

Figure S1 Verification of prognostic signatures of CSR-lncRNAs in osteosarcoma patients in training, validation and entire set. (A) The overall survival time of patients with osteosarcoma in the high-risk and low-risk groups analyzed by the median risk score. (B) The ROC curve demonstrates the accuracy of the prognostic model for CSR-lncRNAs in predicting the survival times of osteosarcoma patients from the TCGA database. (C) Risk score distribution map, the dotted line indicates the optimal cut-off value of the risk score. In survival status, the blue dots represent the surviving patients with osteosarcoma and the red dots represent death. (D) Heatmaps depict the expression of model CSR-lncRNAs for both risk groups. CSR-lncRNAs, cellular senescence-related long non-coding RNAs; TCGA, The Cancer Genome Atlas.

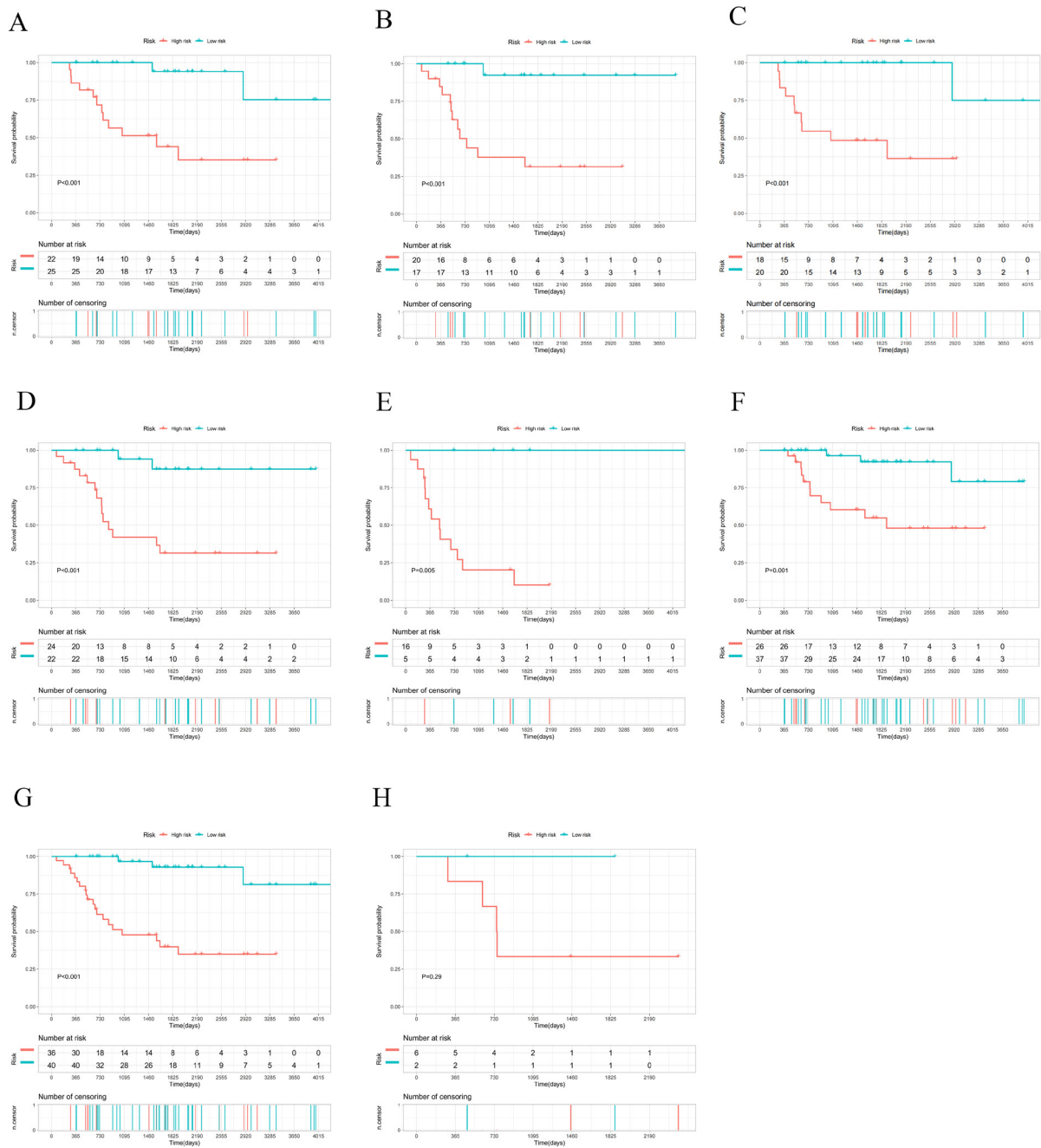


Figure S2 The survival rates of high- and low-risk osteosarcoma patients stratified by different clinicopathological characteristics. Kaplan-Meier survival curve analysis shows overall survival rates of high- and low-risk osteosarcoma patients from the TCGA database stratified by (A,B) sex (male; female), (C,D) age (≥ 15 years; < 15 years), (E,F) metastasis (metastasis; non-metastasis), (G,H) tumor primary sites (legs; other). TCGA, The Cancer Genome Atlas.

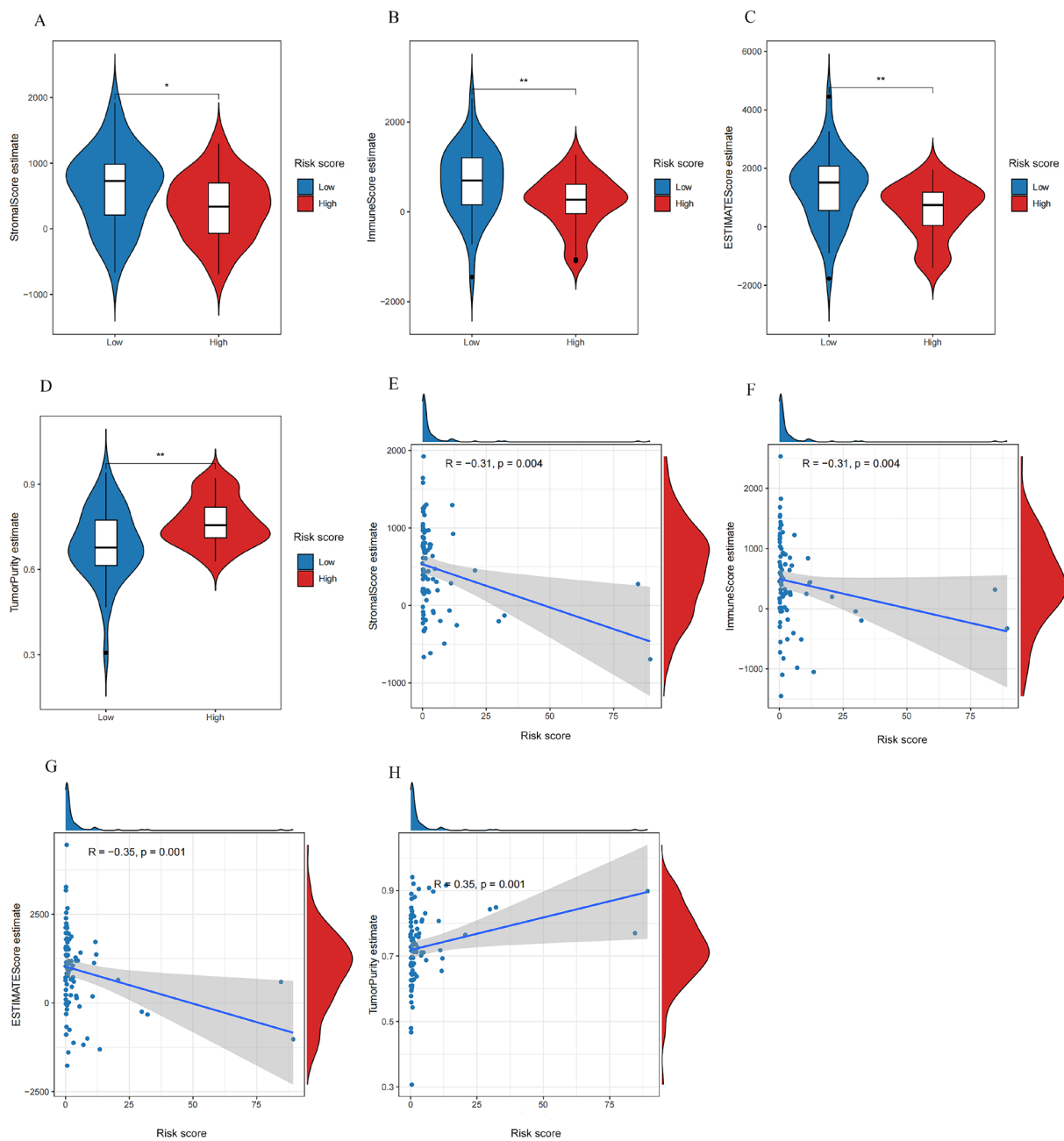


Figure S3 TME analysis between high- and low-risk groups by ESTIMATE. (A) Stromal score. (B) Immune score. (C) ESTIMATE score. (D) Tumor purity (* $P < 0.05$, ** $P < 0.01$). The correlation analysis between stromal score (E), immune score (F), ESTIMATE score (G), tumor purity (H), and CSRDEGs prognostic model risk score. ESTIMATE, estimation of stromal and immune cells in malignant tumor tissues using expression data; CSRDEGs, cellular senescence-related differentially expressed genes.

Table S1 List of pivotal CSR-lncRNAs for the multivariate Cox regression model

LncRNA	Importance	Relative Importance
LINC02328	0.0478	1
AP000785.1	0.0348	0.7276
AC083900.1	0.0346	0.7244
ELFN1-AS1	0.0267	0.5586
AC069120.1	0.0246	0.5156
LZTS1-AS1	0.0198	0.4136
FAM222A-AS1	0.0192	0.4012
CYP2U1-AS1	0.018	0.3759
LINC00944	0.0159	0.332
VPS9D1-AS1	0.0158	0.3312
TRHDE-AS1	0.0152	0.3172
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