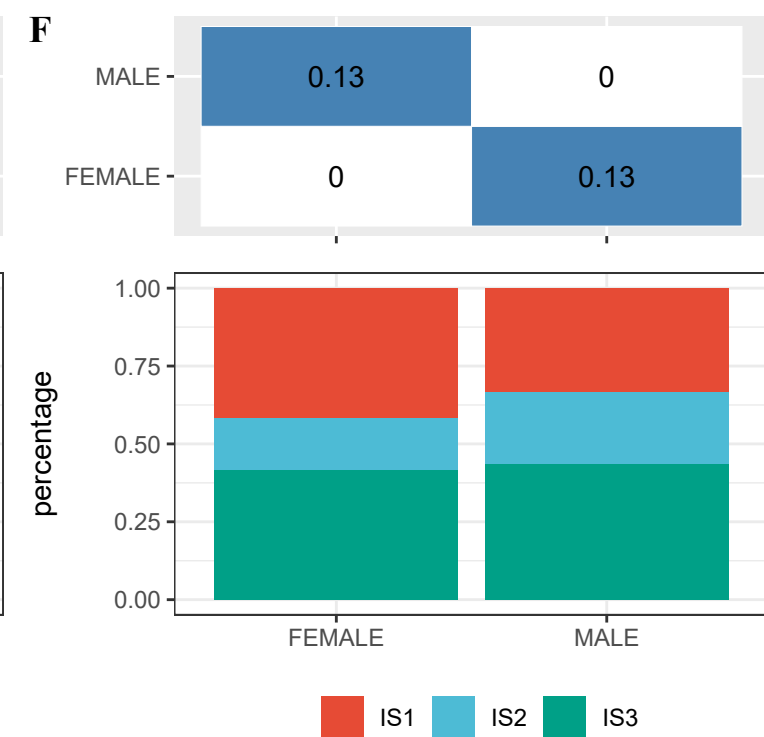
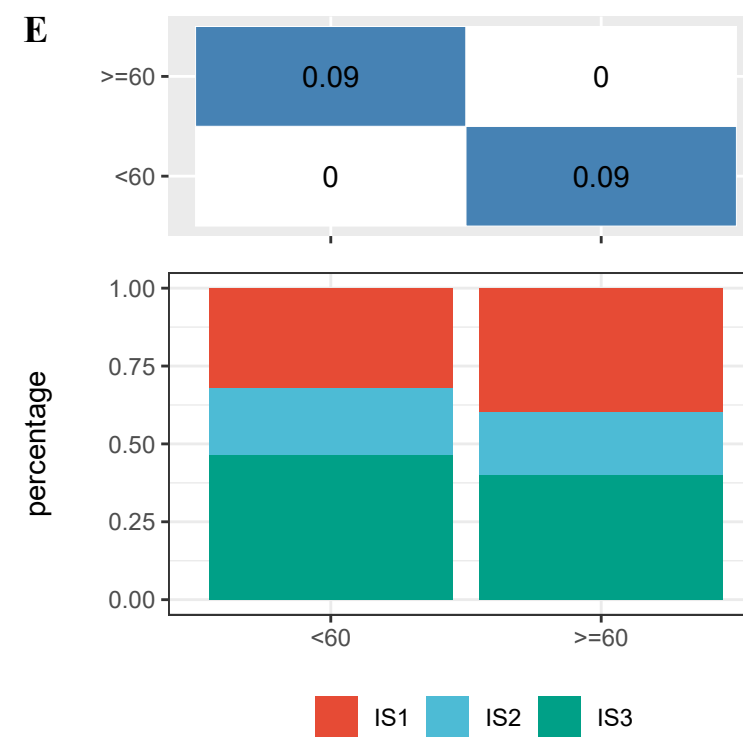
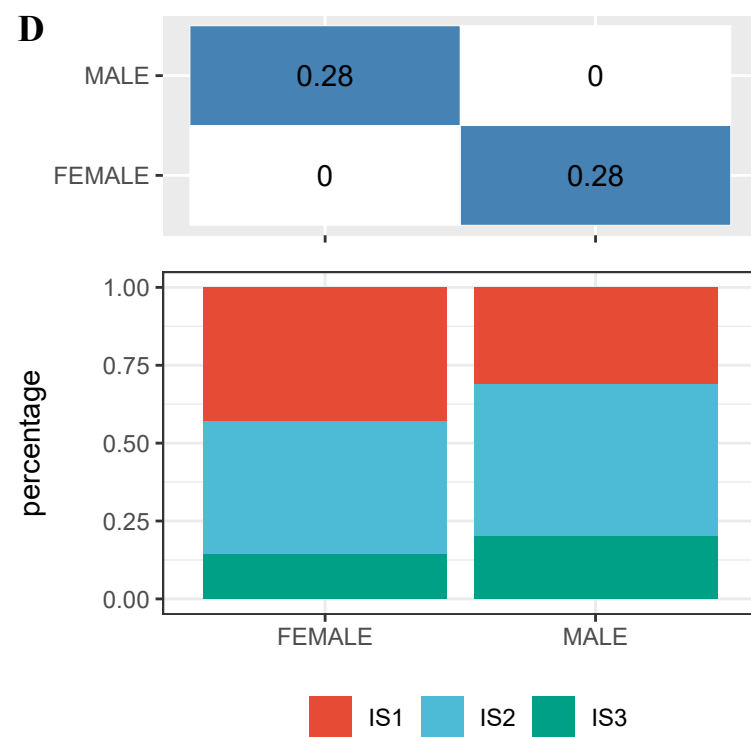
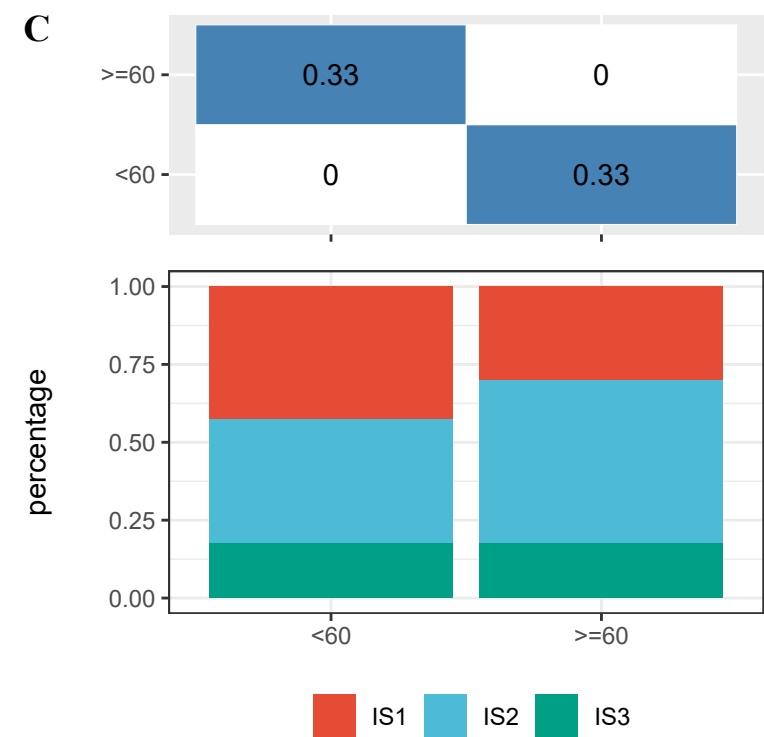
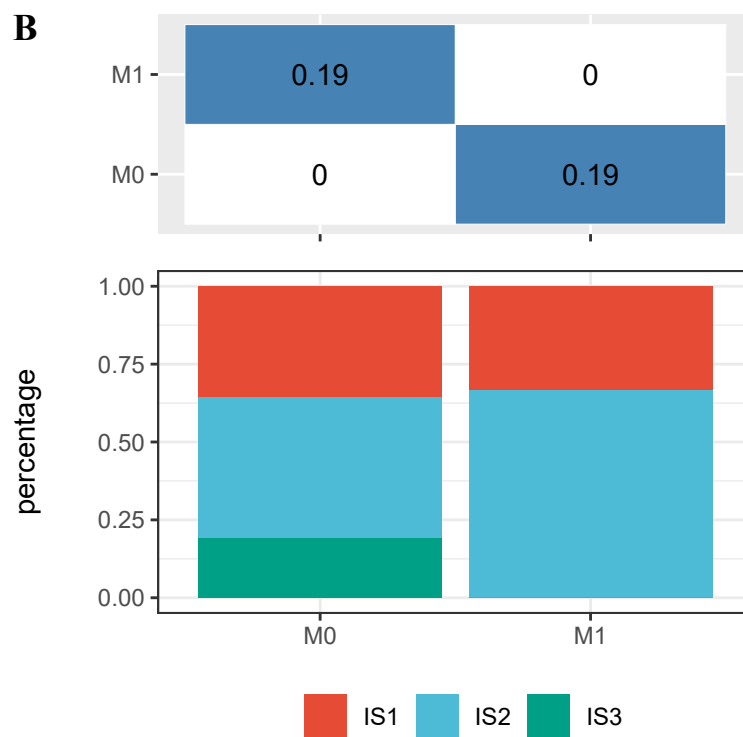
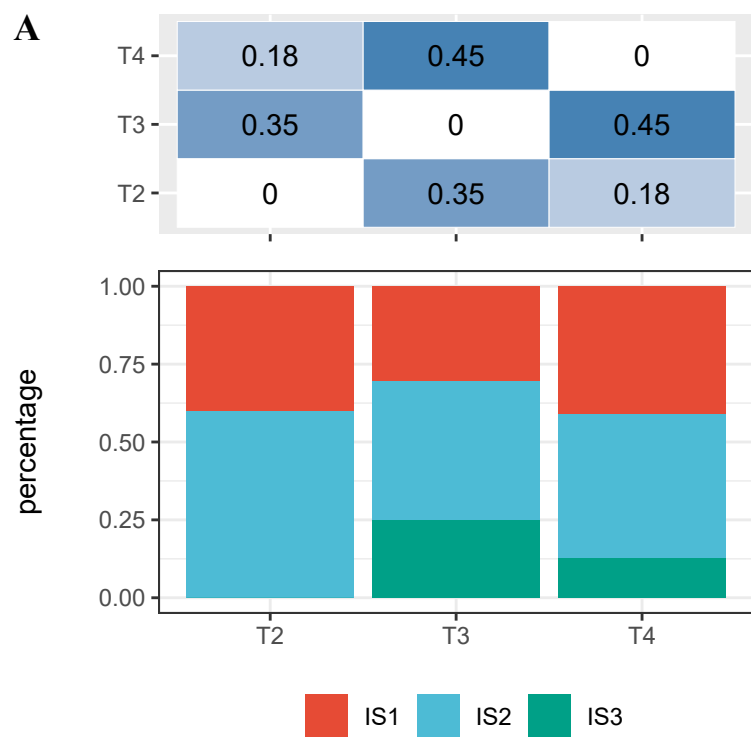

Supplementary Materials

Supplementary Figure S1. The relation between immune subtypes (IS1, IS2 and IS3) and clinical features including T stage (A), M stage (B), age (C) and gender (D) in TCGA dataset, and age (E), gender (F) in GSE22138 dataset.

Supplementary Table S1. Clinical data of TCGA-UVM dataset.

Supplementary Table S2. Clinical data of GSE22138 dataset.

Supplementary Table S3. Comparison of clinical information between TCGA-UVM and GSE22138 datasets.



Supplementary Table S1. Clinical data of TCGA-UVM dataset.

Samples	OS.time	OS	DSS.time	DSS	DFI.time	DFI	PFI.time	PFI	Age	Gender	Stage	T_Stage	N_Stage	M_Stage
TCGA-RZ-AB0B	149	1	149	1	NA	NA	149	0	47	FEMALE	Stage IV	T4b	NX	MX
TCGA-V3-A9ZX	470	0	470	0	NA	NA	233	1	56	MALE	Stage II	T2b	NX	MX
TCGA-V3-A9ZY	459	0	459	0	NA	NA	459	0	54	MALE	Stage II	T3a	NX	MX
TCGA-V4-A9E5	2499	0	2499	0	NA	NA	2499	0	51	FEMALE	Stage III	T4b	N0	M0
TCGA-V4-A9E7	415	1	415	1	NA	NA	35	1	76	MALE	Stage III	T4a	N0	M0
TCGA-V4-A9E8	808	1	808	1	NA	NA	557	1	49	MALE	Stage III	T4a	N0	M0
TCGA-V4-A9E9	1246	0	1246	0	NA	NA	1246	0	50	MALE	Stage III	T4a	N0	M0
TCGA-V4-A9EA	1348	0	1348	0	NA	NA	1348	0	66	MALE	Stage III	T4a	N0	M0
TCGA-V4-A9EC	743	0	743	0	NA	NA	743	0	75	FEMALE	Stage II	T3a	N0	M0
TCGA-V4-A9ED	1078	0	1078	0	NA	NA	1078	0	45	MALE	Stage III	T3b	N0	M0
TCGA-V4-A9EE	398	1	398	1	NA	NA	211	1	86	MALE	Stage II	T3a	N0	M0
TCGA-V4-A9EF	1165	0	1165	0	NA	NA	1165	0	56	MALE	Stage III	T4b	N0	M0
TCGA-V4-A9EH	670	0	670	0	NA	NA	670	0	53	MALE	Stage III	T4c	N0	M0
TCGA-V4-A9EI	389	1	389	1	NA	NA	203	1	78	MALE	Stage III	T4c	N0	M0
TCGA-V4-A9EJ	746	0	746	0	NA	NA	746	0	38	MALE	Stage II	T3a	N0	M0
TCGA-V4-A9EK	1028	0	1028	0	NA	NA	1028	0	37	FEMALE	Stage II	T3a	N0	M0
TCGA-V4-A9EL	982	0	982	0	NA	NA	413	1	60	MALE	Stage III	T4a	N0	M0
TCGA-V4-A9EM	966	0	966	0	NA	NA	966	0	53	MALE	Stage III	T4a	N0	M0
TCGA-V4-A9EO	773	0	773	0	NA	NA	773	0	74	MALE	Stage III	T4a	N0	M0
TCGA-V4-A9EQ	455	1	455	1	NA	NA	252	1	64	MALE	Stage III	T4a	N0	M0
TCGA-V4-A9ES	1511	0	1511	0	NA	NA	1299	1	54	FEMALE	Stage III	T3b	N0	M0
TCGA-V4-A9ET	1362	0	1362	0	NA	NA	1362	0	57	MALE	Stage III	T4b	N0	M0

TCGA-V4-A9EU	709	0	709	0	NA	NA	86	1	83	FEMALE	Stage III	T4d	N0	M0
TCGA-V4-A9EV	1269	1	1269	1	NA	NA	1269	1	59	FEMALE	Stage III	T4a	N0	M0
TCGA-V4-A9EW	1211	0	1211	0	NA	NA	197	1	44	FEMALE	Stage III	T4a	N0	M0
TCGA-V4-A9EX	730	1	730	1	NA	NA	381	1	55	FEMALE	Stage III	T4a	N0	M0
TCGA-V4-A9EY	837	0	837	0	NA	NA	837	0	66	FEMALE	Stage III	T4a	N0	M0
TCGA-V4-A9EZ	599	0	599	0	NA	NA	599	0	78	FEMALE	Stage II	T3a	N0	M0
TCGA-V4-A9F0	945	1	945	1	NA	NA	489	1	59	MALE	Stage III	T4b	N0	M0
TCGA-V4-A9F1	938	0	938	0	NA	NA	938	0	46	FEMALE	Stage II	T3a	N0	M0
TCGA-V4-A9F2	734	0	734	0	NA	NA	734	0	78	FEMALE	Stage III	T3b	N0	M0
TCGA-V4-A9F3	873	1	873	1	NA	NA	329	1	49	FEMALE	Stage III	T4a	N0	M0
TCGA-V4-A9F4	634	0	634	0	NA	NA	634	0	41	MALE	Stage III	T4a	N0	M0
TCGA-V4-A9F5	203	0	203	0	NA	NA	78	1	85	FEMALE	Stage IV	T4e	N0	M1b
TCGA-V4-A9F7	1256	0	1256	0	NA	NA	1256	0	78	FEMALE	Stage II	T3a	N0	M0
TCGA-V4-A9F8	597	0	597	0	NA	NA	597	0	68	MALE	Stage III	T4a	N0	M0
TCGA-VD-A8K7	1459	0	1459	0	NA	NA	1459	0	39	MALE	Stage III	T4a	N0	M0
TCGA-VD-A8K8	1377	1	1377	1	NA	NA	1377	1	56	FEMALE	Stage II	T4a	N0	M0
TCGA-VD-A8K9	1424	0	1424	0	NA	NA	1424	0	71	FEMALE	Stage II	T3a	N0	M0
TCGA-VD-A8KA	1178	0	1178	0	NA	NA	1008	1	22	MALE	Stage II	T3a	N0	M0
TCGA-VD-A8KB	1354	0	1354	0	NA	NA	1032	1	66	FEMALE	Stage II	T3a	N0	M0
TCGA-VD-A8KD	114	1	114	1	NA	NA	NA	1	72	MALE	Stage IV	T4a	N0	M1
TCGA-VD-A8KE	821	0	821	0	NA	NA	821	0	74	FEMALE	Stage II	T2a	N0	M0
TCGA-VD-A8KF	40	1	40	1	NA	NA	40	1	68	MALE	Stage III	T4b	N0	M0
TCGA-VD-A8KG	19	0	19	0	NA	NA	19	0	47	FEMALE	Stage II	T2a	N0	M0
TCGA-VD-A8KH	1158	0	1158	0	NA	NA	1158	0	69	MALE	Stage III	T4b	N0	M0
TCGA-VD-A8KI	1113	1	1113	1	NA	NA	1113	1	68	MALE	Stage II	T3a	N0	M0

TCGA-VD-A8KJ	1150	0	1150	0	NA	NA	1150	0	53	MALE	Stage II	T3a	NO	M0
TCGA-VD-A8KK	64	0	64	0	NA	NA	64	0	54	MALE	Stage III	T4a	NO	M0
TCGA-VD-A8KL	638	0	638	0	NA	NA	638	0	77	FEMALE	Stage II	T3a	NO	M0
TCGA-VD-A8KM	4	0	4	0	NA	NA	4	0	65	MALE	Stage II	T3a	NO	M0
TCGA-VD-A8KN	68	0	68	0	NA	NA	68	0	60	FEMALE	Stage II	T3a	NO	M0
TCGA-VD-A8KO	795	0	795	0	NA	NA	795	0	51	MALE	Stage II	T4a	NO	M0
TCGA-VD-AA8M	6	0	6	0	NA	NA	6	0	64	MALE	Stage II	T3a	NO	M0
TCGA-VD-AA8N	44	0	44	0	NA	NA	44	0	86	MALE	Stage II	T4a	NO	M0
TCGA-VD-AA8O	606	1	606	1	NA	NA	606	1	77	MALE	Stage II	T3a	NO	M0
TCGA-VD-AA8P	86	0	86	0	NA	NA	86	0	64	FEMALE	Stage II	T3a	NO	M0
TCGA-VD-AA8Q	636	1	636	1	NA	NA	636	0	71	MALE	Stage II	T3a	NO	M0
TCGA-VD-AA8R	6	0	6	0	NA	NA	6	0	78	FEMALE	Stage II	T3a	NO	M0
TCGA-VD-AA8S	427	0	427	0	NA	NA	427	0	40	MALE	Stage II	T3a	NO	M0
TCGA-VD-AA8T	49	0	49	0	NA	NA	49	0	83	FEMALE	Stage II	T3a	NO	M0
TCGA-WC-A87T	2600	0	2600	0	NA	NA	2020	1	64	MALE	Stage II	T3	NO	M0
TCGA-WC-A87U	1581	1	1581	0	NA	NA	1581	1	73	MALE	Stage III	T3	NO	M0
TCGA-WC-A87W	1703	0	1703	0	NA	NA	606	1	57	FEMALE	Stage II	T2	NO	M0
TCGA-WC-A87Y	1314	1	1314	1	NA	NA	1314	0	59	MALE	Stage III	T3	NO	M0
TCGA-WC-A880	1258	0	1258	0	NA	NA	1258	0	63	MALE	Stage III	T3	NO	M0
TCGA-WC-A881	1065	0	1065	0	NA	NA	1065	0	75	MALE	Stage II	T4	NO	M0
TCGA-WC-A882	1112	0	1112	0	NA	NA	1112	0	50	FEMALE	Stage II	T3	NO	M0
TCGA-WC-A883	241	1	241	1	NA	NA	241	1	76	FEMALE	Stage III	T4	NO	M0
TCGA-WC-A884	12	0	12	0	NA	NA	12	0	35	FEMALE	Stage III	T4b	NO	M0
TCGA-WC-A885	686	0	686	0	NA	NA	686	0	60	MALE	Stage II	T3	NO	M0
TCGA-WC-A888	575	1	575	0	NA	NA	575	0	76	MALE	Stage II	T3	NO	M0

TCGA-WC-A88A	82	1	82	1	NA	NA	82	1	75	MALE	Stage IV	T4d	NX	M1b
TCGA-WC-AA9A	453	1	453	1	NA	NA	371	1	70	FEMALE	Stage II	T2a	N0	M0
TCGA-WC-AA9E	838	0	838	0	NA	NA	838	0	60	MALE	Stage II	T3	N0	M0
TCGA-YZ-A980	1862	0	1862	0	NA	NA	1556	1	75	MALE	Stage III	T3b	N0	M0
TCGA-YZ-A982	495	0	495	0	NA	NA	495	0	79	FEMALE	Stage III	T4b	N0	M0
TCGA-YZ-A983	798	0	798	0	NA	NA	798	0	51	FEMALE	Stage II	T3a	N0	M0
TCGA-YZ-A984	1396	1	1396	1	NA	NA	154	1	50	FEMALE	Stage II	T4a	N0	MX
TCGA-YZ-A985	1184	0	1184	0	NA	NA	1184	0	41	FEMALE	Stage III	T4a	N0	M0

Supplementary Table S2. Clinical data of GSE22138 dataset.

Samples	OS.time	OS	Age	Gender
GSM550623	2190	0	76.54	female
GSM550624	963.9	1	67.57	male
GSM550625	11.7	1	61.82	male
GSM550626	1920	1	46.4	male
GSM550627	2034.3	0	84.99	male
GSM550628	2582.4	0	50.64	female
GSM550629	2552.7	0	38.67	male
GSM550630	184.2	1	59.1	male
GSM550631	1673.7	0	52.33	male
GSM550632	1656.9	0	32.94	male
GSM550633	237.6	1	70.09	male
GSM550634	502.8	1	60.8	male
GSM550635	27.6	1	54.81	female
GSM550636	196.2	1	75.66	male
GSM550637	2694.6	0	45.97	male
GSM550638	653.4	1	51.61	female
GSM550639	3619.2	0	66.2	female
GSM550640	2864.1	0	51.95	female
GSM550641	753.9	0	59.41	male
GSM550642	1801.8	0	68.51	male
GSM550643	424.8	0	65.62	male
GSM550644	2039.4	0	47.62	female
GSM550645	211.8	1	69.09	male
GSM550646	260.1	1	75.75	female
GSM550647	1470.6	1	67.46	female
GSM550648	866.4	1	40.41	female
GSM550649	629.7	1	72.29	male
GSM550650	3012	0	62.62	male
GSM550651	2574.6	0	51.91	female
GSM550652	736.2	1	63.03	male
GSM550653	1073.4	1	65.2	male
GSM550654	1672.5	0	40.31	male
GSM550655	2700.6	0	28.56	female
GSM550656	2811.9	0	57.69	male
GSM550657	819	1	55.68	female
GSM550658	2104.2	0	72.82	male
GSM550659	1577.1	1	47.43	female
GSM550660	1190.7	0	78.98	male
GSM550661	568.8	1	77.95	female

GSM550662	386.4	1	62.88	male
GSM550663	3.9	1	54.41	female
GSM550664	733.2	1	77.68	female
GSM550665	1880.7	0	56.17	female
GSM550666	2032.5	0	72.79	male
GSM550667	2051.1	1	53.07	female
GSM550668	448.5	1	48.46	male
GSM550669	1762.2	1	68.83	female
GSM550670	566.7	1	62.12	male
GSM550671	219.9	1	56.33	male
GSM550672	1066.5	1	68.36	male
GSM550673	250.2	1	69.05	male
GSM550674	935.4	0	50.17	male
GSM550675	2021.4	0	56.25	female
GSM550676	946.2	0	82.79	female
GSM550677	185.4	1	70.26	male
GSM550678	279	0	80.66	male
GSM550679	528.3	1	50.17	male
GSM550680	952.2	0	66.26	male
GSM550681	1513.8	0	56.1	female
GSM550682	445.5	1	64.55	male
GSM550683	1107	1	60.35	male
GSM550684	1331.7	1	65.72	female
GSM550685	227.7	1	73.13	male

Supplementary Table S3. Comparison of clinical information between TCGA-UVM and GSE22138 datasets.

Clinical information	TCGA-UVM (training dataset)	GSE22138 (validation dataset)
Age (years)		
≥ 60	44	35
< 60	36	28
Gender		
Male	45	39
Female	35	24
T Stage		
T2	5	/
T3	36	/
T4	39	/
N Stage		
N0	76	/
NX	4	/
M Stage		
M0	73	/
M1	3	/
MX	4	/
Stage		
Stage II	39	/
Stage III	37	/
Stage IV	4	/