(figure 2). OC organoids recapitulate histological features of the tumor tissues from which they were derived. In drug-screening assays, 2 organoids that were derived from HGSC patients with known clinical histories recapitulate patients' response to platinum-based adjuvant chemotherapy.
Conclusions Organoids have great potential application for research and personalized medicine. Clinical trial information: NCT04768270.

EPV192/#33 TRENDS OF CHANGE IN CANCER MORBIDITY FOR THE OVARIAN CANCER IN UZBEKISTAN

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Objectives Study of the trends in morbidity and mortality in ovarian cancer in the Republic of Uzbekistan from 2013 to 2017.
Methods The materials and methods of this study were the main statistical indicators for the Republic for the period 2013–2017 according to the cancer register.
Results In 2013, in the structure of the incidence rate by Uzbekistan regions the 1st, 2nd and 3rd places were taken by Bukhara region, Tashkent city and Ferghana regions with incidence rates of 2.6, 2.2 and 2.1 per 100 000 populations respectively. At the same time, in 2017, leading positions were taken by Bukhara, Tashkent and Jizakh regions with incidence rates of 3.9, 3.3 and 3.1 per 100 000 population accordingly. In 2013, there were 573 newly diagnosed cases of ovarian cancer in the Republic of Uzbekistan with incidence rate of 1.9, and 268 women died from ovarian cancer at the same year, with mortality rate of 0.9. To compare the same indicators in 2017, it can be concluded that the rate of morbidity and mortality over the past five years had increased by 0.5 and 0.4 respectively. The percentage of patients with stages III–IV in 2013 was 67.9%, and in 2017 this percentage decreased to 53.2%.
Conclusions As can be seen from the study, over the past 5 years there have been recorded trends in the growth of morbidity and mortality in Uzbekistan. Based on this study, ovarian cancer requires more attention of oncologists in terms of timely diagnosis at the early stages of malignant growth.

EPV193/#344 SYSTEMATIC REVIEW AND META-ANALYSIS OF THE SURVIVAL IMPACT OF SECONDARY CYTOREDUCTIVE SURGERY FOR RECURRENT LOW-GRADE SEROUS OVARIAN CARCINOMA

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Objectives Low-grade serous ovarian cancer (LGSC) is a relatively chemo-resistant disease with limited effective treatment options for patients with recurrence. Secondary cytoreductive surgery (SCS) is commonly offered to women with recurrent LGSC, although the effect of cytoreductive outcomes following SCS on survival is yet to be determined. This systematic review/meta-analysis aims to evaluate the impact of SCS with gross residual disease (GRD) versus SCS with no GRD on overall survival (OS) and progression-free survival (PFS) in recurrent LGSC.
Methods A comprehensive search of MEDLINE, EMBASE, Cochrane Central, Cochrane Database of Systematic Reviews, and Web of Science was conducted to obtain all studies evaluating SCS with GRD versus no GRD in recurrent LGSC. Meta-analysis was performed on OS and PFS, and assessed using the Cochrane Risk of Bias in Non-Randomized Studies (ROBINS)-1 tool. Forest plots with pooled Hazard Ratios (HR) were generated.
Results Three retrospective cohort studies evaluating 112 LGSC patients who underwent SCS were included in the meta-analysis. Two studies were meta-analyzed for OS (n=71) and PFS (n=91), respectively. There were 35 (31.2%) participants with no GRD at SCS, and 77 (68.8%) participants left with GRD at SCS. GRD at SCS negatively impacted PFS (HR=3.51, 95% CI= 1.72, 7.14), and SCS with no GRD significantly improved OS (HR=0.4, 95% CI=0.23, 0.7).
Conclusions Optimal SCS with no GRD may prolong OS and PFS in women with recurrent LGSC. The quality of evidence of the included studies is low and demonstrates the need for prospective studies investigating the role of SCS in women with LGSC.

EPV194/#350 A FIVE YEARS RETROSPECTIVE REVIEW STUDY OF NON -EPITHELIAL OVARIAN CANCERS IN A THERITHERY HOSPITAL IN ETHIOPIA SUB-SHARAN COUNTRY

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Objectives The objective of this study is to describe the incidence, clinical presentation and histology subtypes and therapeutic interventions offered for NEOC.
Methods Institution based retrospective chart and pathology report review from; Aug 1 2015- Aug 1 2020. This study was conducted in Saint Paul's Hospital millennium medical college. We reviewed a total of 1357 ovarian pathology reports from the ovary in the five years period and 264 cases of which were non-epithelial ovarian tumors and of these 80 of the cases were malignant non-epithelial ovarian cancer whose pathology was retrieved and phone was accessible for interview. A pre-prepared structured questioner was filled by the principal investigator. The data was analyzed using IBM SPSS statistics version 20 and presented using figures and tables.
Results The contribution of malignant non-epithelial ovarian cancer is 17.3% of all the ovarian cancers. The mean age for malignant Germ cell tumors is 28.3yrs with the range 1.75yrs to 61 yrs The mean age for sex cord stromal tumors is 44.5yrs with a range of 22yrs to 67 yrs the commonest being hysterectomy, bilateral salpingo-oophrectomy with omental sampling being the commonest procedure done .accounting over 40% of the cases. of those traced 7 of them are died.
Conclusions This study showed prevalence of NEOC was higher than other studies, the commonest histology type of malignant germ cell tumors was yolk sac tumors. Half of the

malignant germ cell tumors have no complete intra peritoneal surgical staging.

EPV195/#37 VEGF-A INHIBITOR INDUCED TUMOR-ASSOCIATED MACROPHAGE REPROGRAMMING AND PD-L1 OVEREXPRESSION VIA A DUAL ROLE OF IFN-Γ IN OVARIAN CANCER

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Objectives The beneficial effects of vascular endothelial growth factor A (VEGF-A) inhibitor are only observed in a subset of patients with advanced ovarian cancer. The lack of response of VEGF-A inhibitors is thought to be related with the immunosuppressive microenvironment; however, this is still controversial. A better understanding of the underlying mechanism of VEGF-A inhibitor (Bevacizumab)-mediated the immune escape could benefit the development of therapeutic regimens for patients with ovarian cancer.

Methods The polarization of tumor-associated macrophages (TAMs), IFN-γ secretion of macrophages and ovarian cancer cells, PD-L1 expression in ovarian cancer cells, and phagocytic function of macrophages after Bevacizumab intervention were examined. In addition, the efficacy of combined Bevacizumab with anti-PD-1 antibody (aPD-1) was evaluated in a murine ovarian cancer model.

Results We first identified that Bevacizumab stimulated IFN-γ secretion from macrophages and ovarian cancer cells. Moreover, we demonstrated that Bevacizumab upregulated PD-L1 expression in an IFN-γ-PI3K-NF-κB-dependent manner in ovarian cancer. Interestingly, although Bevacizumab elicited antitumor immunity by inducing macrophage polarization to an M1 phenotype via elevated IFN-γ secretion, the phagocytic function of macrophages was suppressed by upregulated PD-1 expression in macrophages. Furthermore, Bevacizumab combined with an aPD-1 significantly decreased the tumor burden and prolonged survival time in mice with ovarian cancer.

Conclusions Here, we demonstrated a dual role of IFN-γ induced by Bevacizumab in ovarian cancer. Specifically, IFN-γ promoted immune activation in terms of M1 polarization and immune suppression through PD-L1/PD-1 upregulation. The combination of Bevacizumab and aPD-1 improved the local immune status and provided a promising novel therapeutic regimen against ovarian cancer.

EPV196/#377 PROGESTERONE TRIGGERS CARCINOGENESIS IN A MOUSE MODEL THAT PHENOCOPIES HIGH GRADE SEROUS CARCINOMA HARBORING A GERMLINE BRCA MUTATION

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Objectives The purpose of this study is elucidating the role of ovarian hormones in the development of ovarian cancer.

Methods To evaluate the effects of steroid hormones on HGSC development, upon ovariectomy at 5–6 weeks of age, DKO mice were implanted subcutaneously with a pellet of 17-β estradiol (E2) (0.72 mg/90days/mouse), progesterone (P4) (25 mg/90 days/mouse), or combined E2 (0.72 mg) & P4 (25 mg). Also, for shorter periods of P4 exposure, ovariectomized DKO mice were treated with a P4 pellet of 2 mg (1 week) or 6 mg (3 weeks). Another set of ovariectomized DKO mice implanted with a placebo served as controls. To examine whether mifepristone (RU486) inhibits HGSC development in DKO mice by blocking PR, DKO mice with intact ovaries were implanted with a mifepristone pellet once at 9 mg/90 days (3 months) or three times at 33.3 mg/60 days. For a control group, DKO mice received a placebo pellet for mifepristone.

Results We show that ovarian progesterone is a crucial endogenous factor inducing the development of primary tumors progressing to metastatic ovarian cancer in a mouse model of high- grade serous carcinoma (HGSC), the most common and deadliest ovarian cancer type. Blocking progesterone signaling by the pharmacologic inhibitor mifepristone or by genetic deletion of the progesterone receptor (PR) effectively suppressed HGSC development and its peritoneal metastases. Strikingly, mifepristone treatment profoundly improved mouse survival (~18 human years).

Conclusions Targeting progesterone/PR signaling could offer an effective chemopreventive strategy, particularly in high-risk populations of women carrying a deleterious mutation in the BRCA gene.

EPV197/#394 BCARE- FUNCTIONALLY ASSESSING TREATMENT RESPONSE IN OVARIAN CANCER PATIENTS

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Objectives Treatment regimens in oncology frequently become personalized and multimodal. Therefore, reliable biomarkers to predict drug responses are needed. Here, we establish a functional assay reflecting response to DNA damage-based treatment approaches.

Methods Our Bimodal prediction of ovarian CAncer treatment REsponse (BCARE) score combines irradiation-induced DNA damage with functional assessment of homologous recombination (HR) DNA repair visualized by immunofluorescence detection of γH2AX and cyclinA2/RAD51 positive cells. BCARE is quantified by automated image analysis using Image J and R/Bioconductor. Treatment response of cancer cells to PARP inhibition, radiotherapy, and chemotherapy is analyzed by colony formation and MTT cell viability assays.

Results BCARE reflects the percentage of RAD51/cyclinA2 double positive cells. It significantly correlated with response to various drugs tested in 6 ovarian cancer cell lines: olaparib ($R=0.92$, $p=0.0095$), radiotherapy ($R=0.78$, $p=0.0374$), cisplatin ($R=0.85$, $p=0.0325$), doxorubicin ($R=0.92$, $p=0.0095$), and carboplatin ($R=0.77$, $p=0.0738$). Additionally, we show that the BCARE coincides with the