

S2 Table. Cox proportional hazard model for local failure-free survival

Variables	Univariate			Multivariate		
	HR	95% CI	p-value	HR	95% CI	p-value
Age at RT (yr), incremental	0.98	0.95-1.01	0.142	-	-	-
Sex						
Female	1.00		0.090			-
Male	1.81	0.91-3.58		-	-	
ECOG at RT, incremental	1.42	0.93-2.16	0.104	-	-	
BED ₁₀ (Gy)			0.223			
≤ 50	1.00					
> 50	0.64	0.31-1.31		-	-	
Completion of RT			0.027			0.014
No	1.00			1.00		
Yes	0.25	0.08-0.85		0.21	0.06-0.74	
Extracranial disease at RT			0.526			-
No	1.00					
Yes	1.28	0.60-2.73		-	-	
Aging signature			0.707			-
No altered	1.00					
Altered	1.15	0.56-2.32		-	-	
APOBEC signature			0.284			-
No altered	1.00					
Altered	3.03	0.40-22.96		-	-	
Smoking signature			0.232			-
No altered	1.00					
Altered	0.65	0.32-1.32		-	-	
BRCA1/2 signature			0.972			-
No altered	1.00					
Altered	0.00	∞		-	-	
MMR signature			0.464			-
No altered	1.00					
Altered	1.32	0.63-2.80		-	-	
UV signature			0.239			-
No altered	1.00					
Altered	2.39	0.56-10.17		-	-	
POLE signature			0.250			-
No altered	1.00					
Altered	1.87	0.64-5.48		-	-	
TMZ signature			0.181			-
No altered	1.00					
Altered	3.95	0.53-29.62		-	-	
NRF pathway			0.884			-
No altered	1.00					
Altered	0.95	0.45-2.01		-	-	
DNA repair pathway			0.028			0.018
No altered	1.00			1.00		
Altered	0.43	0.20-0.91		0.40	0.19-0.86	
AR Pathway			0.286			-
No altered	1.00					
Altered	0.59	0.23-1.55		-	-	

RTK-RAS pathway			0.789			-
No altered	1.00					
Altered	1.18	0.35-3.92		-	-	
TP53 pathway			0.479			-
No altered	1.00					
Altered	0.75	0.34-1.67		-	-	
Cell cycle			0.328			-
No altered	1.00					
Altered	0.69	0.33-1.45		-	-	
NOTCH pathway			0.580			-
No altered	1.00					
Altered	1.31	0.50-3.42		-	-	

AR, androgen receptor; BED₁₀, biologically effective dose with a/b=10; CI, confidence interval; ECOG, Eastern Cooperative Oncology Group performance status; HR, hazard ratio; MMR, mismatch repair; RT, radiation therapy; TMZ, temozolomide; UV, ultraviolet.