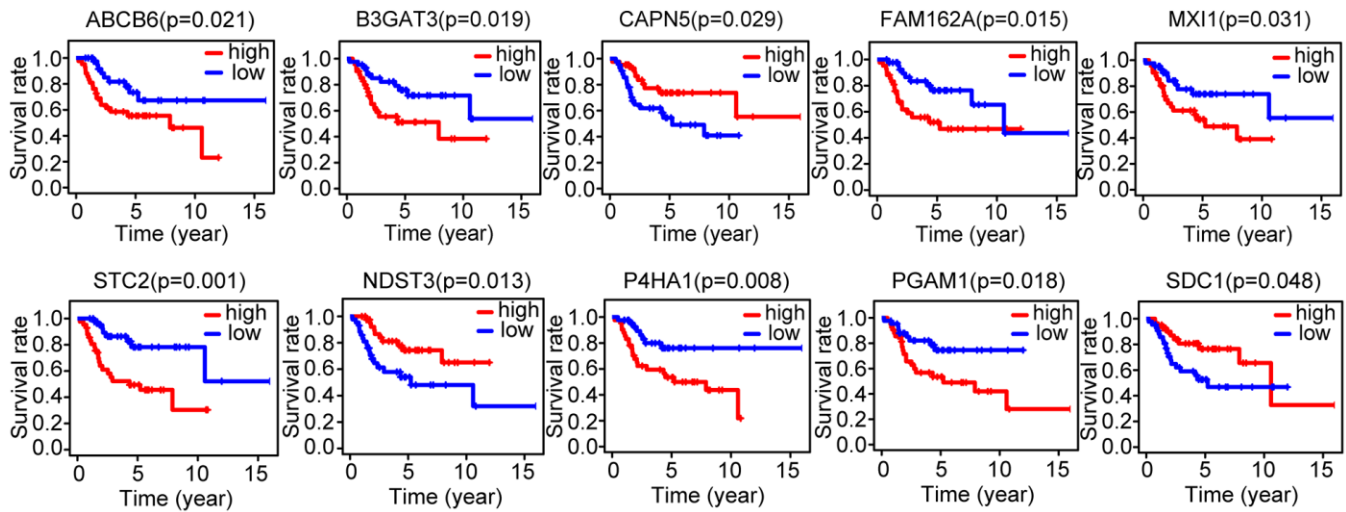
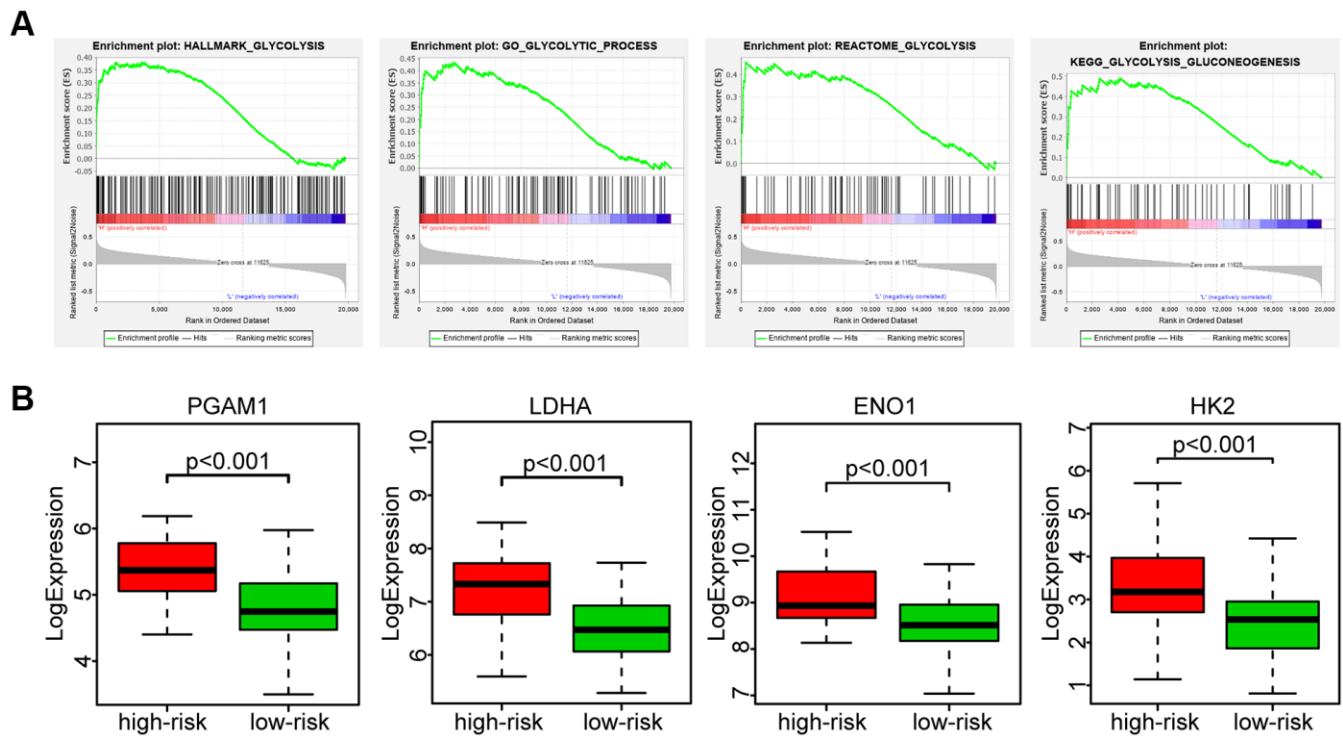


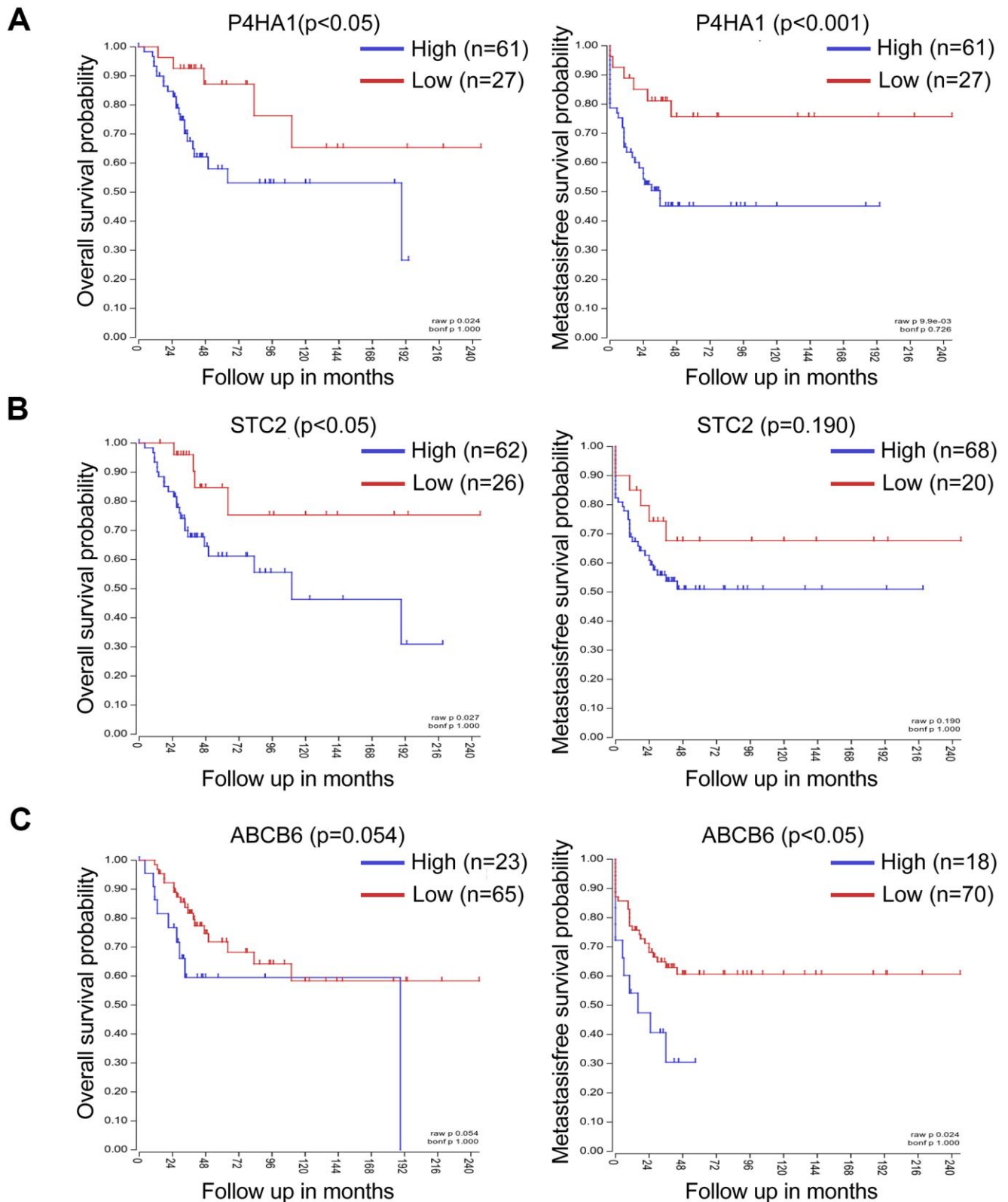
SUPPLEMENTARY FIGURES



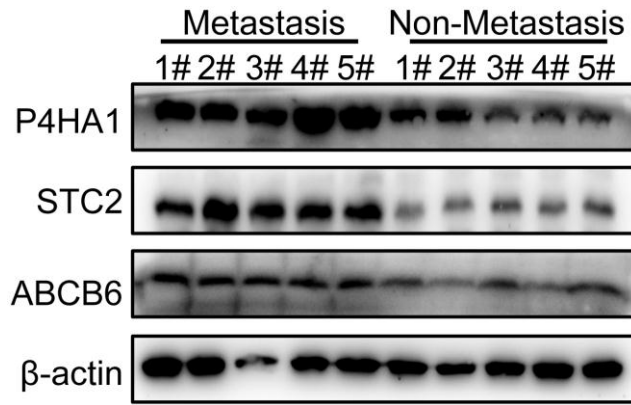
Supplementary Figure 1. Kaplan-Meier survival curve analysis of the ten genes related to overall survival rate.



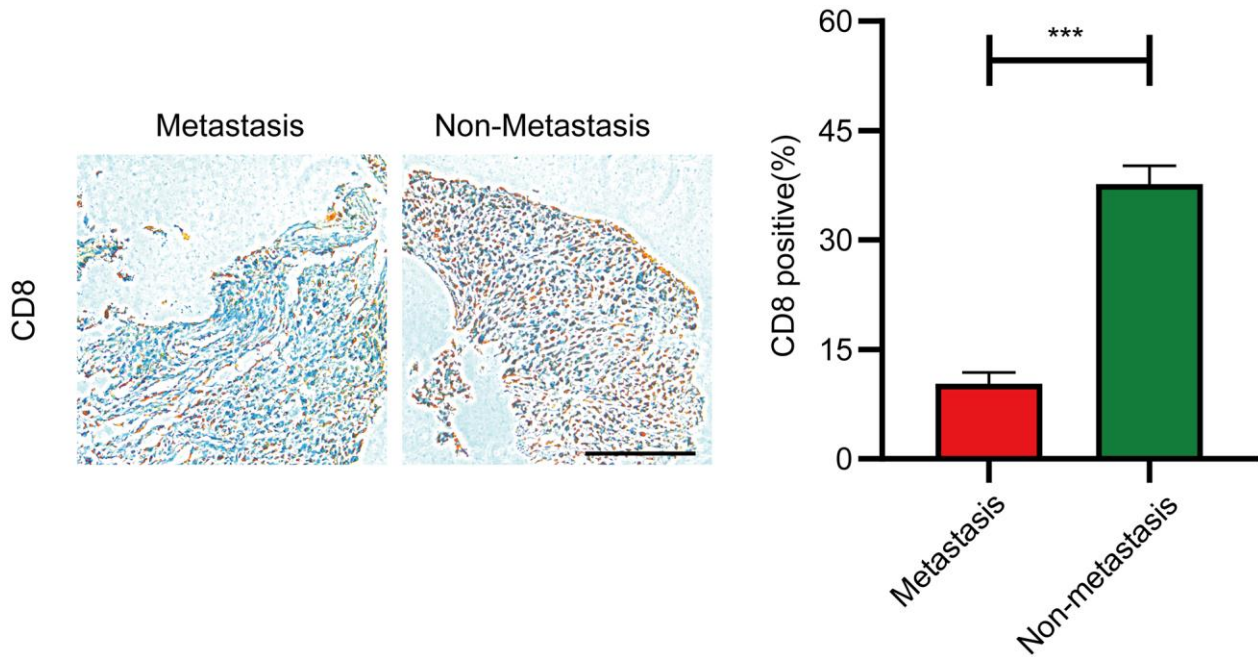
Supplementary Figure 2. The risk signature can reflect the activity of glycolysis to some extent. (A) Enrichment plots of four glycolysis-related gene sets which had significant difference between high-risk and low-risk groups by performing GSEA. (B) The expression of glycolytic pathway-specific genes were higher expressed in high-risk group than low-risk group.



**Supplementary Figure 3. Validation of the risk genes in R2 database.** (A) Kaplan-Meier survival curve of overall survival rate and metastasis free survival rate among OS patients from low-P4HA1 expression group and high-P4HA1 expression group. (B) Kaplan-Meier survival curve of overall survival rate and metastasis free survival rate among OS patients from low-STC2 expression group and high-STC2 expression group. (C) Kaplan-Meier survival curve of overall survival rate and metastasis free survival rate among OS patients from low-ABCB6 expression group and high-ABCB6 expression group.



**Supplementary Figure 4. The risk genes are upregulated in metastatic human OS tissues.** Western blot analysis of risk genes' expression in metastatic human OS compared with non-metastatic human OS tissues.



**Supplementary Figure 5. The expression of CD8+ T cell was detected by IHC in metastatic and non-metastatic human OS tissues.** The results of CD8+ T cell positive (%) were shown in the right panel. The bars indicate the mean±s.d. Statistically significant differences (t-test), \*\*\*P<0.001, Scale bars = 250 μm.