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

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. χ2 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.

EP224/#880 BRCA MUTATIONS IN HIGH GRADE SEROUS OVARIAN CANCER IN KAZAKHSTAN

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 mutations.