

cytoreduction vs. interval surgery), and the amount of residual disease were all significantly associated with the overall survival. In the multivariate analysis, the response based on radiological findings (HR=3.91 95% CI 2.60–5.90 for partial response, HR=13.13; 95% CI 9.17–18.81 for progression), neoadjuvant chemotherapy (HR=1.81; 95%CI 1.32–2.46), and FIGO Stage (HR=1.68 95%CI 1.40–2.02) were identified as independent prognostic factors associated with the worst oncological outcomes ($p < 0.001$)

Conclusion The radiology-based response, neoadjuvant chemotherapy and FIGO stage were independent prognostic factors associated with the worst oncological outcomes in women younger than 45 years old with epithelial ovarian cancer. It highlights the importance of primary complete cytoreduction, performing maximal-effort surgery in these patients due to the tumor's characteristics and the better tolerance to maximal-effort cytoreduction in comparison to older women

Disclosures No

#310 TUMOR IMMUNE MICROENVIRONMENT IN ASCITES AND ITS ASSOCIATION WITH THE PROGNOSIS OF HIGH-GRADE SEROUS CANCER PATIENTS

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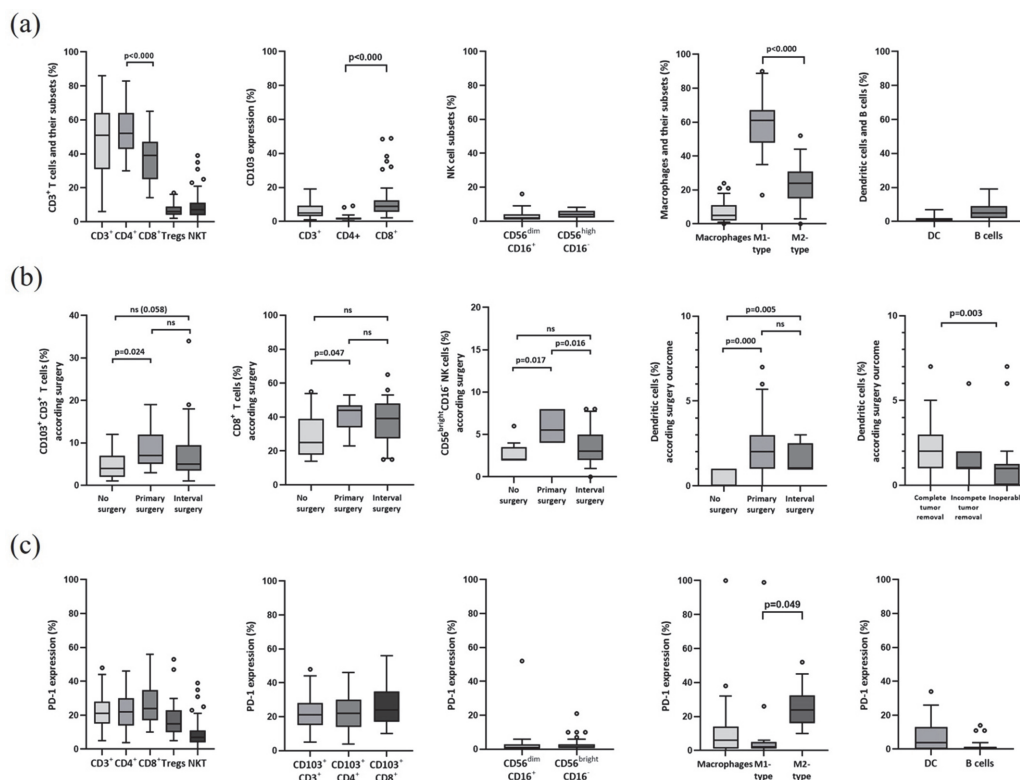
Introduction/Background High-grade serous cancer is often associated with ascites at presentation. Our objective was to

quantify immune cells in the ascites before treatment and evaluate their impact on patient survival.

Methodology Forty-seven patients with primary disease and ascites were included in the study. Flow cytometry analysis was performed to detect percentages of CD3+ T cells (CD4+, CD8+, Tregs, and NKT cells), B cells, NK cells (CD56brightCD16- and CD56dimCD16+ subsets), macrophages, and dendritic cells. CD103 epithelial marker was further analyzed on T cells, and PD-1 and PD-L1 immune checkpoint molecules were analyzed on all immune cells. Cut-off of low and high percentages of immune cells was determined by the median of the variables, and the correlation with progression-free survival and overall survival was calculated.

Results CD3+ T cells were the predominant cells in the ascites (median 51%), while the presence of other immune cells was much lower (median $\leq 10\%$). PD-1 was mainly expressed on CD3+ T cells (median 20%), lower expression was observed on macrophages (median 10%), dendritic cells (median $< 10\%$), NK cells, and B cells (median $< 5\%$). PD-L1 expression was not detected. Progression-free survival and overall survival were significantly better in patients with high percentages of CD103+CD3+ T cells, PD-1+Tregs, CD56brightCD16- NK cells, and dendritic cells. High percentages of CD8+ T cells, macrophages, and PD-1+CD56brightCD16- NK cells, and low percentages of CD4+ also indicated significantly better overall survival.

Conclusion Our results highlight the potential of the ascites tumor immune microenvironment to provide novel prognostic markers for patients diagnosed with primary high-grade serous cancer.



Abstract #310 Figure 1 Box plots showing median (range) and quartiles for (a) T cells, NK cells, macrophages, DCs, B cells, and their subsets in the ascites of HGSC patients, (b) the effect of surgery type and its outcome on ICs percentages (only variables with significant differences are presented) and (c) the expression of PD-1 for each immune population/subset.

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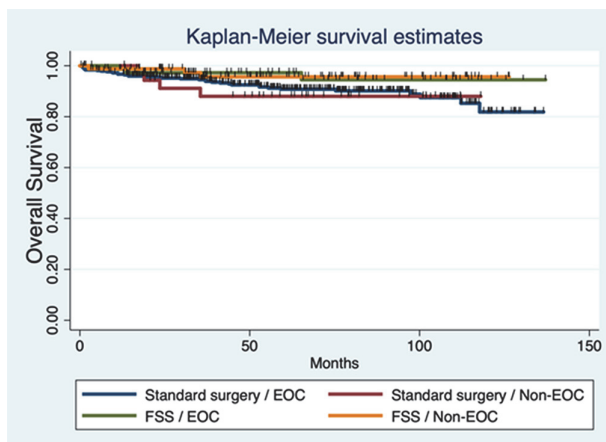
#312 ONCOLOGICAL SAFETY OF FERTILITY PRESERVATION TREATMENT IN OVARIAN CANCER

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Introduction/Background To assess the safety of fertility sparing treatments for early-stage ovarian cancer in women younger than 45 years.

Methodology We performed a retrospective multicenter study including women from 18 to 45 years old diagnosed of early-stage (FIGO I-II) ovarian cancer in 55 Spanish hospitals, from January 2010 to December 2019. Benign and borderline tumors were excluded, as well as advanced-stage (FIGO III-IV). All perioperative characteristics and follow-up were collected and analyzed. Standard staging surgery (SSS) was compared to fertility sparing surgery (FSS) in terms of oncological outcomes.



Abstract #312 Figure 1 Kaplan Meier survival based on histology and type of surgery

Results A total of 630 women were included; 546 (86.7%) were stage I. The median tumor size was 94 mm (IQR 25–75: 60–139). The median patients' age was 38.7 years old (IQR 25–75: 33.4–42.7) with a median body mass index of 23.6 kg/m² (IQR 25–75: 21.2–27.7). Among all patients, 469 (74.4%) underwent SSS and 161 (25.6%) FSS. Up to 351 patients (56.3%) did not have children, but only 12 (1.92%)

had oocyte preservation before treatment. Patients in the FSS group compared to SSS group showed a non-significant difference in recurrences (8.7% vs. 11.8%, respectively; $p=0.31$) and deaths (1.2% vs. 5.5%, respectively; $p=0.087$) during the follow-up. No significant differences were found between epithelial and non-epithelial ovarian cancer both in recurrences (9.1% vs. 8.3%, respectively; $p=0.998$) and deaths (4% vs. 3.6%, respectively; $p=0.997$) among patients who underwent FSS.

Conclusion FSS seems a safe option for treatment of early-stage ovarian cancer in patients who want to preserve fertility; either for epithelial and non-epithelial histology.

Disclosures None

#321 COMBINATION OF IGF1R INHIBITION WITH PD-1 BLOCKADE RESULTS IN SIGNIFICANT ANTI-TUMORAL ACTIVITY IN EPITHELIAL OVARIAN CANCER

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Introduction/Background The insulin-like growth factor 1 receptor (IGF1R) plays a key role in regulating growth and invasiveness in epithelial ovarian cancer (EOC), therefore is regarded as a promising therapeutic target. Recently, it has been shown that IGF1 can regulate dendritic cell (DC) maturation and T cell activation. Our study aims to investigate the combination effect of IGF1R inhibition and anti-PD-1 treatment on EOC.

Methodology EOC cell lines were co-cultured with IGF1R inhibitor (AEW-541)-treated-DCs. DC differentiation and EOC proliferation levels were evaluated by Flow Cytometry Assay (FACS). C57BL/6 mice with established peritoneal ovarian cancer were injected with single or combined anti-PD-1 and AEW-541 treatment, and their survival was evaluated. Conventional DCs and T-cell population levels were analyzed by FACS. Finally, RNA was extracted from tumors and RNA sequencing was performed.

Results IGF1R inhibitor treatment significantly induced DC differentiation in AEW-541 pre-treated-DCs compared to control after 24 h. In addition, Differentiated AEW-541-treated-DCs significantly decreased EOC cell proliferation. In vivo experiment showed that combined anti-PD-1/IGF1R treatment decreased tumor weight compared to single treatments. Moreover, the anti-PD-1/IGF1R treatment significantly increased the conventional DCs compared to AEW-541 and anti-PD-1 treatments. The Gene Ontology (GO) analysis indicate that the most significant differential biological process terms were immune response by increased lymphocytes cells activation.

Conclusion IGF1R pathway inhibition in differentiated DCs suppressed EOC cell proliferation. IGF1R inhibitor combined with anti-PD-1 may result in enhanced anti-tumor activity. Thus, restoring the anti-tumor immune response by IGF1R targeting in combination with immunotherapy may be an effective therapy for EOC.

Disclosures All authors declare no conflict of interest and no financial benefits from the conducted research.