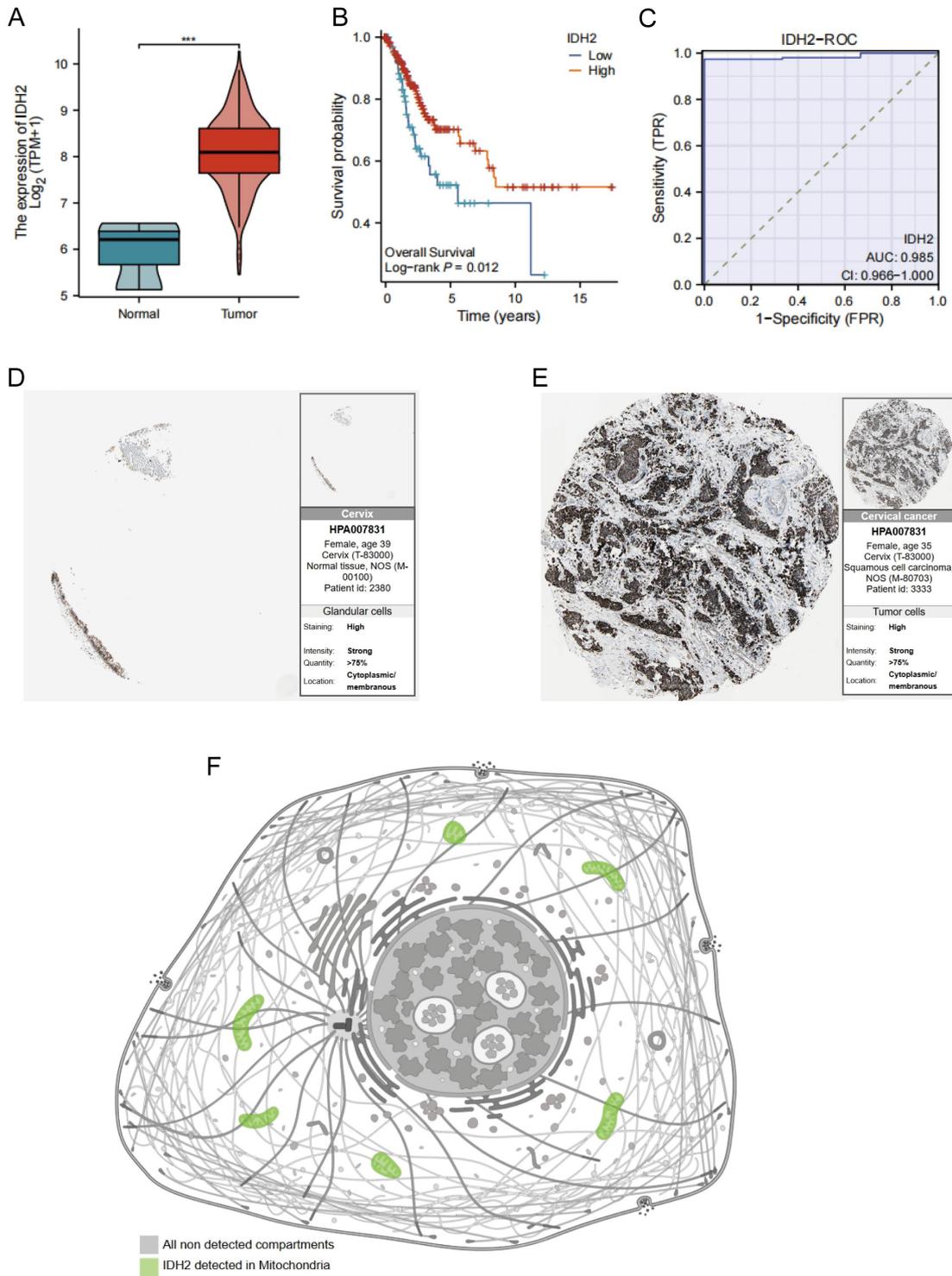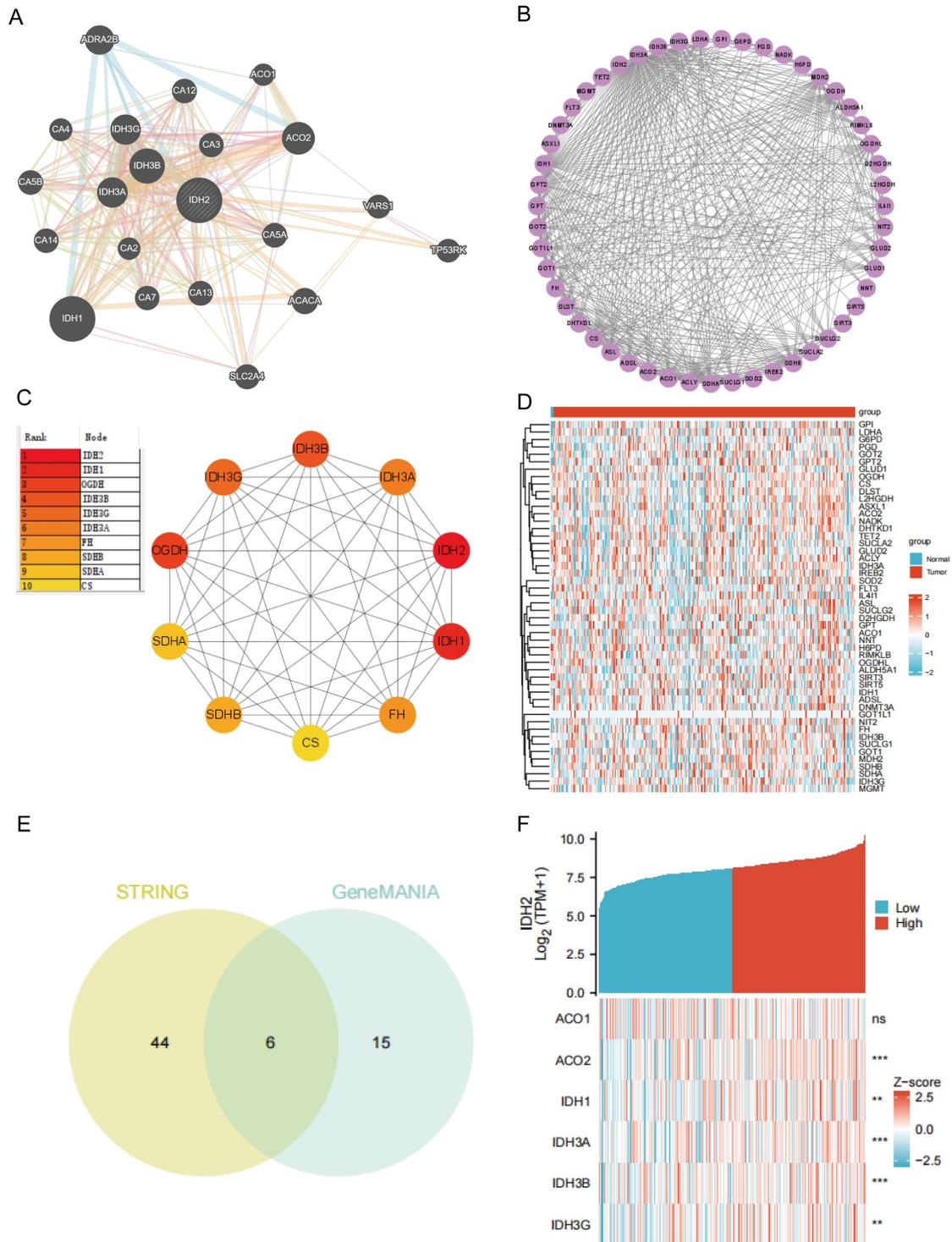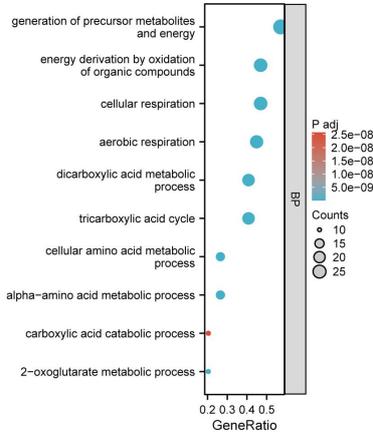# Supplementary Figure S 1

A

B

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Supplementary Figure S 2

Supplementary Figure S 3
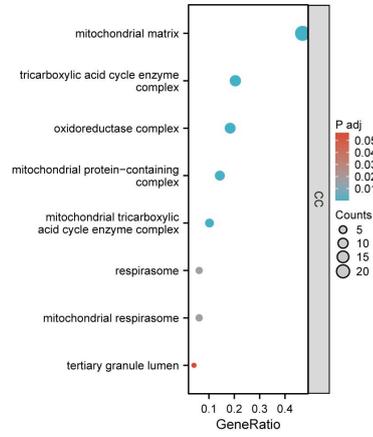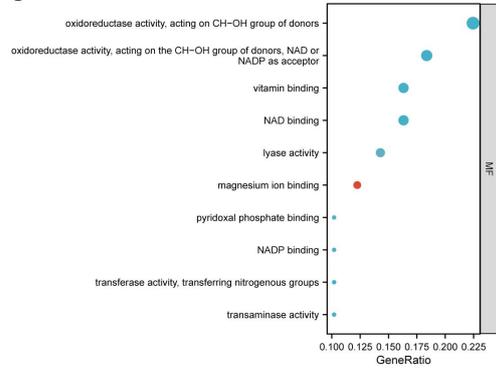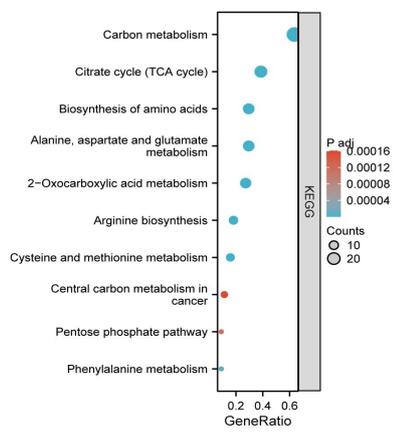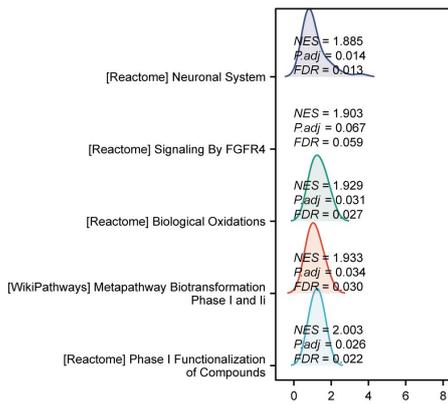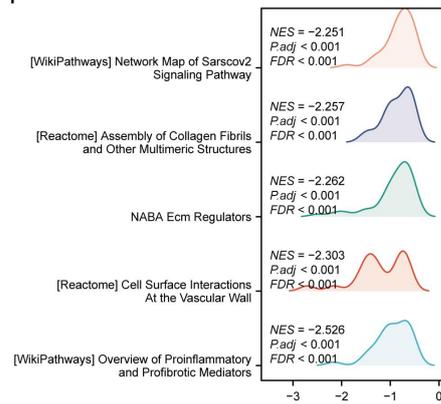
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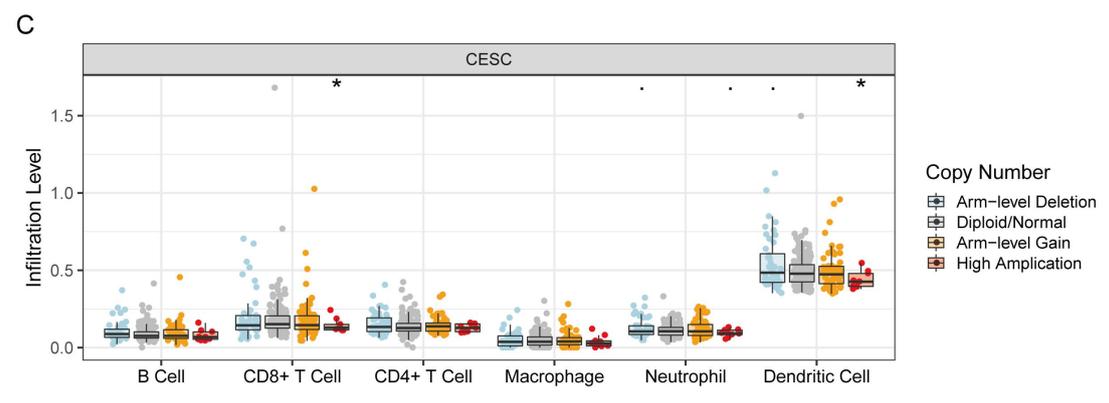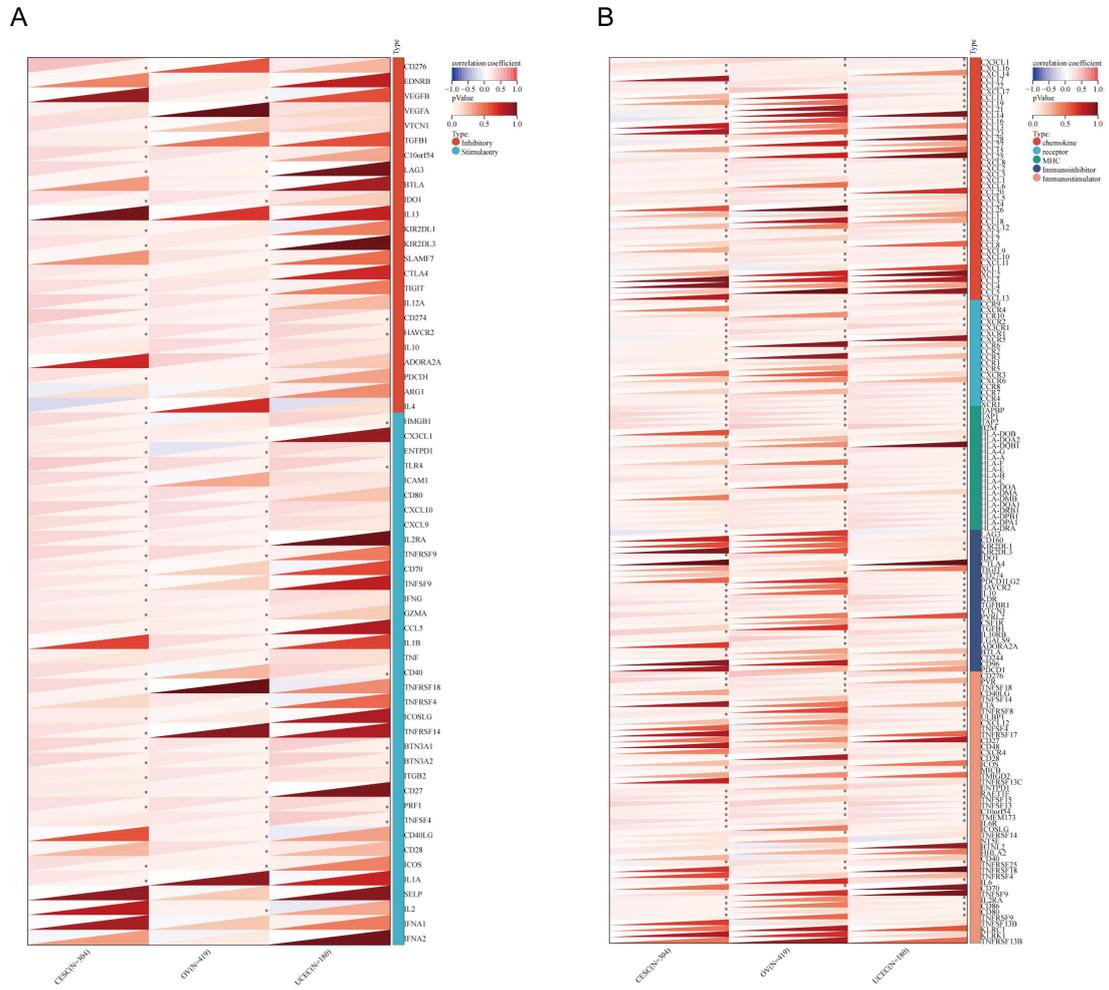
Supplementary Figure S 1 . Prognostic Diagnostic Value of IDH2 in CESC.

(A) In TCGA-CESC, the mRNA expression of IDH2 in cancerous tissues and adjacent non-cancerous tissues ($p < 0.001$).(B) Kaplan-Meier (KM) survival curve of IDH2 in patients with CESC ($p < 0.012$).(C) Clinical ROC analysis in patients with CESC (AUC: 0.985).(D) Representative IHC images of IDH2 expression in normal cervical tissues.(E) Representative IHC images of IDH2 expression in CESC. (F) Schematic diagram of the cellular localization pattern of IDH2.

Supplementary Figure S2 . Analysis of the Protein-Protein Interaction (PPI)

Network and Related Genes of IDH2.

(A) The interaction network of IDH2 in GeneMANIA. (B) The intersection network of the top 50 genes that interact with IDH2 on the STRING website. (C) The top 10 most relevant genes that interact with IDH2 on the STRING website. (D) The top 50 interacting genes in CESC. (E) Venn diagram of the intersection of the datasets from GeneMANIA and STRING. (F) Heat map of gene co-expression between the intersection genes of GeneMANIA and STRING and IDH2.

Supplementary Figure S 3 . Functional Enrichment Analysis Related to IDH2.

(A) Results of biological process (BP) in the enrichment analysis of genes related to IDH2. (B) Results of cellular component (CC) in the enrichment analysis of genes related to IDH2. (C) Results of molecular function (MF) in the enrichment analysis of genes related to IDH2. (D) KEGG enrichment analysis of genes related to IDH2. (E) Positive correlation results of gene set enrichment analysis (GSEA) of genes related to IDH2 (normalized enrichment score (NES) > 1, q-value < 0.25,

Padj < 0.05). (F) Negative correlation results of gene set enrichment analysis (GSEA) of genes related to IDH2 (normalized enrichment score (NES) < 1, q-value < 0.25, Padj < 0.05).

Supplementary Figure S 4 Correlation Analysis between the Expression of IDH2 and Genes Associated with the Efficacy of Immunotherapy.

(A) Correlation analysis between the expression of IDH2 and immune checkpoint genes. (B) Correlation analysis between the expression of IDH2 and immune regulatory genes. (C) Relationship between the copy number variation of IDH2 in cells and immune infiltration in Cervical Squamous Cell Carcinoma (CESC).