

Supplementary Table S1. Clinical characteristics and ctDNA data of patients experiencing disease progression after discontinuation of BRAF inhibitor-based therapy.

<i>BASELINE</i>		<i>ON-TREATMENT</i>				<i>DISCONTINUATION</i>	<i>DISEASE PROGRESSION</i>				<i>RECHALLENGE</i>	
Baseline organ sites involvement		BRAFi-based therapy	Treatment duration (months)	Individual dPFS	Best Response	ctDNA	New organ sites	CNS involvement	LDH >ULN	ECOG PS	Subsequent BRAF/MEK inhibitors	Dose reduction
ID4	Liver	V	25.3	12	CR	NA	Yes	No	No	0	D+T	No
ID6	Lung, Soft tissues	V	65.6	3	CR	NA	No	No	No	0	D+T	No
ID9	Lymph nodes, Soft tissues, CNS	V	57.2	10	PR	-	No	No	No	0	No	-
ID11	Lymph nodes	V	60.3	3	PR	+	No	No	No	0	V+C	No
ID13	Lung	V	58.4	2	CR	+	No	No	No	0	D+T	No
ID16	Lung, Lymph nodes, Liver	V+C	13.3	32	CR	+	No	No	No	0	No	-
ID17	Lung, Lymph nodes	D+T	46.6	9	PR	NA	No	No	No	0	D+T	No
ID19	Lymph nodes, Soft tissues, Peritoneum	D+T	68.6	16	CR	+	Yes	No	No	0	No	-
ID20	Lymph nodes	D+T	70	11	PR	+	No	No	Yes	0	No	-
ID22	Lung	V	88.4	26	CR	+	No	No	No	0	V+C	No
ID24	Soft tissues, CNS	V	87.4	21.4	PR	+	No	No	No	0	No	-

Abbreviations. CNS: central nervous system. CR: complete response. ctDNA: circulating tumor DNA. D+T: dabrafenib in combination with trametinib.

dPFS: post discontinuation progression-free survival. NA: not available. PR: partial response. ULN: upper limit normal. V: vemurafenib. V+C:

vemurafenib in combination with cobimetinib.