Poster 71: Antibody–Drug Conjugates in Gynecologic Cancer Patients with Brain Metastases

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Topic
Translational Research

Objectives
Brain metastases (BM) from gynecologic malignancies are rare and associated with poor prognosis. Although antibody–drug conjugates (ADCs) demonstrate systemic efficacy, their intracranial activity remains poorly characterized as patients with central nervous system (CNS) disease are typically excluded from clinical trials. We evaluated outcomes of gynecologic cancer patients with BM treated with ADCs.

Methods
We conducted a single-center retrospective case series of gynecologic cancer patients who developed BM and received ADC therapy between January 2022 and December 2025. Eight patients received ADCs following BM diagnosis. Clinical characteristics, treatment patterns, and outcomes, including CNS-progression free survival (PFS), extracranial PFS (ePFS), and overall survival (OS), were analyzed. Survival outcomes were compared between 3:1 propensity score matching (PSM) to patients receiving ADCs without BM and to patients treated with ADCs prior to BM development using Kaplan–Meier methods.

Results
All patients received radiation therapy (RT) or underwent craniotomy at BM presentation. At CNS progression, two patients (28.6%) were managed with ADC alone with deferred RT. Time to median CNS-PFS survival probability with mirvetuximab soravtansine (MIRV) was 5.5 months (95% CI, 1.8–NA) in 4 of 6 patients, 6.8 months (NA) in 1 of 2 trastuzumab deruxtecan (T-DXd)-treated patients, and 9.3 months (NA) in the single patient treated with tisotumab vedotin (TV). Time to median ePFS was 5.2 months (95% CI, 4.0–14.9) with MIRV, 5.3 months (NA) with TV, and not estimable with T-DXd. Time to median OS with ADC was 10.6 months (95% CI, 6.1–21.8) with MIRV, 11.4 months (NA) with T-DXd, and 39.3 months with TV. After PSM, patients with BM demonstrated OS and ePFS comparable to patients without CNS disease. Additionally, survival outcomes were similar to those who received ADCs prior to BM diagnosis.

Conclusions
ADC therapy was associated with clinically meaningful disease control in gynecologic cancer patients. Outcomes were comparable to those in patients without CNS disease, suggesting potential intracranial activity and/or effective stabilization with local control with RT or craniotomy, permitting continuation of systemic ADC therapy. These findings should be interpreted with caution given the limited cohort size. Ongoing accrual of patients treated with ADCs and BM, including those with active CNS disease, is essential to better define CNS efficacy and inform inclusion of this historically understudied population in future trials.