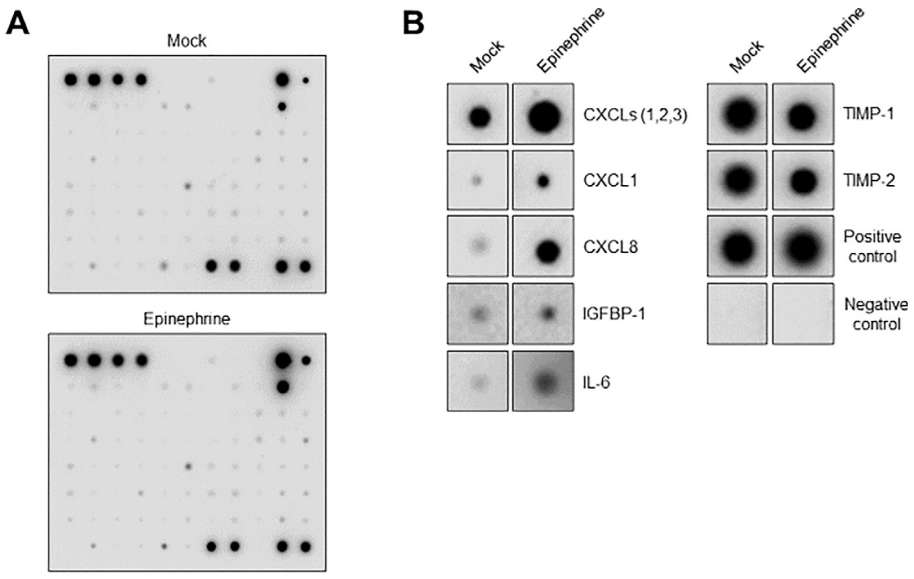

Abstract PR002/#853 Figure 2

cancer and to determine the possibility of inhibiting ovarian cancer progression using novel therapeutics.

Methods In this study, we analyzed the conditioned media in SKOV3 ovarian cancer cell line treated with catecholamine to identify secreted proteins responding to chronic stress.

Results We observed that epinephrine and norepinephrine enhanced the secretion and mRNA expression of CXC-chemokines (CXCL1, 2, 3, and 8). Neutralizing antibody to CXCL8 and CXCL8 receptor (CXCR2) inhibitors significantly reduced catecholamine-mediated invasion of SKOV3 cells. Finally, we found that the concentration of CXCL1 and CXCL8 in the plasma of ovarian cancer patients increased with stage progression.

Conclusion/Implications Therefore, not only can CXCL1 and CXCL8 be used as diagnostic markers for ovarian cancer, but their inhibition also holds promise as a potential therapeutic option for suppressing ovarian cancer progression. Taken together, these findings suggest that stress-related catecholamines may influence ovarian cancer progression through the secretion of CXC-chemokines.

PR003/#357 PERIPHERAL PD-1+REGULATORY T CELLS FOR PREDICTING TREATMENT RESPONSE TO PARP INHIBITOR MAINTENANCE IN PATIENTS WITH EPITHELIAL OVARIAN CANCER

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Introduction Poly (adenosine diphosphate [ADP]-ribose) polymerase inhibitors (PARPis) are becoming the standard of care for epithelial ovarian cancer (EOC). Recently, clinical trials of triple maintenance therapy (PARPi+anti-angiogenic agent+anti-PD-1/L1) are actively ongoing. Here, we investigated the immunological effects of PARPi or triple maintenance therapy on T cells and their impact on clinical responses.

Methods We collected serial blood from EOC patients receiving PARPi therapy (cohort 1: PARPi, n=49; cohort 2: olaparib+bevacizumab+pembrolizumab, n=31). Peripheral T cells were analyzed using flow cytometry and compared according to the PARPi response. Progression-free survival (PFS) was assessed according to predictive biomarkers identified in a comparative analysis

Results Regulatory T cells (Tregs) were suppressed by PARPi therapy, whereas PD-1 was not significantly changed. Short PFS group exhibited a higher percentage of baseline PD-1^{+}Tregs than long PFS group, and the patients with high percentage of PD-1^{+}Tregs before treatment showed poor PFS in cohort 1. However, the expression of PD-1on Tregs significantly decreased after receiving triple maintenance therapy, and the reduction in PD-1^{+}Tregs was associated with superior PFS in cohort 2 (P=0.0078).

Conclusion/Implications PARPi suppresses Tregs, but does not affect PD-1 expression. Addition of PD-1 blockade to PARPi decreases PD-1^{+}Tregs, which have negative predictive value for PARPi monotherapy. Our data suggest that addition of PD-1 blockade to PARPi maintenance therapy is a promising option to improve survival outcomes for high-risk patients with ovarian cancer.

PR004/#458 CELL-FREE DNA FROM ASCITES IDENTIFIES CLINICALLY RELEVANT VARIANTS AND TUMOUR EVOLUTION IN A COHORT OF PATIENTS WITH ADVANCED OVARIAN CANCER

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