Table S1 The training data set

ID	OS	status	HSPA1A	HSPA1B	HSPA6	IL1B	CACYBP	CCL3L1	OSM	STC2	AR	NR2F2
TCGA-VR-A8EZ	1.52	1	49.16	42.23	4.22	1.85	19.82	0.71	0.54	16.71	0.11	4.80
TCGA-Z6-AAPN	0.22	1	112.54	67.20	12.29	16.36	19.78	0.16	0.05	2.11	0.04	2.64
TCGA-LN-A49O	1.12	0	45.76	41.72	10.06	3.41	15.76	9.53	1.23	3.25	0.03	4.98
TCGA-L5-A8NV	4.38	1	14.00	11.90	1.21	15.10	9.08	1.04	0.49	0.74	0.47	14.86
TCGA-M9-A5M8	2.76	0	7.57	7.29	1.69	4.46	14.25	0.97	0.54	0.60	0.07	17.86
TCGA-LN-A4MQ	1.03	0	20.46	24.03	0.83	0.50	15.76	0.18	0.12	8.17	0.08	4.69
TCGA-VR-A8EO	1.57	0	199.96	129.12	8.66	4.95	27.94	0.35	0.93	1.05	0.04	25.89
TCGA-2H-A9GL	0.49	1	55.71	50.40	3.60	0.98	30.59	2.42	1.64	2.71	0.28	11.90
TCGA-LN-A9FO	0.01	0	439.58	293.78	334.35	3.35	34.13	1.53	1.46	3.46	0.26	3.89
TCGA-L5-A8NW	3.84	1	10.28	18.03	1.30	4.24	7.02	0.16	0.81	0.59	0.10	12.55
TCGA-R6-A6DQ	0.63	1	39.61	40.26	1.72	14.00	15.37	2.32	5.72	1.17	0.10	30.42
TCGA-2H-A9GI	1.19	1	6.94	13.04	0.39	3.02	13.63	0.38	0.64	0.88	0.03	4.33
TCGA-R6-A8W8	0.24	1	15.18	23.09	0.97	2.28	9.92	0.18	0.15	1.08	0.10	9.47
TCGA-2H-A9GK	0.64	1	13.24	9.37	2.17	22.38	11.72	4.06	4.99	4.14	0.13	5.56
TCGA-V5-A7RB	0.44	1	19.89	19.94	1.66	51.76	13.75	7.56	7.07	0.89	0.08	9.57
TCGA-LN-A7HZ	1.10	0	36.69	25.33	3.29	2.04	29.65	0.93	0.61	3.38	0.40	5.02
TCGA-LN-A49Y	1.04	0	55.45	39.65	2.40	0.36	21.32	0.79	0.20	0.91	0.11	6.67
TCGA-LN-A4A4	1.05	0	52.84	40.88	1.17	1.18	11.30	0.67	0.93	6.76	0.29	5.63
TCGA-VR-A8EX	2.34	1	48.62	42.80	1.41	1.77	11.44	0.38	0.10	3.14	0.06	1.66
TCGA-VR-A8Q7	3.57	0	49.50	51.35	6.10	4.39	20.88	0.23	0.44	3.61	0.09	5.20
TCGA-L5-A4OT	0.41	1	343.15	245.91	361.22	5.13	39.18	0.34	2.20	1.61	0.28	22.70
TCGA-V5-AASW	0.77	0	11.71	11.01	0.71	4.35	14.21	0.14	0.76	0.37	0.02	6.11
TCGA-LN-A5U6	1.03	0	94.50	64.90	5.28	1.99	27.21	1.09	1.49	5.77	0.11	3.93
TCGA-IG-A5S3	1.95	0	28.09	19.20	1.59	1.06	22.22	0.71	0.17	0.54	1.00	12.00
TCGA-2H-A9GJ	4.88	1	15.59	23.87	0.79	2.55	9.48	0.07	0.17	7.46	0.05	4.37
TCGA-2H-A9GM	1.16	1	9.61	10.96	0.93	2.76	12.78	0.41	0.30	1.95	0.14	5.77
TCGA-LN-A5U5	0.37	1	75.31	53.77	2.46	0.59	25.22	0.10	0.87	5.72	0.07	8.95
TCGA-IG-A3YC	1.68	0	32.40	25.76	1.84	1.82	16.75	2.58	0.41	0.62	0.32	5.90
TCGA-JY-A6FE	0.31	1	20.25	16.86	4.28	4.64	16.56	3.39	1.21	7.60	0.01	4.89
TCGA-L5-A893	0.25	0	7.58	9.70	0.36	27.39	8.42	0.54	0.42	0.28	0.15	6.51
TCGA-IG-A51D	1.42	0	45.12	23.33	1.97	1.82	19.46	0.32	0.24	1.71	0.07	3.81
TCGA-LN-A7HX	1.02	0	83.17	52.89	4.10	10.11	15.61	0.32	0.63	1.75	0.10	5.43
TCGA-LN-A49X	1.05	0	10.23	7.71	0.55	15.25	8.31	0.99	0.52	2.71	0.19	9.26
TCGA-IG-A97H	1.21	0	89.48	85.49	19.26	58.38	19.14	0.95	0.79	8.51	0.05	2.62
TCGA-L5-A8NQ	1.78	1	22.54	22.23	3.67	4.17	4.92	0.33	0.38	0.37	0.25	3.85
TCGA-VR-AA4D	3.78	0	55.17	80.99	12.27	0.77	27.02	0.07	0.19	0.40	0.04	5.01
TCGA-L5-A4OJ	1.75	0	8.26	11.97	0.28	28.17	14.69	0.17	0.24	0.35	0.05	13.11
TCGA-VR-A8EQ	1.90	1	6.91	52.16	2.17	39.23	11.92	2.82	1.21	1.16	0.02	8.11
TCGA-R6-A8W5	1.32	1	18.91	12.81	0.95	23.45	22.94	4.27	8.12	8.39	0.13	9.61
TCGA-LN-A9FQ	1.07	0	11.58	69.51	25.52	0.33	20.72	0.25	0.27	6.97	0.43	5.82
TCGA-R6-A6XQ	0.53	1	26.75	20.36	0.36	3.13	17.66	0.04	0.09	0.15	0.01	7.85
TCGA-L5-A88Y	0.03	0	7.32	20.02	3.10	21.65	6.93	1.81	4.01	2.43	0.21	5.19
TCGA-LN-A4A8	1.29	0	33.20	21.42	0.69	1.12	21.09	1.76	0.65	1.89	0.16	3.78
TCGA-XP-A8T8	1.20	0	57.44	43.63	1.28	2.40	14.97	0.68	0.12	1.11	0.03	2.12
TCGA-L5-A4OM	3.99	1	46.24	30.50	0.71	3.69	14.33	0.04	0.11	1.65	0.19	11.96
TCGA-L7-A56G	0.90	1	20.26	25.20	3.18	6.90	13.19	0.76	0.85	2.20	0.20	3.79
TCGA-L5-A8NS	1.12	0	29.40	35.48	7.66	6.97	9.01	1.56	2.73	1.54	0.79	22.54
TCGA-IG-A5B8	0.07	1	79.17	55.25	7.47	3.34	18.71	0.41	0.22	2.60	0.02	2.56
TCGA-L5-A8NU	5.85	1	8.85	7.38	1.43	1.85	6.69	0.67	0.66	0.98	0.64	18.94
TCGA-LN-A8HZ	1.03	0	4.64	31.49	3.60	3.81	19.55	0.35	0.20	7.51	0.05	4.59
TCGA-L5-A8NK	1.13	0	46.68	40.99	12.85	1.25	10.82	0.28	0.19	0.53	0.38	3.29
TCGA-L5-A8NE	4.62	0	54.89	55.22	1.19	0.62	12.16	0.28	0.56	0.54	0.09	11.68
TCGA-VR-A8ER	1.04	1	39.10	119.45	12.17	2.77	12.70	0.19	1.66	8.69	0.08	3.61
TCGA-IG-A7DP	1.24	0	9.99	8.77	1.17	1.54	8.63	3.07	0.66	1.45	0.74	25.97
TCGA-V5-AASX	0.75	0	12.90	16.38	0.60	4.02	9.63	1.52	0.66	1.09	0.06	17.58
TCGA-VR-A8EW	0.68	1	199.39	156.37	121.17	2.79	16.03	0.29	0.17	4.34	0.03	1.69
TCGA-IG-A50L	0.04	0	55.41	40.50	5.48	3.15	19.52	0.61	0.89	9.76	0.10	9.88
TCGA-JY-A6FB	5.03	0	13.32	23.29	0.96	3.31	14.97	0.42	0.71	1.94	0.10	7.67
TCGA-IG-A3I8	1.30	0	41.94	27.09	2.19	1.85	10.58	0.06	1.22	1.25	0.16	15.25
TCGA-VR-A8EP	1.66	0	10.26	11.49	2.08	2.11	13.57	0.33	0.16	8.40	0.99	4.46
TCGA-L5-A8NJ	1.37	0	25.82	16.26	14.99	0.36	18.68	0.05	0.13	0.10	0.04	12.94
TCGA-LN-A8I1	1.10	0	94.06	48.80	16.13	30.79	17.97	3.35	2.24	6.06	0.10	1.82
TCGA-Q9-A6FW	0.65	0	58.09	52.30	8.14	8.04	8.88	0.00	0.51	0.51	0.15	9.63
TCGA-L5-A8NM	0.65	1	19.21	24.38	1.82	16.46	17.26	2.37	4.24	0.81	0.04	9.48
TCGA-JY-A6FH	3.56	0	50.91	48.88	0.62	0.79	13.47	0.49	0.20	1.34	0.02	16.80
TCGA-R6-A8WC	0.19	0	47.65	28.60	0.23	1.07	11.99	0.24	0.12	0.60	0.12	5.33
TCGA-L5-A88S	1.29	0	70.70	50.65	5.41	0.69	8.61	CCL21	0.13	1.88	0.25	11.27
TCGA-LN-A7HV	0.88	0	27.48	24.40	1.10	4.13	17.30	0.81	0.61	1.49	0.03	1.47
TCGA-LN-A4A9	0.96	1	53.98	44.00	6.55	14.67	7.61	7.45	3.93	2.57	0.12	4.31
TCGA-V5-A7RC	0.28	1	38.92	26.13	2.41	9.52	10.74	1.87	3.20	14.03	0.08	2.30
TCGA-Z6-A9VB	0.11	0	23.00	24.76	1.93	2.04	17.30	0.10	0.18	3.56	0.03	4.03
TCGA-R6-A6Y0	4.50	0	16.77	21.07	4.54	8.69	5.65	1.08	1.66	0.76	0.12	3.75
TCGA-LN-A5U7	2.10	0	85.09	56.09	4.50	4.55	13.34	0.56	0.97	20.51	0.07	2.54
TCGA-LN-A49W	1.10	0	24.50	22.63	2.19	12.15	12.43	1.56	2.13	1.79	0.33	7.55
TCGA-L5-A4OE	2.00	1	118.20	49.41	11.85	7.75	14.46	0.56	0.81	0.44	0.08	6.96
TCGA-IG-A97I	1.01	0	52.47	42.91	2.17	1.32	9.72	0.36	0.21	5.73	0.06	4.68
TCGA-VR-A8ET	0.13	1	13.58	71.42	5.46	16.45	8.60	0.62	0.34	12.18	0.02	1.59
TCGA-L5-A4OI	1.67	0	2.51	28.40	0.95	19.23	15.80	0.18	0.13	0.22	0.03	7.08
TCGA-2H-A9GQ	0.35	1	46.54	89.19	2.17	0.86	8.81	0.10	0.53	3.11	0.13	254.02
TCGA-LN-A49P	1.03	0	56.03	36.84	6.57	0.56	13.66	2.89	1.06	3.52	1.19	6.29

status: 1 = detah; 0 = alive; OS, overall survival (year); HSPA1A, heat shock protein family A member 1A; HSPA1B, heat shock protein family A member 1B; HSPA6, heat shock protein family A member 6; IL1B, interleukin 1 beta; CACYBP, calcyclin binding protein; CCL3L1, C-C motif chemokine ligand 3 like 1; OSM, oncostatin M; AR, androgen receptor; STC2, stanniocalcin 2; NR2F2, nuclear receptor subfamily 2 group F member 2.

Table S2 The testing data set

ID	OS (year)	status	HSPA1A	HSPA1B	HSPA6	IL1B	CACYBP	CCL3L1	OSM	STC2	AR	NR2F2
TCGA-VR-AA7I	1.33	1	33.25	26.46	1.54	1.78	10.46	0.00	1.35	3.00	0.21	4.29
TCGA-Z6-A8JE	0.18	0	34.77	32.82	7.84	0.60	14.93	0.31	0.08	5.94	0.16	3.45
TCGA-IG-A3YA	1.73	0	15.63	13.29	1.31	3.60	9.91	1.46	0.79	1.25	0.37	11.12
TCGA-L5-A8NT	2.26	0	20.22	19.67	0.96	5.35	8.43	0.82	2.06	0.95	0.73	15.45
TCGA-RE-A7BO	0.58	1	40.10	29.47	2.89	11.03	15.23	1.80	0.80	2.29	0.07	4.84
TCGA-VR-A8EY	2.31	0	53.26	38.06	2.54	10.00	12.52	0.49	0.49	13.97	0.02	3.24
TCGA-JY-A93E	2.10	0	13.19	28.58	1.34	2.13	10.85	1.25	0.25	0.35	0.47	28.13
TCGA-LN-A49M	1.05	0	47.54	32.40	1.80	1.98	18.14	0.55	0.37	1.76	0.09	2.66
TCGA-L5-A8NN	0.46	0	9.74	10.65	0.83	2.11	17.93	0.73	0.47	1.90	0.03	15.94
TCGA-IC-A6RE	0.64	0	8.94	21.20	0.47	3.51	8.91	0.24	0.41	0.60	0.27	10.18
TCGA-2H-A9GG	1.67	1	14.61	18.27	0.69	1.28	14.61	1.24	0.72	3.30	0.10	14.63
TCGA-IG-A3QL	1.67	0	61.37	40.78	0.39	3.36	26.72	0.14	0.16	2.58	0.13	4.04
TCGA-LN-A4A5	1.87	1	22.25	16.12	0.84	0.89	8.60	0.46	0.78	4.58	0.39	9.33
TCGA-XP-A8T6	2.09	1	59.95	60.97	1.72	2.73	16.49	0.09	0.37	1.61	0.14	7.17
TCGA-KH-A6WC	0.52	0	13.93	23.31	0.46	0.72	4.48	0.16	0.05	0.14	0.34	1.85
TCGA-L5-A43J	0.00	1	14.11	12.58	0.69	3.02	9.80	0.05	0.32	19.59	0.12	8.26
TCGA-Z6-A8JD	0.28	0	226.56	176.95	94.19	5.46	12.12	0.20	0.32	3.75	0.21	4.28
TCGA-LN-A7HY	1.00	0	56.84	37.73	1.78	1.97	9.51	1.90	1.24	2.98	0.19	9.60
TCGA-L5-A8NH	1.08	1	12.58	36.23	1.50	16.19	15.50	1.81	1.54	1.18	0.05	9.35
TCGA-JY-A93D	2.63	1	58.50	61.27	4.42	2.92	12.35	0.88	0.79	1.32	0.55	23.98
TCGA-LN-A4A1	1.05	0	94.18	46.92	4.20	9.60	15.12	0.67	0.88	4.31	0.12	2.75
TCGA-2H-A9GF	2.15	1	4.25	25.38	0.82	0.74	14.15	0.18	1.42	0.74	0.24	41.20
TCGA-VR-A8EU	1.53	1	24.37	19.78	1.86	12.04	10.73	0.24	0.08	6.12	0.06	2.90
TCGA-IG-A8O2	0.39	1	52.15	42.23	0.67	0.45	15.12	0.52	0.09	2.29	0.98	5.64
TCGA-L5-A43E	2.52	0	37.86	22.72	0.45	1.13	10.12	0.05	0.15	0.34	0.02	6.70
TCGA-LN-A4A3	1.06	0	81.10	61.02	8.11	49.21	21.17	2.18	1.96	2.37	0.12	3.65
TCGA-JY-A93C	1.93	0	29.28	23.95	1.12	4.51	12.55	0.88	1.03	1.00	0.27	8.05
TCGA-JY-A6FA	3.73	1	61.62	54.95	1.28	3.09	12.95	0.16	0.53	4.87	0.10	6.13
TCGA-L5-A88V	0.22	0	5.51	46.92	1.27	3.47	13.50	0.48	0.16	0.56	0.09	14.27
TCGA-IG-A625	1.07	1	20.63	22.81	0.57	0.44	28.79	0.50	0.29	10.90	0.27	3.24
TCGA-L5-A8NR	0.73	0	37.99	27.89	4.61	1.78	13.49	1.25	0.91	0.56	0.32	6.99
TCGA-V5-AASV	1.28	0	23.75	20.91	1.22	9.66	11.29	0.95	0.47	6.17	0.06	6.79
TCGA-L5-A88W	2.09	1	10.48	15.02	2.90	45.37	13.16	0.54	0.90	7.66	0.07	2.23
TCGA-2H-A9GO	1.35	1	48.75	48.84	0.99	74.14	15.13	0.54	1.16	0.50	0.03	31.64
TCGA-R6-A6DN	0.67	1	25.86	31.76	1.60	6.09	14.29	0.94	0.50	0.79	0.05	7.08
TCGA-L5-A4ON	1.53	1	114.85	133.57	41.62	12.76	15.20	0.27	1.75	1.44	0.11	10.32
TCGA-R6-A6KZ	0.42	1	13.53	12.35	0.88	1.41	16.70	0.44	0.26	2.73	0.35	13.84
TCGA-L5-A891	0.31	0	33.64	24.96	2.36	8.45	21.62	1.62	1.55	6.57	0.03	4.79
TCGA-L5-A88T	1.90	0	16.86	17.97	0.62	0.58	5.90	0.15	0.05	0.13	0.45	5.30
TCGA-JY-A6FD	5.67	0	10.48	10.51	1.41	8.79	10.89	1.34	0.42	2.12	0.07	8.97
TCGA-R6-A6XG	3.20	0	1.80	38.73	0.18	3.62	20.63	0.15	0.04	0.24	0.06	7.18
TCGA-IC-A6RF	1.31	0	16.03	16.69	0.70	7.85	8.46	0.54	0.38	0.14	0.08	6.09
TCGA-JY-A93F	2.00	0	11.10	20.15	0.37	13.50	15.32	0.21	0.13	0.40	0.04	3.37
TCGA-LN-A49U	1.28	0	51.40	32.77	1.16	1.26	25.57	0.61	0.32	1.68	0.15	3.61
TCGA-L5-A4OP	0.60	0	1.41	35.88	1.21	1.81	22.59	0.16	0.16	0.43	0.07	21.91
TCGA-LN-A49S	1.10	0	17.42	24.97	1.99	3.53	30.11	0.80	0.49	0.47	0.34	2.53
TCGA-L5-A4OH	2.72	0	9.68	16.51	0.75	2.17	13.89	0.15	0.05	0.29	0.07	4.79
TCGA-L5-A4OW	0.59	1	38.97	35.11	2.37	7.57	11.80	0.49	0.38	0.35	0.10	11.10
TCGA-L7-A6VZ	0.86	0	82.54	55.90	2.27	10.62	13.02	1.77	1.13	0.37	0.04	14.68
TCGA-IG-A4P3	1.55	1	39.10	25.98	2.31	14.57	16.34	1.42	0.26	2.88	0.18	3.10
TCGA-IG-A3YB	0.22	0	29.98	28.55	0.76	0.41	7.36	0.13	0.12	0.31	0.21	7.36
TCGA-R6-A6L4	1.36	1	51.13	49.83	14.95	1.08	16.22	0.06	0.08	0.44	0.04	6.81
TCGA-L5-A4OO	2.28	0	28.13	25.53	1.68	0.33	8.07	0.38	1.33	1.06	0.58	14.83
TCGA-VR-AA4G	1.25	0	158.35	160.10	46.23	15.02	15.04	0.68	0.48	1.76	0.12	4.37
TCGA-2H-A9GN	0.75	1	157.92	167.87	182.43	12.10	41.55	1.34	1.88	4.50	0.20	6.49
TCGA-LN-A8I0	1.12	0	41.35	33.79	6.78	3.48	14.49	0.78	0.81	6.46	0.09	3.35
TCGA-L5-A88Z	0.62	0	12.65	136.99	9.81	5.98	16.88	0.19	0.79	14.66	0.06	3.31
TCGA-L5-A8NG	3.00	0	12.41	11.97	0.72	3.18	9.08	0.73	1.06	1.25	0.35	12.53
TCGA-L5-A8NL	1.10	0	42.59	34.07	3.30	10.19	14.47	0.49	3.12	1.82	0.46	25.67
TCGA-V5-A7RE	1.37	0	44.86	26.26	2.14	3.58	25.31	0.17	0.17	0.24	0.02	7.21
TCGA-R6-A8WG	1.06	1	13.99	14.46	1.11	4.42	16.75	0.50	0.78	0.37	0.08	15.65
TCGA-ZR-A9CJ	1.64	1	201.57	160.16	31.85	12.39	25.55	1.29	2.52	1.34	0.37	13.25
TCGA-L5-A8NI	1.12	1	190.54	143.41	62.39	0.61	27.75	0.46	0.84	12.97	0.23	24.66
TCGA-2H-A9GH	2.61	1	38.57	35.84	1.24	1.49	10.79	0.73	1.18	0.32	0.19	11.41
TCGA-LN-A9FR	1.02	0	10.85	67.81	1.73	3.94	11.20	0.33	1.63	4.50	0.24	6.40
TCGA-L5-A8NF	0.22	1	13.54	31.28	0.95	20.54	11.79	0.58	0.75	2.02	0.04	7.38
TCGA-S8-A6BW	1.70	0	57.01	38.75	4.18	5.92	11.89	0.43	0.22	4.35	0.51	5.44
TCGA-LN-A9FP	1.00	0	19.07	18.25	1.08	0.36	13.01	0.29	0.26	2.66	0.72	16.58
TCGA-2H-A9GR	2.70	1	10.09	13.96	1.02	11.56	11.01	0.27	0.15	0.57	0.24	22.63
TCGA-JY-A939	1.81	0	17.21	17.93	3.52	0.62	10.96	0.26	0.26	1.75	0.59	29.53
TCGA-L5-A4OG	0.39	0	4.64	17.75	5.32	21.60	11.59	0.70	0.95	1.12	0.04	4.06
TCGA-S8-A6BV	1.67	0	64.79	91.66	40.84	3.75	18.31	0.61	0.42	2.36	0.15	7.11
TCGA-IG-A6QS	0.83	1	93.19	73.27	17.26	10.39	16.36	1.19	0.81	1.40	0.02	3.81
TCGA-IG-A4QS	0.32	1	46.63	68.83	1.22	3.38	30.09	0.09	0.64	0.33	0.04	3.74
TCGA-LN-A7HW	1.00	0	34.08	56.86	1.34	1.32	15.34	0.23	0.97	5.63	0.33	9.34
TCGA-L5-A4OX	0.62	1	185.93	141.52	32.25	1.01	21.86	0.21	0.72	0.58	0.03	11.81
TCGA-L5-A4OS	3.48	0	96.31	89.01	3.99	13.41	12.59	3.01	2.50	8.98	0.25	16.71
TCGA-L5-A4OU	2.42	0	66.89	56.23	22.91	0.62	15.03	1.69	0.44	0.51	0.16	34.98

status: 1 = detah; 0 = alive; OS, overall survival (year); HSPA1A, heat shock protein family A member 1A; HSPA1B, heat shock protein family A member 1B; HSPA6, heat shock protein family A member 6; IL1B, interleukin 1 beta; CACYBP, calcyclin binding protein; CCL3L1, C-C motif chemokine ligand 3 like 1; OSM, oncostatin M; AR, androgen receptor; STC2, stanniocalcin 2; NR2F2, nuclear receptor subfamily 2 group F member 2.