

**Supplementary Table 2.** Common genetic alterations and overall survival of 50 adult brainstem glioma patients

Patient no.	Diagnosis	Status	Survival time (months)	IDH1/2	MGMT promoter	1p	19q	TERT promoter	ATRX	TP53	PTEN	EGFR	NF1	RB1	PIK3CA	MSH2	MSH6	EGFR amp*	PDGFR amp	MET amp	CDK4 amp
1	PA	Alive	38.0			LOH															
2	DA	Dead	18.0								Mut	Mut	Mut								
3	DA	Dead	22.0	Mut	Methylated	LOH			Loss	Mut											
4	DA	Dead	29.0	Mut																	
5	DA	Dead	28.0		Methylated	LOH				Mut	Mut										
6	DA	Alive	32.0				LOH			Mut								3.0			6.0
7	DA	Dead	34.0	Mut		LOH				Mut											
8	DA	Dead	36.0			LOH	LOH							Mut		Mut					
9	DA	Alive	40.0	Mut						Mut											
10	DA	Dead	42.0									Mut									
11	O	Alive	33.0			LOH	LOH	Mut													
12	O	Dead	41.0	Mut	Methylated	LOH	LOH														
13	AA	Dead	11.0			LOH	LOH	Mut		Mut	Mut		Mut								
14	AA	Dead	6.1							Mut			Mut			Mut					
15	AA	Dead	17.5		Methylated		LOH				Mut		Mut					6.0			10.0
16	AA	Dead	13.0			LOH		Mut			Mut										
17	AA	Dead	13.5				LOH			Mut	Mut		Mut								
18	AA	Dead	16.2		Methylated														2.7		8.0
19	AA	Dead	17.0				LOH		Loss	Mut	Mut			Mut		Mut				6.5	
20	AA	Dead	19.0		Methylated	LOH		Mut			Mut										
21	AA	Dead	24.5		Methylated		LOH	Mut					Mut		Mut						
22	AA	Dead	21.0	Mut	Methylated				Loss	Mut											
23	AA	Alive	26.0				LOH		Loss	Mut			Mut				Mut				
24	AA	Alive	32.0						Loss	Mut			Mut		Mut						
25	GBM	Dead	0.5			LOH	LOH			Mut	Mut			Mut							
26	GBM	Dead	2.0				LOH	Mut											2.0		11.0
27	GBM	Dead	2.5		Methylated			Mut							Mut					2.1	
28	GBM	Dead	3.1			LOH				Mut											10.0
29	GBM	Dead	4.0								Mut							7.7			
30	GBM	Dead	4.5			LOH															
31	GBM	Dead	5.0			LOH		Mut			Mut							7.1			
32	GBM	Dead	7.8					Mut													
33	GBM	Dead	8.0		Methylated														7.0		
34	GBM	Dead	9.0					Mut			Mut				Mut						
35	GBM	Dead	9.5	Mut		LOH				Mut											
36	GBM	Dead	10.0		Methylated																
37	GBM	Dead	10.3			LOH				Mut	Mut		Mut								
38	GBM	Dead	11.0		Methylated			Mut		Mut								12.0			
39	GBM	Dead	11.4			LOH	LOH	Mut		Mut	Mut										
40	GBM	Dead	12.0							Mut	Mut			Mut							
41	GBM	Dead	12.2				LOH								Mut						
42	GBM	Dead	12.5							Mut	Mut	Mut	Mut		Mut		Mut				
43	GBM	Dead	14.5					Mut		Mut	Mut							5.0			
44	GBM	Alive	16.0		Methylated	LOH	LOH				Mut										
45	GBM	Dead	17.0								Mut		Mut								
46	GBM	Dead	19.6								Mut										
47	DMLG	Dead	3.5		Methylated	LOH									Mut						
48	DMLG	Dead	7.2		Methylated	LOH	LOH														
49	DMLG	Dead	7.5		Methylated					Mut	Mut							10.6			
50	DMLG	Dead	13.0							Mut											

\*Relative change in gene amplification.

AA: anaplastic astrocytoma, amp: amplification, DA: diffuse astrocytoma, DMLG: diffuse midline glioma, GBM: glioblastoma, LOH: loss of heterozygosity, Mut: mutated, O: oligodendroglioma, PA: pilocytic astrocytoma.