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**Supplementary Table S1. Overview of safety and treatment exposure**

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Parameter	SOLO2 [1]		NOVA [2]		ARIEL3 [3]	
	Olaparib (N = 195)	Placebo (N = 99)	Niraparib (N = 367)	Placebo (N = 179)	Rucaparib (N = 372)	Placebo (N = 189)
Grade ≥3 AEs, %	36	18	74	23	56	15
AEs leading to:						
Treatment interruption, %	45	18	69	5	64	10
Dose reduction, %	25	3	66	15	55	4
Treatment discontinuation, %	11	2	15	2	13	2
Median duration of treatment, months	19.4	5.6	NR	NR	8.3	5.5

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AE, adverse event; NR, not reported.

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**Supplementary Table S2. Summary of PARP inhibitor safety profiles in randomised phase III trials (≥20% any grade or ≥5% grade ≥3 in either arm)**

Adverse event, % of patients	SOLO2 [1]				NOVA [2]				ARIEL3 [3]			
	Olaparib (N = 195)		Placebo (N = 99)		Niraparib (N = 367)		Placebo (N = 179)		Rucaparib (N = 372)		Placebo (N = 189)	
	Any grade	Grade ≥3	Any grade	Grade ≥3	Any grade	Grade ≥3	Any grade	Grade ≥3	Any grade	Grade ≥3	Any grade	Grade ≥3
<b>Haematological</b>												
Anaemia <sup>a</sup>	44	19	8	2	50	25	7	0	37	19	6	1
Thrombocytopenia <sup>a</sup>	14	1	3	1	61	34	6	1	28	5	3	0
Neutropenia <sup>a</sup>	19	5	6	4	30	20	6	2	18	7	5	1
Leucopenia	10	2	1	0		NR				NR		
<b>Non-haematological</b>												
Nausea	76	3	33	0	74	3	35	1	75	4	37	1
Fatigue/asthenia <sup>a</sup>	66	4	39	2	59	8	41	1	69	7	44	3
Dysgeusia	27	0	7	0	10	0	4	0	39	0	7	0
Constipation	21	0	23	3	40	1	20	1	37	2	24	1

Vomiting	37	3	19	1	34	2	16	1	37	4	15	1
Increased ALT/AST		NR				NR			34	10	4	0
Diarrhoea	33	1	20	0	19	<1	21	1	32	1	22	1
Abdominal pain	24	3	31	3	23	1	30	2	30	2	26	1
Headache	25	1	13	0	26	<1	9	0	18	<1	16	1
Decreased appetite	22	0	11	0	25	<1	15	1	23	1	14	0
Insomnia		NR			24	<1	7	0	14	0	8	0
Hypertension		NR			19	8	4	2		NR		

<sup>a</sup>Combined terms (not necessarily the same between trials).

ALT, alanine aminotransferase; AST, aspartate aminotransferase; NR, not reported.

## Supplementary references

1. Pujade-Lauraine E, Ledermann JA, Selle F et al. Olaparib tablets as maintenance therapy in patients with platinum-sensitive, relapsed ovarian cancer and a *BRCA1/2* mutation (SOLO2/ENGOT-Ov21): a double-blind, randomised, placebo-controlled, phase 3 trial. *Lancet Oncol* 2017; 18: 1274–1284.
2. Mirza MR, Monk BJ, Herrstedt J et al. Niraparib maintenance therapy in platinum-sensitive, recurrent ovarian cancer. *N Engl J Med* 2016; 375: 2154–2164.
3. Coleman RL, Oza AM, Lorusso D et al. Rucaparib maintenance treatment for recurrent ovarian carcinoma after response to platinum therapy (ARIEL3): a randomised, double-blind, placebo-controlled, phase 3 trial. *Lancet* 2017; 390: 1949–1961.