

Supplemental Table 4 – Summary of NGS timing, treatment received, and mutations detected (n = 25 patients)

Patient number	Days between tissue and plasma acquisition <sup>1</sup>	Treatment received at any time between tissue and plasma acquisition <sup>2</sup>	Mutations detected in plasma <sup>3,4</sup>	Mutations detected in tissue <sup>1,3</sup>
294	-	Vemurafenib, ipilimumab, pembrolizumab, dabrafenib, trametinib	AKT3 Q78K BRAF V600E	-
652	820	Dabrafenib, trametinib	BRAF V600E	BRAF V600E
1154	55	None	BRAF V600E	BRAF V600E
1939	166	Radiation	NRAS Q61K	NRAS Q61K
1429	204	Pembrolizumab, IDO inhibitor, ipililumab, nivolumab, radiation, chemotherapy	NRAS Q61K	NRAS Q61K
65	1605	Ipililumab, pembrolizumab	NRAS Q61R <b>ND, ND</b>	NRAS Q61R CTNNB1 S37F, TP53 Q144X
423	251	Pembrolizumab	NRAS Q61K <b>ND</b>	<b>ND</b> NRAS Q61L
1092	-	Ipililumab	KIT V399I	-
570	199	Pembrolizumab, ipililumab, nivolumab, dabrafenib, trametinib	KIT G565V <b>ND</b>	KIT G565V BRAF V600E
1439	54	Ipililumab, radiation	KIT V560D	KIT V560D
1258	976	Radvax, pembrolizumab, cyberKnife	TP53 S241T PTEN Q298E	TP53 S241T PTEN Q298E
1368	84	Ipililumab, stereotactic body ration therapy (SBRT)	PIK3CA R93W	<b>ND</b>
765	405	Ipilimumab	<b>ND</b>	NRAS Q61K
1334	49	None	<b>ND</b>	TP53 S241F
939	1041	Pegylated interferon, lymph node radiation	<b>ND</b>	BRAF V600E
1202	756	Ipililumab	<b>ND, ND</b> <b>ND, ND</b>	BRAF G466E, TP53 S241F PDGFRA P581L, PTEN D252N
1296	243	Pembrolizumab	<b>ND, ND</b>	BRAF V600E, TP53 R306*
1778	93	Dabrafenib, trametinib	<b>ND</b>	BRAF V600E
940	588	Ipililumab, pembrolizumab, trametinib	<b>ND</b>	NRAS Q61K
1747	187	None	<b>ND</b>	BRAF V600E
671	161	Pembrolizumab	<b>ND</b>	BRAF V600R
396	-	None	<b>ND</b>	-
495	587	Ipilimumab, nivolumab, vemurafenib+HCQ, dabrafenib, trametinib, Gamma knife	<b>ND, ND</b>	BRAF V600E, KIT I563K
1153	214	None	<b>ND</b>	NRAS Q61R
1251	70	Ipililumab	<b>ND</b>	TP53 E294*

<sup>1</sup>A dash indicates that no tissue sequencing was performed prior to blood draw. <sup>2</sup>For the 3 patients with no tissue NGS (1092, 294, 396), the treatment listed is that received prior to plasma acquisition. <sup>3</sup>ND indicates mutation not detected. <sup>4</sup>A total of 16 mutations were detected in plasma, however, 2 were not covered by the tissue NGS panel. Listed here are the 14 mutations detected in plasma and also covered by the tissue NGS panel.