

**Table S10. Baseline characteristics and the correlation with primary vs. secondary resistance\* (dichotomous outcome) (bivariate analysis, n=166)**

Baseline Characteristics	Primary resistance <sup>~</sup>	
	OR (95% CI)	P value
<b>Age<sup>§</sup></b>	0.985 (0.960 to 1.011)	.26
<b>Sex<sup>#</sup></b>	1.424 (0.688 to 2.948)	.34
<b>Ethnicity<sup>+</sup></b>	1.080 (0.525 to 2.221)	.84
<b>Subtype<sup>&amp;</sup></b>		
Acral	1.011 (0.389 to 2.630)	.98
Mucosal	0.888 (0.280 to 2.821)	.84
Ocular	2.711 (0.318 to 23.132)	.36
UP	0.665 (0.233 to 1.901)	.45
<b>Previous systemic treatment<sup>@</sup></b>	0.518 (0.217 to 1.239)	.14
<b>Baseline LDH<sup>^</sup></b>	1.566 (0.693 to 3.537)	.28
<b>Mutation<sup>`</sup></b>		
BRAF	1.011 (0.411 to 2.487)	.98
NRAS	0.696 (0.247 to 1.959)	.49
C-KIT	0.704 (0.156 to 3.178)	.65
<b>M stage<sup>%</sup></b>		
M1b	1.275 (0.447 to 3.639)	.65
M1c	1.670 (0.645 to 4.326)	.29
M1d	3.653 (0.886 to 15.054)	.07
M0 (unresectable)	0.522 (0.030 to 9.109)	.66
<b>Number of organ involved<sup>§</sup></b>	1.374 (0.921 to 2.051)	.12

\*Logistic regression model, adjusted for target lesion size at baseline. <sup>~</sup>Dichotomous outcome, defined as with prior tumor shrinkage or not at the time point of maximal response, with the latter as the reference group). <sup>§</sup>As continuous variables. <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.