($p<0.01$). Only 60 patients (15.2%) underwent chest tube placement overall, which is not enough to support the routine use of prophylactic chest tube placement in all patients. The incidence of postoperative pleural effusion was significantly higher in patients who underwent diaphragmatic incision surgery (47.8%) than in others(29.5%) ($p=0.03$).

Conclusion/Implications Pleural effusion is the most common complication of diaphragmatic surgery in ovarian cancer patients. Long surgery duration and high surgical difficulty correlated with postoperative pleural effusions. Routine placement of the prophylactic chest tube is not suitable for all patients. However, for patients who undergo diaphragmatic incision surgery, intraoperative chest tube placement should be considered.

EP244/#277 EXAMINING REAL-WORLD TREATMENT BENEFITS OF FIRST-LINE MAINTENANCE NIRAPARIB IN NON-BRCA MUTANT HIGH GRADE SEROUS OVARIAN CANCERS

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Introduction Maintenance PARP inhibitor therapy after response to first-line chemotherapy is standard of care in advanced high grade serous ovarian cancer (HGSOC). Progression free survival (PFS) benefit for patients on niraparib with non-BRCA mutant (m)/non-homologous recombination deficient (HRD) cancers is limited. This project aims to assess real-world benefits of first-line niraparib in non-BRCAm HGSOC. It investigates, in the absence of funded HRD testing in Canada, surrogate markers of niraparib response such as KELIM score.

Methods Retrospective chart review of patients with non-BRCAm/HRD unknown HGSOC treated with first-line maintenance niraparib at BC Cancer, Canada between 04/2020–06/2022. Demographic and treatment information was collected. PFS was defined as start of niraparib to radiological evidence of disease progression. KELIM score was calculated using validated software.

Results 83 patients were included; 25% had FIGO stage 4 disease. 68% underwent neoadjuvant chemotherapy with optimal cytoreductive rate of whole population of 72%. 60% had disease progression at data cut-off with median follow-up of 15.3 months. Median PFS (mPFS) on niraparib was 12.7 months (range 1.1–29.2). Patients given neoadjuvant chemotherapy with KELIM scores ≥ 1 had a trend to longer mPFS (14 months) vs. those with KELIM <1 (8.8 months) ($p=0.03$). Despite use of individualized starting dose (ISD), 60% required at least 1 dose reduction and 18% experienced grade 3 toxicity.

Conclusion/Implications mPFS on niraparib in this non-BRCAm/HRD unknown HGSOC population was 12.7 months. 60% of patients required a dose reduction due to toxicity despite ISD. KELIM score may be useful to predict PARP inhibitor response and aid clinical decision-making where HRD testing is unfunded.

EP245/#1396 HUMAN PERITONEAL FLUID EXERTS OVULATION AND NONOVULATION-SOURCED ONCOGENIC ACTIVITIES TO THE TRANSFORMING FALLOPIAN TUBE EPITHELIAL CELLS

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Introduction Ovulation is the main cause of oncogenesis of fallopian tube epithelium (FTE), the origin of ovarian high-grade serous carcinoma (HGSC). Previously, we have identified multiple oncogenic activities of the ovulatory follicular fluid (FF), which exerts full-spectrum transforming activities on FTE cells. After ovulation, FF transfuses into the peritoneal fluid (PF) with which the FTE constantly bathes. We wonder whether PF exerts the same spectrum of oncogenic activities as FF and whether they are sourced from FF.

Methods By using a panel of FTE cells with p53 mutation (FT282-V), p53/CCNE1 aberrations (FT282-CCNE1), and after xenograft peritoneal metastasis after spontaneous transformation (FEXT2), we tested the change of different transformation phenotypes after treating with FF and PF collected before and after ovulation.

Results Similar to FF but to a lesser extent, PF generally promoted anchorage-independent growth (AIG), migration, anoikis resistance, and peritoneal attachment and invasion of the transforming FTE cells, and the more transformed cells were more affected. Activities of AIG, invasion, and peritoneal attachment growth were higher in luteal phase PF than proliferative PF, suggesting an ovulation source. In contrast, anoikis resistance and migration activities were indifferent between PF collected before and after ovulation, suggesting an ovulation-independent source. Finally, coinjection of Luc-FEXT2 cells with either FF or luteal phase PF, but not proliferative phase PF, supported early peritoneal implantation in NSG mice.

Conclusion/Implications PF from ovulating women promotes oncogenic phenotypes of FTE cells at different stages of malignant transformation. Other than anoikis resistance and cell migration, a majority of these activities are sourced from ovulation.

EP246/#164 HIGH GASDERMIN D EXPRESSION IN OMENTAL ADIPOCYTE PREDICTS POOR PROGNOSIS IN ADVANCED STAGE OVARIAN CANCER

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Introduction Recently, an inflammatory programmed cell death characterized by gasdermin-mediated inflammatory cell

death, pyroptosis, was described. Accumulating evidences indicate that pyroptosis can affect the development of tumors, and especially inflammasomes may serve as positive or negative regulators of tumorigenesis. In this study, based on our previous observation of omental CLS formation in advanced OC, we aimed to investigate the role of pyroptosis in inflammatory adipocytes in the OC tumor microenvironment and explore the possible relationship with patient's prognosis.

Methods Immunohistochemistry: Omental tissue blocks from National Cheng Kung University Hospital were obtained. Informed consents were from each subject before surgery. Statistical analysis: cox proportional hazards model and survival difference were calculated by SPSS as well as GraphPad Prism 8 software to identify significant differences.

Results From 2002 to 2018 , there are 137 serous ovarian cancer patients collected in Cheng Kung University Hospital. The mean age is 56.6 y/o. There are 120 cases in stage III, 17 cases in stage IV. Eighty-six patient (63%) had optimal surgery, while 82 cases (60%) were chemosensitive. For progression free survival analysis through cox proportional hazards model, omental GSDMD (High vs. Low), omental CD68+ CLS (absent vs. present) and omental CD163+ CLS (absent vs. present) showed independent prognostic factors. Patients with high GSDMD expression in omentum tissue carried a poor 5-year survival than those with low GSDMD expression (Hazard ratio 0.56, 95% CI: 0.38–0.82, p=0.003)

Conclusion/Implications High gasdermin D expression in omental adipocytes predicts poor prognosis in advanced stage serous ovarian cancer patients.

EP247/#480 LUMICAN ACTIVATES TGFB1-EMT AXIS TO PROMOTE PLATINUM RESISTANCE IN EPITHELIAL OVARIAN CARCINOMA

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Introduction Platinum resistance seriously affects the survival of patients with epithelial ovarian cancer (EOC). Extracellular matrix play an important role in platinum resistance. Lumican (LUM) is an important proteoglycan in extracellular matrix. We intended to explore the expression of LUM in EOC and its effect on platinum resistance.

Methods Expression profile microarray was used to explore the mechanism of platinum resistance. Immunofluorescence and qRT-PCR was used to detect the expression of LUM in drug-resistant (SKOV3DDP) and wild-type (SKOV3) cells. LUM was detected by immunohistochemistry in tissues. After establishing LUM-overexpressing cells (SKOV3 LUM-OE) and knocked-out LUM cells (SKOV3DDP LUM-KO), the effects of LUM were evaluated. CCK8 was performed to evaluate the effects of cisplatin on EOC cells. Immunofluorescence, western blot and qRT-PCR were performed for determining TGFB1, CDH1, CDH2, ZEB1 and MMP9.

Results The expression of extracellular matrix related genes was significantly enriched in platinum-resistant tissue. The expression of LUM in SKOV3DDP was significantly higher than that in SKOV3, and it was significantly increased after cisplatin treatment of SKOV3. LUM was significantly overexpressed in platinum-resistant tissues (77.78% vs 32.0%, P<0.001), and it's an independent prognostic factor for platinum resistance (OR=8.11, P=0.002). The changes of cisplatin sensitivity were consistent with the changes of LUM after overexpression or knockout it. TGFB1 was positively correlated with LUM expression. CDH2, MMP9, ZEB1 were strongly induced and CDH1 was suppresed in SKOV3 LUM-OE.

Conclusion/Implications High expression of LUM is associated with platinum resistance and poor prognosis in EOC. LUM activates TGF-β-EMT signaling pathway to promote platinum resistance in EOC.

EP248/#551 A PREDICTIVE VALUE OF CA-125 ELIMINATION OF RATE CONSTANT K(KELIM) ON PROGNOSIS AND DURATION OF BEVACIZUMAB MAINTENANCE THERAPY IN FIRST PLATINUM-SENSITIVE RECURRENCE OF OVARIAN CANCER

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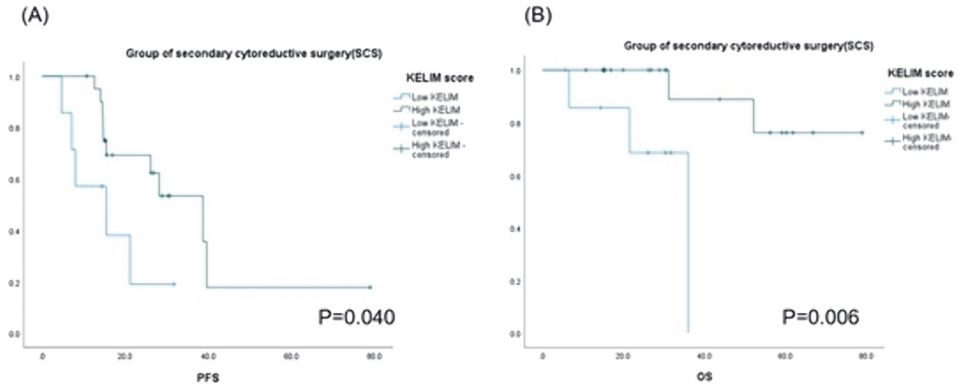
Introduction To evaluate the predictive value of CA-125 ELIMination of Rate Constant K (KELIM) on prognosis and duration of long-term bevacizumab maintenance therapy (BMT) in first platinum-sensitive recurrence of ovarian cancer.

Methods We included patients with platinum-sensitive recurrence of ovarian cancer who underwent six cycles of



Abstract EP248/#551 Figure 1 (A) Progression free survival (PFS), (B) overall survival (OS) of secondary cytoreductive surgery by paclitaxel-carboplatin-bevacizumab therapy group in the platinum sensitive recurrence of ovarian cancer patients according to KELIM score