

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: Potentially pathogenic copy number alterations, rearrangements and short variants reported by the Foundation Medicine T5a test in HGSOC PDX.

File Name: Supplementary Data 2

Description: Dose response observed in nine independent HGSOC PDX to rucaparib in vivo (150mg kg⁻¹, 300mg kg⁻¹ and 450mg kg⁻¹).

File Name: Supplementary Data 3

Description: Re-sequencing of chemo-naïve, cisplatin and rucaparib treated PDX samples from four *BRCA1/2*-mutant HGSOC for secondary mutations.

File Name: Supplementary Data 4

Description: Summary of *BRCA1* promoter methylation detected by MS-ddPCR in the archival chemo-naïve and post-treatment tumor samples in four *BRCA1*-methylated HGSOC (#11, #62, #48, #169).

File Name: Supplementary Data 5

Description: Zygosity status of *BRCA1* promoter methylation in HGSOC in relation to response to rucaparib treatment in the ARIEL2 Part 1 clinical trial.

File Name: Supplementary Data 6

Description: List of genes analysed by BROCA v6 assay.