

Table S1 Univariate and multivariate Cox regression analysis of TNM-stage, gender, age and risk score by using overall survival time

Characteristics	Total (N)	Univariate analysis		Multivariate analysis	
		Hazard ratio (95% CI)	P value	Hazard ratio (95% CI)	P value
Stage_T	354				
T1	104	Reference			
T2	203	1.841 (1.172–2.890)	0.008	1.623 (1.032–2.554)	0.036
T3	31	3.918 (2.112–7.267)	<0.001	3.471 (1.845–6.528)	<0.001
T4	16	3.666 (1.787–7.519)	<0.001	1.824 (0.843–3.950)	0.127
Stage_N	354				
N0	230	Reference			
N1	73	2.115 (1.435–3.116)	<0.001	1.950 (1.313–2.897)	<0.001
N2	51	3.178 (2.092–4.830)	<0.001	2.415 (1.560–3.739)	<0.001
Stage_M	354				
M0	333	Reference			
M1	21	1.869 (1.055–3.312)	0.032	1.913 (1.034–3.540)	0.039
Gender	354				
Female	176	Reference			
Male	178	1.086 (0.782–1.508)	0.624		
Age	354				
<65	161	Reference			
≥65	193	1.016 (0.728–1.418)	0.925		
Risk score	354				
Low risk score	178	Reference			
High risk score	176	2.247 (1.598–3.160)	<0.001	2.062 (1.455–2.922)	<0.001

Table S2 The top 5 most enriched GSEA

Name	Set size	ES	NES	Padjust	Rank
REACTOME_CELL_CYCLE	59	0.59906509	3.48019111	0.00781739	50
REACTOME_CELL_CYCLE_MITOTIC	55	0.5759843	3.29824666	0.00781739	50
REACTOME_CELL_CYCLE_CHECKPOINTS	35	0.53159171	2.68800317	0.00781739	50
REACTOME_M_PHASE	35	0.52834855	2.67160409	0.00781739	50
REACTOME_MITOTIC_METAPHASE_AND_ANAPHASE	28	0.48809888	2.30160681	0.00781739	125

GSEA, Gene set enrichment analysis; ES, enrichment score; NES, normalized enrichment score.