

SUPPLEMENTARY TABLES

Supplementary Table 1. Basic information of enrolled patients and control group.

	GBM	CONTROL	P value
Total	84	45	-
Male (%)	40	24	0.582
Female (%)	44	21	0.582
Age	45.04±0.88(years)	46.02±1.71(years)	0.580

There was no significant difference between the two groups in terms of gender (Pearson Chi-square test, $P = 0.582$) and age (Student t test, $P = 0.580$). GBM: Glioblastoma Multiforme.

Supplementary Table 2. Definition of MRI patterns.

Imaging features	Classification criterion
Edema extent	
Minor	Peritumoral edema extending <1 cm from tumor margin
Major	Peritumoral edema extending ≥1 cm from tumor margin
Edema shape	
Regular	The shape of edema is similar to round and is not radial
Irregular	The shape of edema tends to irregular, such as finger-like or radial shape
Necrosis	
No	No necrosis within tumor
Yes	A region had high signal on T2-W images, but low signal on T1-W images, and had an irregular enhancing border on contrast-enhanced images
Cyst	
No	No cyst in tumor
Yes	A rounded region which was very low T1-W signal and very high T2-W signal matching cerebrospinal fluid signal, and had a thin, smooth, regular, and slightly enhancing or non-enhancing wall
Enhancement	
No obvious	Enhancement signal is less than the signal of fat
Obvious	Enhancement signal is similar to that of fat
Tumor crosses midline	
No	Tumor is limited to unilateral cerebral hemisphere
Yes	Tumor crosses the brain midline and extends into the other side of cerebral hemisphere
Edema crosses midline	
No	Peritumoral edema extent is limited to unilateral cerebral hemisphere
Yes	Peritumoral edema extent crosses the brain midline and is not confined to unilateral cerebral hemisphere
Size (cm)	
< median	The maximum diameter of tumor is less than 4.8 cm
≥ median	The maximum diameter of tumor is equal to or more than 4.8 cm