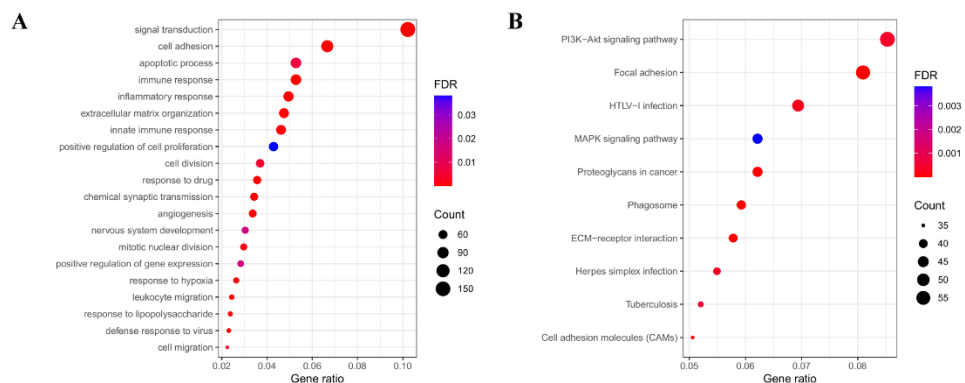


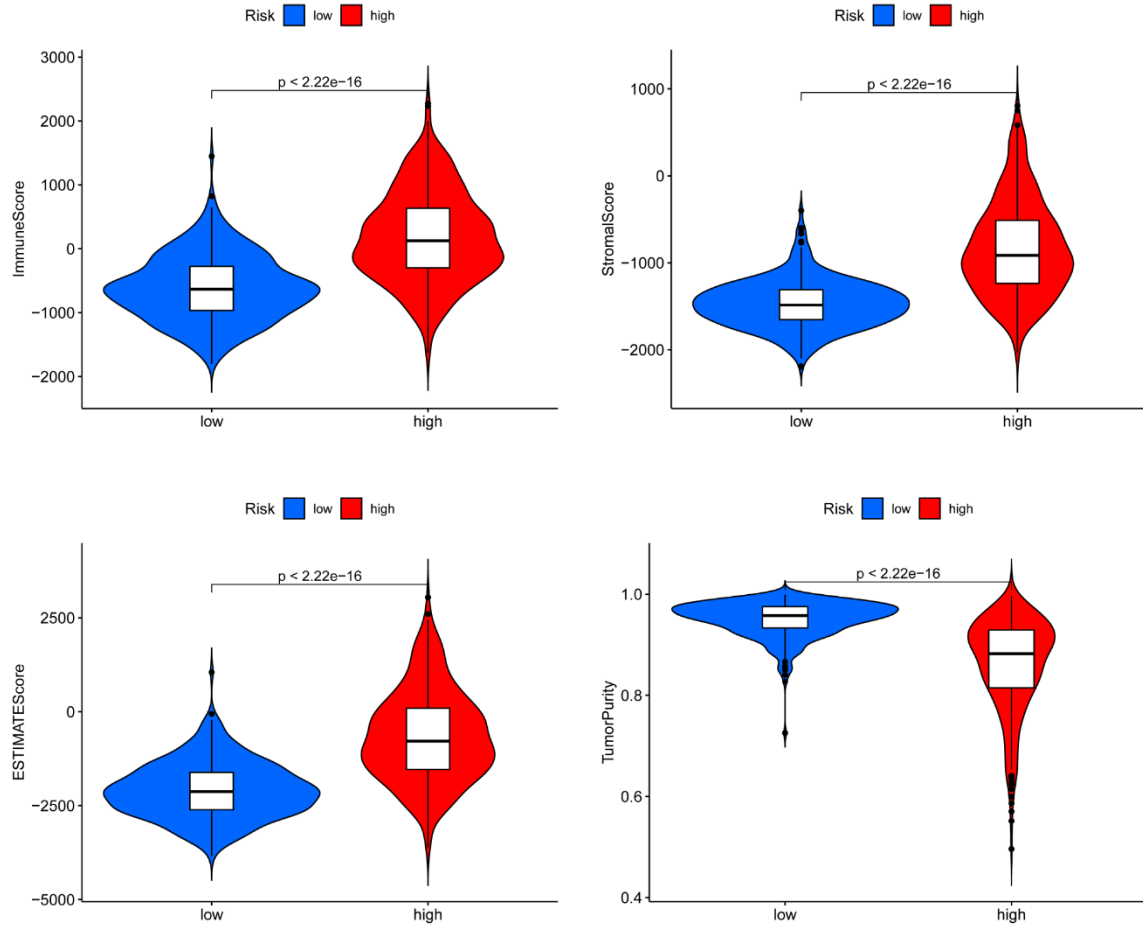
1

2 **Supplementary Figure 1 The expression level of pyroptosis-related genes in the two risk**
 3 **populations.** The boxplot showed that patients with high-risk scores had a higher expression
 4 levels of the pyroptosis genes (***) represented $p < 0.001$).



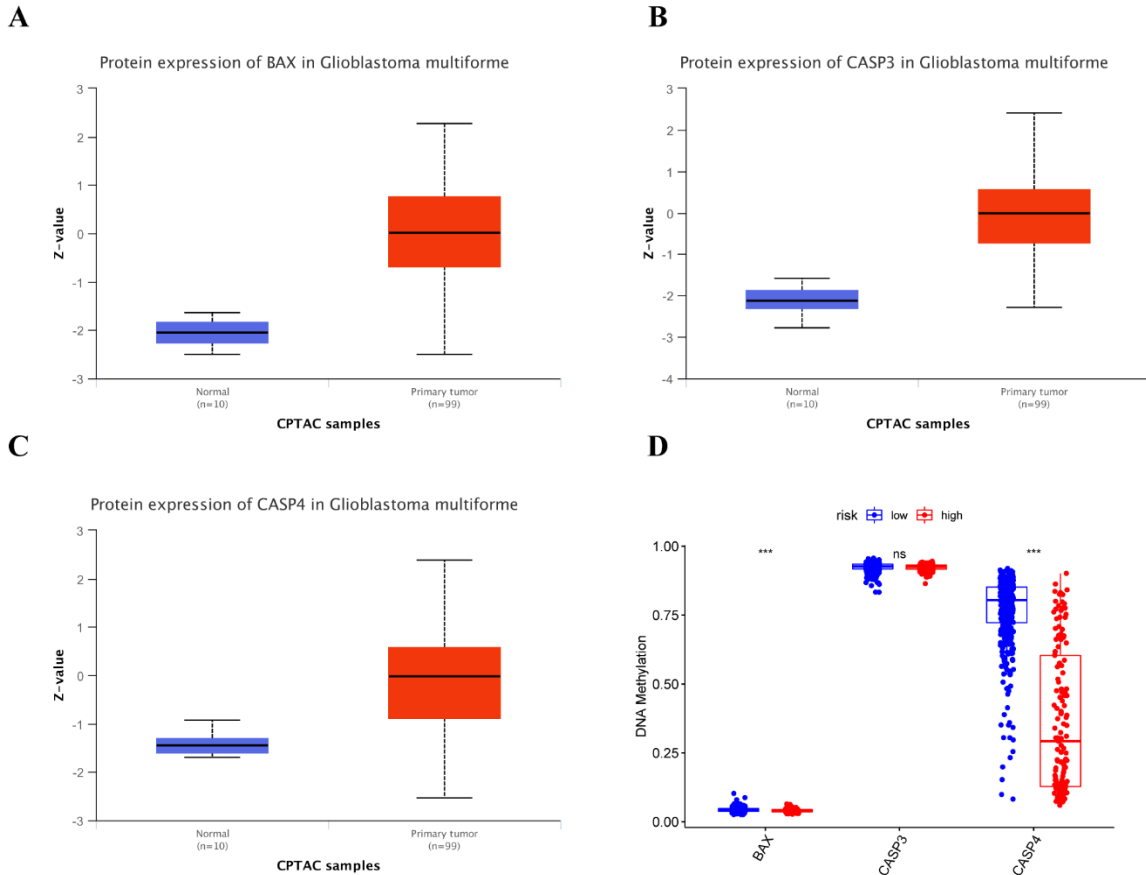
5

6 **Supplementary Figure 2 Functional analysis for DEGs between low and high-risk patients**
7 **in the CGGA cohort. (A) BP enrichment for the differentially expressed gene set. (B) Pathway**
8 **enrichment for differentially expressed genes.**



9

10 **Supplementary Figure 3 TME scores in different groups.** Scores of immune, stromal, estimate,
11 and tumor purity were significantly different in low/high-risk groups.



12

13 **Supplementary Figure 4 Protein expression in normal and glioblastoma and difference of**

14 **methylation between the low and high-risk groups. (A-C) Protein expression of the three risk**

15 **signature genes between normal and glioblastoma in the UALCAN database. (D) The difference of**

16 **methylation levels of BAX, CASP3, and CASP4 between the low and high-risk glioma patients in**

17 **the TCGA set (***) represented $p < 0.001$.**

18 **Supplementary Table 1 The information of 57 pyroptosis-related genes.**

Gene symbol	Full-names
AIM2	Absent in melanoma 2
APIP	APAF1 interacting protein
BAK1	BCL2 antagonist/killer 1
BAX	BCL2 associated X
CASP1	cysteine-aspartic acid protease-1
CASP3	cysteine-aspartic acid protease-3
CASP4	cysteine-aspartic acid protease-4
CASP5	cysteine-aspartic acid protease-5
CASP6	cysteine-aspartic acid protease-6

CASP8	cysteine-aspartic acid protease-8
CASP9	cysteine-aspartic acid protease-9
CHMP2A	charged multivesicular body protein 2A
CHMP2B	charged multivesicular body protein 2B
CHMP3	charged multivesicular body protein 3
CHMP4A	charged multivesicular body protein 4A
CHMP4B	charged multivesicular body protein 4B
CHMP4C	charged multivesicular body protein 4C
CHMP6	charged multivesicular body protein 6
CHMP7	charged multivesicular body protein 7
CYCS	cytochrome c, somatic
DHX9	DHX9 DExH-box helicase 9
ELANE	elastase, neutrophil expressed
GPX4	glutathione peroxidase 4
GSDMA	gasdermin A
GSDMB	gasdermin B
GSDMC	gasdermin C
GSDMD	gasdermin D
GSDME/DFNA5	gasdermin E
GZMA	granzyme A
GZMB	granzyme B
HMGB1	high mobility group box 1
IL18	interleukin 18
IL1A	interleukin 1A
IL1B	interleukin 1B
IL6	interleukin 6
IRF1	interferon regulatory factor 1
IRF2	interferon regulatory factor 2
NAIP	NLR family apoptosis inhibitory protein
NLRC4	NLR family CARD domain containing 4
NLRP1	NLR family pyrin domain containing 1
NLRP2	NLR family pyrin domain containing 2
NLRP3	NLR family pyrin domain containing 3
NLRP6	NLR family pyrin domain containing 6
NLRP7	NLR family pyrin domain containing 7
NLRP9	NLR family pyrin domain containing 9
NOD1	nucleotide binding oligomerization domain containing 1
NOD2	nucleotide binding oligomerization domain containing 2
PJVK	pejvakin/deafness, autosomal recessive 59

PLCG1	phospholipase C gamma 1
PRKACA	protein kinase cAMP-activated catalytic subunit alpha
PYCARD	PYD and CARD domain containing
SCAF11	SR-related CTD associated factor 11
TIRAP	TIR domain containing adaptor protein
TNF	tumor necrosis factor
TP53	tumor protein p53
TP63	tumor protein p63
ZBP1	Z-DNA binding protein 1
