA DAMAGE RESPONSE DEFECTS

David S. Tan^{1,2,3}, Vincent Castonguay⁴, Gregory Cote⁵, Johann S. De Bono⁶, Bassel El-Rayes⁷, Nashat Gabrail⁸, Satoru Iwasa⁹, Markus Joerger¹⁰, Robert Jones¹¹, Michael B. Sawyer¹², Geoffrey I. Shapiro¹³, Daniel Tan¹⁴, Claudia Merz¹⁵, Regina Uttenreuther¹⁶, Michael Jeffers¹⁷, Roberta Ferraldeschi¹⁸, Neelesh Sharma¹⁷, Timothy A. Yap¹⁹, Anastasios Stathis²⁰

¹National University Cancer Institute, National University Health System, Department Of Haematology-oncology, Singapore, Singapore, ²Cancer Science Institute, National University Of Singapore, Singapore, Singapore, ³Yong Loo Lin School of Medicine, National University Of Singapore, Singapore, Singapore, ⁴Chu-de-Québec Université Laval, Department Of Medicine, Quebec City, Canada, ⁵Massachusetts General Hospital, Cancer Center, Boston, United States of America, ⁶Royal Marsden NHS Trust (Surrey), Medical Oncology And Experimental Medicine, Sutton, United Kingdom, ⁷Emory University, Winship Cancer Institute, Atlanta, United States of America, ⁸Gabrail Cancer Center, Medical Oncology, Northwest Canton, United States of America, ⁹National Cancer Center Hospital, Experimental Therapeutics, Tokyo, Japan, ¹⁰Kantonsspital St. Gallen, Medical Oncology, St. Gallen, Switzerland, ¹¹Velindre Hospital, Medical Oncology, Cardiff, United Kingdom, ¹²Cross Cancer Institute, Medical Oncology, Edmonton, Canada, ¹³Dana-Farber Cancer Institute, Medical Oncology, Boston, United States of America, ¹⁴National Cancer Center Singapore, Medical Oncology, Singapore, Singapore, ¹⁵Bayer AG, Oncology Precision Medicine, Berlin, Germany, ¹⁶Chrestos Concept GmbH & Co. KG, Biostatistics, Essen, Germany, ¹⁷Bayer HealthCare Pharmaceuticals, Tmo Oncogenic Signaling, Whippany, United States of America, ¹⁸Bayer Consumer Care, Clinical Development, Basel, Switzerland, ¹⁹University of Texas MD Anderson Cancer Center, Department Of Investigational Cancer Therapeutics, Division Of Cancer Medicine, Houston, United States of America, ²⁰Oncology Institute of Southern Switzerland, New Drugs Development Unit, Bellinzona, Switzerland

Objectives: Elimusertib is a potent, orally available, selective inhibitor of ataxia telangiectasia and Rad3-related kinase, a critical component of DNA damage response (DDR) machinery. We report elimusertib's safety and efficacy in patients with gynecologic cancers and DDR deficiencies enrolled in Phase I (NCT03188965).

Methods: Advanced gynecologic cancer patients resistant or refractory to standard treatment received elimusertib 40 mg twice daily on a 3 days on/4 days off schedule.

Results: 45 patients received ≥ 1 dose of elimusertib: 36 with ovarian, 7 with endometrial, and 2 with cervical cancer. 64% of patients had previously received ≥ 4 therapy lines. BRCA1, BRCA2, and ATM mutations were present in 60%, 20%, and 31% of patients, respectively. 58% of ovarian cancer patients were resistant to last platinum-based therapy and 69% had received PARP inhibitor (PARPi) treatment. Grade 3/4 drug-related treatment-emergent adverse events (TEAEs), mainly hematologic toxicities, were observed in 69%/20% of patients. Dose reduction/discontinuation due to drug-related TEAEs was reported in 40%/11% of patients. Overall response rate was 2% (1/44 evaluable); 77% of patients had a best response of stable disease. One ovarian cancer patient had a PR lasting 308 days (BRCA1). In ovarian cancer patients, the clinical benefit rate at 120 days was 40%, including patients with previous PARPi treatment; 19% of patients had $\geq 50\%$ reduction in CA-125 levels.

Conclusions: Elimusertib demonstrated clinical benefit in heavily pretreated gynecologic cancers with DDR defects, including platinum-resistant ovarian cancer with previous PARPi treatment. A Phase I study of elimusertib plus niraparib is ongoing (NCT04267939).

EP295 / #872

EPOSTER VIEWING: AS11 OVARIAN CANCER

POST OPERATIVE COMPLICATIONS FOLLOWING OVARIAN CANCER SURGERY: RISK FACTORS AND ITS IMPACT ON CANCER SPECIFIC SURVIVAL

Vinotha Thomas¹, Ajit Sebastian², Rachel George², Dhanya Thomas², Anitha Thomas², Abraham Peedicayil²

¹Christian Medical College & Hospital, Dept. Of Gynaecologic Oncology, VELLORE, India, ²Christian Medical College & Hospital, Dept. Of Gynaecologic Oncology, Vellore, Tamilnadu, India

Objectives: 1.To audit complications following ovarian cancer surgery (Clavien-Dindo classification) and their impact on oncologic outcome 2. To determine risk factors associated with postoperative complications.

Methods: Electronic medical records of women who underwent surgery for epithelial ovarian cancer between January 2016 - December 2018 were audited. Design : Retrospective nested case control study. Cases: Patients with post-operative complications. Control: Those without complications. Setting: Department of gynaecologic oncology. Statistical analysis: SPSS v20 was used to analyse data. Chi square / Fischer test , ANOVA and multivariate regression were used to assess risk factors of complications.

Results: Over 36 months, 370 women underwent surgery .Fifty percent (188/370) underwent primary cytoreduction and 74% had advanced disease (273/370). Optimal cytoreduction was achieved in 84% (273/370). The post-operative complication rate was 35% (129/370) ,over a median period of 5 days (0 to 53) : 24 % (89/370) and 10% (37/370) had grade 1-2 complications and grade 3-4 complications respectively . The 30 day mortality was 0.8 % (3/370). Advanced disease ($p=0.027$) , high complexity of surgery ($p=0.015$), and intraoperative blood loss ($p=0.001$) were independently associated with increased rate of complications. The median time to recur was 17 months (12.6 to 21.3 months). Kaplan-Meier curve for survival showed a median recurrence free period of 20, 13 and 11 months respectively in the complication free, grade 1-2 and grade 3-4 complication group respectively, with a log rank value of 0.214.

Conclusions: Ovarian cancer surgery is associated with an acceptable complication rate and patients should be selected with discretion .

EP296 / #298

EPOSTER VIEWING: AS11 OVARIAN CANCER

CHARACTERISTICS AND OUTCOMES OF SECONDARY OVARIAN CANCER AFTER EXTERNAL BEAM RADIOTHERAPY FOR FEMALE PELVIC MALIGNANCY

Andrew Vallejo¹, Syem Barakzai¹, Marcia Ciccone², Lynda Roman^{2,3}, Koji Matsuo^{2,3}

¹University of Southern California, Obstetrics And Gynecology, Los Angeles, United States of America, ²University of Southern California, Gynecologic Oncology, Los Angeles, United States of America, ³Norris Comprehensive Cancer Center, University of Southern California, Gynecology Oncology, Los Angeles, United States of America

Objectives: This study examined characteristics and survival of patients who developed secondary ovarian cancer after external beam radiotherapy (EBRT) that was prescribed for other female pelvic malignancies.

Methods: This is a population-based retrospective cohort study, querying the Surveillance, Epidemiology, and End Result program from 1975-2016. 167,269 women who received EBRT for 7 malignancies (anus, rectum, bladder, cervix, uterus, vulva, or vagina) were examined to identify subsequent secondary ovarian cancer diagnosis after EBRT. Then, within the ovarian cancer cohort (n=147,618), characteristics and survival of patients with secondary ovarian cancer after EBRT were compared to those with ovarian cancer who did not receive prior EBRT.

Results: Secondary ovarian cancer was identified in 215 (1.3 per 1,000) following EBRT. Cervical cancer was the most frequent diagnosis for prior EBRT (n=98, 45.6%) followed by rectal cancer (n=45, 20.9%). The median time from EBRT to secondary ovarian cancer diagnosis was 8.8 years (interquartile range, 2.8-14.5). In multivariable analysis, patients with secondary ovarian cancer after EBRT were more likely to be older, have recent diagnosis year, and have advanced disease compared to ovarian cancer patients without prior EBRT (all, P<0.05). In a propensity score weighted model, patients with secondary ovarian cancer after EBRT had decreased overall survival compared to those with ovarian cancer without prior EBRT (5-year rates, 19.6% versus 39.9%, hazard ratio 1.62, 95% confidence interval 1.43-1.85).

Conclusions: Although rare, secondary ovarian cancer can develop several years after EBRT for pelvic malignancy. Radiotherapy-related ovarian cancer may be associated with decreased survival outcome.

EP297 / #520

EPOSTER VIEWING: AS11 OVARIAN CANCER

IS ROUTINE ADMISSION TO A CRITICAL CARE UNIT FOLLOWING HIPEC FOR OVARIAN CANCER NECESSARY?

Ruby Van Stein¹, Lot Aronson¹, Florine Hendriks², Aletta Houwink³, Peter Schutte³, Cornelis De Kroon², Gabe Sonke⁴, Willemien Van Driel¹

¹The Netherlands Cancer Institute - Antoni van Leeuwenhoek, Department Of Gynecologic Oncology, Amsterdam, Netherlands, ²Leiden University Medical Center, Department Of Gynecology, Leiden, Netherlands, ³The Netherlands Cancer Institute - Antoni van Leeuwenhoek, Department Of Anesthesiology And Intensive Care, Amsterdam, Netherlands, ⁴The Netherlands Cancer Institute - Antoni van Leeuwenhoek, Department Of Medical Oncology, Amsterdam, Netherlands

Objectives: Hyperthermic intraperitoneal chemotherapy (HIPEC) is increasingly used for patients with stage III ovarian cancer undergoing interval cytoreductive surgery (CRS). It is uncertain whether routine postoperative admittance to an intensive care setting following CRS-HIPEC for ovarian cancer is necessary. We estimated the incidence of patients requiring critical care support and tried to identify patients in whom admission to an intensive care setting can be safely omitted.

Methods: We analyzed 154 patients with primary ovarian cancer, who underwent CRS-HIPEC between 2007-2021 in two Dutch HIPEC-centers. Patients were routinely transferred to an Intensive Care Unit (ICU) or Post Anesthesia Care Unit (PACU). Patients requiring critical care support were identified by predefined criteria based on respiratory, circulatory, and metabolic parameters. Logistic regression analyses with backward selection were used to predict the need for critical care support in individual patients and estimated the are-under-the-ROC-curve (AUC) of the model.

Results:

Table 1. Multivariable logistic regression analysis for probability of critical care support (N=153, events=58)

Independent predictors	OR	95% CI	P-value	B
Age > 70 years	4.67	1.85-11.78	0.00	1.54
Blood loss (liter)	2.39	1.22-4.70	0.01	0.87
Norepinephrine dose during surgery (µg/kg/hour)	1.50	1.23-1.83	0.00	0.41
Extensive peritonectomy (in ≥ 2 regions)	4.17	1.41-12.38	0.01	1.43

OR: Odds ratio, CI: confidence interval

Median ICU/PACU length of stay was 21 hours (IQR 19-29) and 38% of patients received postoperative critical care support, mainly consisting of hemodynamic interventions (37%). Independent predictors for critical care support are age, blood loss, norepinephrine dose during surgery, and peritonectomy extent (Table 1). AUC is 0.81 (95% CI 0.74-0.89). Using a 20% cut-off to define low-risk of critical care support, 39% of patients would be eligible to forego ICU/PACU admission.

Conclusions: Postoperative admission to an intensive care setting is not routinely required for ovarian cancer patients undergoing CRS-HIPEC. Following prospective validation, a decision tool based on pre- and intra-operative parameters can help to identify low-risk patients.

EP298 / #540

EPOSTER VIEWING: AS11 OVARIAN CANCER

EVALUATION OF EXTERNAL VALIDITY OF THE OVHIPEC-1 TRIAL IN A REAL-WORLD POPULATION

Ruby Van Stein¹, Karolina Sikorska², Maaïke Van Der Aa³, Gabe Sonke⁴, Willemien Van Driel¹

¹The Netherlands Cancer Institute - Antoni van Leeuwenhoek, Department Of Gynecologic Oncology, Amsterdam, Netherlands, ²The Netherlands Cancer Institute - Antoni van Leeuwenhoek, Department Of Biometrics, Amsterdam, Netherlands, ³Netherlands Comprehensive Cancer Organization (IKNL), Department Of Research & Development, Utrecht, Netherlands, ⁴The Netherlands Cancer Institute - Antoni van Leeuwenhoek, Department Of Medical Oncology, Amsterdam, Netherlands

Objectives: The OVHIPEC-1 trial showed improved overall survival (OS) and recurrence-free survival when interval cytoreductive surgery (CRS) was combined with hyperthermic intraperitoneal chemotherapy (HIPEC) in women with stage III epithelial ovarian cancer (EOC). We compared the trial population to a real-world population diagnosed and treated during the same period to explore the generalizability of the trial results.

Methods: All patients undergoing interval CRS between 2007-2016 were identified from the nationwide Netherlands Cancer Registry if they fulfilled the key eligibility criteria of OVHIPEC-1. We compared patient and treatment characteristics, and OS between the control arm of the trial and the real-world population.

Results: The distribution of age, comorbidity, BRCA-status, histologic subtype, and completeness of CRS were similar in trial and non-trial patients. The trial population had a better performance status and a higher socioeconomic status compared to the real-world population. Trial patients underwent bowel surgery more often. The vast majority of patients received 6 cycles of chemotherapy. In real-world setting, patients received more often >6 cycles. The difference in OS between the trial and the real-world population was not statistically significant (figure

1).

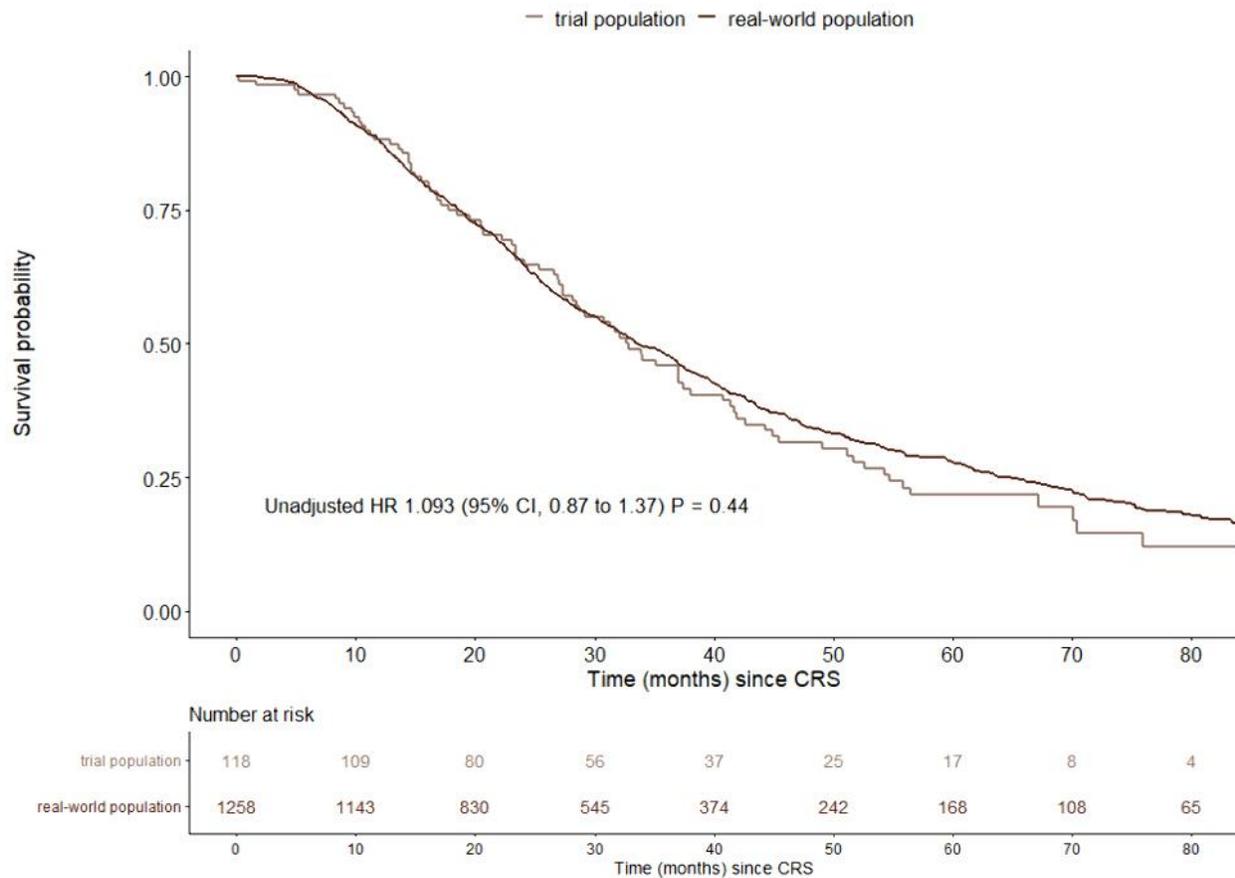


Figure 1. Kaplan-Meier estimates of overall survival
 Median follow-up: 4.9 years from CRS

Conclusions: Despite differences in patient and treatment characteristics, OS of patients treated in the control arm of OVHIPEC-1 was similar to patients treated outside the trial. This finding does not lend support for the hypothesis that the survival benefit seen in the trial was caused by inferior outcome of patients selected for the trial. These results support the administration of HIPEC in stage III EOC patients undergoing interval CRS in clinical practice.

EP299 / #232

EPOSTER VIEWING: AS11 OVARIAN CANCER

GENOMIC INSTABILITY AS A DETERMINANT OF IMMUNE ESCAPE IN OVARIAN CANCER

Ignacio Vazquez-Garcia¹, Florian Uhlitz¹, Nicholas Ceglia¹, Jamie Lim¹, Michelle Wu², Neeman Mohibullah³, Juliana Niyazov¹, Arvin Eric Ruiz⁴, Robert Soslow⁴, Lora Ellenson⁴, Nadeem Abu-Rustum², Carol Aghajanian⁵, Claire Friedman⁵, Andrew Mcpherson¹, Britta Weigelt⁴, Dmitriy Zamarin⁵, Sohrab Shah¹

¹Memorial Sloan Kettering Cancer Center, Computational Oncology, Department Of Epidemiology And Biostatistics, New York, United States of America, ²Memorial Sloan Kettering Cancer Center, Department Of Surgery, New York, United States of America, ³Memorial Sloan Kettering Cancer Center, Integrated Genomics Operation, New York, United States of America, ⁴Memorial Sloan Kettering Cancer Center, Department Of Pathology, New York, United States of America, ⁵Memorial Sloan Kettering Cancer Center, Department Of Medicine, New York, United States of America

Objectives: Genomic instability is a hallmark of human cancer, with fundamental relevance to cancer etiology and evolution, anti-tumor immunity and therapeutic response. High-grade serous ovarian cancer (HGSOC) is an archetypal cancer of genomic instability defined by distinct mutational processes, intraperitoneal spread and tumor heterogeneity. As immunotherapies have thus far proven ineffective in HGSOC, we sought to establish the determinants of immune evasion in its natural disease history.

Methods: We studied the impact of mutational processes and of spatial heterogeneity on cellular phenotypes in the tumor microenvironment (TME), using genome-based stratification of homologous recombination proficient (HRP) and deficient (HRD) disease subtypes, profiling single cell phenotypes from ~1 million cells by single cell RNA sequencing, and site-matched in situ spatial imaging of 160 tumor sites obtained from 42 treatment-naive patients.

Results: Mutational processes in HRD-Dup (BRCA1^{mt}-like) tumors were associated with a high neoantigen burden, cell-intrinsic JAK/STAT signaling and CD8⁺ T cell dysfunction; HRD-Del (BRCA2^{mt}-like) tumors presented expanded M2-type macrophage populations; and foldback inversion (FBI, HRP) tumors were associated with cell-intrinsic TGFβ signaling, immune exclusion and predominantly naive T cells. HLA loss of heterozygosity was a common mechanism of immune escape in HRD tumors, connecting evolutionary selection with immune states. Multi-region sampling also revealed substantial spatial variation, highlighting the adnexa as an “immune-privileged” site, and suggesting that organ microenvironments can direct immune pruning in patients with widespread disease.

Conclusions: Our findings yield mechanistic insights linking mutational processes in HGSOC to intra- and inter-patient variation in immune resistance, which can be leveraged to optimize future immunotherapeutic strategies.

EP300 / #876

EPOSTER VIEWING: AS11 OVARIAN CANCER

IMPACT OF INITIATION TIMING OF NIRAPARIB MAINTENANCE TREATMENT IN NEWLY DIAGNOSED ADVANCED OVARIAN CANCER

Jing Wang¹, Lingying Wu², Jianqing Zhu³, Rutie Yin⁴, Lingya Pan⁵, Beihua Kong⁶, Hong Zheng⁷, Jihong Liu⁸, Xiaohua Wu⁹, Li Wang¹⁰, Yi Huang¹¹, Ke Wang¹², Dongling Zou¹³, Hongqin Zhao¹⁴, Chunyan Wang¹⁵, Weiguo Lu¹⁶, An Lin¹⁷, Xiaoa Zhen¹⁸, Wenzhao Hang¹⁹, Jianmei Hou¹⁹

¹Hunan Cancer Hospital, the Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, Department Of Gynecologic Oncology, Changsha, China, ²National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Department Of Gynecologic Oncology, Beijing, China, ³Cancer Hospital of the University of Chinese Academy of Sciences (Zhejiang Cancer Hospital), Department Of Gynecologic Oncology, Hangzhou, China, ⁴West China Second University Hospital, Key Laboratory of Birth Defects and Related Diseases of Women and Children, Ministry of Education, Sichuan University, Department Of Gynecology And Obstetrics, Chengdu, China, ⁵Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Department Of Obstetrics And Gynecology, Beijing, China, ⁶Qilu Hospital of Shandong University, Department Of Gynaecology And Obstetrics, Jinan, China, ⁷Peking University Cancer Hospital & Institute, Department Of Gynecologic Oncology, Beijing, China, ⁸Sun Yat-sen University Cancer Center, Department Of Gynecological Oncology, Guangzhou, China, ⁹Fudan University Shanghai Cancer Center, Department Of Gynecologic Oncology, Shanghai, China, ¹⁰Affiliated Cancer Hospital of Zhengzhou University (Henan Cancer Hospital), Department Of Gynecological Oncology, Zhengzhou, China, ¹¹Hubei Cancer Hospital (Affiliated Cancer Hospital of Tongji Medical College, Huazhong University of Science and Technology), Department Of Gynecological Oncology, Wuhan, China, ¹²Tianjin Medical University Cancer Institute & Hospital, Department Of Gynecological Oncology, Tianjin, China, ¹³Chongqing University Cancer Hospital (Chongqing Cancer Hospital), Department Of Gynecological Oncology, Chongqing, China, ¹⁴The First Affiliated Hospital of Wenzhou Medical University, Department Of Gynecology, Wenzhou, China, ¹⁵Cancer Hospital of China Medical University (Liaoning Cancer Hospital & Institute), Department Of Gynecology, Shenyang, China, ¹⁶Women's Hospital School of Medicine Zhejiang University, Department Of Gynecologic Oncology, Hangzhou, China, ¹⁷Cancer Hospital of Fujian Medical University (Fujian Cancer Hospital), Department Of Gynecologic Oncology, Fuzhou, China, ¹⁸Zai Lab (US) LLC, Nil, Boston, United States of America, ¹⁹Zai Lab (Shanghai) Co., Ltd, Nil, Shanghai, China

Objectives: PARPi maintenance treatment (MT) is indicated for patients with newly diagnosed advanced ovarian cancer (aOC) after first-line platinum-based chemotherapy (1LCT). However, the impact of initiation timing of PARPi MT is unclear. This study aims to compare the efficacy and safety of niraparib MT initiated after different intervals upon completion of 1LCT.

Methods: This is a post hoc analysis of the PRIME phase 3 study (NCT03709316). Adults with newly diagnosed aOC and a response to 1LCT were randomized 2:1 to receive niraparib or placebo within 12 weeks upon completing of 1LCT. The primary endpoint was PFS by BICR. Subgroups comprised patients who initiated MT <9 weeks or ≥9 weeks upon completion of 1LCT.

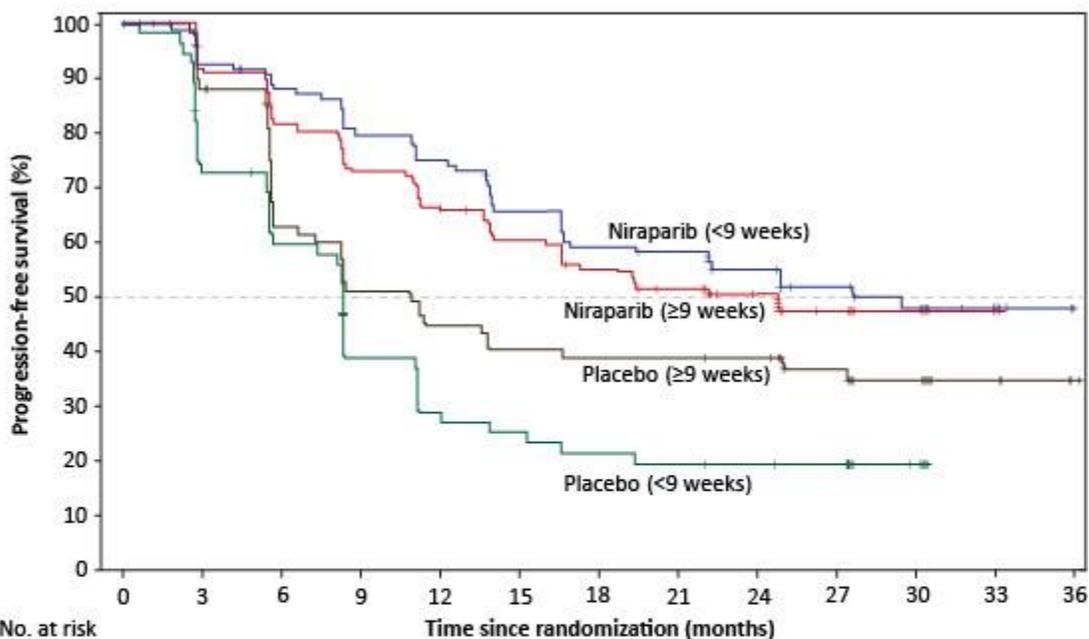
Results: Key baseline characteristics were overall balanced between groups (Table 1). Median PFS (95% CI) was 29.4 months (16.9–not estimable) with niraparib versus 8.3 months (5.5–11.0) with placebo (HR =0.31; 95% CI, 0.20–0.48) for the <9 weeks group and was 24.7 months (16.5–not estimable) with niraparib versus 10.8 months (6.5–24.9) with placebo (HR=0.60; 95% CI, 0.41–0.89) for the ≥9 weeks group (Figure 1). Grade ≥3 hematological adverse events occurred in similar proportions of niraparib-treated patients for the <9 weeks and ≥9 weeks groups: anemia (19.3% versus 17.0%), platelet count decreased (18.4% versus 10.6%), and neutrophil count decreased (15.8% versus 18.4%).

Table 1. Key baseline characteristics for groups who initiated maintenance therapy <9 weeks or ≥9 weeks upon completion of 1LCT

n (%)	0–<9 weeks after 1LCT		≥9–12 weeks after 1LCT	
	Niraparib (N=114)	Placebo (N=58)	Niraparib (N=141)	Placebo (N=71)
FIGO stage				
III	76 (66.7)	41 (70.7)	106 (75.2)	53 (74.6)
IV	38 (33.3)	17 (29.3)	35 (24.8)	18 (25.4)
Neoadjuvant chemotherapy				
Yes	54 (47.4)	29 (50.0)	67 (47.5)	30 (42.3)
No	60 (52.6)	29 (50.0)	74 (52.5)	41 (57.7)
BRCA mutation status				
Germline BRCA mutation	46 (40.4)	19 (32.8)	39 (27.7)	21 (29.6)
Non-germline BRCA mutation	68 (59.6)	39 (67.2)	102 (72.3)	50 (70.4)
Residual disease status after surgery				
Optimal	89 (78.1)	46 (79.3)	104 (73.8)	59 (83.1)
Suboptimal or missing	25 (21.9)	12 (20.7)	37 (26.2)	12 (16.9)
Response to 1LCT				
Complete response	92 (80.7)	47 (81.0)	120 (85.1)	56 (78.9)
Partial response	22 (19.3)	11 (19.0)	21 (14.9)	15 (21.1)

1LCT, first-line platinum-based chemotherapy; FIGO, International Federation of Gynecology and Obstetrics.

Figure 1. PFS by BICR (intention-to-treat): Initiation of maintenance treatment <9 weeks or ≥9 weeks upon completion of chemotherapy



	0	3	6	9	12	15	18	21	24	27	30	33	36
Niraparib (<9 weeks)	114	101	95	86	81	70	63	61	53	35	23	0	0
Niraparib (≥9 weeks)	141	126	112	100	89	81	73	64	50	37	18	4	0
Placebo (<9 weeks)	58	40	32	20	14	13	11	10	8	7	3	0	0
Placebo (≥9 weeks)	71	61	42	34	30	27	26	26	24	17	14	4	1

	Interval: 0–<9 weeks		Interval: ≥9–12 weeks	
	Niraparib (N=114)	Placebo (N=58)	Niraparib (N=141)	Placebo (N=71)
Events, n (%)	53 (46.5)	43 (74.1)	70 (49.6)	43 (60.6)
Median PFS (95% CI), months	29.4 (16.9–NE)	8.3 (5.5–11.0)	24.8 (16.5–NE)	10.8 (6.5–24.9)
Hazard ratio (95% CI)	0.31 (0.20–0.48)		0.60 (0.41–0.89)	

Conclusions: Whether initiated <9 weeks or ≥9–12 weeks upon completion of 1LCT, niraparib MT conferred clinically significant benefit versus placebo to patients with newly diagnosed aOC, without significant impact on safety profile.

EP301 / #854

EPOSTER VIEWING: AS11 OVARIAN CANCER

VOCAL (VIEWS OF OVARIAN CANCER PATIENTS-HOW MAINTENANCE THERAPY AFFECTS THEIR LIVES) STUDY: PATIENT PREFERENCE FOR TREATMENT FORMULATION AND ADMINISTRATION

Stephanie L Wethington¹, Soham Shukla², Joanna De Courcy³, Hilary Ellis³, Jennifer Hanlon², Amanda Golembesky⁴, Teresa Taylor-Whiteley³, Dana Chase⁵

¹The Kelly Gynecologic Oncology Service, Johns Hopkins Medicine, Department Of Gynecology And Obstetrics, Baltimore, United States of America, ²GlaxoSmithKline, Value Evidence And Outcomes, Collegeville, United States of America, ³Adelphi Real World, N/a, Macclesfield, United Kingdom, ⁴GlaxoSmithKline, Value Evidence And Outcomes, Research Triangle, United States of America, ⁵University of Arizona Cancer Center, Gynecologic Oncology Division, Tucson, United States of America

Objectives: Patient preferences regarding management approach following frontline platinum-based chemotherapy for epithelial ovarian cancer(EOC) remain unstudied. Multiple treatment options are available, including PARP inhibitors, so understanding patient preference is critical.

Methods: A cross-sectional survey was completed by US patients with newly-diagnosed EOC eligible for frontline maintenance therapy. Maintenance preference was assessed via time trade-off simulation. Patients selected their preferred post-chemotherapy treatment approach: surveillance, oral daily(QD), oral twice daily(BID), intravenous every 3 weeks(IV-Q3W), or combination IV-Q3W/BID, assuming equivalent efficacy(for all scenarios) and safety(medication scenarios only). Patients were asked to select between a series of maintenance scenarios comparing decreased time to progression(TTP) on their preferred option with constant TTP with alternative options(Table 1). Relative disutility of each scenario was calculated.

Results: 153 patients completed the survey; 30% were non-White, and 83% had health insurance covering full EOC treatment(Table 1). Of all medication strategies, QD treatment was preferred(38%, Table 2); patients were willing to trade the least amount of time(2.3 months) without progression on this scenario versus other choices. For patients who preferred to take a medication even when surveillance offered the same amount of time without progression(n=86), the most common reason(66%) was a feeling of taking an active approach to treatment(Table 3).

Conclusions: Patients preferred QD treatment more than other medication strategies for EOC maintenance following frontline platinum-based chemotherapy; patients who preferred medication wanted an active treatment approach. Patient preferences should be considered in treatment decisions and further studied. Funding: GlaxoSmithKline (214511/NCT02655016). Editorial support provided by Fishawack Health, funded by

Table 1. Patients

Demographic characteristic, n (%)	N=153
Age, median (range), years	52.3 (27–77)
Race, n (%)	
White	107 (70)
Black/African American	19 (12)
Hispanic and Latino	13 (8)
American Indian/Alaskan Native	3 (2)
Asian	2 (1)
Other	2 (1)
Prefer not to say	10 (7)
Education level, n (%)	
High school diploma or GED	17 (11)
Some college	18 (12)
College degree (2-year)	13 (8)
College degree (4-year)	52 (34)
Graduate degree or higher	45 (29)
Trade school/certificate program	1 (1)
Prefer not to say	7 (5)
Health insurance coverage, n (%)	
Covers all EOC treatment	124 (83)
Partially covers EOC treatment	25 (17)
Caregiver due to EOC, n (%)	
Yes	109 (71)
No	44 (29)

GSK. EOC, epithelial ovarian cancer ; GED, General Educational Development

Table 2. Patient (N=153) preferences for formulation and dosing frequency of frontline maintenance treatment for EOC

Treatment	Preferred treatment, ¹	Mean trade-off time,	
	n (%)	months ²	Disutility ³
Surveillance (no medication)	67 (43.8)	6.2	11.4%
QD	58 (37.9)	2.3	0.0%
BID	14 (9.2)	3.2	2.6%
IV-Q3W	11 (7.2)	5.5	9.4%
IV-Q3W/BID	3 (2.0)	7.5	15.5%

¹Percentage of patients who selected each treatment as their most preferred option.

²Average amount of TTP that patients would trade off or “give up” from 36 months on their respective preferred treatments to be considered equivalent to this treatment. Smaller numbers indicate higher preference.

³Calculated by dividing mean TTP for each treatment by the treatment with the best TTP mean (oral QD). Higher disutility indicates lower preference.

BID, oral twice daily; EOC, epithelial ovarian cancer; IV-Q3W, intravenous every 3 weeks; QD, oral daily; TTP, time trade-off; TTP, time to progression.

Table 3. Responses to the question, “Why would you ideally prefer to take a medication rather than active surveillance only if each offers you the same time before the cancer gets worse or comes back?”, for patients who preferred to take a medication even when surveillance offered the same amount of time without progression

Selected response, n (%)	N=86
Makes me feel I am actively doing something to prevent my cancer from coming back	57 (66)
Taking active medication provides reason for regular visits to my doctor/hospital	26 (30)
Is reassuring	21 (24)
Means I am cared for/monitored more regularly and carefully	24 (28)
Other	1 (1)

EP302 / #310

EPOSTER VIEWING: AS11 OVARIAN CANCER

EXPRESSION OF THE ANTI-ANGIOGENIC VEGF-A SPLICE VARIANT, VEGF-A165B, AS PREDICTIVE BIOMARKER FOR BEVACIZUMAB TREATMENT IN ADVANCED OVARIAN CANCER PATIENTS

Pauline Wimberger¹, Mara Gerber¹, Jacobus Pfisterer², Susanne Füssel³, Kati Erdmann³, Theresa Link¹, Andreas Du Bois⁴, Stefan Kommos⁵, Alexander Burges⁶, Tjong-Won Park-Simon⁷, Antje Belau⁸, Lars Hanker⁹, Rainer Kimmig¹⁰, Nikolaus De Gregorio¹¹, Barbara Schmalfeldt¹², Klaus Baumann¹³, Willibald Schröder¹⁴, Florian Heitz¹⁵, Jan Kuhlmann¹

¹Medical Faculty and University Hospital Carl Gustav Carus, Technische Universität Dresden, Department Of Gynecology And Obstetrics, Dresden, Germany, ²University Hospital of Schleswig Holstein, Gynecologic Oncology Center, Kiel, Germany, ³University Hospital Carl Gustav Carus Dresden, Technische Universität Dresden, Department Of Urology, Dresden, Germany, ⁴Kliniken Essen Mitte (KEM), Medical Director, Essen, Germany, ⁵University of Tuebingen, Department Gynecology & Gynecologic Oncology, Tübingen, Germany, ⁶University Hospital LMU Munich, Department Of Gynecology And Obstetrics, München, Germany, ⁷Hannover Medical School, Department Of Gynecology And Obstetrics, Hannover, Germany, ⁸University Hospital Greifswald, Department Of Gynecology And Obstetrics, Greifswald, Germany, ⁹University Hospital Schleswig-Holstein, Campus Luebeck, Gynecology And Obstetrics, Luebeck, Germany, ¹⁰University Hospital Essen, University Hospital Essen, Essen, Germany, ¹¹University Hospital Ulm, Department Of Gynecology And Obstetrics, Ulm, Germany, ¹²University Medical Center Hamburg-Eppendorf, Department Of Gynecology And Obstetrics, Hamburg, Germany, ¹³University Hospital Gießen and Marburg, Department Of Gynecology And Obstetrics, Gießen, Germany, ¹⁴Klinikum Bremen-Mitte, Department Of Gynecology And Obstetrics, Bremen, Germany, ¹⁵Kliniken Essen-Mitte (KEM), Department Of Gynecology And Gynecologic Oncology, Essen, Germany

Objectives: The identification of a robust immunohistochemical marker to predict the response to bevacizumab in ovarian cancer is of high clinical interest. VEGF-A, the molecular target of bevacizumab, is expressed as multiple isoforms with pro- or anti-angiogenic properties, of which VEGF-A_{165b} is the most dominant anti-angiogenic isoform. The balance of VEGF-A isoforms is closely related to the angiogenic capacity of a tumor and may define its vulnerability to anti-angiogenic therapy. We investigated, whether expression of VEGF-A_{165b} is a predictive biomarker for bevacizumab treatment in advanced ovarian cancer.

Methods: Formalin-fixed paraffin-embedded (FFPE) tissues from 413 patients of the ICON7 multicenter phase III trial, treated with standard platinum-based chemotherapy with or without bevacizumab, were probed for VEGF-A_{165b} expression by immunohistochemistry.

Results: In patients with low VEGF-A_{165b} expression, the addition of bevacizumab to standard platinum-based chemotherapy significantly improved progression-free (HR: 0.727, 95%CI=0.538 – 0.984; p=0.039) and overall survival (HR: 0.662, 95%CI=0.458 – 0.958; p=0.029). Multivariate analysis showed that the addition of bevacizumab in low VEGF-A_{165b} expressing patients conferred significant improvements in progression-free survival (HR: 0.610, 95%CI=0.446 - 0.834; p=0.002) and overall survival (HR: 0.527, 95%CI=0.359 – 0.775; p=0.001), independently from established risk factors.

Conclusions: We demonstrate for the first time that immunohistochemical expression of the anti-angiogenic VEGF-A isoform, VEGF-A_{165b}, is an independent predictor for bevacizumab treatment in ovarian cancer patients. We envision that this marker could be implemented into routine diagnostics in ovarian cancer and may guide clinical decisions related to bevacizumab treatment.

EP303 / #705

EPOSTER VIEWING: AS11 OVARIAN CANCER

EFFICACY AND SAFETY OF ANLOTINIB PLUS ALBUMIN-BOUND PACLITAXEL IN PATIENTS WITH RECURRENT, PLATINUM-RESISTANT PRIMARY EPITHELIAL OVARIAN OR PERITONEAL CARCINOMA: A PROSPECTIVE PHASE II CLINICAL TRIAL

Li Yanfang, Yun Zhou, Jian Zhou

Sun Yat-Sen University Cancer Center, Department Of Gynecology, Guangdong, China

Objectives: We examined the efficacy and safety of combining anlotinib with albumin-bound)paclitaxel (ab-paclitaxel) in patients with recurrent,platinum-resistant ovarian or peritoneal carcinoma.

Methods: In this study,44 patients progressing within 6 months after prior platinum-based treatment, were planned to be enrolled. Patients received ab-paclitaxel 260 mg/m² given by intravenous infusion over 30 min every 3 weeks and oral TKI inhibitor anlotinib (10mg, qd, for 14 days,every 3 weeks) until disease progression or intolerable toxicity. For efficacy evaluation, the following were required: measurable disease defined by RECIST 1.1, or if there were no measurable lesions but an elevated CA125 with significant symptoms such as abdominal pain, bloating, or pleural effusion/ascites (Rustin criteria). The primary end point were investigator-confirmed objective response rate (ORR).

Results: From January 2021 to May 2022, twenty patients were enrolled with a median age of 52 years(range, 43-66). seventeen patients had measurable lesions. The baseline characteristics were listed in Table1. Among these patients, sixteen patient were evaluable, including complete response (CR) in one patients, partial response (PR) nine, stable disease six, and progressive disease (PD) zero. The ORR was 62.5% (95% CI, 38.6 to 81.5), the DCR was 100% (95% CI,80.6 to 100). The median PFS and OS was not reached. The frequent TRAEs were rash (18.3%), gum-pain (11.7%), and decreased white blood cell count (9.9%). four patients experienced grade ≥ 3 AEs. The commonly reported grade ≥ 3 AEs were hematologic.

Conclusions: Our data showed that anlotinib plus ab-paclitaxe have promising antitumor activity and manageable toxicity profile in patients with recurrent,platinum-resistant ovarian carcinoma.

EP304 / #313

EPOSTER VIEWING: AS11 OVARIAN CANCER

EFFICACY AND SAFETY OF NIRAPARIB COMBINED WITH ORAL ETOPOSIDE IN PLATINUM RESISTANT/REFRACTORY RECURRENT OVARIAN CANCER: A MULTICENTRE, SINGLE ARM, PROSPECTIVE PHASE II TRIAL

Huimei Zhou¹, Jiixin Yang¹, Qian Liu¹, Qingshui Li², Depu Zhang², Dongyan Cao¹, Yang Xiang¹
¹Peking Union Medical College Hospital, Chinese Academy of Medical Sciences & Peking Union Medical College, National Clinical Research Center for Obstetric & Gynecologic Diseases, Gynecologic Oncology, Beijing, China, ²Shandong Cancer Hospital Affiliated to Shandong University, Shandong Academy of Medical Sciences, Gynecological Oncology, Jinan, China

Objectives: Treatment options for platinum resistant or refractory recurrent ovarian cancer (PRR OC) are few and therapeutic efficacy are limited especially for those after 1 prior line of platinum-based chemotherapy. So, we designed a Phase II trial to evaluate the efficacy and safety of niraparib combined with oral etoposide in PRR OC.

Methods: Key eligibility criteria include patients with histologically confirmed non-mucinous epithelial ovarian, fallopian tube, or primary peritoneal carcinoma; 1-2 prior lines of platinum-based chemotherapy; platinum resistant or refractory recurrence. Patients will receive niraparib 200mg and 100 mg on alternate days and oral etoposide 50mg on day 1-20 of each 30-day treatment cycle. After 6-8 cycles, oral etoposide will be discontinued. Niraparib was given alone until disease progression, intolerable toxicity or withdrawal of informed consent. The primary endpoint is PFS by Response Evaluation Criteria in Solid Tumors (RECIST v1.1).

Results: Recruitment began on 22 May 2020. 26 patients were enrolled to date. The mean number of prior lines of chemotherapy was 1.3 which mean almost all of had primary platinum-refractory diseases. Median treatment duration was 4.3 months (1.1~16.1). Notably, one primary platinum resistant patient achieved CR lasting from week 16 to week 64 and is still on treatment. Another patient had clear cell carcinoma and has maintained PR through week 48 assessment; she is also still on treatment.

Conclusions: Niraparib combined with oral etoposide show promising antitumor activity in PRR OC patients who received 1-2 prior lines of platinum-based chemotherapies. Study recruitment is ongoing.

EP305 / #335

EPOSTER VIEWING: AS11 OVARIAN CANCER

SHORT-COURSE OF NAB-PACLITAXEL PLUS CARBOPLATIN IN FIRST-LINE ADVANCED OVARIAN CANCER TREATMENT: A MULTICENTER, NONRANDOMIZED CONTROLLED, PHASE II STUDY

Zhuo Yang¹, Jiyong Jiang², Xingyuan Xu¹, Danbo Wang¹

¹Cancer Hospital of China Medical University/Liaoning Cancer Hospital, Department Of Gynecology, Shenyang, China, ²Dalian Municipal Women and Children's Medical Center, Department Of Gynecological Oncology, Shenyang, China

Objectives: This study was designed to compare the efficacy and safety of short-course regimen of nab-paclitaxel (Keaili®) plus carboplatin (Nab-PC) and standard chemotherapy of paclitaxel plus carboplatin (PC) for ovarian cancer (ChiCTR1900028165).

Methods: In this phase II study, women with stage II to IV epithelial ovarian cancer were assigned to Nab-PC group (4 cycles of nab-paclitaxel 260 mg/m² and carboplatin AUC5 every 3 weeks) or PC group (6 cycles of paclitaxel 175 mg/m² plus carboplatin AUC5 every 3 weeks) according to patient's choice. The primary endpoint was progression-free survival. Secondary endpoints were objective response rate, overall survival and safety.

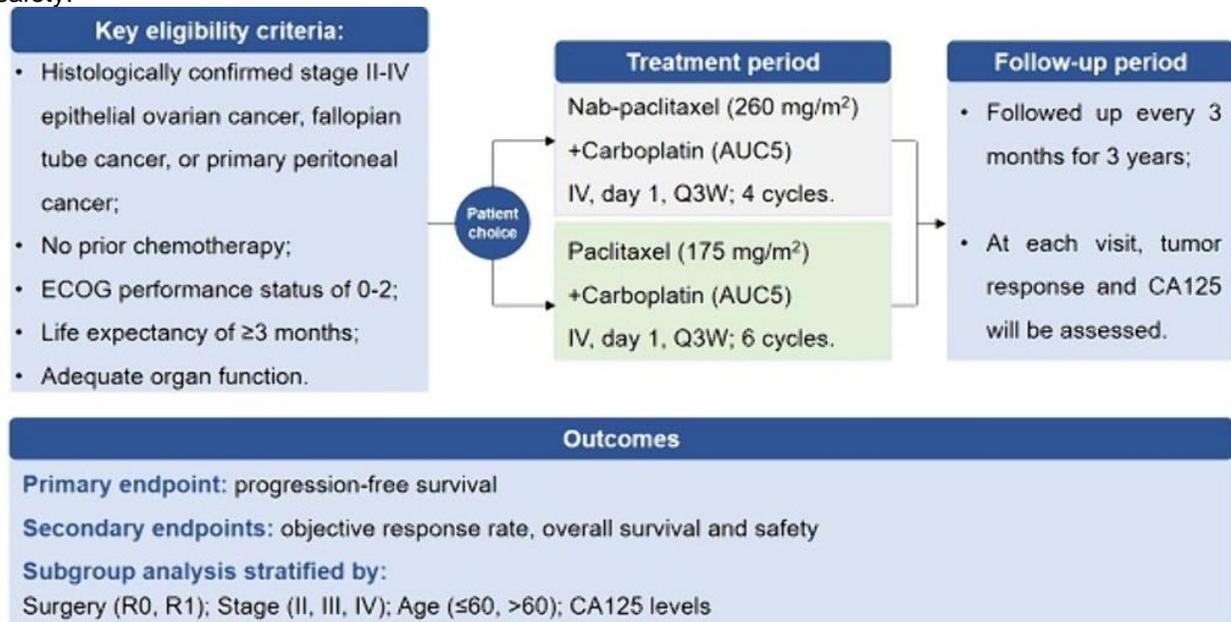


Figure 1. Study outline

Results: Only 17 patients in Nab-PC group were included in this preliminary analysis. The median age was 54 years. 10 patients were evaluable for response according to GCIG CA125 criteria, the objective response rate was 100%. A study of PC as first-line chemotherapy showed CA125 response was 76.8% (J Natl Cancer Inst 2004;96:1682-91). With a median follow-up of 7.36 months, one patient developed progressive disease 21.26 months after enrollment. Compared with the above-mentioned PC study, we found a lower incidence of grade 3/4 neutropenia (11.76% vs 84%) and thrombocytopenia (0.00% vs 10%) and with a similar incidence of anemia (11.76% vs

8%).

Table 1 Baseline characteristics

Characteristic	Nab-PC group (N=17)
Age, years	
Median (range)	54(38-67)
ECOG performance status, No.(%)	
0	1(5.88)
1	12(70.59)
Missing data	4(23.53)
CA125, U/mL	
Median (range)	124.30(16.32-306.50)
Histological type, No.(%)	
High-grade serous carcinoma	13(76.47)
Low-grade serous carcinoma	1(5.88)
Serous (no grade specified) carcinoma	1(5.88)
Endometrioid	1(5.88)
Mixed or other types	1(5.88)
FIGO stage, No.(%)	
IIB	2(11.76)
IIIC	14(82.35)
IIIB	1(5.88)

Conclusions: Preliminary results suggested that for advanced epithelial ovarian cancer the short-course Nab-PC regimen as first-line chemotherapy provided equivalent efficacy to that of the PC regimen and there appeared to be a lower incidence of hematologic toxicities.

EP306 / #201

EPOSTER VIEWING: AS11 OVARIAN CANCER

EFFICACY AND SAFETY OF NANOPARTICLE ALBUMIN-BOUND PACLITAXEL PLUS CARBOPLATIN AS NEOADJUVANT CHEMOTHERAPY FOR WOMEN WITH UNRESECTABLE OVARIAN CANCER: A SINGLE-CENTER, OPEN PHASE IB/II CLINICAL TRIAL

Lina Yin, Wei Jiang, Boer Shan, Huijuan Yang
Fudan University Shanghai Cancer Center, Gynecologic Oncology, Shanghai, China

Objectives: This study aimed to explore the efficacy and safety of nanoparticle albumin-bound paclitaxel (nab-p) combined with carboplatin as a neoadjuvant chemotherapy (NACT) regimen for patients with ovarian cancer (OC).

Methods: This is a single-center, open phase Ib/II Clinical Trial (ChiCTR1900026893). We enrolled women with unresectable epithelial OC, FIGO stage III or IV. Patients received 3 cycles of NACT, then interval debulking surgery (IDS), followed by 3-6 cycles of adjuvant chemotherapy. Each 3-week cycle consisted of carboplatin AUC5 plus nab-p 260 mg/m²(Keaili®). In the phase Ib part, the objective was to evaluate the safety and tolerability of the NACT. In the phase II part, the primary objective was R0 resection rate. Secondary objectives were progression-free survival, objective response rate (ORR) and safety.

Results: Phase Ib results showed the NACT was safe and tolerable, so the study proceeded to phase II. A total of 22 patients were included in this analysis, 10 patients in the phase Ib and 12 patients in the phase II. The median age was 58.5 years and 13 (59.1%) patients had stage IIIC. After NACT, the ORR was 86.4% (95%CI: 65.1%-97.1%). Among the 20 patients who underwent IDS, all patients achieved optimal debulking and 75% (95%CI: 50.9%-91.3%) achieved R0 resection. During NACT, the most common grade 3/4 adverse events were hematologic toxicities, including neutropenia (81.8%), leucopenia (54.5%), anaemia (22.7%) and thrombocytopenia (22.7%). All adverse events returned to normal or acceptable levels after receiving appropriate treatment.

Conclusions: Nab-p plus carboplatin as a NACT regimen was effective and tolerable for unresectable epithelial OC.

EP307 / #659

EPOSTER VIEWING: AS11 OVARIAN CANCER

THE LONG-TERM PROGNOSIS OF TOTAL PARIETAL PERITONECTOMY IN PRIMARY DEBULKING SURGERY FOR ADVANCED OVARIAN CANCER

Kota Yokosu¹, Hiroshi Tanabe², Yuki Koike², Suguru Odajima², Aikou Okamoto¹

¹The Jikei University School of Medicine, Department Of Obstetrics And Gynecology, Tokyo, Japan, ²National Cancer Center Hospital East, Gynecology, Chiba, Japan

Objectives: The object of this study is to evaluate the long-term clinical efficacy of total parietal peritonectomy (TPP) in primary debulking surgery (PDS) for advanced ovarian cancer. We previously reported that TPP showed the favorable prognosis at 3 years after PDS. In this study, the prognosis at 5 years after PDS and first recurrent site were investigated.

Methods: This retrospective single-center study analyzed 16 patients with FIGO stages IIIC-IVB epithelial ovarian cancer who underwent TPP in PDS and achieved macroscopically complete resection between April 2015 and June 2016.

Results: The median age of 16 patients was 52.5 years old, 12 were in stage IIIC and 4 were in stage IV. The histological types were high grade serous in 13 patients, and endometrioid grade3, clear cell and low grade serous in 1 patient each. All patients underwent chemotherapy (paclitaxel-carboplatin alone or with bevacizumab) after PDS. The 5-year relapse-free survival was 43.7% (95%CI: 19.8-65.6%) and overall survival was 68.8% (95%CI: 40.5-85.6%). Regarding the site of first recurrence, lymph node was observed in 6 patients, peritoneum in 5, and distant metastasis to parenchymal organs in 3 (includes duplicate patients).

Conclusions: These results were favorable considering that these patients were treated before the introduction of PARP inhibitors. Examination of the site of first recurrence suggested that TPP reduced peritoneal recurrence. TPP in PDS may improve the prognosis of advanced ovarian cancer. On the other hand, complications may increase. Further studies are necessary on its safety and efficacy. We are going to start a phase 2 clinical trial soon.

EP308 / #195

EPOSTER VIEWING: AS11 OVARIAN CANCER

CLINICAL CHARACTERISTICS AND SURVIVAL ANALYSIS OF CHINESE OVARIAN CANCER WITH BRCA1 C.5470_5477DEL GERMLINE MUTATION

Hua Yuan

National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Department Of Gynecologic Oncology, Beijing, China

Objectives: BRCA1 c.5470_5477del mutation is the most common BRCA1/2 genes mutation in Chinese ovarian cancer patients. We aimed to describe the behavior among patients with c.5470_5477del mutation.

Methods: We conducted next-generation sequencing (NGS) for BRCA1/2 genes in 760 Chinese ovarian cancer patients. Clinicopathological characteristics and outcomes were assessed.

Results: BRCA1 c.5470_5477del germline mutation was detected in 2.76% (21/760) of patients, which was the most frequent BRCA1/2 mutation of these patients. This pathogenic mutation represented for 13.46% (21/156) of BRCA1 mutations and 9.81% (21/214) of BRCA1/2 mutations. 21 patients came from 21 unrelated families. Patients median age at diagnosis was 52 years (range: 36-67 years). 81.0% (17/21) of them were diagnosed after 50 years. 9 patients (42.9%) had a family history of ovarian or breast cancer. 4 patients (19.0%) had a personal history of breast cancer. And 9 patients had no family history of ovarian or breast cancer, and no personal history of breast cancer. The distribution by stage was: stage I-II in 2 patients (9.6%), stage III-IV in 19 patients (90.4%). 81.0% (17/21) patients had high-grade serous carcinoma. The median follow-up was 34.5 months (range: 12.3–111.0 months). Median recurrence-free survival (RFS) and 2-year RFS for these patients was 25.4 months and 57.4%, respectively. 13 patients (13/21, 61.9%) relapsed during follow up, among which 92.3% (12/13) were classified as platinum-sensitive recurrence.

Conclusions: Nearly half of BRCA1 c.5470_5477del mutation carriers had no family history of ovarian or breast cancer, and no personal history of breast cancer. Most patients tended to be associated with aggressive phenotype.

EP309 / #952

EPOSTER VIEWING: AS11 OVARIAN CANCER

ARCHIPELAGO OF OVARIAN CANCER RESEARCH: A DUTCH NATIONWIDE, INTERDISCIPLINARY OVARIAN CANCER RESEARCH INFRASTRUCTURE

Hein Zelisse¹, Constantijne Mom², Mignon Van Gent²

¹Amsterdam UMC, University of Amsterdam, Pathology, Cancer Center Amsterdam, Amsterdam Reproduction & Development Research Institute, Amsterdam, Netherlands, ²Centre for Gynaecologic Oncology Amsterdam, Amsterdam UMC, University of Amsterdam, Gynaecologic Oncology, Cancer Center Amsterdam, Amsterdam, Netherlands

Objectives: High-impact fundamental and translational research is urgently needed to improve survival of ovarian cancer patients. Therefore, we established the Dutch nationwide Archipelago of Ovarian Cancer Research (AOCR). This multicenter, interdisciplinary infrastructure and biobank is a collaboration between all 19 Dutch hospitals in which ovarian cancer surgery takes place, and is aimed at facilitating large-scale, high-quality fundamental and translational ovarian cancer research.

Methods: Adult patients with (suspected) ovarian cancer are eligible for inclusion in the AOCR. Preoperative and follow-up blood samples, ascites, biopsies, and tissue from primary and metastatic tumor sites are collected and stored in a uniform manner for future (genetic) research. One representative histological hematoxylin and eosin stained slide per participant is digitized and reassessed by a gynecological pathologist's panel. Clinical and pathological parameters are retrieved from Dutch data registries. Besides issue of samples to individual researchers and research groups, subsequent research questions will be defined jointly by all collaborators.

Results: Between January 2021 and May 2022, 273 patients were included in five participating hospitals. Ten more hospitals are expected to start inclusion between May and July 2022. From these 273 patients, 775 blood samples, 572 tissue samples and 162 digital slides were collected.

Conclusions: The AOCR ensures a large collection of samples to be used for research. It enhances interdisciplinary and multicenter collaboration at a national, and, hopefully in the future, international level. The AOCR facilitates large-scale, high-quality fundamental and translational ovarian cancer research with the ultimate aim to improve diagnostics, treatment and survival of ovarian cancer patients.

EP310 / #1033

EPOSTER VIEWING: AS11 OVARIAN CANCER

SOLUBLE HLA-E AND TNF-ALPHA EXPRESSION ASSOCIATION IN EPITHELIAL OVARIAN CARCINOMA ASCITES

Wafa Babay¹, Nadia Boujelbene², Ines Zemni³, Sabine Dhouioui¹, Mohamed Ali Ayadi³, Vera Rebmann⁴, Ines Zidi¹

¹Laboratory Microorganismes and Active Biomolecules, Sciences Faculty Of Tunis, Tunis, Tunisia, ²Salah Azaiez Institute, Department Of Pathology, Tunisia, Tunisia, ³Salah Azaiez Institute, Surgical Oncology, Tunis, Tunisia, ⁴Institute for Transfusion Medicine, University Hospital Essen, Essen, Germany

Objectives: Most patients with ovarian carcinoma are diagnosed at an advanced stage, and therapeutic options for these patients still limited. The present study aims to investigate soluble Human leukocyte antigen-E (sHLA-E) and TNF- α inflammatory cytokine expression in ascites of patients with epithelial ovarian carcinoma (EOC).

Methods: Thirty ascites specimens from EOC patients were collected. We optimized a direct sandwich enzyme-linked immunosorbent assay (ELISA) method to simultaneously determine the total antibody levels of sHLA-E and TNF- α .

Results: Ascites from EOC patients showed increased sHLA-E levels (Mean: 1403pg/ml) and TNF- α levels (Mean: 40,4pg/ml). Interestingly, sHLA-E was positively correlated to TNF- α expression (Spearman $r=0.37$, $p=0.05$). Both soluble molecules were decreased in ascites of EOC patients with high CA-125 without significance (CA-125 <35U vs CA125 \geq 35U: sHLA-E: 1914 pg/ml vs 1307pg/ml and TNF-a: 154.2pg/ml vs 24.85pg/ml).

Conclusions: Our preliminary data demonstrated that sHLA-E and TNF-a are increased in EOC patients' ascites but decreased in those with high CA-125 tumor marker. sHLA-E might be highly secreted to decrease local inflammation and inhibit tumor progression. Further studies could shed light on the potential immune tolerance role of HLA-E in EOC.

EP311 / #1038

EPOSTER VIEWING: AS11 OVARIAN CANCER

SECRETED HLA-G PROFILING IN EPITHELIAL OVARIAN CARCINOMA ASCITES

Wafa Babay¹, Nadia Boujelbene², Ines Zemni³, Sabrine Dhouioui¹, Ines Ben Safta³, Vera Rebmann⁴, Ines Zidi¹

¹Laboratory Microorganismes and Active Biomolecules, Sciences Faculty Of Tunis, Tunis, Tunisia, ²Salah Azaiez Institute, Department Of Pathology, Tunisia, Tunisia, ³Salah Azaiez Institute, Surgical Oncology, Tunisia, Tunisia, ⁴Institute for Transfusion Medicine, University Hospital Essen, Essen, Germany

Objectives: Human leukocyte antigen (HLA)-G expression has been correlated with disease status and cancer patients' outcome. In this study, we aimed to investigate the expression levels of both free soluble molecules (sHLA-G) and via extracellular vesicles as a membrane anchored molecule (HLA-G_{EV}) in ascites from epithelial ovarian carcinoma (EOC) patients. We also explored their correlation with CA-125 tumor marker levels and histological subtypes.

Methods: sHLA-G and HLA-G_{EV} levels were measured using Enzyme-Linked Immunosorbent Assay (ELISA) method in 30 ascites from EOC patients.

Results: Secreted HLA-G was detected in most of the ascites of EOC patients (sHLA-G 93%; HLA-G_{EV} 70%) with increased levels (sHLA-G: 6.46 ng/ml and HLA-G_{EV}: 3.62ng/ml). Secreted HLA-G levels were highly increased in patients with serous ovarian carcinoma versus other subtypes (sHLA-G : 6.94ng/ml vs 4.62ng/ml, and HLA-G_{EV}: 4.20ng/ml vs 1.45ng/ml, respectively). Interestingly, sHLA-G level was increased in EOC patients with high CA-125 tumor marker levels (CA125 \geq 35U/ml: 7.20ng/ml vs CA-125 <35U/ml: 3.51 ng/ml). Similarly, HLA-G_{EV} level was increased in EOC patients with high CA-125 tumor marker levels (CA125 \geq 35U/ml: 4.16ng/ml vs CA-125 <35U/ml: 1.89ng/ml).

Conclusions: Our preliminary data established that both sHLA-G and HLA-G_{EV} may provide an interesting new opportunity as tumor markers to evaluate patients with suspected ovarian cancer. Further studies still needed to consolidate our finding and clearly establish secreted HLA-G as new biomarkers for monitoring the disease.

EP312 / #486

EPOSTER VIEWING: AS11 OVARIAN CANCER

COMPARISON OF HRD STATUS BEFORE AND AFTER NEOADJUVANT CHEMOTHERAPY IN PATIENTS WITH ADVANCED EPITHELIAL OVARIAN CANCER

Tiange Zhang¹, Changzhong Li², Hongqi Li¹, Fei Wang¹, Chunyan Li¹, Yüewen Gao¹, Minxue Gai¹, Hongyang Zhang¹

¹Shandong Provincial Hospital, Gynecology, Jinan, China, ²Peking University, Shenzhen Hospital, Shenzhen, China

Objectives: Neoadjuvant chemotherapy (NACT) has been regarded as a standard treatment for those advanced epithelial ovarian cancer patients with massively disseminated tumors. The homologous recombination deficiency (HRD) status has guiding significance for the therapeutic selection of poly (ADP-ribose) polymerase (PARP) inhibitors. However, platinum may be mutagenic as a DNA cross-linker. So, the HRD status may change. Therefore, we analyze some clinical data to detect the change in HRD status before and after platinum-based NACT.

Methods: A total of 41 patients with advanced epithelial ovarian cancer for which biopsies were obtained before receiving NACT were enrolled. The BRCA mutation, HRD score, and HRD status of the paired samples of biopsy and surgery were tested by the AmoyDx® HRD-Focus panel.

Results:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
Biopsy BRCA	+	-	-	-	-	-	-	-	+	-	+	-	-	+	-	+	-	-	-	+	-	
Surgery BRCA	+	-	-	-	-	-	-	-	-	-	+	-	-	+	-	+	-	-	-	-	+	-
Biopsy HRD score	80	8	6	34	2	79	32	46	69	2	68	79	78	66	41	74	3	63	84	34	97	
Surgery HRD score	61	58	30	17	36	1	2	4	53	7	78	43	42	60	85	59	12	46	56	7	35	
Biopsy HRD status	+	-	-	-	-	+	-	+	+	-	+	+	+	+	+	+	-	+	+	+	+	
Surgery HRD status	+	+	-	-	-	-	-	-	+	-	+	+	+	+	+	+	-	+	+	+	-	
	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41		
Biopsy BRCA	-	+	+	+	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	
Surgery BRCA	-	+	-	+	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	
Biopsy HRD score	11	31	54	72	47	10	22	2	3	13	1	48	12	9	62	6	31	59	81	4		
Surgery HRD score	23	27	39	72	56	40	55	11	42	35	20	47	10	51	37	26	35	67	0	70		
Biopsy HRD status	-	+	+	+	+	-	-	-	-	-	-	+	-	-	+	-	-	+	+	-	-	
Surgery HRD status	-	+	-	+	+	-	+	-	+	-	-	+	-	+	-	-	-	+	-	+	-	

HRD status was defined as HRD positive for tumors with BRCA1/2 mutation or HRD scores ≥ 41 . Before NACT, 10 patients were BRCA mutation-positive and 22 were HRD positive. While 9 patients were BRCA mutation-positive, 21 were HRD positive and 1 was not detected after NACT. There were 3 paired samples changed in BRCA mutation, and 2 of them were BRCA mutation-positive changed into BRCA mutation-negative. The other pair showed the opposite change. Among 10 paired samples of HRD status changed, HRD positive to negative accounts for half.

Conclusions: The HRD status of advanced epithelial ovarian cancer patients may be influenced by platinum-based chemotherapy. So, it should be detected by surgical sample after NACT.

EP313 / #490

EPOSTER VIEWING: AS11 OVARIAN CANCER

VALIDATION OF MUTATION ANALYSIS OF OVARIAN CANCER PREDISPOSITION GENES IN TUMOR TISSUE

Wouter Koole¹, Anne Jansen², Margreet Ausems¹, Trudy Jonges², Petronella Witteveen³, Ronald Zweemer⁴, Wendy De Leng²

¹UMC Utrecht, Genetics, Utrecht, Netherlands, ²UMC Utrecht, Pathology, Utrecht, Netherlands, ³University Medical Center Utrecht, Medical Oncology, Umc Utrecht Cancer Center, Utrecht, Netherlands, ⁴University Medical Center Utrecht, Gynecologic Oncology, Umc Utrecht Cancer Center, Utrecht, Netherlands

Objectives: Almost 10% of ovarian cancer (OC) patients carry a somatic pathogenic variant (PV) in one of the ovarian cancer (OC) predisposition genes (e.g. BRCA1/2) and might respond to PARP inhibition. Without somatic testing these patients are denied effective treatment.

Methods: To implement tumor testing of ovarian cancer predisposition genes the 523 gene panel (TSO500, Illumina) was validated in a cohort of 48 formalin-fixed paraffin-embedded archival samples with known mutation status. Blind data analysis was performed for mutational status using Franklin Genoox software (Franklin) and an in-house built Copy Number Variation (CNV) analysis. BRCA1 MLPA analysis was performed for all mutation negative samples.

Results: The validation cohort consisted of ovarian (n=40), breast (n=6) and pancreas (n=2) samples of which 44 were known to contain a germline mutation and 3 a somatic mutation. After blinded data analysis, a PV was detected in 35 cases (BRCA1/2, BRIP1, RAD51C) and a variant of unknown significance in 6 cases (BRCA1/2, BRIP1, RAD51D). Exon deletions in BRCA1 were detected in 5 cases. The known molecular defect was identified in 46/48 (96%). Two CNVs (4%) were missed, a tandem duplication including CHEK2 and loss of RAD51D.

Conclusions: TSO500 mutation analysis can be reliably used to detect PVs in OC predisposition genes, however, CNV analysis remains challenging. Therefore, the tumor first workflow where the tumor test is performed first to guide treatment might not identify all carriers of a germline PV. However, with Dutch nationwide implementation, this universal workflow leads to genetic testing of a higher proportion of OC patients.

EP314 / #868

EPOSTER VIEWING: AS12 PALLIATIVE CARE

CLINICAL CHARACTERISTICS AND OUTCOMES IN ELDERLY GYNECOLOGIC CANCERS PATIENTS WITHOUT SURGICAL TREATMENT

Ji Yeon Choi¹, Kyeong A So¹, Eun Jung Yang², Seung Hyuk Shim², Sun Joo Lee², Tae Jin Kim²
¹Konkuk University School of Medicine, Obstetrics And Gynecology, Seoul, Korea, Republic of, ²Konkuk University School of Medicine, Obstetrics And Gynaecology, Seoul, Korea, Republic of

Objectives: Although surgery is the main treatment for gynecologic cancer, elderly patients are less likely to have surgical treatment than younger patients. This study aimed to investigate clinical characteristics and outcomes of elderly gynecologic cancer patients who did not receive surgical treatment.

Methods: This retrospective study included patients aged 65 years and older who were diagnosed with invasive gynecologic cancers at a tertiary medical center in Korea. Patients with recurrent cancer, or incomplete records were excluded. Clinical data included age at diagnosis, comorbidity, stage, reason for not having surgery, nonsurgical treatments such as radiation or chemotherapy, and dates of last follow-up.

Results: During the study period, 247 patients with gynecologic cancer were enrolled. The mean age of patients was 70.5 years. Ovarian, endometrial, and cervical cancer were 85, 60, and 102 patients, respectively. Among them, 127 (51.4%) patients underwent surgical treatment and 120 (48.6%) patients did not undergo any surgery. Cervical cancer (49.6%) was the most common in the non-surgery group, but ovarian cancer (43.7%) was the most common in the surgery group. In the non-surgical group, there were 51 (42.5%) patients who did not receive any treatment. The elderly patients in the non-surgery group were older ages ($p < 0.0001$), more advanced stage ($p = 0.017$), and shorter follow-up period ($p = 0.004$) than those in the surgery group.

Conclusions: Only half of the elderly patients who diagnosed with gynecologic cancers received an appropriate surgical treatment. Elderly gynecologic cancers patients without surgical treatment showed more aggressive disease and poorer prognosis than those with surgical treatment.

EP315 / #711

EPOSTER VIEWING: AS12 PALLIATIVE CARE

PALLIATIVE CARE UTILIZATION AND GOALS OF CARE DISCUSSIONS DURING ADMISSION FOR MALIGNANT BOWEL OBSTRUCTION IN GYNECOLOGIC MALIGNANCIES

Elizabeth Howell¹, Julia Moyett², Melissa Greene², Gloria Broadwater¹, Brittany Davidson¹

¹Duke University Medical Center, Department Of Obstetrics And Gynecology, Durham, United States of America, ²Duke University Medical Center, School Of Medicine, Durham, United States of America

Objectives: Malignant bowel obstruction (MBO) represents a devastating sequelae of gynecologic cancer. MBO patients experience high rates of symptom burden, re-admission, and mortality. Dedicated goals of care (GOC) discussions and specialty Palliative Care (PC) consultation may provide two crucial adjuncts when caring for MBO patients, for both symptom management and advanced care planning.

Methods: A retrospective review was performed of patients with gynecologic MBO admitted to a single academic institution from 2016-2021. Palliative Care consultation, post-hospitalization disposition, and rates of GOC discussion were extracted from the electronic medical record (EMR).

Results: 179 patients accounted for 269 MBO-related admissions over the study period. During the first MBO-related admission, GOC discussions were documented in (64/169) 37.9% of patients; about half (84/169; 50.3%) received PC consultation. 1 in 4 (25.4%) patients were discharged to hospice following first MBO admission. Considering any MBO-related admission, GOC conversations were documented in 90/169 (53.3%) of patients. Almost 1/3 of patients (29.4%) of patients opted to discontinue cancer-directed therapy during an MBO-related admission. Frequency of GOC discussion documentation increased with disease severity, and was higher for patients with carcinomatosis, ascites, complete bowel obstruction, leukocytosis, and/or hypoalbuminemia. PC consultation rates did not trend with disease severity.

Conclusions: MBO-related admission may represent a sentinel event for patients with gynecologic cancers. Many patients are discharged to hospice or decide to discontinue disease-directed therapy following a single MBO-related admission. Rates of GOC discussion documentation and formal Palliative Care consultation remain low in this cohort, suggesting an opportunity to improve the delivery of goal-concordant care.

EP316 / #1111

EPOSTER VIEWING: AS12 PALLIATIVE CARE

MALIGNANT BOWEL OBSTRUCTION PATHWAY TO IMPROVE SERIOUS ILLNESS CONVERSATION AND STANDARDIZE MANAGEMENT

Shuk On Annie Leung¹, Leila Mahdavi², Helen Knight³, Isaac Chua³, Joel Goldberg⁴, Rachel Pozzar⁵, Janet Abraham³, Colleen Feltmate²

¹McGill University Health Center, Obstetrics And Gynecology, montreal, Canada, ²Brigham and Women's Hospital, Division Of Gynecologic Oncology, Department Of Obstetrics, Gynecology, And Reproductive Biology, Boston, United States of America, ³Brigham and Women's Hospital, Palliative Medicine, Boston, United States of America, ⁴Brigham and Women's Hospital, Gastrointestinal And General Surgery, Boston, United States of America, ⁵Dana Farber Cancer Institute, Phyllis F. Cantor Center For Research In Nursing And Patient Care Services, Boston, United States of America

Objectives: There is significant heterogeneity in the management of patients admitted with malignant bowel obstruction (MBO). MBO is a poor prognostic sign that warrants ascertainment of patients' goals of care. The objective of this study was to develop a pathway for inpatient MBO management that incorporates serious illness conversations (SICs).

Methods: A parallel convergent mixed methods design was used. We developed a provisional MBO pathway based on a retrospective chart review of patients admitted with MBO (07/2020-04/2021) and assessed usual management and SIC documentation. We elicited feedback through surveys and interviews of clinicians in gynecologic oncology, medical oncology, and palliative care. We summarized chart review and survey data with descriptive statistics, inductively analyzed interview transcripts, and iteratively refined the pathway between interviews.

Results: Among 18 patients' (62±11.3 years, 72% with 2+ lines of treatment) charts, 50% had documented SICs. Ten clinicians participated in surveys and interviews: 6/10 reserve nasogastric tubes for symptomatic (nausea/vomiting) patients; 9/10 initiate IV steroids 2 days ≤ and 6/10 initiate octreotide 4 days ≤ without resolution. All agreed that MBO warrants a SIC but only 3/10 "always" document SICs. Interviews revealed barriers to SIC, including the acute nature of MBOs, clinicians' discomfort and unclear role initiating and communicating about SICs.

Conclusions: A MBO pathway which incorporates a "prognostic time-out" that brings the multidisciplinary team together to review the patient's goals could improve the frequency of SICs, improve documentation, and clarify roles of each member. Future work will implement this pathway and follow patients on the pathway as part of a quality improvement initiative.

EP317 / #1119

EPOSTER VIEWING: AS12 PALLIATIVE CARE

SERIOUS ILLNESS CONVERSATIONS IN PATIENTS WITH MALIGNANT BOWEL OBSTRUCTION

Shuk On Annie Leung¹, Rachel Pozzar², Isaac Chua³, Joel Goldberg⁴, Janet Abraham³, Colleen Feltmate⁵
¹McGill University Health Center, Obstetrics And Gynecology, montreal, Canada, ²Dana Farber Cancer Institute, Phyllis F. Cantor Center For Research In Nursing And Patient Care Services, Boston, United States of America, ³Brigham and Women's Hospital, Palliative Medicine, Boston, United States of America, ⁴Brigham and Women's Hospital, Gastrointestinal And General Surgery, Boston, United States of America, ⁵Brigham and Women's Hospital, Division Of Gynecologic Oncology, Department Of Obstetrics, Gynecology, And Reproductive Biology, Boston, United States of America

Objectives: Malignant bowel obstruction (MBO) is a poor prognostic sign in patients with gynecologic malignancies. Serious Illness Conversations (SICs) may improve patient well-being and clinician satisfaction. At our institution, SICs are underutilized by clinicians caring for patients with MBO. We explored clinicians' perceptions of and experiences with SICs.

Methods: Using a qualitative descriptive study design, we conducted one-hour, semi-structured interviews with clinicians caring for patients with MBO to explore their practices with regards to SIC, perceived facilitators and barriers to SIC, and interactions with other medical team members. Concurrent with data collection, two researchers inductively analyzed transcripts for themes and resolved discrepancies through discussion.

Results: Ten clinicians (3 gynecologic oncologists, 3 palliative care physicians, 1 medical oncologist, 1 nurse practitioner, 1 colorectal surgeon, and 1 physician assistant) completed the study. We identified three major themes. Participants identified challenges related to interdisciplinary communication, including identifying a primary communicator and arriving at a shared understanding of the patient's illness. The broad spectrum of MBO presentation entailed prognostic uncertainty, and participants perceived that initiating SICs may be daunting in the acute setting for both patients and clinicians. Clinicians reported moral distress and helplessness in not being able to offer additional treatment; but SICs offer the opportunity for concordance in goals of care when treatment options are limited.

Conclusions: Incrementally introducing SICs in the outpatient setting would facilitate further discussion in the inpatient setting. Clinicians can start by inquiring about patients' hopes and worries. Incorporating SICs into routine MBO care may improve patient well-being and mitigate clinicians' moral distress.

EP318 / #1132

EPOSTER VIEWING: AS12 PALLIATIVE CARE

MALIGNANT BOWEL OBSTRUCTION IN GYNECOLOGIC MALIGNANCIES: PROGNOSIS AND PATIENT-CENTERED MANAGEMENT

Julia Moyett¹, Elizabeth Howell², Gloria Broadwater², Melissa Greene¹, Brittany Davidson²

¹Duke University Medical Center, School Of Medicine, Durham, United States of America, ²Duke University Medical Center, Department Of Obstetrics And Gynecology, Durham, United States of America

Objectives: Patients with gynecologic cancers and malignant bowel obstruction (MBO) have poor prognoses and quality of life. The Henry score (HS) was developed in a gastrointestinal cancer-predominant population to predict 30-day mortality and identify patients likely to benefit from surgical MBO management. We aim to assess prognosis following MBO and evaluate HS utility in gynecologic cancers.

Methods: This is a retrospective review of patients with gynecologic cancer and MBO admitted to a single academic institution between 2016 and 2021. Primary outcome was to characterize MBO admissions including interventions utilized, readmission rates, and HS. Secondary outcomes included 1- and 6-month survival after first MBO admission.

Results: 179 patients totaling 269 were admissions identified. Most patients (59.2%) had a HS of 2-3 at first MBO admission followed by those with 4-5 (32.5%), indicating highest risk of 30-day mortality. 30-day mortality rates increased with increasing HS (0.0%, 13.0%, and 38.2% for 0-1, 2-3, 4-5, respectively). Overall, 62.1% were managed conservatively, 21.3% underwent procedural management (percutaneous gastrostomy tube or colonic stent placement), and 10.7% were managed operatively. Need for procedural management increased as HS increased with a concomitant decline in conservative management (Table). Over 1/3(34.1%) of patients were readmitted for MBO. Mortality at 1- and 6-months was 20.1% and 60.9%, respectively. 43(25.4%) of patients were discharged to hospice at first MBO

admission.

Table: Comparison of outcomes by initial Henry score

	Henry score at initial MBO			
	0-1 (N=14)	2-3 (N=100)	4-5 (N=55)	Total (N=169)
Management Type Categories, n (%)				
Conservative	11 (78.6%)	69 (69.0%)	25 (45.5%)	105 (62.1%)
Procedural	1 (7.1%)	12 (12.0%)	23 (41.8%)	36 (21.3%)
Surgical	1 (7.1%)	12 (12.0%)	5 (9.1%)	18 (10.7%)
Chemotherapy	1 (7.1%)	7 (7.0%)	2 (3.6%)	10 (5.9%)
Disposition Location, n (%)				
Home	12 (85.7%)	81 (81.0%)	27 (49.1%)	120 (71.0%)
Skilled Nursing Facility	0 (0.0%)	1 (1.0%)	1 (1.8%)	2 (1.2%)
Hospice	2 (14.3%)	16 (16.0%)	25 (45.5%)	43 (25.4%)
Death	0 (0.0%)	2 (2.0%)	2 (3.6%)	4 (2.4%)
Death within 30 days of first MBO admission, n (%)				
No	7 (50.0%)	69 (69.0%)	29 (52.7%)	105 (62.1%)
Yes	0 (0.0%)	13 (13.0%)	21 (38.2%)	34 (20.1%)
Not Deceased	7 (50.0%)	17 (17.0%)	5 (9.1%)	29 (17.2%)
Status unknown	0 (0.0%)	1 (1.0%)	0 (0.0%)	1 (0.6%)

MBO, malignant bowel obstruction

Conclusions: MBO in gynecologic cancer is associated with high readmission and mortality rates. Intervention type differed by HS in this population suggesting potential utility in gynecologic cancers.

EP319 / #1030

EPOSTER VIEWING: AS13 PATIENT ADVOCACY

NOTHING ABOUT ME WITHOUT ME: HOW THE PATIENT VOICE HAS CHANGED HOW WE COMMUNICATE IN GYNAECOLOGICAL ONCOLOGY CLINICS IN IRELAND.

Yvonne O'Meara

UCD Gynaecological Oncology Group, University College Dublin, Department Of Medicine, Mater Miseser University Hospital, Dublin, Ireland

Objectives: Those who have lived experience of a disease treatment have a unique lens in recommending improvements to a service. It is well recognised that early use of patient and public involvement (PPI) ensures that research focuses on relevant issues. In Ireland, survivorship research is a huge area of growth and PPI is key to this.

Methods: Participants with a diagnosis of gynaecological cancer were sought from within the Irish Society of Gynaecological Oncology PPI group to guide survivorship research. They attended a 2-hour workshop which was recorded, transcribed and qualitatively analysed via an interpretive phenomenological approach (IPA). The concept of a diagnosis delivery card and diagnosis image to illustrate a patient's diagnosis including stage, grade and extent of cancer. Six months after implementation, feedback was sought from 5 clinicians using the resources as well as 20 patients who had been furnished with the card and image. Responses were again analysed via IPA.

Results: 86% of patients found the images and the card extremely helpful. In particular, they felt that the visual aid and the card assisted them in explaining their diagnosis to family or friends who were not present at the consultation. However, 1 patient did find the image difficult to look at. The clinicians found the resources enhanced the consultation, aided understanding and made disclosing a cancer diagnosis easier.

Conclusions: The positive findings of this Diagnosis Delivery project will allow the further roll out of this suite of resources nationally and internationally in collaboration with our partners.

EP320 / #820

EPOSTER VIEWING: AS13 PATIENT ADVOCACY

**"WHAT DO PEOPLE REALLY WANT TO KNOW ABOUT CANCER BRCA PREVENTION?"
GYNECOLOGIC COUNSELLING CHANGES BRCA PATIENTS CHOICES?**

Elisa Picardo¹, Marco Mitidieri¹, Ilaria Barbierato², Stefano Fucina², Silvia Gemmiti², Fiammetta Gervasoni², Francescato Roberta³, Benedetto Chiara⁴, Alberto Zambelli⁵, Danese Saverio²

¹AOU Citta della Salute e della scienza di Torino, Department Of Gynecology And Obstetrics Sant'anna Hospital, Torino, Italy, ²AOU Citta della Salute e della Scienza di Torino, Department Of Gynecology And Obstetrics Sant'anna Hospital, Torino, Italy, ³Ospedale di Ivrea, Department Of Gynecology And Obstetrics, Ivrea, Italy, ⁴University of Turin, Department Of Gynecology And Obstetrics Sant'anna Hospital, Torino, Italy, ⁵Humanitas University Rozzano, Breast Cancer Section Department Of Biomedical Sciences, Irccs Humanitas Research Hospital,, Milan, Italy

Objectives: The purpose of this study is to emphasize the role of oncogenetic counseling in a cohort of women affected by BRCA 1/2 germline mutations. Oncological counseling is essential to ensure an appropriate interpretation of the genetic test result, explain the management possibilities, helping people in the choices of medical options. Mutations of the BRCA 1 and BRCA 2 genes increase the risk of developing familial breast and ovarian cancer. Prevention options we can offer to BRCA mutated patients are intensified surveillance, chemoprevention and prophylactic surgery regarding breast and ovarian cancer.

Methods: A 35-item questionnaire on the type of prevention choice made was developed and offered to 197 BRCA mutated patients of the Sant 'Anna Hospital in Turin from September 2018 to February 2021. We selected 61 patients who correctly completed the questionnaire.

Results: Concerning breast cancer risk reduction, 63% of patients tell us that the preferred option is intensified breast surveillance while for the ovary, the preferred option is surgery in 50% of patients. In both cases the variable "desire for motherhood" influenced the patient' choices in an important way. The 90% of women were satisfied with the doctor's help in directing their choice of prevention.

Conclusions: Physicians should discuss the advantages and disadvantages of risk reduction strategies with high-risk women. Concerning ovarian surgery, surgical menopause and estrogen deprivation are two aspects to consider and to inform patients about symptoms and their treatment. From the point of view of breast surgery, it is considered appreciable talk about aesthetic outcome.

EP321 / #470

EPOSTER VIEWING: AS13 PATIENT ADVOCACY

ASSESSING PSYCHO-EMOTIONAL STATE IN TERMINAL PHASE OF FEMALE REPRODUCTIVE SYSTEM ORGANS CANCER IN GEORGIA

Revaz Shalamberidze^{1,2}, Vasil Tkeshelashvili², Tamar Beruchashvili¹, Mikheil Chkhaidze¹, Akaki Gvazava¹

¹The University of Georgia, Public Health, School Of Health Sciences, Tbilisi, Georgia, ²University of Georgia, School Of Health Sciences, Tbilisi, Georgia

Objectives: Background: Efforts to improve the quality of life of cancer patients as much as possible in the last days of life, advocacy, require further study of thanatogenesis.

Methods: In order to assess thanatogenesis in last days of life of patients in the terminal phase of cancer medical histories of 150 cancer (study group) and 150 neurological (control) patients hospitalized in Tbilisi Palliative Care Clinic were retrospectively studied. Specially designed questionnaire was also applied for prospective study to monitor 50 cancer and 44 neurological patients in the last days of life. In both studies, out of 26 cases of breast and 24 cases of gynecological cancer were diagnosed.

Results: In terminal phase of breast and gynecological cancer, 66.7% and 68.4% of cases, respectively, experience anxiety, restlessness; In 88.9% and 68.4% - confusion, uncertainty in time, place and personalities; 66.7% and 84.2% - delirium; 61.1% and 73.7% - depression, drowsiness, lethargy; 72.2% and 73.7% have a tendency to lose and regain consciousness. Two-thirds of patients with terminal breast (66.7%) and 63.2% of gynecological cancer patients experienced the highest intensity pain (10.0 points) at the end of life.

Conclusions: Permanent pain syndrome in the terminal phase is a complex of cancer-specific symptoms in 2/3 of cases, which, along with unbearable physical suffering of pain, involves psycho-emotional and spiritual feelings of patients. It is recommended that the issue of pain syndrome management be included in the annual cancer control report (NCDC). Goal of annual monitoring: achieve 100% management of permanent pain syndrome.

EP322 / #302

EPOSTER VIEWING: AS13 PATIENT ADVOCACY

**INFORMATION NEEDS OF LYNCH SYNDROME AND BRCA 1/2 MUTATION CARRIERS
CONSIDERING RISK-REDUCING SURGERY: A QUALITATIVE STUDY OF THE DECISION MAKING
PROCESS**

Lucy Zhao¹, Lua Eiriksson^{2,3}, Lorrie Lynch⁴

¹McMaster University, Faculty Of Health Sciences, Hamilton, Canada, ²Juravinski Hospital and Cancer Centre, Division Of Gynecologic Oncology, Hamilton, Canada, ³McMaster University, Department Of Obstetrics And Gynecology, LS L, Canada, ⁴Juravinski Cancer Centre, Cancer Genetics Clinic, Hamilton, Ontario, Canada

Objectives: Risk-reducing surgery (RRS) may be offered to BRCA and Lynch syndrome mutation carriers to reduce risk of gynecological cancer. This study was conducted to better understand patients' information needs when navigating the decision-making process surrounding RRS and how patients weigh different sources of information in their decision-making process.

Methods: This study used a qualitative approach to understand patients' perspectives towards RRS. Semi-structured interviews were conducted virtually. Inclusion criteria included women offered RRS between 35 and 70 years of age with an identifiable BRCA or LS mutation. Data from interviews was coded with constant comparative analysis to develop themes.

Results: Of eight participants, six made decisions regarding RRS; five decided yes to RRS; one decided no. Two were undecided. Thematic analysis found that the key factors affecting patient's decisions around prophylactic surgery were cancer risk, surgical menopause, and psychological readiness. To make an informed decision, patients relied most heavily on information provided by healthcare professionals and family members with prior cancer experience. Information from friends and the Internet also contributed to decision-making. However, some participants reported feeling inadequately informed and identified COVID-19 as a significant barrier affecting access to information.

Conclusions: This qualitative study revealed the key sources of information influencing attitudes regarding risk-reducing surgery. Results underscore the need for greater attention to patients' information needs in the context of psychological readiness, particularly amidst the pandemic. Research involving a larger sample size may help to better support the information needs of individuals with BRCA and LS mutations considering risk-reducing surgery.

EP323 / #723

EPOSTER VIEWING: AS14 PRE-INVASIVE DISEASE

CERVICAL GLANDULAR INTRAEPITHELIAL NEOPLASIA; INCIDENCE, MANAGEMENT AND OUTCOMES OVER 1 YEAR IN A TERTIARY IRISH HOSPITAL

Aoife Corcoran¹, Vicky O'Dwyer¹, Claire Thompson²

¹The Rotunda Hospital, Obstetrics And Gynaecology, Dublin, Ireland, ²The Rotunda Hospital, Colposcopy, Dublin, Ireland

Objectives: To assess the characteristics of the CGIN patient cohort diagnosed in the Rotunda Colposcopy Unit. To identify the number of patients referred with and diagnosed with CGIN in our unit in 1 year. To establish the outcomes of all cases of CGIN our unit.

Methods: Audit approval was obtained from the Rotunda Clinical Audit Department. In the Rotunda Colposcopy Unit, all cases of CGIN are discussed at MDT. A list of all cases of CGIN diagnosed in our unit in 2021 was established from Colposcopy MDT reports. A retrospective chart review was performed. Data was collected and analysed using Microsoft Excel.

Results: 2073 women were referred to the Rotunda Colposcopy Unit in 2021, 12 of whom were diagnosed with CGIN giving an incidence of 0.6%. 75%(n=9) women had High Grade cytological changes on their referral cervical smear, and 25%(n=3) had Low Grade changes. 83%(n=10) patients were diagnosed via cervical punch biopsy and the remaining 2 patients were diagnosed via LLETZ. 3 patients underwent 1 LLETZ procedure, 6 patients underwent 2 LLETZ, and 3 patients had 1 LLETZ followed by Hysterectomy. 3 patients underwent Total Laparoscopic Hysterectomies, one of whom was referred to Gynae-oncology with SCC in situ. 1 patient has had her second TOC, 5 patients have had their first TOC, and 3 patients are awaiting their first TOC.

Conclusions: The HPV screening programme is detecting CGIN, which is universally associated with HPV and high grade squamous abnormalities. Treatment of CGIN is complex and supported by MDT involvement.

EP324 / #386

EPOSTER VIEWING: AS14 PRE-INVASIVE DISEASE

A DOUBLE-BLIND, 4-BLOCK RANDOMIZED, PLACEBO-CONTROLLED, ADAPTIVE PHASE 2/3 TRIAL TO CONFIRM EFFICACY OF BLS-ILB-E710C IN PATIENTS WITH CERVICAL INTRAEPITHELIAL NEOPLASIA 2/3 WITH EXTENSION STUDY

Jae Kwan Lee¹, Seung Hun Song², Young Tae Kim³, Chi-Heum Cho⁴, Tae Jin Kim⁵, Seong Su Min⁶, Do Young Lee⁶, Young-Chul Park⁶

¹Korea University Guro Hospital, Obstetrics And Gynecology, Seoul, Korea, Republic of, ²CHA Bundang Medical Center, CHA University, Comprehensive Gynecologic Cancer Center, Bundang, Korea, Republic of, ³Institute of Women's Medical Life Science, Yonsei University College of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of, ⁴School of Medicine, Keimyung University, Obstetrics And Gynecology, Daegu, Korea, Republic of, ⁵Konkuk University School of Medicine, Obstetrics And Gynaecology, Seoul, Korea, Republic of, ⁶BL Corporation, R&d Division, Yongin, Korea, Republic of

Objectives: - Current treatments for cervical intraepithelial neoplasia 2/3(CIN 2/3) are ablative, so non-invasive treatments are needed as alternatives. For the development of alternative treatment, we designed adaptive phase 2/3 trial to confirm efficacy of BLS-ILB-E710c in patients with CIN 2/3.

Methods: - Safety and efficacy of BLS-ILB-E710c are assessed in a double-blind, 4-block randomized, placebo-controlled, seamless two-part, adaptive phase 2/3 study. The adaptive phase 2/3 trial consists of two parts. In phase 2, the optimal dose of BLS-ILB-E710c is determined based on the histopathological regression. In phase 3, the efficacy of BLS-ILB-E710c is assessed.

Results: – In a previous clinical trial, there was no difference in the rate of histopathological regression in the group taking the BLS-ILB-E710c 1000 mg per day compared to the placebo group at Week 16. However, in the sub-group analysis of CIN 3 patients, the rate of histopathological regression in the experimental group increased statistically significantly at Week 32 compared to Week 16. Additionally, a significant change in CD8+ T cells in the cervix was observed in the experimental group at Week 32. Based on these results, we'll add a group taking BLS-ILB-E710c 1500 mg per day and confirm the histopathological regression at week 32 instead of week 16.

Conclusions: Conclusion/Implications – In order to improve the results of the existing clinical trial, stratified randomization will be performed using age and baseline CIN as factors. Additionally, to discover biomarkers of CIN, an extension study will be conducted only on patients with histopathological regression.

EP325 / #716

EPOSTER VIEWING: AS14 PRE-INVASIVE DISEASE

MEDICAL MANAGEMENT OF ATYPICAL ENDOMETRIAL HYPERPLASIA - OUTCOMES AT A TERTIARY CENTRE IN SINGAPORE

Shi Hui Lee¹, Pearl Wee Ling¹, Charissa Goh², Felicia Chin³

¹KK Women's and Children's Hospital, Department Of Obstetrics And Gynaecology, Singapore, Singapore, ²KK Women's and Children's Hospital, Department Of Reproductive Medicine, Singapore, Singapore, ³KK Women's and Children's Hospital, Department Of Gynaecological Oncology, Singapore, Singapore

Objectives: Medical management of atypical endometrial hyperplasia (AEH) includes oral or intrauterine progestins. This study aims to evaluate the oncological and reproductive outcomes of these patients.

Methods: This retrospective study included women diagnosed with AEH on endometrial biopsy between January 2015 to October 2017, and treated with at least 8 weeks of the same progestin. Statistical analysis was performed with Pearson χ^2 test or independent sample t test as appropriate.

Results: 42 patients met the inclusion criteria. Median follow up was 39 months (range 2-72). 28 patients (66.6%) achieved complete regression (CR) with a median time of 6 months (range 3-23). 7 recurred with EH (25%) and 1 recurred with endometrial carcinoma (3.6%). Median time to recurrence was 4 months (range 3-7). 4 (9.5%) progressed to grade 1 endometrioid adenocarcinoma with a median time of 6 months (range 3-16). Age of diagnosis was significantly lower in patients who achieved CR as compared to those who did not (39.32 ± 6.50 vs 45.4 ± 6.27 , $p=0.006$). Patients below 39 years old had a significant higher chance of CR (12/13 vs 16/29, $p=0.018$). There was no significant difference in mean body mass index (30.0 ± 7.96 vs 33.4 ± 9.03 , $p=0.227$) or parity ($p=0.716$). Probability of CR plateaued at 9 months at 0.63 (95% CI 0.47-0.79). 9 patients were trying to conceive. Clinical pregnancy rate was 44.4% ($n=4$) and live birth rate was 22.2% ($n=2$).

Conclusions: Younger patients, especially those below 39 years old, are more likely to achieve CR. Value of medical treatment beyond 9 months needs to be re-evaluated.

EP326 / #898

EPOSTER VIEWING: AS14 PRE-INVASIVE DISEASE

ORAL PROGESTINS VS LEVONORGESTREL-RELEASING INTRAUTERINE SYSTEM IN TREATMENT OF ATYPICAL ENDOMETRIAL HYPERPLASIA

Shi Hui Lee¹, Pearl Wee Ling¹, Charissa Goh², Felicia Chin³

¹KK Women's and Children's Hospital, Department Of Obstetrics And Gynaecology, Singapore, Singapore, ²KK Women's and Children's Hospital, Department Of Reproductive Medicine, Singapore, Singapore, ³KK Women's and Children's Hospital, Department Of Gynaecological Oncology, Singapore, Singapore

Objectives: This study aims to compare the treatment efficacy of oral progestins vs levonorgestrel-releasing intrauterine system (LNG-IUS) in patients with atypical endometrial hyperplasia (AEH).

Methods: This is a retrospective study conducted in a single tertiary hospital in Singapore. Women diagnosed with AEH on endometrial biopsy between January 2015 to October 2017, and treated with at least 8 weeks of the same progestin were included. Statistical analysis was performed with Pearson χ^2 test, Fisher exact test or independent sample t test as appropriate.

Results: 42 patients met the inclusion criteria, of which 37 were treated with oral progestins and 5 with LNG-IUS. Median follow up was 39 months (range 2-72). Age of diagnosis was significantly lower in patients who were treated with LNG-IUS as compared to oral progestin (34.20 ± 5.357 vs 42.32 ± 6.654 , $p=0.013$). There was no significant difference in mean body mass index (30.44 ± 8.11 vs 36.40 ± 9.409 , $p=0.490$), parity ($p=0.591$), diabetes mellitus (8/37 vs 3/5, $p=0.103$), and polycystic ovarian syndrome (3/37 vs 1/5, $p=0.410$). There was no significant difference in mean time (months) to regression (7.26 ± 5.68 vs 6.6 ± 1.95 , $p=0.802$). All 5 patients treated with LNG-IUS had complete regression with no recurrence, but this was not significantly different as compared to those treated with oral progestins (regression rate 5/5 vs 23/37, $p=0.138$; recurrence rate 0/5 vs 8/23, $p=0.119$).

Conclusions: There was no significant difference in treatment outcomes with oral progestins as compared to LNG-IUS.

EP327 / #93

EPOSTER VIEWING: AS14 PRE-INVASIVE DISEASE

DIFFERENTIATED CERVICAL INTRAEPITHELIAL NEOPLASIA (D-CIN) REPRESENTS A RARE HPV-INDEPENDENT PRECURSOR LESION OF SQUAMOUS CELL CANCER

Olaf Reich, Sigrid Regauer
Medical University of Graz, Obstetrics&gynecology, Graz, Austria

Objectives: Although our knowledge of HPV-independent squamous cell cancers (SCC) of the cervix is growing, the current 2020 WHO classification does not describe HPV independent cervical precancers. The main reason for this was that these exceedingly rare cervix HPV-independent precancerous lesions were not described at time of publication.

Methods: This review will focus on recent aspects of HPV-independent cervical carcinogenesis.

Results: In 2020 we reported for the first time a preinvasive cervical lesion negative with 3 different HPV tests in a series of 474 cone specimens (Reich O. Gynecol Oncol 2020). In 2022 we demonstrated detailed characteristics of HPV-negative cervical intraepithelial precursors (Regauer S. Am J Surg Path 2022). HPV-negativity was defined as lack of both, DNA of 32 HPV subtypes and E6/E7 mRNA of 14 HPV subtypes, and additionally by the absence of HPV sequences in ~5 Mio's WGS reads. The morphological hallmark of this cervical lesion was the presence of atypical keratinocytes confined to the basal and parabasal layers in squamous epithelium with hyper- and parakeratosis with elongated rete ridges. The subepithelial stroma had a dense inflammation with plasma cells and eosinophilic granulocytes. Finding an appropriate terminology for these differentiated intraepithelial precursor lesions, however, proves difficult. In analogy to terminology of vulvar carcinogenesis, differentiated cervical intraepithelial neoplasia (d-CIN) may be appropriate.

Conclusions: The existence of primarily HPV-negative squamous cervical precancers (d-CIN type and basaloid type) needs to be recognized (Regauer S. Int J Gynecol Cancer 2022). In a future classification squamous intraepithelial cervical precancers should be grouped into two categories: HPV-associated and HPV-independent.

EP328 / #979

EPOSTER VIEWING: AS14 PRE-INVASIVE DISEASE

CYTOLOGY AND HPV DNA CERVICAL CANCER SCREENING IN HIV POSITIVE AND HIV NEGATIVE WOMEN

Leon Snyman¹, Karin Richter², Azwidowi Azwidowi Lukhwareni³, Gerrit J Dreyer⁴, Matthys Botha⁵, Frederick Van Der Merwe⁶, Cathy Visser¹, Greta Dreyer¹

¹University of Pretoria, Obstetrics & Gynaecology, Gynaecologic Oncology Unit, Pretoria, South Africa, ²University of Pretoria, Medical Virology, Pretoria, South Africa, ³University of Pretoria, Medical Virology, Pretoria, South Africa, ⁴University of Stellenbosch, Statistics And Actuarial Science, Stellenbosch, South Africa, ⁵University of Stellenbosch, Obstetrics & Gynaecology, Unit For Gynaecologic Oncology, Stellenbosch, South Africa, ⁶Stellenbosch University and Tygerberg Academic Hospital, Gynaecologic Oncology Unit, Cap Town, South Africa

Objectives: HPV-testing is becoming the preferred cervical cancer screening test. Data on HPV DNA screening in resource poor settings are limited. The objectives were to investigate cytology and primary HPV screening in women living with HIV and HIV negative women

Methods: Study was performed in two academic centres in South Africa. Patients had cytology and HPV testing (Hybrid Capture-2, HC2). Those with positive tests had colposcopy and punch biopsy or loop excision of the transformation zone (LLETZ). Data were imputed using a statistical model which maintained the underlying distribution of the available results, allowing calculation for the total screening population

Results: Included were 909 women with mean age 41.42 years (SD 9.82; 25-65 years). In 903 women with known HIV status, 683(75.64%) had negative cytology and 202(22.37%) had abnormal cytology. HC2 HPV was negative in 621(68.77%) women. In WLWH, 54.48% tested cytology negative compared to 79.69% in HIV negative women ($p < 0.0001$). HC2 HPV screening had higher sensitivity (60.92%), but lower specificity (82.39%) compared to cytology (48.59% and 86.75%) for detection of CIN 2+ in all women, except in HIV negative women, where HC2 HPV specificity (75.00%) was comparable to that of cytology (79.74%). For detection of CIN3+, HC2 HPV screening had higher sensitivity (70.45%) compared to cytology (62.88%), but specificity (75.49%) was lower in whole population compared to cytology ASCUS+ (82.37%).

Conclusions: HC2 as screening test performs well in the whole population as well as in WLWH and HIV negative women. Cytology in WLWH is a suitable screening test in low-resource settings for this population group

EP329 / #75

EPOSTER VIEWING: AS14 PRE-INVASIVE DISEASE

THE TREND OF NODAL EVALUATION AT TIME OF HYSTERECTOMY FOR ENDOMETRIAL HYPERPLASIA

Amin Tavakoli¹, Caroline Violette¹, Rachel Mandelbaum¹, Maximilian Klar², Lynda Roman³, Jason Wright⁴, Koji Matsuo³

¹LAC+USC, Ob/gyn, Los Angeles, United States of America, ²University of Freiburg Faculty of Medicine, Department Of Obstetrics And Gynecology, Freiberg, Germany, ³University of Southern California, Obstetrics And Gynecology, Los Angeles, United States of America, ⁴Columbia University, Obstetrics And Gynecology, New York, United States of America

Objectives: Occult endometrial cancer can be identified after a hysterectomy has been done in the setting of endometrial hyperplasia (EH), and this concern raises the possible utility of surgical nodal evaluation at time of hysterectomy for EH. The objective of the study was to examine the trends and characteristics of surgical nodal evaluation at time of hysterectomy for EH.

Methods: This is a retrospective cohort study querying the National Inpatient Sample. The study population was 12,860 women with EH who had hysterectomy from January 2016 to December 2019. Exclusion criteria included adnexal pathology and uterine cancer. Temporal trends of lymph node evaluation were examined, and a binary logistic regression model was used for multivariable analysis.

Results: A total of 815 (6.3%) women had nodal evaluation at hysterectomy. The number of women undergoing nodal evaluation increased from 3.8% to 10.4% (2.7-fold increase, $P<0.001$). The EH with atypia group had higher rate of nodal evaluation compared to the non-atypia group (10.1% versus 3.3%, $P<0.001$), but the utilization of nodal evaluation increased both in the atypia group (7.0% to 14.4%, 2.1-fold increase, $P<0.001$) and in the non-atypia group (1.4% to 5.2%, 3.7-fold increase, $P<0.001$). In a multivariable analysis, older age, recent year surgery, comorbidity, obesity, EH with atypia, minimally invasive hysterectomy, and urban teaching large bed capacity centers remained independent characteristics for nodal evaluation at hysterectomy (all, $P<0.05$).

Conclusions: This analysis suggested a shift towards nodal evaluation at hysterectomy for EH, even in non-atypia. This trend merits further investigation to examine the risk-benefit ratio and the cost effectiveness of nodal evaluation.

EP330 / #475

EPOSTER VIEWING: AS14 PRE-INVASIVE DISEASE

IMMUNE-BASED BIOMARKER ACCURATELY PREDICTS RESPONSE TO IMIQUIMOD IMMUNOTHERAPY IN CERVICAL HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESIONS

Edith Van Esch¹, Ziena Abdulrahman², Natasja Hendriks³, Arnold Jan Kruse⁴, Antonios Somarakis⁵, Anna Sande⁶, Heleen Van Beekhuizen⁶, Jurgen Piek¹, Noel De Miranda⁷, Loes Kooreman⁸, Brigitte Slangen³, Sjoerd Van Der Burg², Peggy De Vos Van Steenwijk³

¹Catharina Ziekenhuis, Gynaecology, Eindhoven, Netherlands, ²Leiden University Medical Center, Medical Oncology, Leiden, Netherlands, ³Maastricht University Medical Center, Gynaecology, Maastricht, Netherlands, ⁴Isala Klinieken, Gynaecology, Zwolle, Netherlands, ⁵Leiden University Medical Center, Radiology, Leiden, Netherlands, ⁶Erasmus Medical Center, Gynaecology, Rotterdam, Netherlands, ⁷Leiden University Medical Center, Pathology, Leiden, Netherlands, ⁸Maastricht University Medical Center, Pathology, Maastricht, Netherlands

Objectives: Topical imiquimod is a non-invasive alternative to a Large Loop Excision of the Transformation Zone (LLETZ) in the treatment of cervical high-grade squamous lesions (cHSIL), and is effective in approximately 60% of primary cHSIL. Prediction of therapy responses upon imiquimod could increase therapy efficacy and aid in patient selection and counselling.

Methods: Two multispectral seven-color immunofluorescence panels for T cell and myeloid cell composition were used to study the immune composition in relation to imiquimod response in 35 cHSIL patients on biopsies before and 10 weeks on imiquimod treatment. Based on these results a simplified immunohistochemical detection protocol was developed.

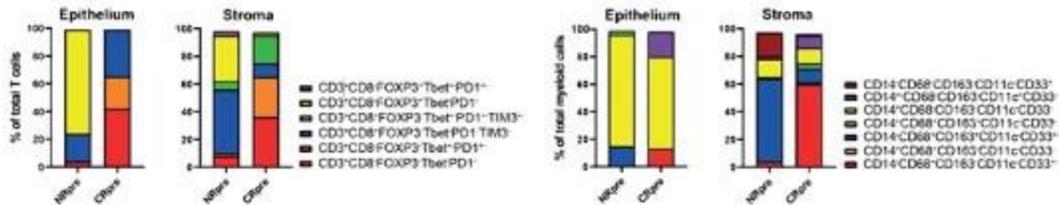


Figure 1. Pre-existing differences in immune cell composition between responders and non-responders to imiquimod. A) Differences in median T cell and myeloid cell changes pre- and on imiquimod treatment in CR (n=21) and NR (n=11) cHSIL epithelium and stroma. In case of more than one marker indicated by +, at least one of these markers is positive in that cell phenotype. B) Pre-existing differences in composition of T cell and myeloid cell infiltrate in CR (n=21) versus NR (n=11) cHSIL epithelium and stroma.

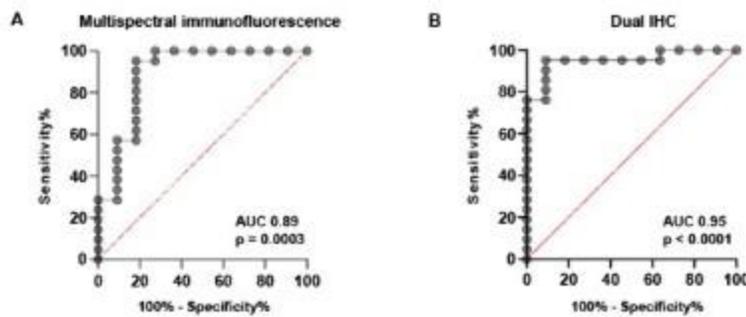


Figure 2. Epithelial immune biomarker is excellent for imiquimod prediction of therapy responses in cHSIL. A) Multispectral immunofluorescence biomarker performance in the epithelium and the same in B) for the dual immunohistochemical biomarker as determined by the receiver operating characteristic (ROC) curve (n=32).

Results:

The immune microenvironment (Figure 1) of complete responders (CR) prior to imiquimod is characterized by a strong and coordinated infiltration by T helper cells (activated PD1⁺/type 1 Tbet⁺), M1-like macrophages (CD68⁺CD163⁻) and dendritic cells (CD11c⁺). The lesions of non-responders (NR) displayed a high infiltration of CD3⁺FOXP3⁺ regulatory T cells. Based on the pre-existing immune composition differences a quantitative simplified one color immunohistochemical biomarker approach was developed which can

be automatically and unbiasedly quantified and has an excellent predictive capacity for complete response to therapy (ROC AUC 0.95, $p < 0.0001$; Figure 2).

Conclusions: A pre-existing coordinated local immune response was associated with the capacity of cHSIL patients to respond to imiquimod. This allowed to develop an easy to apply immunohistochemical biomarker approach to select cHSIL patients with a high likelihood to experience a complete response to imiquimod immunotherapy.

EP331 / #950

EPOSTER VIEWING: AS15 RARE TUMORS

PHYLLODES TUMOR: EPIDEMIOLOGICAL CHARACTERISTICS IN PATIENTS OVER 40 YEARS OLD

Rihab Dahleb, Rim Bouchahda, Insaf Morjène, Fatma Bouguila, Samir Hidar, Ons Kaabia
Université de Sousse, Faculté de Médecine de Sousse, Gynecology Obstetrics, Sousse, Tunisia

Objectives: We aim to determine the clinical, histological, therapeutic, and prognostic characteristics of phyllodes tumors in patients over 40.

Methods: This is a retrospective study conducted at the department of gynecology at Farhat Hached Teaching Hospital Sousse Tunisia over a 5-year period (2017 to 2021) recruiting all the female patients with histologically proven phyllodes tumors of the breast diagnosed at an age over 40.

Results: The average age of occurrence was 51 years [41-63] and 45,4% of the patients were menopausal. The revelation was clinical, with the self-discovery of a breast lump in 90.9%. The mean tumor size was 75 mm [36-144]. All patients had breast surgery. The conservative treatment was decided in 27,2% of cases. Adjuvant radiotherapy was performed on 4 women (36.3%) of patients. Chemotherapy was indicated for a patient with pulmonary and bone metastases. The 3-year follow-up was very favorable in 81.8% with a local recurrence in 2 patients.

Conclusions: In women over 40, Phyllodes tumors are bulky tumors that may often result in a mastectomy. The treatment is mainly surgical. The evolution may be marked by local recurrence and rarely metastases.

EP332 / #368

EPOSTER VIEWING: AS15 RARE TUMORS

RESPONSE TO SYSTEMIC THERAPY IN OVARIAN ADULT GRANULOSA CELL TUMORS: A LITERATURE REVIEW

Geertruid Brink¹, Jolijn Groeneweg¹, Lotty Hooft², Ronald Zweemer¹, Petronella Witteveen³

¹University Medical Center Utrecht, Gynecologic Oncology, Umc Utrecht Cancer Center, Utrecht, Netherlands, ²University Medical Center Utrecht, Cochrane Netherlands, Julius Center For Health Sciences And Primary Care, Utrecht, Netherlands, ³University Medical Center Utrecht, Medical Oncology, Umc Utrecht Cancer Center, Utrecht, Netherlands

Objectives: Adult granulosa cell tumors (aGCTs) represent a rare subtype of ovarian cancer. While (repeated) surgery is the preferred treatment modality, chemotherapy and anti-hormonal therapy are frequently used in patients with recurrent inoperable aGCT. Limited evidence on systemic therapy in aGCT so far has shown varying drug regimens and response rates. We systematically reviewed the existing literature on the response to chemotherapy and anti-hormonal therapy in patients with aGCT.

Methods: Embase and MEDLINE were searched from inception to November 2021. Studies with a reported response based on CT or MRI imaging were included. Objective response rate (ORR) was calculated as the total number of cases with a complete response (CR) or a partial response (PR). Disease control rate (DCR) was defined as the sum of cases with CR, PR or stable disease (SD).

Results: 2817 articles were screened for eligibility, of which 100 studies were submitted to full-text review. A total of 10 studies were included reporting on chemotherapy and 13 studies reporting on anti-hormonal therapy. The response rates of the 56 chemotherapy regimens that could be evaluated resulted in an ORR of 30% and a DCR of 58%. For anti-hormonal therapy, the results of 73 regimens led to an ORR of 11% and a DCR of 66%.

Table 1. Summary of response rates of chemotherapy for aGCT, excluding case reports.

Regimen	Number of regimens	CR n (%)	PR n (%)	SD n (%)	PD n (%)	Unknown n (%)
Platinum based	37	4 (11)	11 (30)	10 (27)	10 (27)	2 (5) ¹
Taxane based	7	0 (0)	1 (14)	2 (29)	4 (57)	0 (0)
Platinum taxane combination	6	2 (33)	0 (0)	2 (33)	2 (33)	0 (0)
Other ²	6	0 (0)	0 (0)	1 (17)	5 (83)	0 (0)
Total	56	5 (9)	12 (21)	16 (28)	22 (39)	2 (3)

¹ One response not stated, one patient stopped due to toxicity.

² Including 5-fluorouracil, chlorambucil, doxorubicin and cyclophosphamide.

CR: complete response, PR: partial response, SD: stable disease, PD: progressive disease.

Table 2. Summary of response rates of anti-hormonal therapy for aGCT, excluding case reports.

Regimen	Number of regimens	CR n (%)	PR n (%)	SD n (%)	PD n (%)	Unknown n (%)
Aromatase inhibitor	9	0 (0)	0 (0)	6 (67)	3 (33)	0 (0)
GnRH agonist	9	0 (0)	2 (22)	6 (67)	1 (11)	0 (0)
Progestin	6	0 (0)	0 (0)	5 (83)	1 (17)	0 (0)
SERM	5	0 (0)	0 (0)	2 (40)	3 (60)	0 (0)
Type unknown	44	1 (3)	5 (11)	21 (48)	12 (27)	5 (11) ¹
Total	73	1 (1)	7 (10)	40 (55)	20 (27)	5 (7)

¹ For the remaining five patients one was lost to follow up, two were within the first 6 months of treatment and two did not tolerate treatment.

CR: complete response, PR: partial response, SD: stable disease, PD: progressive disease, GnRH: gonadotropin-releasing hormone, SERM: selective estrogen receptor modulator.

Conclusions: For both chemotherapy and anti-hormonal therapy, the ORR is limited, but the response rate is considerably higher when patients achieving SD are included. Additional studies are needed to provide more evidence and to standardize systemic treatment in aGCT. A Dutch prospective cohort study is ongoing.

EP333 / #921

EPOSTER VIEWING: AS15 RARE TUMORS

MANAGEMENT OF UTERINE CARCINOSARCOMA: ROLE OF ADJUVANT CHEMOTHERAPY

Alessia Cafforio¹, Brigida Anna Maiorano², Evaristo Maiello², Gennaro Cormio¹, Ettore Cicinelli¹, Vera Loizzi³, Francesca Arezzo¹, Leonardo Resta⁴, Gabriella Serio⁴, Gerardo Cazzato⁴, Giovanni Falcicchio¹
¹University of Bari "Aldo Moro", Department Of Biomedical Science And Human Oncology, Obstetrics And Gynecology Unit, Bari, Italy, ²Foundation Casa Sollievo della Sofferenza IRCCS, Oncology Unit, San Giovanni Rotondo, Italy, ³University of Bari, Interdisciplinar Department Of Medicine, Obstetrics And Gynecology Unit, Bari, Italy, ⁴University of Bari, Emergency And Organtransplantation, Pathology Section, Bari, Italy

Objectives: Current literature is poor on Uterine Carcinosarcoma (UC). Objective of the study is to evaluate pathological-clinical features and management of UC.

Methods: Patients with confirmed UC diagnoses were included retrospectively. Age at diagnosis, FIGO stage, type of surgery, adjuvant-treatment, treatment response, disease-free survival (DFS), overall survival (OS) were collected for each patient. Four groups of patients were identified based on FIGO stage and treatment: I/II stage - surgery (A), I/II stage - surgery + adjuvant-treatment (B), III/IV stage - surgery (C), III-IV stage - surgery + adjuvant-treatment (D). Mean DFS and OS were calculated for each group.

Results: 80 patients with a mean age of 66 yo (42-85) at diagnosis were included. 79 patients (98.75%) underwent hysterectomy and bilateral salpingo-oophorectomy, 1 (1.25%) hysterectomy and monolateral salpingo-oophorectomy. 23 (28.75%) peritoneal staging and 42 (52.5%) pelvic lymphadenectomy were performed. 45 (56.25%) were I/II stages, 35 (43.75%) were III/IV stages. 54 (67.5%) patients received chemotherapy after surgery. 29 (36.25%) showed a complete response. 4 (5%) in group A had recurrence, 11 (13.7%) in B, 4 (5%) in C, 7 (8.7%) in D. Mean DFS was: A) 47.1 mo, B) 56.8 mo, C) 17.6 mo, D) 51.2 mo. Mean OS was: A) 50.4 mo, B) 65.8 mo, C) 21.2 mo, D) 56.0 mo.

Conclusions: Mean OS and DFS increased when adjuvant treatment was administered. Survival differences were more remarkable between groups C and D. Prognosis remained poor in all groups despite the adjuvant treatment.

EP334 / #194

EPOSTER VIEWING: AS15 RARE TUMORS

SINGLE CELL TRANSCRIPTOMIC ANALYSIS OF A LOW GRADE SEROUS OVARIAN CANCER PATIENT TREATED WITH PRESSURIZED INTRAPERITONEAL AEROSOLIZED CHEMOTHERAPY (PIPAC)

Thanh Dellinger¹, Isaac Bishara², Patrick Cosgrove², Sumana Majumdar², Adrian Kohut¹, Raechelle Tinsley^{2,3}, Melissa Eng³, Paul Frankel², Sue Chang⁴, Wiebke Solass⁵, Mihaela Cristea⁶, Mustafa Raof¹, Andrea Bild²

¹City of Hope, Department Of Surgery, Duarte, United States of America, ²City of Hope, Beckman Research Institute, Duarte, United States of America, ³City of Hope, Clinical Trials Office, Duarte, United States of America, ⁴City of Hope, Department Of Pathology, Duarte, United States of America, ⁵University of Bern, Switzerland, Pathology, Bern, Switzerland, ⁶Regeneron, Pharmaceuticals, Tarrytown, United States of America

Objectives: Low grade serous (LGS) ovarian cancer (OC) patients with recurrent peritoneal metastases (PM) have poor prognoses due to inherently chemo-resistant tumors. PIPAC is an intraperitoneal (IP) treatment that intensifies chemotherapy delivery to PM via drug nebulization and pressurization. We analyzed the molecular and tumor microenvironment (TME) changes of a PIPAC-treated LGS patient.

Methods: A heavily pretreated, recurrent LGS OC patient underwent PIPAC (aerosolized cisplatin 10.5 mg/m² and doxorubicin 2.1 mg/m², at 12 mmHg), via laparoscopy q6 weeks, for two cycles (NCT04329494). Tumor and normal peritoneum were biopsied immediately before and after each PIPAC. After cancer cell and nuclei isolation, sc-RNAseq was performed. 10X Genomics generated cDNA libraries were sequenced on Illumina HiSeq 2500 or NovaSeq 6000 instruments using 150 cycle paired-end sequencing at a depth of 10K reads/cell. Multiplex immunohistochemistry (IHC) was performed (quad staining PAX5-DAB/PD-L1/CD68/Tryptase; triple staining PD-1/CD8/CD3; double staining FOXP3-DAB/PD-1).

Results: The Peritoneal Carcinomatosis Index (PCI) reduced from 20 to 14 after one cycle. scRNAseq of post-PIPAC tumors demonstrated significantly upregulated immune and KRAS signaling pathways, compared to post-PIPAC normal tissues. Acute PIPAC-induced responses included upregulation of immune pathways (inflammatory response, complement, interferon-gamma response), hormonal signaling (androgen, estrogen late response), TNF- α signaling via NF- κ B, apoptosis, and hypoxia pathways. PD-1 expression was increased in tumor infiltrating lymphocytes (TILs) within cancer islands.

Conclusions: PIPAC induces peritoneal tumor regression in LGS OC, possibly via modulation of TME, and upregulation of immune and KRAS signaling pathways; thus suggesting potential future combination with MEK inhibitors and immunotherapies.

EP335 / #539

EPOSTER VIEWING: AS15 RARE TUMORS

**PERITONEAL CARCINOMATOSIS FROM RARE OVARIAN TUMORS TREATED WITH
CYTOREDUCTIVE SURGERY AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY
(CRS/HIPEC)**

Luis Felipe Falla Zuñiga¹, Armando Sardi¹, Mary Caitlin King¹, Felipe Lopez-Ramirez¹, Carol Nieroda¹, Teresa Diaz-Montes², Vadim Gushchin¹

¹Mercy Medical Center, Surgical Oncology, Baltimore, United States of America, ²Mercy Medical Center, Gynecologic Oncology, Baltimore, United States of America

Objectives: There are limited treatment options and no consensus on the management of advanced rare ovarian malignancies (ROv). Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy (CRS/HIPEC) is an effective treatment for peritoneal metastasis (PM) of non-gynecologic origin and, recently, in epithelial ovarian cancer. However, available data is largely focused on more common histologic subtypes. We hypothesized that ROv can safely undergo optimal CRS/HIPEC with comparable results to non-gynecologic tumors.

Methods: A retrospective review of a single-center, prospective database (1997-2021) was performed to identify patients with ROv treated with CRS/HIPEC. Clavien-Dindo 90-day morbidity/mortality and Kaplan-Meier overall (OS) and progression-free survival (PFS) were analyzed.

Results: Of 35 identified patients, 29 underwent CRS/HIPEC and 6 were aborted due to extensive disease. Histologic subtypes included: clear cell (5/29, 17.2%), endometrioid (6/29, 20.7%), low-grade serous (6/29, 20.7%), mesonephric (1/29, 3.4%), mucinous (6/29, 20.7%), granulosa cell (3/29, 10.3%), and small cell (2/29, 6.9%). Nine (31%) patients had primary and 20 (69%) recurrent disease. Median peritoneal cancer index (PCI) was 21 (IQR: 6–29). Optimal cytoreduction (<2.5 mm residual disease) was achieved in 96.6% (28/29). Median number of major resections was 5 (IQR: 3-7). Grade III-IV complications occurred in 7/29 (24.1%) with one (3.4%) mortality. After a median follow-up of 65.8 months, 20 patients were alive (Table 1). Five-year OS and PFS were 70.0% and 48.7%

respectively.

Table 1. CRS/HIPEC characteristics and postoperative outcomes by histopathologic subtype

Procedure Variables	Histologic Subtype							
	Clear cell (n=5)	Endometrioid (n=6)	Low-grade Serous (n=6)	Mesonephric (n=1)	Mucinous (n=6)	Granulosa cell (n=3)	Small cell (n=2)	Total (n=29)
Age at surgery, years, median (IQR)	52.0 (47.5-57.0)	55.5 (52.7-63.2)	58.0 (51.0-59.7)	54.0	55.5 (47.2-65.0)	73.0 (51.0-73.0)	55.5 (37.0-74.0)	56.0 (50.5-62.5)
Treatment, n (%)								
Upfront	2 (40)	3 (50)	3 (50)	0 (0)	0 (0)	0 (0)	0 (0)	9 (31)
Salvage	3 (60)	3 (50)	3 (50)	1 (100)	6 (100)	3 (100)	2 (100)	20 (69)
PCI, median (IQR)	6 (4-29)	8 (4-20)	26 (24-30)	29	8 (6-19)	10 (3-28)	33 (32-34)	21 (6-29)
CC-score, n (%)								
CC-0/1	5 (100)	5 (83.3)	6 (100)	1 (100)	6 (100)	3 (100)	2 (100)	28 (96.6)
CC-2/3	0 (0)	1 (16.7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3.4)
Length of surgery, hours, median (IQR)	8.0 (5.1-9.6)	9.5 (6.2-9.7)	10.0 (8.4-12.0)	9.0	7.6 (6.2-9.1)	6.5 (4.5-7.8)	11.3 (10.3-12.3)	8.7 (6.6-9.9)
Length of stay, days, median (IQR)	9 (6-11)	10.0 (7.2-10.7)	9.0 (7.7-9.2)	12.0	9.5 (7.5-19.2)	7.3 (7.0-8.0)	13.5 (13.0-14.0)	9.0 (7.5-11.0)
90-day morbidity, n (%)								
Claviden-Dindo Grade III/IV	1 (20)	0 (0)	2 (33.3)	1 (100)	1 (16.7)	1 (33.3)	1 (50)	7 (24.1)
90-day mortality	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (33.3)	0 (0)	1 (33.3)
Follow-up, months, median (95% Confidence interval)	3.3 (0.7-5.9)	70.7 (41.7-99.7)	67.9 (63.5-72.3)	25.0	130.0 (53.1-206.9)	3.8 (NA)	26.1 (13.7-38.4)	65.8 (43.9-87.7)
Status, n (%)								
NED	5 (100)	3 (50.0)	1 (16.7)	0 (0)	4 (66.7)	2 (66.7)	0 (0)	15 (51.7)
AWD	0 (0)	2 (33.3)	2 (33.3)	1 (100)	0 (0)	0 (0)	0 (0)	5 (17.2)
DOC	0 (0)	0 (0)	1 (16.7)	0 (0)	1 (16.7)	1 (33.3) ^A	0 (0)	3 (10.3)
DOD	0 (0)	1 (16.7)	2 (33.3)	0 (0)	1 (16.7)	0 (0)	2 (100)	6 (20.7)
5-year PFS, %	100.0%	80.0%	16.7%	-	62.5%	-	-	48.7%
5-year OS, %	100.0%	100.0%	80.0%	-	62.5%	-	-	70.0%

^A Postoperative death after CRS/HIPEC due to septic shock secondary to ischemic bowel disease on postoperative day 14.

- Not determined due to insufficient follow-up.

AWD: alive with disease; **CC-score:** completeness of cytoreduction score; **CRS/HIPEC:** cytoreductive surgery with hyperthermic intraperitoneal chemotherapy; **DOD:** dead of disease; **IQR:** interquartile range; **NA:** not available; **NED:** no evidence of disease; **OS:** overall survival; **PCI:** peritoneal cancer index; **PFS:** progression-free survival.

Conclusions: In patients with PM from ROv, CRS/HIPEC may provide long-term survival even after standard therapy fails, with an acceptable safety profile. Longer follow-up and multicenter trials are needed.

EP336 / #1095

EPOSTER VIEWING: AS15 RARE TUMORS

DEVELOPING A CENTRAL DATABASE AND VIRTUAL BIOBANK FOR RARE GYNAECOLOGICAL CANCERS IN THE UK: RANGO (RARE NEOPLASMS OF GYNAECOLOGICAL ORIGIN)

Marcia Hall¹, John Mcgrane², Rosalind Glasspool³, Jeyarooban Jeyneethi⁴, Rebecca Herbertson⁵, Rebecca Bowen⁶, Sayeh Saravi⁴, Phillip Rolland⁷, Joanne Millar⁸, Thirza Mcdonald⁹, Emmanouil Karteris⁴

¹Mount vernon Cancer Centre, Medical Oncology, Northwood, United Kingdom, ²Royal Cornwall Hospital NHS Trust, Oncology, TR LJ, United Kingdom, ³Beatson West of Scotland Cancer Centre and Institute of Cancer Sciences, University of Glasgow, and NCRI, Medical Oncology, Glasgow, United Kingdom, ⁴Brunel University London, Life Sciences, Uxbridge, United Kingdom, ⁵Brighton and Sussex University NHS Trust, Oncology, Brighton, United Kingdom, ⁶Royal United Hospital Bath, Oncology, Bath, United Kingdom, ⁷Cheltenham General Hospital NHS Trust, Gynaecology, Cheltenham, United Kingdom, ⁸Belfast Health and Social Care Trust, Oncology, Belfast, United Kingdom, ⁹Mount vernon Cancer Centre, Sort, Northwood, United Kingdom

Objectives: To create a platform for further exploration of the diagnosis and current management of patients with RaNGO. To build a tissue bank for future translational work.

Methods: A clinical trial was devised to collect patient data about a specific set of RaNGO, particularly those where there is unmet clinical need. The trial began recruitment in 2017 and has gradually been opening more gynaecological cancer centre sites across the UK. Patients are requested to consent to disclosure of anonymised details of their diagnosis and treatment as well as follow up information, internationally. They also agree to donate any tissue for future ethically approved laboratory work, nationally or internationally. Some patients also agreed to donate regular blood samples for the identification of circulating factors.

Results: 354 patients have been recruited from 30 sites. Table 1 shows the set of RaNGO eligible for inclusion and the numbers of patients collected to May 2022. For those who had sequential blood sampling before, during and after treatment, the numbers of cytokeratin + (CK+) cells identified in blood samples reduced following successful treatment and rose with relapsed disease.

Conclusions:

Organ of origin	Tumour Type	No patients	No patients donating blood samples
Ovary	Malignant Germ Cell tumour ¹	24	2
	SOC or other arising in dermoid	4	4
	Granulosa Cell Tumours	52	12
	Non-granulosa cell sex cord stromal tumours ²	18	1
	Malignant rhabdoid tumours (hypercalcaemic small cell cancer ovary)	11	4
	Mucinous ovary cancer ≥ Stage 2 (no GI/appendix origin)	26	6
	Serous borderline tumour ≥ Stage 2	4	1
	Low grade serous ovary cancer	86	22
	Neuroendocrine ovarian tumours	10	2
Adnexa	Female adnexal tumour of Wolffian origin (FATWC)	3	
Uterus	Endometrial stromal sarcoma	24	6
	Undifferentiated uterine sarcoma, Leiomyosarcoma	3	
	Uterus: uterus eg mesonephric	21	7
	Smooth muscle tumour of uncertain malignant potential (STUMP)	2	1
	Uterine tumour resembling ovarian sex cord tumour (UTROSC)	5	
		1	
	Neuroendocrine uterine tumours	4	3
Cervix	Neuro-endocrine tumours cervix	4	2
	Unusual morphological subtypes of cervical adenocarcinoma ³	13	3
	Adenoid basal and adenoid cystic carcinoma		
Vulva	Any SOC > Stage 1B	17	12

¹ Embryonal, yolk sac, dysgerminoma, endodermatoma, malignant mixed germ cell tumour, immature teratoma, teratomas with teratoid malignant foci,畸胎瘤

² Sex cord stromal (granulosa cell, theca cell, sex cord stromal tumour), undifferentiated sex cord stromal tumours with anaplastic features (SCAT), mesonephric, pleural, paraneoplastic, serous, sex cord stromal

There is considerable enthusiasm for collaboration amongst patients and clinicians to improve the understanding and management of patients with RaNGO. It is hoped that in due course this data can be encompassed in larger international datasets which are likely to be required for meaningful interpretation for the rarest malignancies. Interrogation of blood from patients at more advanced stages continues and will be compared with available tissue.

EP337 / #976

EPOSTER VIEWING: AS15 RARE TUMORS

**CYSTIC MATURE TERATOMA OF THE OVARY WITH MALIGNANT TRANSFORMATION:
DIAGNOSTIC AND PROGNOSTIC FEATURES**

Ons Kaabia¹, Nihed Abdessayed², Rim Bouchahda¹, Mohamed Ben Abdesslem¹, Riadh Ncibi¹, Samir Hidar¹

¹Université de Sousse, Faculté de Médecine de Sousse, Gynecology Obstetrics, Sousse, Tunisia, ²Université de Sousse, Faculté de Médecine de Sousse, Pathology, Sousse, Tunisia

Objectives: The main objective of this study is to describe the particularities of the diagnosis of the cystic mature teratoma of the ovary with malignant transformation (CMTOWMT). The secondary objective is to identify the prognostic factors of these rare tumors.

Methods: This is a descriptive longitudinal study carried out over a 20-year period (2000- 2019) on all the patients with CMTOWMT, diagnosed in our institution and listed in the center's cancer registry. For the pathological definitions of the CMTOWMT, we adopted the 2020 world health organization (WHO) classification of tumors of the female genital tract. The CMTOWMT was pathologically defined as malignant tumors developed from a mature tissue element present in the cystic mature teratoma.

Results: We collected 4680 cases of ovarian tumors of whom 6 cases were CMTOWMT with a frequency of 1.2‰. The CMTOWMT represents 4.4‰ of ovarian cancers and 9.6% of the malignant germ cell tumors of the ovary. The median age of the patients was 57.5 years [44-71] and 66.6% of the patients were menopausal. The mean tumor size was 151.1 mm [110-250]. The pathological diagnosis of the malignant transformation were: 3 squamous cell carcinomas, a thyroid vesicular carcinoma, an adenocarcinoma of the colonic intestinal type, and a primary melanoma. The treatment was a conservative fertility-sparing surgery in 2 non-menopausal patients with early-stage Ia. The intraoperative incidents were dominated by the accidental rupture of the cyst in and the extravasation of its contents (4 cases). Three patients are dead within the first year of follow-up.

Conclusions: The CMTOWMT is a rare ovarian malignant tumor with a poor prognosis among menopausal women.

EP338 / #105

EPOSTER VIEWING: AS15 RARE TUMORS

EPIDEMIOLOGICAL PROFILE AND CLINICO-PATHOLOGICAL FEATURES OF PEDIATRIC GYNECOLOGICAL CANCERS AT MOI TEACHING & REFERRAL HOSPITAL, KENYA

Anisa Mburu¹, Peter Itsura¹, Elkanah Omenge¹, Philliph Tonui¹, Elly Odongo¹, Afrin Shaffi¹, Allan Covens², Barry Rosen³

¹Moi University, Reproductive Health, Eldoret, Kenya, ²Sunnybrook Health Services, Gynecologic Oncology, Ontario, Canada, ³Beaumont Hospital, Gynecologic Oncology, Michigan, United States of America

Objectives: The main pediatric (0–18 years) gynecologic cancers include stromal carcinomas (juvenile granulosa cell tumors and Sertoli-Leydig cell tumors), genital rhabdomyosarcomas and ovarian germ cell. Outcomes depend on time of diagnosis, stage, tumor type and treatment which can have long-term effects on the reproductive career of these patients. This study seeks to analyze the trends in clinical-pathologic presentation, treatment and outcomes in the cases seen at our facility. This is the first paper identifying these cancers published from sub-Saharan Africa.

Methods: Retrospective review of clinico-pathologic profiles and treatment outcomes of pediatric gynecologic oncology patients managed at MTRH between 2010 and 2020. Data was abstracted from gynecologic oncology database and medical charts.

Results: Records of 40 patients were analyzed. Most, (92.5%, 37/40) of the patients were between 10 and 18 years. Ovarian germ cell tumors were the leading histological diagnosis in 72.5% (29/40) of the patients; with dysgerminomas being the commonest subtype seen in 12 of the 37 patients (32.4%). The patients received platinum-based chemotherapy in 70% of cases (28/40). There were 14 deaths among the 40 patients (35%)

Conclusions: Surgery remains the main stay of treatment and fertility-sparing surgery with or without adjuvant platinum-based chemotherapy are the standard of care with excellent prognosis following early detection and treatment initiation. LMICs face several challenges in access to quality care and that affects survival of these patients. Due to its commonality, ovarian germ cell cancers warrant a high index of suspicion amongst primary care providers attending to adnexal masses in this age group.

EP339 / #383

EPOSTER VIEWING: AS15 RARE TUMORS

CLINICOPATHOLOGICAL PROFILE, SURGICAL PRACTICES AND OUTCOME OF UTERINE SARCOMA IN EASTERN INDIA

Bhagyalaxmi Nayak¹, Kavin Nilavu², Jita Parija², Janmejay Mohapatra², Manoranjan Mohapatra², Ashok Padhy²

¹AHPGIC, Gynaecologic Oncology, Cuttack, India, ²AHPGIC, Gynaecologic Oncology, Cuttack, India

Objectives: To analyze the clinic-pathological profile, surgical practice and survival outcome of patients with uterine sarcoma.

Methods: During the period 2011-2017, 40 cases of uterine sarcoma were recorded. The clinicopathological profile were studied along with survival outcome.

Results: The median age at presentation was 44 years. The youngest patient who got treated was an 18-year-old with low grade endometrial stromal sarcoma of stage IIIC disease. The main clinical presentation was bleeding pervaginum (60%) followed by abdominal pain (30%). Low grade endometrial stromal sarcoma (42%) was the most common uterine sarcoma followed by leiomyosarcoma (40%), adenosarcoma (7.5%), undifferentiated sarcoma (5%), high grade endometrial stromal sarcoma (2.5%) and stromal tumor of unknown malignant potential (STUMP)(2.5%). The sarcomas were diagnosed at stage I and IIIC in 92.5% and 2.5% cases, respectively. Surgical resection was the primary modality of treatment in all the patients. A total of four patients had vaginal hysterectomy as they had preoperative imaging suggestive of uterine fibroid. One patient underwent hysteroscopic guided endometrial biopsy and had leiomyosarcoma confined to myomatous polp. The patient had two live birth following the resection of polyp and was disease free on last follow-up. Three patients received adjuvant radiotherapy and six patients received chemotherapy. Ifosfomide and doxorubicin was the adjuvant chemotherapy used. Median survivals for LGESS, LMS, HGESS, undifferentiated stromal sarcoma, AS and STUMP were 32, 11, 4, 9.5, 26 and 42 months respectively. The median overall survival was 57months.

Conclusions: FIGO stage and histo-pathological type are the main prognostic factors. Surgery should always aim for complete cytoreduction.

EP340 / #825

EPOSTER VIEWING: AS15 RARE TUMORS

THE CLINICAL COURSE OF CLEAR CELL CARCINOMAS OF THE UTERINE CORPUS AND OVARY AT A SINGLE INSTITUTION

Kohei Omatsu¹, Yoichi Aoki¹, Sanshiro Okamoto¹, Makiko Omi¹, Yusuke Shimizu², Mayumi Kamata¹, Terumi Tanigawa¹, Mayu Yunokawa³, Yumiko Tanaka⁴, Emiko Sugawara⁵, Tomohiro Chiba⁵, Akiko Tonooka⁵, Sachiho Netsu¹, Ryo Koike¹, Shiho Tsumura¹, Atsushi Fusegi¹, Hidetaka Nomura¹, Kuniko Utsugi¹, Hiroyuki Kanao¹

¹Cancer Institute Hospital, Gynecologic Oncology, Koto-Ku, Japan, ²Nagoya University Hospital, Obstetrics And Gynecology, Nagoya, Japan, ³Cancer Institute Hospital, Medical Oncology, Koto-ku, Japan, ⁴Cancer Institute Hospital, Diagnostic Imaging, Koto-ku, Japan, ⁵Cancer Institute Hospital, Clinicopathology, Koto-ku, Japan

Objectives: Clear cell carcinoma of the uterine corpus (CCCUC) and the ovary (CCCOV) is a rare disease and difficult to control once recurrence occurs. In this study, we compared the clinical course of CCCUC and CCCOV, based on the daily practice in our institution.

Methods: We reviewed the records of all patients diagnosed with clear cell carcinoma of the uterine corpus or the ovary who underwent primary treatment at our institution between April 2005 and March 2021. All patients who underwent laparotomy at our institution and received a pathological diagnosis of clear cell carcinoma of the uterine corpus or ovary were included in the study. The exclusion criteria were a histological diagnosis of mixed subtype and inadequate follow up.

Results: Thirty-eight and 281 patients with uterine corpus and ovarian carcinoma, respectively, were eligible. The median ages of CCCUC and CCCOV patients were 66 (42 – 81) and 53 years (21-83), respectively. The CCCUC stages were I , 21 (55%); II , 4 (11%); III, 8 (21%); and IV, 5 (13%). The CCCOV stages were I , 187 (66.3%); II , 27 (9.7%); III, 55 (19.4%); and IV, 12 (4.5%). Patients with recurrence were 14 (36%) and 72 (25%) CCCUC and CCCOV, respectively. Progression free survival : 44 and 61 months for CCCUC and CCCOV, respectively. Overall survival (OS) : 51.9 and 62 months for CCCUC and CCCOV, respectively. Median OS after first recurrence were 8 and 9 months for CCCUC and CCCOV, respectively.

Conclusions: The clinical course of primary and recurrent disease was very similar in CCCUC and CCCOV.

EP341 / #510

EPOSTER VIEWING: AS15 RARE TUMORS

EXPLORATORY RESULTS OF A PHASE IB TRIAL OF PACLITAXEL AND CARBOPLATIN + GALUNISERTIB IN PATIENTS WITH UTERINE AND OVARIAN CARCINOSARCOMA

Christina Washington¹, Camille Gunderson-Jackson², Joan Walker¹, Robert Mannel¹, Laura Holman¹, Debra Richardson¹, Deepika Neelakantan³, Andrew Cohoon⁴, Resham Bhattacharya⁵, Kai Ding⁶, Shailendra Dwivedi¹, Zoran Gatalica⁷, Liangyue Qian¹, Katherine Moxley⁸, Lisa Landrum⁹, Michelle Rowland¹⁰, Kathleen Moore¹

¹Stephenson Cancer Center University of Oklahoma, Gynecologic Oncology, Oklahoma City, United States of America, ²Mercy Hospital, Gynecologic Oncology, Oklahoma City, United States of America, ³Stephenson Cancer Center, University of Oklahoma Health Sciences Center, Clinical Trials Office, Oklahoma City, United States of America, ⁴University of Oklahoma Health Science Center, Biostatistics & Epidemiology, Oklahoma City, United States of America, ⁵University of Oklahoma, Gynecologic Oncology, Oklahoma City, United States of America, ⁶University of Oklahoma, Biostatistics, Oklahoma City, United States of America, ⁷University of Oklahoma, Pathology, Oklahoma City, United States of America, ⁸University of Michigan, Gynecologic Oncology, Ann Arbor, United States of America, ⁹IU Health, Gynecologic Oncology, Indianapolis, United States of America, ¹⁰OSF Healthcare, Gynecologic Oncology, Peoria, United States of America

Objectives: Gynecologic carcinosarcoma (CS) is a aggressive subtype of uterine and ovarian cancer with limited treatment options. Preclinical work demonstrates that transforming growth factor beta (TGF- β) may play a role in epithelial to mesenchymal transformation, a key feature in CS. This study aimed to determine the feasibility of combining Galunisertib (GB), a small molecule inhibitor of TGF β receptor 1, with paclitaxel/carboplatin (TC) in patients with CS and evaluate upregulated pathways.

Methods: Patients with newly diagnosed or recurrent CS were included. Intravenous TC was given every 28 days with GB 150mg orally twice daily (Days 4-17). Feasibility was determined by the occurrence of dose limiting toxicity (DLT) during cycles 1-4. The exploratory objective was to determine whether H-score criteria of nuclear phospho-smad (pSMAD) levels after cycle 1 (C1) are associated with response to GB.

Results: 26 patients were treated, with paired data for 6 patients. 81% were stage III/IV. 24/26 patients received 4 cycles of GB with TC. Of patients with measurable disease the ORR was 54%. Of patients with Stage III/IV disease the median PFS was 5.7 months. Among those with paired biopsies, there was no change in H-score pSMAD after C1 in 3/4 patients with a partial response. 4 patients with paired samples had a decrease in epithelial component, this did not correlate with response.

Conclusions: GB was well tolerated with TC with no DLTs. Paired biopsies were too limited to make conclusions. However, the putative mechanism of action of galunisertib and the well tolerated nature of the combination would warrant further exploration.

EP342 / #326

EPOSTER VIEWING: AS15 RARE TUMORS

SURVIVAL OUTCOMES AND PROGNOSTIC FACTORS OF UNDIFFERENTIATED UTERINE SARCOMA

Hua Yuan

National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Department Of Gynecologic Oncology, Beijing, China

Objectives: To describe the behavior among patients with undifferentiated uterine sarcomas (UUS).

Methods: 29 patients with UUS treated at our institution from 2001 to 2020 were analyzed.

Results: Patients median age at diagnosis was 52 years. The FIGO 2009 distribution by stage was: stage I in 17 patients (58.6%), stage II in 5 patients (17.2%), stage III in 4 patients (13.8%) and stage IV in 3 patients (10.3%). For 28 patients received surgical treatment, 27 patients (96.4%) underwent total/sub-radical/radical hysterectomy combined bilateral salpingo-oophorectomy, 17 (58.6%) pelvic lymphadenectomy, 7 (24.1%) pre-aortic lymphadenectomy and 8 (28.6%) omentectomy. The median follow-up was 23.4 months (range: 4.5–200.2 months). 18 patients (62.1%) died during follow up, and 13 patients (72.2%) died within 2 years after diagnosis. Median PFS and OS for the entire cohort were 15.5 and 27.4 months. 2-year RFS and 5-year RFS were 40.3% and 26.9%. 2-year OS and 5-year OS were 54.0% and 36.5%. Stage-specific median PFS and OS were as follows: stage I-II—17.7 and 6.0 months, stage III-IV—35.5 and 6.7 months. Multivariate analysis showed that omentectomy was an independent predictor of decreased PFS and OS (PFS, HR 0.059, 95% CI 0.006-0.587, P=0.016; OS, HR 0.042, 95% CI 0.004-0.488, P=0.011). Patients with recurrent UUS who underwent cytoreduction surgery associated with an improved overall survival (median OS: 52.9 months vs 17.9months), but the difference was not statistically significant (P=0.081).

Conclusions: UUS are a rare group of tumors with an aggressive behavior and poor outcomes. The current study shows that omentectomy seems to have benefited patients.

EP343 / #379

EPOSTER VIEWING: AS15 RARE TUMORS

THE VALUE OF RE-EXPLORATION IN PATIENTS WITH UTERINE SARCOMA TREATED FOLLOWING SURGERY FOR PRESUMED BENIGN DISEASE

Hua Yuan

National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Department Of Gynecologic Oncology, Beijing, China

Objectives: To determine the value of re-exploration in patients with uterine sarcoma treated following surgery for presumed benign disease.

Methods: 95 patients with uterine sarcoma found incidentally after primary surgery for presumed benign disease who presented to our institution and received re-exploration from 2004 to 2021 were analysed.

Results: The initial surgery included myomectomy in 50 patients, subtotal hysterectomy in 12 patients, total hysterectomy in 33 patients. The median time to the staging surgery was 40 days (range 15-90 days). 29 patients had remnant sarcoma after re-exploration, with 17 patients (17.9%) on the remaining uterus, 9 patients (9.5%) had disseminated diseases, 4 patients (4.2%) had positive lymph nodes. For patients with disseminated disease (n=9), 3 patients (33.3%) disseminated to pelvic peritoneum, 4 patients (44.4%) disseminated to ovarian, 1 patient (11.1%) disseminated to abdominal peritoneum, 1 patient (11.1%) disseminated to pelvic peritoneum and residual cervical. The FIGO 2009 distribution after re-exploration by stage was: stage I in 83 patients (87.4%), stage II in 7 patients (7.4%), stage III in 5 patients (5.3%). 5-year RFS and 5-year OS for the entire cohort was 81.7% and 92.1%. Patients with remnant sarcomas had a tendency towards a worse survival compared with those without (5-year RFS: 75.6% vs 84.5%, P=0.224; 5-year OS: 85.5% vs 95.1%, P=0.217). Patients with disseminated disease had a worse 5-year OS (62.5% vs 95.1%, P=0.007) and non-significantly worse 5-year RFS (64.8% vs 83.4%, P=0.153) compared with those without.

Conclusions: Re-exploration to complete the staging operation have a high likelihood of detecting remnant or disseminated sarcoma.

EP344 / #697

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

PRELIMINARY CHARACTERISATION OF CIRCULATING HUMAN PAPILLOMAVIRUS 16/18/31/35 ANTIBODIES FOR THE DETECTION OF CERVICAL NEOPLASIA BY A RAPID POINT OF CARE TEST

Neerja Bhatla¹, Pankaj Kumar², Lalit Dar², Shachi Vashist¹, Dean Brenner³, Jennifer Christen⁴, Ching-Wen Hou⁵, Kirk Herman³, Christopher Sang⁴, Joshua Eger⁴, Khushboo Rai², Rajesh Kumari¹, Karen Anderson⁵

¹All India Institute of Medical Sciences, Obstetrics & Gynaecology, New Delhi, India, ²All India Institute of Medical Sciences, Microbiology, New Delhi, India, ³University of Michigan Medical Center, Internal Medicine, Ann Arbor, United States of America, ⁴Arizona State University, School Of Electrical, Computer And Energy Engineering, Tempe, United States of America, ⁵Arizona State University, Center For Personalized Diagnostics, The Biodesign Institute, Tempe, United States of America

Objectives: A prototype multiplexed fluorescent programmable point-of-care technology developed by us was tested for simultaneous identification of 6 HPV antigen-specific IgG antibodies to early antigens of HPV16/18/31/45 as biomarkers in CIN2/3 and invasive cancer (CIN2+) cases.

Methods: We developed a multiplexed serological assay based on a fluorescent lateral flow assay platform that detects the following early antibodies: HPV16 CE2/NE6/E7; HPV18 E7; HPV31 E7; and HPV45 E7. HPV genotyping was done in biopsy samples of CIN2+ cases using INNO-LiPA Extra-II kit (Fujirebio), based on PCR-reverse hybridization.

Results: Among 110 women with CIN2/3 (n=19) and invasive cancer (n=91), early antibodies to any HPV early antigen were detected in 58(53%). The difference between CIN2/3 (47.4%) and cancer (53.8%) was not significant (p=0.62). All 58 were positive for antibodies to HPV16 CE2/NE6/E7. HPV18/31/45 E7 antibodies were detected additionally in 1,1 and 2 cases, respectively. Among 40 controls (normal cytology and negative HPV DNA on Hybrid Capture), any early HPV antibodies were detected in 8(20.0%) cases with HPV16 CE2/NE6/E7 in 3(7.5%), HPV18 E7 in 2(5%), HPV31 E7 in 5(12.5%), and HPV45 E7 in 3(7.5%). On HPV genotyping, 88(80.0%) cases had any high-risk (hr)HPV type, commonest being HPV16(69%), HPV18(5%), HPV31/33(3% each), HPV35/45/59(2% each). Single hrHPV infections were detected in 77 patients, 7 had single hrHPV infections other than HPV16. Multiple hrHPV infections were detected in 11(10%) patients.

Conclusions: The serological test detects a high proportion of cases detected by INNO-LiPA. Further development of this simple, affordable technology holds promise to facilitate cervical screening and triage in community settings.

EP345 / #758

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

BREAST CANCER SCREENING PROGRAM IN UZBEKISTAN- REPORT FROM A BUKHARA PILOT

Sayde Djanklich¹, Mirzagaleb Tillyashaykhov², Dinesh Pendharkar³, Askar Adilkhodjayev¹, Aleksandr Ososkov¹, Lola Alimkhodjayeva¹, Shavkat Ibragimov¹

¹Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology, Gynecological, Tashkent, Uzbekistan, ²Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology., Director, Tashkent, Uzbekistan, ³Sarvodaya cancer center, Oncological, Faridabad, India

Objectives: The main purpose of the study is to organize population- based mammography screening.

Methods: Bukhara region has 13 subdivisions with an overall population of about 2 million. Every subdivision was equipped with a digital mammograph (all together 13 fixed and 2 mobile units). The paramedical personnel were appropriately trained on the use of technology. A specialized uniquely designed registration process records all important data including ID, family status, history, menopausal status, hormonal usage, medical history including ovarian or other malignancies and more. The target group planned is women between age group of 45-65. With target women population estimated to be 200,000, it was decided to perform about 70-80000 mammograms over a year.

Results: Women were reached using state television, radio and other channels of communication. Data generated by mammography machine is directly sent to central reporting center based at National Republican Cancer Center in Tashkent in real time. Standard BIRADS scoring is used. A total of 55013 women were screened. Out of this group 388 (0.7%) were found to have BIRAD 5 (highly suspicious of cancer, 95 % probability of malignancy) 2033 women (3.7 %) were found to have BIRADs 4 (suspicious of cancer 20-35 % probability) and BIRADS 1-2 category was reported in 50765 women (92.3%). The follow up plan is well lead out and is being executed.

Conclusions: Establishment of national large level population-based mammography screening appears to be feasible. Women can be mobilized to attend. Substantial number of early cancers can be detected which would lead to cancer mortality reduction.

EP346 / #388

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

DEEP LEARNING BASED PREDICTION OF CERVICAL INTRAEPITHELIAL NEOPLASIA ON COLPOSCOPY

Angela Cho, Shin Eunseo, Chul Min Park, Sungyob Kim
Jeju National University Hospital, Obstetrics And Gynecology, Jeju, Korea, Republic of

Objectives: Deep learning is a type of machine learning that uses a neural network structure composed of multiple layers through data learning. Among artificial neural networks used for deep learning, convolutional neural networks show excellent performance in image recognition and classification, and are mainly used to analyze visual images. However, there have been few studies about CNN based prediction of cervical intraepithelial neoplasia yet. The purpose of this study is to examine whether the accuracy of CNN model to detect high grade squamous intraepithelial lesion(HSIL) on colposcopic image can be improved when segmentation information for acetowhite epithelium is added.

Methods: We collected 3,699 images of colposcopy conducted at Jeju National University Hospital from 2008 to 2021. The images were labeled with negative (negative colposcopic findings without biopsy, chronic cervicitis and low grade squamous intraepithelial lesion on biopsy) and positive (HSIL on biopsy). We composed dataset with collected images and augmented dataset to 20,000 images, and using Resnet-18, -50, -101 model, we classified colposcopic images into negative and positive. Then, we segmented acetowhite epithelium on colposcopic images using SegNet, and add these segmented images for classification.

Results: Using Resnet-18, -50, and -101 model, the sensitivity to detect HSIL was 0.66, 0.62, and 0.64, respectively, and the specificity was 0.75, 0.74, and 0.75 respectively. After adding segmentation information, the accuracy to detect HSIL was improved, which was consistent across all different types of Resnet.

Conclusions: HSIL of cervix can be detected through convolutional neural network that learns colposcopic images with comparable accuracy by adding segmentation information for acetowhite.

EP347 / #879

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

DETECTION OF PROGRESSION OR REGRESSION OF GYNECOLOGIC CANCERS BY CIRCULATING TUMOR DNA (CTDNA)

Bipin Ghimire¹, Ujjwal Karki¹, Emma Herrman¹, Mohammad Chisti²

¹Beaumont Health - Royal Oak, MI, Internal Medicine, Royal Oak, United States of America, ²Beaumont Health - Royal Oak, MI, Hematology/oncology, Royal Oak, United States of America

Objectives: The use of post-operative circulating tumor DNA (ctDNA) to detect cancer recurrence has been reported in various studies but the literature describing variable changes in ctDNA is limited. The objective of this study is to describe the utility of single and serial ctDNA values in detecting the progression or regression of gynecological cancers.

Methods: This is a retrospective observational study including nineteen patients, aged ≥ 18 years who had the ctDNA test completed at hematology/oncology clinic of William Beaumont - Royal Oak and Troy Hospitals, Michigan, USA.

Results: Among the nineteen patients, fifteen had breast, three had ovarian, and one had endometrial cancer. The median age at diagnosis was 57 years, and 73.7% of patients had either stage III or IV disease. Our primary endpoint, the correlation of single ctDNA results with imaging showing either progression or residual disease, showed a sensitivity and specificity of 100% and 93.3%, respectively. Secondly, serial ctDNA analysis in ten patients revealed both sensitivity and specificity of 100% for up-trending ctDNA to detect progression, down-trending to detect regression, and negative results to detect the absence of disease. The positive ctDNA results detected disease progression with a median lead-time of 36.5 days compared to imaging.

Conclusions: Given the high sensitivity and specificity to detect disease progression and regression in gynecologic cancer by single and serial values in our study, we conclude that ctDNA can be a valid way to monitor for changes in disease status. Further clinical studies are required to prove the utility of ctDNA in detecting changes in disease status

EP348 / #107

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

ROLE OF HPV IN PREDICTION OF RECURRENCE/PERSISTENCE AFTER TREATMENT FOR CERVICAL PRECANCER

Anjali Kulkarni¹, Allan Covens², Lilian Gien³, Danielle Vicus², Ray Osborne², Nancy Durand⁴, Zeina Ghorab⁵, Rachel Kupets⁶

¹University of Ottawa, Gynecologic Oncology, Ottawa, Canada, ²Sunnybrook Odette Cancer Center, Division Of Gynecologic Oncology, Toronto, Canada, ³Sunnybrook Odette Cancer Centre, Division Of Gynecologic Oncology, Toronto, Canada, ⁴Sunnybrook Health Sciences Center, Obstetrics And Gynecology, Toronto, Canada, ⁵Sunnybrook Health Sciences Center, Gynecologic Pathology, Toronto, Canada, ⁶Sunnybrook Health Sciences Center, Gynecologic Oncology, Toronto, Canada

Objectives: 1. To determine the role of HPV testing after excisional treatment of cervical precancer. 2. To determine clinical factors associated with persistence of cervical precancer post-treatment.

Methods: A retrospective chart review was conducted on patients who had a LEEP for cervical precancer (CIN3/AIS/HSIL) between 2016-2018 at a colposcopy unit in a university-affiliated centre in Toronto. Persistence/recurrence of disease was defined as a finding of high-grade cytology or pathology results during the time of follow-up. Univariate and multivariate regression models were run with persistence/recurrence and HPV positivity at exit testing as an outcome.

Results: A total of 284 patients were included. The median follow-up time was 19 months. Of the LEEP specimens, 90.8% (n=258) demonstrated HSIL and 3.9% (n=11) had AIS. 28.5% (n=81) of the LEEP specimens had positive margins. In follow-up, 72.9% had negative cytology, 17.6% had ASCUS/LSIL, 1.8% had ASC-H/LSIL-H and 6.7% had HSIL. At the final follow-up, 27.8% (n=79) were HPV+. Overall rate of persistence/recurrence was 11.3% (n=32); median time to persistence/recurrence was 6.5 months. Multivariate regression models demonstrated that follow-up HPV positivity (OR=22.0) and positive margins (OR=3.7) were significant for predicting persistence/recurrence. Similarly, in univariate regression models, positive margins were significant (OR=2.2) for predicting HPV positivity in exit testing.

Conclusions: Persistence/recurrence of precancer can occur due to incomplete treatment of lesions by local excision and by persistence of HPV infection. Surveillance strategies for women treated for cervical precancer require a risk-based approach such as that suggested in the ASCCP guidelines.

EP349 / #554

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

LOGISTICS OF TIME REQUIRED TO IMPLEMENT A SCREEN-AND-TREAT STRATEGY USING POINT-OF-CARE HPV TESTING FOR THE PREVENTION OF CERVICAL CANCER

Nomonde Mbatani¹, Rakiya Saidu¹, Delivette Castor², Rosalind Boa¹, Jennifer Moodley³, Louise Kuhn⁴, Lynette Denny¹

¹University of Cape Town, Obstetrics And Gynaecology, Cape Town, South Africa, ²Columbia University, Infectious Disease, New York, United States of America, ³University of Cape Town, Public Health, Cape Town, South Africa, ⁴Columbia University, Epidemiology, New York, United States of America

Objectives: We conducted a time-motion study to assess implementation feasibility of POC HPV testing within a SAT program.

Methods: We recruited women from a primary health care facility in Khayelitsha, Cape Town between February 2015-May 2016. We identified the following critical steps necessary if POC HPV testing is to be integrated into a SAT protocol: consent, history and examination, and sample testing on-site. Since HPV Xpert was used, which requires 60 minute run time, we estimated that the total visit time until a treatment decision could be made, assuming no delays, would be 95 minutes. If treatment is indicated, an additional 30 minutes would be needed to complete the visit

Results: We enrolled 715 women, 223 (31.2%) were HPV-positive. Women were aged 42.7 (SD 8.6) years on average. Median visit time until a treatment decision could be made was 2.93 hours (range: 0.58-6.73; IQR 1.38) overall, 3.13 hours (range: 1.71–6.73; IQR 1.23) for participants who stayed to receive their HPV results and 1.97 hours (range: 0.58–5.00; IQR 1.64) for those who did not (Figure 1). The decision to stay for receipt of HPV results was associated with earlier arrival in the day (Table 1).

Conclusions: Staying to receive results adds almost an hour to the visit, but it enables treatment at the same visit as screening. Patients who arrived later in the day were less likely to stay for their results. The logistics of POC testing are complex and require careful consideration to ensure efficient visits with as little wait-times for patients as possible.

EP350 / #1150

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

A CROSS-SECTIONAL COMPARATIVE STUDY ON THE DIAGNOSTIC ACCURACY OF MVA VERSUS ENDOSAMPLER AMONG PATIENTS WITH ABNORMAL UTERINE BLEEDING AND POSTMENOPAUSAL BLEEDING IN A TERTIARY HOSPITAL

Bernadette Mayumi Morte¹, Lilli May Teodoro-Cole²

¹University of the East Ramon Magsaysay Memorial Medical Center, Inc, Obstetrics And Gynecology, Quezon City, Philippines, ²UNIVERSITY OF THE EAST RAMON MAGSAYSAY MEMORIAL MEDICAL CENTER INC., Obstetrics & Gynecology, Quezon, Philippines

Objectives: This study aims to compare MVA to Endosampler in detecting endometrial pathology among women with Abnormal Uterine Bleeding (AUB) or Postmenopausal bleeding (PMB), specifically comparing histopathologic diagnosis, tissue yield, and pain scores of both methods.

Methods: This cross-sectional diagnostic study was conducted at a tertiary university hospital from August 2020-January 2021. Thirty-one women with AUB or PMB underwent endometrial sampling using both Endosampler and MVA. Participants were randomly divided into two groups based on treatment sequence. Age, gravidity, and endometrial thickness were recorded. Histopathologic diagnoses, weight of endometrial tissues, and pain scores by Visual Analogue Pain Scale (VAPS) were evaluated.

Results: The MVA has high sensitivity and specificity in detecting premalignant and malignant lesions, with a diagnostic accuracy of 96.7%. There was histopathologic concordance to Endosampler in all cases of hyperplasias and carcinomas. The MVA also detected the following over Endosampler: 1 hyperplasia without atypia, 1 atypical hyperplasia, 1 endometrial carcinoma, 1 leiomyoma, and 1 proliferative endometrium. The MVA sampled significantly more endometrial tissue than Endosampler(2.1g vs 1.5g), p-value=0.008. The pain scores for both groups had no significant difference

TABLE 4. Agreement (kappa scores) between Pipelle vs MVA for hyperplasia, atypia, malignancy

	Agreement	Expected agreement	Kappa	Interpretation	p-value
Hyperplasia	96.77%	55.15%	0.928	Almost Perfect	<0.001
Atypia	96.77%	75.13%	0.87	Almost Perfect	<0.001
Malignancy	96.77%	85.12%	0.783	Substantial	<0.001
Pipelle first [n=14]					
Hyperplasia	100.00%	66.33%	1.000	Perfect	<0.001
Atypia	92.86%	70.41%	0.759	Substantial	0.002
Malignancy	92.86%	80.61%	0.632	Substantial	0.006
Vacuum first [n=17]					
Hyperplasia	94.12%	50.52%	0.881	Almost Perfect	<0.001
Atypia	100.00%	79.24%	1	Perfect	<0.001
Malignancy	100.00%	88.93%	1	Perfect	<0.001

Kappa statistic interpretation¹: ≤ 0, none; (0 – 0.20), poor; (0.20 – 0.40), fair; (0.40 – 0.60), moderate; (0.60 to 0.80), substantial; (0.8 – 1), Almost perfect; 1, Perfect

Landis JR, Koch GG. The measurement of observer agreement for categorical data. Biometrics.1977;33(1):159–74

Table 9. Weight of tissue yield

	Pipelle	Vacuum	p-value
	Median (Range)		
Weight, g	1.5 (0.4–15.2)	2.1 (0.6–22.7)	0.008

Statistical test used: Wilcoxon Sign-rank test

Conclusions: The MVA is comparable to Endosampler as an endometrial sampling alternative in low-resource settings. It yields more endometrial tissues than the Endosampler with no significant difference in pain scores.

EP351 / #1127

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

COLPOSCOPIC AND HISTOLOGIC RESULTS BEHIND SECOND ATYPICAL SQUAMOUS CELL OF UNDERTERMINED SIGNIFICANCE

Karen Poque¹, Pedro Cervantes¹, Estrella Scherer²

¹Hospital San Jose del Carmen, Gynecology, Copiapo, Chile, ²Independent, Nursing, Copiapo, Chile

Objectives: The objective of this revision is to determine the frequency of biopsies and the risk of pre-invasive and invasive lesions after the results of two cytology with ASC-US, with the intention to know local results and inform our patients.

Methods: Retrospective descriptive study for case series. Including the revision of patient's files derived from second cytology ASC-US and evaluated at the Unit of Gynecology Oncology in the Regional Hospital between 18-03-20 to 16-03-22. Intake analysis, colposcopy reports and histologic results were analyzed (diagnostic biopsy and LEEP loop conization).

Results: There were 156 admissions to the Gynecology Oncology Unit for altered cytology. 55 patients were identified (35.2%) admitted for two cytology ASC-US. There were 10 satisfactory colposcopies (18.2%) and no lesion was identified. There were 44 biopsies (79.9%) and 1 patient refused biopsy due to pregnancy. These are the results: 1 (1.8%) no lesion, 1 (1.8%) chronic cervicitis, 7 (12.7%) HPV, 7 (12.7%) CIN I, 9 (16.4%) CIN II, 18 (32.7%) CIN III and 1 (1.8%) cervical cancer.

Conclusions: Referral due to second cytology ASC-US corresponded to more than one third of positive cytology. There was a high percentage of lesions in the colposcopies (79.8%) and pre-invasive lesions with high grade (CIN II-III) 49.1% of analyzed patients. These results differ from national and international results; therefore, it needs further research.

EP352 / #1137

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

OPORTUNITY BIOPSY DONE DURING URGENT CARE VISITS AT THE GYNECOLOGIC UNIT IN A REGIONAL HOSPITAL, NORTH CHILE: ONCOLOGIC RESULTS

Pedro Cervantes¹, Barbara Cortés², Estrella Scherer³

¹Hospital San Jose del Carmen, Gynecology, Copiapo, Chile, ²Hospital San Jose del Carmen, Gynecology Oncology Unit, Copiapo, Chile, ³Independent, Nursing, Copiapo, Chile

Objectives: The purpose of this study is to find oncologic pathologies that are not usually diagnosed during a gynecologic urgent care visit.

Methods: Retrospective analysis of statistic data using biopsy reports, patient's charts, histologic reports from patients that visited the gynecologic urgent care unit between January 2020 and April 2022.

Results: There were 188290 patients seen at the Urgent Care between January 2020 and April 2022, a total of 12247 were gynecological visits with a total of 82 biopsies with reported results divided as follows: 60.9% (50) endometrium: 84% (42) had benign reports: 10 simple endometrial hyperplasia, 17 proliferative and secretory tissue, 7 insufficient sample, 3 atrophic samples, 3 polyps, 2 endometritis; and 16% (8) had oncologic reports: 3 carcinomas (adenocarcinoma, clear cells and mixed mullerian tumor) and 5 intraepithelial neoplasia (atypical complex endometrial hyperplasia). 21.9% (18) cervix: 66.6% (12) had benign reports: 6 endocervical polyps, 1 atrophic sample, 1 insufficient, 4 cervicitis, and 33.3% (6) had oncologic results: 4 squamous carcinomas, 1 adenocarcinoma and 1 high grade intraepithelial lesion. 15.8% (13) abortions without oncologic reports. 1.2% (1) vulva: Bartholin's gland.

Conclusions: There were 17% (14 patients) with biopsies found with positive oncologic results. For many patients, the urgent care visit is the only opportunity for a biopsy and diagnostic of gynecological cancer due to the lack of regular medical services; therefore, it is necessary to implement adequate protocols for the collection of biopsies during these visits.

EP353 / #865

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

AN AUTOMATED QUANTITATIVE CYTOLOGY-DNA PLOIDY INTEGRATED ANALYSIS PLATFORM FOR CERVICAL CANCER SCREENING

Changfa Shu, Yang Yu, Meidan Zhao, Si Wu, Pan Gu, Xingping Zhao, Dabao Xu
The Third Xiangya Hospital of Central South University, Department Of Gynecology, Changsha, China

Objectives: Thinprep cytology test (TCT) is a widely used method for cervical cancer screening but it is labor-intensive and lacks objectivity. Here, we aimed to establish and promote an effective TCT-based screening approach using artificial intelligence to improve the efficiency and accuracy.

Methods: TCT slides were automatically scanned under microscope and images of cervical exfoliated cells were obtained. To analyze the images, artificial intelligence methods including deep convolutional neural networks were used to assist in cytology analysis and quantitative DNA ploidy analysis based on integral optical density simultaneously. Nuclear parameters such as nuclear area and perimeter were also integrated in DNA ploidy analysis to help distinguish abnormal cells. After training and validation process, the automated quantitative cytology-DNA ploidy integrated analysis (aqCDPIA) platform was established to determine the abnormality of TCT samples. The results of aqCDPIA were compared with manual TCT.

Results: After examination of 21,865 samples, aqCDPIA showed an excellent consistency of 94.6% with manual TCT results. The Kappa value was 0.733. According to the pathological results of 1,197 samples, the sensitivities of aqCDPIA and manual TCT to discover cervical intraepithelial neoplasia were 91.4% and 88.6%, respectively. And the specificities of aqCDPIA and manual TCT were 33.4% and 41.5%. Besides, aqCDPIA has the superiority to identify non-HPV associated cervical adenocarcinoma compared with manual TCT.

Conclusions: The efficient aqCDPIA platform has great potential to serve as an alternative TCT and replaces traditional visual analysis by cytopathologists. It will be beneficial to cervical cancer screening especially in the underdeveloped region where cytopathologists are scarce.

EP354 / #1147

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

CANCER SCREENING IN BISEXUAL WOMEN IN THE UNITED STATES: IS THERE A DISPARITY? - A US BRFSS STUDY

Ava Chan¹, Sahana Somasegar², Cheng-I Liao³, Michael Richardson⁴, Chloe Chan⁵, Caitlin Johnson⁶, Daniel Kapp⁷, Juno Obedin-Maliver⁸

¹Palo Alto Medical Foundation Research Institute, Obgyn, Palo Alto, United States of America, ²University of Chicago, Ob Gyn, Chicago, United States of America, ³Kaohsiung Veterans General Hospital, Ob Gyn, Kaohsiung, Taiwan, ⁴University of California Los Angeles, Obstetrics And Gynecology, Los Angeles, United States of America, ⁵Palo Alto Medical Foundation Research Institute, Gynecologic Oncology, Palo Alto, United States of America, ⁶California Pacific Medical Center Research Institute, Gynecologic Oncology, San Francisco, United States of America, ⁷Stanford University School of Medicine, Radiation Oncology, Palo Alto, United States of America, ⁸Stanford School of Medicine, Obstetrics And Gynecology, Palo Alto, United States of America

Objectives: To compare the rate of cancer screening for breast and cervical cancer in bisexual and lesbian/gay women versus heterosexual women in the United States.

Methods: Data on self-reported sexual orientation and cancer screening were obtained from the Behavioral Risk Factor Surveillance System (BRFSS) from 2014-2017. Chi square tests were employed for statistical analysis.

Results: Of 204,535 female participants, with respects to self-reported sexual orientation, 94.04% (N=192,349) were heterosexual, 0.98% (N=2005) were lesbian/gay, and 1.68% (N=3442) were bisexual. 93.96% of self-reported straight women endorsed ever having a pap smear for cervical cancer screening, compared to only 88.78% of lesbian/gay women ($p<0.001$) and only 84.4% of bisexuals ($p<0.001$). Of 168,773 female participants over the age of 40 who reported having a mammogram within the past two years, 94.76% (N=159,928) self-reported heterosexual, 0.86% (N=1456) self-reported lesbian/gay, and 0.93% (N=1580) self-reported bisexual. 72.79% of self-reported heterosexual women over the age of 40 endorsed having had a mammogram in the past two years, compared to 72.73% of lesbian/gay women ($p=0.37$) and only 66.33% of bisexuals ($p<0.001$).

Conclusions: In the United States, bisexuals are significantly less likely to undergo cervical and breast cancer screening when compared to heterosexual women. Compared to lesbian/gay women are also less likely to undergo cervical cancer screening. Further studies are warranted to better understand the obstacles in cancer screening in non-heterosexual women.

EP355 / #485

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

EXTENDED GENOTYPING AS TRIAGE OF HPV POSITIVE SCREENED WOMEN IN LOW-MIDDLE INCOME COUNTRIES (LMIC)

Frederick Van Der Merwe¹, Matthys Botha^{1,2}, Greta Dreyer³, Leon Snyman³, Cathy Visser³, Robyn Adams¹, Karin Richter⁴, Gerrit J Dreyer⁵

¹University of Stellenbosch, Obstetrics & Gynaecology, Unit For Gynaecologic Oncology, Stellenbosch, South Africa, ²Stellenbosch University and Tygerberg Academic Hospital, Gynaecologic Oncology Unit, Cap Town, South Africa, ³University of Pretoria, Obstetrics & Gynaecology, Gynaecologic Oncology Unit, Pretoria, South Africa, ⁴University of Pretoria, Medical Virology, Pretoria, South Africa, ⁵Stellenbosch University, Statistics And Actuarial Science, Cape Town, South Africa

Objectives: Cervix cancer screening with HPV testing is widely accepted. The ideal triage test of screen positive women should identify those at highest risk of CIN2+ and avoid overtreatment of those with lesions <CIN2. We evaluated extended genotyping on the Xpert® HPV platform as triage test.

Methods: A total of 1063 women, aged 25-65 years with no screening in the preceding five years were screened and genotyped with an Xpert® HPV test. The 14 targeted HPV types are detected in five fluorescent channels: HPV16; HPV18/45; HPV31/33/35/52/58; HPV51/59; and HPV39/56/66/68. Biopsies were performed on all HPV+ women.

Results: A total of 454 participants were HIV+ (WLWH) and 609 were HIV-. Overall HPV prevalence was 34.0%. The prevalence was significantly higher in WLWH compared to HIV- women (48.9% vs 22.8%). This was consistent over all channels. CIN2+ prevalence amongst all participants was 32.74% (n=348), 44.93% (n=204) amongst WLWH and 23.65% (n=144) amongst HIV- participants. The absolute risk (PPV) of CIN2+ for channels 1&2, channel 3 and channels 4&5 were 81.12%, 62.50% and 30.77% respectively. Corresponding PPV for WLWH were 87.10%, 68.97% and 31.03% respectively and for HIV- women 70.00%, 51.02% and 30.43% respectively.

Table 1: GeneXpert HPV results

	WLWH (n=454)		HIV negative (or unknown) (n=609)		P value	Total (n=1063)
	n	%	n	%		
Any HR-HPV positive	222	48.9	139	22.8	P < 0.0001	361 (33.96%)
HPV 16	47	10.4	25	4.1	P < 0.0001	72 (6.77%)
HPV 18/45	56	12.3	25	4.1	P < 0.0001	81 (7.61%)
HPV 31/33/35/52/58	130	28.6	61	10.0	P < 0.0001	191 (17.96%)
HPV 51/59	31	6.8	17	2.8	P=0.0019	48 (4.51%)
HPV 39/56/66/68	46	10.1	18	3.0	P < 0.0001	64 (6.02)
Invalid	13	2.9	17	2.8	P=0.9227	30 (2.82%)
HR-HPV negative	232	51.1	470	77.2	P < 0.0001	702 (66.03%)

Table 2: Performance of extended genotyping for detection of CIN2+ lesions

	PPV %	NPV %	Positive likelihood ratio	Negative likelihood ratio
All women (n=1063)				
HPV 16 & 18/45	81,12%	74,78%	8.25	0.70
HPV 31/33/35/52/58	62,50%	71,63%	3.43	0.82
HPV 51/59 & 39/56/66/68	30,77%	67,16%	1	1
All HR-HPV	65,56%	82,10%	3.88	0.45
HIV negative or unknown (n=609)				
HPV 16 & 18/45	70,00%	80,50%	8.0	0.78
HPV 31/33/35/52/58	51,02%	78,75%	3.4	0.87
HPV 51/59 & 39/56/66/68	30,43%	76,62%	1.7	0.98
All HR-HPV	54,92%	84,19%	3.92	0.60
WLWH (n=454)				
HPV 16 & 18/45	87,10%	65,93%	13.3	0.62
HPV 31/33/35/52/58	68,97%	60,76%	2.6	0.80
HPV 51/59 & 39/56/66/68	31,03%	54,12%	0.5	1.04
All HR-HPV	71,77%	77,96%	3.08	0.34

Conclusions: Extended genotyping identified women who tested positive in the first 3 channels to be at highest risk for CIN2+. These women could be directly referred for treatment. Women testing positive for channels 4 and 5 should either be subjected to a second triage test or followed up.

EP356 / #377

EPOSTER VIEWING: AS16 SCREENING/EARLY DETECTION

HPV PRIMARY CERVICAL SCREENING PILOT IN THE REPUBLIC OF UZBEKISTAN

Nargiza Zakhirova¹, Mirzagaleb Tillyashaykhov², Odil Alhmedov³, Elnara Osmanova⁴, Viloyat Saydakhmedova⁴, Malika Mamatova⁵, Zarifa Islamova⁵

¹Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology, Tumors Of The Women's Reproductive System., Tashkent, Uzbekistan, ²Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology., Director, Tashkent, Uzbekistan, ³Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology., Chief Physician, Tashkent, Uzbekistan, ⁴Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology., Gynecology, Tashkent, Uzbekistan, ⁵Andijan State Medical Institute, Gynecology, Andijan, Uzbekistan

Objectives: Detection of HPV associated precancerous diseases of the cervix and cervical cancer in ecologically unfavorable regions of the Republic of Karakalpakstan.

Methods: The first UNFPA-WHO pilot project on HPV-based cervical cancer screening is underway with funding from the Government of Japan, technical assistance from WHO, IARC and UNFPA, and some support from the French Embassy. The pilot screening project was approved by the Ministry of Health of the Republic, covering 10 districts, mainly near the Aral Sea: Khojeyli, Kanlykul, Shumanay, Chimbay, Karauzyak, Kungrad, Kegeili, Muynak, Buzatau, Nukus district. The age of women is 30-55, the number of women is 50,000 (100%).

Results: From July 2021 to April 2022, 49.140 (98,3%) were tested, 3290 (6.7%) of which HPV positive, 45,890 (93.4%)- HPV negative. By randomization 1/1, a triage of VIA was performed - 37.9% / colposcopy - 47.8%, invalid and erroneous tests - 0.4%. 808 (24,6%) HPV positive women referred to oncologist, pathological conclusion: CIN I - 90 (11.1%), CIN II - 122 (15%), CIN III - 73 (9%), Cancer in situ - 30 (3,7%), invasive cervical cancer – 8 (1%).

Conclusions: Upon successful completion of the project, a national cervical cancer screening program will be developed.

EP357 / #634

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

COUNTRY OF BIRTH INFLUENCES SURVIVAL OUTCOMES IN CARIBBEAN BLACK WOMEN WITH ENDOMETRIAL CANCER

Saida Bowe¹, Alex Sanchez-Covarrubias², Raleigh Butler¹, Darron Halliday¹, Andre Pinto³, Paulo Pinheiro⁴, Sophia George², Matthew Schlumbrecht²

¹Princess Margaret Hospital, Gynecologic Oncology, Nassau, Bahamas, ²Sylvester Comprehensive Cancer Center, Division Of Gynecologic Oncology, Miami, United States of America, ³University of Miami Miller School of Medicine, Pathology, Miami, United States of America, ⁴University of Miami Miller School of Medicine, Public Health Sciences, Miami, United States of America

Objectives: Prior studies have demonstrated survival differences between Black women with endometrial cancer (EC) born in the US (USB) and the Caribbean. Haitian-born (HB) and Jamaican-born (JB) women represent the largest proportion of Caribbean immigrants to the US, but these populations have not been specifically studied. Our objective was to determine if country of birth influences overall survival (OS) outcomes in Black women with EC.

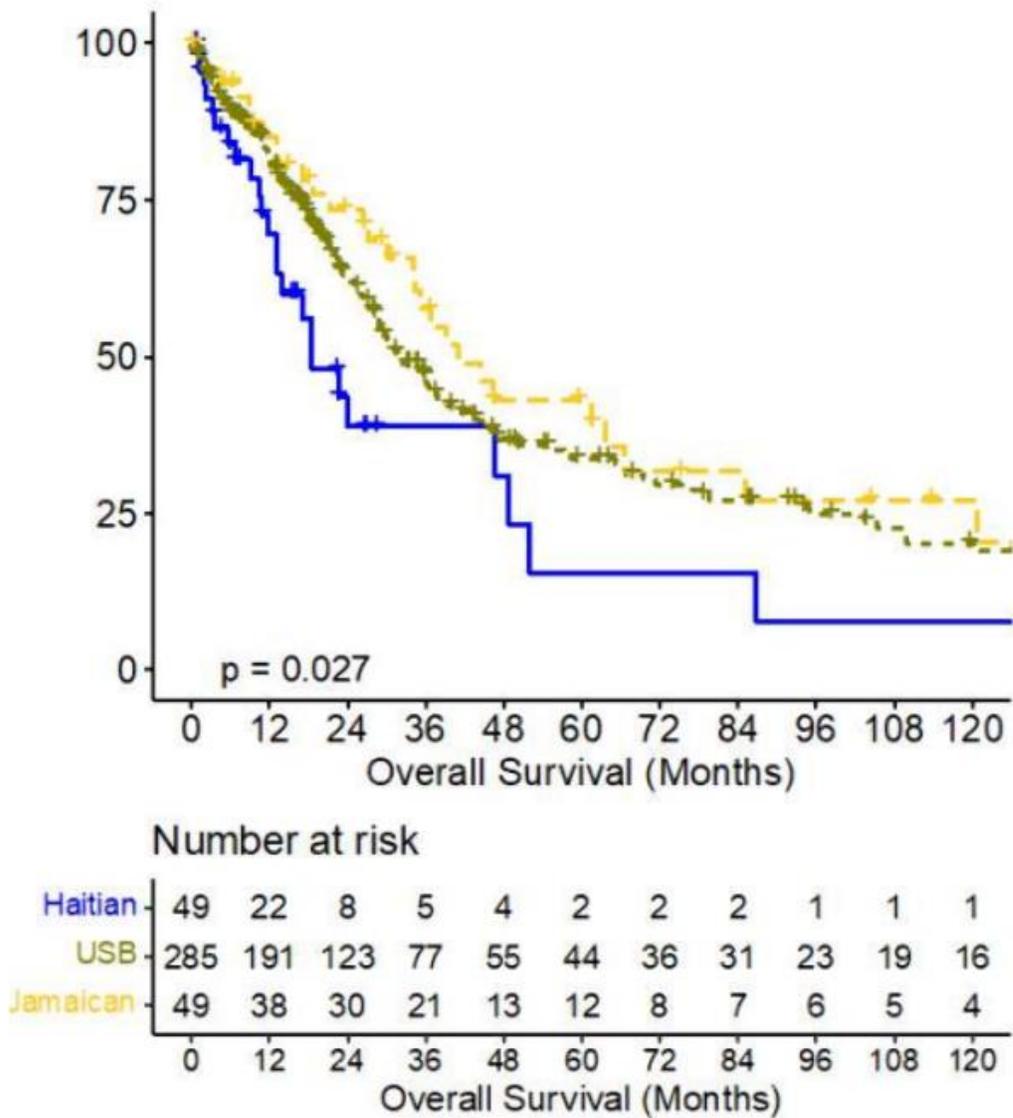
Methods: Using the Florida Cancer Data System (FCDS), women with EC diagnosed from 1981-2016 were identified. Demographic and clinical information were abstracted. Women who self-identified as Black and born in the US, Jamaica, or Haiti were included. Statistical analyses were performed using chi-square, Cox proportional hazards models, and the Kaplan-Meier methods with significance set at $p < 0.05$.

Results: 3434 women met inclusion criteria. Compared to USB, JB and HB had more high-grade histologies, more advanced disease, were uninsured or government-insured, and received more chemotherapy (all $p < 0.05$) (Table 1). In multivariate analyses, age (HR 1.02, $p = 0.008$), distant disease (HR 2.32, $p < 0.001$), high-grade histology (HR 2.15, $p < 0.001$), surgery (HR 0.23, $p < 0.001$), and chemotherapy (HR 0.67, $p = 0.01$) were independently associated with OS. In addition, relative to HB women, USB (HR 0.59, $p = 0.004$), and JB (HR 0.54, $p = 0.026$) had improved OS. Among patients with serous EC, HB women had markedly worse median OS (18.5 months) compared to USB (32.2 months) and JB (41 months) ($p = 0.027$) (Figure 1).

Table 1. Cohort Summary considering only USB Black and Caribbean born Black women, Clinical-pathologic and Demographic Comparison.

<i>Variable</i>	<i>USA</i> <i>n = 2690</i>	<i>Haiti</i> <i>n = 367</i>	<i>Jamaica</i> <i>n = 377</i>	<i>p value</i> <i>(Chi square)</i>
Age at Diagnosis (Mean, range)	62.92 (20-98)	62.72 (29-97)	64.18 (28-92)	0.1353
Stage at Diagnosis (%)				0.0026
Localized	1406 (56.3)	157 (47.6)	169 (48.3)	
Regional	682 (27.3)	101 (30.6)	113 (32.3)	
Distant	409 (16.4)	72 (21.8)	68 (19.4)	
Insurance (%)				<0.0001
Private	751 (35.8)	93 (27.4)	106 (30.4)	
Medicaid	172 (8.2)	49 (14.4)	39 (11.2)	
Medicare	610 (29)	81 (23.9)	87 (24.9)	
No insurance	163 (7.8)	60 (17.8)	65 (18.6)	
Other ins	405 (19.2)	56 (16.5)	52 (14.9)	
Smoking status (%)				<0.0001
Ever smoker	491 (22.3)	32 (10.7)	31 (9.8)	
Never smoker	1706 (77.7)	268 (89.3)	286 (90.2)	
Histology (%)				0.0010
Endometrioid	1720 (63.9)	200 (54.5)	206 (54.6)	
Serous	285 (10.6)	49 (13.4)	49 (13)	
Clear cell	79 (2.9)	9 (2.4)	9 (2.4)	
Carcinosarcoma	247 (9.2)	44 (12)	56 (14.9)	
Mixed cell	96 (3.6)	20 (5.4)	15 (4)	
Other	263 (9.8)	45 (12.3)	42 (11.1)	
Pathologic Classification (%)				0.0101
Type I (low-grade)	1026 (46)	107 (38.1)	123 (40.1)	
Type II (high-grade)	1204 (54)	174 (61.9)	184 (59.9)	
Lymph vascular inv. (%)				0.9425
Yes	260 (29.7)	41 (31.6)	36 (30.3)	
No	617 (70.3)	91 (68.9)	83 (69.7)	
Surgery Performed (%)				0.0218
Yes	2423 (90.4)	316 (86.1)	344 (91.5)	
No	257 (9.6)	51 (13.9)	32 (8.5)	
Radiation Treatment (%)				0.0953
Yes	695 (26.4)	77 (21.5)	87 (23.8)	
No	1939 (73.6)	282 (78.5)	282 (76.2)	
Chemotherapy Treatment (%)				0.0004
Yes	582 (22.4)	110 (31)	98 (27.4)	
No	2018 (77.6)	245 (69)	260 (72.6)	

Figure 1. Overall survival in Black women with serous endometrial cancer by country of birth



Conclusions: Country of birth affects EC survival, with Haitian women demonstrating worse outcomes. Understanding the biologic and social etiologies of these findings is necessary.

EP358 / #948

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

EVALUATING THE RACIAL/ETHNIC REPRESENTATION OF TARGETED THERAPY CLINICAL TRIALS IN GYNECOLOGIC ONCOLOGY: WHO IS BEING LEFT BEHIND?

Katherine Cotangco¹, Caitlin Johnson², Amandeep Mann³, Arya Aliabadi⁴, Cheng-I Liao⁵, Ritu Salani¹, Joshua Cohen¹, Daniel Kapp⁶, John K Chan³

¹University of California Los Angeles, Obstetrics And Gynecology, Los Angeles, United States of America, ²California Pacific Medical Center Research Institute, Gynecologic Oncology, San Francisco, United States of America, ³Palo Alto Medical Foundation Research Institute, Gynecologic Oncology, Palo Alto, United States of America, ⁴UCLA, David Geffen School Of Medicine, Los Angeles, United States of America, ⁵Kaohsiung Veterans General Hospital, Ob Gyn, Kaohsiung, Taiwan, ⁶Stanford University School of Medicine, Radiation Oncology, Palo Alto, United States of America

Objectives: It is unclear if targeted therapy trials represent the diversity of gynecologic oncology patients. Our objective was to evaluate racial representation of targeted therapy clinical trials in gynecologic oncology.

Methods: From 2005-2021, all phase 3 clinical trials on bevacizumab, olaparib, niraparib, rucaparib, veliparib, atezolizumab, pembrolizumab, avelumab, cemiplimab, mirvetuximab, lenvatinib, and MEK inhibitors were identified from clinicaltrials.gov. Using the United States Cancer Registry (USCS) as comparison, Chi square analysis was performed.

Results: Of 30 trials (n= 23,155 patients), 24 were international and 6 were US trials. 26 trials were ovarian followed by 2 endometrial and 2 cervical cancer trials. The overall proportion of White patients was 79%, Asian 12%, Hispanic 3%, and Black women 3%. Compared to USCS, Black women were underrepresented in uterine (4% vs 10%), ovarian (5% vs. 15%), and cervical cancers (7% vs. 15%), p-value <0.05. The proportion of Hispanic women were underrepresented in uterine (0% vs. 8%), ovarian (3% vs. 9%) , and cervical cancers (12% vs 16%), p-value <0.05. In the subset of US trials, Black (5% vs 9%) and Hispanic women (4% vs 9%) were underrepresented in ovarian and cervical cancer compared to USCS incidence data. The proportion of Black and Hispanic women enrolled in gynecologic cancer trials has not improved over this time period (3% Black and 3% Hispanic women).

Conclusions: Black and Hispanic women were underrepresented in gynecologic cancers trials involving targeted therapies. Careful interpretation of these results and their real-world application in US women is necessary given their distinct host and tumor biology.

EP359 / #1129

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

RACIAL DISPARITIES IN ADHERENCE TO ESMO GUIDELINES FOR GERMLINE GENETIC TESTING IN GYNECOLOGIC CANCER PATIENTS WHO UNDERWENT SOMATIC TUMOR TESTING

Hannah Karpel¹, Simone Sasse², Bhavana Pothuri³

¹New York University Grossman School of Medicine, Obstetrics And Gynecology, New York, United States of America, ²NYU Langone Health, Obstetrics And Gynecology, New York, United States of America, ³Gynecologic Oncology Group (GOG), Laura & Isaac Perlmutter Cancer Center, NYU Langone Health, Department Of Obstetrics/gynecology, New York City, United States of America

Objectives: Prior studies suggest use of genetic testing (GT) varies by race. In gynecologic cancer patients, we assessed frequency of positive tumor next generation sequencing (NGS) results that met ESMO 2019 recommendations for germline GT and determined differences in referral to and completion of germline GT by race/ethnicity.

Methods: Patients with tumor NGS within a large healthcare system in New York City were retrospectively identified (Sept 2019-Feb 2022). Eligible patients with potentially actionable germline mutations on NGS were identified based on ESMO guidelines (Mandelker et al. 2019). Chi-square/Fisher's exact analysis assessed differences in outcomes by race/ethnicity.

Results: Of 357 gynecologic cancer patients undergoing tumor NGS, 79 (22.1%) had at least one positive tumor mutation meeting ESMO guidelines for germline GT. The racial/ethnic distribution of eligible patients was: 48 (60.7%) non-Hispanic White, 12 (15.2%) Asian, 8 (10.1%) Hispanic, 7 (8.9%) Black, 4 (5.1%) Other. Non-Hispanic White patients were more likely to be referred to GT than patients of Other race/ethnicity (93.8% vs 71.0%, $p=0.009$) as well as more likely to complete GT (81.3% vs 54.8%, $p=0.02$).

Conclusions: There are racial disparities in referral to and completion of GT in gynecologic cancer patients whose tumor results met EMSO criteria for germline testing. As outcomes of gynecologic cancer are worse for racial minorities, actions need to be taken to avoid further exacerbating health disparities regarding GT. Development of reflex protocols based on positive somatic mutations identified on tumor NGS or, alternatively, population based germline GT may help reduce disparities related to germline GT in gynecologic cancer patients.

EP360 / #1163

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

ENROLLMENT TRENDS AS COMPARED WITH DISEASE PREVALENCE FOR MINORITY PATIENTS WITH OVARIAN AND ENDOMETRIAL CANCER

Hannah Karpel¹, Michelle Lightfoot², Bhavana Pothuri³

¹New York University Grossman School of Medicine, Obstetrics And Gynecology, New York, United States of America, ²NYU Langone Health, Obstetrics And Gynecology, New York, United States of America, ³Gynecologic Oncology Group (GOG), Laura & Isaac Perlmutter Cancer Center, NYU Langone Health, Department Of Obstetrics/gynecology, New York City, United States of America

Objectives: With the National Cancer Institute (NCI) call-to-action to increase racial/ethnic diversity in clinical trial enrollment, we sought to evaluate minority patient enrollment in gynecologic cancer clinical trials as compared with disease prevalence estimates by race/ethnicity.

Methods: Enrollment data from endometrial and ovarian therapeutic clinical trials from January 2018-May 2022 at a NCI-designated Comprehensive Cancer Center in New York City was analyzed. Minority enrollment in ovarian and endometrial cancer trials was compared to SEER estimates of disease prevalence using chi-square analysis. Population estimates of NYC demographics were obtained from the U.S. Census.

Results: Over the study period, 129 patients were enrolled in ovarian cancer trials and 52 patients in endometrial cancer trials. Regarding total enrollment, the proportion of clinical trial participants identifying as racial/ethnic minorities (34.1%) was significantly higher than the SEER disease estimate of ovarian cancer in minority patients (25.7%, $p < 0.05$). Likewise, total enrollment of minority patients in endometrial cancer trials (61.5%) exceeded their disease prevalence estimate of 28.5% ($p < 0.05$). However, enrollment of Asian patients in endometrial cancer trials (1.9%) remained under disease prevalence estimates (7.7%) despite the NCI call-to-action (Table 2).

Table 1: Ovarian Cancer Prevalence and Clinical Trial Enrollment by Race/Ethnicity

Race/Ethnicity	Population Race/Ethnicity New York City ^a	Disease Prevalence (SEER data) ^b	Clinical Trial Total Enrollment (N=129)
Non-Hispanic White	31.9%	74.4%	65.9%
Black/African American	23.8%	6.7%	6.2%
Asian	14.3%	7.9%	14.7%
Hispanic/Latino	28.9%	11.1%	13.2%

^aNYC Census 2021: www.census.gov/quickfacts/newyorkcitynewyork

^bStenzel et al. 2019: www.sciencedirect.com/science/article/pii/S1877782119300918?via%3Dihub

Table 2: Endometrial Cancer Prevalence and Clinical Trial Enrollment by Race/Ethnicity

Race/Ethnicity	Population Race/Ethnicity New York City ^a	Disease Prevalence (SEER data) ^b	Clinical Trial Total Enrollment (N=52)
Non-Hispanic White	31.9%	71.5%	38.5%
Black/African American	23.8%	9.7%	40.4%
Asian	14.3%	7.7%	1.9%
Hispanic/Latino	28.9%	11.1%	19.2%

^aNYC Census 2021: www.census.gov/quickfacts/newyorkcitynewyork

^bClark et al. 2022: jamanetwork.com/journals/jamaoncology/article-abstract/2792010

Conclusions: In a diverse city population, enrollment of minority patients exceeded disease prevalence estimates for most underrepresented racial/ethnic groups in gynecologic cancer, with the exception of Asian patients in endometrial cancer. Further efforts are needed to increase enrollment of Asian patients in endometrial cancer clinical trials so that novel therapies can be tested in all patients.

EP361 / #717

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

DEVELOPING INFRASTRUCTURE FOR MOLECULAR PROFILING IN OVARIAN CANCER (DEMO)

Elaine Leung¹, Gabriel Funingana², Lisa Bird³, Marie-Lyne Alcaraz², Joo Ern Ang⁴, Christine Parkinson⁴, Merche Jimenez-Linan⁵, Sue Freeman⁶, Catherine Spencer⁷, Julie Winning⁸, Raji Ganesan⁹, Sarah Williams⁸, Kai Ren Ong¹⁰, Parveen Abedin¹¹, William Boyle⁹, Sudha Sundar⁷, Janos Balega⁷, James Brenton²

¹University of Birmingham, Institute Of Cancer And Genomic Sciences, Birmingham, United Kingdom, ²University of Cambridge, Department Of Oncology, Cambridge, United Kingdom, ³University of Birmingham, Library Services, Birmingham, United Kingdom, ⁴Addenbrooke's Hospital, Cancer Services, Cambridge, United Kingdom, ⁵Addenbrooke's Hospital, Pathology, Cambridge, United Kingdom, ⁶Addenbrooke's Hospital, Radiology, Cambridge, United Kingdom, ⁷Pan-Birmingham Gynaecological Cancer Centre, Gynaecology, Birmingham, United Kingdom, ⁸University Hospitals Birmingham NHS Foundation Trust, Oncology, Birmingham, United Kingdom, ⁹Birmingham Women's and Children's NHS Foundation Trust, Pathology, Birmingham, United Kingdom, ¹⁰University Hospitals Birmingham NHS Foundation Trust, Clinical Genetics, Birmingham, United Kingdom, ¹¹Birmingham Women's and Children's NHS Foundation Trust, Gynaecology, Birmingham, United Kingdom

Objectives: Poor patient understanding and biopsy quality could both reduce the number of successful molecular tests performed after the diagnosis of ovarian cancer. DEMO is a multi-centre quality improvement study that aims to improve the uptake and success rates of tumoural and germline molecular testing in ovarian cancer. The two lead sites that have vastly different patient demographics. One in 7 (15%) women diagnosed in Birmingham are non-Caucasian with high number of patients requiring interpreters for their consultations, whilst patients diagnosed in Cambridge are mostly Caucasian and fluent in English.

Methods: The three components of DEMO include 1) the establishment of a patient advisory group to co-produce a multimedia, multilingual patient information package to support informed decision making, 2) the use of improvement methodology to analyse existing diagnostic pathways and 3) the development of a multidisciplinary consensus guideline to improve the current biopsy pathways for molecular profiling.

Results: The first retrospective audit (n=75; January-August 2021) demonstrated high tumoural (BRCA or Homologous Repair Deficiency) testing failure rates of 25% (3/12) and 35% (11/31) of samples from image-guided biopsies and post-chemotherapy resections, respectively. A prospective audit pathway has been agreed to inform future practice. In addition, the first patients advisory group discussion in June 2022 will provide a qualitative narrative on patients' perceptions on molecular testing and explore how patients would like such complex information conveyed to support patient information package development.

Conclusions: Supporting informed decision making for all and establish auditable pathways are crucial for the implementation of molecular profiling to improve ovarian cancer care.

EP362 / #803

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

QUALITY OF LIFE AS A PREDICTIVE FACTOR OF EARLY DEATH IN OLDER BRAZILIAN WOMEN WITH FEMALE TUMORS A COHORT STUDY PERSPECTIVE

Jurema Lima¹, Nathalia Ramalho², Vandre Carneiro³, Candice Santos¹, Maria Julia De Mello¹, Ana Beatriz Melo⁴, Maria Stella Trigueiro⁴, Maria Alice Guedes⁴, Leticia Sales⁴, Andrea De Souza⁴, Carla Azevedo¹

¹IMIP /DOR, Oncology, RECIFE, Brazil, ²IMIP / DOR, Gynecologic, RECIFE, Brazil, ³IMIP / HCP / DOR, Surgical Oncology, Recife, Brazil, ⁴IMIP/ FPS, Oncology, recife, Brazil

Objectives: Analyzing the baseline quality of life as a predictive factor for the occurrence of early death in older patients with breast cancer or gynecological tumors.

Methods: PROSPECTIVE COHORT STUDY was carried out in women aged ≥ 60 years, diagnosed with BC or GC, admitted to the oncology service between 2015 and 2020. sociodemographic description of the older cancer patients included; Determine baseline QoL (at diagnosis) using the EORTC QLQ C30; To compare the mean quality of life scores between patients who died or not within a six-month period.

Results: Of the 405 patients, with a medium age of 71.64 years (± 7.84), 89 (22.0%) died. In the evaluation of the quality of life related to health with EORTC QLQ-C30, the main predictive factors for death on the functional scales were emotional (62.73 ± 32.83) and physical (64.11 ± 28.77) capacities. As for symptoms, it was financial difficulties (48.81 ± 42.67) and loss of appetite (34.08 ± 37.93). The global quality of life scale had an average of 67.97 ± 28.25 among those who died.

Conclusions: Quality of life related to health evaluated by the EORTC QLQ-C30 can be used as a predictor of death, as it was observed that worse physical and emotional function and the presence of symptoms such as financial difficulties and loss of appetite influence the overall survival of older patients with female cancer, and greater efforts should be made to improve these domains and better their quality of life, reducing mortality.

EP363 / #1122

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

CERVICAL CANCER AS A MARKER OF EXCLUSION TO HEALTH SERVICES AND SOCIAL VULNERABILITY

Jurema Lima¹, Candice Santos¹, Carla Azevedo¹, Nathalia Ramalho², Leticia Sales¹, Paula Marina Santos³, Andrea Pontes De Souza³, Vanessa Lins⁴, Caio Barros⁵, Rodrigo Pinto¹, Vandre Carneiro⁶, Fernanda Araújo¹, Maria Cecília De Souza⁴, Maria Julia De Mello³
¹IMIP /DOR, Oncology, RECIFE, Brazil, ²IMIP / DOR, Gynecologic, RECIFE, Brazil, ³IMIP /FPS, Oncology, recife, Brazil, ⁴IMIP NEOH, Oncology, recife, Brazil, ⁵IMIP NEOH, Oncology, Recife, Brazil, ⁶IMIP / HCP / DOR, Surgical Oncology, Recife, Brazil

Objectives: To evaluate care and primary and secondary prevention practices offered to cervical cancer patients and their families

Methods: Descriptive, observational, cross-sectional study. Carried out in the oncology of IMIP (BRAZIL), using an adapted form, between 2020--2021. Socio-demographic data, cancer characteristics. Descriptive statistics were used to analyze the data.

Results: data were collected from 100 patients with CC aged 20 to 80 years.. About the Pap smear, (89%) reported having heard about the preventive test and its function. 16% reported never having done it before diagnosis. 25% reported having performed the first exam between 15 and 24 years of age, while more than 50% stated that the first exam took place between 25 and 39 years of age. Regarding frequency, 35% of these patients reported annual exams. Regarding knowledge about the HPV vaccine, 78% claimed to have heard about their vaccine. Regarding knowledge of the age group to be vaccinated, 57% knew the target audience to be immunized, and among those who did not, the majority (80%) were unaware of HPV vaccination for boys. 76 women reported having relatives aged between 9 and 21 years. When asked about the vaccination status of these family members, 11% had not undergone immunization against HPV. The reason given for non-vaccination among family members was lack of information about the need

Conclusions: it is necessary to reinforce the importance of health education, especially in relation to the performance and frequency of preventive examinations, and also about immunization against Papillomavirus and the target audience for which it is intended.

EP364 / #1136

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

TEENAGE PREGNANCY AS A RISK FACTOR FOR NOT PERFORMING PRIMARY AND SECONDARY PREVENTION ACTIONS AGAINST CANCER IN WOMEN WITH CERVICAL CANCER.

Jurema Lima¹, Nathalia Ramalho², Candice Santos¹, Carla Azevedo¹, Leticia Sales³, Paula Marina Santos⁴, Vandre Carneiro⁵, Andrea Pontes De Souza⁶, Caio Barros⁴, Fernanda Araújo⁴, Vanessa Lins⁴, Maria Cecília De Souza⁷, Rodrigo Pinto¹, Maria Julia De Mello⁶
¹IMIP /DOR, Oncology, RECIFE, Brazil, ²IMIP / DOR, Gynecologic, RECIFE, Brazil, ³IMIP/ FPS, Oncology, recife, Brazil, ⁴IMIP NEOH, Oncology, recife, Brazil, ⁵IMIP, Surgical Oncology, Recife, Brazil, ⁶IMIP /FPS, Oncology, recife, Brazil, ⁷IMIP /DOR, Oncology, Recife, Brazil

Objectives: to analyze the TEENAGE PREGNANCY AS A RISK FACTOR FOR NOT PERFORMING PRIMARY AND SECONDARY PREVENTION ACTIONS AGAINST CANCER IN WOMEN WITH CERVICAL CANCER

Methods: observacional, cross-sectional study. Carried out in the oncology of IMIP, using an adapted form, carried out in period from November 2020 to August 2021 Patients with a diagnosis of cervical cancer confirmed by histology, cytology or immunohistochemistry and who were 18 years of age or older at the time of inclusion in the study were included.

Results: 100 cancer cervical patients, with mean age of 34years (75% 30-40y), were enrolled.42% of women who became pregnant in adolescence (PA group) , in the group of women who became pregnant in adolescence (PA group) , 88% said they never practiced physical activity versus 45% who became pregnant in adulthood or never became pregnant.(p< 0.001) Regarding the age of first sexual intercourse, 64% of women had their first intercourse between 15-18 years old, while 32% between 10-14 years old. PA group showed a significant(p < 001) reduction in pap test performance, use and knowledge about HPV vaccine and knowledge about cervical cancer and prevention measures available.

Conclusions: 46% of women with cervical cancer became pregnant during adolescence. in this group, the performance of primary and secondary prevention measures with themselves and their children was significantly lower. a situation that perpetuates social inequities.PA group showed a significant reduction in pap test performance, HPV vaccine and knowledge about cervical cancer and prevention measures available.

EP365 / #1142

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

IMPLEMENTATION OF NOVEL, ALTERNATIVE AND AFFORDABLE OPTIONS FOR OVARIAN CANCER CARE THROUGHOUT THE ENTIRE JOURNEY: A KOLGO TRG APPROACH

Asima Mukhopadhyay^{1,2,3}

¹Chittaranjan National Cancer Institute, Kolkata Gynecological Oncology Trials And Translational Research Group, Kolkata, India, ²James Cook University Hospital, Gynaecological Oncology, Middlesbrough, United Kingdom, ³Newcastle University, Population Health Sciences Institute, Newcastle Upon Tyne, United Kingdom

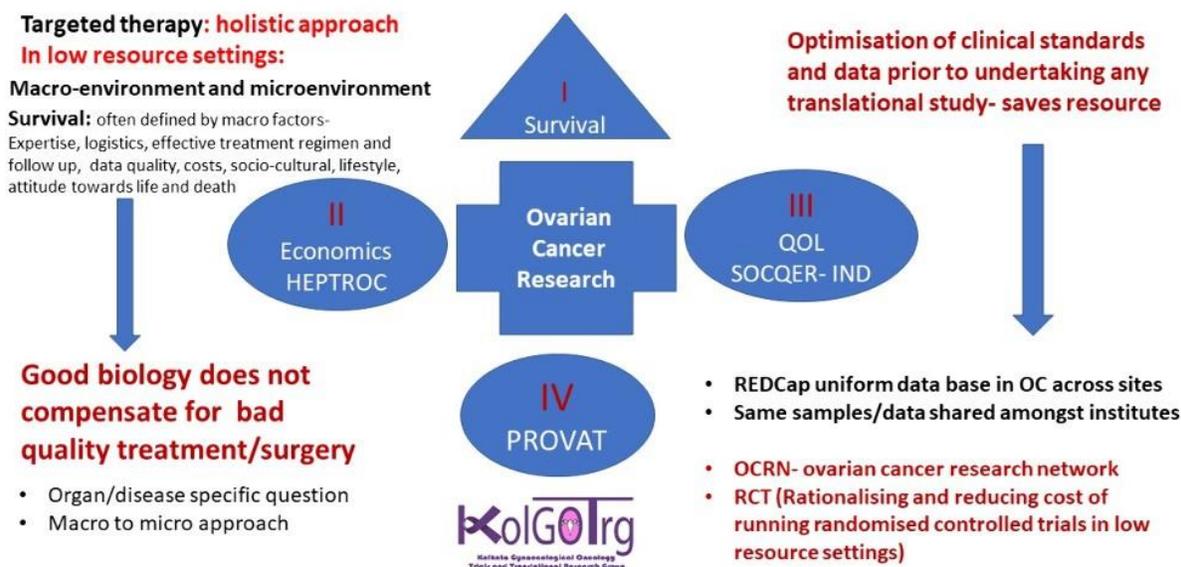
Objectives: With a predicted 50% rise in incidence and mortality from ovarian cancer by 2040, health-inequality and access to recent paradigm changing treatment options in ovarian cancer care remain a significant challenge in low resource settings. Kolkata Gynecological Oncology Trials and Translational Research Group (KolGo Trg), the first GCIG group from India was formed in 2018 with a mission to address this cancer care gap through academic clinical studies/ education/training.

Methods: A road map was developed for implementation of a series of sequential studies (OCRN): Optimal surgery/training, targeted/precision surgery in frontline setting (HIPEC-HR), low- cost predictive biomarkers (academic HRD test- HRDAIC), Nurse-led genetic counselling/awareness (NUGENA), low-cost treatment options for biochemical recurrence (HOTROC), affordable approaches to parpi therapy (IPIROC), parpi in arsenic endemic zones (BIODIVARSITY), QOL-studies (SOCQER-IND), health-economics and willingness to pay studies (HEPTROC), Translational studies (PROVAT), Health policy studies (ROCK- regional ovarian cancer centre, Kolkata), novel statistical designs (SMART- PARP and RCT- rationalising and reducing the cost of running randomised controlled trials in low resource settings), survivorship/patient-public-involvement (KOLGO-SURV/ SARBOJAYA).

Results: We have successfully initiated and implemented all these studies; barriers and challenges are being measured through the REAIM framework for implementation research i.e., feasibility, accessibility, acceptability, cost effectiveness, scalability (Table 1. www.kolgotrg.org). Some of our studies are being considered for wider global participation through GCIG.

Conclusions:

Integrating research improves clinical care when data collection taken under research settings and principles of GCP



This systematic model for addressing novel and affordable indigenous solutions for each step of cancer care could be an exemplar for other cancer types in LMICs.

Ovarian Cancer: Improving survival in low resource settings (inequality)

	High resource	Low resource	Alternative	KolGo Trg approach
Optimal/ complete cytoreductive surgery	Yes, ESGO Criteria >50% Primary surgery >80% optimal CTR	Requires Manpower resource – training and peri-op care	Most cost effective intervention	IGCS fellowship LAPNAC study
Intraperitoneal chemotherapy/HIPEC	NCCN guidelines	Patchy- has cost implications	HIPEC in biological sub groups	HIPEC-HR
BRCA genetic testing- HBOC and prevention	Routine	Patchy- lack of genetic counsellors and tracing at risk individuals	Nurse led genetic counselling and PPI	NuGenA
HRD testing	Routine- costly genomic studies	Not available/ QA/ costs	Low cost academic HRD assay (Rad51)	PROVAT/ Biobanking
PARP inhibitors/ Avastin	Routine and Standard of care	Not accessible/ available/ costly PFS will be different	Intermittent / less than daily dosing/ subgroups	IPIROC BIODIVERSITY
Treatment of recurrence	Trials/ targeted T/T options	Limited options OS not prolonged	Hormones/oral chemo/AYUSH	HOTROC TOPARP
Quality of life/ Morbidity/ cost	Routine	Important but neglected end points	QAPFS/QTWIST	SOCQER-IND, HEPTRC, MOREPARP
Survivorship	Routine	Not well established	Snowballing	KolGo Surv/ Sarbojaya

EP366 / #354

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

THE IGCS VIRTUAL TUMOR BOARD IN VIETNAM: AN IMPACT ASSESSMENT OF THE LAST 5 YEARS

Dung Nguyen¹, Joseph Ng², Linda Van Le³, Quy Tran¹, Quynh Tran⁴, Ngoc Phan⁴, Siobhan O'Connor⁵, Anna Plotkin⁶, Aaron Han⁷, Annekathryn Goodman⁸, Keiichi Fujiwara⁹, Anuja Jhingran¹⁰, Peter Lim¹¹, Joyce Varughese¹², Linh Tran¹³, Tri Dinh¹⁴

¹Da Nang Oncology Hospital, Gynecologic Oncology, Da Nang, Viet Nam, ²National University Cancer Institute, Singapore, Gynecologic Oncology, Singapore, Singapore, ³University of North Carolina School of Medicine, Gynecologic Oncology, Chapel Hill, United States of America, ⁴Da Nang Oncology Hospital, Gynecologic Oncology, da nang, Viet Nam, ⁵University of North Carolina School of Medicine, Pathology And Laboratory Medicine, Chapel Hill, United States of America, ⁶University of Toronto, Laboratory Medicine And Pathobiology, Toronto, Canada, ⁷Kings College Dubai, Department Of Pathology, Dubai, United Arab Emirates, ⁸Massachusetts General Hospital, Gynecologic Oncology, Boston, United States of America, ⁹Saitama Medical University International Medical Center, Gynecologic Oncology, Saitama, Japan, ¹⁰MD Anderson Cancer Center, Radiation Oncology, Houston, United States of America, ¹¹Center of Hope, Gynecologic Oncology And Pelvic Surgery, Reno, United States of America, ¹²Capital Health Surgical Group, Gynecologic Oncology, Pennington, United States of America, ¹³Ho Chi Minh Oncology Hospital, Radiotherapy, Ho Chi Minh, Viet Nam, ¹⁴Mayo Clinic Florida, Medical And Surgical Gynecology, Jacksonville, United States of America

Objectives: To enhance the expertise of local gynecologic oncologists, the International Gynecologic Cancer Society (IGCS) collaborates with Da Nang Oncology Hospital (DOH) in monthly virtual tumor boards using the Project ECHO model. This study evaluates the impact of this collaboration on the diagnosis and treatment of gynecologic malignancy at DOH.

Methods: A retrospective review of patients presented at tumor boards from July 2017 to April 2022 was performed. Each tumor board typically consisted of a presentation of two cases with pathology review, a discussion of management, and a short didactic lecture. We report changes in clinical and pathologic diagnoses, treatments, and outcomes. SPSS 20.0 was used for data analysis.

Results: 107 cases were presented at 54 tumor boards: 43 ovarian, 23 cervical, 17 uterine, 16 vulvar and vaginal cancers, 4 gestational trophoblastic neoplasia, and 4 other gynecologic diseases. Tumor board discussion changed clinical diagnosis in 15.9%, pathologic diagnosis in 30.8%, and treatment in 74.8% of cases. 103/107 patients agreed with the treatment recommendation, of which 55.3% were completed, 33.0% uncompleted, and 11.7% ongoing. In the completed treatment group, complete response rate was 75.4%, partial response 3.5%, stable disease 1.8%, progressive disease 15.8%, and recurrence 3.5%. The mean duration of treatment delay due to tumor board was 8.9 ± 7.4 days, with 97.2% being less than 4 weeks late.

Conclusions: Project ECHO facilitates access by patients in low-middle income countries to best-practice care. Virtual tumor boards improve the diagnosis and treatment of gynecologic cancer patients in low-resource settings without significantly delaying treatment.

EP367 / #545

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

JEHOVAH'S WITNESSES PATIENTS WITH GYNECOLOGICAL MALIGNANCIES IN JAPAN

Yoshitaka Onishi, Takashi Miyakawa, Mari Minematsu, Shimpei Natsuaki, Tomoko Hirota, Yuki Karasawa
Fukuoka Tokushukai Hospital/Tokushukai, Gynecology, Kasuga/Fukuoka, Japan

Objectives: Jehovah's Witnesses(JW) do not accept blood cell transfusions. In gynecological malignancies, such as cervical cancer and endometrial cancer patients have the risk of severe anemia with genital bleeding from the lesion. We have to select the best therapy individually for each JW patient. In Japan, institute or hospital that accept JW patients is very few. We reviewed JW patients with gynecological malignancies in our hospital.

Methods: We reviewed the medical chart of JW gynecological cancer patients from 2017 to 2022. All patients signed the "Blood transfusion rejection" form.

Results: We had 33 JW patients(3 cervical, 15 endometrial, 12 ovarian, 1 vaginal and 1 peritoneal cancer)(8 advanced and 3 recurrent). Eleven patients died of cancer (1 cervical with stage IV, 2 ovarian with clear cell, 5 ovarian with advanced or recurrent, 1 endometrial with stage III, 5 endometrial with stage IV or recurrent disease and 1 stage IV peritoneal cancer).

Conclusions: One third patients had advanced or recurrent cancer. Their prognosis was poorer than non-JW patients maybe because of their advanced disease. Most patients visited nearby hospital and were diagnosed malignant disease but they were not accepted because of JW. And then visited our hospital far from their home. Japanese Supreme Court has some precedents and some medical society of Japan have the recommendations for JW. Although, many hospitals reject JW patients to treat or operate in Japan. We have to treat cancer patients with best medical care including "best supportive care" according to their social, economic, familial, and religious background.

EP368 / #932

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

ETHNIC DISPARITY IN CERVICAL CANCER STAGE AT DIAGNOSIS IN AN ISRAELI REFERRAL-CENTER

Gabriel Levin¹, Omer Bensimchon², Lior Cohen², Benny Brandt¹, Liron Kogan¹, Tamar Perri¹
¹hadassah medical center, Gynecologic Oncology, jerusalem, Israel, ²hadassah medical center, Obstetrics And Gynecology, jerusalem, Israel

Objectives: We aimed to compare stage and stage-specific survivals of cervical cancer among Jewish and Arab women in a referral medical center in Israel

Methods: Consecutive patients with cervical cancer treated in a single institution between 2011–2021 were identified. A comparison between Jewish and Arab women included demographic, pathologic and clinical features. Factors related to advanced stage ($\geq 2B$) were determined by regression analysis. Stage-specific survival was compared using the Kaplan-Meier method

Results: Included were 288 Jewish and 66 Arab women. Histology was Squamous-cell carcinoma in 2/3 of the cases in both groups. The groups did not differ in mean BMI, age at diagnosis and menopausal status. Arab women had higher parity. Arab ethnicity was related to a higher risk of advanced stage at diagnosis (54.5% vs. 70.3%, HR 1.97, 95% CI 1.10-3.54, $p=0.021$). In multivariate regression analysis, older age (OR 1.02, 95% CI 1.007-1.047, $p=0.008$), and Arab descent (OR 2.27, 95% CI 1.05-4.89, $p=0.036$) were found to be associated with an advanced stage. Adenocarcinoma histology was independently negatively associated with advanced disease (OR 0.32, 95% CI 0.15-0.70, $p=0.004$). During median follow-up period of 25 months (interquartile range 9-97 months), 88 patients died and 35 progressed. Stage-specific survival was similar among the ethnic groups

Conclusions: Advanced stage at diagnosis was more prevalent in Arabs compared to Jewish women with cervical cancer, whereas stage-specific survival was similar. Possible attributing factors to the observed disparity, such as: health-care access, socioeconomic status, education, culture, molecular and genetic mechanisms, should be further investigated

EP369 / #547

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

CLINICAL TRIAL DIRECTED TREATMENT AND OUTCOMES OF BLACK VS. WHITES WITH STAGE III OVARIAN CANCER - AN ANCILLARY DATABASE STUDY

Michael Richardson¹, Caitlin Johnson², Amandeep Mann³, Kathleen Darcy⁴, Chunqiao Tian⁴, Daniel Kapp⁵, John K Chan³

¹University of California Los Angeles, Obstetrics And Gynecology, Los Angeles, United States of America, ²California Pacific Medical Center Research Institute, Gynecologic Oncology, San Francisco, United States of America, ³Palo Alto Medical Foundation Research Institute, Gynecologic Oncology, Palo Alto, United States of America, ⁴Henry M Jackson Foundation for the Advancement of Military Medicine, Inc., Gynecologic Cancer Center Of Excellence Program, Bethesda, United States of America, ⁵Stanford University School of Medicine, Radiation Oncology, Palo Alto, United States of America

Objectives: To evaluate racial differences in long-term survival of stage III ovarian cancer patients treated on clinical trials.

Methods: Data on patients with optimally cytoreduced stage III ovarian cancer from three Gynecologic Oncology Group prospective clinical trials (GOG 114, 158, 172) were utilized. Chi-squared and multivariate Cox models were employed for analyses.

Results: Of 1,432 patients, 94.1% were White (n=1,347) and 5.9% Black (n=85). Compared to Whites, Blacks were younger, (64.7% less than age 57 vs 47.7%, p=0.002) and had more mucinous (7.1% vs 1.9%) and endometrioid (12.9% vs 10.2%) histologies (p=0.011). There was no difference in extended long-term survival (>15 year) for Blacks vs. Whites with regard to progression free survival (PFS, 10.6% vs. 15.1%, p=0.352) or overall survival (OS, 20.0% vs. 23.8%, p=0.245). On multivariate analysis, younger age (HR 0.82; 95% CI [0.73,0.93]; p=0.002), endometrioid histology (HR 0.69; 95% CI [0.56,0.86]; p=0.001), and grade I tumors (HR 0.64; 95% CI [0.51,0.80]; p<0.0001) were independent predictors of improved survival. However, race was not predictive of PFS (HR 1.11; 95% CI [0.87,1.40]; p=0.40) or OS (HR 1.17; 95% CI [0.91,1.50]; p=0.22) after adjusting for clinical factors.

Conclusions: Black and White patients with optimally cytoreduced stage III ovarian cancer treated in clinical trials had comparable long-term survival. Younger age, endometrioid histology, and lower grade predicted improved survival outcomes.

EP370 / #492

EPOSTER VIEWING: AS17 SOCIAL INEQUITIES AND IMPACT ON CANCER OUTCOMES

RACIAL DISPARITIES IN DIAGNOSTIC EVALUATION OF UTERINE CANCER AMONG MEDICAID BENEFICIARIES

Xiao Xu¹, Ling Chen², Jason Wright²

¹Yale University, Department Of Obstetrics, Gynecology And Reproductive Sciences, New Haven, United States of America, ²Columbia University, Department Of Obstetrics And Gynecology, New York, United States of America

Objectives: Black patients with uterine cancer are less likely than White patients to be diagnosed with localized tumors. To inform reasons for such disparity, we compared the quality of diagnostic evaluation received by Black versus White patients with uterine cancer.

Methods: Using 2008-2019 MarketScan Multi-State Medicaid Database, we identified 858 Black and 1,749 White patients with uterine cancer presenting with abnormal uterine bleeding (AUB). Quality of diagnostic evaluation was measured by delayed diagnosis (time between AUB reporting and uterine cancer diagnosis >1 year), not receiving guideline-recommended diagnostic procedures, and delayed time to first diagnostic procedure (time between AUB reporting and first diagnostic procedure >2 months). The association between race and the quality indicators was examined by logistic regressions adjusting for patient age, concurrent gynecologic conditions, comorbidities, and other characteristics.

Results: Black patients were more likely than White patients to experience delayed diagnosis (11.3% versus 8.3%, $p=0.01$; adjusted OR, 1.71, 95% CI, 1.27-2.29) or to not receive guideline-recommended diagnostic procedures (10.1% versus 5.0%, $p<0.001$; adjusted OR, 1.94, 95% CI, 1.40-2.68). Even when they did receive recommended diagnostic procedures, Black patients were more likely than White patients to experience delay in time to first diagnostic procedure (10.9% versus 9.1%, $p=0.16$; adjusted OR, 1.46, 95% CI, 1.09-1.97). A lower proportion of Black than White patients underwent hysteroscopy (32.4% versus 39.6%, $p<0.001$) and transvaginal/pelvic ultrasound (61.8% vs. 73.3%, $p<0.001$).

Conclusions: Black and White patients with uterine cancer differed in the quality of diagnostic evaluation received, which may be one plausible reason for their disparity in stage at diagnosis.

EP371 / #985

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

A CASE CONTROL STUDY TO COMPARE EFFECT OF PERIOPERATIVE WOUND INFILTRATION SYSTEM VS POSTOPERATIVE OPIOID INSTALLATION ALONG WITH GA IN ELECTIVE GYNECOLOGIC ONCOLOGY SURGERY.

Ayesha Akter, Shahana Pervin
Mugda Medical College Hospital, Gynaecology And Obstetrics, Dhaka, Bangladesh

Objectives: Major open surgery for gynaecological cancer usually extensive and induced severe postoperative surgical site pain (POSP). We investigated whether perioperative wound infiltration system along with general anaesthesia effectively decrease POSP compared with traditional general anaesthesia followed by opioid in gynaecologic oncology patient.

Methods: This is prospective case control study includes 230 patients who underwent extensive pelvic surgery during gynaecologic cancer surgery. Study was conducted over one year (April, 2016 to March, 2017), where the wound infiltration group (n=115) which received (0.5% bupivacaine HCl) as a single dose by subcutaneous infiltration at the site of incision before the skin closure, where the patients were still anaesthetized. Control group was treated with standard of care postoperative systemic pain medication. The degree of pain was assessed by using visual analogue pain scores (1-10). On early postoperative day opioid consumption was also significantly reduced. Other elements of postoperative phase of ERAS program is also improved. Chi-square (x²) test, Fischer's exact test, student t test were used in data analysis.

Results: The group treated with perioperative wound infiltration with bupivacaine HCl has lower pain score (<0.001), lower the consumption of opioid (<0.05), earlier mobilization (p <0.001), fewer consumption to bed (p <0.001), better patient satisfaction (p <0.05) but no significant difference in complication rate.

Conclusions: Wound infiltration with bupivacaine HCl into surgical site effectively reduced pain and opioid consumption and PONV. Bupivacaine HCl is safe, well tolerated and superior to traditional systemic pain medication in both self-reported and clinical outcome among the patient who underwent extensive pelvic gynaecological surgery and enhance ERAS program

EP372 / #1117

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

TOTALLY IMPLANTABLE CENTRAL VENOUS CATHETER IN ONCOLOGIC PATIENTS: A SINGLE-CENTER EXPERIENCE

Bruno Azevedo¹, Fabiano Bittencourt¹, Nicole Baroni¹, Adriano Boareto¹, Priscila Morosini¹, João Bozza², Audrey Tsunoda³

¹Grupo Oncoclinicas - Curitiba, Surgical Oncology, Curitiba, Brazil, ²Pilar Hospital, Anesthesiology, Curitiba, Brazil, ³Hospital Erasto Gaertner, Gynecologic Oncology Department, Curitiba, Brazil

Objectives: Central venous catheters play a significant role in the management of oncologic patients. Totally implantable ports (port-a-caths) are completely enclosed systems without external lines, implanted in the subcutaneous tissue of the chest wall. The optimal catheter tip location is in the superior vena cava (SVC), at or above its junction with the right atrium. This paper aims to review the experience of port implantation and related complications in a single institution.

Methods: In this retrospective study, the data were collected from patients who received treatment for hematologic malignancies or solid tumors after searching our internal database from January/2019 to December/2021. All ports were single lumen. All the devices were implanted under procedural sedation combined with locoregional anesthesia.

Results: A total of 309 port-a-caths were implanted in 306 patients. Most procedures were performed by a surgical oncologist (281; 90.9%), and the right internal jugular vein was accessed in 250 (80.9%) patients. Only 4 cases (1.2%) demanded vein dissection, all the remaining were achieved by the Seldinger technique. A total of 10 (3.2%) of port-a-caths were removed prematurely due to complications. None of the patients died due to complications. Infection was the major reason for port removal (4 patients, 1.29%), followed by catheter fracture (3 patients, 0.97%), skin dehiscence (1 patient, 0.32%), and port chamber rotation (1 patient, 0.32%).

Conclusions: In this study, port-a-caths implanted with the Seldinger procedure, by surgical oncologists, through the right internal jugular vein, were safe and highly feasible for patients requiring infusional chemotherapy, in a single institution.

EP373 / #1103

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

CONCURRENT LAPAROSCOPIC HYSTERECTOMY AND BARIATRIC SURGERY FOR EARLY-STAGE ENDOMETRIAL CANCER AND ENDOMETRIAL INTRAEPITHELIAL NEOPLASIA: EARLY RESULTS FROM A PROSPECTIVE FEASIBILITY TRIAL

Alexandra Bercow¹, Stephen Fiascone², Kevin Elias³, Michael Worley³, Colleen Feltmate³

¹Massachusetts General Hospital, Division Of Gynecologic Oncology, Boston, United States of America, ²Boston Medical Center, Division Of Gynecologic Oncology, Department Of Obstetrics & Gynecology, Boston, United States of America, ³Brigham and Women's Hospital, Division Of Gynecologic Oncology, Department Of Obstetrics, Gynecology, And Reproductive Biology, Boston, United States of America

Objectives: The objective of this prospective study is to examine the feasibility of expedited referral to a bariatric surgeon and concurrent laparoscopic hysterectomy and bariatric surgery in obese women with presumed early-stage grade 1 endometrial carcinoma (EC) or endometrial intraepithelial neoplasia (EIN).

Methods: Patients are recruited from the Brigham and Women's Hospital gynecologic oncology clinic. Women with EIN or grade 1 EC and BMI \geq 40 or BMI \geq 35 with one or more obesity-related comorbidities are eligible. Patients are then referred to a bariatric surgeon with a goal of undergoing concurrent laparoscopic hysterectomy and bariatric surgery within 8 weeks for women with grade 1 EC, 12 weeks for EIN, and 6 months for EIN with IUD in situ.

Results: Ten patients were screened and four enrolled. The average age of enrolled patients was 54.5 years old, and BMI was 44.11. Obesity-related comorbidities included hypertension, insulin-dependent diabetes, and obstructive sleep apnea. Average time between initial visit with a gynecologic oncologist and bariatric surgeon was 6.25 days. All women had EIN pathology. Patient #1 was unable to undergo either procedure because of an incidental gastric neuroendocrine tumor and failed cardiac stress test. Patient #2 declined bariatric surgery for personal reasons. Patient #3 was denied coverage by insurance for both procedures. Patient #4 has been approved by insurance and will undergo her concurrent surgeries.

Conclusions: Early results demonstrate feasibility of an expedited referral process to a bariatric surgeon for obese women with EIN or grade 1 EC. The outcome of concurrent surgery remains to be seen.

EP374 / #164

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

A DOUBLE-BLIND RANDOMIZED TRIAL COMPARING SURGEON-ADMINISTERED TRANSVERSUS ABDOMINIS PLANE (TAP) BLOCK WITH PLACEBO AFTER MIDLINE LAPAROTOMY IN GYNECOLOGIC ONCOLOGY.

Laurence Bernard, Melissa Lavecchia, Gabrielle Trepanier, Sarah J. Mah, Alida Pokoradi, Justin McGinnis, Mohammad Alyafi, Bryan Glezerson, Julie Nguyen, Vanessa Carlson, Limor Helpman, Laurie Elit, Waldo Jimenez, Lua Eiriksson, Clare Reade
Juravinski Cancer Centre, Gynecologic Oncology, Hamilton, Canada

Objectives: Surgeon-administered Transversus Abdominis Plane (TAP) block is a contemporary approach to providing postoperative analgesia. We evaluated its efficacy in a double-blind, randomized, placebo-controlled trial, hypothesizing that TAP blocks would decrease total opioid use in the first 24 hours postoperatively. Secondary outcomes included pain scores, postoperative nausea and vomiting, incidence of clinical ileus, time to flatus, and hospital length-of-stay.

Methods: Patients with a suspected or proven gynecologic malignancy undergoing surgery through a midline laparotomy at one Canadian tertiary care centre were randomized to receive bilateral surgeon-administered, transperitoneal TAP blocks with a total of 40 mL of either 0.25% bupivacaine or normal saline (placebo), prior to fascial closure.

Results: 38 patients were randomized to the bupivacaine arm, and 41 patients to the placebo arm. The mean age was 60 years and mean BMI was 29.3. A supra-umbilical incision was used in 38% of cases. Patient and surgical characteristics were evenly distributed. The patients who received the bupivacaine TAP block required 98 ± 59.2 morphine milligram equivalents in the first 24 hours after surgery, while the placebo group received 100.8 ± 44 MME ($p=0.85$). The mean pain score at 4 hours after surgery was 3.1 ± 2.4 in the TAP group, versus 3.1 ± 2 in the placebo group ($p=0.93$). Nausea, time to first flatus, rates of clinical ileus and length-of-stay were similar between groups.

Conclusions: In this trial, surgeon-administered bupivacaine TAP block was not superior to placebo in reducing postoperative opioid requirements or improving other postoperative outcomes. Surgeon-administered TAP should not be considered standard of care in postoperative multimodal analgesia.

EP375 / #834

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

ENHANCED RECOVERY PROTOCOL IN PATIENTS UNDERGOING CYTOREDUCTION WITH/WITHOUT HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY: A FEASIBILITY STUDY

Geetu Bhandoria¹, Snita Sinukumar², Prashant Bhandarkar³, Aditi Bhatt⁴

¹Command Hospital Kolkata, Obstetrics & Gynecology, Kolkata, India, ²Jehangir Hospital, Surgical Oncology, Pune, India, ³BARC Hospital, Biostatistics, Mumbai, India, ⁴Zydus Hospital, Surgical Oncology, Ahmedabad, India

Objectives: There is a lack of prospective evidence supporting recently published guidelines on the use of 'enhanced recovery after surgery' (ERAS) pathways in patients undergoing cytoreductive surgery (CRS) with or without Heated Intraperitoneal Chemotherapy (HIPEC). We assess the feasibility of ERAS in patients undergoing CRS with/without HIPEC for ovarian/fallopian tube/primary peritoneal cancer.

Methods: This study was carried out at three Indian centres, where a predefined ERAS protocol based on the ERAS-CRS-HIPEC guidelines was used. The complexity of the surgery was classified according to the surgical complexity score(SCS) by Aletti.

Table 1: ERAS elements and surgical variables

Diagnosis	N=60 (%)
Ovary	55(91.7)
Primary Peritoneal	2(3.3)
Endometrium with peritoneal metastases	1(1.7)
Fallopian tube	1(1.7)
Recurrent Ovary	1(1.7)
Surgery	
CRS	35(58.3)
CRS+HIPEC	25(41.7)
PCI (Mean)	13.7
Prehabilitation	
Nutritional Supplementation (Protein, Eggs)	60 (100)
Incentive Spirometry	60 (100)
Walking, 45-60 mins/5-6 times a day/3-4 weeks	60 (100)
Preoperative elements	
6-hour fasting for solids	60 (100)
2-hour fasting for liquids	60 (100)
Carbohydrate preloading	1 (1.7)
Mechanical bowel preparation	42 (70)
Antibiotic bowel preparation	18 (30)

Results:

Sixty patients were included in the present analysis from January 2021 to March 2022 (Table 1). 56.6% had a high SCS, 11.6% intermediate SCS and 31.6% a low SCS. The compliance to prehabilitation and intraoperative ERAS elements was nearly 100%. Carbohydrate preloading was not done in any of the patients. Mechanical bowel preparation and intra-abdominal drains were both used in 70% of the patients. Foley's catheter was retained for over 24 hours in 98% and the nasogastric tube in 60% of the patients.

The mean ICU stay was 2.5 ± 3.7 days, and the mean hospital stay was 10.9 ± 6.7 days. Grade 3-4 complications were seen in 16.7% of patients.

Conclusions: The application of the ERAS protocol was selective with low compliance for the postoperative elements. This could be attributed to the complexity of the surgical procedure (>50% patients with a high SCS) and the lack of evidence for the safety of these practices in these complex procedures.

EP376 / #727

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

THE EFFECT OF TRANSVERSUS ABDOMINIS PLANE BLOCK ON POSTOPERATIVE OPIOID USE IN GYNECOLOGIC ONCOLOGY PATIENTS UNDERGOING LAPAROTOMY WITH ENHANCED RECOVERY AFTER SURGERY (ERAS).

Kristin Black, Gregg Nelson, Steven Bisch
University of Calgary, Department Of Gynecologic Oncology, Calgary, Canada

Objectives: To characterize the effect of transversus abdominis plane (TAP) blocks on opioid use and pain score in the first 48 hours following laparotomy for gynecologic malignancy.

Methods: This retrospective cohort study assessed patients who underwent laparotomy by gynecologic oncology service from 2016-2017, and in 2020. Patients on long-acting opioids were excluded. Data were abstracted from the electronic health record and ERAS Interactive Audit System. Opioid consumption was converted to oral morphine equivalent dose (MED) in milligrams. Maximum pain was reported from 0 -10 on visual analogue scale (VAS). Mean opioid use at 12, 24, and 48 hours postoperatively was compared between patients with TAP block to those without using t-test. Stratification by postoperative NSAID use was performed to adjust for confounding.

Results: 671 patients were included, 555 had a TAP block, 116 did not. Opioid use was reduced in patients with TAP blocks compared to those patients without TAP blocks at 12 hours (27.7 vs 20.5mg MED, $p=0.006$), 12-24 hours (19.3 vs 12.3mg MED, $p=0.0004$), and 24-48 hours postoperatively (27.7 vs 15.4mg MED, $p<0.0001$). There was no statistically significant difference in max pain score. Stratification demonstrated a reduction in opioid use at 12 hours (20.3 vs 34.8mg, $p=0.017$), 12-24 hours (14.5 vs 32.3mg, $p<0.001$), and 24-48 hours (18.7 vs 56.0mg, $p<0.001$) in patients not receiving NSAIDs ($n=99$) but not in patients who received NSAIDs ($n=572$) ($p=NS$).

Conclusions: TAP blocks significantly decreased opioid use in patients not receiving NSAIDs undergoing gynecologic oncology laparotomy on an ERAS protocol.

EP377 / #246

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

INVOLVEMENT OF MESORECTAL LYMPH NODES IN PATIENTS UNDERGOING MODIFIED POSTERIOR EXENTERATION OR LOW ANTERIOR RESECTION FOR GYNECOLOGIC MALIGNANCIES

João Casanova^{1,2}, Sara Proença^{2,3}, José Filipe Cunha²

¹Hospital da Luz, Gynecology, Lisboa, Portugal, ²Fundação Champalimaud, Gynecology, Lisboa, Portugal, ³Hospital de Cascais Dr José de Almeida, Gynecology, Alcabideche, Portugal

Objectives: Determine the incidence of positive mesorectal lymph nodes and rectal wall invasion in patients undergoing a standardized surgical approach.

Methods: A retrospective study of patients submitted to either modified posterior exenteration (MPE) or low anterior resection (LAR) for gynecologic malignancies, performed in one center, was performed.

Results: Forty-one patients had undergone either MPE or LAR for gynecologic malignancies during the study. Forty-one percent of these underwent primary surgery, 39% interval surgery and 20% were submitted to surgery in the recurrence setting. Primary tumor site was ovary 87,7%, endometrium 10% and uterine corpus 2,3%. Sixteen patients had positive mesorectal lymph nodes at the time of total pelvic exenteration and 13 of these had rectal wall involvement (mucosa, submucosa or muscularis) ($p < 0,001$). Only 6 patients without involvement of mesorectal lymph nodes had rectal invasion ($p < 0,001$).

Conclusions: Although the mesenteric is not a common pathway of lymphogenous metastatic spread in patients with primary gynecologic neoplasms, the mesenteric lymph nodes may be affected. We found that mesorectal lymph nodes were frequently positive for malignancy and this finding was more common if patients had rectal wall invasion. There is paucity of data regarding the optimal surgical approach in gynecologic cancers and studies are needed to determine the prognostic significance of positive mesorectal lymph nodes. One strength in our study was the standardized surgical approach, done by the same team, thus ensuring reproducibility. The authors acknowledge the limited sample size and the need to mature data to evaluate patterns of recurrence and its potential relation with our findings.

EP378 / #781

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

ADVANTAGES OF LAPAROSCOPY IN GYNECOLOGIC SURGERY IN ELDERLY PATIENTS

Chi-Son Chang, Il-Yeo Jang, Jungeun Jeon, Jihee Jung, Yoo-Young Lee, Tae-Joong Kim, Jeong-Won Lee, Byoung-Gie Kim, Chel Hun Choi
Samsung Medical Center, Sungkyunkwan University School of Medicine, Department Of Obstetrics And Gynecology, Seoul, Korea, Republic of

Objectives: Older patients are at a higher risk for postoperative morbidity and mortality compared to younger patients. Laparoscopic surgery has been widely used as a minimally invasive method to reduce postoperative morbidity. However, it is prone to higher cardiopulmonary morbidity in elderly patients. So, we compared surgical outcomes of open and laparoscopic gynecologic surgeries in elderly patients.

Methods: This study included patients who received gynecologic surgery at over 55 years of age from 2010 to 2020. Surgeries with vaginal approach and operations for ovarian cancer were excluded. Surgical outcomes were compared between the open surgery and laparoscopy group. To consider age, the age cut-off was set as 65 which showed the most discriminative power in surgical outcomes between the younger and older groups.

Results: Among 2983 patients, 28.6% underwent open surgery and 71.4% underwent laparoscopic surgery. In both young and elderly groups, the perioperative outcomes of laparoscopic surgery were better than those of the open surgery. In both open and laparoscopic surgery groups, patients older than 65 showed overall worse surgical outcomes. However, the age-related difference in the perioperative outcomes was less severe in the laparoscopy group. In linear regression analysis, the differences in EBL, transfusion, and hospital days between the younger and older groups were smaller in laparoscopy than in open surgery.

Conclusions: Although the surgical outcome was worse in the older patients, the difference between the age groups was smaller when surgery was performed with laparoscopy. Laparoscopic gynecologic surgery offers more advantages and safety in elderly patients over 65 years of age.

EP379 / #1028

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

EXPECTATIONS AND CONCERNS OF WOMEN PRIOR TO NON-RECONSTRUCTIVE BREAST CANCER SURGERY

Ons Kaabia, Mohamed Ben Abdesslem, Riadh Ncibi, Rim Bouchahda, Samir Hidar
Université de Sousse, Faculté de Médecine de Sousse, Gynecology Obstetrics, Sousse, Tunisia

Objectives: We aim to identify patient concerns and expectations, especially regarding their body image and their reproductive and sexual life prior to non-reconstructive breast cancer surgery to include such information in the patients' preoperative counselling.

Methods: This is a single-institution cross-sectional observational study based on a paper questionnaire to collect quantitative and qualitative data from a cohort of women due to undergo non-reconstructive breast cancer surgery between February 2022 and April 2022.

Results: A total of 27 women took part in the study. The mean age of the patients was 50.55 [18-80]. The mean reflection time between the announcement of the surgery and the operation was 61 days [11- 168]. The main concern of women regarding breast surgery is cancer recurrence (88.88%). When asked about their worries regarding their femininity, 55.55% of the women answered that they were not concerned and 66.66% associated the breast with femininity. Among the participants, 62.96% think that the intervention will neither change their partners' opinions about them nor the quality of their sex life. When asked about their reproductive life, 14.81% fear a negative impact of the surgery on their fertility, and 11.11% fear a negative impact on their contraception. The fear of a negative change in their professional life is present in 40.74% of the participants.

Conclusions: Prior to a non-reconstructive breast cancer surgery, women have general reservations about having the surgery because of the fear of the recurrence of cancer per se associated with individual risks due to breast surgery such as a negative impact on body image and their professional life.

EP380 / #421

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

PERIOPERATIVE GLYCEMIC MANAGEMENT PROGRAM (PGMP) PILOT IN A CANADIAN TERTIARY CENTRE

Tamara Kuzma¹, Julie Mckeen², Tyrone Harrison², Mary Brindle³, Sanjay Beesoon⁴, Karmon Helmle², Anna Cameron¹, Shannon Ruzycki²

¹University of Calgary, Department Of Obstetrics & Gynecology, Calgary, Canada, ²University of Calgary, Department Of Medicine, Calgary, Canada, ³University of Calgary, Department Of Surgery, Calgary, Canada, ⁴Alberta Health Services, Environmental Health Sciences, Calgary, Canada

Objectives: Postoperative hyperglycemia occurs in two-thirds of non-cardiac surgery patients and is associated with increased morbidity and mortality. We implemented a multi-disciplinary perioperative glycemic management pathway with the aim of reducing postoperative hyperglycemia and improving patient outcomes.

Methods: Our study evaluated the implementation of the PGMP in gynecologic oncology patients. The PGMP encompasses glycemic management across the outpatient and inpatient surgical journey. We report changes in process measures (blood glucose measurement), outcome measures (hyperglycemia) and clinical measures (length-of-stay) pre- and post-implementation. Single-cohort interrupted time-series analysis was used to compare pre- (April 1, 2018 - September 30, 2019) and post- (October 1, 2019 - March 31, 2021) intervention means and trends.

Results: 949 gynecologic oncology patients were evaluated pre-intervention, and 878 post. After implementation, the proportion of patients who were screened with HbA1c increased by 11.3% (95% CI: 5.0, 17.7%; p=0.02). The proportion of patients with diabetes who had at least one blood glucose measurement in the first 24-hours after surgery increased by 15.3% (95% CI: -3.2, 33.8%; p=0.10). Median length-of-stay for all postoperative patients decreased by 0.42 days (95% CI: -0.91, 0.07 days; p=0.09). There was no change in 30-day readmissions, regardless of diabetes diagnosis.

Conclusions: Implementation of PGMP increased the identification of patients at high-risk for hyperglycemia. Our pilot reveals challenges experienced in evaluating perioperative glycemic management. Our study also showcases the need to measure both process and outcome measures and the need to perform robust statistical analysis when evaluating quality improvement initiatives.

EP381 / #543

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

SENTINEL LYMPH NODE BIOPSY TECHNIQUES IN DIFFERENT GYNAECOLOGICAL CANCERS: HOW MUCH DO OBGYN RESIDENTS KNOW?

Shi Hui Lee¹, Ieera Aggarwal²

¹KK Women's and Children's Hospital, Department Of Obstetrics And Gynaecology, Singapore, Singapore, ²KK Women's and Children's Hospital, Department Of Gynaecological Oncology, Singapore, Singapore

Objectives: The applicability and accessibility of sentinel lymph node biopsy (SLNB) in gynecological cancers has increased in recent years. We aim to assess OBGYN residents' understanding on this topic to identify gaps in their knowledge.

Methods: A 10-question survey was designed to assess their background clinical exposure, understanding and applied knowledge of the use and techniques of SLNB.

Results: Of the 45 residents surveyed, 38 responses (82.6%) were received. Most residents had observed SLNB procedures (97.2%) and attended gynae-oncology tumor board discussions (94.4%). Mean total score was higher in senior residents as compared to junior residents (7.71 ± 2.40 vs 6.65 ± 2.62 , $p=0.86$), residents who had observed SLNB procedures (7.34 ± 2.26 vs 4.00 ± 4.00 , $p=0.31$), attended SLNB teachings (8.50 ± 1.73 vs 6.91 ± 2.57 , $p=0.37$) or attended tumor board (7.21 ± 2.36 vs 6.00 ± 4.00 , $p=0.15$) Most residents were aware that SLNB can be used in endometrial cancer (97.4%), but only 6 (15.8%) were aware of its use in cervical and vulvar cancer. While most residents knew of the optimal tracer injection site (81.6%), only 12 residents (31.6%) could match the optimal tracer for each gynaecological malignancy. Two residents (5.3%) were aware that blue dye is contraindicated in pregnancy. Significantly, only 3 residents (7.9%) were able to select the correct options in the SLNB algorithm for endometrial cancer.

Conclusions: Majority of residents have a basic understanding of the use of SLNB, but the lack of clinical knowledge and surgical techniques should be addressed in a formal setting.

EP382 / #1139

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

EFFECT OF BLEEDING DISORDERS ON PERIOPERATIVE HYSTERECTOMY TRANSFUSIONS: A NATIONAL SURGICAL QUALITY IMPROVEMENT PROGRAM (NSQIP) STUDY

Sarah Lee, Bhavana Pothuri

New York University School of Medicine, Obstetrics And Gynecology, New York, United States of America

Objectives: Perioperative management varies for patients with bleeding disorders. We sought to determine the association between bleeding disorders and perioperative transfusions for hysterectomy patients.

Methods: We included patients undergoing non-emergent hysterectomy between 2014-2019 from the NSQIP, a validated, risk-adjusted database from 700 hospitals. We compared 30-day perioperative transfusions between patients with and without bleeding disorders (chronic, persistent, active hematologic disorders). Transfusions ≤ 1 day were immediate, and after ≥ 2 days were delayed. Covariates were age, race/ethnicity, preoperative anemia (hematocrit $\leq 30\%$) and thrombocytopenia (platelet $< 100,000/\text{mL}$), fibroids, endometriosis, cancer, and surgical route.

Results: Of 290,642 patients, 10,705 (3.7%) received perioperative transfusions (8,679, 2.9%, immediate; 2,026, 0.7%, delayed). Of 2,687 patients with bleeding disorders, 283 (10.5%) received transfusions, compared to 10,422/287,955 (3.6%) of those without ($p < 0.001$). For gynecologic cancer patients, 17.1% (121/707) with bleeding disorders received transfusions compared to 8.4% (3,261/38,379) of those without ($p < 0.001$). 999 (0.3%) underwent reoperation for bleeding, and this was more likely with bleeding disorders (27/2,687, 1.0% vs. 972/287,955, 0.3%, $p < 0.001$). Anemia (OR 11.7, CI 11.1-12.4) and bleeding disorders (OR 2.0, CI 1.7-2.3) were associated with transfusions when adjusting for age, race/ethnicity, fibroids, endometriosis, cancer, and surgical approach. The effect of bleeding disorders on transfusions persisted in the laparoscopic group (OR 2.5, CI 1.9-3.3). Bleeding disorders were associated with immediate transfusions (OR 1.7, CI 1.5-2.0) and delayed transfusions (OR 2.1, CI 1.6-2.7).

Table 1. Characteristics of patients receiving transfusions

	No transfusion (N= 279,937)	Immediate transfusion (N=8,679)	Delayed transfusion (N=2,026)	All postoperative transfusions (N=10,705)	P-value
Age (Median, Range)	48 (18-90)	50 (19-90)	52 (22-90)	50 (19-90)	<0.001
Race (n, %)					
White	182,827 (97.13)	4,349 (2.31)	1,048 (0.56)	5,397 (2.87)	<0.001
American Indian/ Alaskan Native	1,569 (96.20)	53 (3.25)	9 (0.55)	62 (3.80)	
Asian	10,155 (93.31)	631 (5.80)	97 (0.89)	728 (6.69)	
Black/ African American	37,387 (94.24)	1,909 (4.81)	375 (0.95)	2,284 (5.76)	
Native Hawaiian/ Pacific Islander	1,615 (93.62)	99 (5.74)	11 (0.64)	110 (6.38)	
Unknown/ Not reported	46,384 (95.62)	1,638 (3.38)	486 (1.00)	2,124 (4.38)	
Hispanic (n, %)					<0.001
No	208,224 (96.43)	6,316 (2.93)	1,382 (0.64)	7,698 (3.57)	
Yes	28,126 (96.13)	937 (3.20)	196 (0.67)	1,133 (3.87)	
Unknown	43,587 (95.88)	1,426 (3.14)	448 (0.99)	1,874 (4.12)	
Fibroid (n,%)	36,844 (95.82)	1,354 (3.52)	254 (0.66)	1,608 (4.18)	<0.001
Endometriosis (n, %)	11,930 (98.33)	173 (1.43)	30 (0.25)	203 (1.67)	<0.001
Gynecologic cancer (n, %)	36,204 (91.46)	2,695 (6.81)	687 (1.74)	3,382 (8.54)	<0.001
Anemia (n, %)	7,148 (69.16)	2,840 (27.48)	348 (3.37)	3,188 (30.84)	<0.001
Thrombocytopenia (n, %)	817 (86.64)	103 (10.92)	23 (2.44)	126 (13.36)	<0.001
Bleeding disorder(n, %)	2,404 (89.47)	220 (8.19)	63 (2.34)	283 (10.53)	<0.001
Hysterectomy route (n, %)					<0.001
Abdominal	63,858 (88.80)	6,418 (8.93)	1,635 (2.27)	8,058 (11.20)	
Laparoscopic/robotic	178,349 (98.88)	1,714 (0.95)	307 (0.17)	2,021 (1.12)	
Vaginal	37,735 (98.36)	547 (1.43)	84 (0.22)	631 (1.64)	

Table 2. Logistic regression analysis of factors associated with perioperative transfusions

	Unadjusted		Adjusted*	
	OR	95% CI	OR	95% CI
Age	1.02	1.02-1.02	1.96	1.68-2.27
Race				
White	Reference		Reference	
American Indian/ Alaskan Native	1.34	1.04-1.73	1.47	1.11-1.94
Asian	2.43	2.24-2.63	1.92	1.75-2.09
Black/ African American	2.07	1.97-2.18	1.32	1.24-1.40
Native Hawaiian/ Pacific Islander	2.31	1.90-2.80	1.93	1.55-2.40
Unknown/ Not reported	1.55	1.47-1.63	1.19	1.09-1.30
Hispanic				
No	Reference		Reference	
Yes	1.09	1.02-1.16	1.17	1.09-1.26
Unknown	1.16	1.10-1.22	0.91	0.84-1.00
Fibroid	1.17	1.10-1.23	0.96	0.90-1.02
Endometriosis	0.43	0.38-0.50	0.91	0.78-1.06
Gynecologic cancer	3.11	2.98-3.24	2.48	2.35-2.62
Anemia	16.19	15.43-16.97	11.71	11.09-12.36
Thrombocytopenia	4.07	3.37-4.91	1.5	1.18-1.91
Bleeding disorder	3.13	2.77-3.55	1.95	1.68-2.27
Hysterectomy mode				
Laparoscopic	Reference		Reference	
Abdominal	11.13	10.59-11.70	9.36	8.89-9.86
Vaginal	1.48	1.35-1.61	1.85	1.68-2.02

*Adjusted for all variables in the model
 OR, odds ratio; CI, confidence interval

Conclusions: Patients with bleeding disorders are twice as likely to receive immediate and delayed transfusions for hysterectomies, even with a laparoscopic approach. Data are needed to optimize bleeding disorders to decrease transfusion risk.

EP383 / #1049

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

RETROSPECTIVE ANALYSIS OF SECONDARY RESECTION OF THE CERVICAL STUMP FOLLOWING SUBTOTAL HYSTERECTOMY IN ISRAEL

Naama Ben Abu¹, Gabriel Levin²

¹Hadassah medical center, Gynecology And Obstetrics, Jerusalem, Israel, ²Hadassah University Hospital, Obstetrics And Gynecology, Jerusalem, Israel

Objectives: The benefits of a laparoscopic approach to hysterectomy are well documented. During the last decade a major discussion evoked regarding the role of subtotal hysterectomy (SH) following the FDA warning against power morcellation in 2014. In Israel, the guidelines allow SH following patient counseling. We aim to study the trend of SH in Israel during the last decade and to study the rate of reoperation following SH

Methods: A retrospective study including all cases of SH performed in a tertiary referral center in Israel during 2014-2021. We searched all surgeries performed by Senior gynecological surgeons in the Gynecologic department and extracted data of surgeries coded as SH in the surgical notes. Further, the rate of minimally invasive surgery (MIS) was evaluated across years of study

Results: Overall, we included 143 SH surgeries of women with a median age of 52 years. Symptomatic myoma was the indication in 75.5% of cases. MIS SH was completed in 33 (23.1%) of cases. The rate of MIS SH decreased from 46.7% in 2014 to 8.3% in 2021. Importantly, in 5 (3.5%) SH, malignancy was evident in the final pathological report. Reoperation was performed in 5 (3.5%) of cases in a median time of 71 months with 3 cases (2.1%) of malignancy as the indication.

Conclusions: Although performed, SH carries a non negligible risk of performing an incomplete surgery in gynecologic unsuspected malignancy and the necessity of future gynecological oncological surgery.

EP384 / #926

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

COST-ANALYSIS OF AN ENHANCED RECOVERY PROGRAM AFTER MINIMALLY INVASIVE GYNECOLOGIC ONCOLOGY SURGERY

Cristina Mitric¹, Soyoun Rachel Kim², Gregg Nelson³, Stephane Laframboise⁴, Stuart Mccluskey⁵, Lisa Avery⁶, Nastasia Kujbid², Aysha Zia², Elisabeth Spenard², Marcus Bernardini⁷, Sarah Ferguson², Taymaa May⁸, Liat Hogen², Paulina Cybulska², Edyta Marcon⁹, Genevieve Bouchard-Fortier⁹

¹University Health Network, University of Toronto, Gynecologic Oncology, Toronto, Canada, ²Princess Margaret Cancer Centre/University Health Network/Sinai Health Systems, Gynecology Oncology, Toronto, Canada, ³University of Calgary, Department Of Gynecologic Oncology, Calgary, Canada, ⁴University of Toronto, Department Of Obstetrics And Gynecology, Division Of Gynecologic Oncology, Toronto, Canada, ⁵University Health Network, University of Toronto, Anesthesia, Toronto, Canada, ⁶University Health Network, Biostatistics, Toronto, Canada, ⁷Princess Margaret Cancer Centre/University Health Network/Sinai Health Systems, Gynecologic Oncology, Toronto, Canada, ⁸Princess Margaret Cancer Center, Gynecologic Oncology, Toronto, Canada, ⁹University of Toronto, Laboratory Medicine & Pathobiology, Toronto, Canada

Objectives: A perioperative quality improvement initiative for minimally invasive (MIS) gynecologic oncology surgery at our centre improved the rate of same day discharge (SDD) from 29% to 75%. The current study aims to estimate the project implementation costs and compare costs between the pre-intervention and post-intervention cohorts.

Methods: Our Early Recovery After Surgery (ERAS)-based perioperative program enrolled 102 consecutive patients undergoing MIS hysterectomy at a single cancer centre during a 12-month period, and their SDD rates were compared to a historical cohort of 100 consecutive patients. Surgical admissions and readmissions were collected from the case-cost department. Postoperative and unplanned clinic visits, and emergency room visits costs were estimated from average visit cost. Total costs were calculated from the surgical visits, readmissions, and all 30 days postoperative visits at our institution, with the addition of implementation cost in the post-intervention group.

Results: The total cost per patient was 10 357.41\$ post-intervention compared to 12420.65 pre-intervention ($p=0.01$), resulting in a 17% total hospital cost reduction per patient, specifically 2063.24\$. The total cost for the program implementation was 134.34\$ per patient for a total cost of 13 106.52\$. The average surgical admission cost per patient post-intervention was 9859.80\$ compared to 12 122.88\$ pre-intervention ($p=0.01$). The mean costs for readmission and outpatient clinical visits were 221.93\$ vs. 157.53\$, and 140.56\$ vs. 133.44\$ for post- and pre-intervention respectively.

Conclusions: A quality-improvement ERAS initiative in gynecology oncology MIS led to a 17% total cost reduction per patient for a total saving of 2063.24\$ per patient.

EP385 / #1176

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

IMPLEMENTATION OF A MODIFIED MEDIAL INGUINOFEMORAL GROIN DISSECTION TECHNIQUE TO REDUCE MORBIDITY IN VULVAL CANCER SURGERY: AN UK- INDIA EXPERIENCE

Asima Mukhopadhyay^{1,2,3}

¹Chittaranjan National Cancer Institute, Kolkata Gynecological Oncology Trials And Translational Research Group, Kolkata, India, ²James Cook University Hospital, Gynaecological Oncology, Middlesbrough, United Kingdom, ³Newcastle University, Population Health Sciences Institute, Newcastle Upon Tyne, United Kingdom

Objectives: Traditional Groin node dissection techniques are associated with significant local wound related morbidity and lymphedema. Sentinel node techniques are not available widely in many LMICs and are not applicable due to tumour size at presentation or multifocal disease. Novel techniques for morbidity reduction and training is required for implementation.

Methods: A technique was developed comprising of the following: Small incision above groin crease- 1 cm lateral to pubic tubercle not extending beyond pulsation of femoral artery, Saphenous-sparing, Subfasial dissection, Closure of subcutaneous fat in 2 layers to obliterate dead space, suction drains to stay according to output, early ambulatory care. Success was measured using: Would complication rates-breakdown/lymphedema, Vulval QOL, Surgeon's/trainee satisfaction, implementation as a new standard of care, pathology , groin recurrence.

Results: Since June 2019, this technique was implemented in 3 centres: 1.NGOC, Gateshead, UK 2. JCUH, Middlesbrough UK 3. CNCI, Kolkata, India Both RCOG subspeciality fellows and IGCS fellows (India/Nepal) were trained. > 25 cases have been performed. Trainees found this technique easy to learn/implement. It has been a regarded as a change of practice in all 3 institutions including plan for surgical QA . Average length of incision was 5-6 cm without compromising depth of dissection, removal of nodes medial to femoral artery/vein and visibility of the femoral triangle. There was significant reduction in local wound-related morbidity. In CNCI Kolkata, IGCS fellow has started audit on QOL . No groin recurrences have been detected till date.

Conclusions: Surgical techniques to reduce morbidity in cancer surgery is a priority

EP386 / #184

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

MOBILE APP POST-OPERATIVE HOME MONITORING AFTER GYNECOLOGIC ONCOLOGY AND BREAST RECONSTRUCTION SURGERY ASSOCIATED WITH IMPROVED QUALITY OF RECOVERY: RESULTS OF A RANDOMIZED CLINICAL TRIAL

Gregg Nelson¹, Spencer Yakaback², Carmen Webb², Claire Temple-Oberle²

¹University of Calgary, Obstetrics & Gynecology, Calgary, Canada, ²University of Calgary, Surgery, Calgary, Canada

Objectives: Smartphone applications have been shown to positively impact patient experience. Our aim was to compare post-surgical care using conventional in-person follow-up with smartphone app assisted follow-up.

Methods: Patients undergoing gynecologic-oncology (GO) or breast-reconstruction (BR) surgery were randomized into a parallel two-arm clinical trial comparing smartphone app-assisted follow-up (App) with conventional follow-up (Conv). Patients were managed according to Enhanced Recovery After Surgery protocols. Post-discharge, the App group utilized a surgeon-monitored smartphone app, in which patients recorded Quality of Recovery 15 (QoR15) scores, EORTC selected adverse events and surgical site photographs over six weeks. The Conv group were seen in-person at standard intervals. Patient satisfaction scores were assessed in both groups using Patient Satisfaction Questionnaire (PSQ)-III subscales at two and six weeks post-operatively, while the Conv group also completed the QoR15 questionnaire at these intervals.

Results: Seventy-one patients (36 GO; 35 BR) were enrolled. Compared to Conv, the App group had significantly higher QoR15 scores post-operatively (two weeks: 127.58 vs 117.68, $p=0.02$; six weeks: 136.64 vs 129.76, $p=0.03$). Patients were equally satisfied between groups in all subsets of the PSQ-III, including overall care (two weeks: 23.18 vs 22.88, $p=0.79$; six weeks: 23.23 vs 24.94, $p=0.10$), communication with their surgeon (two weeks: 21.71 vs 21.74, $p=0.78$; six weeks: 21.43 vs 21.65, $p=0.59$) and access to care (two weeks: 43.75 vs 43.30, $p=0.74$; six weeks: 42.45 vs 44.62, $p=0.16$). Surgeons appreciated early complication identification with the app.

Conclusions: Post-operative follow-up using app-assisted monitoring led to high satisfaction with care for patients and surgeons.

EP387 / #661

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

PELVIC EXENTERATION IN GYNECOLOGIC CANCERS: A SINGLE CENTER STUDY FROM INDIA

Upasana Palo¹, Anik Ghosh¹, Debapriya Mondal², Basumita Chakraborti¹, Jaydip Bhaumik¹

¹Tata Medical Center, Gynecologic Oncology, Kolkata, India, ²Tata Medical Center, Medical Oncology, Kolkata, India

Objectives: This study aimed to assess the perioperative and oncologic outcomes of pelvic exenteration (PE) for advanced, recurrent, or persistent gynecologic cancers in a contemporary cohort from a resource-limited setup.

Methods: A review was conducted of patients excluding ovarian carcinoma who underwent PE over 10 years (2012 – 2021) at Tata Medical Center. Clinical information including baseline patient and disease characteristics, surgical details, and survival data were extracted from electronic medical records. Survival analysis was done using Kaplan-Meier and life-table methods.

Results: Twenty-four patients (age 32-72) underwent PE with local recurrence (70.8%) as the most common indication. Ten patients (41.7%) had cervical cancer, while 29.2%, 20.8%, and 8.3% patients had uterine, vulval, and vaginal cancers respectively. Twelve patients (50%) underwent anterior exenteration, 9 (37.5%) total, and 3 (12.5%) posterior. Urinary diversion was required in 21 (87.5%) patients, colostomy in 12 (50%) patients, and reconstruction in 11 (45.8%) patients. The median estimated blood loss was 1000 mL (250-2700), and the median hospital stay was 16 days (7-44). Seventeen patients (70.8%) had infectious complications, and urinary tract (58.3%) was the most frequent focus. Clavien-Dindo grade ≥ 3 30-day complication rate was 20.8%, and the 30-day mortality rate was 4.2% (1 patient). Three-year locoregional control rate was 87% while the median overall survival (OS) was 33.9 months (95% CI 9.7-58.1). The estimated 5-year OS rate was 35%. No factor had a significant association with survival.

Conclusions: Exenteration for gynecologic cancers had acceptable early morbidity and mortality, albeit a high postoperative infection rate. Survival was comparable to prior studies.

EP388 / #630

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

CREATING A MULTIDISCIPLINARY PROTOCOL FOR THE ADMINISTRATION OF HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY WITH CISPLATIN: A SINGLE-INSTITUTION EXPERIENCE

Aaron Praiss¹, Lea Moukarzel¹, Kimberly Dessources¹, Yukio Sonoda¹, Kara Long Roche¹, Ginger Gardner¹, William Tew², Rachel Grisham², Dennis Chi¹, Roisin O'Cearbhaill², Oliver Zivanovic¹
¹Memorial Sloan Kettering Cancer Center, Surgery, New York, United States of America, ²Memorial Sloan Kettering Cancer Center, Medical Oncology, New York, United States of America

Objectives: Hyperthermic intraperitoneal chemotherapy (HIPEC) with cisplatin at time of interval cytoreductive surgery (iCS) has shown to improve oncologic outcomes in patients with advanced-stage epithelial ovarian cancer (EOC). We report initial outcomes of a multidisciplinary protocol for perioperative management of patients receiving HIPEC.

Methods: An institutional protocol was created with medical oncology, surgical, anesthesia, nursing, and pharmacy teams. From 1/1/2020 – 5/1/2022, patients with pathology-confirmed, radiologic stage III EOC and an Eastern Cooperative Oncology Group (ECOG) performance status between 0-1 were deemed eligible for HIPEC at time of iCS. Patient demographics, clinicopathologic characteristics, and perioperative outcomes were prospectively collected. Descriptive analyses were performed.

Results: Twenty consecutive patients were scheduled for HIPEC at iCS. The median age was 64 years (range, 39-76). Four patients did not receive HIPEC due to preoperative thrombocytopenia, cardiac comorbidities, hearing loss, or intraoperative decision to abort iCS secondary to extent of disease. Ten patients (63%) completed 3 cycles of neoadjuvant chemotherapy. Complete gross resection (CGR) was achieved in 69% (n=11) of cases. Bowel resections were performed in 10 patients (63%), and all anastomoses were performed prior to HIPEC administration without diverting ostomies. Two patients (12.5%) experienced serious adverse events: an abdominal infection requiring reoperation and an acute kidney injury requiring hemodialysis. There were no perioperative deaths. The median time to start postoperative chemotherapy was 33 days (range, 20-71).

Conclusions: The risk of HIPEC is acceptable when administered using a standard protocol and multidisciplinary team approach. Renal protection protocols are necessary to decrease risk of nephrotoxicity and improve perioperative outcomes.

EP389 / #656

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

SENTINEL NODE MAPPING USING INDOCYANINE GREEN AND NEAR-INFRARED FLUORESCENCE IMAGING TECHNOLOGY FOR ENDOMETRIAL CANCER: A PROSPECTIVE STUDY USING A SURGICAL ALGORITHM IN INDIAN PATIENTS

Elroy Saldanha, Sp Somashekhar, Ashwin Rajagopal, Rohit Kumar
Manipal Comprehensive Cancer Centre, Gynec And Surgical Oncology, Bangalore, India

Objectives: Indocyanine Green(ICG) fluorescence with high definition 3D imaging systems is emerging as the latest strategy to improve surgical outcomes during Oncosurgery. It holds a great promise as a modern staging strategy for endometrial cancer. Aim was to assess the feasibility, diagnostic accuracy of SLN algorithm, evaluate the location and distribution of SLN and role of frozen section.

Methods: Prospective study involving 100 carcinoma endometrium patients who underwent robotic assisted type 1 pan hysterectomy, with ICG directed sentinel lymph node(SLN) biopsy from November 2020 to March 2022. SLN were sent for frozen section. Patients with positive sentinel nodes underwent complete lymph node dissection.

Results: Overall SLN detection rate was 98% with bilateral detection in 92% cases. Complete node dissection was done where SLN mapping failed. The most common location for SLN in our series was obturator on right and internal iliac on left hemiplevis. SLN in the para aortic area were detected in 14%. In 6% cases SLN were found at in atypical locations. 8% of patients had SLN positive for metastasis and underwent complete retroperitoneal lymphadenectomy. Comparison of final histopathology report with frozen section reports showed no false negatives.

Conclusions: ICG with cervical injection showed a high overall detection rate, and bilateral mapping appears to be a feasible alternative to the traditional methods of SLN mapping in patients with endometrial cancer. ICG fluorescence imaging system is simple, safe and may become a standard in oncosurgery. This approach can reduce morbidity, operative time, and costs associated with complete lymphadenectomy while maintaining prognostic & predictive information.

EP390 / #568

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

APIXABAN FOR POSTOPERATIVE THROMBOPROPHYLAXIS AS STANDARD OF CARE FOR GYNECOLOGIC ONCOLOGY PATIENTS: A REAL-WORLD DATA STUDY

Elisabeth Spenard¹, William Geerts², Yulia Lin³, Lilian Gien⁴, Allan Covens⁴, Rachel Kupets⁴, Danielle Vicus⁴

¹University of Toronto, Department Of Obstetrics & Gynecology, Division Of Gynecologic Oncology, Toronto, Canada, ²Sunnybrook Health Sciences Centre, Department Of Medicine And Thromboembolism Program, Toronto, Canada, ³Sunnybrook Health Sciences Centre, Laboratory Medicine And Molecular Diagnostics, Toronto, Canada, ⁴Sunnybrook Odette Cancer Centre, Division Of Gynecologic Oncology, Toronto, Canada

Objectives: Venous thromboembolic events represent the second most frequent cause of mortality in cancer patients. Literature showed that direct oral anticoagulants(DOACs) are as effective and safe as low molecular weight heparin for postoperative thromboprophylaxis. However, this practice has not been broadly adopted in gynecologic oncology. The aim of this study was to evaluate clinical effectiveness and safety of apixaban for thromboprophylaxis after laparotomies in comparison to enoxaparin in gynecologic oncology.

Methods: The division of gynecologic oncology at a large tertiary center transitioned from enoxaparin 40mg SC daily to apixaban 2.5mg PO BID for 28 days after laparotomies in November 2020. This real-world study compared patients from November 2020 to July 2021(n=112) to a pre-intervention cohort from January to November 2020(n=144), using the institutional National Surgical Quality Improvement Program(NSQIP) database. To assess postoperative DOAC utilization in Canada, a survey was distributed to twenty gynecologic oncology centers.

Results: Patient characteristics were similar between groups. The pulmonary emboli rate was higher in the enoxaparin group (3%(n=5) vs.0%(n=0), p=0.012), however no difference was found between rates of total venous thrombosis events (4%(n=6) vs.3%(n=3), p=0.256). No difference was found in postoperative readmission (5%(n=7) vs.6%(n=7), p=0.317). Of the 7 readmissions in the enoxaparin group, one was due to severe bleeding requiring transfusion; there were no readmission for bleeding in the apixaban group (p=0.159). None required a surgical take-back. 13%(n=2) of Canadian centers have transitioned to apixaban.

Conclusions: Apixaban for 28-day postoperative thromboprophylaxis is an effective and safe alternative to enoxaparin after laparotomies in a real-world data cohort in gynecologic oncology.

EP391 / #571

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

UTILIZATION OF INDOCYANINE GREEN FLUORESCENCE ANGIOGRAPHY FOR ANASTOMOTIC PERFUSION ASSESSMENT FOLLOWING BOWEL RESECTION FOR GYNECOLOGIC MALIGNANCIES: A PAN-CANADIAN SURVEY

Elisabeth Spenard¹, Julie Nguyen², S. Daisy Kosa³, Taymaa May⁴

¹University of Toronto, Department Of Obstetrics & Gynecology, Division Of Gynecologic Oncology, Toronto, Canada, ²Juravinski Cancer Centre, Gynecologic Oncology, Hamilton, Canada, ³McMaster University, Department Of Health Research Methods, Evidence, And Impacts, Hamilton, Canada, ⁴Princess Margaret Cancer Center, Gynecologic Oncology, Toronto, Canada

Objectives: Real-time intraoperative assessment of anastomotic perfusion with indocyanine green fluorescence angiography (ICG-FA) is an innovative technique that effectively evaluates perfusion of bowel anastomoses. Our objective was to capture national practice patterns, characterize facilitators and barriers to ICG-FA utilization for bowel perfusion assessment.

Methods: A survey was developed with a focus group of key stakeholders and methodologist in the field and piloted in advance of distribution. The survey captured: basic socio-demographics, work history, facilitators and barriers to use ICG-FA for bowel perfusion assessment, and modalities for further education including peer-reviewed article, surgical video, national/international conference, local grand rounds, and practical training. On July 1, 2021, the survey was distributed to 81 gynecologic oncologists within the Society of Gynecologic Oncology of Canada.

Results: The response rate was 75% (n=61), with respondents from all Canadian provinces. The majority identified as women (80%, n=48), and have been in practice for less than 10 years (55%, n=33). 78% (n=47) performed bowel resection and 46% (n=28) used ICG-FA for bowel anastomotic perfusion assessment. The three most reported barriers to integrating ICG-FA into routine clinical practice were lack of training (32%), lack of equipment (28%), and lack of knowledge (26%). Surgical videos were the highest ranked desired educational modality followed by national/international conferences and peer-reviewed articles.

Conclusions: Targeted training across multiple educational modalities is needed to build knowledge around ICG-FA for bowel perfusion assessment among the Canadian gynecologic oncologic community, with surgical videos being the preferred educational modality. Funding for necessary equipment may facilitate the uptake of this tool. This represents a national practice improvement opportunity.

EP392 / #193

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

SINGLE-ARM CONFIRMATORY CLINICAL TRIAL OF PERIOPERATIVE MANAGEMENT TO PREVENT POSTOPERATIVE SYMPTOMATIC PULMONARY EMBOLISM FOR GYNECOLOGICAL CANCER PATIENTS WITH ASYMPTOMATIC VENOUS THROMBOSIS EMBOLISM PREOPERATIVELY (GOTIC-VTE TRIAL)

Yoshifumi Takahashi¹, Hiroyuki Fujiwara¹, Kouji Yamamoto², Masashi Takano³, Morikazu Miyamoto³, Kosei Hasegawa⁴, Maiko Miwa⁴, Toyomi Sato⁵, Hiroya Itagaki⁵, Takashi Hirakawa⁶, Haruka Nishida⁷, Tomonori Nagai⁸, Yoshinobu Hamada⁹, Soichi Yamashita¹⁰, Hiroko Yano¹¹, Tomoyasu Kato¹², Keiichi Fujiwara⁴, Mitsuaki Suzuki¹³

¹Jichi Medical University, Obstetrics And Gynecology, Tochigi, Japan, ²Yokohama City University, Biostatistics, Kanagawa, Japan, ³National Defense Medical College, Obstetrics And Gynecology, Saitama, Japan, ⁴Saitama Medical University International Medical Center, Gynecologic Oncology, Saitama, Japan, ⁵University of Tsukuba, Obstetrics And Gynecology, Ibaraki, Japan, ⁶Gunma University Graduate School of Medicine, Obstetrics And Gynecology, Gunma, Japan, ⁷The University of Tokyo, Obstetrics And Gynecology, Tokyo, Japan, ⁸Saitama Medical Center, Saitama Medical University, Obstetrics And Gynecology, Saitama, Japan, ⁹Dokkyo Medical University Saitama Medical Center, Obstetrics And Gynecology, Saitama, Japan, ¹⁰Gunma Prefectural Cancer Center, Gynecology, Gunma, Japan, ¹¹Hyogo Cancer Center, Gynecologic Oncology, Hyogo, Japan, ¹²National Cancer Center Hospital, Gynecology, Tokyo, Japan, ¹³Shinyurigaoka General Hospital, Obstetrics And Gynecology, Kanagawa, Japan

Objectives: There is no established optimal perioperative venous thrombosis embolism (VTE) prophylaxis for gynecological cancer patients with asymptomatic VTE preoperatively. The GOTIC-VTE trial was a prospective, multi-center, single-arm, confirmatory clinical trial to investigate the prevention of postoperative symptomatic pulmonary embolism (PE) onset by seamless anticoagulant therapy from the preoperative to 4 weeks after surgery instead of withholding intermittent pneumatic compression (IPC).

Methods: Anticoagulant therapy was started immediately after the diagnosis of asymptomatic VTE, administration of unfractionated heparin (UFH) was resumed within 12 hours after surgery, and anticoagulant therapy was continued for 28 days by combining UFH, low-molecular weight heparin and edoxaban. IPC was not used during the perioperative period. The primary outcome was the incidence of symptomatic PE during the 28 days after surgery, which was compared with historical controls who received short-term anticoagulant therapy.

Results: Between February 2018 and September 2020, 99 patients were enrolled and 82 were included in the full analysis set. There were 58 patients with ovarian cancer, 21 with endometrial cancer and 3 with cervical cancer. 47 patients had deep vein thrombosis (DVT) alone, 18 had PE alone and 17 had DVT and PE in combination at the time of registration. No symptomatic PE was observed during the 28 days after surgery. Two patients had bleeding events. The AEs of Grade3 were only 3 cases, increased ALT, AST and GGT, respectively.

Conclusions: The seamless anticoagulant therapy from the preoperative to postoperative 4 weeks for gynecological malignancies with asymptomatic VTE was effective in preventing the onset of postoperative symptomatic PE.

EP393 / #809

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

VALIDATION OF A FRAILITY INDEX IN GYNAECOLOGIC ONCOLOGY

Lawrence Woo, Jennifer Mateshaytis, Hanan Mal, Prafull Ghatage, Anna Cameron
University of Calgary, Gynaecologic Oncology, Calgary, Canada

Objectives: Frailty is associated with adverse outcomes in the oncologic and surgical patient. Frailty indices have been developed in multiple surgical fields and have been found to be predictive of post-operative morbidity and mortality. We aim to validate the Modified Frailty Index amongst our patient population. We hypothesize that those with increased frailty are at increased risk of surgical morbidity and mortality and that identifying these patients and applying Quality Improvement (QI) designed interventions may reduce adverse outcomes.

Methods: New patients who presented to the Gynaecologic Oncology service in Calgary, Alberta completed a frailty index. Between January 2020 and May 2021, frailty indices were collected on 616 patients, of which 475 underwent surgery. Frailty scores were compared to the primary outcome measures including: length-of-stay, 30-day morbidity, re-admission, and mortality. Thirty-day morbidity was assessed with the Clavien-Dindo classification. Secondary outcome measures include: documented residual disease, consultations within hospital, and non-home discharge. Data regarding patients' baseline characteristics, malignancy, and surgery were also documented.

Results: Baseline analysis show frail patients are more likely to experience post-surgical complications and to have a longer length-of-stay ($p = 0.018$ for both). There is a trend towards an increased frequency of readmissions ($p = 0.052$). Sub-group analysis reveal a higher grade of complications based on Clavien-Dindo classification for frail endometrial cancer patients ($p = 0.022$).

Conclusions: Preliminary analysis reveal the Modified Frailty Index is predictive of increased risk of post-surgical morbidity and complications in our population. Further application of the index and interventions may assist in surgical decision-making and improving post-operative outcomes.

EP394 / #393

EPOSTER VIEWING: AS18 SURGICAL TECHNIQUES AND PERIOPERATIVE MANAGEMENT

IMPACT OF RESIDENT PARTICIPATION ON SURGICAL OUTCOMES IN LAPAROSCOPICALLY ASSISTED VAGINAL HYSTERECTOMY

A Jin Lee¹, Seo-Yeon Kim², Eunbi Jang¹, Eun Jung Yang¹, Kyeong A So¹, Sun Joo Lee¹, Tae Jin Kim¹, Seung Hyuk Shim¹

¹Konkuk University School of Medicine, Obstetrics And Gynaecology, Seoul, Korea, Republic of, ²Kangbuk Samsung Hospital, Obstetrics And Gynaecology,, Seoul, Korea, Republic of

Objectives: This study compared the surgical outcomes of patients with benign disease who underwent laparoscopic assisted vaginal hysterectomy (LAVH) to determine the association of surgical outcomes with resident participation in the gynecological field.

Methods: We performed a single center retrospective study of 683 patients diagnosed with gynecological benign disease from January 2010 to December 2015 who underwent the LAVH procedure. Clinicopathological characteristics and surgical outcomes were compared between the resident involvement group and attending physician alone group. The primary endpoint was 30-day postoperative morbidity.

Results: In total, 165 patients underwent LAVH with resident involvement and 518 patients underwent surgery without resident involvement. The mean age of the patients was 49 years and 48 years in the resident involvement group and attending alone groups, respectively. There was 30-day postoperative morbidity in 8 (3.5%) and 18 (4.8%) patients in the resident involvement group and attending alone group ($P=0.422$), respectively. Operative time was significantly different between the two groups, 131 minutes in resident involvement group and 101 minutes in attending alone groups ($P<0.001$). On multivariate analysis, Charlson comorbidity index > 2 (OR 8.0, 95% CI 2.7–24.0, $P<0.001$), operation time (OR: 1.018, 95% CI: 1.008–1.028; $P<0.001$) and EBL (OR: 1.002, 95% CI: 1.001–1.003; $P<0.001$) were significantly associated with 30-day morbidity, but resident involvement was not statistically significant.

Conclusions: The operation time was longer when the resident involvement in LAVH, but was no significant difference in morbidity at 30 days. Therefore, resident involvement in LAVH is a reasonable way to meet both resident training and patient safety.

EP395 / #477

EPOSTER VIEWING: AS19 SURVIVORSHIP

A NORWEGIAN VERSION OF THE GYNECOLOGIC CANCER LYMPHEDEMA QUESTIONNAIRE AND THE LOWER-EXTREMITY LYMPHEDEMA SCREENING QUESTIONNAIRE: TRANSLATION AND CROSS-CULTURAL ADAPTATION

Pernille Bjerre Trent^{1,2}, Ragnhild Falk³, Anne Cathrine Staff^{2,4}, Doris Jorde⁵, Ane Gerda Eriksson⁶
¹Oslo University Hospital, Norwegian Radium Hospital, Department Of Gynecological Oncology, Division Of Cancer Medicine, Oslo, Norway, ²University of Oslo, Faculty Of Medicine, Institute Of Clinical Medicine, Oslo, Norway, ³Oslo University Hospital, Oslo Centre For Biostatistics And Epidemiology, Research Support Services, Oslo, Norway, ⁴Oslo University Hospital, Division Of Obstetrics And Gynecology, Oslo, Norway, ⁵University of Oslo, Faculty Of Education, Oslo, Norway, ⁶Oslo University Hospital, Radium Hospital, Department Of Gynecologic Oncology, Division Of Cancer Medicine, Oslo, Norway

Objectives: There is paucity of data regarding self-reported lower extremity lymphedema (LEL) and quality of life after surgery for endometrial cancer. Questionnaires are emerging, however translated and validated Norwegian versions are not available. Cross-cultural adaptation is important to reduce the risk of introducing bias into a study. The purpose of this pilot study was to translate and culturally adapt the Gynecologic Cancer Lymphedema questionnaire (GCLQ) and Lower-extremity Lymphedema Screening Questionnaire (LELSQ).

Methods: Permissions were obtained to use the original English versions of the GCLQ and LELSQ for translation into Norwegian. The questionnaires were translated using a procedure based on standard guidelines including forward translation by native speakers of the target language, synthesis, back translation and review. Sixteen patients from the Radium Hospital gynecological cancer outpatient ward, all expected to have stable disease, were invited for questionnaire test-retest by completing the same questionnaires twice at 3-4-week intervals. Internal consistency was assessed by Cronbach's alpha. Test-retest was assessed by intra-class correlation coefficient (ICC).

Results: Twelve (75%) patients responded to the invitation and completed all items in the questionnaires. Chronbach's alpha was 0.75 for the GCLQ and 0.89 for LELSQ. The ICC was 0.86 for GCLQ and 0.91 for LELSQ.

Conclusions: Translation and cross-cultural adaptation of these internationally validated patient reported outcomes questionnaires for LEL in gynecological cancer survivors was feasible. The Norwegian translation of GCLQ and LELSQ showed acceptable internal consistency and the test-retest reliability was excellent.

EP396 / #1020

EPOSTER VIEWING: AS19 SURVIVORSHIP

CANCER ASSOCIATED MENOPAUSAL SYMPTOMS AND THE IMPACT ON SLEEP IN WOMEN LIVING WITH AND BEYOND CANCER IN IRELAND

Fionán Donohoe¹, Ivaila Valcheva², Yvonne O'Meara², Aidin Roberts², Louise Comerford², Donal Brennan²

¹Mater Misericordiae University Hospital, Living Well Cancer Programme, Dublin, Ireland, ²Mater Misericordiae University Hospital, Living Well Cancer Programme, Dublin, Ireland

Objectives: The Menopause after Cancer Study (MACS) is a single arm phase II study enrolling women with a current or prior cancer diagnosis and bothersome vasomotor symptoms of menopause, and, for whom HRT is contraindicated. Baseline data on sleep disturbance in this cohort are lacking.

Methods: MACS aims to measure the impact of a composite intervention which includes non-hormonal pharmacotherapy and digital CBT for insomnia on quality of life (QOL). The sleep condition indicator (SCI) was the sleep measure employed for this study, scores <16 represent significant insomnia symptoms. The EORTC-QLQ-C30 was used as a primary QoL outcome measure. The Hot Flush Rating Scale (HFRS) was used to assess the bother/interference of vasomotor symptoms with a score of 10 indicating maximum interference.

Results: 191 women were recruited to the study. The median age of participants was 49 (Range 28-66[DB1] [DB2]). 80% of participants had a diagnosis of breast cancer, 9% had ovarian cancer, 6% endometrial cancer, 5% other cancer types. The baseline median HFRS score was 7. The median baseline SCI score was 8 (SD 4.7) indicating significant sleep dysfunction[DB3]. This degree of dysfunction is further supported by baseline data from the insomnia subscale of the EORTC-QLQ-C30 which demonstrated a median baseline score of 67 (SD26.4). There was no difference in mean SCI score between those with a diagnosis of breast cancer and those who had gynaecological or other diagnoses.

Conclusions: Sleep dysfunction is a major concern for women dealing with cancer associated menopausal symptoms and availability of effective therapy is urgently needed.

EP397 / #844

EPOSTER VIEWING: AS19 SURVIVORSHIP

**SURVIVORSHIP NEEDS OF WOMEN FOLLOWING TREATMENT FOR GYNAECOLOGICAL CANCER
– LEARNING FROM THE PATIENT EXPERIENCE TO DEVELOP FUTURE MODELS OF CARE**

Bronwyn Jennings, Naven Chetty

Mater Hospital Brisbane, Gynaecological Oncology, South Brisbane, Australia

Objectives: The Gynaecology Oncology unit at Mater Hospital Brisbane is one of three specialist units in Queensland, providing care to women from urban, regional and remote Queensland, Northern Territory and Northern New South Wales. To gain a greater understanding of the symptoms experienced following treatment and to identify patient's preferences for support the unit undertook a survey of women undergoing surveillance for their gynaecological cancer.

Methods: An anonymous 10 question survey was provided to all women undergoing face to face surveillance appointments in the Gynae Oncology clinic at Mater Hospital Brisbane over a six-week period, with over 100 responses received.

Results: Respondents represented a range of age groups and years since treatment completion. Over two thirds of respondents came from urban areas (N=78), with the remainder coming from regional and remote areas (N=22). Respondents experienced a range of symptoms and concerns; most commonly increase / decrease in weight (N=36), problems sleeping (N=29) and anxiety (N=29). The most commonly desired allied health linkages were physiotherapy (N=12), dieticians (N=7), psychology (N=7), occupational therapy (N=7), menopause specialists (N=7) and counsellors to help with sexual function intimacy (N=7), demonstrating the importance of holistic care in the survivorship space. Almost two thirds of women (N=60) indicated they preferred to attend the hospital over telehealth or in-home appointments.

Conclusions: This survey provides insight into the physical, psychological and sexual symptoms experienced following treatment for gynaecological malignancies. This knowledge will aid in the development and design of future survivorship clinics and models of care.

EP398 / #196

EPOSTER VIEWING: AS20 SYMPTOM MANAGEMENT/SUPPORTIVE CANCER CARE

THE VALUE OF NON HORMONAL HERBAL COMPLEMENTARY ON REDUCING MENOPAUSAL HOT FLASHES

Farah Farzaneh¹, Golnaz Fallah Talouki², Maryamsadat Hosseini³

¹Shahid Beheshti University of Medical Sciences, Ob & Gyn, Tehran, Iran, ²Preventative Gynecology Research Center, Shahid Beheshti University of Medical Sciences, Ob & Gyn, Tehran, Iran, ³Preventative Gynecology Research Center, Shahid Beheshti University of Medical University, Ob & Gyn, Tehran, Iran

Objectives: Hot flashes is a bothering symptom in perimenopause women as well as in women after cancer treatment. Present study aimed to investigate the effects of a non-hormonal herbal complementary(NHHC) in the treatment of hot flashes.

Methods: This study is the preliminary result of an ongoing large clinical research assessing the effect of NHHC on reducing hot flashes particularly when hormonal treatment is contraindicated. A randomized, double-blind, placebo-controlled clinical trial was performed on 70 postmenopause women with symptoms of hot flashes (no history of cancer). The cases(n=35) were given 2 capsules/daily of EstroG-100 (extracts of *Cynanchum wilfordii* Hemsley, *Phlomis umbrosa* Turczaninow, *Angelica gigas* Nakai) for 12 weeks. The controls(n=35) were given placebo. The consent form, demographic questionnaire were completed. The severity of hot flashes recorded weekly for 12 weeks. Statistical tests were performed using SPSS 22.0.

Results: The mean age was 51.1 ± 0.4 and 50.3 ± 0.4 in cases and controls respectively. The mean duration of menopause was < 2 years. No significant differences found in the demographic factors. Among all the laboratory tests, just the Alkaline phosphatase value in the cases was significantly higher than the controls (p-value = 0.047). In the cases the reduction of the severity of hot flashes at 30, 60, and 90 days after treatment and the trend of reduction, were significantly reduced ($P < 0.001$). The severity of hot flashes in the control group did not change significantly during the study.

Conclusions: In this study the use of herbal extract (EstroG-100) significantly reduced the severity of hot flashes in postmenopause women, without significant adverse effects

EP399 / #1156

EPOSTER VIEWING: AS20 SYMPTOM MANAGEMENT/SUPPORTIVE CANCER CARE

PREVALENCE AND FACTORS ASSOCIATED WITH MALNUTRITION IN THE DIAGNOSIS OF OLDER BRAZILIAN OUT PATIENTS WITH GYNECOLOGICAL CANCER : PROSPECTIVE COHORT STUDY

Jurema Lima¹, Nathalia Ramalho², Leticia Sales³, Carla Azevedo¹, Zilda Cavalcanti³, Vandre Carneiro⁴, Mirella Bezerra⁵, Maria Julia De Mello⁶, Candice Santos¹

¹IMIP /DOR, Oncology, RECIFE, Brazil, ²IMIP / DOR, Gynecologic, RECIFE, Brazil, ³IMIP/ FPS, Oncology, recife, Brazil, ⁴IMIP, Surgical Oncology, Recife, Brazil, ⁵IMIP NEOH, Oncology, recife, Brazil, ⁶IMIP /FPS, Oncology, recife, Brazil

Objectives: To determine the prevalence of malnutrition and predictive factors for the occurrence of early adverse events (infection, hospitalization and death) IN THE DIAGNOSIS OF OLDER BRAZILIAN OUT PATIENTS WITH GYNECOLOGICAL CANCER

Methods: Prospective cohort enrolled older patients >60 years with a recent gynecological cancer diagnosis admitted between 2015-2019. The CGA performed at the time of admission included the following instruments: CCI; KPS; MMSE; TUG test; IPAQ; ADL; MNA; MNA-SF; GDS15; PPS; Polypharmacy. The outcomes included malnutrition and early death. Survival analysis (Kaplan-Meier) and Cox proportional hazard

regression was performed. was performed by univariate analysis by adjusting simple Poisson regression models, considering $p < 0.20$. Then, the variables that found an association were included in a new multivariate Poisson regression model adopting a 5% significance level and 95%

Results: in total, 826 patients were included in the study. prevalence of malnutrition in 42,3% of the sample and 14,9% were at risk of malnutrition. During the six months of surveillance, 28.4% of the patients developed a Infrction, 34.6% were hospitalized and 16.4% died. for early death MNA < 23.5(HR= 2.89; 95% CI 1.81–5.99, $p < 0.001$)

Conclusions: The prevalence of malnutrition and nutritional risk was high in older women with gynecological cancer; and metastatic disease; patients with fall history, sedentary and risk of depression. malnutrition is a predictive factors for the occurrence of early adverse events (infection, hospitalization and death). It is important evaluate early nutritional status of the group patients, to contribute positively to the clinical outcome of these patients.

EP400 / #967

EPOSTER VIEWING: AS20 SYMPTOM MANAGEMENT/SUPPORTIVE CANCER CARE

THE ROLE OF PLEURAL FLUID DRAINAGE CATHETER PLACEMENT IN PATIENTS WITH GYNECOLOGIC MALIGNANCIES

Ravali Reddy, Elisabeth Diver

Stanford University School of Medicine, Obstetrics And Gynecology, Division Of Gynecologic Oncology, Palo Alto, United States of America

Objectives: Many individuals with gynecologic malignancies suffer symptoms related to malignant pleural effusions that improve with drainage. The objective of this study is to review a single institution's experience with pleural fluid drainage catheter placement in these patients.

Methods: Adult patients with a confirmed gynecologic malignancy who underwent catheter placement from 2010-2020 were identified, and clinical data was extracted for analysis.

Results: Chart review identified 63 patients, the majority of whom were diagnosed with ovarian cancer (63%). 89% of patients had unilateral catheter placement. Pulmonologists placed the plurality (40%) of catheters, with the remainder placed by thoracic surgeons or interventional radiologists. Median time from cancer diagnosis to catheter placement was 25 months. 41% of patients had already received 4+ lines of chemotherapy at the time of placement, and 17% had goals of care focused on comfort at placement. Only 16% of patients in the cohort experienced complications related to their catheters, with the most common complications being infection and pneumothorax. 35% of patients had documented catheter removal, with minimal ongoing drainage being the indication for the majority of removals. 84% of the cohort was deceased at the time of data collection. Median survival time following catheter placement was 3 months.

Conclusions: While many patients with symptomatic malignant pleural effusions from gynecologic malignancies opt to undergo drainage catheter placement while pursuing treatment, the overall prognosis for this group appears limited, with survival measured in short months. This information may be used to appropriately counsel patients in this clinical context regarding prognosis and supportive care.

EP401 / #975

EPOSTER VIEWING: AS20 SYMPTOM MANAGEMENT/SUPPORTIVE CANCER CARE

A RANDOMIZED CONTROLLED STUDY BETWEEN THC CANNABIS OIL AND PLACEBO ADDED ON STANDARD PROPHYLAXIS FOR REDUCING CHEMOTHERAPY-INDUCED NAUSEA VOMITING (CINV) FOLLOWING CARBOPLATIN AND PACLITAXEL REGIMEN

Sinee Wanishpongpan, Shina Oranratanaphan
King Chulalongkorn Memorial Hospital, Obstetrics And Gynecology, Bangkok, Thailand

Objectives: To determine the effect of THC cannabis oil added on standard antiemetic prophylactic drugs for reducing intensity of delayed phase (24-120 hours) nausea among gynecologic cancer patients receiving Carboplatin and Paclitaxel chemotherapy.

Methods: This study was a randomized, double-blinded, crossover, placebo-controlled trial. Participants were gynecologic malignancy patients receiving Carboplatin and Paclitaxel chemotherapy at King Chulalongkorn Memorial Hospital. Either THC cannabis oil (1 mg per day) or placebo were prescribed added on standard antiemetic prophylaxis, in alternated cycles between groups: in the first group, THC cannabis oil was prescribed in odd cycles and placebo in even cycles, vice versa for the second group. Patients with gut obstruction, brain or bowel metastasis, or patient with contraindicated usage of Cannabis oil were excluded. Statistics were analyzed by SPSS ver.22

Results: 74 participants were randomized. Mean age was 57 years. 54 patients(77%) were chemotherapy-naïve. In delay phase of nausea, proportion of patients without significant nausea during delay phases of cycle was higher in THC group (57%) compared to placebo group (41%) without any statistical significance (p-value = 0.063), also insignificant in acute phase of cycle (p-value = 0.862). For the acute and delayed phase of vomiting, there was no difference between the groups. No serious adverse effects were demonstrated for the usage of THC cannabis oil.

Conclusions: Symptom of nausea especially in delay phase (24-120 hours) will decrease normally over the time with standard antiemetic prophylaxis. Only small additive effect from THC Cannabis oil can alleviate delay phase nausea. The benefit on vomiting was not promising

EP402 / #1074

EPOSTER VIEWING: AS21 TROPHOBLASTIC DISEASES

EPIDEMIOLOGY OF GESTATIONAL TROPHOBLASTIC NEOPLASIA IN A SECOND LEVEL HOSPITAL IN TUNISIA

Hadir Lamiri¹, Hajer Bettaieb², Hadhami Rouiss¹, Nesrine Souayah², Meriem Ouederni¹, Rahma Bouhmida¹, Amal Chermiti¹, Hedhili Oueslati², Chaouki Mbarki²
¹tunis, Gynaecology And Obstetrics, Tunis, Tunisia, ²Regional hospital Ben Arous, Gynaecology And Obstetrics, Tunis, Tunisia

Objectives: To assess the incidence and individual characteristics associated with gestational trophoblastic neoplasia.

Methods: We conducted a monocentric retrospective study that included all patients diagnosed with a gestational trophoblastic neoplasia over a period of 18 years. It took place in the gynecology and obstetrics department of the hospital of Ben Arous. We studied the patients features and characteristics.

Results: We registered 204 cases of gestational trophoblastic disease (GTD) during the period of the study including: 189 (92.65%) cases of hydatidiform mole and 15 (7.35%) cases of gestational trophoblastic neoplasia (GTN). Three patients were diagnosed with choriocarcinoma. Two of them had placental site trophoblastic tumor and one patient had an invasive mole. Only two patients had a metastatic disease. The incidence of GTN was 2.7 cases per 10000 deliveries and 2.6 per 10000 pregnancies. The mean age of our patients was 30.6 years old [24-53]. Most patients were pauciparous. Three of them had a perimenopausal status. History of spontaneous abortion was found in 5 cases. A history of hydatidiform mole was found in 12 cases. All pregnancies were spontaneous.

Conclusions: Gestational trophoblastic neoplasia is rare and has wide incidence variations worldwide. Maternal age and history of hydatidiform mole have been identified as risk factors but the definitive mechanism is not well known.

EP403 / #1097

EPOSTER VIEWING: AS21 TROPHOBLASTIC DISEASES

MANAGEMENT AND OUTCOME OF GESTATIONAL TROPHOBLASTIC DISEASE IN A TUNISIAN PUBLIC HOSPITAL.

Meriem Ouederni¹, Hajer Bettaieb², Hadhami Rouiss¹, Nesrine Souayah², Rahma Bouhmida³, Hadir Lamiri¹, Amal Chermiti¹, Wael Mbarki², Hedhili Oueslati², Chaouki Mbarki²
¹tunis, Gynaecology And Obstetrics, Tunis, Tunisia, ²Regional hospital Ben Arous, Gynaecology And Obstetrics, Tunis, Tunisia, ³Regional hospital Ben Arous, Gynaecology, Tunis, Tunisia

Objectives: Gestational trophoblastic disease (GTD) arises from abnormal placenta and is composed of a spectrum of premalignant to malignant disorders. The aim of this study was to analyze the current management modalities as well as the outcome of GTD.

Methods: This study was carried out in the gynecology and obstetrics department of Ben Arous hospital over a period of 18 years extending from January 2004 to June 2021. We included all patients matching the FIGO diagnostic criteria or with a histological confirmation.

Results: 204 cases of GTD were reported in our study divided as follows: 198 hydatidiform moles and 15 cases of gestational trophoblastic neoplasia (GTN). The mean age of patients was 33.86 years. 81% of molar pregnancies were diagnosed between 6 and 12 weeks' gestation. In 12.7% of patients, the initial diagnosis was that of an incomplete abortion or a miscarriage. These patients received Misoprostol: 57% of them had a subsequent aspiration for failure to evacuate. 82.3% of patients had an ultrasound-guided uterine evacuation straight away. Contraception was systematic in all patients. Clinical Follow-up, monitoring serum chorionic gonadotropin (β HCG) as well as ultrasounds were performed in 77.5% of the patients only. A positive outcome was observed in 144 patients while 9 patients had an unfavorable evolution defined either by stagnation or by re-ascension of the β HCG. Hysterectomy was performed in 3 cases. 9 patients had chemotherapy.

Conclusions: GTN is a significant source of maternal morbidity with increased risk of mortality from complications if not detected early and treated promptly.

EP404 / #361

EPOSTER VIEWING: AS21 TROPHOBLASTIC DISEASES

GESTATIONAL TROPHOBLASTIC DISEASE: A FIFTEEN - YEAR EXPERIENCE OF A SINGLE TERTIARY INSTITUTION.

Sedick Camroodien¹, Nomonde Mbatani¹, Gregory Petro²

¹Groote Schuur Hospital, Gynaecology Oncology, Cape Town, South Africa, ²Groote Schuur Hospital, Obstetrics And Gynaecology, Cape Town, South Africa

Objectives: Gestational trophoblastic disease (GTD) is of clinical and epidemiological importance because it affects women in the reproductive age. This descriptive study was undertaken to provide a detailed analysis of GTD at Groote Schuur hospital (GSH), Cape Town, South Africa.

Methods: The files of patients admitted to GSH with GTD from January 2004 to December 2019 were retrospectively reviewed.

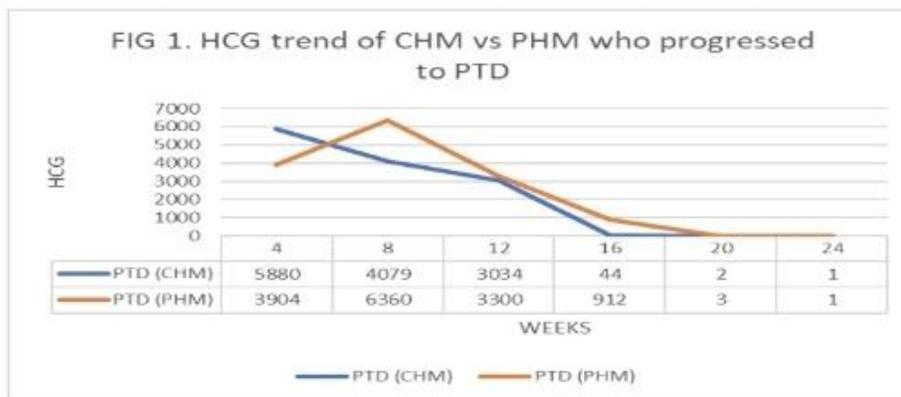
Results: There were 554 057 deliveries and 235 cases of GTD, with an incidence of 0,42/1000 deliveries. Suction evacuation was performed in 97,4% of patients. Patients aged between 20 – 40 years constituted 78,7% of patients. Most patients (51.3%) were diagnosed in the second trimester. The most common presenting complaint was vaginal bleeding (37,4%) and the commonest complication was hyperthyroidism (16,6%). Twenty-six (11,2%) patients required blood transfusion. Seventeen patients (7,2%) required a second evacuation due to ongoing bleeding with 4 patients (1,7%) requiring a hysterectomy due to excessive haemorrhage. Patients with GTD normalized their HCG at a median time of 12 weeks post evacuation. There were 40 cases of persistent trophoblastic disease (PTD), all of whom had HCG levels above 6000 mIU/mL and 4000 mIU/mL at 4 weeks and 8 weeks respectively. Almost 45% of patients never completed follow-

up.

Table 1. Demographic distribution of patients with GTD.

Variable	CHM n (%)	PHM n (%)	TOTAL n (%)
Age			
<20 years	23 (15.23)	7 (8.33)	30 (12.8)
20-40 years	112 (74.17)	73 (86.90)	185 (78.7)
>40 years	16 (10.60)	4 (4.76)	20 (8.5)
n	151	84	235
Antecedent pregnancy			
Live birth	74 (90.24)	45 (90)	119 (90.1)
Miscarriage	6 (7.32)	5 (10)	11 (8.3)
Molar	2 (2.44)	0 (0)	2 (1.5)
n	82	50	132
Interval between antecedent pregnancy and diagnosis of GTD (months)			
Median (IQR)	48 (24-72)	48 (30-96)	
7 - 12 MONTHS	4 (10.53)	3 (12)	7 (11.1)
> 12 MONTHS	34 (89.47)	22 (88)	56 (88.9)
n	38	25	63
Parity			
Nulliparous	61 (40.40)	30 (36.14)	91 (38.9)
Multiparous	88 (58.28)	52 (62.65)	140 (59.8)
Grandmultiparous	2 (1.32)	1 (1.20)	3 (1.3)
n	151	83	234
Gestational age at admission (weeks)			
<13 WEEKS	28 (43.75)	25 (53.19)	53 (47.7)
13 - 26 WEEKS	36 (56.25)	21 (44.68)	57 (51.3)
> 27 WEEKS	0 (0)	1 (2.13)	1(0.9)
n	64	47	111
Smoking history			
Yes	25 (29.76)	14 (29.79)	39(29.8)
No	59 (70.24)	33 (70.21)	92(70.2)
n	84	47	131
HIV status			
Positive	16 (18.6)	8 (16.3)	24(17.8)
Negative	70 (81.4)	41 (83.7)	111(82.2)
n	86	49	135
BLOOD GROUP			
A	33 (31.7)	15 (26.3)	48(20.8)
B	21 (20.2)	10 (17.5)	31(19.2)
AB	4 (3.8)	5 (8.8)	9(5.6)
O	46 (44.2)	27 (47.4)	73 (45.3)
n	104	57	161

IQR = interquartile range
 CHM = Complete hydatidiform mole
 PHM = Partial hydatidiform mole



Conclusions: The incidence of GTD within our centre is declining but remains an important cause of morbidity as it mainly affects the reproductive age. We strongly recommend a revised follow up protocol to accommodate patients with complex socio-economic backgrounds as the current protocol seems to be associated with an increase rate of loss to follow up.

EP405 / #363

EPOSTER VIEWING: AS21 TROPHOBLASTIC DISEASES

TREATMENT OUTCOME OF GESTATIONAL TROPHOBLASTIC NEOPLASIA PATIENTS IN BANGLADESH: AN EXPERIENCE IN A TERTIARY REFERRAL HOSPITAL

Nasrin Hossain¹, Salma Walida¹, Begum Anwar¹, Sharif Mahmud², S.M. Khan³

¹National institute of Cancer Research and Hospital(NICRH), Gynaecological Oncology, Dhaka, Bangladesh, ²Combined military hospital (CMH), Physician, Dhaka, Bangladesh, ³Sir Salimullah Medical College and Hospital, Medicine, Dhaka, Bangladesh

Objectives: Gestational trophoblastic disease (GTD) is a group of disorders that arises from placenta, including the premalignant complete and partial hydatidiform moles and malignant invasive mole, choriocarcinoma, PSTT and ETT. The current staging system for GTN combines both anatomic staging and a prognostic scoring system using a variety of clinical factors. So, objective of study were to see the response of treatment of GTN patients, to see the disease free survival (DFS) and overall survival (OS) of patients and prognostic factors affecting the response of treatments.

Methods: Observational study

Results: A total 86 patients were included. Median age 29.50 years. Persistent GTN is the most common 23.3% than choriocarcinoma (23.3%). FIGO stage I and lung metastasis were the most common. According to GTN types, median DFS time overall was 48 months and OS time was 65 months but there were not significant. Significant association with GTN types with antecedent pregnancy and β HCG level but insignificant with tumor size. WHO prognostic score significantly associated with diagnosis to treatment interval ($p=0.003$), largest tumor size ($p=0.005$), number of metastasis ($p=0.000$), previously failed chemotherapy ($p=0.000$) but age, antecedent pregnancy and β HCG level were insignificant. A total of 10 patients died during course of their treatment mainly due to advanced metastatic disease and treatment complications. In low risk patients, overall treatment response was 92.85% and in high risk overall treatment response was 80%. Overall complete remission was achieved in 86.4% of patients.

Conclusions: GTN is a significant source of maternal morbidity with increased risk of mortality.

EP406 / #808

EPOSTER VIEWING: AS21 TROPHOBLASTIC DISEASES

THE EFFICACY OF SECOND CURETTAGE IN THE TREATMENT OF LOW-RISK GESTATIONAL TROPHOBLASTIC NEOPLASIA: A SYSTEMATIC REVIEW AND META-ANALYSIS

Sarah J. Mah¹, Melissa Lavecchia², Alida Pokoradi², Clare Reade³, Lua Eiriksson⁴

¹McMaster University and Juravinski Cancer Centre, Gynecologic Oncology, Hamilton, Canada, ²Juravinski Cancer Centre, Gynecologic Oncology, Hamilton, Canada, ³Juravinski Cancer Center, Hamilton Health Sciences, Gynecologic Oncology, Hamilton, Canada, ⁴Juravinski Hospital and Cancer Centre, Division Of Gynecologic Oncology, Hamilton, Canada

Objectives: Patients with low-risk gestational trophoblastic neoplasia (GTN) are almost universally cured with chemotherapy, but second uterine curettage has been explored as an alternative to avoid chemotherapy-related toxicities. We systematically reviewed intervention studies to determine whether second curettage in patients with low-risk GTN affects: 1) the proportion of patients requiring chemotherapy; 2) the number of chemotherapy cycles; and 3) the need for multi-agent chemotherapy.

Methods: A literature search was performed including the Cochrane Central Register of Controlled Trials, MEDLINE, EMBASE, and Web of Science. Two authors screened titles, abstracts, and full texts and abstracted data. Risk of bias was assessed for each outcome. Data were pooled using a random-effects model and assessed for heterogeneity. Quality of evidence was assigned using GRADE.

Results: Six studies met inclusion criteria; 2 randomized studies (RCT) and 4 non-randomized studies (NRS). Mean difference in number of chemotherapy cycles was 2.04 fewer in patients who underwent second curettage (95% CI -5.00 to 0.91) based on two pooled RCTs (N=138). Those who underwent second curettage had RR=0.60 (95% CI 0.31 to 1.18) for requiring chemotherapy based on 4 pooled NRS (N=1105), and RR=1.17 (95% CI 0.76 to 1.80) for multi-agent chemotherapy based on two pooled NRS (N=900). The certainty of evidence is very low due to risk of bias for potential confounding, selection bias, missing data, and inconsistency of the results.

Conclusions: Second curettage may reduce the need for chemotherapy in patients with low-risk gestational trophoblastic neoplasia but the evidence is very uncertain.

EP407 / #401

EPOSTER VIEWING: AS21 TROPHOBLASTIC DISEASES

PSYCHO-EMOTIONAL REHABILITATION OF PATIENTS OF FERTILE AGE WITH GESTATIONAL TROPHOBLASTIC DISEASE

Nargiza Zakhirova¹, Malika Mamatova², Nargiza Yusupova³

¹Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology, Tumors Of The Women's Reproductive System., Tashkent, Uzbekistan, ²Andijan State Medical Institute, Gynecology, Andijan, Uzbekistan, ³Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology., Consultative And Diagnostic Center, Tashkent, Uzbekistan

Objectives: To study clinicopathological, psycho-emotional features of different forms of gestational trophoblastic disease in Uzbekistan.

Methods: A total of 150 patients with GTD were studied. Of these, 43 (76.8%) had complete hydatidiform mole (HM), 13 (23.2%) had partial HM, 26 (17.3%) had placental trophoblastic tumor, 56 (37.3%) had invasive HM, and 18 (12%) patients had choriocarcinoma. An informed consent questionnaire was analysed. The questionnaire included patient data, demographic data, socioeconomic information and information on the patient's current condition, information on the reasons for treatment delay, medical history and patient health awareness.

Results: The most common reasons for delaying treatment were: after the curettage they didn't explain what to do next, which specialist to contact - 64%, the patient's opinion that it was just a miscarriage - 49%, lack of money - 34%, there were no available places in hospital - 39%, did not want the family to know about the recommended chemotherapy - 38%, family problems - 47%. History and psychological aspects: in 63% of cases women did not share their problem with others; fear of infertility after chemotherapy was the reason for delaying chemotherapy in 58% of cases.

Conclusions: Psycho-emotional factors are of considerable importance in the full diagnosis and adequate treatment of HTD. Monitoring principles for women after evacuation of a HM should be standardized. Further research on the epidemiology of HTD in Uzbekistan is needed. There are no unified surveillance centers for this disease.

EP408 / #990

EPOSTER VIEWING: AS21 TROPHOBLASTIC DISEASES

IMPROVEMENT OF METHODS FOR EARLY DIAGNOSIS AND PROGNOSIS OF CHORIOCARCINOMA

Malika Mamatova¹, Nargiza Zakhirova^{2,3}, Zarifa Islamova¹

¹Andijan State Medical Institute, Gynecology, Andijan, Uzbekistan, ²Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology, Tumors Of The Women's Reproductive System., Tashkent, Uzbekistan, ³Republican Specialized Scientific-Practical Medical Center of Oncology and Radiology, Gynecological, Tashkent, Uzbekistan

Objectives: Purpose: to identify a prognostic biomarker indicating a possible malignant transformation of hydatidiform mole. Material: 71 patients with gestational trophoblastic disease (GTD) were divided into 3 groups: 27 samples of hydatidiform mole (HM), 23 - of invasive hydatidiform mole (IHM), and 21- of choriocarcinoma (CC). 25 women with an uncompleted pregnancy (UP) - control group.

Methods: immunohistochemistry (IHC) of CLIC1 protein

Results: The IHC study of CLIC1 antigen in 1 group showed: 13 (48.1%) - negative, 8 (29.6%) - weak staining, 4 (14.8%) - moderate staining and 2 (7.4%) - strong staining. It was concluded that 7.4% patients had a high risk of malignant transformation. In group 2, 23 patients with IHM: 1 case (4.3%) - no reactivity, 3 cases (13%) - weak staining, 8 cases (34.7%) - moderate staining and 11 cases (47.8%) - strong staining of cells. The results showed that high expression of CLIC1 protein in the nuclei of cytotrophoblasts was observed in almost 48% of cases. Group 3 results: 1 case (4.7%) - weak staining, 2 cases (9.5%) - moderate staining, and 18 samples (85.7%) - strong staining, no negative result was observed in any case. IHC study of control group: 18 (72%) - no expression, 7 (28%) - weak staining. No moderate or strong staining of cells was observed.

Conclusions: The level of CLIC1 activity is increased in malignant-transformed cells and is expressed in the nucleus and cytoplasm of trophoblastic cells. Thus, CLIC1 can serve as a prognostic marker for early detection of malignant transformation of HM.

EP409 / #892

EPOSTER VIEWING: AS21 TROPHOBLASTIC DISEASES

GESTATIONAL TROPHOBLASTIC NEOPLASIA: A TUNISIAN RETROSPECTIVE STUDY

Ines Lajnaf, Alia Latrous, Yosra Berrazaga, Haifa Rachdi, Nouha Daoud, Nesrine Mejri, Hamouda Boussen
Abderrahmen Mami Hospital, Medical Oncology, ariana, Tunisia

Objectives: Gestational Trophoblastic neoplasia (GTN) are rare with good prognosis malignancies. We aimed in our study to evaluate clinico-pathological and therapeutic characteristics and outcomes of GTN in the Tunisian context.

Methods: We conducted a retrospective monocentric study including 29 Tunisian patients with GTN between January 2013 and May2022. Clinico- pathological Data, treatment and outcomes were collected from medical records.

Results: Patients were under 40 years old in 55% of cases. One patient (4%) presented hemorrhagic shock which was controlled by hysterectomy . Previous pregnancies were hydatiform mole , abortion and full term pregnancy in respectively 14%, 21% and 65%. Metastatic disease was reported in 38% of patients. Metastases occurred in lung in 34% of cases and brain in 4%. Choriocarcinoma was diagnosed in 24% of cases. Interval between index pregnancy and chemotherapy was under 4 months in 71.4% of cases. High risk disease (FIGO score ≥ 7) was reported in 39% of cases who received EMA-CO (etoposide, methotrexate, actinomycin D, cyclophosphamide, vincristine) regimen. All patients with low risk disease received methotrexate (MTX) regimen. Median number of cycles until normalization of HCG level was 5 cycles [2-12]. Consolidation courses were received in 55 % of cases. Reascension of HCG level was reported in 3 cases, 2 of them after MTX regimen. Salvage regimen were EMACO and BEP (Bleomycin, etoposide, and cisplatin). After a median follow up of 72 months [12-120], all patients were alive.

Conclusions: Epidemiological and clinical characteristics and therapeutic outcomes of our study population are concordant with literature.

EP410 / #198

EPOSTER VIEWING: AS21 TROPHOBLASTIC DISEASES

STRATIFIED WHO RISK SCORE AND CHEMOTHERAPY RESPONSE IN GESTATIONAL TROPHOBLASTIC NEOPLASIA

Shalini Rajaram¹, Ayush Heda¹, Amit Sehrawat², Deepak Sundriyal², Jaya Chaturvedi³, Anupama Bahadur³, Amrita Gaurav³, Rajlaxmi Mundhra³, Kavita Khoiwal³, Latika Chawla³, Parmod Kumar²
¹All India Institute of Medical Sciences, Rishikesh, Obstetrics & Gynecology (gynecologic Oncology), Rishikesh, India, ²All India Institute of Medical Sciences, Rishikesh, Medical Oncology, Rishikesh, India, ³All India Institute of Medical Sciences, Rishikesh, Obstetrics & Gynecology, Rishikesh, India

Objectives: Grey zones exist in the management of gestational trophoblastic neoplasia (GTN). An analysis stratified into four risk groups is presented.

Methods: Retrospective descriptive study of WHO risk groups; low risk (≤ 6); low (0-4) and intermediate (5-6), high risk (≥ 7); high (7-12) and ultra-high risk (≥ 13). Chemotherapy regimens, cycles for remission, side effects and cumulative delay were assessed.

Results: Of 22 cases of GTN, 13.6% (n=3) were low risk, 36.4% (n=8) intermediate risk, 40.9% (n=9) were high risk and 9.1% (n=2) ultra-high risk. Presentations included vaginal bleeding 90.9% (n=18), lung metastasis 50.0% (n=11) and pulmonary artery thrombosis 13.6% (n=3). Low risk GTN received single agent methotrexate for mean 4.7 ± 1.5 cycles. Women with WHO score 5 (n=2) received methotrexate for mean 7.5 ± 3.5 cycles. Women with score 6 (n=6); one received 8 cycles of methotrexate, one crossed over to EMACO and received 8 cycles. Three cases received EMACO for a mean of 8.7 ± 4.5 cycles. Of high risk GTN (n=9), three received mean 6 cycles EMACO, another received 3 cycles induction with cisplatin/etoposide followed by 6 cycles EMACO, one required 9 cycles EMACO followed by pneumonectomy and 21 cycles of second-line chemotherapy but succumbed to disease. Two were lost to follow-up while two are on treatment. Ultra-high risk GTN (n=2), responded to 9 cycles of EMACO. Surgical interventions were needed in four. 15 achieved remission, two lost to follow up, two succumbed to disease and three on treatment. Grade 1-2 toxicity were seen in majority. COVID 19 pandemic caused cumulative delay of 146 days in one with ultra-high risk GTN.

Conclusions: Research into newer and effective chemotherapy/targeted regimens for intermediate and high-risk GTN are needed

EP411 / #99

EPOSTER VIEWING: AS22 VULVAR AND VAGINAL CANCER

HIV AND VULVAR CANCER IN SAINT PAUL'S HOSPITAL MILLENNIUM MEDICAL COLLEGE, SUB-SAHARAN AFRICAN ETHIOPIA

Biruck Batu

saint paul's Hospital Millennium medical college, Obstetrics And Gynecology, Addis Ababa, Ethiopia

Objectives: This work is aimed to study the incidence and characteristics of patients with this cancer within the study period in view of the changing pattern.

Methods: This is a retrospective study of histologically diagnosed gynecological cancers seen in our gynecologic oncologic unit between January 2016 and December 2020 GC, over five-year period. The records of the patients were retrieved from our Gynecologic oncology register and the histopathology laboratory. Then the incidence of vulvar cancer was computed and the frequency distribution of demographic features patients with this cancer were determined using SPSS version of 25. HIV positive vulvar cancer patients were compared with those negative patients.

Results: There were a total of 2055 gynaecological malignancies over the study period and vulvar cancer accounted for 63 (3.1%) of all the gynecological cancers. Their ages ranged from 18 to 80 years with a mean of 43.6 years. More than half (57.1%) of patients had concomitant HIV/AIDS infection. The average age at diagnosis of vulvar cancer in HIV-positive patients is a decade lower than in sero-negative patients (39.3 years vs 49.8 years). Women living with HIV are twelve times more likely to get vulvar cancer at young age (<45 years) compared to women without HIV (adjusted odd ratio (OR) =12.4,95%CI: 3.6-42.7,P=0.0001).

Conclusions: The incidence of vulvar cancer in this hospital is comparable to other reports.in this study, it was noted that there is an association between HIV/AIDS is quit alarming.

EP412 / #708

EPOSTER VIEWING: AS22 VULVAR AND VAGINAL CANCER

VULVAR CANCER: PATTERNS OF CARE IN A TERTIARY CENTRE IN INDIA AND IMPLICATIONS OF THE REVISED FIGO STAGING (2021)

Neerja Bhatla¹, Seema Singhal¹, Daya Nand Sharma², Swati Tomar¹, Haritha Maddirala¹, Chandrima Ray¹, Sandeep Mathur³, Jyoti Meena¹, Sarita Kumari¹, Divya Sehra¹, Saroj Rajan¹, Anju Singh¹, Rakhi Kumari¹, Sunesh Kumar¹

¹All India Institute of Medical Sciences, Obstetrics & Gynaecology, New Delhi, India, ²All India Institute of Medical Sciences, Radiation Oncology, Dr. Brairch, New Delhi, India, ³AIIMS, Pathology, New Delhi, India

Objectives: To evaluate the clinical profile and management of vulval cancer in India and assess the impact of the revised FIGO staging on outcomes.

Methods: This retrospective observational study reviewed hospital records of 82 biopsy-proven vulval cancers. FIGO staging was assigned by 2009 and 2021 classifications. Survival function was calculated using Kaplan Meier and multivariable analysis using Cox proportional hazards model.

Results: The median age of patients was 61 (24-92) years. Primary therapy was surgery in 73.2%; definitive radiotherapy±chemotherapy in 10.9%; neoadjuvant radiotherapy and surgery in 4.9% and palliation in 10.9% cases. Adjuvant RT was administered in 31.7% (26/82) cases. Disease-specific recurrence and mortality rates were 32.9%(26/82) and 30.5%(25/82), respectively. Median DFS and OS were 17(IQR 1-36) and 27(IQR 9-52) months, respectively. With 2021 staging, stage shift was observed in 18% cases of advanced vulval cancer (3 upstaged from IIIA to IIIB; 5 downstaged from IVA to IIIA). The 3-year DFS was reduced for stage IIIA from 71.4% to 67%, and 5-year-DFS from 71.4% to 33%. The 3-year-OS reduced from 100% to 50%, and 5-year-OS from 83% to 33%. In Stage IVA 3-year-OS reduced from 23% to 20%, 5-year-OS from 11% to 0%, and increased for stage IIIB (3-year-DFS from 60% to 69%, 5-year-DFS from 20% to 34%; 3-year-OS from 46% to 56.7%, 5-year-OS from 35% to 47.3%).

Conclusions: There is a wide variety of patterns of care in LMICs. The FIGO 2021 staging is simpler and easier to use. Nearly one-fifth of advanced vulvar cancer were restaged. There was better correlation with outcomes.

EP413 / #936

EPOSTER VIEWING: AS22 VULVAR AND VAGINAL CANCER

VULVAR CANCER: CLINICAL PRESENTATION AND MANAGEMENT OPTIONS IN A LOW RESOURCE COUNTRY

Rim Bouchahda, Ons Kaabia, Rihab Dahleb, Fatma Bouguila, Insaf Morjène, Samir Hidar
Université de Sousse, Faculté de Médecine de Sousse, Gynecology Obstetrics, Sousse, Tunisia

Objectives: We aim to study the epidemiological features of vulvar cancer in Tunisia and report the management strategies in a low-resource country.

Methods: It is a retrospective study. We included all patients diagnosed, at our institution, during a 12-year- period (2010- 2021), with invasive vulvar cancer. We collected the data regarding the epidemiological, clinical, imaging, pathological, oncological management strategies and outcomes.

Results: We included 65 patients of whom 89% were menopausal at the time of diagnosis. The average age is 65 years [49- 94]. A history of lichen was reported in 20% of patients, and 5% had vitiligo. The comorbidity rate was 45.8%. The main symptom was vulvar pruritus in 94%. A vulvar lump was reported in 50%of cases. Inguinal lymph nodes were present in 39.21% of cases. Among the 65 patients, 2 patients were metastatic. All patients had vulvar surgery (vulvectomy 89%) and inguinal lymph node dissection (blue dye sentinel lymph node detection rate was 65%). The mean postoperative hospital stay was 24 days [6- 31]. The postoperative complication rate was 39% of whom 66% are infectious complications. 17% had radiotherapy within 12 months after the surgery. The 3 year recurrence rate is 14%.

Conclusions: Vulvar cancer in Tunisia is mainly a menopausal women's burden characterized by its late diagnosis and the perioperative complication of oncological surgery.

EP414 / #837

EPOSTER VIEWING: AS22 VULVAR AND VAGINAL CANCER

HISTOLOGY RESULTS OF WOMEN PRESENTING WITH LARGE WARTY VULVA LESIONS

Cathy Visser¹, Greta Dreyer¹, Matthys Botha², Frederick Van Der Merwe², Mc Van Aardt¹, Leon Snyman¹
¹University of Pretoria, Obstetrics & Gynaecology, Gynaecologic Oncology Unit, Pretoria, South Africa, ²University of Stellenbosch, Obstetrics & Gynaecology, Unit For Gynaecologic Oncology, Stellenbosch, South Africa

Objectives: Lower genital tract lesions are commonly found in South African women, especially in HIV-infected patients. Here we describe the histological results of wart-like vulva lesions, clinically classified as Condylomata acuminata, pre-invasive and invasive squamous lesions.

Methods: Women with large vulvo-vaginal warty lesions were recruited. At first visit, clinical examination was performed and biopsies collected for histopathology. Treatment-type was based on size, number of lesions at time of treatment visit, and previous biopsy reports. Histopathology results of excised lesions were collected at treatment visit.

Results: Included were 49 participants with mean age 34.2 years; 91.8%(45/49) were HIV positive. Worst grade histology of biopsies taken at first visit showed C. acuminata in 69.4%(34/49) women, VIN1 in 2.0%(1/49), VIN2 in 14.3%(7/49), VIN3 in 8.2%(4/49), squamous cancer in 4.1%(2/49) and one case of seborrheic keratosis. In 40 women, lesions were removed surgically and histopathology results collected. Worst of first-visit biopsy or treatment-visit result was regarded as final histological diagnosis: these showed C. acuminata in 46.9%(23/49), VIN1 in 4.1%(2/49), VIN2 in 4.1%(2/49), VIN3 in 34.7%(17/49) and squamous cancer in 10.2%(5/49) women.

Conclusions: Only 47% of women had C. acuminata as worst diagnosis on histology. Histology of warty lesions that clinically resembles C. acuminata is essential to diagnose pre-invasive lesions or even invasive cancer. Among South African women who clinically and histologically have genital warts, pre-invasive and invasive lesions commonly co-exist. It is imperative to obtain excision biopsy of any suspicious warty vulva lesion in the era of HIV.

EP415 / #978

EPOSTER VIEWING: AS22 VULVAR AND VAGINAL CANCER

THE MODIFIED 5-ITEM FRAILTY INDEX (MFI-5) IS A PREDICTOR OF POSTOPERATIVE COMPLICATIONS IN VULVAR CANCER: A NATIONAL SURGICAL QUALITY IMPROVEMENT PROGRAM (NSQIP) ANALYSIS

Monica Levine¹, Ashley Felix², Caitlin Meade², Laura Chambers¹

¹The Ohio State University Comprehensive Cancer Center, Gynecologic Oncology, Columbus, United States of America, ²The Ohio State University Medical Center, Department Of Epidemiology, Columbus, United States of America

Objectives: Frailty is a known predictor of post-operative morbidity, but the impact in women with vulvar cancer is unknown. Our objective was to determine whether frailty is associated with postoperative morbidity following radical vulvectomy (RV).

Methods: Using the National Surgical Quality Improvement Program (NSQIP) database, women who underwent RV from 2014-2020 were identified. Frailty was defined utilizing the modified Frailty Index (mFI-5) assessing diagnoses of congestive heart failure, chronic obstructive pulmonary disease, diabetes mellitus, hypertension requiring medication and partial/total functional dependence. Patients were categorized as non-frail (0-1) or frail (2+). Multivariable-adjusted logistic regression analyses were performed.

Results: Of 886 women, 49.9% underwent RV alone, and 19.5% and 30.6% concurrent unilateral or bilateral inguinofemoral lymphadenectomy (IFLND), respectively. 24.5% had mFI ≥ 2 and were considered frail. Compared to non-frail women, frail women were more likely to have an unplanned readmission (7.8% vs 12.9%, $p=0.02$), wound disruption (4.2% vs. 8.3%, $p=0.02$), and deep surgical site infection (1.4% vs. 3.7%, $p=0.04$). On multivariable-adjusted models, frailty was a significant predictor for minor (OR=1.58, 95% CI= 1.09, 2.30) and any complications (OR= 1.46, 95% CI= 1.02, 2.08). Specifically, for RV with bilateral IFLND, frailty was significantly associated with major (OR= 2.13, 95% CI= 1.03, 4.40) and any complications (OR= 2.10, 95% CI= 1.14, 3.87).

Conclusions: In this NSQIP analysis, one-quarter of women undergoing RV were considered frail. Notably, frailty was associated with increased post-operative complications, especially in women concurrently undergoing bilateral IFLND. Frailty screening prior to RV may assist in patient counseling and improve postoperative outcomes.

EP416 / #785

EPOSTER VIEWING: AS22 VULVAR AND VAGINAL CANCER

PREGNANCY AFTER SURGERY AND BRACHYTHERAPY FOR VAGINAL CANCER – A CASE REPORT

Giovana Gerbasi¹, Paula Deckers¹, Giuliana Kanaguchi¹, Georgia Cintra¹, Maria Aparecida Maia², Andre Lopes¹

¹Sao Camilo Oncologia, Department Of Gynecology, Sao Paulo, Brazil, ²Sao Camilo Oncologia, Department Of Radiation Oncology, Sao Paulo, Brazil

Objectives: To report a successful pregnancy case, carried to term, after treatment for vaginal cancer. Primary vaginal cancer is infrequent, corresponding to 1-2% of all female genital tract cancer diagnoses. Treatment for vaginal cancer varies depending on tumor histology, size, location, and staging and may include one or more of the following: surgical excision, radiation therapy and/or chemotherapy. All treatments negatively affect fertility/pregnancy outcomes. Pelvic radiation therapy, even in doses < 2 Gy, may extinguish up to 50% of immature oocytes. In addition, radiotherapy may cause modifications in cervical length, loss of uterine junctional zone anatomy and lead to myometrial atrophy and fibrosis, increasing the risk for adverse pregnancy outcomes.

Methods: We reviewed the medical charts of a patient who carried a pregnancy to term after surgery and brachytherapy for vaginal cancer.

Results: A 28 year-old woman, presented with a 3cm right vaginal wall tumor, diagnosed as grade 3, vaginal squamous cell carcinoma -FIGO 2009, stage IB. Computed tomography showed no evidence of lymph node spread or distant metastasis. The patient underwent surgery followed by 4 sessions of vaginal brachytherapy totaling a dose of 6 Gy at a 5mm depth. One year and 9 months after treatment, the patient gave birth to a healthy child at 40 weeks. A C-section was needed due functional dystocia during labor.

Conclusions: This is the first case report of a successful pregnancy carried to term after surgery and brachytherapy for vaginal cancer.

EP417 / #795

EPOSTER VIEWING: AS22 VULVAR AND VAGINAL CANCER

VALUE OF SURGICAL LYMPH NODE ASSESSMENT FOR PATIENTS WITH VULVAR MELANOMA.

Dimitrios Nasioudis¹, Gabrielle Gossner², William Burke², Theofano Orfanelli²

¹University of Pennsylvania, Division Of Gynecologic Oncology, Philadelphia, United States of America, ²Stony Brook University, Division Of Gynecologic Oncology, Department Of Obstetrics, Gynecology And Reproductive Medicine, Stony Brook, United States of America

Objectives: Investigate the utilization and outcomes of lymphadenectomy (LND) for patients with vulvar melanoma.

Methods: Patients with vulvar melanoma, known depth of tumor invasion, no distant metastases, with/without inguinal lymph node sampling/dissection (LND) were identified. Median overall survival (OS) was compared with log-rank test. A Cox model was constructed to control for confounders.

Results: 1286 patients were included; 808 (62.8%) underwent LND. 8.6% of patients had chemotherapy and/or radiation therapy. Performance of LND was associated with younger age (median 66 vs 76 years, $p<0.001$), private insurance (42.9% vs 27.8%, $p<0.001$), tumor ulceration (65.9% vs 58.6%, $p=0.01$), deeper tumor invasion ($p<0.001$) and radical vulvectomy (26.4% vs 12.1%, $p<0.001$). Rate of LND was 55.9% when invasion ≤ 1 mm, 62.2% when 1.01-2.0 mm, 73.6% when 2.01-4.0 mm and 64.3% when >4 mm. LN metastases were found in 288 patients (35.6%); 26.3% when depth of invasion ≤ 1 mm, 20.8% when 1.01-2.0 mm, 35.9% when 2.01-4.00 mm and 50.5% when >4 mm ($p<0.001$). Patients with LND had better OS than those who did not (median OS 49.08 vs 35.91 months, $p<0.001$). Following stratification by Breslow thickness, patients with LND had better OS with invasion 1.01-2.0 mm (median OS 83.32 vs 44.45 months, $p<0.001$), 2.01-4.0 mm (median OS 52.57 vs 28.16 months, $p<0.001$) and >4.0 mm (median OS 31.93 vs 21.32 months, $p<0.001$) but not <1 mm ($p=0.44$). After multivariable analysis, LND was associated with better OS (HR: 0.78, 95% CI: 0.67, 0.92).

Conclusions: For patients with vulvar melanoma with at least 1 mm invasion, LND is associated with better OS.

EP418 / #181

EPOSTER VIEWING: AS22 VULVAR AND VAGINAL CANCER

OUTCOMES OF POSITIVE GROIN SENTINEL LYMPH NODE BIOPSIES IN VULVAR SQUAMOUS CELL CARCINOMA AND HPV STATUS: A POPULATION BASED STUDY

Kimberly Stewart¹, Amy Jamieson¹, Caroline Holloway², Lily Proctor¹, Kelly Wei³, Lien Hoang³, Iwa Kong⁴, Janice Kwon¹

¹University of British Columbia, Gynecologic Oncology, Vancouver, Canada, ²BC Cancer Agency, Radiation Oncology, Victoria, Canada, ³University of British Columbia, Pathology, Vancouver, Canada, ⁴BC Cancer Agency, Radiation Oncology, Vancouver, Canada

Objectives: The GROINSS-V II study identified a threshold of 2 mm in positive inguofemoral sentinel lymph nodes (SN) in vulvar squamous cell carcinoma (VSCC) for guiding subsequent treatment. The objective of this study is to stratify isolated groin recurrence rate of SN micrometastases (ITC and ≤ 2 mm) versus macrometastases (>2 mm) in the context of HPV status.

Methods: Retrospective population based cohort from British Columbia, Canada included patients diagnosed from 2005-2020 with VSCC and positive SN. Tumour HPV status (independent/dependent) was determined with p16 immunohistochemistry or differentiated VIN pathology. Radiotherapy plans were reviewed for dose and volumes.

Results: There were 232 patients of whom 38 (16.4%) had positive SN, 21 (55%) of these had HPV independent disease. Average follow up was 51 months (6-172). There were 10 (26%) with micrometastases; 1 of 3 recurred in the groin after adjuvant inguofemoral radiotherapy, and 0 of 7 recurred after inguofemoral lymphadenectomy (IFL). There were 28 (74%) with macrometastases; 1 of 2 recurred in the groin with no adjuvant therapy, 4 of 13 with adjuvant radiotherapy alone, and 0 of 3 after IFL. There were 2 of 10 who had IFL and adjuvant radiation who recurred with both groin and distant disease within 6 months of diagnosis. All recurrences in the macrometastatic subgroup were HPV independent.

Conclusions: Isolated groin recurrence rate after adjuvant radiation only with macrometastatic SN in VSCC is high, in keeping with GROINSS-V II findings. All groin recurrences in macrometastatic SN were in HPV independent tumours, implying need for alternate treatment in this subgroup.

EP419 / #488

EPOSTER VIEWING: AS22 VULVAR AND VAGINAL CANCER

GROIN NODE MANAGEMENT IN SURGICALLY UNRESECTABLE, LOCALLY ADVANCED VULVA CANCER

Brenna Swift¹, Lama Khoja², Joanna Matthews³, Jenn Croke^{2,4}, Stephane Laframboise^{1,5}, Eric Leung^{2,6}, Lilian Gien^{1,7}

¹University of Toronto, Department Of Obstetrics And Gynecology, Division Of Gynecologic Oncology, Toronto, Canada, ²University of Toronto, Radiation Oncology, Toronto, Canada, ³University of Toronto, Temerty Faculty Of Medicine, Toronto, Canada, ⁴University Health Network, Radiation Oncology, Toronto, Canada, ⁵University Health Network, Gynecologic Oncology, Toronto, Canada, ⁶Sunnybrook Health Sciences Centre, Radiation Oncology, Toronto, Canada, ⁷Sunnybrook Odette Cancer Center, Division Of Gynecologic Oncology, Toronto, Canada

Objectives: As groin node management is important for vulva cancer prognosis, this study assesses clinical outcomes of groin surgery compared to primary groin radiation for surgically unresectable vulva cancer.

Methods: Patients treated with curative intent primary radiation +/- chemotherapy for >4cm, surgically unresectable vulva cancers were included in this retrospective study at 2 academic centres from 2000-2020. Groin recurrence-free survival was compared for groin surgery and primary groin radiation using the Kaplan Meier method and log rank test. Multivariable analysis was performed. Groin failures are described by treatment modality.

Results: Of 476 patients treated with radiation for vulva cancer, 112 patients met inclusion criteria. The median (95% CI) follow up was 1.9 (1.4-2.5) years. Complete clinical response was 80.0% in patients with groin surgical management (n=45) compared to 58.2% for primary groin radiation (n=67) (p=0.04). The 3 year groin recurrence-free survival (RFS) was 94.4% (87.1-100) in patients undergoing groin surgery compared to 79.2% (69.1-90.9) (p=0.02) in patients treated with primary radiation. After adjusting for clinical and/or radiologically abnormal lymph nodes (p=0.67), groin surgery was significantly associated with lower groin recurrence (HR 0.2 (95%CI 0.05-0.92), p=0.04). Fifteen patients had groin treatment failures, 13 with primary radiation at a median (IQR) dose of 57.6 (45-62) Gy, 7 received concurrent chemotherapy and 2 had groin surgery prior to radiation. Three patients undergoing primary groin radiation had isolated groin treatment failures.

Conclusions: In locally advanced vulva cancer, surgical groin management improves groin RFS and there were fewer groin treatment failures compared to radiation alone.

EP420 / #949

EPOSTER VIEWING: AS22 VULVAR AND VAGINAL CANCER

POSTOPERATIVE VENOUS THROMBOEMBOLISM RISK IN PATIENTS WITH VULVAR DYSPLASIA AND CARCINOMA, A NATIONAL SURGICAL QUALITY IMPROVEMENT PROGRAM STUDY.

Vincent Wagner¹, Ashley Felix², Caitlin Meade², Laura Chambers¹

¹The Ohio State University Comprehensive Cancer Center, Gynecologic Oncology, Columbus, United States of America, ²The Ohio State University Medical Center, Department Of Epidemiology, Columbus, United States of America

Objectives: Due to the relatively low prevalence of vulvar dysplasia and cancer, the risk factors associated with VTE in this population are poorly understood. We aimed to analyze the risk factors associated with VTE in women undergoing surgery for vulvar dysplasia and carcinoma.

Methods: Patients who underwent vulvar procedures for dysplasia or carcinoma were collected from the National Surgical Quality Improvement Program database (NSQIP). Baseline demographics and clinical characteristics were compared between patients that did and did not have a VTE. Descriptive and univariable analyses were performed.

Results: Between 2014 and 2020, 1414 patients undergoing vulvar procedures for dysplasia and carcinoma were included; 521 (37.1%), 438 (31.2%), 267 (19.0%) and 171 (12.2%) underwent simple vulvectomy, radical vulvectomy, radical vulvectomy with bilateral inguinofemoral lymphadenectomy or radical vulvectomy with unilateral lymphadenectomy respectively. No patients (0/521) who underwent simple vulvectomy had a VTE. VTE rate was 1.13% (5/443) in radical vulvectomy alone and 1.35% with lymphadenectomy (0.74% for bilateral and 2.29% unilateral). No patients that underwent sentinel lymphadenectomy had a VTE (0/19). Univariate analysis revealed functional dependency, operation time, wound disruption and postoperative infection (including UTI, sepsis and deep SSI) as risk factors for VTE.

Conclusions: Patients with vulvar dysplasia undergoing simple vulvectomy have low risk for VTE, those with carcinoma undergoing radical vulvectomy have a moderate risk of VTE. The risk factors for VTE include functional dependency, longer operating time and postoperative infections. Sentinel lymphadenectomy appears to carry a low risk of VTE.