ovarian cancer during the period 2018 to 2022. HRD was determined by Myriad myChoice test. The variables to be studied were: somatic mutation, and germline if positive by NGS, type of mutation, age at diagnosis, histology, stage, primary or interval surgery after neoadjuvant chemotherapy, response, PARPi, progression free survival (PFS), and allergy to chemotherapy.

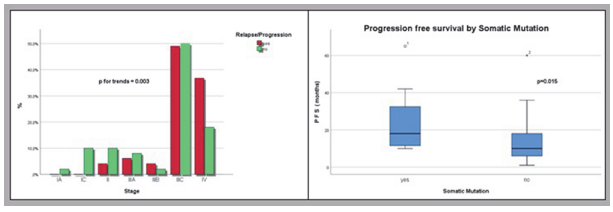
Results The mean age at diagnosis of ovarian carcinoma was 62 years, with a predominance of 50% stage IIIC, and 80% of serous histology grade 3. 32% were HRD positive, with BRCA1 in 55%, BRCA2 in 10%, and the remaining 35% others of the RAD51C, BRIP1.

68% of cases received neoadjuvant chemotherapy, and only 50% were candidates for interval surgery. Primary surgery was performed in 32% of patients. Results: CR 38.4%, PR 53.5%. SD: 2% and progression 6.1%. Allergic reaction to chemotherapy occurred in 22% of the total.

38% of patients received PARPi as first-line maintenance.

In the group of patients who progressed to first line (49% of our series), PFS was higher in those with somatic line pathogenic variants, presenting a median of 18 months versus 10 months, (p=0.015).

Conclusion The results of our case series are compatible with those published in the literature, highlighting the increase in PFS in HRD+ patients who have received maintenance with PARPi. We found an increase of allergic reactions in patients carrying pathogenic germline variants, probably due to splicing-related mechanisms. These data should be cross-checked with other future studies.



Abstract #263 Figure 1 Stage/Progression. PFS/HRD

Disclosures No

#270 IMMUNOPHENOTYPIC FEATURES AND BRCA1/2 MUTATIONS FROM HIGH-GRADE SEROUS CANCER: THE ROLE OF CYTOPATHOLOGICAL ASSESSMENT

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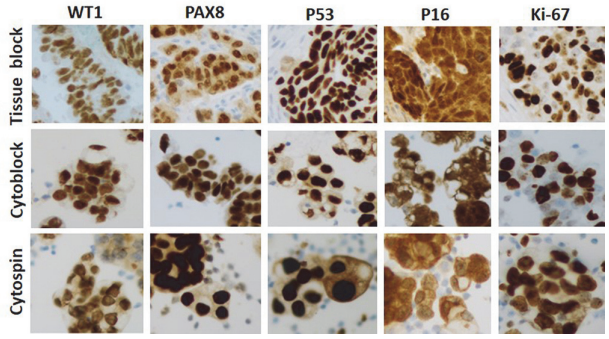
Introduction/Background High-grade serous cancer (HGSC) is the most common and aggressive type of ovarian cancer, and it is often associated with ascites at presentation. The objective of our research was to evaluate the accuracy of cytopathology to identify immunophenotypic features of HGSC and BRCA1/2 mutations from ascites.

Methodology Forty-five patients with histologically confirmed primary HGSC and malignant ascites were included in our study. Immunocytochemistry (ICC) staining for PAX8, WT1, P53, P16, and Ki-67 was performed on cytospins and cytoblocks prepared from ascites. Next-generation sequencing (NGS) was used to detect germline/somatic BRCA1/2 mutations in the ascites. Both ICC and NGS results were compared with immunohistochemistry (IHC) and NGS results from tissue blocks of the primary tumor. Cronbach α and $\chi 2$ statistics, respectively, were used.

Results ICC/IHC results for PAX8, WT1, P53, and P16 showed good reliability between cytospins, cytoblocks, and tissue blocks ($\alpha > 0.75$), whereas poor reliability and significant differences were observed for Ki-67 between ascites and tissue blocks ($\alpha < 0.26$; $p < .001$ [Kruskal-Wallis]). For germline BRCA1/2 mutations, 100% concordance was confirmed, but only 14% concordance was confirmed for somatic mutations.

Conclusion Our results confirmed that cytopathology is an accurate method for identifying immunophenotypic features of HGSC and detecting germline BRCA1/2 mutations from ascites. However, further investigation is required for assessing the proliferation activity of HGSC in ascites and for detecting somatic BRCA1/2 mutations.



Abstract #270 Figure 1 WT1, PAX8, P53, P16, Ki67 positive stained tumor cells on ascites cytospins and cell blocks, and tumor tissue blocks (immunhisto/cytochemistry results). 200x magnification.

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#271 CHARACTERIZATION OF TUMOR SPHEROIDS FROM HIGH-GRADE SEROUS OVARIAN CANCER BASED ON MORPHOLOGICAL FEATURES AND CELL COMPOSITION

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Introduction/Background Tumor spheroids in the ascites of high-grade serous cancer (HGSC) patients are poorly described since all research has focused on 3D in vitro models. Our objective was to describe HGSC spheroids in the ascites, with emphasis on their morphological features, cell composition, and PD-1 and PD-L1 expression on spheroid-associated tumor- and immune cells.

Methodology Patients with histologically confirmed HGSC and present malignant ascites were included in the study. Spheroid density and size in the ascites were assessed from Giemsa smears, the cell composition of spheroid-associated immune