Abstract Number: 25

Session: Scientific Plenary II

Title: Final overall survival results from SOLO3: Phase III trial assessing olaparib monotherapy versus non-platinum chemotherapy in heavily pretreated patients with germline BRCA1 and/or BRCA2-mutated platinum-sensitive relapsed ovarian cancer

Objectives In the open-label Phase III SOLO3 trial (NCT02282020), olaparib monotherapy provided clinically relevant and statistically significant improvements in objective response rate (ORR; primary endpoint) and progression-free survival (PFS; secondary endpoint), compared with single-agent non-platinum chemotherapy, in patients (pts) with germline *BRCA1* and/or *BRCA2*-mutated (gBRCAm) platinum-sensitive relapsed ovarian cancer (PSROC) who had received ≥2 prior lines of platinum-based chemotherapy (Penson *et al. JCO* 2020). We report final overall survival (OS) and second disease progression results from SOLO3.

Methods Pts were randomised (2:1) to olaparib tablets (300 mg bid) or single-agent non-platinum chemotherapy treatment of physician's choice (TPC; paclitaxel [P], topotecan [T], gemcitabine [G], or pegylated liposomal doxorubicin [PLD]). Study treatment continued until objective radiological disease progression, unacceptable toxicity, or other discontinuation criteria were met. The time from randomisation to second progression or death (PFS2) and OS were secondary endpoints. As prespecified, this analysis was performed at approximately 60% data maturity for OS.

Results 266 pts were randomised (olaparib, n=178; TPC, n=88 [PLD, n=47; P, n=20; G, n=13; T, n=8]); 12 (14%) TPC pts withdrew before receiving study treatment. At the final data cut-off (DCO; April 16, 2021), 19 (11%) olaparib pts versus no TPC pts were still receiving study treatment; the percentage of pts who left the study prior to death was approximately 2.3 times higher in the TPC arm (22 pts [25%]) than in the olaparib arm (19 pts [11%]). Following disease progression, the majority of pts received subsequent anticancer therapy (119 of 178 [67%] olaparib pts vs 54 of 88 [61%] TPC pts received ≥1 subsequent anticancer regimen); 3 of 178 (2%) olaparib pts versus 23 of 88 (26%) TPC pts received a PARP inhibitor in their first subsequent line of therapy, with 9 of 178 (5%) versus 33 of 88 (38%) pts, respectively, receiving a PARP inhibitor in any subsequent line of therapy. At the final DCO, PFS2 favoured olaparib over TPC, although the between-group difference was not statistically significant, and OS was similar in the olaparib and TPC groups (see table). Adverse events (AEs) were consistent with the known safety profile of olaparib and with previous SOLO3 analyses; no new safety signals were identified. Discontinuation of study treatment because of AEs occurred in 18 of 178 (10%) olaparib pts versus 15 of 76 (20%) TPC pts in the safety analysis set. Circulating tumour DNA analyses are ongoing.

Conclusions In the primary analysis of SOLO3, olaparib monotherapy improved ORR and PFS compared with single-agent non-platinum chemotherapy in heavily pretreated pts with gBRCAm PSROC. In the final analysis, PFS2 favoured olaparib monotherapy over TPC, and OS was similar in both treatment groups, supporting the use of olaparib as a chemotherapy-free treatment option in this pt population. No new safety signals were identified.

	Olaparib N=178		TPC N=88
PFS2			
Number (%) of events	114 (64)		48 (55)
Median PFS2, months	23.6		19.6
HR (95% CI)		0.80 (0.56–1.15)	
P value		0.229	
OS			
Number (%) of events	116 (65)		46 (52)
Median OS, months	34.9		32.9
HR (95% CI)		1.07 (0.76–1.49)	
P value		0.714	

CI, confidence interval; HR, hazard ratio