TREATMENT PATTERNS AND OUTCOMES AFTER PROGRESSION ON POLY-ADP RIBOSE POLYMERASE INHIBITOR MAINTENANCE THERAPY

Introduction/Background poly-ADP ribose polymerase inhibitors (PARPi) are approved as maintenance therapy in epithelial ovarian cancer (EOC) after response to last platinum-based therapy both in first line and in the platinum-sensitive relapse. Although they have modified clinical practice, few data are available on post-progression treatments and response.

Methodology We evaluated, in a real-life population, treatment patterns and response after PARPi therapy, evaluating duration of response (DOR) to first line after PARPi, progression free survival (PFS) from the beginning of PARPi to progression on the subsequent chemotherapy and overall survival (OS). We retrospectively analyzed patients treated with PARPi maintenance therapy and progressed on it. Clinico-pathological characteristics and treatment outcomes were collected from medical records.

Results 80 EOC patients were identified. 13% started PARPi after front-line chemotherapy, while 87% in the relapsed setting. 21% received olaparib, 73% niraparib, 6% rucaparib. 25% were BRCA mutated. Median duration of PARPi was 7.7 months (IQR 5.4–16.0). In the BRCA-mutated cohort (25%) it was 12.3 months (IQR 9.1–15.8), 7.1 (IQR 4.4–17.5) in the non BRCA-mutated. Following PARPi progression, 75% of patients received chemotherapy, 26% receiving platinum. Response rate (RR) to first line therapy after PARPi was 31%. DOR was 3.8 months (IQR 2.8–5.3). Based on chemotherapy subgroups, it was 3.8 months (IQR 3.5–4.4) for platinum-doublet, 4.8 (IQR 2.5–6.6) for platinum monotherapy, 3.8 (IQR 2.8–6.0) for trabectedin and pegylated liposomal doxorubicin (PLD) and 4.0 (IQR 3.1–5.3) for other non-platinum agents. Median PFS was 19.1 months (95%CI 14.4–23.0); 8.2 (95% CI 6.5–11.3) and 17.0 months (95%CI 14.4–20.8) for platinum-resistant and sensitive disease, respectively. OS was 25 months (95% CI 20.3–31.7).

Conclusion Post-progression treatments and response after PARPi suggest that RR and DOR to subsequent therapy are lower than expected even for platinum-sensitive patients. With the intrinsic limits of this study, it highlights the need of clinical research in post PARPi treatments.