

**Table S1. Baseline characteristics and previous treatments in PS patients Subsequent Platinum-free regimens.**

	<b>Total N=7</b>
Age at diagnosis (years), Median [IQR]	66.4 [61.8;67.9]
Histology, n (%): HGSOc	7 (100.0%)
BRCA mutational status, n (%):	
Positive	1 (14.3%)
WT	4 (57.1%)
Variants of unknown significance (VUS)	2 (28.6%)
Other HRR genes mut, n (%):	
Positive	1 (14.3%)
Pt-based chemo immediately previous to PARPi, n (%):	
Pt monotherapy	1 (14.3%)
Pt doublet	6 (85.7%)
Months from last cycle of prior Pt to initiation of Pt immediately pre-PARPi, n (%):	
6-12m	2 (28.6%)
> 12m	4 (57.1%)
Non-available	1 (14.3%)
Number of previous lines to PARPi (including the immediately previous), Median [IQR]	2.0 [2.0;3.0]
Number of previous lines to PARPi (including the immediately previous), n (%):	
= 2	4 (57.1%)
> 2	3 (42.9%)
Number of cycles of Pt-based chemo immediately previous to PARPi, Median [IQR]	6.0 [5.0;6.5]
Best response to Pt-based chemo immediately previous to PARPi, n (%):	
PR	6 (85.7%)
SD	1 (14.3%)
Months with Pt-based CT treatment, Median [IQR]	4.2 [3.0;5.1]
PARPi, n (%):	
olaparib	2 (28.6%)
niraparib	4 (57.1%)
rucaparib	1 (14.3%)
Months with PARPi, Median [IQR]	7.4 [5.6;8.5]
Prior PARPi, n (%):	
Yes	1 (14.3%)
No	6 (85.7%)
Months from finishing Pt pre-PARPi to Pt pre-PARPi progression, Median [IQR]	8.4 [7.2;9.3]

Pt: platinum

**Table S2. Baseline characteristics and previous treatments in PS patients receiving subsequent platinum according to PFI.**

	PFI 6-12 months N=33	PFI ≥ 12 months N=41	p
Age at diagnosis (years), Median [IQR]	59.7 [55.9;67.5]	61.2 [54.0;69.2]	0.952
Histology, n (%):			1.000
HGSOc	31 (93.9%)	39 (95.1%)	
HGEOc	2 (6.1%)	2 (4.9%)	
BRCA mutational status, n (%):			0.024
Positive	10 (30.3%)	25 (61.0%)	
WT	21 (63.6%)	14 (34.1%)	
Variants of unknown significance (VUS)	2 (6.1%)	2 (4.9%)	
Other HRR genes mut, n (%):			0.081
Positive	1 (3.4%)	6 (17.1%)	
Pt-based chemo immediately previous to PARPi, n (%):			1.000
Pt monotherapy	3 (9.1%)	4 (9.8%)	
Pt doublet	30 (90.9%)	37 (90.2%)	
Months from last cycle of prior Pt to initiation of Pt immediately pre-PARPi, n (%):			0.546
6-12m	15 (45.5%)	16 (39.0%)	
> 12m	17 (51.5%)	25 (61.0%)	
Non-available	1 (3.0%)	0 (0.0%)	
Number of previous lines to PARPi (including the immediately previous), Median [IQR]	2.0 [2.0;3.0]	2.0 [2.0;3.0]	0.789
Number of previous lines to PARPi (including the immediately previous), n (%):			0.954
= 2	19 (57.6%)	25 (61.0%)	
> 2	14 (42.4%)	16 (39.0%)	
Number of cycles of Pt-based chemo immediately previous to PARPi, Median [IQR]	6.0 [5.0;6.0]	6.0 [5.0;6.0]	0.783
Best response to Pt-based chemo immediately previous to PARPi, n (%):			0.061
CR	4 (12.1%)	14 (34.1%)	
PR	27 (81.8%)	24 (58.5%)	
SD	2 (6.1%)	3 (7.3%)	
Months with Pt-based CT treatment, Median [IQR]	4.7 [3.5;5.6]	4.6 [3.7;5.1]	0.683
PARPi, n (%):			0.060
olaparib	14 (42.4%)	26 (63.4%)	
niraparib	19 (57.6%)	14 (34.1%)	
rucaparib	0 (0.0%)	1 (2.4%)	
Months with PARPi, Median [IQR]	6.5 [5.6;8.3]	14.7 [11.8;22.2]	<0.001
Prior PARPi, n (%):			0.435
No	29 (96.7%)	39 (100.0%)	
maybe	1 (3.3%)	0 (0.0%)	
Months from finishing Pt pre-PARPi to Pt pre-PARPi progression, Median [IQR]	8.8 [6.8;9.8]	17.1 [13.6;22.6]	<0.001
Months from finishing Pt pre PARPi to CT post PARPi initiation, Median [IQR]	9.5 [7.4;10.9]	19.4 [15.2;23.1]	<0.001
Included in the OREO study, n (%): Yes	0 (.%)	5 (100.0%)	.
Best response to CT administered after PARPi progression, n (%):			
CR	6 (8.1%)	2 (6.1%)	4 (9.8%)
PR	25 (33.8%)	9 (27.3%)	16 (39.0%)
SD	20 (27.0%)	10 (30.3%)	10 (24.4%)
PROG	23 (31.1%)	12 (36.4%)	11 (26.8%)
OS*	20.6 (13.6-28.9)	17.2 (13-NA)	20.6 (13.2-NA)
PFS*	6.6 (6-9.2)	6.1 (4.9-9.9)	7.2 (6.5-10.8)

Pt: platinum; PFI: progression-free interval

**Table S3. ORR, PFS and OS in PR patients.**

	<b>Total N=30</b>	<b>ssq Pt N=13</b>	<b>ssq non-Pt N=17</b>
Best response to CT administered after PARPi progression, n (%):			
PR	14 (46.7%)	6 (46.2%)	8 (47.1%)
SD	5 (16.7%)	1 (7.7%)	4 (23.5%)
PROG	11 (36.7%)	6 (46.2%)	5 (29.4%)
OS	13 (8-15.4)	10.1 (6.3-NA)	14.4 (10.7-NA)
PFS	5.1 (4.4-7)	4.7 (3.4-NA)	6.8 (5.1-NA)

Pt: platinum; ssq: subsequent