

with cancer outcomes including surgical resection, overall survival (OS) and progression free survival (PFS). Correlations were investigated between SCD and tumour vascularity.

Result(s)* Capillary rarefaction occurred in all patients during cytotoxic treatment ($p < 0.001$). This correlated with a decline in VEGF and Ang 1 ($p = 0.02$, $p < 0.001$). Rarefaction was greater in the subgroup of patients who received Bevacizumab and was strongly correlated with a rise in blood pressure. Baseline SCD was strongly associated with the outcome of debulking surgery ($p = 0.001$). Patients who had a smaller reduction in skin capillary density during treatment had a worse PFS ($p = 0.01$). Vessel density in the tumour reduced after treatment and was more significant in patients who received Bevacizumab. There was no correlation between SCD and tumour vascularity.

Conclusion* Skin capillary rarefaction occurs during both cytotoxic and anti angiogenic treatment in women with ovarian cancer. SCD could be useful as a biomarker of response to treatment and cancer outcomes and act as a surrogate marker of angiogenesis in cancer. It is a reproducible, cheap and non-invasive investigation that is acceptable to patients and shows promise in helping to guide treatment and prognostic information in the era of personalised medicine.

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ABSTRACT WITHDRAWN

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AVELUMAB ALONE IN PLATINUM-RESISTANT/REFRACTORY OVARIAN CANCER: SELECTED BIOMARKER ANALYSES FROM THE JAVELIN OVARIAN 200 TRIAL

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Introduction/Background* In the randomized phase 3 JAVELIN Ovarian 200 trial (N=566), avelumab alone or combined with pegylated liposomal doxorubicin (PLD) did not significantly prolong progression-free survival (PFS; blinded independent central review) or overall survival (OS) vs PLD alone in patients with platinum-resistant/refractory ovarian cancer (PRROC). Here, we report exploratory biomarker analyses associated with outcomes in the avelumab alone arm.

Methodology Biomarkers analyzed in tumour tissue or blood were somatic and germline mutations by whole-exome sequencing and whole-transcriptomic profiling by RNAseq. Associations were assessed using the Cox proportional hazards

model. For continuous biomarkers, hazard ratios (HRs) and 95% CIs were reported using a median cutoff.

Result(s)* Within the avelumab alone arm, higher expression of CD8+ T-cell signature correlated with longer PFS (HR, 0.61 [95% CI 0.43-0.87]), and higher tumour mutational burden (> 0.6 mut/Mb) and presence of the high-affinity *FCGR2A* allele correlated with longer OS (HR [95% CI], 0.63 [0.42-0.96] and 0.53 [0.34-0.83], respectively), while presence of APOBEC and homologous recombination deficiency (HRD) mutational signatures were associated with shorter OS (HR [95% CI], 2.17 [1.22-3.89] and 1.68 [1.07-2.62], respectively). In patients with PFS of < 6 months, a lower score for several signatures, including P53 and angiogenesis, predicted better outcomes within the avelumab alone arm (HR [95% CI], 0.37 [0.23-0.60] and 0.52 [0.33-0.82], respectively). *BRCA1/2* mutations (germline and/or somatic) were not associated with improved outcomes. Within the avelumab alone arm, higher expression of TGF- β signaling, estrogen receptor early expression signature, and epithelial-to-mesenchymal transition gene signatures correlated with shorter OS (HR [95% CI], 1.64 [1.10-2.47], 1.63 [1.09-2.45], and 1.57 [1.05-2.35], respectively). Higher expression of signatures for mesenchymal cells, cancer-associated fibroblasts, and fat cells were marginally associated with shorter OS (HR [95% CI], 1.47 [0.97-2.23], 1.45 [0.95-2.21], and 1.50 [0.99-2.27], respectively). Multivariable analyses are ongoing.

Conclusion* Although JAVELIN Ovarian 200 did not meet its primary endpoints, these analyses indicate potential subgroups of patients who could have improved outcomes with immunotherapy alone and provide insights into the biology of PRROC that may inform future trials.

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AVELUMAB COMBINED WITH PEGYLATED LIPOSOMAL DOXORUBICIN IN PLATINUM-RESISTANT/REFRACTORY OVARIAN CANCER: BIOMARKER ANALYSES FROM JAVELIN OVARIAN 200

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