Supplementary Material



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Figure S1: Detailed response to AsiDNA (A) or olaparib (B). Mean tumor growth of all mice (grey line). As response was heterogeneous in both treatments, groups were divided as responder and non responder according to their survival to allow longer growth tumor follow up: responder (A,B, n=4), survival>100 days and non-responder (A,n=4; B, n=5), survival<100). Grey rectangle, progression time before response to treatment; Arrows, beginning of cycles of treatment.



Suplementary figure S2: Average weight fluctuations with various treatments (A) single injection of increasing doses of carboplatin (50, 100, 150, 200, 250mg/kg). \*1/3 deaths observed at day 42 following carboplatin treatment at a concentration of 100mg/kg (33% mortality). 100% mortality was observed at carboplatin concentrations of 150, 200 and 250mg/kg. (B) three cycles of combinde treatment with carboplatin (3 x 80mg/kg) with AsiDNA (12 x 15mg) or olaparib (15 x 200mg/kg)



**Suplementary Figure S3: Effect of a single administration of carboplatin (80mg/kg).** (A) Average total cell counts of bone marrow (BM), spleens and thymus at 0 (black), 7 (light grey), 10 (grey) or 21 (dashed) days post treatment (B) Bone marrow average absolute cell number of the erythroid lineage at 0, 7, 10 or 21 days post treatment : Basophilic erythroblasts (black), Polychromatic erythroblasts (light grey) and Orthochromatic erythroblasts (mid grey) (C) Bone marrow average absolute cell number of Pre/Pro B lymphocytes (grey) and Mature B lymphocytes (black) at 0, 7, 10 or 21 days post treatment.



**Suplementary Figure S4: Effect of three cycles of different treatments.** Different combination of Carboplatin 80mg/kg, AsiDNA 8mg or 15mg and Olaparib 200mg/kg were used to treat mice. Average total cell number 7 and 21 days post treatment of (A) Bone marrow erythroid lineage : Basophilic erythroblasts (black), Polychromatic erythroblasts (light grey) and Orthochromatic erythroblasts (mid grey), (B) spleens and (C) thymus.

Antibody	Manufacturer/catalog	Cell type detected
	ue No.	
Rat Anti-mouse	BD Biosciences	Entire B cell lineage (Pre-pro-B cell,
CD45R/B220 Hu-PE-clone	553089	pro-B cell, pre-B cell, immature B cell,
RA3-6B2		mature B cell)
Rat anti-mouse CD90.2	BD Biosciences	T lymphocytes (T cell precursors and
(Thy1.2)-FITC-clone 53-2.1	553004	mature T cells)
Rat anti-mouse TER-119-	BD Biosciences	Erythroid lineage (erythroid
PE/erythroid cells	553673	precursors, reticulocytes and
		erythrocytes)
Rat anti-mouse CD71-FITC	BD Biosciences	Erythroid lineage (erythroid
	553266	progenitors and precursors)
Rat anti-mouse Ly-6G and	BD Biosciences	Granulocytes
Ly-6C (Gr-1) Ms-PE-clone	553128	
RB6-8C5		
Rat anti-mouse CD11b	BD Biosciences	Macrocytes, megakaryocytes,
(Mac-1)-FITC-clone M1/70	557396	monocytes, activated lymphocytes
PE Rat IgG2b -clone A95	BD Biosciences	Isotype control
	553989	
FITC IgG2a	BD Biosciences	Isotype control
	553456	

Table S1: Antibodies used for flow cytometry.

Treatment	Relative risk (p value)	Mice (number)
Vehicle		6
Carboplatin	0.37 (4.3 10-2)	7
AsiDNA	0.25 (4.5 10-3)	7
Carboplatin + AsiDNA	0.14 ( 3 10-4)	8
Vehicle		6
Carboplatin	0.36 (5 10-2)	6
Olaparib	0.40 (5.2 10-2)	9
Carboplatin + Olaparib	0.20 (3 10-4)	10

 Table S2. Efficacy of combination treatments