Table S1. The characteristics between high- and low-FGF13 AML patients.

Characteristic	Low expression of FGF13 (n=75)	High expression of FGF13 (n=76)	p
Gender, n (%)			0.284
Female	30 (19.9%)	38 (25.2%)	
Male	45 (29.8%)	38 (25.2%)	
Age, n (%)			0.794
<=60	45 (29.8%)	43 (28.5%)	
>60	30 (19.9%)	33 (21.9%)	
WBC count(x10^9/L), n (%)			0.050
<=20	32 (21.3%)	45 (30%)	
>20	43 (28.7%)	30 (20%)	
Cytogenetic risk, n (%)			< 0.001
Favorable	5 (3.4%)	26 (17.4%)	
Intermediate	49 (32.9%)	33 (22.1%)	
Poor	20 (13.4%)	16 (10.7%)	
Cytogenetics, n (%)			0.004

Characteristic	Low expression of FGF13 (n=75)	High expression of FGF13 (n=76)	p
Normal	42 (31.1%)	27 (20%)	
+8	5 (3.7%)	3 (2.2%)	
del(5)	0 (0%)	1 (0.7%)	
del(7)	3 (2.2%)	3 (2.2%)	
inv(16)	2 (1.5%)	6 (4.4%)	
t(15;17)	0 (0%)	11 (8.1%)	
t(8;21)	1 (0.7%)	6 (4.4%)	
t(9;11)	1 (0.7%)	0 (0%)	
Complex	12 (8.9%)	12 (8.9%)	
FLT3 mutation, n (%)			0.762
Negative	50 (34%)	52 (35.4%)	
Positive	24 (16.3%)	21 (14.3%)	
NPM1 mutation, n (%)			0.237
Negative	55 (36.7%)	62 (41.3%)	
Positive	20 (13.3%)	13 (8.7%)	

Characteristic	Low expression of FGF13 (n=75)	High expression of FGF13 (n=76)	p
RAS mutation, n (%)			1.000
Negative	71 (47.3%)	71 (47.3%)	
Positive	4 (2.7%)	4 (2.7%)	
OS event, n (%)			0.259
Alive	23 (15.2%)	31 (20.5%)	
Dead	52 (34.4%)	45 (29.8%)	
Race, n (%)			1.000
Asian	0 (0%)	1 (0.7%)	
Black or African American	7 (4.7%)	6 (4%)	
White	67 (45%)	68 (45.6%)	
Age, meidan (IQR)	56 (43.5, 65.5)	57.5 (41.75, 67)	0.917

Table S2. The abbreviations of 33 cancer types

Abbreviations	Full names
ACC	Adrenocortical carcinoma
BLCA	Bladder Urothelial Carcinoma
BRCA	Breast invasive carcinoma
CESC	Cervical squamous cell carcinoma and endocervical adenocarcinoma
CHOL	Cholangiocarcinoma
COAD	Colon adenocarcinoma
DLBC	Lymphoid Neoplasm Diffuse Large B-cell Lymphoma
ESCA	Esophageal carcinoma
GBM	Glioblastoma multiforme
HNSC	Head and Neck squamous cell carcinoma
KICH	Kidney Chromophobe
KIRC	Kidney renal clear cell carcinoma
KIRP	Kidney renal papillary cell carcinoma
LAML	Acute Myeloid Leukemia
LGG	Brain Lower Grade Glioma
LIHC	Liver hepatocellular carcinoma
LUAD	Lung adenocarcinoma
LUSC	Lung squamous cell carcinoma
MESO	Mesothelioma
OV	Ovarian serous cystadenocarcinoma
PAAD	Pancreatic adenocarcinoma
PCPG	Pheochromocytoma and Paraganglioma

PRAD	Prostate adenocarcinoma
READ	Rectum adenocarcinoma
SARC	Sarcoma
SKCM	Skin Cutaneous Melanoma
STAD	Stomach adenocarcinoma
TGCT	Testicular Germ Cell Tumors
THCA	Thyroid Carcinoma
THYM	Thymoma
UCEC	Uterine Corpus Endometrial Carcinoma
UCS	Uterine Carcinosarcoma
UVM	Uveal melanoma

Table S3. Univariate and multivariate Cox analyses for the prognostic factors.

Characteristics	Total(N)	HR(95% CI) Univariate analysis	P value Univariate analysis	HR(95% CI) Multivariate analysis	P value Multivariate analysis
Age	140				
<=60	79	Reference			
>60	61	3.333 (2.164-5.134)	<0.001	3.138 (2.004-4.913)	<0.001
WBC count(x10^9/L)	139				
<=20	75	Reference			
>20	64	1.161 (0.760-1.772)	0.490		
Cytogenetic risk	138				
Favorable	31	Reference			
Intermediate&Poor	107	3.209 (1.650-6.242)	<0.001	2.000 (0.983-4.071)	0.056
FLT3 mutation	136				
Negative	97	Reference			
Positive	39	1.271 (0.801-2.016)	0.309		
IDH1 R132 mutation	138				
Negative	126	Reference			
Positive	12	0.588 (0.238-1.452)	0.249		
IDH1 R172 mutation	138				
Negative	136	Reference			
Positive	2	0.610 (0.085-4.385)	0.623		
IDH1 R140 mutation	138				
Negative	127	Reference			

Positive	11	1.131 (0.565-2.264)	0.727			
RAS mutation	139					
Negative	131	Reference				
Positive	8	0.643 (0.235-1.760)	0.390			
NPM1 mutation	139					
Negative	106	Reference				
Positive	33	1.137 (0.706-1.832)	0.596			
FGF13	140					
Low	70	Reference				
High	70	0.539 (0.351-0.829)	0.005	0.588 (0.374-0.927)	0.022	

Table S4. The association between drug sensitivity and FGF13 expression

Gene	Drug	cor	pvalue
FGF13	Bafetinib	0.366693	0.003955
FGF13	Dasatinib	-0.3132	0.014823
FGF13	okadaic acid	0.310069	0.015908
FGF13	Pipamperone	0.302455	0.018833
FGF13	Triciribine phosphate	-0.29887	0.020361
FGF13	Raltitrexed	0.291645	0.023763
FGF13	Hydrastinine HCl	0.287395	0.025979
FGF13	Nilotinib	0.280412	0.029998
FGF13	Afatinib	-0.2784	0.031247
FGF13	bisacodyl, active ingredient of viraplex	-0.27721	0.032008
FGF13	Vemurafenib	0.275113	0.033384
FGF13	geldanamycin analog	0.270763	0.036397
FGF13	Vincristine	0.268354	0.03816
FGF13	Acetalax	-0.26307	0.042272
FGF13	Vismodegib	0.262643	0.042625

Figure S1. The representative Kaplan–Meier survival plots of FGF13 in the M3 subgroup.
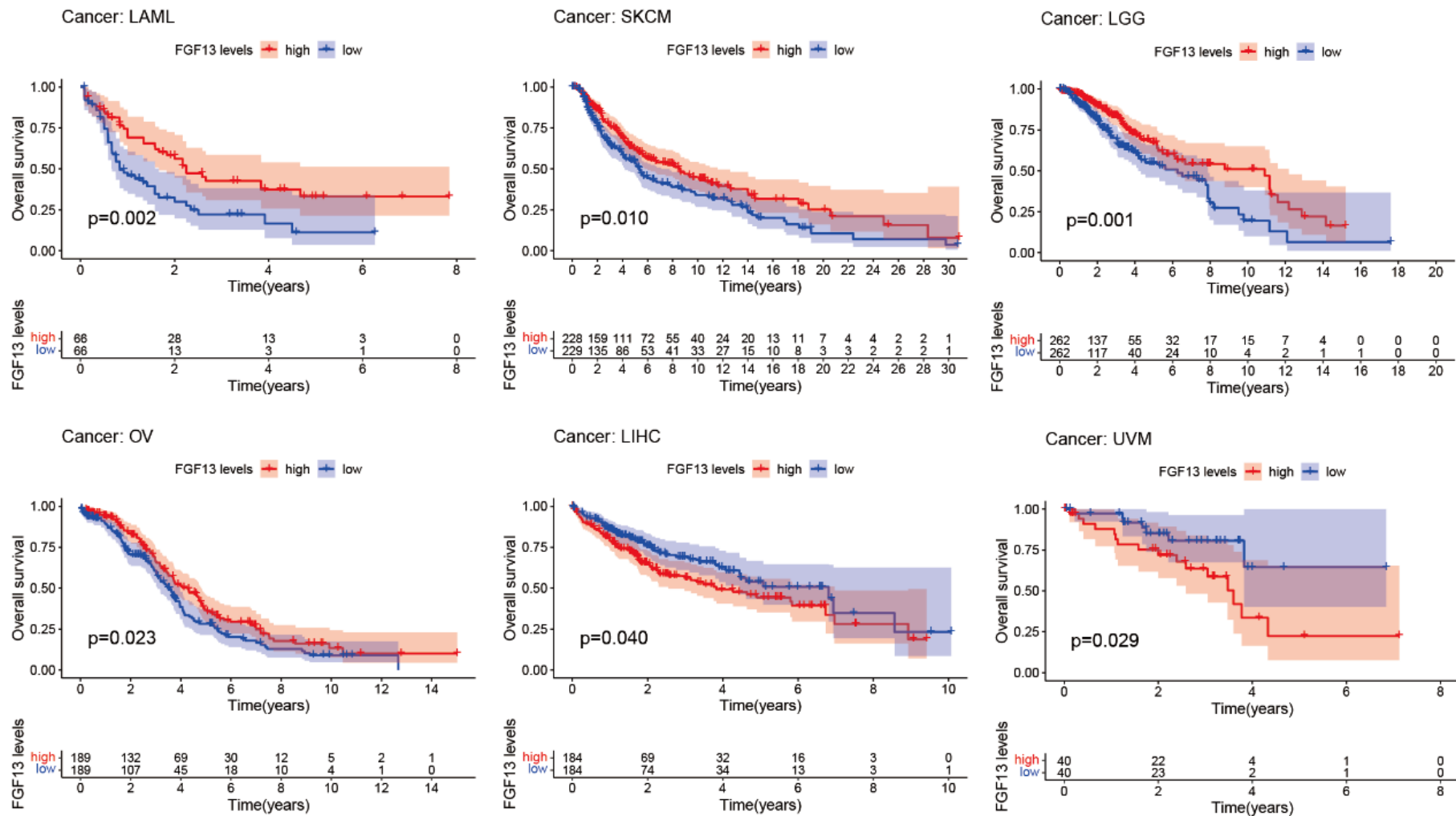
Figure S2. The representative Kaplan–Meier survival plots of FGF13 at a pan-cancer level.
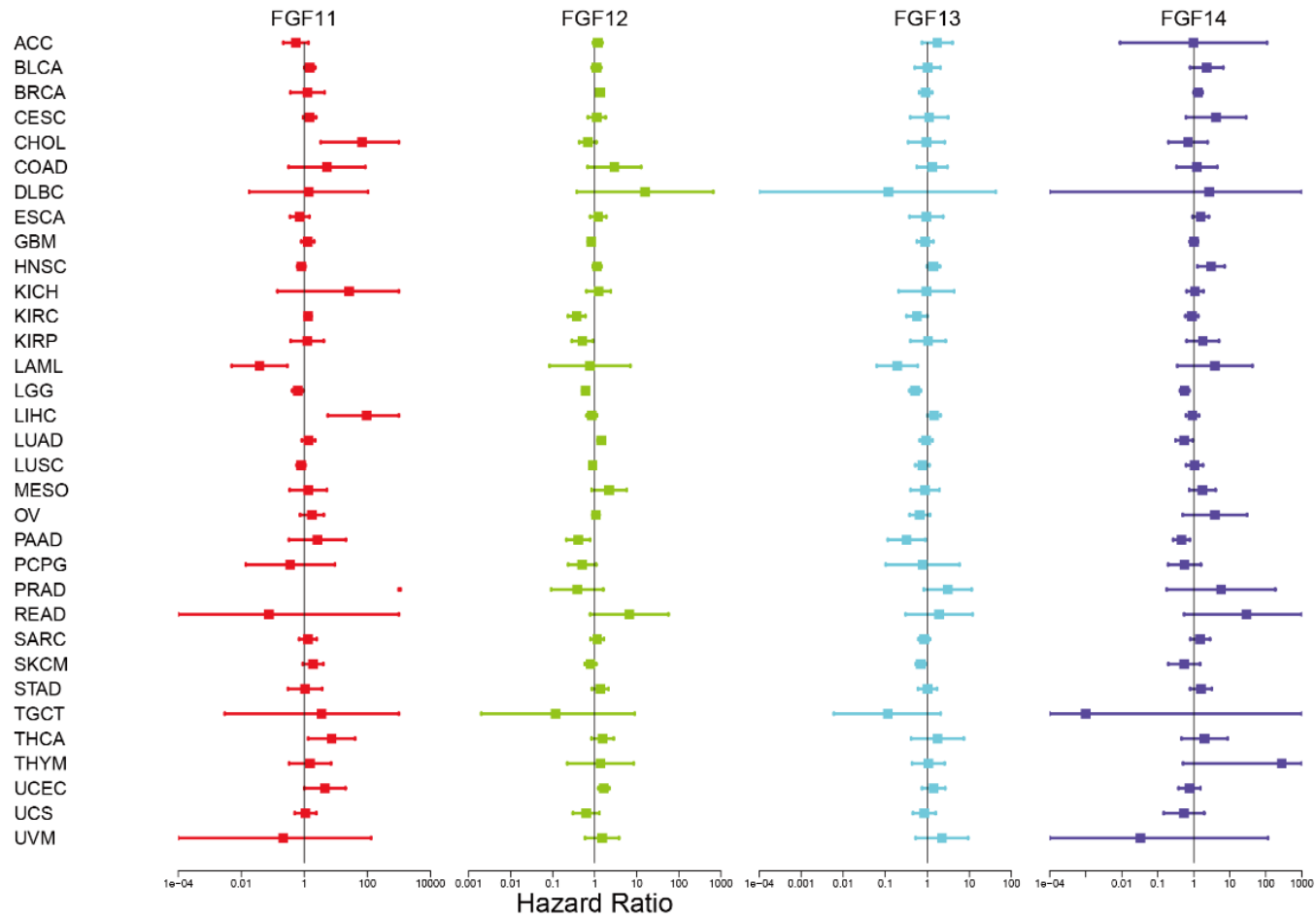
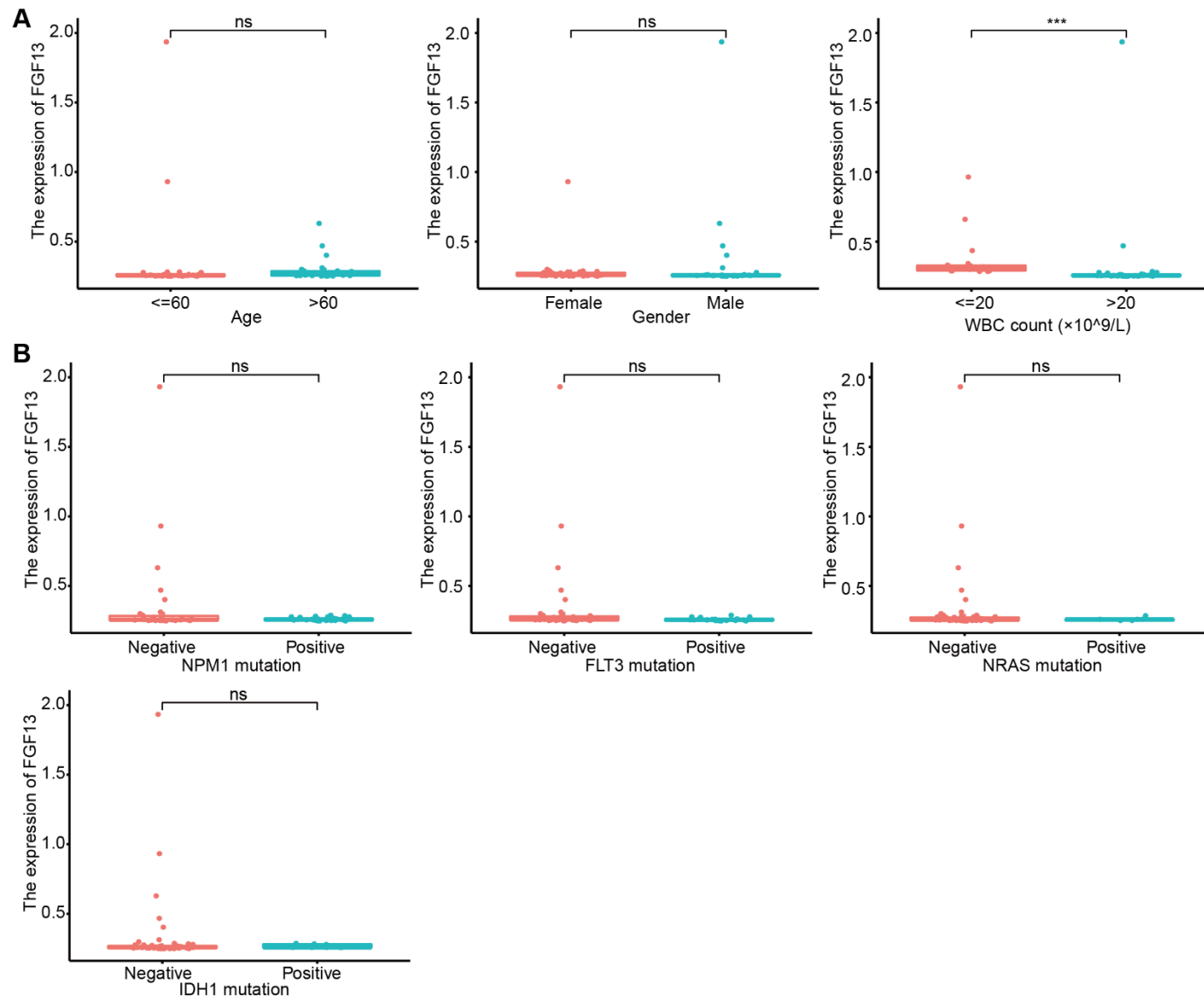**Figure S3.** Cox survival analysis of FHFs at a pan-cancer level.

Figure S4. Association between FGF13 expression and clinical features in the normal karyotype subgroup. The relationship of FGF13 with age, gender, WBC count, cytogenetic risk (A), and AML driver gene mutations (B). *p < 0.05, **p < 0.01, ***p < 0.001; "ns" means not significant.
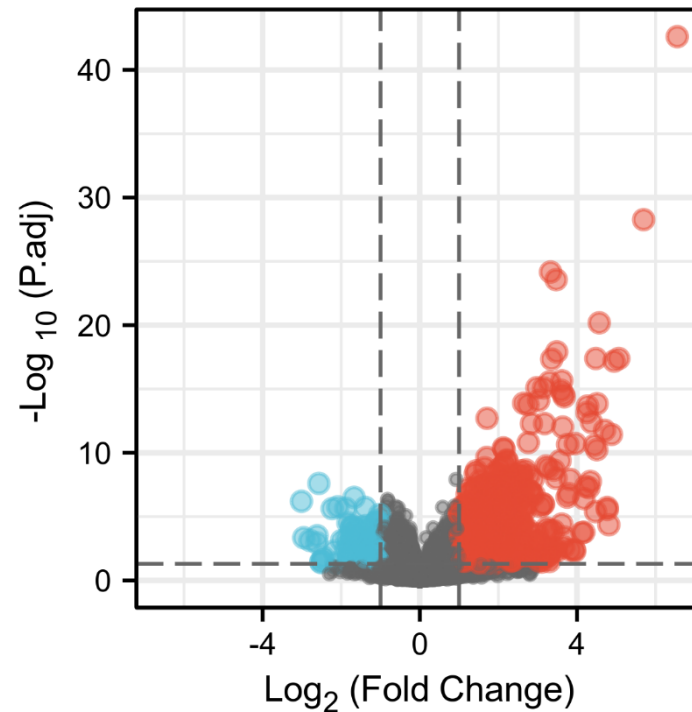

Figure S5. The volcano plot of DEGs between FGF13-high and FGF13-low groups. Red dots represent upregulated genes; blue dots represent downregulated genes.