Table S1 Correlation of evaluated markers with OS

S.NO	MARKERS	r- VALUE	95% CI	p-VALUE
1	hTERT	-0.6558	-0.7732 to -0.4948	<0.0001****
2	HMGA1	-0.5659	-0.7086 to -0.3787	<0.0001****
3	NLR	-0.552	-0.6984 to -0.3612	<0.0001****
4	IL-6	-0.5748	-0.8446 to -0.07195	<0.0273*
5	YKL-40	-0.4953	-0.6562 to -0.2915	<0.0001****
6	TIMP-1	-0.3903	-0.5751 to -0.1676	<0.0001****
7	hTERT	-0.3941	-0.5780 to -0.1719	<0.0001****

(Values expressed in the format: r, 95%CI, p-value as **** extremely significant)

Inference:

Using the Spearman's correlation coefficient, correlation with overall survival of all molecular markers was assessed. From the above data, all above markers showed a significantly inverse correlation with overall survival.

Table S2 ROC analysis between control and Grade IV (GBM)

S.NO	Grades	AUC	STD. ERROR	95%CI	CUTOFF	SENSITIVITY (%)	SPECIFICITY (%)	p-VALUE
1	hTERT‡	1.0	0	1.0-1.0	21	100	70	<0.0001****
2	HMGA1‡	1.0	0	1.0-1.0	7.55	100	70	<0.0001****
3	NLR	1.0	0	1.0-1.0	3.95	100	80	<0.0001****
4	IL-6	0.96	0.032	0.91 -1.0	178.4	53.33	100	<0.0001****
5	YKL-40	0.96	0.025	0.91- 1.01	89.32	100	63.33	<0.0001****

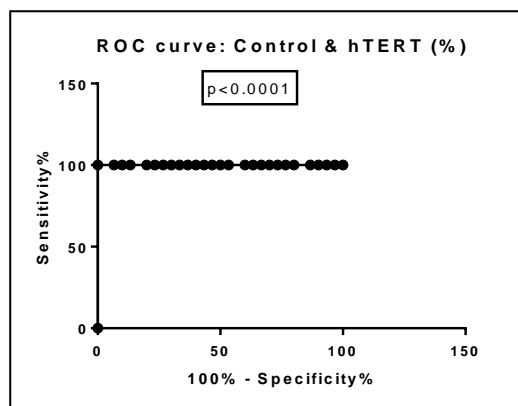|								
6	TIMP-1	0.85	0.046	0.76- 0.95	88.75	100	53.33	<0.0001****
7	hTERT	0.78	0.063	0.65- 0.89	1.452	60	90	0.0003***

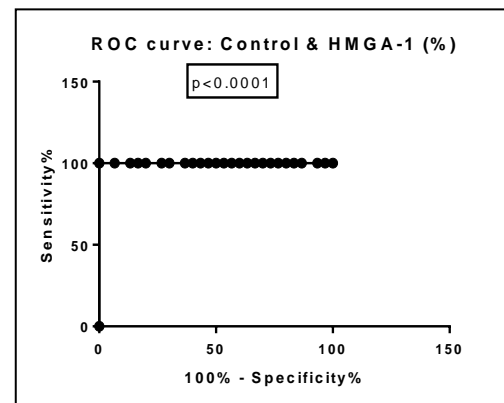**** Extremely significant, *** highly significant, ‡ tissue based marker

Inference

- ❖ ROC curve analysis of control and grade IV provided a cut-off value for hTERT at 21 (sensitivity = 100%, specificity = 70%, likelihood ratio=3.33) to best predict survival.

- ❖ ROC curve analysis of control and grade IV for marker HMGA1 provided a cut-off value at 7.55 (sensitivity = 100%, specificity = 70%, likelihood ratio=3.33) to best predict survival.

- ❖ ROC curve analysis of control and grade IV provided a cut-off value for NLR at 3.95 (sensitivity = 100%, specificity = 80%, Likelihood ratio=5) to best predict survival.

- ❖ ROC curve analysis of control and grade IV provided a cut-off value for IL-6 at 178.4 (sensitivity = 53.33%, specificity = 100%) to best predict survival.

- ❖ ROC curve analysis of control and grade IV provided a cut-off value for TIMP-1 at 88.75 (sensitivity = 100%, specificity = 53.33%, Likelihood ratio=2.143) to best predict survival

- ❖ ROC curve analysis of control and grade IV provided a cut-off value for YKL-40 at 89.32 (sensitivity = 100%, specificity = 63.33%, Likelihood ratio=2.727) to best predict survival

- ❖ ROC curve analysis of control and grade IV provided a cut-off value for hTERT at 1.452 (sensitivity = 60%, specificity = 90%, Likelihood ratio=6) to best predict survival.

Figure S1 ROC curve analysis between control and Grade IV: (a) hTERT (tissue) (b)HMGA1 (tissue), (c) NLR, (d)IL-6, (e) TIMP-1, (f) YL-40 and (g) hTERT (in blood)
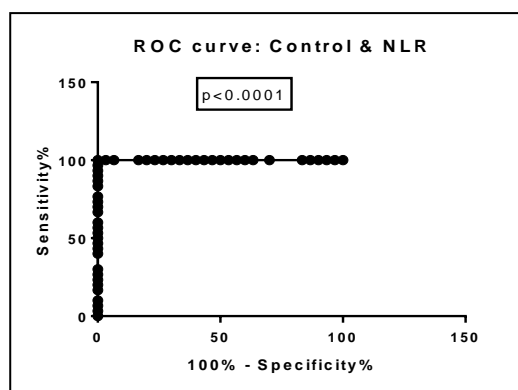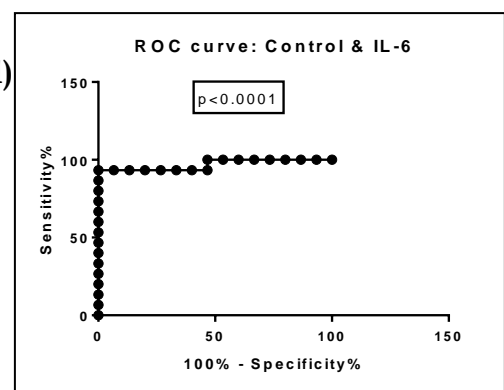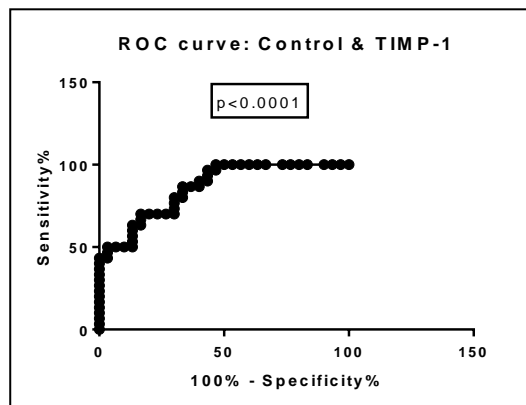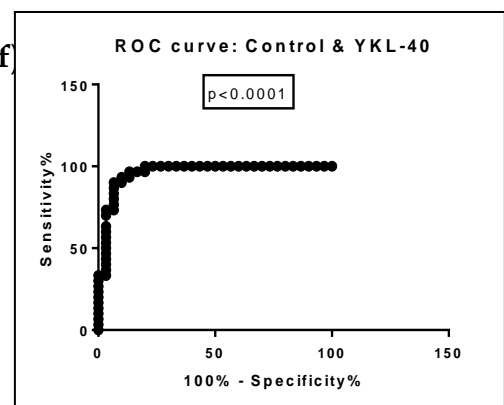
(a) ROC curve: Control & hTERT (%)
(b) ROC curve: Control & HMGA-1 (%)
(c) ROC curve: Control & NLR
(d) ROC curve: Control & IL-6
(e) ROC curve: Control & TIMP-1
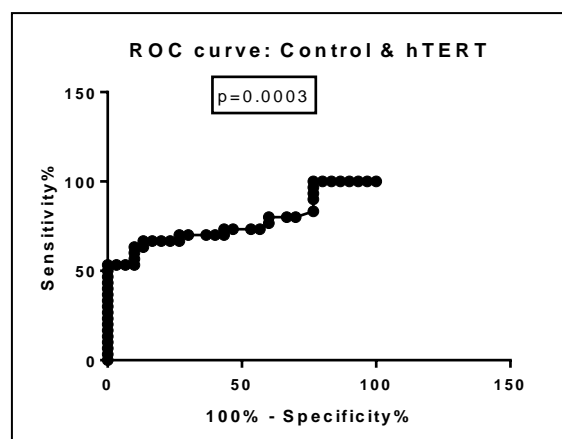(f) ROC curve: Control & YKL-40
(g) ROC curve: Control & hTERT

Supplementary Table S3: Survival curve analysis of evaluated molecular markers.

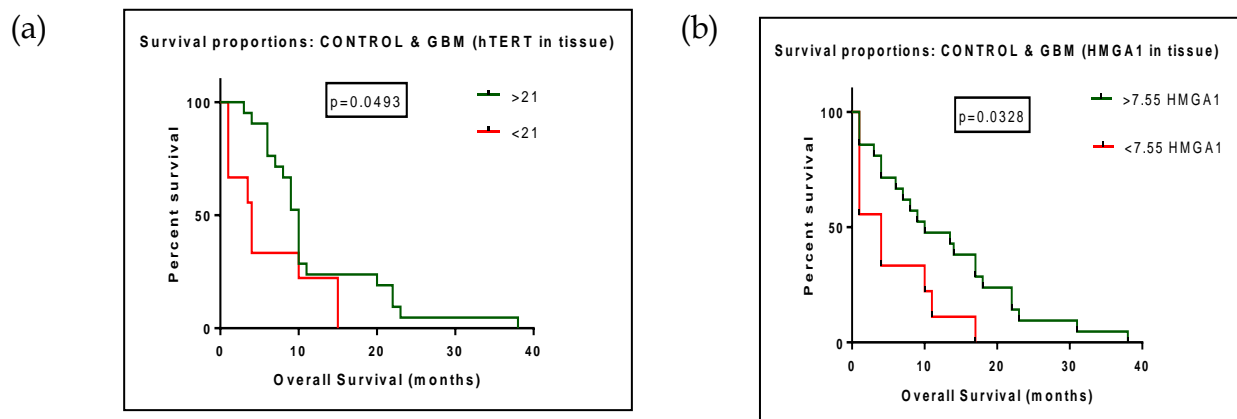| S. No.	MARKERS	Chi square	Hazard Ratio	95% CI of ratio	p value
1	hTERT	3.863	0.5033	0.1973 to 1.284	0.0493*
2	HMGA1	4.555	0.4753	0.183 to 1.234	0.0328*
3	IL-6	4.313	2.616	0.8706 to 7.859	0.0378*
4	NLR	5.031	2.321	1.105 to 4.876	0.0249*
5	TIMP-1	11.24	2.752	1.254 to 6.039	0.0008***
6	YKL-40	4.59	2.004	0.9777 to 4.107	0.0322*
7	hTERT	3.884	1.86	0.8783 to 3.94	0.0487*

*significant; *** highly significant

Inference:

(1) Comparison of survival curves between control and patients with optimal cut-off >21 to best predict survival; patients with hTERT level exceeding >21 were found to differ significantly from those with hTERT <21 and had a decreased survival time (4vs.10 months, hazard ratio 0.5033with 95% CI:0.1973 to 1.284, p=0.0493).

(2) Comparison of survival curves between control and grade IV with optimal cut-off >7.55 to best predict survival; patients with HMGA1 expression exceeding 7.55 were found to differ significantly from those with HMGA1< 7.55 and had a decreased survival time (4 vs. 10 months, hazard ratio 0.4753 with 95% CI: 0.183 to 1.234, p=0.0328).

(3) Comparison of survival curves between control and grade IV with optimal cut-off >3.95 to best predict survival; patients with NLR exceeding 3.95 were found to differ significantly from those with NLR 3.95 and had a decreased survival time (5 vs.21 months, hazard ratio 2.321 with 95% CI: 1.105 to 4.876, p = 0.0249).

(4) Comparison of survival curves between control and grade IV with optimal cut-off >178.4 to best predict survival; patients with IL-6 exceeding 178.4
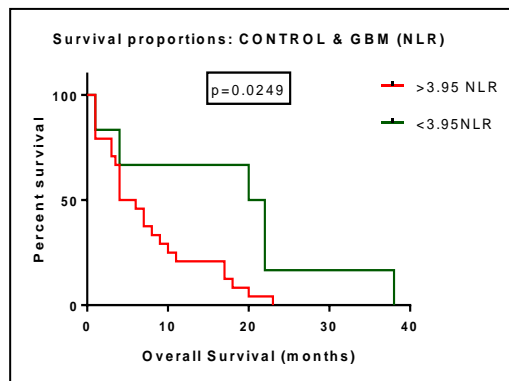
were found to differ significantly from those with IL-6 >178.4 and had a decreased survival time (5 vs.21 months, hazard ratio 2.616 with 95% CI: 0.8706 to 7.859, p = 0.0378).

(5)   Comparison of survival curves between control and grade IV with optimal cut-off >88.75 ng/mL to best predict survival; patients with TIMP-1 level exceeding >8.75 ng/mL were found to differ significantly from those with TIMP-1 <88.75 ng/mL and had a decreased survival time (3.75 vs.14 months, hazard ratio 2.752 with 95% CI: 1.254 to 6.039, p = 0.0008).

(6)   Comparison of survival curves between control and grade IV with optimal cut-off >89.32 ng/mL to best predict survival; patients withYKL-40 level exceeding >89.32 ng/mL were found to differ significantly from those withYKL-40 <89.32 ng/mL and had a decreased survival time (4 vs.17 months, hazard ratio 2.004 with 95% CI: 0.8783 to 3.94, p = 0.0487)

(7)   Comparison of survival curves between control and grade IV with optimal cut-off >1.452 ng/L to best predict survival; patients with hTERT level exceeding >1.452 ng/L were found to differ significantly from those with hTERT <1.45.2 ng/L and had a decreased survival time (6vs.9 months, hazard ratio 1.86 with 95% CI: 0.87832 to 3.94, p = 0.0487).
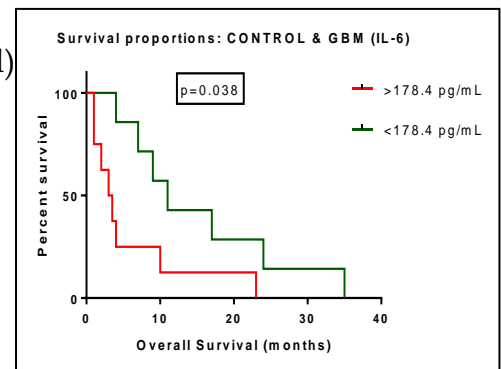
Figure S2. Survival curve analysis of control and Grade IV: (a) hTERT (tissue) (b)HMGA1 (tissue), (c) NLR, (d)IL-6, (e) TIMP-1, (f) YL-40 and (g) hTERT (blood)
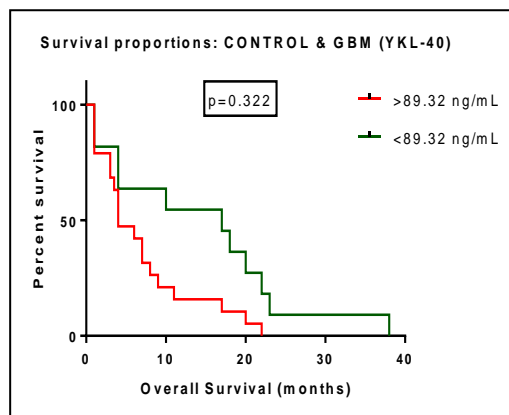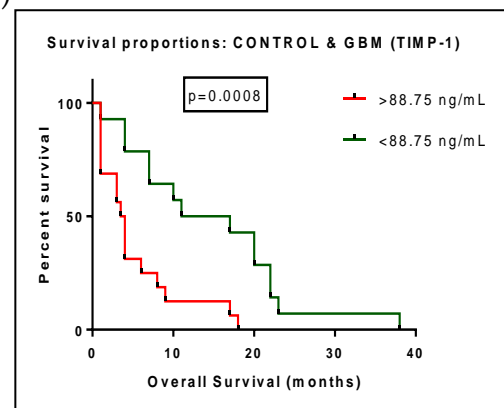
(a) Survival proportions: CONTROL & GBM (hTERT in tissue)

(b) Survival proportions: CONTROL & GBM (HMGA1 in tissue)

(c) Survival proportions: CONTROL & GBM (NLR)
p=0.0249
>3.95 NLR
<3.95NLR

(d) Survival proportions: CONTROL & GBM (IL-6)
p=0.038
>178.4 pg/mL
<178.4 pg/mL

(e) Survival proportions: CONTROL & GBM (YKL-40)
p=0.322
>89.32 ng/mL
<89.32 ng/mL

(f) Survival proportions: CONTROL & GBM (TIMP-1)
p=0.0008
>88.75 ng/mL
<88.75 ng/mL

(g) Survival proportions: CONTROL & GBM (hTERT)
p=0.0487
>1.452 ng/L
<1.452 ng/L