

SUPPLEMENTARY TABLES

Supplementary Table 1. Multivariate analysis of correlation of different disease parameters in BRCA, ESCA, HNSC, KIRC, KIRP, LIHC, LUAD or STAD patients.

Parameter	Multivariate analysis BRCA			Multivariate analysis ESCA		
	HR	95% CI	p value	HR	95% CI	p value
Gender	0.9537	0.1292 - 7.042	0.9630	1.247	0.0927 - 16.766	0.8679
Race	0.893	0.6298 - 1.266	0.5250	0.725	0.3132 - 1.678	0.45264
Ethnicity	5.8278	0.8107 - 41.895	0.0799	1.469	0.1216 - 17.765	0.76212
Primary diagnosis	0.7095	0.5378 - 0.936	0.0152	1.904	0.6730 - 5.384	0.22494
Tumor stage	1.2114	1.1428 - 1.284	1.10E-10	1.525	1.1233 - 2.071	0.00682
Age at diagnosis	1.0001	1.0001 - 1.000	1.28E-08	1.000	0.9999 - 1.000	0.40249
Fuz level	0.9996	0.9993 - 1.000	0.0106	0.998	0.9957 - 1.000	0.09167

Parameter	Multivariate analysis HNSC			Multivariate analysis KIRC		
	HR	95% CI	p value	HR	95% CI	p value
Gender	0.8247	0.5842 - 1.164	0.27342	0.9170	0.6353 - 1.324	0.64357
Race	0.8430	0.6128 - 1.160	0.29424	0.9811	0.5549 - 1.735	0.94774
Ethnicity	0.9505	0.4698 - 1.923	0.88771	4.8638	1.5412 - 15.350	0.00698
Primary diagnosis	0.9786	0.9571 - 1.001	0.05591	N/A	N/A	N/A
Tumor stage	1.5944	1.3186 - 1.928	1.48E-06	1.8836	1.6176 - 2.193	3.56E-16
Age at diagnosis	1.0001	1.0000 - 1.000	0.00296	1.0001	1.0000 - 1.000	0.00224
Fuz level	0.9995	0.9989 - 1.000	0.10457	1.0000	0.9997 - 1.000	0.93238

Parameter	Multivariate analysis KIRP			Multivariate analysis LIHC		
	HR	95% CI	p value	HR	95% CI	p value
Gender	0.798	0.3419 - 1.863	0.60189	0.8888	0.5772 - 1.369	0.593
Race	0.805	0.3225 - 2.010	0.64221	0.9669	0.7706 - 1.213	0.771
Ethnicity	2.1369	0.2799 - 16.317	0.46407	1.2104	0.4700 - 3.117	0.692
Primary diagnosis	N/A	N/A	N/A	N/A	N/A	N/A
Tumor stage	2.9383	2.0429 - 4.226	6.18E-09	1.2998	1.1749 - 1.438	3.64E-07
Age at diagnosis	1.0001	1.0000 - 1.000	0.06171	1.0000	1.0000 - 1.000	0.369
Fuz level	0.9988	0.9981 - 1.000	0.00241	1.0001	0.9994 - 1.001	0.825

Parameter	Multivariate analysis LUAD			Multivariate analysis STAD		
	HR	95% CI	p value	HR	95% CI	p value
Gender	0.9682	0.6656 - 1.408	0.866	1.071	0.6869 - 1.670	0.76191
Race	1.2936	0.8047 - 2.080	0.288	1.052	0.8713 - 1.270	0.59922
Ethnicity	1.1651	0.2779 - 4.885	0.834	N/A	N/A	N/A
Primary diagnosis	0.9688	0.8138 - 1.153	0.721	9.533	0.7760 - 1.171	0.64897
Tumor stage	1.2151	1.1197 - 1.319	3.04E-06	1.181	1.0738 - 1.300	6.24E-04
Age at diagnosis	1.0000	1.0000 - 1.000	0.414	1.000	1.0000 - 1.000	0.02021
Fuz level	1.0001	0.9996 - 1.001	0.593	1.001	1.0002 - 1.001	0.00257

Supplementary Table 2. The detailed number of cases with *Fuz* genomic alterations in different types of cancer.

Cancer types	Total cases	Altered cases				
		Mutation	Amplification	Deep deletion	Multiple alterations	Fusion
Endometrial Carcinoma	586	14 (2.39%)	8 (1.37%)	1 (0.17%)	0	0
Adrenocortical Carcinoma	91	0	3 (3.3%)	0	0	0
Cholangiocarcinoma	36	1 (2.78%)	0	0	0	0
Bladder Urothelial Carcinoma	411	5 (1.22%)	5 (1.22%)	0	0	0
Mature B-Cell Neoplasms	48	0	0	1 (2.08%)	0	0
Pancreatic Adenocarcinoma	184	1 (0.54%)	2 (1.09%)	0	0	0
Diffuse Glioma	513	0	0	8 (1.56%)	0	0
Invasive Breast Carcinoma	1084	0	13 (1.2%)	1 (0.09%)	1 (0.09%)	0
Cervical Squamous Cell Carcinoma	251	1 (0.4%)	2 (0.8%)	0	0	0
Esophagogastric Adenocarcinoma	514	3 (0.58%)	3 (0.58%)	0	0	0
Non-Seminomatous Germ Cell Tumor	86	1 (1.16%)	0	0	0	0
Colorectal Adenocarcinoma	594	5 (0.84%)	0	0	0	0
Thymic Epithelial Tumor	123	0	0	1 (0.81%)	0	0
Prostate Adenocarcinoma	494	1 (0.2%)	1 (0.2%)	2 (0.4%)	0	0
Sarcoma	255	1 (0.39%)	0	1 (0.39%)	0	0
Melanoma	444	3 (0.68%)	0	0	0	0
Non-Small Cell Lung Cancer	1053	4 (0.38%)	2 (0.19%)	0	0	0
Ovarian Epithelial Tumor	584	1 (0.17%)	2 (0.34%)	0	0	0
Head and Neck Squamous Cell Carcinoma	523	1 (0.19%)	1 (0.19%)	0	0	0
Glioblastoma	592	0	1 (0.17%)	0	0	1 (0.17%)
Hepatocellular Carcinoma	369	0	1 (0.27%)	0	0	0
Renal Clear Cell Carcinoma	511	0	0	1 (0.2%)	0	0