**EP227/#389**

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

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**Introduction**

The insulin-like growth factor 1 receptor (IGF1R) plays a key role in regulating growth and invasive-ness 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.

**Methods**

EOC cell lines were co-cultured with IGF1R inhibitor (AEW-541)-treated-DGs. 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-DGs compared to control after 24 h. In addition, Differentiated AEW-541 treated-DGs 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/Implications**

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.

**EP228/#418**

**DISPARITIES IN TREATMENT MODALITIES AND SURVIVAL AMONG ELDERLY HIGH GRADE SEROUS OVARIAN CANCER PATIENTS**

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**Introduction**

Elderly women with ovarian cancer are often undertreated. We aimed to evaluate the treatment modalities of elderly patients and its impact on overall survival.

**Methods**

A total of 5,055 high grade serous ovarian cancer patients and 3584 advanced stage (IIIC+IV) patients aged 65 years or older were hereby identified, all from the Surveillance, Epidemiology, and End Results (SEER) database from January 1, 2010 to December 31, 2017. Overall survival (OS) and ovarian cancer-specific survival (OCSS) was compared across age and Cox proportional-hazards model was created to adjust for case-mix.

**Results**

The very elderly patients (≥75 years old) had significantly: less surgical complexity like undone lymphadenectomy (59.7% vs 48.6%; < 0.001), less chemotherapy (78.2% vs 89.4%; < 0.001), less standard treatment (70.6% vs. 85%; < 0.001) and less optimal debulking surgery (44.0% vs 52.7%; < 0.001). The very elderly and elderly patients all had a high use of NACT, but no significant difference was found (38.7% vs 36.2%; P=0.212). Patients ≥75 had significantly worse OS and OCSS.

**Conclusion/Implications**

The survival of women with EOC strongly decreases with increasing age, EOC patients over 75 years old received less standard treatment and more elderly patients were treated with NACT.