

**Table S1** Identification of apoptosis-related genes based on the Lasso Cox regression analysis

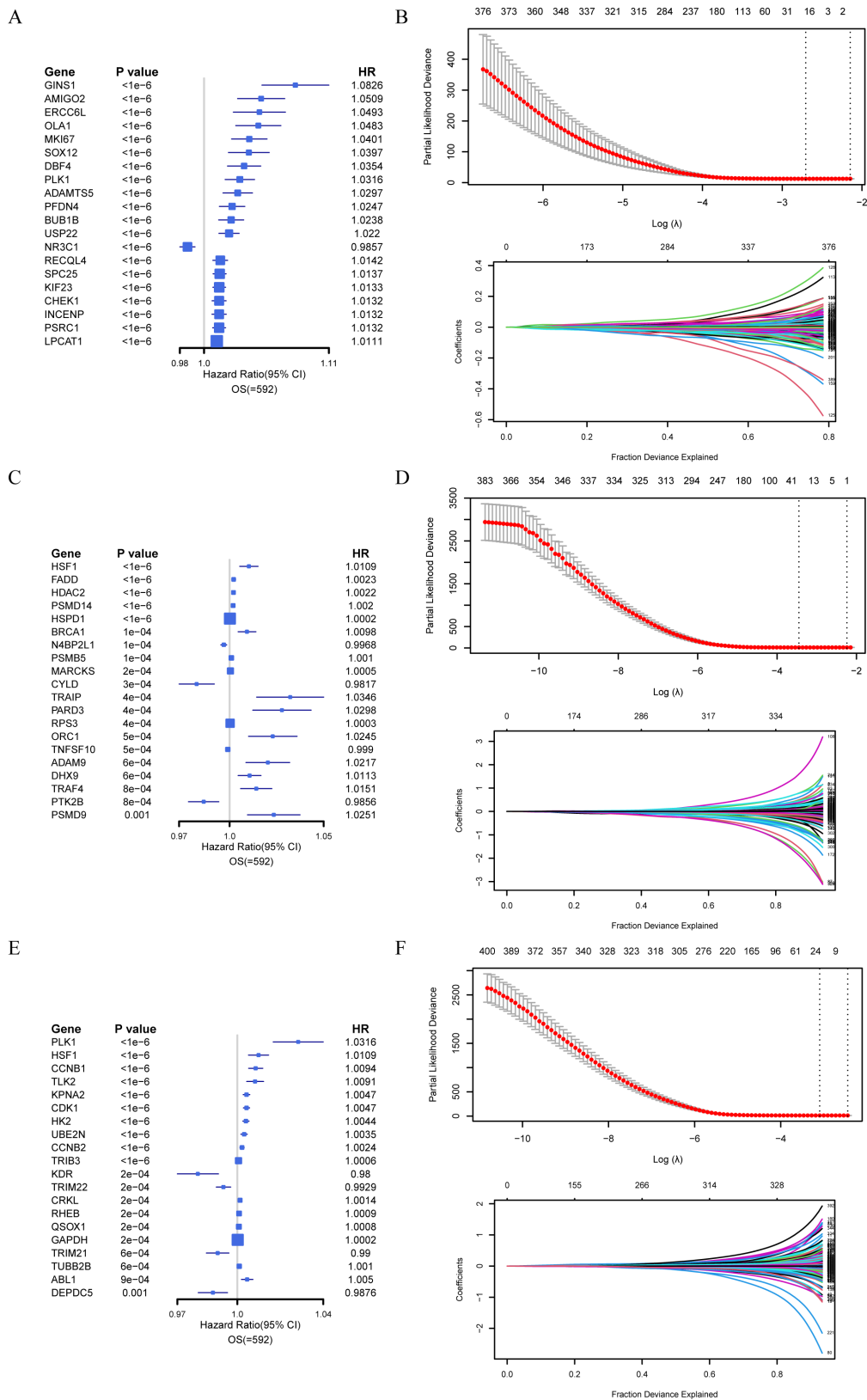
Gene	Coef
<i>ADAMTS5</i>	0.000587594
<i>AMIGO2</i>	0.001725452
<i>APOL3</i>	-0.000190232
<i>CD3E</i>	-0.001212312
<i>CDK1</i>	0.001107498
<i>CNTLN</i>	-0.00303789
<i>FOXM1</i>	4.72E-05
<i>GINS1</i>	0.002319763
<i>HK2</i>	0.000340135
<i>HSF1</i>	0.001065301
<i>IRF2</i>	-0.002820281
<i>IVNS1ABP</i>	0.000177826
<i>LPCAT1</i>	0.000427821
<i>NEDD9</i>	0.001026363
<i>RPS7</i>	9.26E-05
<i>SERPINE1</i>	7.60E-05
<i>UNG</i>	0.00025134

**Table S2** Identification of autophagy-related genes based on the Lasso Cox regression analysis

Gene	Coef
<i>ABL1</i>	0.002135571
<i>AKT1</i>	-0.000620612
<i>AMBRA1</i>	0.003479414
<i>ATG16L1</i>	0.001684609
<i>ATG4A</i>	-0.000251037
<i>ATG7</i>	-0.00024143
<i>ATP6V1A</i>	-0.000313147
<i>CAMKK2</i>	0.001503485
<i>CDK1</i>	0.002607186
<i>CSNK2A2</i>	8.78E-05
<i>DAPK1</i>	-0.000518263
<i>DEPDC5</i>	-0.005174269
<i>GSK3B</i>	-0.000122915
<i>HK2</i>	0.001971588
<i>HSF1</i>	0.003911878
<i>KDR</i>	-1.02E-05
<i>PLK1</i>	5.00E-05
<i>PRKAA1</i>	0.000257883
<i>PRKCB</i>	-0.00441842
<i>QSOX1</i>	7.01E-05
<i>RHEB</i>	0.000193367
<i>ROCK1</i>	0.000706747
<i>SREBF1</i>	0.000107231
<i>STX17</i>	-0.003542468
<i>SUPT5H</i>	-0.000705803
<i>TICAM1</i>	-0.000191569
<i>TLK2</i>	0.000337562
<i>TRIB3</i>	0.000244817
<i>TRIM14</i>	-0.010818825
<i>TRIM21</i>	-0.000246306
<i>TUBA8</i>	-0.002190503
<i>UBA5</i>	-0.000503829
<i>VPS33A</i>	0.000378019
<i>ZKSCAN3</i>	-0.0014514

**Table S3** Identification of necroptosis-related genes based on the Lasso Cox regression analysis

Gene	coef
<i>AFF3</i>	0.000494615
<i>AKAP12</i>	0.000554567
<i>AKT1</i>	-1.53E-05
<i>ARRB2</i>	-0.002021954
<i>BRCA1</i>	0.001109759
<i>CA2</i>	-1.61E-05
<i>CD2</i>	-0.00087032
<i>CYLD</i>	-0.002180739
<i>DHX9</i>	0.000621084
<i>FADD</i>	0.000676245
<i>HDAC2</i>	0.000660106
<i>HSF1</i>	0.003371364
<i>HSPD1</i>	7.16E-05
<i>MAP3K14</i>	-0.001360791
<i>MCAM</i>	0.002333455
<i>PSMD14</i>	0.000255743
<i>PSMD9</i>	0.002376679
<i>PTEN</i>	4.84E-06
<i>PTK2B</i>	-0.000379617
<i>TNFRSF10C</i>	0.003854232
<i>TRAF4</i>	0.001889227
<i>YTHDC2</i>	-0.002630726



**Figure S1** Construction of three prognostic models based on univariate and Lasso Cox regression analyses.