

ADAM19, Ki-67, and Caspase-3) and chemoresistance test (to carboplatin chemotherapy).

**Results** It was found that the number of spheroids obtained, all gene expression, and number of chemoresistance to carboplatin regimen in CD133+ CSC cultures were higher than the main population and CD133-. CSCs with CD133+ had a higher ability to proliferate with increased Ki-67 gene expression, stronger stemness with higher NANOG gene expression, and greater chemoresistance ability with increased ATM and ATR gene.

**Conclusion/Implications** It can be concluded that ATM and ATR gene expression are positively correlated with the resistance of CSC in ovarian cancer patients.

EP222/#246

#### QUANTIFYING PLATINUM SENSITIVITY AS A MARKER FOR RESPONSE TO PARP INHIBITION IN PATIENTS WITH ADVANCED OVARIAN CANCER

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**Introduction** All patients with high grade epithelial ovarian cancer(HGEOC) do not benefit equally from PARP inhibitors, but all are exposed to PARP-associated toxicities. This study aims to assess the correlation between the pathology-based Chemotherapy Response Score(CRS) at the time of interval debulking surgery(IDS) and progression free survival (PFS) in patients who received PARP maintenance, to determine this score's potential as a marker of expected benefit from PARP.

**Methods** This is a retrospective cohort study of patients with HGEOC who underwent IDS between January 2016 and September 2022. Demographic and clinical parameters were collected.  $\chi^2$  test and Student t-test were used to compare descriptive variables and Kaplan-Meier survival analysis with log rank test comparison for PFS.

**Results** On 169 patients, 47 received PARP maintenance and the majority needed dose reduction due to toxicity(53.2%). Patients with CRS 1(No/Minimal response) or CRS 2-3(Moderate/Complete response) were comparable in terms of baseline characteristics. Patients CRS 1 compared to CRS 2-3 had lower PFS regardless of maintenance( $p=0.017$ ). Patients with CRS 2-3 who received PARP showed significantly improved PFS(20 vs 15 months,  $p=0.029$ ) compared to those who did not, while in those with CRS 1 maintenance was not associated with improved PFS( $p=0.27$ ). Results were similar on multivariate analysis, adjusting for BRCA status and surgical outcomes.

**Conclusion/Implications** In HGEOC patients demonstrating response(CRS 2-3) to NACT, PARP maintenance was associated with a significant improvement in PFS. CRS can be a helpful tool in counseling prior to PARP inhibitor initiation, in patients BRCA-intact, and in settings where homologous recombination deficiency testing is not easily available.

EP223/#840

#### KAZAKHSTAN NATIONAL EXPERIENCE: GRANULOSA CELL TUMORS OF THE OVARY

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**Introduction** Objectives: Ovarian granulosa cell tumors (OGCT) are rare, and Eurasian data have not been published. This study objective was to describe OGCT among the 19 million residents of Kazakhstan.

**Methods** The Kazakhstan Cancer Registry Database was queried for descriptive and outcomes data of all consecutive patients with histologically verified OGCT from 2014-2020. Descriptive statistics and log likelihood ratios were performed using JMP Version 14.0.

**Results** 240 patients with OGCT were included, representing 3.9% of ovarian cancer in Kazakhstan. The median age was 52 years (range, 15-87 years). Nationality of origin was 55% Kazakh, 30.8% Russian, 3.8% Ukrainian, and 11% other. Stage distribution was 53.7% Stage I, 20.4% Stage II, 22% Stage III, 2.5% Stage IV, and 1% unknown. In total, 89 patients (37.6%) received chemotherapy; this did not correlate with stage. Common regimens included paclitaxel/carboplatin; bleomycin, etoposide, and cisplatin (BEP); and EP. Of the 240 patients, 67 patients (28%) recurred; recurrence correlated with stage ( $p<0.001$ ). Treatment for recurrent disease included surgery, chemotherapy, and radiation therapy. After 16-month median follow up (range, 0-90 months), 186 patients (77.5%) were without evidence of disease, 12 patients (5%) were alive with disease, and 42 patients (17.5%) had died. Risk of death increased with advancing stage ( $p<0.001$ ). Stage I OGCT patients who received adjuvant chemotherapy were significantly less likely to die than those who had not ( $p=0.003$ ).

**Conclusion/Implications** This is the first description of OGCT in Kazakhstan. There is a survival advantage to chemotherapy administration in early-stage patients, supporting the importance of access to chemotherapy.

EP224/#880

#### BRCA MUTATIONS IN HIGH GRADE SEROUS OVARIAN CANCER IN KAZAKHSTAN

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**Introduction** Objectives: More than 1,000 new cases and 500 deaths from ovarian cancer are detected annually in Kazakhstan. The aim of this study was to examine the BRCA1/2

mutation rate in a cohort of Kazakhstani women with high-grade serous ovarian carcinoma (HGSOC).

**Methods** We performed a retrospective review of the Kazakhstan Cancer Registry Database and identified all patients with HGSOC who had undergone genetic testing between 2018–2022. Gynecologic oncologists and genetic counselors initiated genetic testing within the KazIOR health care system. All testing was performed on site through DNA isolation from tumor tissue 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. Study covered by MOH BR11065390

**Results** 96 patients underwent genetic testing. The median age was 55.3 years (range, 26–83 years). Of the 96 patients, 34 tested positive for a pathogenic mutation in either BRCA1 or BRCA2, yielding a prevalence of 35.4%. Median age did not differ based on mutation status. Patients with BRCA mutations were more likely to recur. Of the 96 patients, 18 of 34 BRCA+ patients (52.9%) recurred, compared with 13 of 62 BRCA- patients (21%, p=0.001). Median overall survival was similar for BRCA+ patients (23.6 months) compared with BRCA- patients (22.1 months).

**Conclusion/Implications** Pathogenic mutations in BRCA1/2 are more common than expected in women with HGSOC in Kazakhstan. All women diagnosed with HGSOC should undergo genetic testing to guide personalized treatment using PARP inhibitors.

EP225/#828

**DIFFERENCE IN HEMODYNAMIC PARAMETERS IN PATIENTS (PTS) WITH ADVANCED EPITHELIAL OVARIAN CANCER (EOC) UNDERGOING PRIMARY (PDS) OR INTERVAL DEBULKING SURGERY (IDS)**

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**Introduction** To examine the impact of PDS versus IDS on hemodynamic and transfusion characteristics as well as the length of care in the intensive care unit (ICU).

**Methods** All consecutive pts with EOC (FIGO stage ≥IIIC) undergoing PDS or IDS between 01/2018 and 12/2019 were included in the analysis. All data were collected in a prospectively maintained database and retrospectively analyzed regarding anaesthesiological characteristics.

**Results** 270 pts could be included, 181 pts (67%) were treated with PDS, 89 pts (33%) underwent IDS. IDS pts showed a higher rate of thromboembolic events in history (10.1%) vs. PDS pts (1.1%, p<0.001), further differences in comorbidities or medications were not found. Table 1 shows patient and tumor characteristics. The initial median hemoglobin value in IDS pts was 10.5 g/dl (9.3;11.5) vs. PDS pts 11.7 g/dl (10.8;12.7, p<0.001) and IDS pts were more frequently

Abstract EP225/#828 Table 1 Patient and tumor characteristics

	PDS (n=181)	IDS (n=89)	P-value
ECOG PS			0.558
0	172 (95.0%)	86 (96.6%)	
1	8 (4.4%)	2 (2.2%)	
2	0 (0%)	1 (1.1%)	
3	1 (0.6%)	0 (0%)	
ASA PS			0.010
1	17 (9.4%)	1 (1.1%)	
2	111 (61.3%)	52 (58.4%)	
3	47 (26.0%)	35 (39.3%)	
4	1 (0.6%)	0 (0%)	
Charlson Comorbidity index			0.791
0	136 (75.1%)	68 (76.4%)	
1	23 (12.7%)	13 (14.6%)	
2	15 (8.3%)	2 (2.2%)	
3	3 (1.7%)	4 (4.5%)	
4	3 (1.7%)	2 (2.2%)	
5	0 (0%)	0 (0%)	
6	1 (0.6%)	0 (0%)	
Arterial hypertension	65 (35.9%)	33 (37.1%)	0.893
Cardiac diseases	21 (11.6%)	5 (5.6%)	0.130
Diabetes mellitus	10 (5.5%)	7 (7.9%)	0.439
Renal insufficiency	3 (1.7%)	2 (2.2%)	0.666
Pulmonary diseases	18 (9.9%)	12 (13.5%)	0.413
Beta blocker	38 (21.0%)	14 (15.7%)	0.329
ACE inhibitor	47 (26.0%)	15 (16.9%)	0.123
FIGO stage			0.020
IIIC	70 (38.7%)	42 (47.2%)	
IVA	5 (2.8%)	8 (9.0%)	
IVB	109 (60.2%)	41 (46.1%)	
Ascites (ml)	200 (30; 1200)	0 (0; 50)	<0.001

Data are shown as median (25%; 75%) quartiles or as n (%) patients. P-values calculated using the exact Wilcoxon-Mann-Whitney test or the exact Fisher test in contingency tables as appropriate. ECOG PS: Eastern Cooperative Oncology Group performance status, ASA PS: American Association of Anesthesiologists physical status, FIGO: Fédération Internationale de Gynécologie et d'Obstétrique| ACE: Angiotensin-converting-enzyme.