Introduction/Background Breast cancer gene (BRCA) mutation and homologous recombination deficiency (HRD) are useful predictive and prognostic biomarkers in epithelial ovarian cancer but their effect on the efficacy of hyperthermic intraperitoneal chemotherapy (HIPEC) has not been adequately studied. We aimed to assess the survival outcomes of interval debulking surgery (IDS) with HIPEC in advanced epithelial ovarian cancer (EOC) according to BRCA or HRD status.

Methodology Data of all women who underwent IDS HIPEC between March 2018 and December 2022 at Tata Medical Center and had their BRCA or HRD status available were retrieved from a prospective HIPEC database. As per institutional protocol, HRD testing was offered only to women without germline BRCA mutations. Patients were divided into three groups (BRCA+, BRCA-/HRD+, and BRCA-/HRD-) for survival analysis.

Results In the cohort of 77 women who underwent IDS HIPEC during the study period, BRCA or HRD status was available for 54. Germline BRCA1 mutations were detected in 16.7% and BRCA2 mutations in 20.4% (BRCA+ 37%). BRCA-/HRD+ were 13% and BRCA-/HRD- were 50%. Key characteristics, including poly (ADP-ribose) polymerase inhibitor maintenance, were not significantly different among the groups (P = .6). The median progression-free survival (PFS) for BRCA+, BRCA-/HRD+, and BRCA-/HRD- was 27 months (95% CI 7–47), 23.4 months (95% CI 21.3–25.4), and 26.9 months (95% CI 20.9–32.9) respectively (P = .78). The median PFS was not different between germline BRCA mutated and wild-type [27.1 months versus 26.9 months, HR 1.3 (95% CI 0.53–3.2)]. The median overall survival for BRCA+, BRCA-/HRD+, and BRCA-/HRD- was 43.7 months (95% CI 19.9–67.5), 32.5 months (95% CI 24.1–40.9), and 39.9 months (35–44.8) respectively (P = .69). Overall survival was similar between germline BRCA mutated and wild-type [HR 1.5 (95% CI 0.37–5.8)].

Conclusion BRCA or HRD status did not affect survival after IDS HIPEC in women with advanced EOC.

Disclosures None