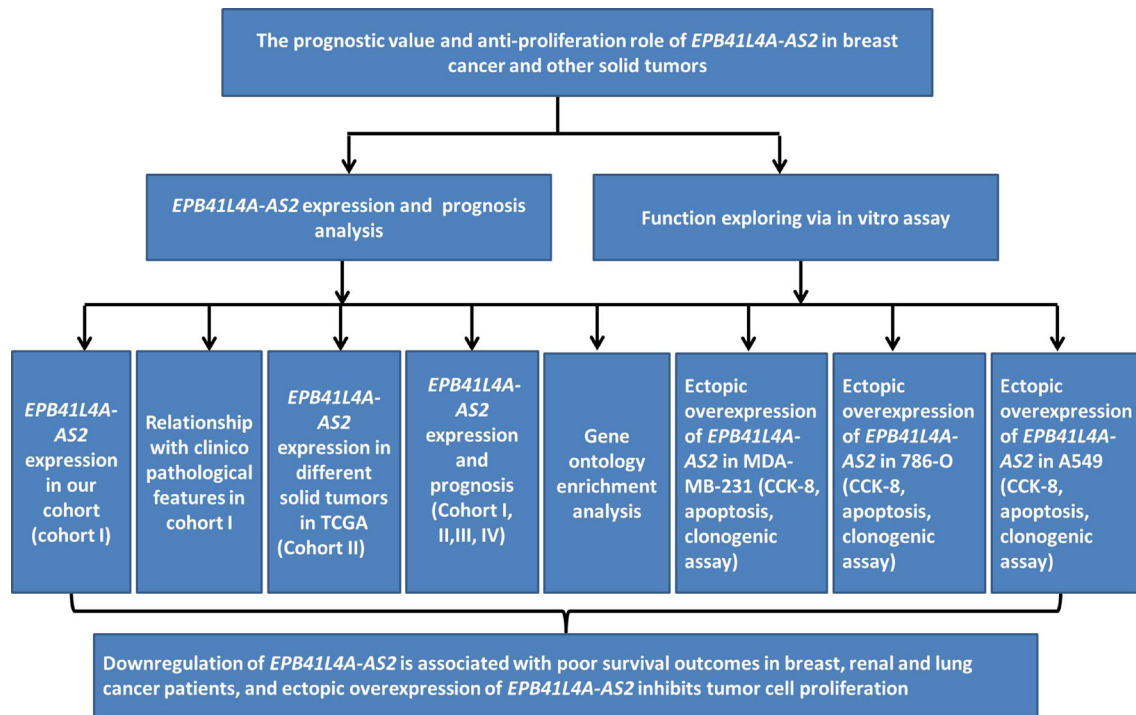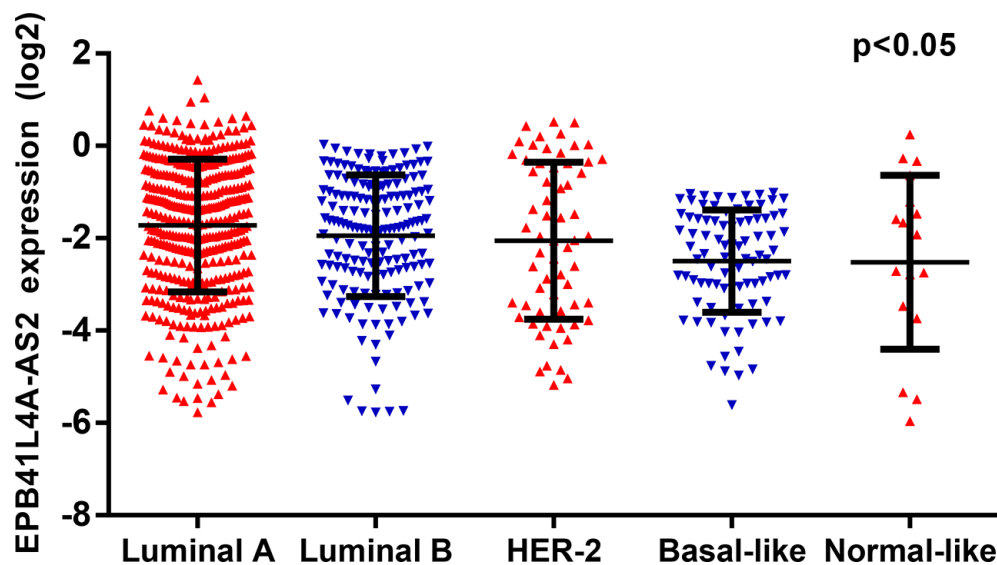# The long non-coding RNA *EPB41L4A-AS2* inhibits tumor proliferation and is associated with favorable prognoses in breast cancer and other solid tumors
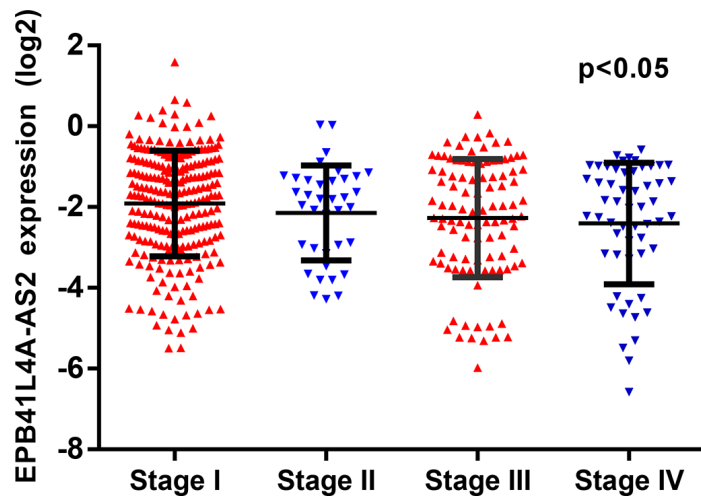
Supplementary Materials
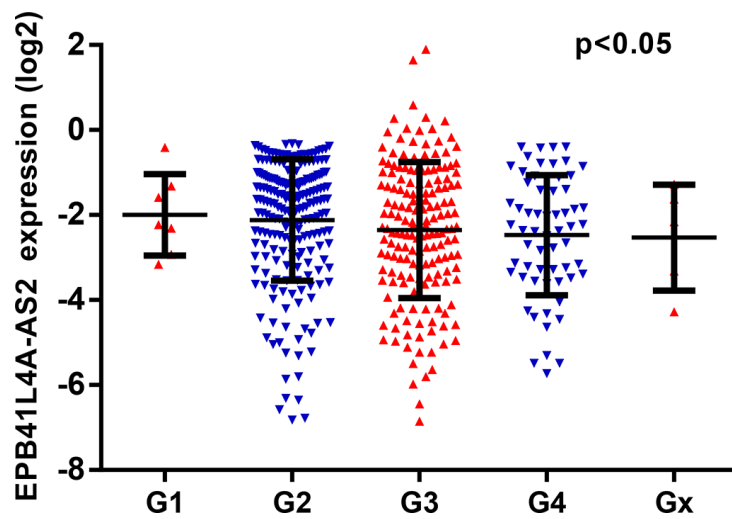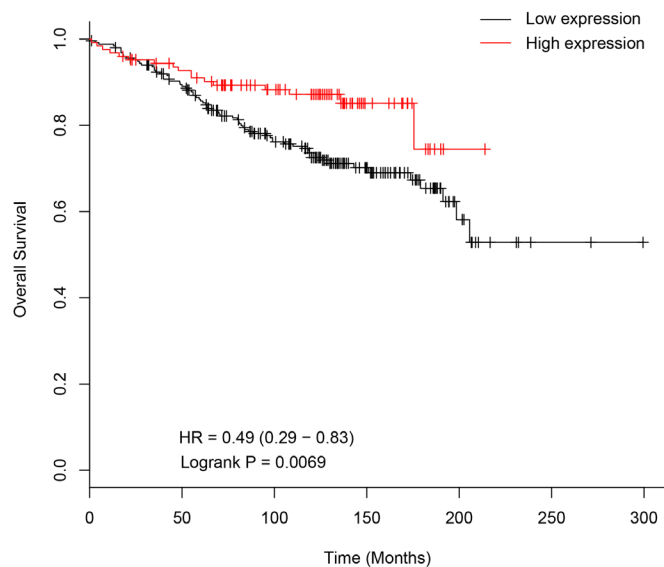

Supplementary Figure S1: Flow chart of this study.

Supplementary Figure S2: *EPB41L4A-AS2* expression in five different molecular subtype breast cancer tissues.
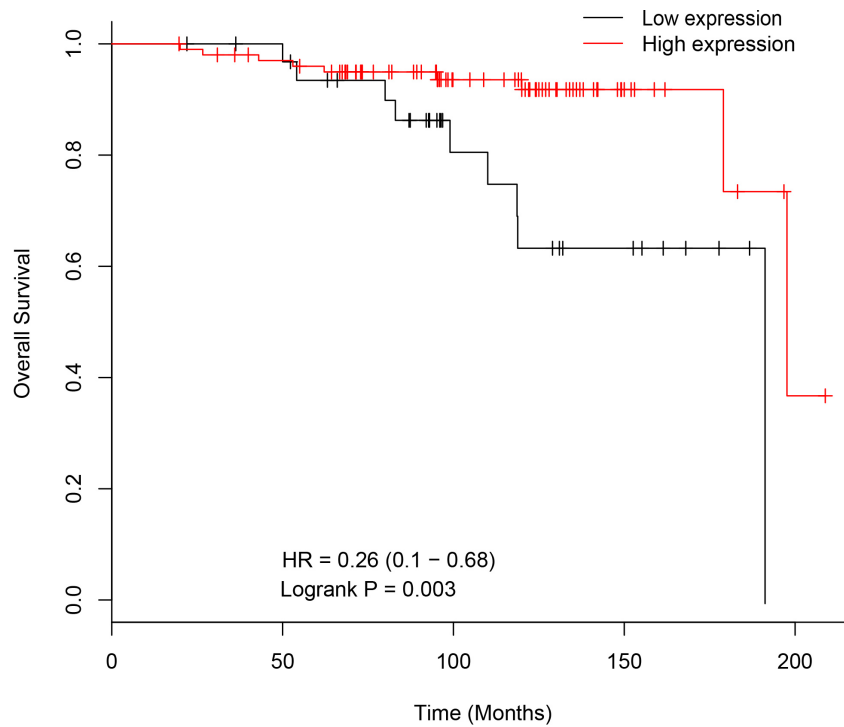
Supplementary Figure S3: *EPB41L4A-AS2* expression in renal cancer with different stage.

Supplementary Figure S4: *EPB41L4A-AS2* expression in renal cancer with different grade.

Supplementary Figure S5: High *EPB41L4A-AS2* expression was associated with better OS than low expression in patients with ER positive breast cancer in cohort III (*N* = 377).

Supplementary Figure S6: High *EPB41L4A-AS2* expression was associated with better OS than low expression in patients with low tumor grade in cohort III (*N* = 135).
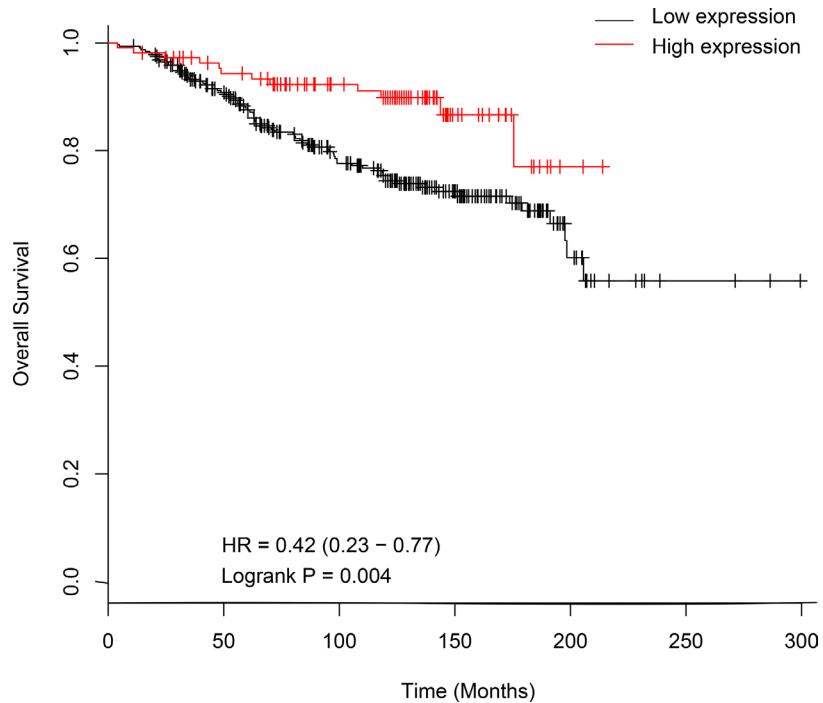
Supplementary Figure S7: High *EPB41L4A-AS2* expression was associated with better OS than low expression in patients with uninvolved lymph nodes in cohort III (*N* = 425).

Supplementary Figure S8: High *EPB41L4A-AS2* expression was associated with worse OS than low expression in breast cancer patients with a *TP53* mutation (*N* = 111).

Study code	No. patients	No. AE	p-value	HR	
GSE1378	59	27	0.4809	0.88	
GSE2603	82	27	0.5647	0.89	
GSE1456	159	50	0.0745	0.78	
GSE2034	286	107	0.1982	0.88	
E_TABM_158	112	42	0.1562	0.82	
GSE4922	249	89	0.1345	0.86	
GSE7390	198	91	0.1764	0.87	
GSE6532	393	139	0.5255	0.95	
GSE5327	58	11	0.5499	0.83	
E_UCON_1	135	65	0.6457	0.95	
GSE7378	54	9	0.1916	0.56	
GSE9195	77	13	0.0186	0.61	
GSE11121	200	46	0.1690	0.83	
GSE16391	55	55	0.6726	0.94	
GSE12093	136	20	0.9732	1.01	
GSE19615	115	14	0.5467	1.19	
GSE17907	39	17	0.7714	1.08	
GSE20711	85	36	0.2433	1.23	
GSE26971	258	58	0.6588	0.95	
GSE25055	309	65	0.3936	0.90	
GSE20685	296	73	0.1058	1.24	
GSE21653	252	83	0.9758	1.00	
GSE33926	51	12	0.2312	1.38	
GSE45255	41	14	0.1123	1.70	
Pool	**3699**	**1163**	**0.0175**	**0.93**	

Supplementary Figure S9: Meta-analysis of *EPB41L4A-AS2* expression and prognosis of any event in breast cancer patients in cohort IV (*N* = 3,699).

Supplementary Figure S10: High *EPB41L4A-AS2* expression was associated with better OS than low expression in renal cancer patients in cohort II (*N* = 448).
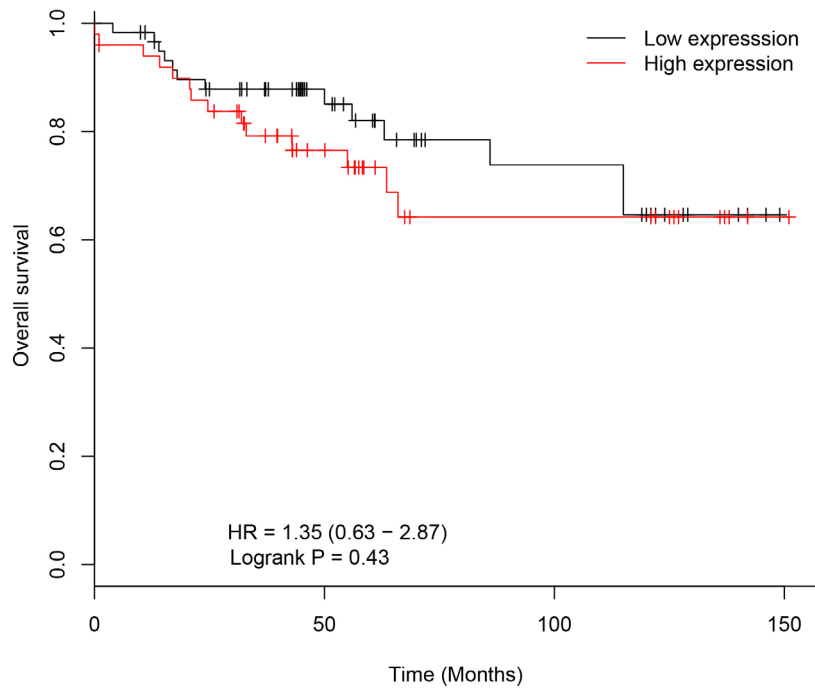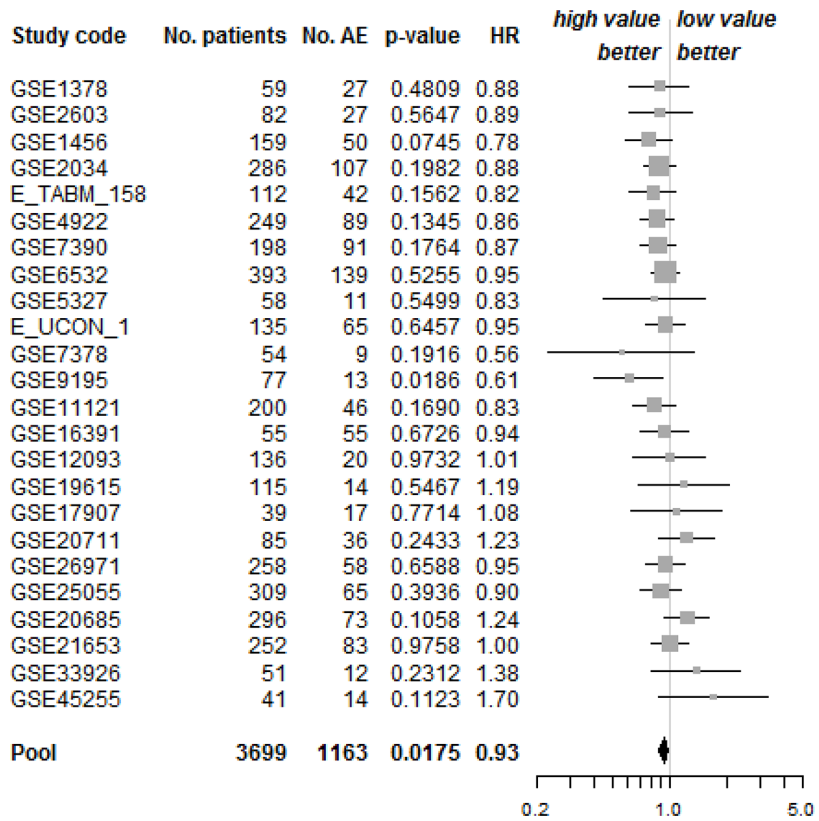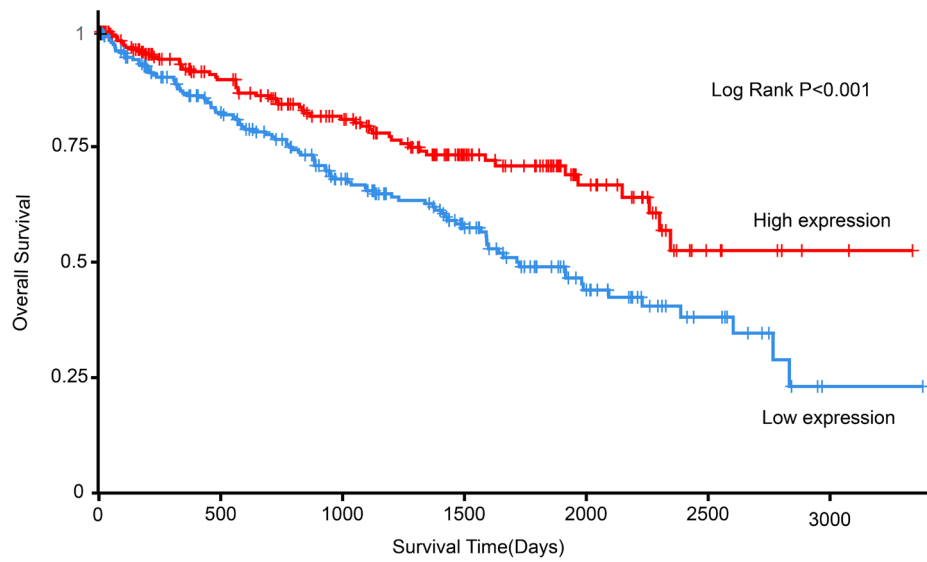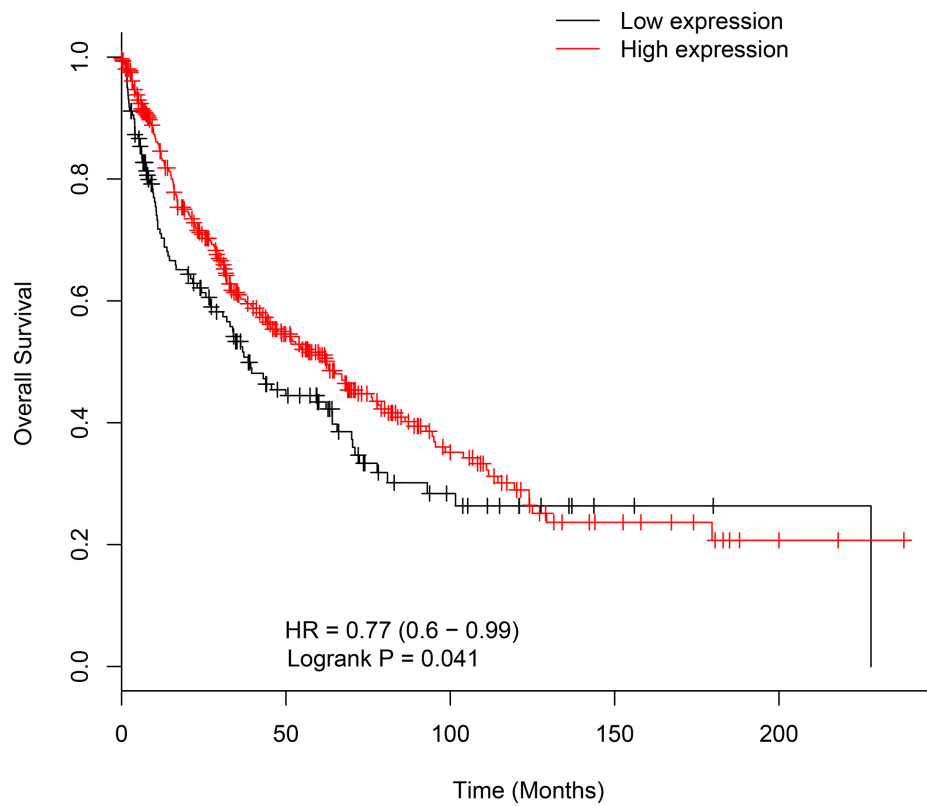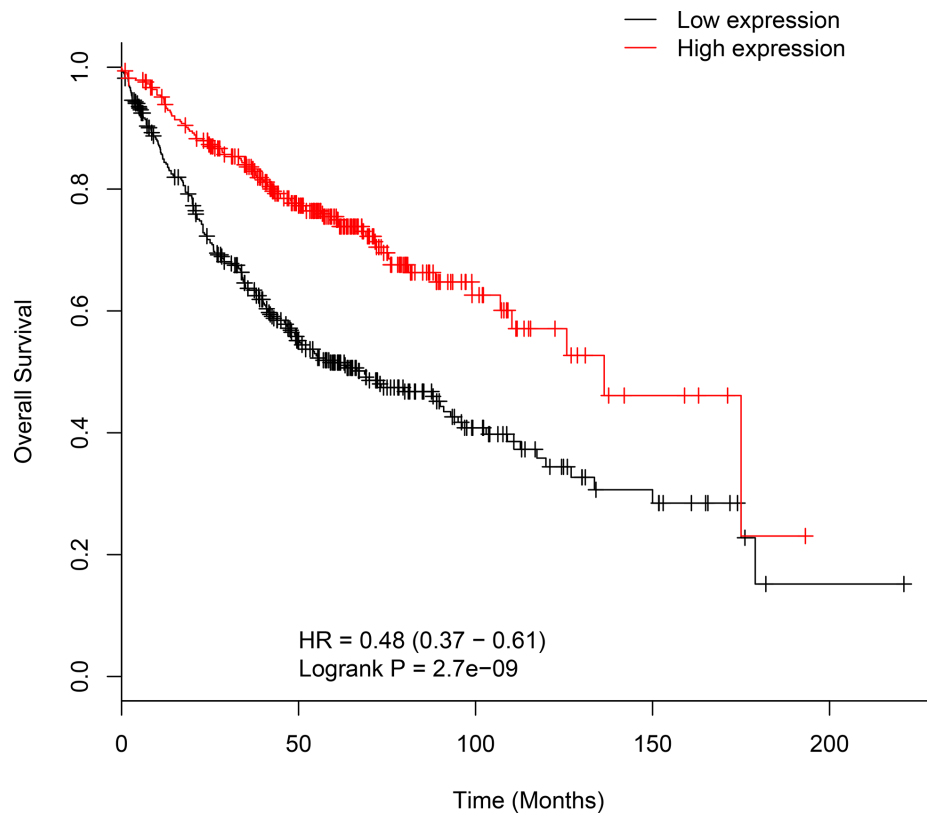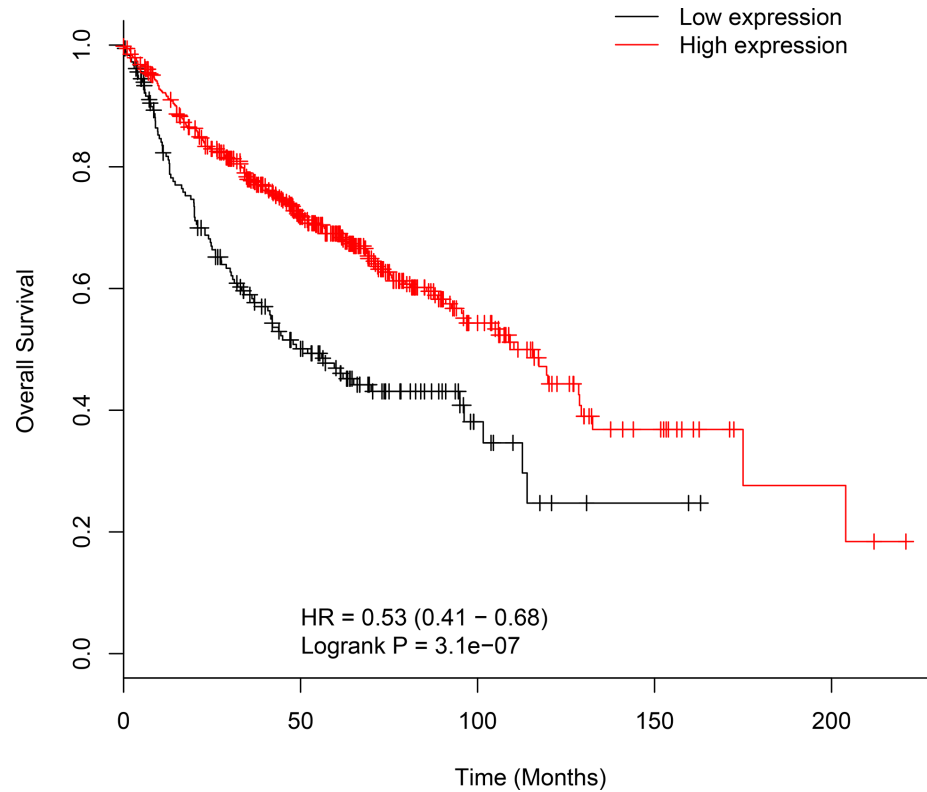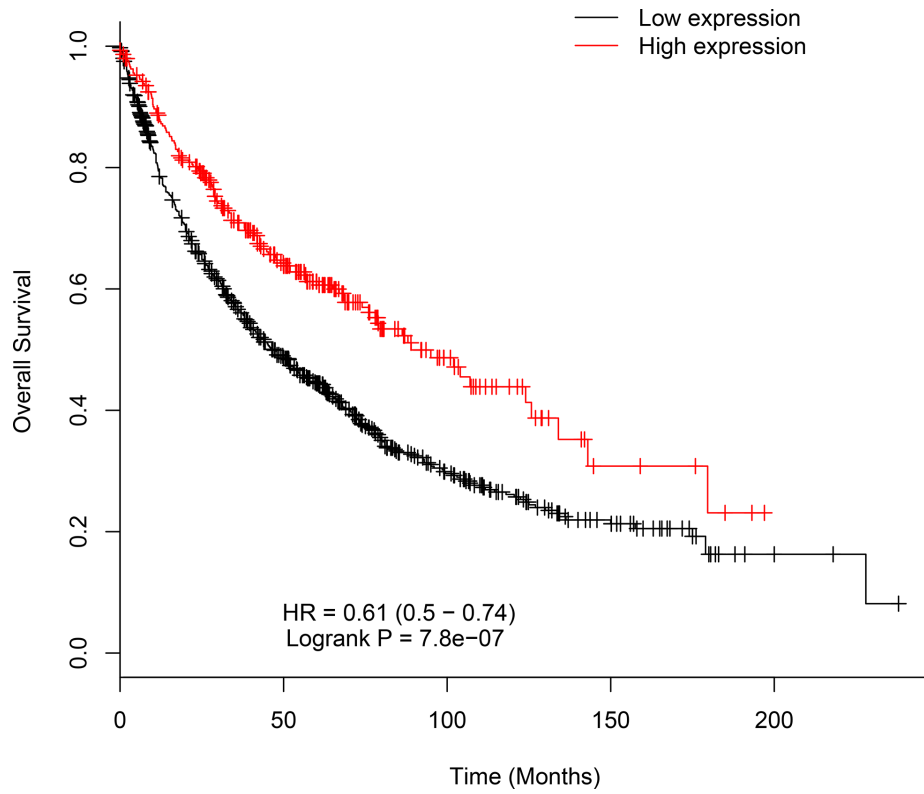

Supplementary Figure S11: High *EPB41L4A-AS2* expression was associated with better OS than low expression in lung squamous cell cancer patients (*N* = 524).
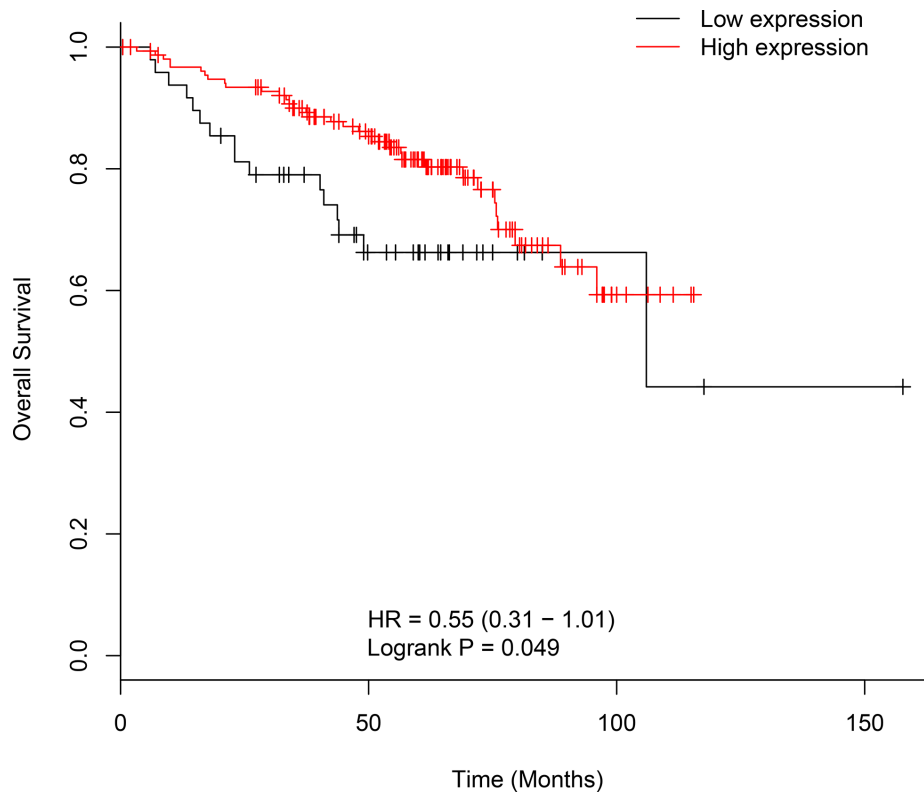
Supplementary Figure S12: High *EPB41L4A-AS2* expression was associated with better OS than low expression in lung adenocarcinoma patients (*N* = 720).
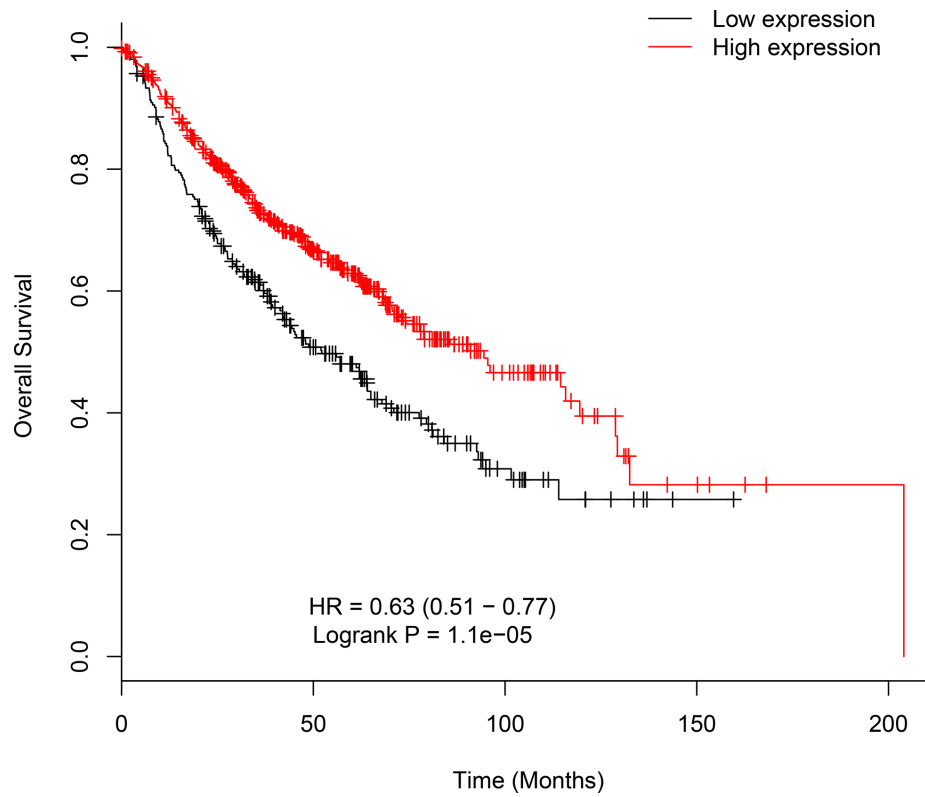

Supplementary Figure S13: High *EPB41L4A-AS2* expression was associated with better OS than low expression in female lung cancer patients (*N* = 715).

Supplementary Figure S14: High *EPB41L4A-AS2* expression was associated with better OS than low expression in male lung cancer patients (*N* = 1,100).

Supplementary Figure S15: High *EPB41L4A-AS2* expression was associated with better OS than low expression in lung cancer patients who never smoked (*N* = 205).

Supplementary Figure S16: High *EPB41L4A-AS2* expression was associated with better OS than low expression in lung cancer patients who smoked (*N* = 820). ****$p < 0.0001$; ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$.

Supplementary Table S1: GEO datasets list in cohort III

Cohort III
GSE12276
GSE11121
GSE12093
GSE1456
GSE16391
GSE16446
GSE17907
GSE17705
GSE19615
GSE20194
GSE20271
GSE2034
GSE20685
GSE20711
GSE21653
GSE25055
GSE26971
GSE26990
GSE31448
GSE31519
GSE3494
GSE5327
GSE6532
GSE7390
GSE9195
E_MTAB_365

Supplementary Table S2: GEO datasets list in cohort IV

Cohort IV
GSE1378
GSE11121
GSE12093
GSE1456
GSE16391
GSE17907
GSE19615
GSE2034
GSE20685
GSE20711
GSE21653
GSE25055
GSE26971
GSE2603
GSE33926
GSE45255
GSE4922
GSE5327
GSE6532
GSE7390
GSE7378
GSE9195
E_TABM_158
E_UCON_1