

Supplementary

Table S1 Correlation of IRAK3 mRNA expression and clinical prognosis in LUAD with different clinicopathological factors by Kaplan-Meier plotter

Clinicopathological characteristics	Overall survival (n=1,161)			Progression-free survival (n=906)		
	N	Hazard ratio	P value	N	Hazard ratio	P value
Sex						
Female	537	0.64 (0.48-0.86)	0.003	445	0.56 (0.4-0.79)	<0.001
Male	566	0.75 (0.59-0.97)	0.03	461	0.69 (0.52-0.92)	0.01
Stage						
1	370	0.4 (0.27-0.59)	<0.001	283	0.58 (0.34-0.98)	0.04
2	136	0.46 (0.27-0.77)	0.003	103	0.7 (0.4-1.21)	0.20
3	24	4.3 (1.15-16.04)	0.02	10	NA	NA
4	4	NA	NA	0	NA	NA
Stage T						
1	272	0.72 (0.46-1.13)	0.15	235	0.49 (0.28-0.87)	0.01
2	357	1.32 (0.98-1.79)	0.07	322	1.4 (1.04-1.91)	0.03
3	32	0.61 (0.27-1.42)	0.25	23	0.68 (0.28-1.69)	0.41
4	11	NA	NA	5	NA	NA
Stage N						
0	485	1.22 (0.92-1.6)	0.16	420	0.75 (0.55-1.02)	0.07
1	130	0.52 (0.33-0.83)	0.005	115	0.77 (0.46-1.29)	0.32
2	56	1.87 (0.97-3.61)	0.059	49	0.54 (0.26-1.13)	0.10
Stage M						
0	232	0.67 (0.43-1.03)	0.06	227	0.55 (0.32-0.93)	0.02
1	0	NA	NA	0	NA	NA

LUAD, lung adenocarcinoma; stage T, stage tumor; stage N, stage node; stage M, stage metastasis; NA, not applicable.

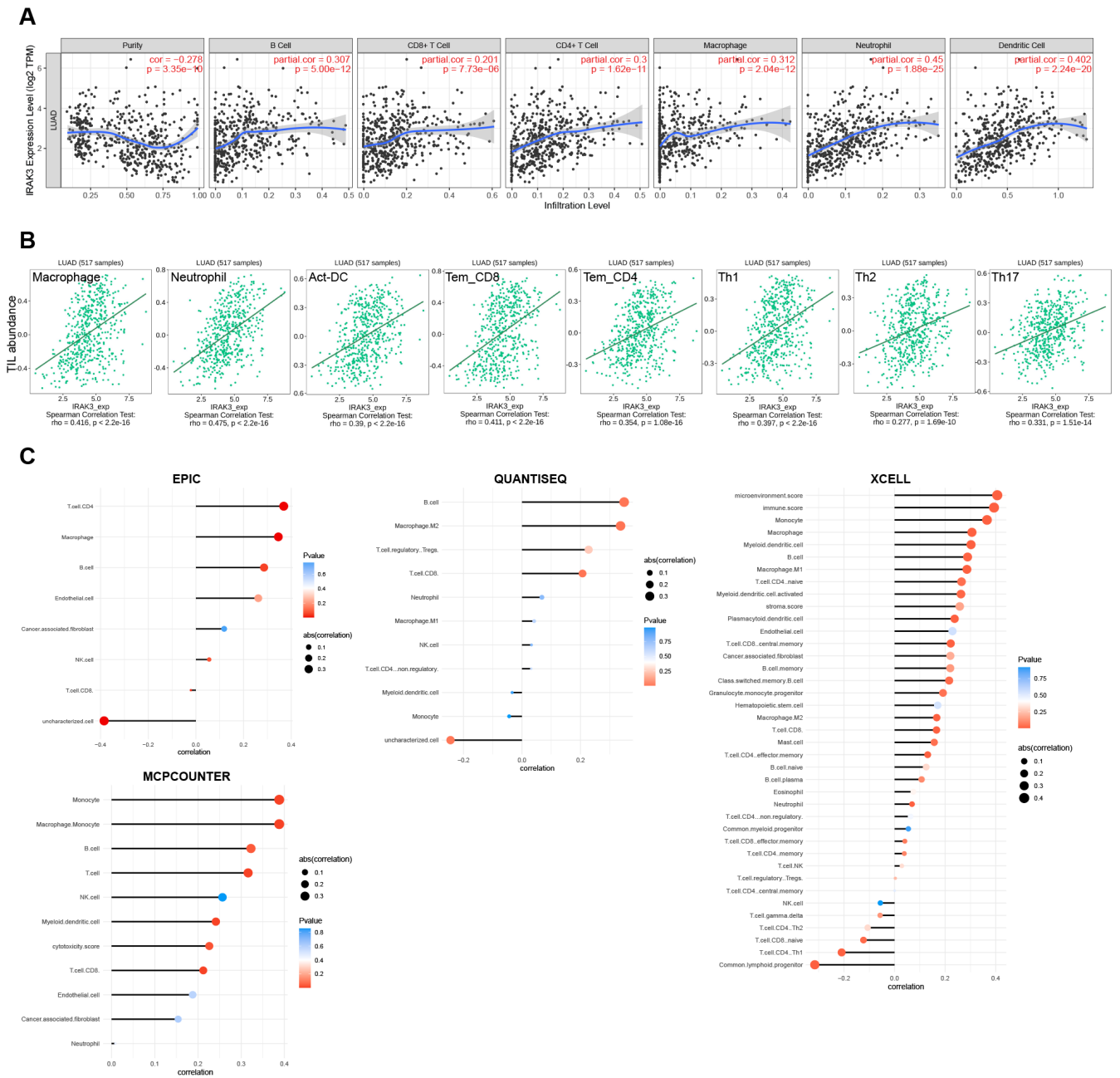


Figure S1 Correlation analysis results between IRAK3 expression and immune infiltration level in LUAD. (A) The correlation between the infiltration of immune cells and the expression of IRAK3 from the TIMER database. (B) Correlation scatterplots between IRAK3 expression and immune infiltration cells from the TISIDB database. (C) Lollipop plots for correlation analysis results by EPIC, QUANTISEQ, XCELL and MCPCOUNTER algorithms. LUAD, lung adenocarcinoma.

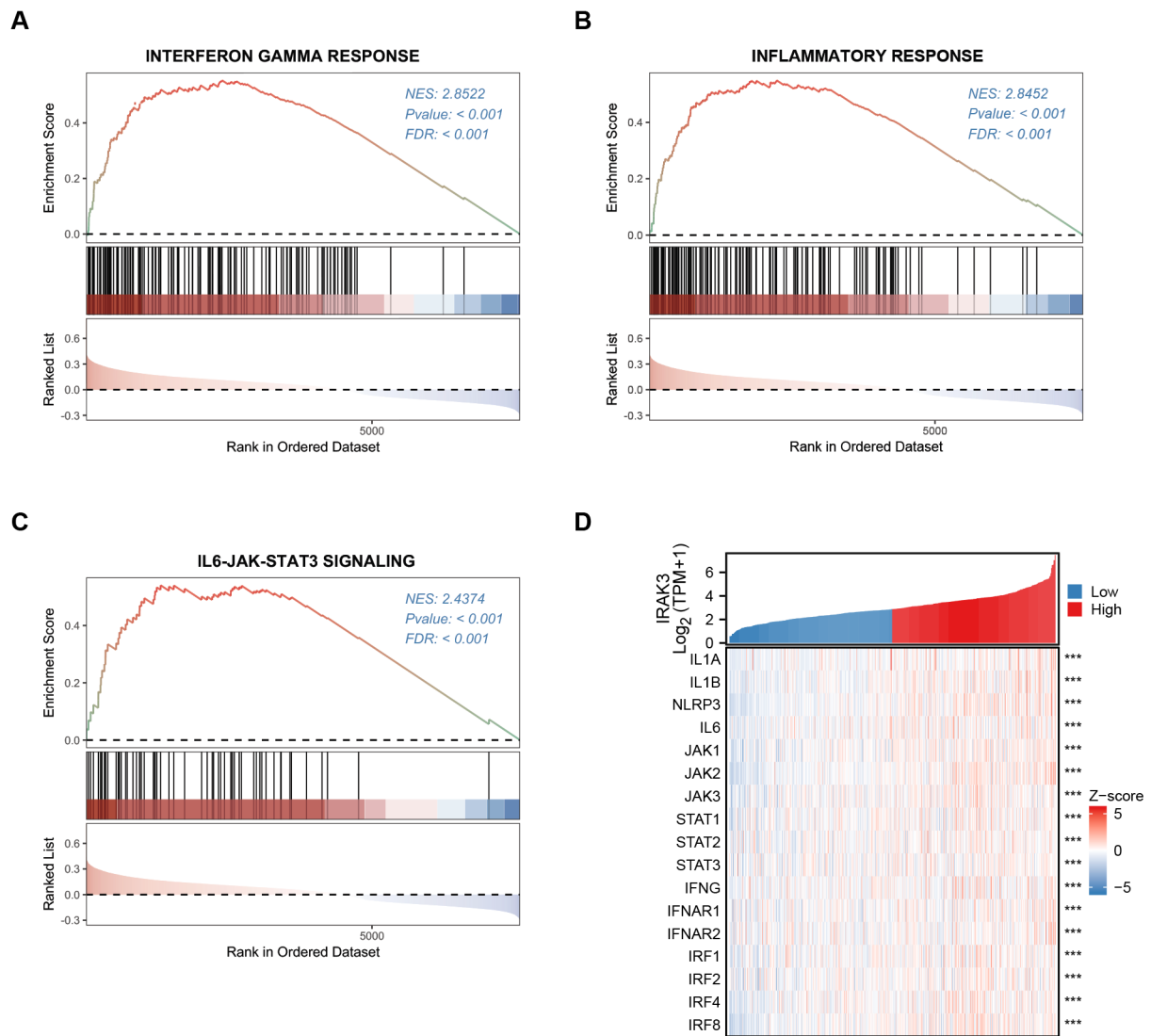


Figure S2 GSEA for LUAD samples with high and low IRAK3 expression and co-expression analysis. (A) GSEA of interferon-gamma response pathway in the LUAD cohort. (B) GSEA of inflammatory response pathway in the LUAD cohort. (C) GSEA of IL6/JAK/STAT3 signaling pathway in the LUAD cohort. (D) The correlation of IRAK3 and the key components of interferon-gamma response, inflammatory response and IL-6/JAK/STAT3 signaling pathways (***, $P < 0.001$). NES, normalized enrichment score; FDR, false discovery rate; GSEA, gene set enrichment analysis; LUAD, lung adenocarcinoma.