

**Table S6. Baseline characteristics, response pattern and their correlation with progression pattern (continuous outcome) (bivariate analysis, n=166)**

Baseline Characteristics	Number of culprit organ <sup>~</sup>		Target lesion size <sup>~</sup>		Enlargement dynamics <sup>~</sup>	
	Coefficient (95% CI)	P value	Coefficient (95% CI)	P value	Coefficient (95% CI)	P value
Age <sup>§</sup>	-0.013 (-0.026 to -0.001)	.04	-0.460 (-0.849 to -0.071)	.02	-0.203 (-0.405 to -0.002)	.048
Sex <sup>#</sup>	-0.096 (-0.467 to 0.275)	.61	0.259 (-11.408 to 11.927)	.97	-6.122 (-12.149 to 0.096)	.047
Ethnicity <sup>+</sup>	-0.473 (-0.832 to 0.115)	.01	-23.668 (-34.487 to 12.848)	<.001	-12.078 (-17.752 to 6.404)	<.001
Subtype <sup>&amp;</sup>						
Acral	0.172 (-0.299 to 0.644)	.47	23.556 (8.937 to 38.175)	.002	11.722 (4.229 to 19.214)	.002
Mucosal	0.686 (0.100 to 1.273)	.02	6.050 (-12.514 to 24.614)	.52	12.216 (2.713 to 21.720)	.01
Ocular	-0.287 (-1.075 to 0.501)	.47	11.964 (-12.385 to 36.315)	.33	3.751 (-8.699 to 16.200)	.55
UP	-0.276 (-0.828 to 0.277)	.33	10.202 (-6.899 to 27.303)	.24	1.568 (-7.552 to 10.689)	.73
Previous systemic treatment <sup>@</sup>	0.246 (-0.155 to 0.648)	.23	9.565 (-2.902 to 22.032)	.13	4.925 (-1.626 to 11.477)	.14
Baseline LDH <sup>^</sup>	0.281 (-0.118 to 0.681)	.17	2.501 (-9.898 to 14.900)	.69	3.074 (-3.333 to 9.481)	.35
Mutation <sup>`</sup>						
BRAF	-0.013 (-0.478 to 0.452)	.96	-9.591 (-23.817 to 4.635)	.18	-7.638 (-14.793 to 0.483)	.04
NRAS	-0.096 (-0.658 to 0.466)	.74	-14.624 (-31.938 to 2.691)	.10	-10.292 (-19.169 to 1.414)	.02
C-KIT	0.330 (-0.490 to 1.150)	.43	5.434 (-19.382 to 30.250)	.67	13.409 (1.102 to 25.716)	.03
M stage <sup>%</sup>						
M1b	0.706 (0.158 to 1.256)	.01	3.329 (-14.210 to 20.869)	.71	-3.009 (-12.194 to 6.177)	.52
M1c	0.456 (-0.031 to 0.942)	.07	-8.409 (-23.808 to 6.989)	.28	-4.064 (-12.079 to 3.951)	.32

					3.950)	
M1d	-0.053 (-0.651 to 0.545)	.86	-15.539 (-34.922 to 3.844)	.12	-14.354 (-24.364 to -4.344)	.005
M0 (unresectable)	-0.425 (-2.039 to 1.189)	.60	3.064 (-48.007 to 54.135)	.91	-11.437 (-37.481 to 14.607)	.39
<b>Number of organ involved<sup>§</sup></b>	0.277 (0.096 to 0.459)	.003	-1.568 (-7.375 to 4.239)	.59	-2.737 (-5.727 to 0.254)	.07
<b>Response pattern</b>						
<b>Tumor percent change (%)<sup>§</sup></b>	0.007 (0.004 to 0.010)	<.001	0.467 (0.395 to 0.538)	<.001	0.222 (0.178 to 0.266)	<.001
<b>Time to nadir (months)<sup>§</sup></b>	-0.050 (-0.092 to -0.008)	.02	-3.204 (-4.437 to -1.971)	<.001	-0.440 (-1.127 to 0.247)	.21
<b>PFS (month)<sup>§</sup></b>	-0.035 (-0.058 to -0.012)	.003	-1.891 (-2.561 to -1.222)	<.001	-0.379 (-0.771 to 0.013)	.06

<sup>~</sup>Linear regression model, adjusted for target lesion size at baseline. <sup>§</sup>As a continuous variable.

<sup>#</sup>Female as the reference group. <sup>+</sup>Non-Caucasian as the reference group. <sup>&</sup>Cutaneous melanoma as the reference. <sup>@</sup>Without previous systemic treatment as the reference group. <sup>^</sup>Normal baseline LDH as the reference. <sup>`</sup>Others as the reference group. <sup>%</sup>M1a as the reference group.