Poster 44: Real-world efficacy and practice patterns of mirvetuximab soravtansine in ovarian cancer

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Topic
Ovarian

Objectives
Mirvetuximab soravtansine-gynx (MIRV) is an antibody-drug conjugate that targets folate receptor alpha (FRα) and is approved for the treatment of platinum-resistant epithelial ovarian cancer. Real-world outcomes and approaches to MIRV sequencing remain poorly defined. This study characterizes efficacy, safety, and real-world treatment patterns among patients with epithelial ovarian cancer treated with MIRV.

Methods
This retrospective analysis included patients with histologically confirmed epithelial ovarian, fallopian tube, or primary peritoneal carcinoma who received MIRV between January 2023-May 2025 at an academic cancer center. Tumor response and disease progression were assessed radiographically using RECIST v1.1. Efficacy was assessed via objective response rate (ORR) and progression-free survival (PFS).

Results
77 patients were included. Median age at MIRV initiation was 65.8 years (range 30.6-85.3). The majority of patients had high-grade serous histology (96.1%) with advanced stage disease (61.0% stage III, 36.4% stage IV). Median number of prior lines of therapy was 4 (range 0-11). 83.1% of patients demonstrated FRα expression in 75% of tumor cells and 15.6% demonstrated expression in 20-74% of tumor cells. MIRV was administered predominantly in the platinum-resistant setting (90.9%). 92.2% of patients were treated with an initial dosing of 6 mg/kg adjusted ideal body weight, and 35.1% required a dose reduction. 15.6% of patients had MIRV given in combination with bevacizumab (15 mg/kg). Overall ORR was 40.3% (95% CI: 28.5-53.0) with 2 complete responses (CR) and 25 partial responses (PR). For those treated with single agent MIRV, ORR was 36.4% (95% CI: 24.1-50.2) with 2 CR and 18 PR. For those treated with combination therapy with MIRV and bevacizumab, ORR was 58.3% (95% CI: 27.7-84.8) with all 7 PR. ORR was 42.9% (95% CI: 11.8-79.8) for those with 0-1 prior lines of therapy, 40.7% (95% CI: 22.1-61.9) for those with 2-3 prior lines, and 39.4% (95% CI: 22.9-57.9) for those with 4+ prior lines. Median PFS was 5.0 months (95% CI: 3.8-6.2). 9.1% of patients discontinued treatment due to toxicity, with concerns including eye toxicity (2.6%), cytopenia (2.6%), GI toxicity (1.3%), fatigue (1.3%), and pneumonitis (1.3%). Following treatment with MIRV, patients received diverse subsequent therapies including 9.1% of patients who went on to enroll in clinical trials and 10.4% who transitioned to hospice.

Conclusions
MIRV demonstrated meaningful clinical activity and a toxicity profile consistent with prior reports even in a heavily pretreated population. These real-world findings support MIRV's role in platinum-resistant disease and provide preliminary data to inform patient selection and treatment sequencing strategies for incorporating MIRV into routine practice in the context of an evolving therapeutic landscape for recurrent ovarian cancer.