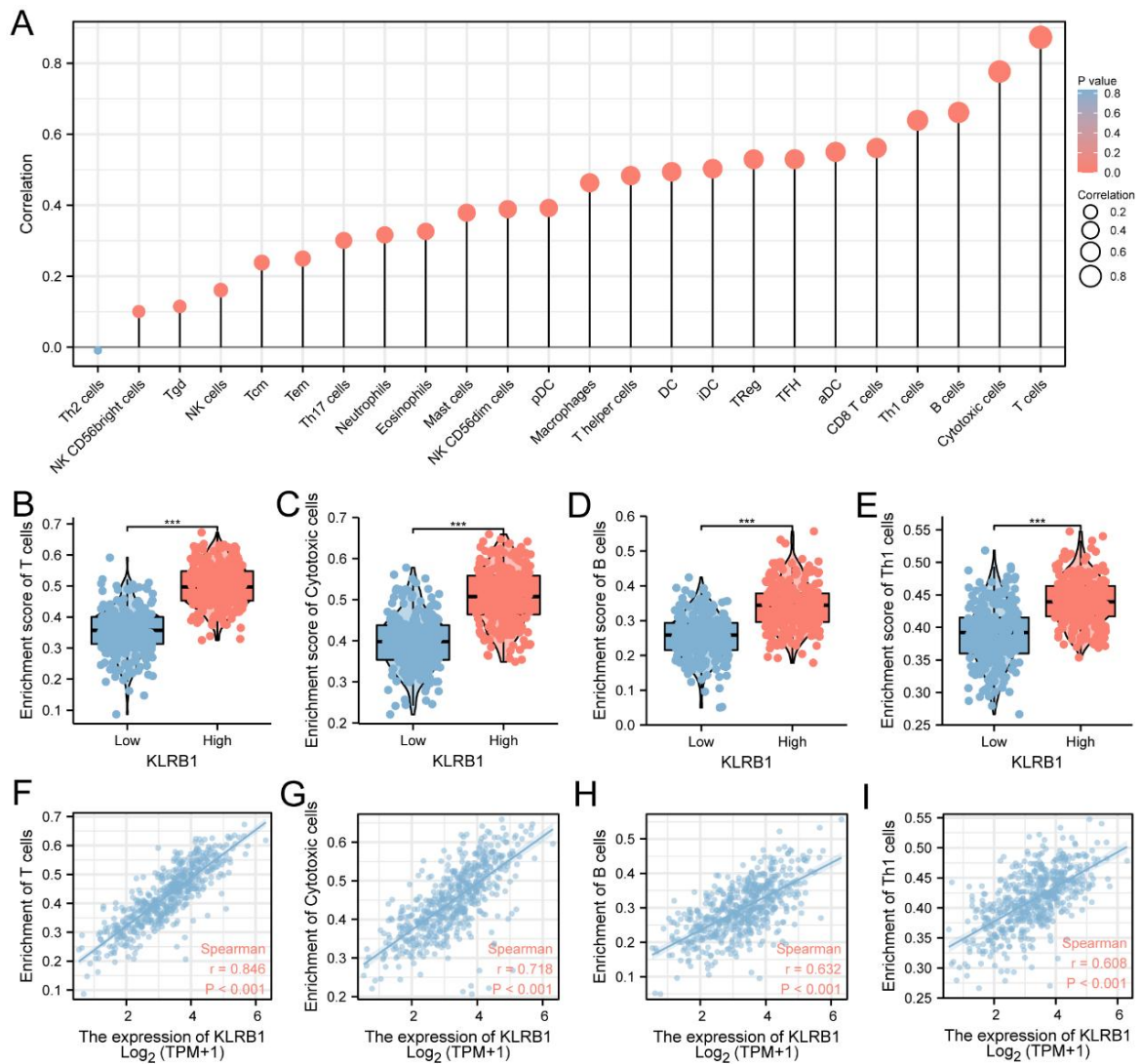
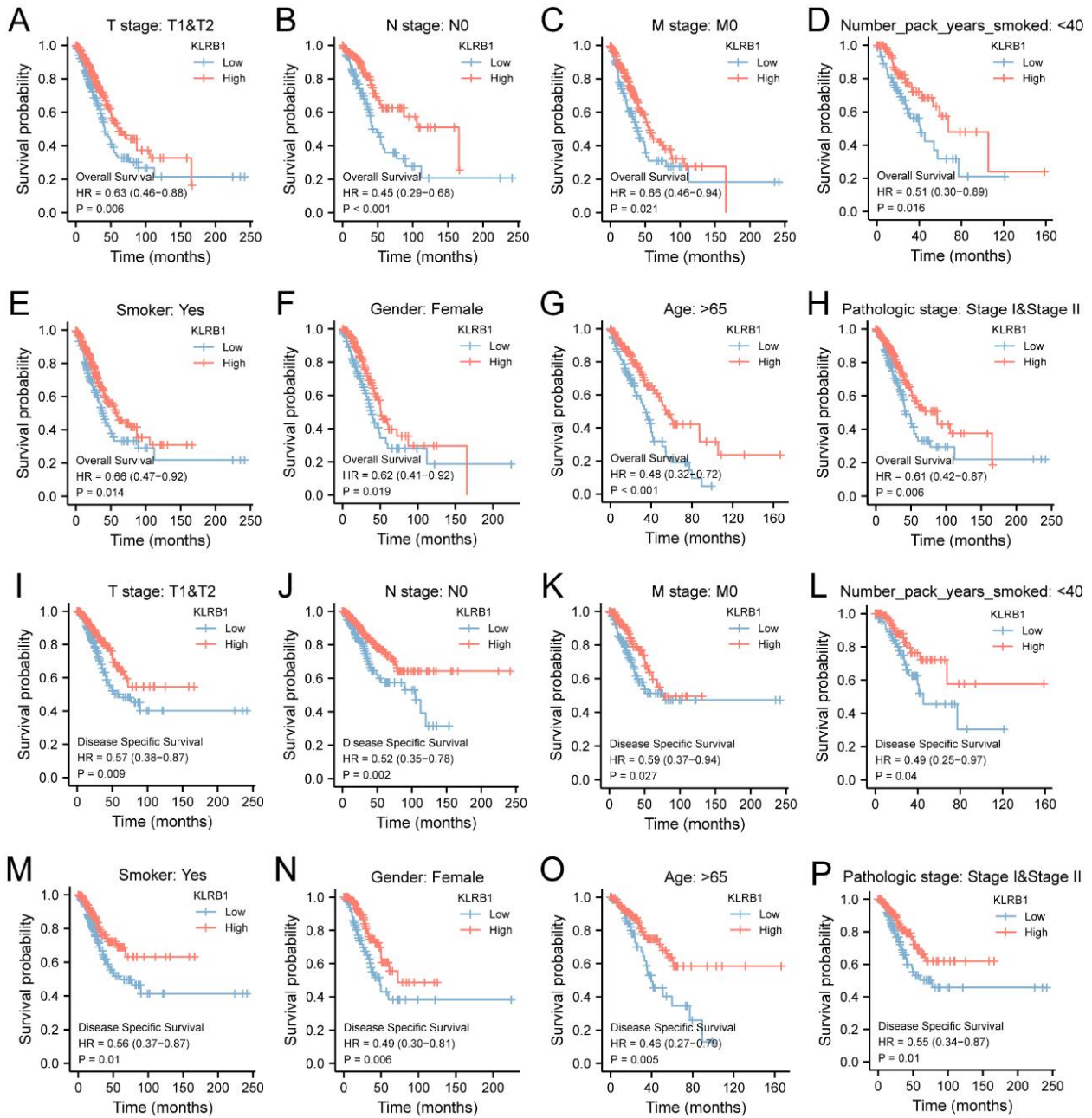


**Figure S1** Association between *KLRB1* expression and clinicopathological features. (A) T stage; (B) M stage; (C) pathological stage; (D) gender; (E) age; (F) smoker; (G) primary therapy outcome; (H) OS event; (I) DSS event. \*, P<0.05; \*\*, P<0.01; \*\*\*, P<0.001.



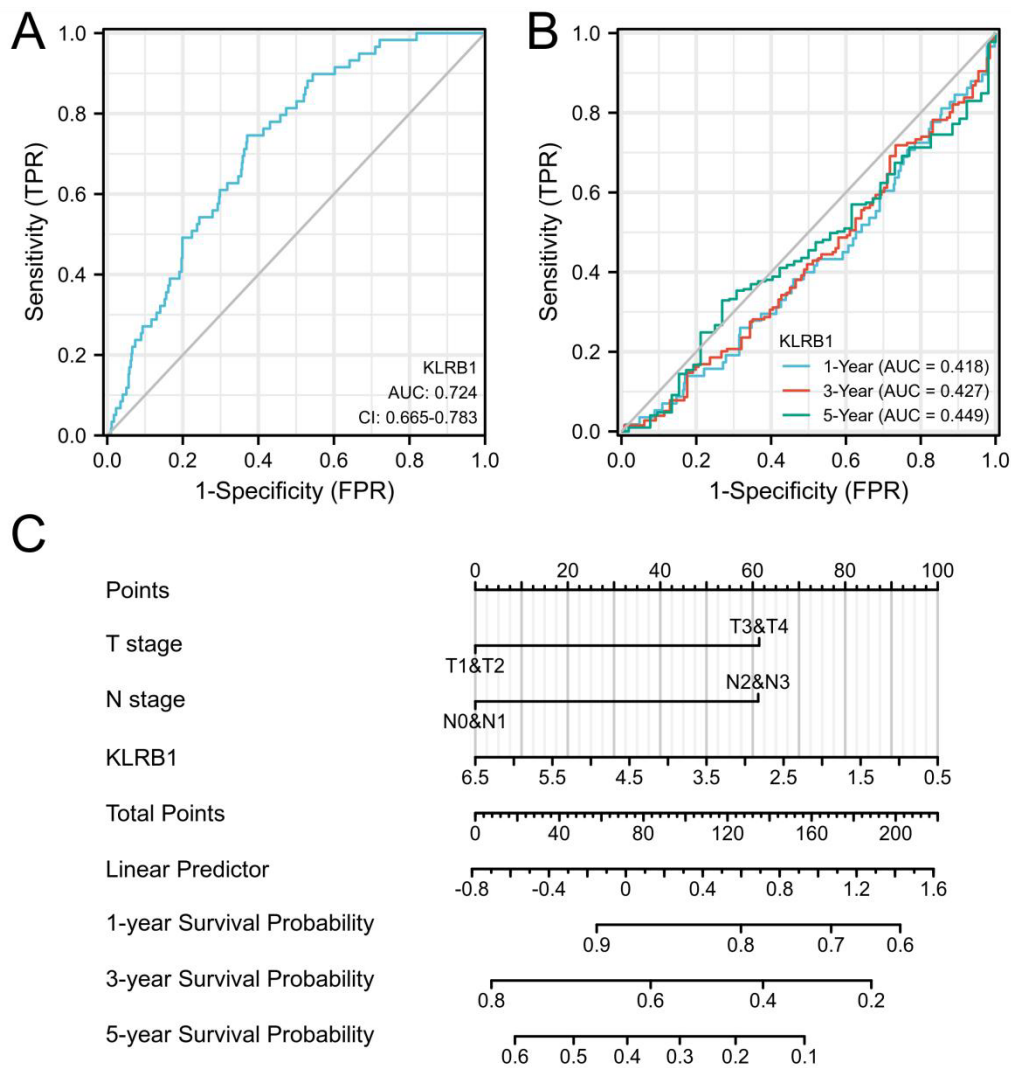
**Figure S2** The correlation analysis between immune cell infiltration and *KLRB1* expression in LUAD. (A) Results of Spearman correlation analysis between the infiltration levels of 24 immune cell types and *KLRB1* expression levels in LUAD tissues. The size of the point corresponds to the absolute value of the Spearman correlation coefficient. (B-E) Comparison of immune infiltration levels (including T cells, cytotoxic cells, B cells, Th1 cells) between high and low *KLRB1* expression groups. (F-I) Correlation of the relative enrichment fraction of immune cells (including T cells, cytotoxic cells, B cells, Th1 cells) with *KLRB1* expression. \*\*\*,  $P < 0.001$ .



**Figure S3** Prognostic value of *KLRB1* expression in lung cancer patients assessed by Kaplan-Meier method in different subgroups. (A-H) OS survival curves of T1 and T2, N0, M0, pack-year <40, smoker, female, age >65 years, stage I and stage II. (I-P) DSS survival curves of T1 and T2, N0, M0, pack-year <40, smoker, female, age >65 years, stage I and stage II.

**Table S1** Univariate and multifactorial Cox regression analysis of the effect of *KLRB1* on patients' DSS

Characteristics	Total (N)	Univariate analysis		Multivariate analysis	
		HR (95% CI)	P value	HR (95% CI)	P value
T stage	466				
T1 & T2	410	Reference			
T3 & T4	56	2.055 (1.236–3.417)	0.006	1.698 (0.933–3.091)	0.083
N stage	457				
N0 & N1	392	Reference			
N2 & N3	65	1.984 (1.252–3.145)	0.004	1.758 (1.027–3.007)	0.04
M stage	327				
M0	306	Reference			
M1	21	2.480 (1.278–4.811)	0.007	2.162 (1.069–4.370)	0.032
Age, years	459				
≤65	226	Reference			
>65	233	1.039 (0.713–1.513)	0.842		
Pack-year	318				
<40	158	Reference			
≥40	160	0.904 (0.569–1.437)	0.67		
Smoker	455				
No	68	Reference			
Yes	387	1.013 (0.585–1.755)	0.962		
Gender	469				
Female	252	Reference			
Male	217	0.956 (0.658–1.390)	0.815		
Anatomic neoplasm subdivision	456				
Left	179	Reference			
Right	277	1.109 (0.749–1.641)	0.606		
Anatomic neoplasm subdivision2	167				
Peripheral lung	110	Reference			
Central lung	57	0.828 (0.433–1.586)	0.57		
<i>KLRB1</i>	469	0.743 (0.617–0.894)	0.002	0.754 (0.600–0.946)	0.015



**Figure S4** Columnar line graph model with *KLRB1* shows excellent diagnostic and prognostic performance in LUAD. (A) Diagnostic ROC curves differentiating LUAD tissue from normal tissue based on *KLRB1* expression levels. (B) Time-dependent survival ROC curves for predicting 1-, 3-, and 5-year survival of LUAD patients based on *KLRB1* expression levels. (C) Columnar plots for predicting 1-, 3-, and 5-year overall survival in LUAD patients.