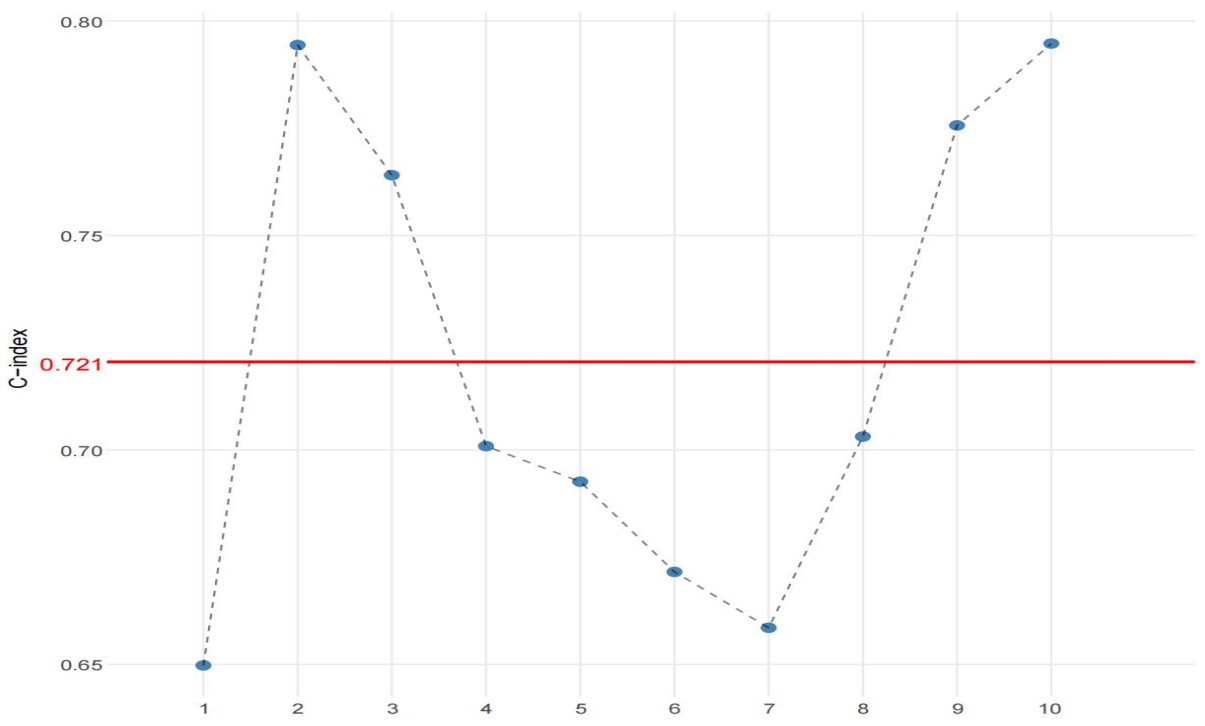
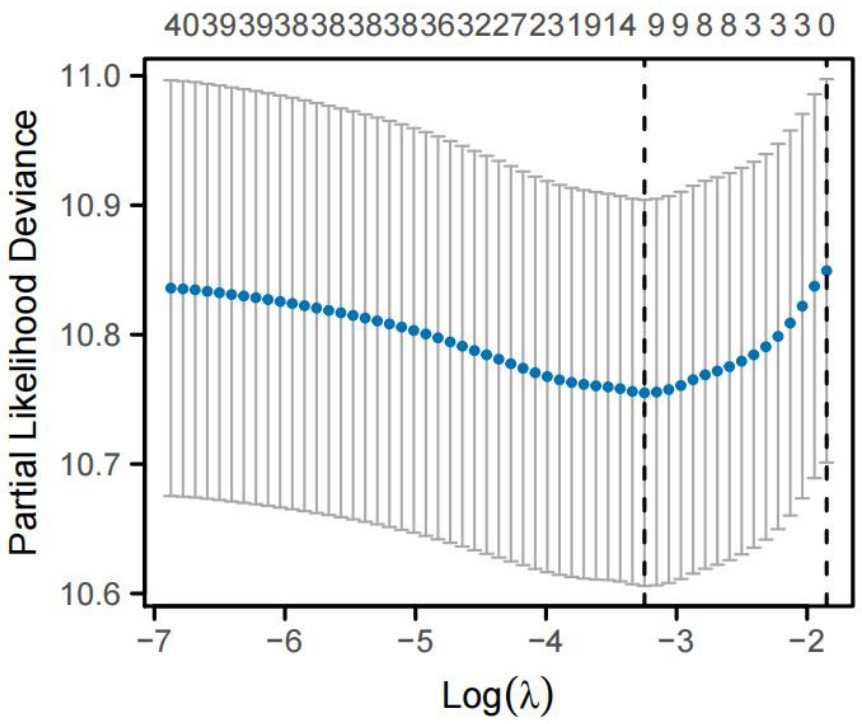
Supplementary Figure1. (A) The C-index curve graph of 10-fold cross-validation of the RSF model. **(B)** LASSO screening based on IMmotion151 cohort. The expression matrix and PFS data of the 41 screened DEGs were used for LASSO regression, with screening index was deviance, and cross-validation was adopted. **(C)** The variation trajectory of LASSO variables. **(D, E)** Univariate and multivariate COX regression analyses were conducted on the 9 genes screened by LASSO. **(F)** KIRC_GSE159115 cell annotation markers.

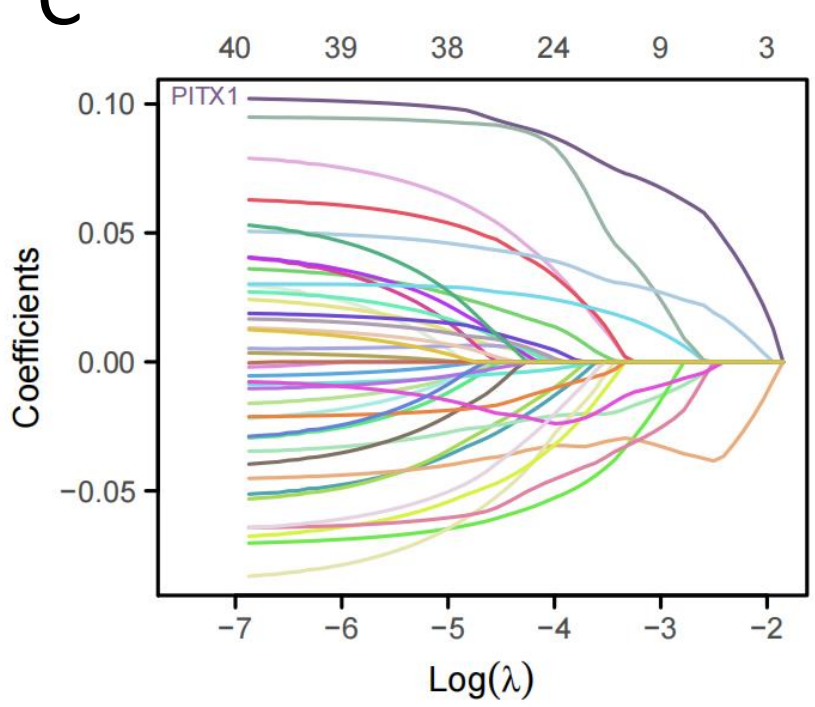
A



B



C



D

Characteristics	Total(N)	HR(95% CI) Multivariate analysis	P value Multivariate analysis
AOC1	823	0.971 (0.929 − 1.014)	0.177
NEFL	823	0.924 (0.878 − 0.972)	0.002
PITX1	823	1.102 (1.039 − 1.169)	0.004
CDHR5	823	0.980 (0.930 − 1.032)	0.438
UGT1A10	823	1.032 (0.995 − 1.071)	0.091
MOCOS	823	1.091 (1.010 − 1.179)	0.028
C19orf33	823	0.952 (0.900 − 1.006)	0.082
SLC13A1	823	0.979 (0.934 − 1.027)	0.381
UCHL1	823	1.040 (0.988 − 1.094)	0.133

E

Characteristics	Total(N)	HR(95% CI) Univariate analysis	P value Univariate analysis
AOC1	823	0.929 (0.899 − 0.960)	< 0.001
NEFL	823	0.963 (0.923 − 1.005)	0.083
PITX1	823	1.161 (1.105 − 1.220)	< 0.001
CDHR5	823	0.894 (0.861 − 0.927)	< 0.001
UGT1A10	823	1.074 (1.038 − 1.112)	< 0.001
MOCOS	823	1.145 (1.080 − 1.214)	< 0.001
C19orf33	823	0.906 (0.864 − 0.950)	< 0.001
SLC13A1	823	0.918 (0.884 − 0.954)	< 0.001
UCHL1	823	1.117 (1.075 − 1.161)	< 0.001

F

