Supplemental Table 1. Toxicity by Grade; Cycle 1-Carboplatin and Paclitaxel (n=46).

Event	Any Grade	Grade 1	Grade 2	Grade 3	Grade 4
	number of patient (%)*				
Any adverse event	40 (87)	31 (67)	27 (59)	18 (39)	12 (26)
Neutrophil count decreased	26 (56)	0	6 (13)	9 (20)	11 (24)
White blood cell decreased	21 (46)	4 (9)	6 (13)	8 (17)	3 (6)
Nausea	13 (28)	11 (24)	1 (2)	1 (2)	0
Alopecia	12 (26)	12 (26)	0	0	0
Fatigue	11 (24)	8 (17)	3 (6)	0	0
Anemia	10 (22)	1 (2)	8 (17)	0	1 (2)
Vomiting	7 (15)	4 (9)	2 (4)	1 (2)	0
Diarrhea	7 (15)	5 (11)	2 (4)	0	0
Peripheral sensory neuropathy	6 (13)	6 (13)	0	0	0
Platelet count decreased	5 (11)	1 (2)	3 (6)	0	1 (2)
Pain in extremity	4 (9)	1 (2)	3 (6)	0	0
Myalgia	4 (9)	2 (4)	2 (4)	0	0
Dyspepsia	4 (9)	3 (6)	1 (2)	0	0
Insomnia	3 (6)	2 (4)	1 (2)	0	0
Hyponatremia	2 (4)	1 (2)	0	1 (2)	0
Hypocalcemia	2 (4)	0	2 (4)	0	0
Lymphocyte count decreased	2 (4)	0	2 (4)	0	0

Arthralgia	2 (4)	1 (2)	1 (2)	0	0
Dyspnea	2 (4)	2 (4)	0	0	0
Mucositis, oropharyangeal	2(4)	2 (4)	0	0	0
Constipation	2 (4)	3 (6)	0	0	0
Muscle weakness	2 (4)	1(2)	1 (2)	0	0
Thromboembolic event	1 (2)	0	0	1 (2)	0
Dehydration	1 (2)	0	1 (2)	0	0
Rash maculopapular	1 (2)	0	1 (2)	0	0
Anorexia	1 (2)	0	1 (2)	0	0
Flu like symptoms	1 (2)	1 (2)	0	0	0
Hiccups	1 (2)	1 (2)	0	0	0
Tremor	1 (2)	1 (2)	0	0	0
Alkaline phosphatase increased	1 (2)	1 (2)	0	0	0
Dysgeusia	1 (2)	1 (2)	0	0	0
Hypercalcemia	1 (2)	1 (2)	0	0	0
Hypophosphatemia	1 (2)	1 (2)	0	0	0
Palmar-plantar erythrodysesthesia syndrome	1 (2)	1 (2)	0	0	0
Fever	1 (2)	1 (2)	0	0	0
Gingival pain	1 (2)	1 (2)	0	0	0
Bone pain	1 (2)	1 (2)	0	0	0

Supplemental Table 2. Toxicity by Grade, All Cycles (n=73).

Event	Any Grade	Grade 1	Grade 2	Grade 3	Grade 4
			number of patients (%)		
Any adverse event	72 (99)	65 (89)	63 (86)	50 (68)	46 (63)
Neutrophil count decreased	60 (82)	2 (3)	3 (4)	13 (18)	42 (57)
White blood cell decreased	52 (71)	4 (5)	16 (22)	22 (30)	10 (14)
Fatigue	46 (63)	25 (34)	16 (22)	5 (7)	0
Anemia	43 (59)	3 (4)	25 (34)	14 (19)	1 (1)
Nausea	41 (56)	28 (38)	9 (12)	4 (5)	0
Platelet count decreased	36 (49)	8 (11)	17 (23)	8 (11)	3 (4)
Peripheral sensory neuropathy	30 (41)	22 (30)	5 (7)	3 (4)	0
Alopecia	26 (36)	13 (18)	13 (18)	0	0
Vomiting	21 (29)	12 (16)	7 (10)	2 (3)	0
Diarrhea	19 (26)	15 (21)	4 (5)	0	0
Lymphocyte count decreased	15 (21)	2 (3)	8 (11)	4 (5)	1 (1)
Anorexia	15 (21)	12 (16)	3 (4)	0	0
Myalgia	14 (19)	10 (14)	4 (5)	0	0
Constipation	13 (18)	10 (14)	3 (4)	0	0
Arthralgia	10 (14)	8 (11)	2 (3)	0	0
Hyponatremia	9 (12)	6 (8)	0	2 (3)	1 (1)
Muscle weakness	8 (11)	5 (7)	2 (3)	1 (1)	0
Dyspepsia	8 (11)	6 (8)	2 (3)	0	0
Fever	8 (11)	5 (7)	1 (1)	2 (3)	0
Hypocalcemia	7 (10)	2 (3)	3 (4)	2 (3)	0
Dyspnea	7 (10)	6 (8)	1 (1)	0	0

Alkaline phosphatase increased	7 (10)	6 (8)	1 (1)	0	0
Mucositis, oropharangeal	7 (10)	7 (10)	0	0	0
Dysgeusia	7 (10)	7 (10)	0	0	0
Pain in extremity	6 (8)	2 (3)	3 (4)	1 (1)	0
Hypomagnesemia	6 (8)	4 (5)	2 (3)	0	0
Creatinine increased	6 (8)	5 (7)	1 (1)	0	0
Aspartate aminotransferase increased	6 (8)	5 (7)	1 (1)	0	0
Cough	6 (8)	6 (8)	0	0	0
Weight loss	5 (7)	2 (3)	2 (3)	1 (1)	0
Dizziness	5 (7)	4 (5)	0	1 (1)	0
Insomnia	5 (7)	4 (5)	1 (1)	0	0
Thromboembolic event	4 (5)	0	1 (1)	2 (3)	1 (1)
Allergic reaction	4 (5)	3 (4)	0	0	1 (1)
Hypokalemia	4 (5)	2 (3)	0	2 (3)	0
Hypoalbuminemia	4 (5)	2 (3)	2 (3)	0	0
Edema limbs	4 (5)	2 (3)	2 (3)	0	0
Rash, maculopapular	4 (5)	3 (4)	1 (1)	0	0
Headache	4 (5)	3 (4)	1 (1)	0	0
Alanine aminotransferase increased	4 (5)	4 (5)	0	0	0
Febrile neutropenia	3 (4)	0	0	1 (1)	2 (3)
Hypophosphatemia	3 (4)	1 (1)	0	2 (3)	0
Dehydration	3 (4)	0	2 (3)	1 (1)	0
Pruritus	3 (4)	3 (4)	0	0	0
Bone pain	3 (4)	3 (4)	0	0	0

Sepsis	2 (3)	0	0	0	2 (3)
Dysphagia	2 (3)	1 (1)	0	1 (1)	0
Blood bilirubin increased	2 (3)	1 (1)	1 (1)	0	0
Pain	2 (3)	1 (1)	1 (1)	0	0
Flushing	2 (3)	2 (3)	0	0	0
Flu-Like symptoms	2 (3)	2 (3)	0	0	0
Hiccups	2 (3)	2 (3)	0	0	0
Anxiety	2 (3)	2 (3)	0	0	0
Abdominal pain	2 (3)	2 (3)	0	0	0
Chills	2 (3)	2 (3)	0	0	0
Dry mouth	2 (3)	2 (3)	0	0	0
Gastritis	2 (3)	2 (3)	0	0	0
Rash acneiform	2 (3)	2 (3)	0	0	0
Pulmonary Embolism	1 (1)	0	0	1 (1)	0
Atrial fibrillation	1 (1)	0	0	1 (1)	0
Presyncope	1 (1)	0	0	1 (1)	0
Enterocolitis infectious	1 (1)	0	0	1 (1)	0
Syncope	1 (1)	0	0	1 (1)	0
Cytokine release syndrome	1 (1)	0	1 (1)	0	0
Back pain	1 (1)	0	1 (1)	0	0
Lung infection	1 (1)	0	1 (1)	0	0
Hematuria	1 (1)	0	1 (1)	0	0
Hypercalcemia	1 (1)	0	1 (1)	0	0
Erythema multiforme	1 (1)	0	1 (1)	0	0
Upper respiratory infection	1 (1)	0	1 (1)	0	0

Laryngitis	1 (1)	0	1 (1)	0	0
Hypertension	1 (1)	0	1 (1)	0	0
Acute kidney injury	1 (1)	0	1 (1)	0	0
Blurred vision	1 (1)	1 (1)	0	0	0
Injection site reaction	1 (1)	1 (1)	0	0	0
Tremor	1 (1)	1 (1)	0	0	0
Palmar-plantar erythrodysesthesia syndrome	1 (1)	1 (1)	0	0	0
Bronchospasm	1 (1)	1 (1)	0	0	0
Esophagitis	1 (1)	1 (1)	0	0	0
Gingival pain	1 (1)	1 (1)	0	0	0
Hyperhidrosis	1 (1)	1 (1)	0	0	0
Urinary incontinence	1 (1)	1 (1)	0	0	0
Sinus disorder	1 (1)	1 (1)	0	0	0
Flatulence	1 (1)	1 (1)	0	0	0
Stomach pain	1 (1)	1 (1)	0	0	0
Ataxia	1 (1)	1 (1)	0	0	0
Dry skin	1 (1)	1 (1)	0	0	0
Generalized muscle weakness	1 (1)	1 (1)	0	0	0
Purpura	1 (1)	1 (1)	0	0	0
Skin ulceration	1 (1)	1 (1)	0	0	0
Dysesthesia	1 (1)	1 (1)	0	0	0
Depression	1 (1)	1 (1)	0	0	0
Paresthesia	1 (1)	1 (1)	0	0	0
Facial nerve disorder	1 (1)	1 (1)	0	0	0

Supplemental Table 3. Mean (standard deviation) pharmacokinetic parameters of veliparib alone, first dose (day 1) and veliparib at steady-state in the presence of carboplatin and paclitaxel (CT, day 3).

	D1, CT -					D3, CT +		$Ratio_{D3/D1}$	
Dose (mg) (N/N)	C_{max} (ng/mL)	T_{max} (h)	AUC_{0-inf} (µg•h/mL)	$T_{1/2}$ (h)	CL/F (L/h)	C_{max} (ng/mL)	AUC_{0-12} (µg•h/mL)	C_{max}	AUC_{0-8}
10 (1/1)	45	3.0	0.42	5.6	23.7	66	0.50	1.47	1.46
20 (10/11)	124 (43)	1.6 (1.1)	0.86 (0.27)	6.0 (1.5)	25.4 (7.8)	126 (46)	0.78 (0.30)	1.08	1.21
40 (16/15)	298 (222)	1.4 (0.8)	1.79 (1.28)	4.3 (1.1)	28.3 (10.9)	240 (77)	1.36 (0.44)	1.02	1.10
50 (5/5)	330 (150)	1.3 (0.3)	1.92 (0.51)	5.9 (2.4)	27.5 (6.9)	272 (55)	1.87 (0.36)	1.05	1.30
80 (9/11)	698 (330)	1.9 (1.1)	4.65 (1.73)	5.5 (2.7)	19.5 (7.1)	581 (186)	3.88 (1.11)	0.73	0.95
100 (7/8)	777 (234)	1.6 (0.8)	4.66 (1.58)	4.4 (0.7)	23.6 (7.7)	612 (241)	4.32 (1.62)	0.86	1.09
120 (9/10)	703 (385)	1.5 (1.1)	5.35 (4.58)	5.4 (5.0)	40.0 (40.5)	763 (367)	4.95 (2.31)	1.00	1.27
All (57/61)	-	1.6 (0.9)	-	5.1 (2.5)	27.5 (18.2)	-	-	1.01	1.12

N/N, in the absence and presence of carboplatin and paclitaxel.

Day 1 AUC_{0-inf} extrapolated beyond the last time point sampled was mean 37% (range 17-87%).

Day 3 AUC_{0-12} extrapolated beyond the last time point sampled was mean 24% (range 9-37%).

Ratios reported as median; mean overall ratio C_{max} 1.07 (0.82), AUC_{0-8} 1.23 (0.72). Median accumulation ratio expected based on individual day 1 half-lives is 1.20; mean 1.26 (0.27).

Supplemental Table 4. Mean (standard deviation) pharmacokinetic parameters of ultrafilterable carboplatin in the absence and presence of veliparib.

	Veliparib -				Veliparib +			Ratio+/- veliparib		
Veliparib Dose (mg) (N/N)	C_{max} (µg/mL)	$AUC_{0\text{-}inf}$ (mg•min/mL)	$T_{1/2}$ (h)	CL (mL/min)	C_{max} (µg/mL)	$AUC_{0\text{-}inf}$ (mg•min/mL)	CL (mL/min)	C_{max}	$AUC_{0\text{-}inf}$	CL
20 (11/11)	30.9 (9.1)	6.98 (2.10)	3.0 (1.0)	113 (40)	33.1 (11.7)	7.38 (1.88)	105 (39)	1.06	1.02	0.98
40 (19/15)	31.1 (9.1)	7.49 (1.66)	3.5 (0.9)	105 (32)	28.1 (8.2)	6.65 (1.60)	125 (61)	0.91	0.82	1.12
50 (5/3)	30.3 (7.3)	7.92 (3.16)	3.5 (1.2)	106 (33)	36.0 (10.9)	8.48 (3.13)	89.9 (29.8)	0.89	1.00	1.01
80 (7/9)	34.9 (14.4)	8.34 (2.07)	3.1 (0.4)	93.7 (38.8)	27.9 (8.0)	7.75 (3.29)	90.6 (31.2)	0.88	0.82	1.21
100 (0/8)	-	-	-	-	37.6 (10.9)	6.69 (3.03)	138 (78)	-		
120 (3/8)	40.8 (6.2)	12.5 (8.3)	3.2 (0.4)	80.2 (38.9)	32.0 (12.6)	8.23 (2.23)	96.3 (29.9)	0.85	1.03	1.11
All (45/54)	32.2 (9.7)	7.88 (2.92)	3.3 (0.9)	104 (35)	31.5 (10.3)	7.32 (2.37)	111 (52)	0.94	0.88	1.10

Concentrations expressed as carboplatin mass units. N/N, in the absence and presence of veliparib.

$AUC_{0\text{-}inf}$ (carboplatin without veliparib, day 1 if a carboplatin paclitaxel alone lead-in cycle was given) extrapolated beyond the last time point sampled was mean 1.9% (range 0-31%).

$AUC_{0\text{-}inf}$ (carboplatin with veliparib, day 3 of cycle 1 or 2) extrapolated beyond the last time point sampled was mean 3.9% (range 0-36%).

Ratios reported as median; mean overall ratio C_{max} 0.98 (0.32), $AUC_{0\text{-}inf}$ 0.95 (0.25), CL 1.11 (0.32), all non-significant by 2-sided exact Wilcoxon signed rank test.

Supplemental Table 5. Mean (standard deviation) pharmacokinetic parameters of paclitaxel in the absence and presence of veliparib.

	Veliparib -				Veliparib +		Ratio+/- veliparib	
Dose (N/N) Vel (mg)/ Pac. (mg/m^2)	C_{max} (µg/mL)	$AUC_{0\text{-}inf}$ (µg•h/mL)	$T_{1/2}$ (h)	CL (L/h/m^2)	C_{max} (µg/mL)	$AUC_{0\text{-}inf}$ (µg•h/mL)	C_{max}	$AUC_{0\text{-}inf}$
10/150 (1/1)	1.85	7.30	5.8	20.6	2.06	7.70	1.11	1.05
20/150 (8/7)	9.31 (3.19)	35.8 (10.4)	6.3 (1.1)	4.67 (1.98)	8.01 (3.93)	28.8 (13.9)	0.80	0.82
20/175 (3/3)	5.21 (1.64)	18.2 (4.7)	5.9 (0.2)	10.1 (2.8)	4.94 (2.39)	19.7 (11.4)	0.82	0.84
40/175 (3/3)	3.30 (0.77)	14.7 (2.6)	6.2 (1.1)	12.2 (2.1)	4.30 (1.10)	16.1 (2.7)	1.20	1.06
40/200 (16/12)	5.64 (1.48)	21.9 (5.6)	6.3 (1.8)	9.65 (2.22)	4.76 (1.56)	21.5 (6.2)	0.89	1.07
50/200 (5/5)	5.63 (1.02)	19.8 (3.2)	5.1 (1.6)	10.3 (1.6)	5.75 (0.64)	19.8 (2.7)	1.09	1.03
80/200 (6/10)	4.62 (1.25)	19.8 (6.8)	6.5 (1.4)	11.4 (4.7)	6.06 (2.61)	24.9 (12.9)	1.17	1.34
100/200 (0/6)	-	-	-	-	7.38 (3.18)	39.9 (16.1)	-	-
120/200 (3/10)	8.26 (0.53)	25.9 (1.11)	4.2 (2.8)	7.73 (0.33)	6.69 (1.08)	24.3 (4.6)	0.87	0.95
All (44/55)	6.06 (2.53)	23.1 (9.0)	6.0 (1.6)	9.37 (3.76)	6.01 (2.49)	24.8 (11.4)	1.00	1.04

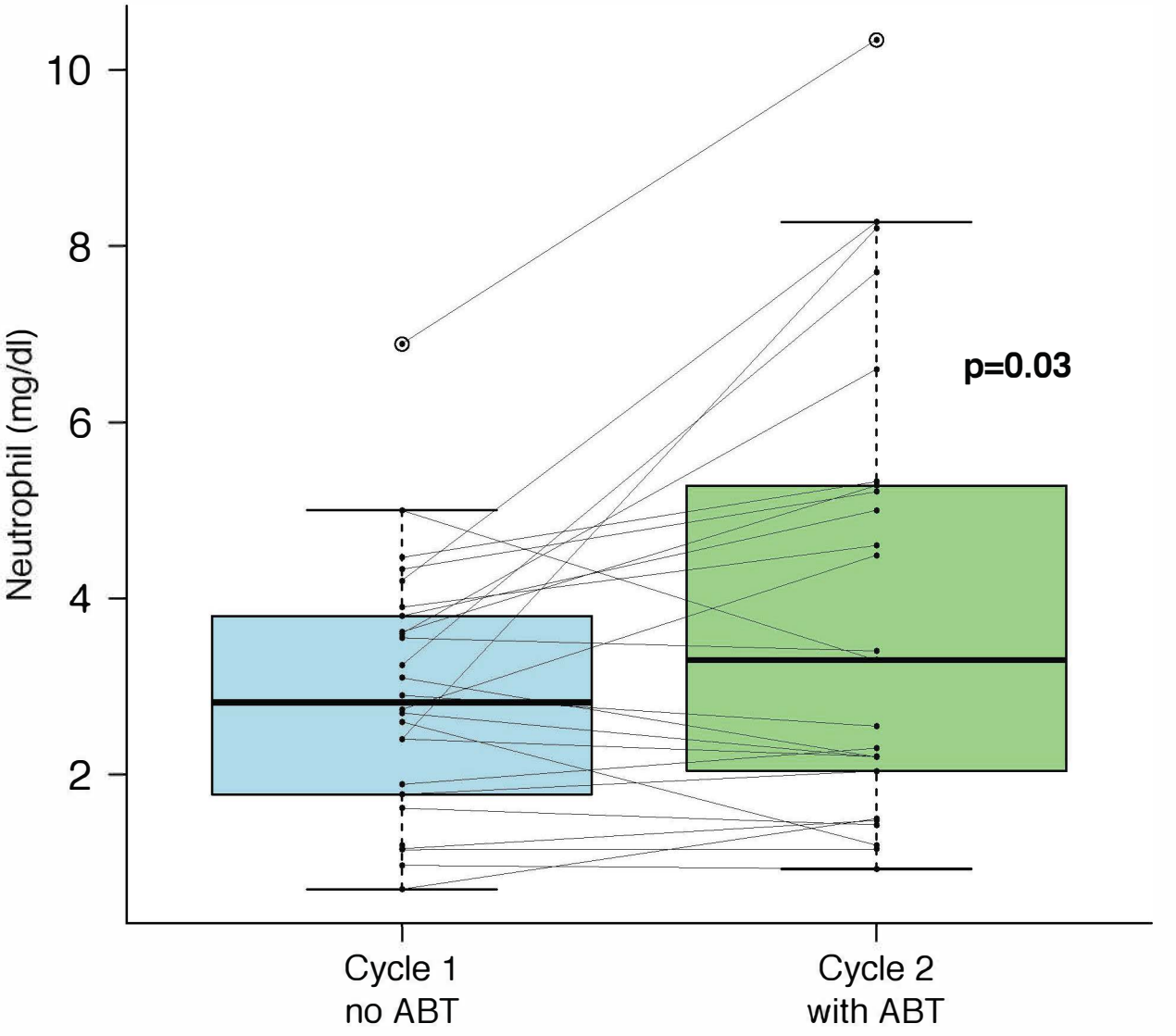
N/N, in the absence and presence of veliparib.

$AUC_{0\text{-}inf}$ (paclitaxel without veliparib, day 1 if a carboplatin paclitaxel alone lead-in cycle was given) extrapolated beyond the last time point sampled was mean 4.2% (range 1-19%).

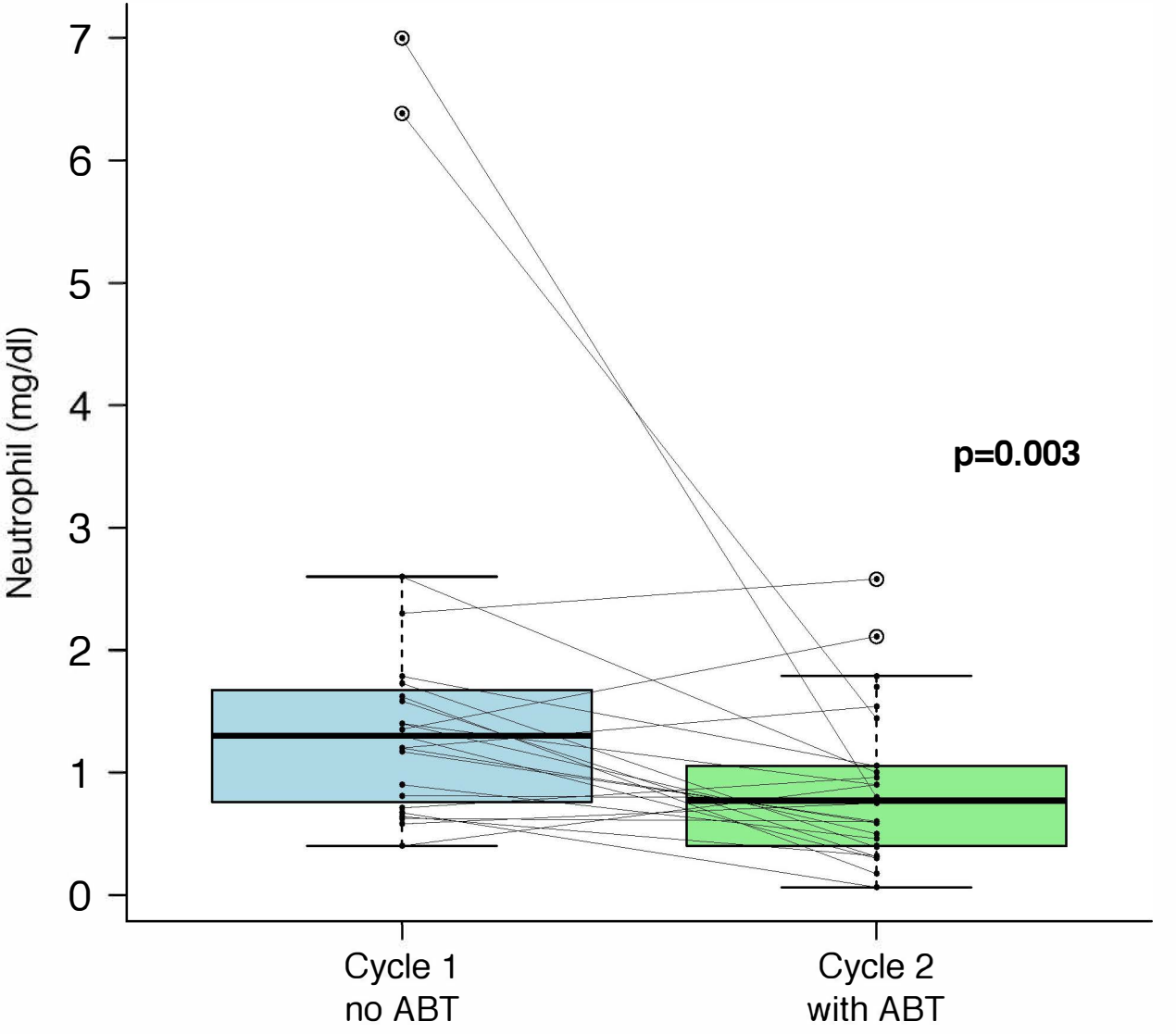
$AUC_{0\text{-}inf}$ (paclitaxel with veliparib, day 3 of cycle 1 or 2) extrapolated beyond the last time point sampled was mean 6.4% (range 1-27%).

Ratios reported as median; mean overall ratio C_{max} 1.01 (0.31), $AUC_{0\text{-}inf}$ 1.03 (0.24), all non-significant by 2-sided exact Wilcoxon signed rank test.

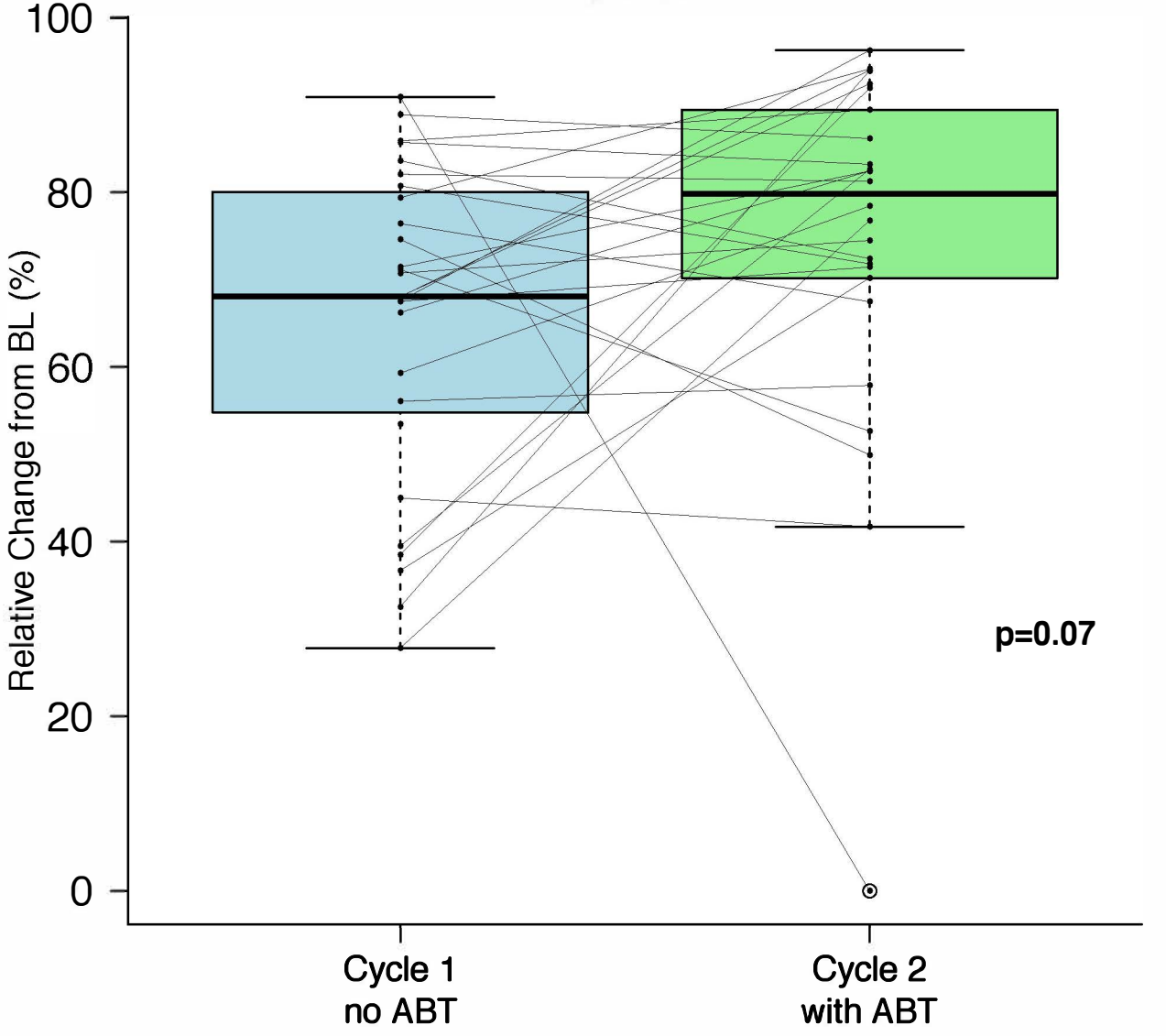
Supplemental Figure 1a. Day 8 Neutrophils: Cycle 1 vs Cycle 2



Supplemental Figure 1b. Day 15 Neutrophils: Cycle 1 vs Cycle 2



Supplemental Figure 1c. Maximum Relative Change of Neutrophil from Baseline Cycle 1 vs Cycle 2



Supplementary Figure 1. Plot of neutrophil in cycle 1 (no veliparib) vs cycle 2 (with veliparib). D8 and D15 ANC was plotted and compared for cycle 1 vs cycle 2 for 27 patients who received carboplatin and paclitaxel only in cycle 1 and were evaluable for DLT in cycle 2 after receiving carboplatin, paclitaxel and veliparib (A, B). We also plotted and compared the maximum relative change of neutrophil from baseline of cycle 1 vs cycle 2 (C), which is the difference between the minimum value of D8, D15, and D22 and the baseline value. Two-sided Wilcoxon signed rank test was performed to compare cycle 1 vs cycle 2. In Part A, Day 8 ANC was lower in cycle 1 compared to cycle 2. However, in Part B, day 15 ANC was higher in cycle 1 compared to cycle 2. In Part 3, maximum relative change of neutrophil count from baseline in cycle 1 was smaller compared to cycle 2.