

Table SI. Clinicopathological data of 6 patients.

Patient	Age, years	Sex	Ethnicity	ISUP grading	Primary tumor site	Clinical TNM classification	Lymph node metastasis	Lymph node metastasis site	Distant metastasis
1	57	Male	Asian	Grade I	Left kidney	T2N0M0	No		No
2	54	Male	Asian	Grade II	Left kidney	T2N0M0	No		No
3	49	Male	Asian	Grade II	Left kidney	T2N0M0	No		No
4	66	Male	Asian	Grade III	Left kidney	T3aN2M0	Yes	Left hilar lymph node	No
5	26	Female	Asian	Grade III	Right kidney	T4N3M0	Yes	Right hilar lymph node	No
6	54	Male	Asian	Grade III	Left kidney	T4N1M0	Yes	Left hilar lymph node	No

ISUP, International Society of Urological pathology; TNM, Tumor-Node-Metastasis.

Table SIII. Results of univariate Cox regression.

Gene	Hazard ratio (95% CI)	P-value
ABCD1	1.998 (1.378-2.897)	0.000262
ADCY1	0.477 (0.312-0.731)	0.000675
ADIPOQ	1.52 (1.137-2.031)	0.004662
ADORA2B	1.995 (1.486-2.68)	4.43E-06
AGER	1.611 (1.35-1.922)	1.20E-07
BST1	0.731 (0.577-0.927)	0.009593
C5AR2	0.507 (0.333-0.771)	0.001489
CCL7	2.87 (2.084-3.951)	1.03E-10
CSF1	1.659 (1.298-2.122)	5.39E-05
CXCL3	1.586 (1.254-2.006)	0.000117
DAB2IP	0.537 (0.431-0.669)	3.15E-08
F2RL1	0.698 (0.615-0.791)	2.26E-08
FCER1A	0.697 (0.59-0.823)	2.21E-05
GPS2	1.745 (1.392-2.187)	1.39E-06
HGF	1.248 (1.069-1.456)	0.005025
HMGB2	1.978 (1.395-2.804)	0.000128
IL1RL2	0.699 (0.539-0.906)	0.006907
IL4	121.787 (36.526-406.065)	5.46E-15
IL17C	14.102 (2.095-94.903)	0.006519
IL20RB	1.24 (1.156-1.33)	1.78E-09
IL22	30712.654 (684.787-1377459.722)	1.01E-07
IL31RA	3.224 (1.962-5.299)	3.84E-06
IL34	1.427 (1.195-1.704)	8.72E-05
ITIH4	2.418 (1.732-3.375)	2.12E-07
LIPA	0.669 (0.558-0.802)	1.42E-05
LRRC19	0.694 (0.605-0.795)	1.56E-07
LTB4R2	2.09 (1.477-2.959)	3.21E-05
MFHAS1	0.657 (0.521-0.83)	0.000427
MMP8	2.462 (1.245-4.869)	0.009613
NDUFS4	0.45 (0.322-0.629)	2.87E-06

NLRP10	320.317 (21.659-4737.252)	2.70E-05
PARP4	0.685 (0.553-0.849)	0.000546
PBK	1.802 (1.386-2.344)	1.10E-05
PRKCZ	0.382 (0.26-0.563)	1.07E-06
RHBDD3	2.753 (2.039-3.717)	3.79E-11
RORA	0.48 (0.361-0.638)	4.25E-07
SERPINF1	1.358 (1.216-1.517)	5.89E-08
SOCS3	1.276 (1.125-1.448)	0.000153
TCIRG1	2.091 (1.694-2.581)	6.42E-12
TNFSF11	1.611 (1.174-2.211)	0.003146
TOLLIP	0.359 (0.256-0.504)	3.28E-09
TPSB2	0.763 (0.661-0.882)	0.000241
WNT5A	1.721 (1.315-2.251)	7.58E-05
