

Table SI. Univariate and multivariate analyses of factors contributing to overall survival of patients with clear cell renal cell carcinoma patients.

^aP<0.05, ^bP<0.01, ^cP<0.001. HR, hazard ratio; CI, confidence interval.

Characteristics	Total, N	Univariate analysis		Multivariate analysis	
		HR (95% CI)	P-value	HR (95% CI)	P-value
Sex	539				
Female	186	Reference			
Male	353	0.930 (0.682-1.268)	0.648		
Age	539				
≤60	269	Reference			
>60	270	1.765 (1.298-2.398)	<0.001 ^c	1.507 (1.106-2.053)	0.009 ^b
Pathologic stage	536				
Stages I and II	331	Reference			
Stages III and IV	205	3.946 (2.872-5.423)	<0.001 ^c	2.968 (2.120-4.154)	<0.001 ^c
Histologic grade	531				
G1 and G2	249	Reference			
G3 and G4	282	2.702 (1.918-3.807)	<0.001 ^c	1.713 (1.191-2.463)	0.004 ^b
OVOL1	539	0.492 (0.347-0.700)	<0.001 ^c	0.645 (0.446-0.933)	0.020 ^a
OVOL2	539	0.729 (0.409-1.300)	0.284		
OVOL3	539	1.049 (0.490-2.245)	0.902		

Table S2. GO and KEGG functional enrichment analyses of OVOLs and their 100 associated neighbor genes.

aP<0.05, bP<0.01, cP<0.001. BP, biological process; CC, cellular component; GO, Gene Ontology; KEGG, Kyoto Encyclopedia of Genes and Genomes.

Analysis	ID	Description	GeneRatio	BgRatio	P-value	P.adjust	q-value
GO							
BP	GO:0007043	Cell-cell junction assembly	7/90	124/18,670	2.28e-06 ^c	0.002 ^b	0.002 ^b
BP	GO:0034329	Cell junction assembly	9/90	241/18,670	2.44e-06 ^c	0.002 ^b	0.002 ^b
BP	GO:0070830	Bicellular tight junction assembly	5/90	55/18,670	6.69e-06 ^c	0.002 ^b	0.002 ^b
BP	GO:0120192	Tight junction assembly	5/90	56/18,670	7.32e-06 ^c	0.002 ^b	0.002 ^b
BP	GO:0009913	Epidermal cell differentiation	10/90	358/18,670	8.69e-06 ^c	0.002 ^b	0.002 ^b
CC	GO:0070160	Tight junction	11/99	128/19,717	4.34e-11 ^c	5.71e-09 ^c	5.07e-09 ^c
CC	GO:0016324	Apical plasma membrane	15/99	318/19,717	5.94e-11 ^c	5.71e-09 ^c	5.07e-09 ^c
CC	GO:0043296	Apical junction complex	11/99	143/19,717	1.45e-10 ^c	9.26e-09 ^c	8.23e-09 ^c
CC	GO:0005923	Bicellular tight junction	10/99	123/19,717	6.01e-10 ^c	2.89e-08 ^c	2.56e-08 ^c
CC	GO:0045177	Apical part of cell	15/99	384/19,717	8.17e-10 ^c	2.97e-08 ^c	2.64e-08 ^c
Molecular function	GO:0015605	Organophosphate ester transmembrane transporter activity	3/90	27/17,697	3.41e-04 ^c	0.088	0.083
KEGG	hsa04530	Tight junction	11/46	169/8,076	1.72e-09 ^c	2.19e-07 ^c	2.03e-07 ^c
KEGG	hsa04514	Cell adhesion molecules	6/46	149/8,076	1.82e-04 ^c	0.012 ^a	0.011 ^a
KEGG	hsa04966	Collecting duct acid secretion	3/46	27/8,076	4.60e-04 ^c	0.019 ^a	0.018 ^a
KEGG	hsa05130	Pathogenic Escherichia coli infection	6/46	197/8,076	8.11e-04 ^c	0.026 ^a	0.024 ^a
KEGG	hsa00565	Ether lipid metabolism	3/46	49/8,076	0.003 ^b	0.067	0.063