

Table S2. Univariate analysis of candidate baseline factors by survival.

Parameter	Progression-Free Survival		Overall survival	
	Hazard Ratio (95 % CI)	<i>p</i> -value	Hazard Ratio (95 % CI)	<i>p</i> -value
Age				
1-year increase	0.977 (0.953-1.002)	0.068	0.967 (0.945-0.990)	0.004
Gender				
Male vs female	2.084 (1.149-3.780)	0.016	1.886 (1.015-3.503)	0.045
Primary grade 3 glioma				
Yes vs no	0.834 (0.477-1.461)	0.527	0.652 (0.361-1.177)	0.156
Grade 3 glioma diagnosis				
AOD vs AA*	0.685 (0.290-1.621)	0.389	0.748 (0.297-1.879)	0.536
Frontal location				
Yes vs no	0.588 (0.326-1.062)	0.078	0.483 (0.255-0.913)	0.025
Series of TMZ (as second-line therapy)				
> 5 vs ≤ 5	1.495 (0.835-2.677)	0.176	1.566 (0.876-2.801)	0.130
Response to prior CTX				
Yes vs no	1.144 (0.837-2.570)	0.738	1.366 (0.713-2.616)	0.347
Corticosteroid use				
Yes vs no	1.973 (1.107-3.516)	0.021	2.027 (1.101-3.732)	0.023
Time from grade 3 diagnosis to baseline	1.003 (0.995-1.010)	0.458	1.000 (0.992-1.008)	0.996
WHO performance status				
2 vs 0-1	8.859 (3.235-24.262)	< 0.001	8.086 (2.973-21.994)	< 0.001
Tumor size				
Log increase	1.282 (1.053-1.560)	0.013	1.305 (1.069-1.593)	0.009
Multifocal disease				
Yes vs no	0.761 (0.416-1.391)	0.374	1.092 (0.538-1.867)	0.994
IDH1, n (%)				
Positive vs negative	0.793 (0.392-1.603)	0.518	1.005 (0.479-2.108)	0.990
p53, n (%)				
Positive vs negative	1.490 (0.799-2.781)	0.210	2.263 (1.167-4.388)	0.016
ATRX, n (%)				
Positive vs negative	0.716 (0.381-1.346)	0.300	0.617 (0.319-1.194)	0.152
EGFR, n (%)				
Positive vs negative	1.090 (0.589-2.018)	0.783	1.435 (0.733-2.809)	0.292
MGMT, n (%)				
Positive vs negative	1.582 (0.604-4.146)	0.351	1.926 (0.717-5.169)	0.193
Ki-67 (%)				
> 6 vs ≤ 6	1.312 (0.719-2.395)	0.376	1.265 (0.668-2.396)	0.471
Neutrocyte-to-lymphocyte ratio				
> 4.3 vs ≤ 4.3 (median)	1.331 (0.769-2.302)	0.307	1.328 (0.745-2.367)	0.337
Cognitive deficit				
Moderate/severe vs none	1.145 (0.676-1.937)	0.615	1.172 (0.678-2.027)	0.569

AA anaplastic astrocytoma, AOD, anaplastic oligodendroglioma, TMZ temozolomide, CTX chemotherapy, RT radiotherapy, EIAED enzyme-inducing anti-epileptic drugs

*No effect on PFS or OS was observed when dividing into histo-molecular subgroups.