

Supplementary Table 1. multivariate analysis of 7 driver genes and various clinical characteristics with patients' mortality in STAD patients

Variable	DNER		LHCGR		NLRP14		OR4N2		PSG6		TTC29		ZNF568	
	OR	Pvalue	OR	Pvalue	OR	Pvalue	OR	Pvalue	OR	Pvalue	OR	Pvalue	OR	Pvalue
Age	1.13	0.00	1.13	0.00	1.11	0.01	1.12	0.01	1.13	0.00	1.14	0.00	1.12	0.00
Gender	2.48	0.24	2.97	0.17	2.74	0.19	2.81	0.19	2.76	0.18	2.80	0.19	2.74	0.22
Pathologic stage	0.90	0.78	0.97	0.94	1.25	0.56	1.04	0.92	1.39	0.41	1.34	0.46	1.02	0.96
Pathologic_t_stage	0.70	0.39	0.75	0.48	0.67	0.36	0.79	0.57	0.75	0.49	0.77	0.53	0.84	0.69
Pathologic_n_stage	1.69	0.31	1.35	0.56	1.28	0.62	1.09	0.87	1.24	0.64	1.36	0.54	1.00	1.00
Pathologic_m_stage	2.50	0.48	2.13	0.60	1.49	0.77	3.68	0.34	1.98	0.59	2.24	0.55	0.81	0.88
Number positive lymph nodes	0.95	0.50	0.96	0.65	0.98	0.80	0.98	0.81	1.00	0.98	0.98	0.72	1.02	0.83
Radiation therapy	1.85	0.48	2.19	0.38	3.02	0.22	1.85	0.49	2.25	0.36	1.78	0.52	3.32	0.19
Targeted molecular therapy	1.52	0.58	1.09	0.91	1.15	0.85	1.28	0.74	1.34	0.69	1.20	0.80	1.43	0.66
Microsatellite instability	1.87	0.12	1.58	0.24	1.83	0.13	1.45	0.33	1.65	0.18	1.65	0.18	2.62	0.04
Gene	4.51	0.04	5.44	0.02	6.10	0.02	4.60	0.03	5.36	0.05	5.16	0.02	14.75	0.01

Supplementary Table 2. Comparison of clinical characteristics among the four cohorts of STAD patients used for somatic mutation, WGCNA, CNV and survival analyses respectively

	Age	Gender	Cancer stage	Number of lymph nodes	Survival status	Radiotherapy	Targeted Therapy	Microsatellite instability
		Male/female	(I/II/III/IV)		Dead/alive	Yes/no	Yes/no	
Dataset for mutation analysis (387)	65.37±10.79	248/139	56/117/156/38	5.19±7.67	59/328	263/45	176/130	0.52±0.79
Dataset for WGCNA analysis (415)	65.83±10.75	265/150	57/123/171/41	5.68±8.58	79/336	262/54	171/142	0.53±0.8
Dataset for CNV analysis (441)	65.67±10.77	284/157	59/128/186/44	5.61±8.4	87/354	277/56	183/147	0.52±0.79
Dataset for survival analysis (378)	66.07±10.89	244/134	50/119/163/34	5.41±7.36	73/305	253/47	165/132	0.52±0.79
Statistical results	P > 0.05	P > 0.05	P > 0.05	P > 0.05	P > 0.05	P > 0.05	P > 0.05	P > 0.05
	for all cases	for all cases	for all cases	for all cases	for all cases	for all cases	for all cases	for all cases
Statistical method	T test	Fisher exact test	Fisher exact test	T test	Fisher exact test	Fisher exact test	Fisher exact test	T test

