

Supplemental Tables for:  
Targetable BRAF and RAF1 alterations in advanced pediatric cancers  
Andrew Rankin et al.

Patient #	Diagnosis	Age (yrs)	BRAF Genomic Alteration
1	T-lymphoblastic leukemia/lymphoma	10	L597Q
2	AML (therapy related)	14	V600E
3	Anaplastic large cell lymphoma (ALK positive)	15	G469V
4	Langerhans cell histiocytosis	1	V600E
5	Langerhans cell histiocytosis	1	V600E
6	Langerhans cell histiocytosis	2	V600E
7	Langerhans cell histiocytosis	2	V600E
8	Langerhans cell histiocytosis	3	V600E
9	Langerhans cell histiocytosis	4	V600E
10	Langerhans cell histiocytosis	5	V600E
11	Langerhans cell histiocytosis	5	V600E
12	Langerhans cell histiocytosis	6	N486_T491>K
13	Histiocytic neoplasm, NOS	12	G469V
14	Langerhans cell histiocytosis	13	N486_P490del
15	Histiocytic neoplasm, NOS	16	V600E
16	Langerhans cell histiocytosis	19	N486_P490del
17	Melanoma	9	V600K
18	Melanoma	14	V600E
19	Melanoma	15	V600E
20	Melanoma	18	V600D
21	Melanoma	17	V600E
22	Melanoma	19	V600E
23	Melanoma	20	V600E
24	Melanoma	20	V600E
25	Melanoma	20	V600E
26	Melanoma	20	V600E
27	Papillary thyroid carcinoma	13	V600E
28	Papillary thyroid carcinoma	17	V600E
29	Papillary thyroid carcinoma	17	V600E
30	Papillary thyroid carcinoma	18	V600E
31	Neuroblastoma	7	K501E
32	Neuroblastoma	8	K501E
33	Neuroblastoma	8	K501E
34	Rhabdomyosarcoma (NOS)	7	K501E
35	Rhabdomyosarcoma (NOS)	12	V600E
36	Rhabdomyosarcoma, embryonal	4	K1A1549-BRAF
37	Sarcoma (NOS)	4	K1A1549-BRAF
38	Sarcoma (NOS)	1	CUX1-BRAF
39	Sarcoma (NOS)	12	STARD3NL-BRAF
40	Acinar cell carcinoma	7	PPP1CC-BRAF
41	Acinar cell carcinoma	15	V600E
42	MPNST	10	K1A1549-BRAF
43	Large cell neuroendocrine carcinoma (unknown primary)	13	KHDR852-BRAF
44	Malignant mixed germ cell tumor	20	N581S
45	Serous carcinoma	18	V600E

**Table S1.** Hematologic malignancies and extracranial solid tumors with known-activating *BRAF* alteration

Patient #	Diagnosis	Age (yrs)	BRAF Genomic Alteration
46	PXA, G2	6	V600E
47	PXA, G2	15	V600E
48	PXA, G2	16	V600E
49	Anaplastic PXA, G3	6	V600E
50	Anaplastic PXA, G3	10	V600E
51	Anaplastic PXA, G3	14	V600E
52	Anaplastic PXA, G3	17	V600E
53	Anaplastic PXA, G3	20	V600E
54	PA, G1	5	V600E
55	PA, G1	11	V600E
56	PA, G1	12	V600E
57	PA, G1	18	V600E
58	PA, G1	18	V600E
59	PA, G1	20	V600E
60	PA, G1	21	V600E
61	Pilomyxoid astrocytoma, G2	5	V600E
62	Pilomyxoid astrocytoma, G2	7	V600E
63	Pilomyxoid astrocytoma, G2	11	V600E
64	Pilomyxoid astrocytoma, G2	16	V600E
65	Anaplastic astrocytoma, WHO Grade III	7	V600E
66	Anaplastic astrocytoma, WHO Grade III	16	V600E
67	Ganglioglioma, G1	5	V600E
68	Ganglioglioma, G1	5	V600E
69	Ganglioglioma, G1	5	V600E
70	Ganglioglioma, G1	7	V600E
71	Ganglioglioma, G1	9	V600E
72	Ganglioglioma, G1	10	V600E
73	Ganglioglioma, G1	11	V600E + N581S
74	Ganglioglioma, G1	15	V600E
75	Ganglioglioma, G1	17	V600E
76	Ganglioglioma, G1	21	V600E
77	Anaplastic Ganglioglioma, G3	13	V600E
78	Anaplastic Ganglioglioma, G3	15	V600E+D594G
79	GBM	1	V600E
80	GBM	7	V600E
81	GBM	9	V600E
82	GBM	11	N486_T491>K
83	GBM	12	V600E
84	GBM	13	V600E
85	GBM	14	V600E
86	GBM	14	V600E
87	GBM	15	V600E
88	GBM	16	V600E+D594G
89	GBM	16	V600E
90	GBM	20	V600E
91	GBM	20	V600E
92	LGG (NOS)	2	V600E
93	LGG (NOS)	2	V600E
94	LGG (NOS)	5	V600E
95	LGG (NOS)	5	V600E
96	LGG (NOS)	6	V600E
97	LGG (NOS)	10	T599_V600insT
98	LGG (NOS)	12	V600E
99	LGG (NOS)	14	V600E
100	LGG (NOS)	16	A598_T599insT
101	LGG (NOS)	18	V600E
102	LGG (NOS)	18	V600E
103	LGG (NOS)	21	V600E
104	HGG (NOS)	7	V600E
105	HGG (NOS)	20	V600E
106	HGGNT (NOS)	8	N581S
107	HGGNT (NOS)	19	V600E
108	LGGNT (NOS)	12	V600E
109	Diffuse midline glioma, G4	13	V600E
110	Diffuse midline glioma, G4	15	V600E
111	Gliosarcoma	6	V600E

**Table S2.** Primary brain tumors with known-activating *BRAF* SV or Indels

Patient #	Diagnosis	Age (yrs)	BRAF Genomic Alteration
112	PA, G1	1	KIAA1549-BRAF
113	PA, G1	2	KIAA1549-BRAF
114	PA, G1	2	KIAA1549-BRAF
115	PA, G1	2	KIAA1549-BRAF
116	PA, G1	2	KIAA1549-BRAF
117	PA, G1	3	KIAA1549-BRAF
118	PA, G1	4	KIAA1549-BRAF
119	PA, G1	4	KIAA1549-BRAF
120	PA, G1	5	KIAA1549-BRAF
121	PA, G1	5	KIAA1549-BRAF
122	PA, G1	5	KIAA1549-BRAF
123	PA, G1	5	KIAA1549-BRAF
124	PA, G1	5	KIAA1549-BRAF
125	PA, G1	6	KIAA1549-BRAF
126	PA, G1	6	FAM131B-BRAF
127	PA, G1	6	KIAA1549-BRAF
128	PA, G1	6	KIAA1549-BRAF
129	PA, G1	7	KIAA1549-BRAF
130	PA, G1	7	KIAA1549-BRAF
131	PA, G1	7	KIAA1549-BRAF
132	PA, G1	8	KIAA1549-BRAF
133	PA, G1	8	KIAA1549-BRAF
134	PA, G1	8	KIAA1549-BRAF
135	PA, G1	8	KIAA1549-BRAF
136	PA, G1	9	KIAA1549-BRAF
137	PA, G1	9	KIAA1549-BRAF
138	PA, G1	12	KIAA1549-BRAF
139	PA, G1	13	KIAA1549-BRAF
140	PA, G1	13	KIAA1549-BRAF
141	PA, G1	13	KIAA1549-BRAF
142	PA, G1	14	KIAA1549-BRAF
143	PA, G1	14	KIAA1549-BRAF
144	PA, G1	14	KIAA1549-BRAF
145	PA, G1	17	KIAA1549-BRAF
146	PA, G1	17	KIAA1549-BRAF
147	PA, G1	18	KIAA1549-BRAF
148	PA, G1	18	BCAS1-BRAF
149	PA, G1	20	KIAA1549-BRAF
150	Pilomyxoid astrocytoma, G2	1	KIAA1549-BRAF
151	Pilomyxoid astrocytoma, G2	1	KIAA1549-BRAF
152	Pilomyxoid astrocytoma, G2	1	KIAA1549-BRAF
153	Pilomyxoid astrocytoma, G2	1	KIAA1549-BRAF
154	Pilomyxoid astrocytoma, G2	1	KIAA1549-BRAF
155	Pilomyxoid astrocytoma, G2	3	KIAA1549-BRAF
156	Pilomyxoid astrocytoma, G2	5	KIAA1549-BRAF
157	Pilomyxoid astrocytoma, G2	5	KIAA1549-BRAF
158	Pilomyxoid astrocytoma, G2	8	KIAA1549-BRAF
159	Anaplastic astrocytoma, WHO Grade III	<1	KIAA1549-BRAF
160	Anaplastic astrocytoma, WHO Grade III	20	KIAA1549-BRAF
161	Anaplastic PXA, G3	1	CCDC6-BRAF
162	Anaplastic Ganglioglioma, G3	10	TMEM106B-BRAF
163	LGG (NOS)	3	KIAA1549-BRAF
164	LGG (NOS)	3	KIAA1549-BRAF
165	LGG (NOS)	3	KIAA1549-BRAF
166	LGG (NOS)	8	KIAA1549-BRAF
167	LGG (NOS)	8	KIAA1549-BRAF
168	LGG (NOS)	9	KIAA1549-BRAF
169	LGG (NOS)	18	KIAA1549-BRAF
170	HGG (NOS)	15	KIAA1549-BRAF
171	LGGNT (NOS)	1	KIAA1549-BRAF
172	DA, G2	4	KIAA1549-BRAF
173	DOLT	19	KIAA1549-BRAF
174	DIGG, G1	3	KIAA1549-BRAF
175	CNS-PNET	12	KIAA1549-BRAF
176	CNS-PNET	16	KIAA1549-BRAF

**Table S3.** Primary brain tumors with known-activating *BRAF* fusion