paclitaxel-carboplatin-bevacizumab chemotherapy followed by BMT between 2015 and 2021. To predict the prognosis and duration of long-term BMT (≥10 cycles), we calculated KELIM scores after completion of three cycles of paclitaxel-carboplatin-bevacizumab. Then, we calculated the cut-off value of the KELIM score to predict progression-free interval ≥12 months.

Results A total of 96 patients were included, who consisted of 28 (29%) treated with secondary cytoreductive surgery (SCS) followed by chemotherapy, and 68 (71%) treated with chemotherapy alone. The cut-off value of the KELIM score for predicting PFI ≥12 months was 1.08. (AUC 0.82; sensitivity, 0.75; specificity, 0.76). Although SCS did not affect progression-free survival (PFS) and overall survival (OS), high-KELIM demonstrated better prognosis than low-KELIM in patients treated with SCS (PFS, median, 13.7 vs. 15.4 mons; p=0.04; OS, 21.7 vs. 28.8; p=0.006; figure 1), whereas there was no significant difference of PFS and OS according to the KELIM score in those treated with chemotherapy alone. Moreover, high-KELIM score was a favorable factor for long-term BMT in only those treated with SCS (adjusted odd ratio, 15; 95% confidence interval, 1.225–18.363).

Conclusion/Implications High-KELIM had a predictive value for better prognosis and long-term BMT in patients with first platinum-sensitive ovarian cancer who received paclitaxel-carboplatin-bevacizumab followed by BMT after SCS.

EP249/#705 PLASMA-ACTIVATED MEDIUM INHIBITS CANCER STEM CELL-LIKE PROPERTIES AND EXHIBITS A SYNERGISTIC EFFECT IN COMBINATION WITH CISPLATIN IN OVARIAN CANCER

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Introduction Ovarian cancer stem-like cells (CSCs) have been implicated in tumor recurrence, metastasis, and drug resistance. Accumulating evidence has demonstrated the antitumor effect of plasma-activated medium (PAM) in various carcinomas, including ovarian cancer. Thus, PAM represents a novel onco-therapeutic strategy. However, its impact on ovarian CSCs is unclear.

Methods In this study, we assessed whether PAM regulates the stemness properties in a CSC-like spheroid model. Furthermore, we investigated the potential enhanced anti-cancer effects of combination treatment with conventional chemotherapeutic agents and PAM using in vitro and in vivo models.

Results PAM exhibited synergistic cytotoxicity with cisplatin (CDDP) but not with paclitaxel and doxorubicin. In a peritoneal metastasis xenograft model established via intraperitoneal spheroid injection, PAM intraperitoneal therapy significantly suppressed peritoneal carcinomatosis (tumor size and number), with a more significant decrease observed due to the combined effects of PAM and CDDP with no side effects.

Conclusion/Implications We demonstrated the anti-CSC activity of PAM and the synergistic cytotoxic effect of the PAM and CDDP combination therapy on ovarian CSCs. Analysis of intraperitoneal PAM and CDDP combination therapy in a spheroid culture xenograft model of ovarian cancer showed promising results. Further studies are needed to determine the molecular mechanism underlying the synergistic anti-cancer effects of PAM and anti-cancer drugs to enhance their antitumor efficacy against ovarian CSCs and reduce the relevant side effects.

EP250/#544 SYNERGISTIC EFFECT OF SHETA2 AND ABEMACICLIB IN OVARIAN CANCER SPHEROIDS AND ASCITES-DERIVED SPHEROIDS

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Introduction While recent advances in ovarian cancer therapy have improved patient's lives, current therapies are highly toxic. We developed sulfur heteroarotinoid A2 (SHetA2), a non-toxic drug currently in Phase 1 trial. SHetA2 causes cyclin D1 degradation and cyclin-dependent kinases 4 and 6 (CDK4/6) from protection by heat shock cognate 70 protein, causing G1 cell cycle arrest. Abemaciclib is a cyclin-dependent kinase (CDK) 4 and 6 inhibitor used to treat breast cancer. We hypothesized that combination of SHetA2 and abemaciclib synergistically reduces cell lines- and ascites- derived spheroids viability as both drugs target different proteins in the cyclinD1/CDK4/6 complex critical for G1 to S progression.

Methods Ovarian cancer spheroids were developed from ES2 and OVCAR8 ovarian cancer cells lines using ultra-low attachment plates. Ascites-derived spheroids were collected from ovarian cancer patients who were undergoing paracentesis for ascites removal after receiving their informed consent. The half maximal inhibitory concentration (IC_{50}) for spheroids or ascites-derived spheroids was determined using CellTiter-Glo® 3D Cell Viability Assay. GraphPad Prism was used to calculate IC_{50} for single drugs, while combination indexes were determined using CompuSyn.

Results Ovarian cancer spheroids IC_{50} values ranged between 3–10 μM and 10–15 μM for SHetA2 and abemaciclib, respectively. There were synergistic effects when abemaciclib and SHetA2 were combined at doses above IC_{50} of both drugs for cell line and ascites-derived spheroids.

Conclusion/Implications Findings from this study support the combination of SHetA2 and abemaciclib as a novel, less toxic therapy for ovarian cancer. Animal models will be carried out to validate these findings.

EP253/#205 DISCREPANCY IN DIAGNOSIS OF ADVANCED EPITHELIAL OVARIAN CARCINOMA, TUBAL CARCINOMA AND PRIMARY PERITONEAL CARCINOMA PRIOR TO NEOADJUVANT CHEMOTHERAPY

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Introduction To evaluate the rate of discrepancy between initial diagnosis and surgico-pathological diagnosis in patients treated with neoadjuvant chemotherapy (NAC) followed by interval debulking surgery (IDS) of advanced epithelial ovarian

Abstract EP253/#205 Table 1 Summary data of discrepancy patients

No.	Age	CA-125	CEA	CA125/CEA	EGD&Colonoscopy	Type/site of investigations	Result of pretreatment investigations	Final diagnosis
1	70	21.4	356	0.06	negative finding	Cytology/ ascites	Metastatic adenocarcinoma, mucin producing	LAMN
2	68	118.9	6.86	17.33	negative finding	Cytology/ ascites	Metastatic carcinoma, abundant mucin	LAMN
3	51	842.6	72.96	11.55	-	Cytology/ ascites	Metastatic carcinoma	Poorly differentiated carcinoma of stomach
4	65	111.4	-	-	-	Histology/ omentum biopsy	Metastatic carcinoma, mucous material	LAMN
5	48	365	-	-	-	Histology/ peritoneum biopsy	Metastatic adenocarcinoma	Metastasis mucinous adenocarcinoma from GI origin
6	35	1300	-	-	-	Cytology/ pleural effusion	Metastatic carcinoma	Granulosa cell tumor
7	73	163.4	1.13	144.6	-	Cytology/ ascites	Metastatic carcinoma	Carcinosarcoma of uterus
8	58	1212	0.66	1836.36	-	Histology/ cervical biopsy	High grade serous carcinoma	Carcinosarcoma of uterus
9	46	3387	0.42	8064.29	-	Histology/ pelvic mass biopsy	High grade serous carcinoma	High grade serous carcinoma of endometrium
10	57	1047	29.03	36.07	-	Cytology/ ascites Histology/ endometrial biopsy	Metastatic carcinoma High grade carcinoma	High grade serous carcinoma of endometrium
11	69	91.9	1.64	56.04	-	Cytology/ ascites Histology/ endometrial biopsy	Metastatic carcinoma Endometrioid carcinoma grade2	High grade carcinoma of endometrium

Abbreviations: CA-125, cancer antigen 125; CEA, carcinoma embryonic antigen; EGD, esophagogastroduodenoscopy; GI, gastrointestinal; LAMN, low grade appendiceal mucinous neoplasm

carcinoma (EOC). The second objective was to determine factors associated with diagnosis discrepancy.

Methods The clinical data, disease status, initial cytology/pathology report and final pathology results were extracted from medical records of selected patients who underwent NAC administration followed by IDS from January 2009 to August 2022. Regression analysis was used to investigate the independent factors associated to diagnosis discrepancy.

Results Overall 229 patients underwent IDS. Of these, 11 patients (4.8%) showed diagnostic differences. Patients with CA125 level <200 U/ml had significantly higher discrepancy rate than the group of CA125 level ≥200 U/ml, with 25.0% vs 2.9% (P<0.001) respectively. Furthermore, patients with CEA level >100 ng/ml has a high discrepancy rate of 100%. The CA125/CEA ratio ≤25 was associated with higher discrepancy than patients with ratio >25, with 75.0% vs 4.1% (P<0.001), respectively. The pretreatment cytology, histology, and cytology plus histology results yielded comparable accuracy rates of 96.8%, 91.8%, and 91.7%, respectively (P=0.255).

Conclusion/Implications The discrepancy risk for patients with CA125/CEA ratio ≤25 is unacceptably high, work up for gastro-intestinal malignancies should strongly be recommended. Additionally, either use of cytology or pathology results is reliable for the diagnosis prior to NAC.

EP254/#645 THE BCAM-AKT2 FUSION PROTEIN EFFECT ON THE IGF1 SIGNALING PATHWAY IN EPITHELIAL OVARIAN CANCER CELLS

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Introduction The Insulin Growth Factor1 Receptor (IGF1R) has been identified as a key player in the development of ovarian cancer, making it an appealing target for therapeutic intervention. Fusion genes associated with the IGF1R are good candidates to play this role. Recently, the BCAM-AKT2 fusion protein was identified in ovarian cancer patients. We aim to investigate the BCAM-AKT2 fusion protein involvement in the IGF1 signaling pathway and the mechanism behind the oncogenic effect in epithelial ovarian cancer (EOC).

Methods In-vitro experiments were conducted in EOC cell lines. Protein expression levels of BCAM-AKT2, IGF1R, and the downstream key factors were measured by western blots. In addition, an XTT assay was used to measure the effect of the BCAM-AKT2 fusion protein on proliferation of EOC cell line. Moreover, RNA from SKOV3 and OVCAR4 transfected cells was extracted and RNA-seq was performed to determine the effect of BCAM-AKT2 on gene expression.

Results XTT assays suggest that BCAM-AKT2 induces EOC proliferation. RNA-seq experiment revealed activation of unfolded protein response, and inhibition of viral response, interferon and pyroptosis signaling pathways as a result of BCAM-AKT2 overexpression in SKOV3. However, BCAM-AKT2 did not affect gene expression in OVCAR4. Interestingly, IGF1R protein expression and activation were not affected by the BCAM-AKT2 expression. Moreover, BCAM-AKT2 phosphorylation is independent of IGF1 treatment.

Conclusion/Implications Our results suggest a possible effect of the BCAM-AKT2 fusion protein on key canonical pathways in EOC. We believe that elucidation of the mechanism of the fusion protein will help identify new biomarkers for ovarian cancer.