

## Supplementary files

**Table S1.** Associations between FAS mRNA expression and overall survival in different types of malignancies. HR: hazard ratio; CI: confidence interval.

Type of malignancies	Overall survival	
	HR and 95% CI	p value
kidney cancer	1.07(0.84-1.35)	0.6
breast cancer	0.59 (0.47 – 0.73)	1.5e-06
gastric cancer	0.65(0.54-0.77)	8.00E-07
head and neck cancer	1.19(0.87-1.64)	0.27
pancreatic cancer	1.33(1.06-1.66)	0.01
liver cancer	1.01(0.78-1.31)	0.93
glioblastoma	1.14(1-1.29)	0.06
colorectal carcinoma	1.25(0.97-1.61)	0.08
acute myeloid leukemia	1.57(1.02-2.41)	0.04
ovarian cancer	0.98 (0.86 – 1.11)	0.74
lung cancer	0.78 (0.69 – 0.89)	0.00016

**Table S2.** The prognostic value of FAS mRNA expression in subgroups of ovarian cancer patients. HR: hazard ratio; CI: confidence interval.

Subgroups	Overall survival		Progression-free survival	
	HR and 95%CI	p value	HR and 95%CI	p value
all	0.98 (0.86 – 1.11)	0.74	0.98 (0.87 – 1.12)	0.8
<b>Stage</b>				
1	0.35 (0.1 – 1.31)	0.1	0.68 (0.23 – 2.05)	0.49
2	1.85 (0.6 – 5.68)	0.28	1.27 (0.65 – 2.5)	0.48
1+2	0.76 (0.35 – 1.67)	0.5	0.74 (0.42 – 1.32)	0.3
3	0.96 (0.82 – 1.13)	0.62	1.04 (0.89 – 1.21)	0.62
4	0.79 (0.55 – 1.14)	0.21	0.86 (0.59 – 1.24)	0.42
3+4	0.95 (0.82 – 1.1)	0.49	0.99 (0.86 – 1.14)	0.87
<b>Grade</b>				
I	0.84 (0.33 – 2.15)	0.72	/	/
I+II	0.93 (0.7 – 1.24)	0.63	1.16 (0.88 – 1.54)	0.3
III	0.97 (0.83 – 1.15)	0.75	1.01 (0.85 – 1.19)	0.93
IV	/	/	/	/
<b>p53 status</b>				
p53mut	1.12 (0.9 – 1.41)	0.31	1.07 (0.86 – 1.34)	0.54
p53wild	1.18 (0.67 – 2.08)	0.57	0.95 (0.56 – 1.6)	0.85
<b>Histology</b>				
endometrioid	/	/	0.7 (0.28 – 1.79)	0.46
serous	0.97 (0.83 – 1.12)	0.65	1 (0.87 – 1.16)	0.98

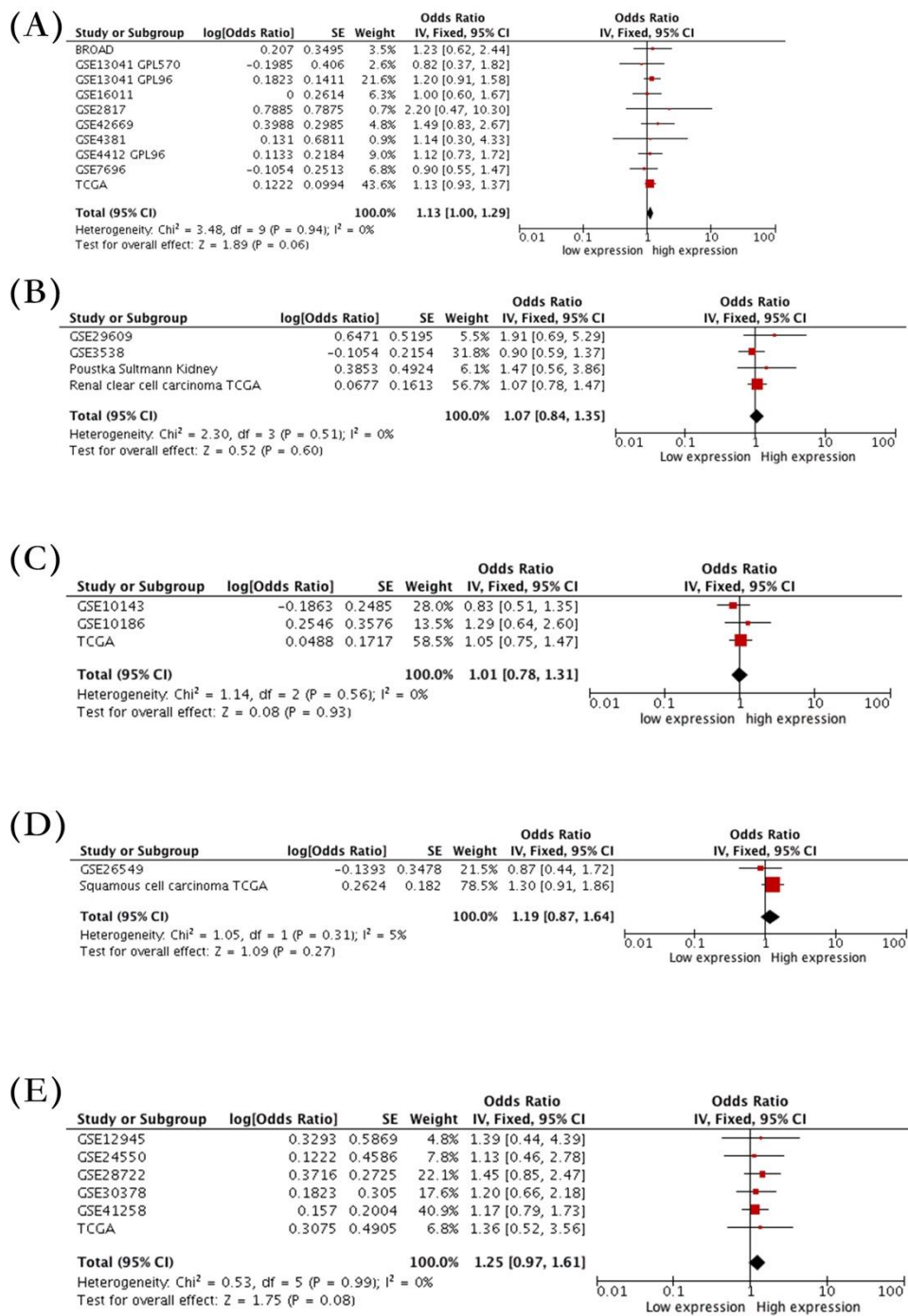
**Table S3.** The summary of median expression level of FAS for each type of malignancy.

Type of malignancies	Median expression value (Expression range of the probe)	
	Overall survival	Relapse-free survival
breast cancer	413(7-2457)	393(7-2541)
Type of malignancies	Median expression value (Expression range of the probe)	
	Overall survival	Progression-free survival
lung cancer	436(23-2531)	498(22-2531)
ovarian cancer	431(5-2298)	427(4-4749)
gastric cancer	531(57-4131)	367(57-3917)
Type of malignancies	Median expression value (Expression range of the probe)	
	Overall survival	
renal carcinoma	16(0.06-72)	
head and neck carcinoma	666(100-4186)	
pancreatic cancer	3(0.3-92)	
hepatic cancer	617(16-12855)	
colorectal cancer	5(0.3-2048)	
glioblastoma	98(0.47-20171)	
acute myeloid leukemia	369(0.4-1305)	

**Table S4.** The detailed information of datasets used for analyzing the prognostic value of FAS.

breast cancer	Overall survival (OS)	Relapse-free survival (RFS)	acute myeloid leukemia	OS
	GSE1456	E-MTAB-365		GSE12417-GPL96
	GSE16446	GSE11121		GSE425-GPL318
	GSE16716	GSE12093		GSE425-GPL319
	GSE20271	GSE12276	head and neck cancer	OS
	GSE20685	GSE1456		GSE26549
	GSE20711	GSE16391		TCGA
	GSE3494	GSE16446	pancreatic cancer	OS
	GSE37946	GSE16716		TCGA
	GSE42568	GSE17705		GSE21501
	GSE45255	GSE17907		GSE28735
	GSE7390	GSE19615		ICGC
		GSE20271	hepatic cancer	OS
		GSE2034		GSE10143
		GSE20685		GSE10186
		GSE20711		TCGA
		GSE21653	colorectal cancer	OS
		GSE2603		GSE12945
		GSE26971		GSE24550
		GSE2990		GSE28722
		GSE31519		GSE30378
		GSE3494		GSE41258
		GSE37946		TCGA
		GSE42568		glioblastoma
		GSE45255	BROAD	
		GSE4611	GSE13041 GPL96	
		GSE4922	GSE13041 GPL570	
	GSE5327	GSE16011		
	GSE6532	GSE2817		
	GSE7390	GSE42669		
	GSE9195	GSE4381		
		GSE4412 GPL96		
ovarian	OS	Progression-free survival (PFS)		
	GSE14764	GSE14764	GSE7696	
	GSE15622	GSE15622	TCGA	

	GSE18520	GSE26193	renal cancer	OS
	GSE19829	GSE26712		GSE29609
	GSE23554	GSE30161		GSE3538
	GSE26193	GSE32062		Poustka Sultmann Kidney
	GSE26712	GSE51373		TCGA
	GSE27651	GSE63885		
	GSE30161	GSE65986		
	GSE3149	GSE9891		
	GSE32062	TCGA		
	GSE63885			
	GSE9891			
	TCGA			
	lung cancer	OS	PFS	
CaArray		CaArray		
GSE14814		GSE29013		
GSE19188		GSE31210		
GSE29013		GSE31908		
GSE30219		GSE50081		
GSE31210		GSE8894		
GSE3141				
GSE31908				
GSE37745				
GSE4573				
GSE50081				
TCGA				
gastric cancer	OS	PFS		
	GSE14210	GSE14210		
	GSE15459	GSE15459		
	GSE22377	GSE22377		
	GSE29272	GSE62254		
	GSE38749			
	GSE51105			
	GSE62254			



**Figure S1.** The pooled overall survival results from SurvExpress of five types of malignancies. The meta-analysis results of glioblastoma (A), renal cancer (B), hepatic cancer (C), head and neck carcinoma (D) and colorectal cancer (E).