**Introduction/Background**

Ovarian cancer is the leading cause of cancer death from gynaecologic malignancy in the UK. Over the last few years, Poly ADP ribose polymerase inhibitors (PARPis) becomes the mainstay maintenance treatment for patients with ovarian cancer including those patients with BRCA1/BRCA2 mutations. (PARPi) has shown efficacy as a maintenance treatment in platinum-sensitive relapsed ovarian cancer.

**Methodology**

We retrospectively evaluated patients with (HGSOC) treated with maintenance Olaparib (300 mg bid, tablets), Niraparib (300 mg OD) and Rucaparib (600 mg BD) who received ≥2 platinum-based chemotherapy (ChT) and had a partial or complete response to the last platinum-based regimen. Patients who received Olaparib were BRCA 1/2 mutated (germline and/or somatic) and those who received Niraparib or Rucaparib were BRCA 1/2 wild-type. Study endpoints were progression-free survival (PFS), overall survival (OS) and adverse events (AEs).

**Results**

In the period between September 2018 and December 2021, 36 patients received maintenance PARPis (9 received Olaparib and 11 received Rucaparib&16 received Niraparib). The median age was 55 years, and all patients had ECOG ≤1. The majority had an ovarian primary tumour with high grade serous histology (88%). Most patients (77.6%) received 2 prior platinum regimens. Twelve patients died (2 had Olaparib 16.6%, 2 had Rucaparib 16.6% and 8 had niraparib 66.6%). Median PFS was 9.8 months (median PFS for BRCA 1/2 mutated and BRCA 1/2 wild-type patients was 12.1 and 9 months, respectively). Toxicities been assessed with CTCAE Grade ≥3 AEs (anaemia, thrombocytopenia, neutropenia and nausea & elevated LFT) occurred in 8 patients (15.4% with niraparib). Treatment was suspended in 25 patients due to disease progression (3 with olaparib, 8 Rucaparib &13 with niraparib).

**Conclusion**

This retrospective study provides real-world data which demonstrating the efficacy and safe toxicity profile of PARPi as a maintenance therapy in relapsing BRCA-mutated and non-mutated high-grade serous or endometrioid ovarian cancers.