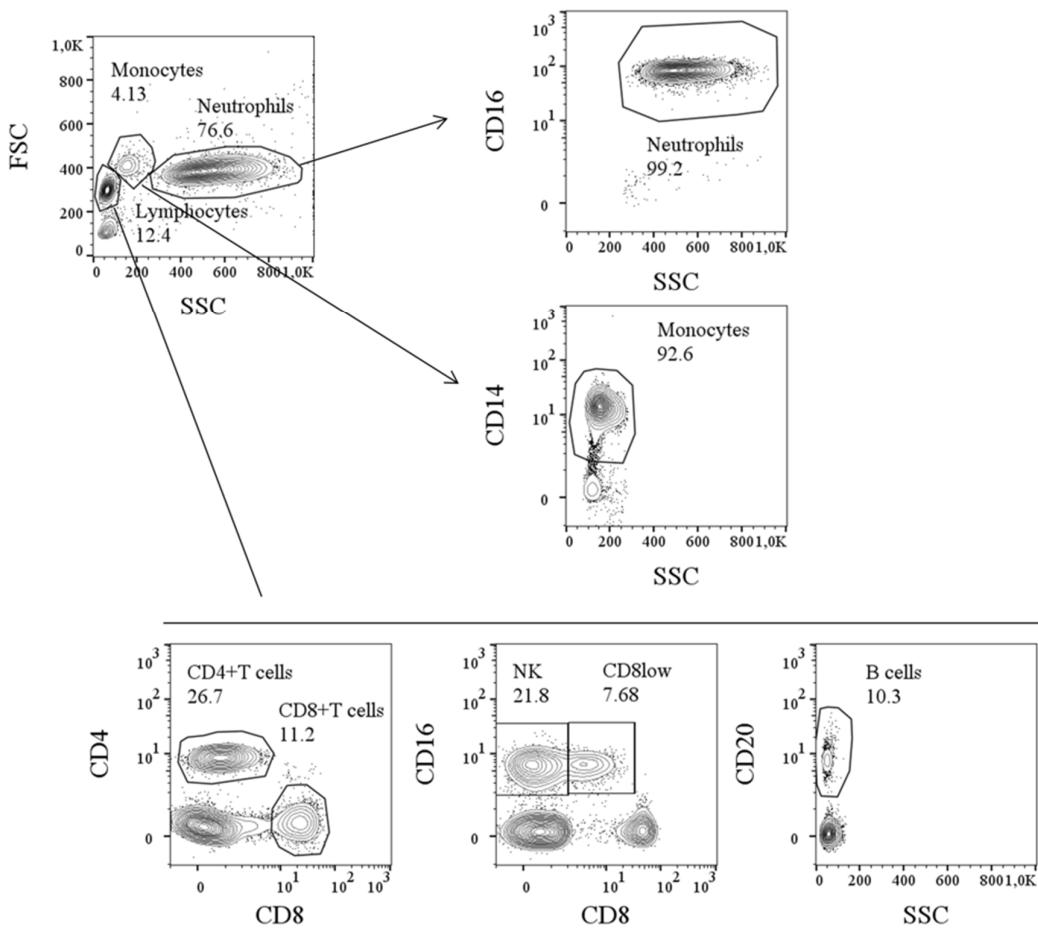
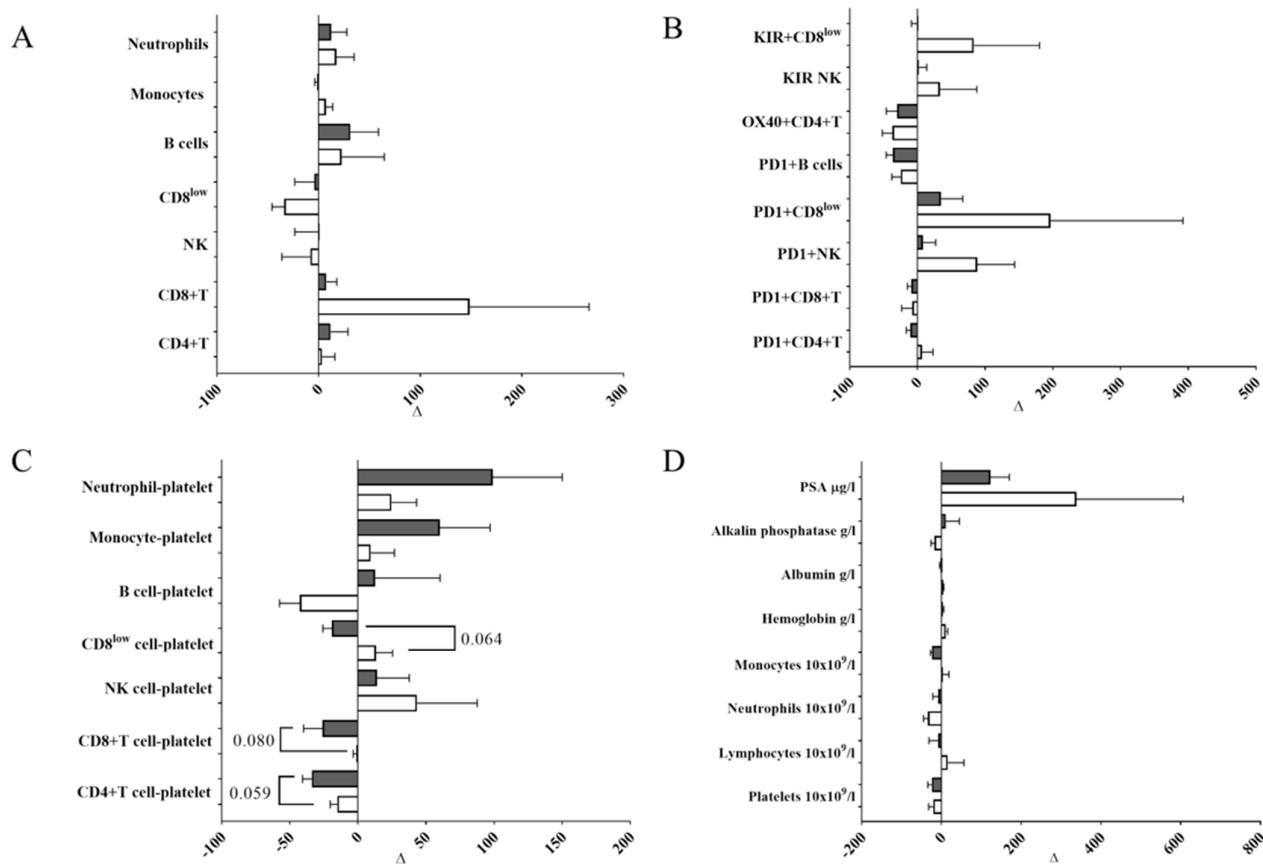


**Supplementary Table S1.** Demographic, clinical and blood characteristics of mCRPC patients stratified in slow and fast progression.

	<b>Slow Progression (n = 7)</b>	<b>Fast Progression (n = 5)</b>
Age	76.43 ± 7.39	82.80 ± 6.94
Weight (kg)	77.00 ± 10.39	71.60 ± 9.88
Height (cm)	171.00 ± 5.72	164.8 ± 9.01
Months between diagnosis and sample collection	83.14 ± 39.08	115.00 ± 100.10
Months between resistance to castration and sample collection	62.43 ± 43.59	33.60 ± 21.66
Month between metastasis and sample collection	72.29 ± 43.15	42.80 ± 30.82
Stage disease at moment of diagnosis:	I (14%); II (0%); III (14%); IV (72%)	I (20%); II (40%); III (0%); IV (40%)
Gleason score:		
≤8	60%	71%
≥9	40%	29%
ECOG performance-status score (0–2):		
1	4	3
2	3	2
Median haematological and biochemical values:		
Platelets ( $\times 10^9/L$ )	248.60 ± 102.10	194.80 ± 67.27
Lymphocytes ( $\times 10^9/L$ )	1.462 ± 0.368	1.03 ± 0.36
Neutrophils ( $\times 10^9/L$ )	5.82 ± 3.65	5.92 ± 2.63
Monocytes ( $\times 10^9/L$ )	0.43 ± 0.13	0.64 ± 0.16
Hemoglobin (g/L)	100.70 ± 16.95	109.00 ± 9.72
Albumin (g/L)	38.30 ± 3.57	40.82 ± 2.02
Alkaline phosphatase (U/L)	248.00 ± 188.20	164.00 ± 166.40
PSA ( $\mu g/L$ )	333.20 ± 411.90	96.98 ± 118.10
Lactate dehydrogenase (U/L)	249.60 ± 56.66	277.00 ± 86.66
Previous treatment:		
Abiraterone (yes/no)	7/0	4/1
Enzalutamide (yes/no)	6/1	4/1
Chemotherapy (yes/no)	6/1	3/2

Values are presented as mean±SD. Gleason score and ECOG were referred at moment of sample collection. PSA: Prostate-specific antigen.





**Supplementary Figure S2.** Increment or decrement percentage between two weeks after the second Radium-233 injection and baseline: (A) leukocyte populations; (B) immunomodulatory molecules; (C) platelets—leukocytes complexes; (D) biochemical analytes based on slow (white) and fast (grey) progression. The Mann-Whitney test was used for the comparison of independent variables.  $P$ -values  $<0.05$  were considered significant.