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Oral Plenary

Plenary III

Oncolytic Vaccinia (Olvi-Vec) Primed Immunochemotherapy in Platinum-Resistant/Refractory Ovarian Cancer

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Introduction: Intraperitoneal oncolytic vaccinia virus (Olvi-Vec) was administered to heavily pretreated patients with platinum-resistant/refractory ovarian cancer (PRROC) followed by intravenous carboplatin-doublet (CD) ± bevacizumab (Bev) in a Phase-2 trial (NCT02759588). Primary objectives: RECIST overall response rate (ORR) & progression-free survival (PFS).

Methods: Patients with PRROC who progressed after most recent therapies received 2 days of Olvi-Vec followed by CD±Bev, then maintenance with single-agent therapies ± Bev. Pre-&post-virotherapy tumor biopsies were obtained for translational analyses.

Results: 27 patients enrolled: median 4 prior regimens, 82% prior Bev, 52% platinum-refractory and 48% platinum-resistant. Mean cycles of CD±Bev were 6(±3). Median follow-up was 26.5 months. RECIST ORR was 54% (95%CI:33-74%): 2(8%) complete response, 11(46%) partial response; 8(33%) stable disease. Median duration of response was 7.6 months (95%CI:3.7-9.6). Clinical benefit rate was 88%. Median PFS was 11.0 months (95%CI:6.7–13.0), and PFS-6-month was 77%. CA-125 ORR was 85% (95%CI:65–96%). There were no Grade 4 adverse events with virotherapy. Performance status was preserved/improved in 24 (89%) patients while on CD±Bev. Post-virotherapy intra-tumoral infiltration of CD8+ T-cells and upregulation of STAT1 expression (p=0.008) were demonstrated.

Conclusions: Despite PRROC, prior bevacizumab, and progression on last therapy, the majority of patients achieved RECIST response with median PFS exceeding their prior line of therapy. Virus-induced changes in the tumor microenvironment may explain the apparent clinical reversal of platinum resistance.