

**Table S1.** Correlation between CpG island methylator phenotype (CIMP) and clinicopathological parameters of clear cell renal cell carcinomas (ccRCCs) in the learning cohort.

Clinicopathological parameters		CIMP-negative ccRCCs (n=88)	CIMP-positive ccRCCs (n=14)	<i>P</i> <sup>a</sup>
Age		62.32±10.21	67.36±11.06	<u>9.90×10<sup>-2</sup></u> <sup>b</sup>
Sex	Male	61	11	<u>6.97×10<sup>-1</sup></u> <sup>c</sup>
	Female	27	3	
Tumor diameter (cm)		4.96±3.02	8.75±2.85	<u>1.34×10<sup>-4</sup></u> <sup>b</sup>
Histological grades <sup>d</sup>	G1	47	1	<u>7.69×10<sup>-6</sup></u> <sup>c</sup>
	G2	33	4	
	G3	7	7	
	G4	1	2	
Vascular involvement <sup>e</sup>	Negative	52	1	<u>3.02×10<sup>-4</sup></u> <sup>c</sup>
	Positive	36	13	
Renal vein tumor thrombi <sup>f</sup>	Negative	67	5	<u>2.05×10<sup>-3</sup></u> <sup>c</sup>
	Positive	21	9	
Growth pattern	Expansive	82	7	<u>6.79×10<sup>-6</sup></u> <sup>c</sup>
	Infiltrative	6	7	
Tumor necrosis	Negative	69	2	<u>1.26×10<sup>-6</sup></u> <sup>c</sup>
	Positive	19	12	
Invasion to renal pelvis	Negative	81	10	<u>2.09×10<sup>-2</sup></u> <sup>c</sup>
	Positive	7	4	
Pathological TNM stage <sup>g</sup>	Stage I	48	0	<u>7.25×10<sup>-5</sup></u> <sup>c</sup>
	Stage II	1	1	
	Stage III	23	9	
	Stage IV	16	4	

Among the 104 RCCs used in our previous study [7], 102 (88 CIMP-negative and 14 CIMP-positive RCCs), from which sufficient amount of genomic DNA was available, were used in the present study as the learning cohort. <sup>a</sup>*P* values of <0.05 are underlined. <sup>b</sup>Mann-Whitney *U* test. <sup>c</sup>Fisher's exact test. <sup>d</sup>All the tumors were graded on the basis of previously described criteria [19]. <sup>e</sup>The presence or absence of vascular involvement was examined microscopically on slides stained with hematoxylin-eosin and elastica van Gieson. <sup>f</sup>The presence or absence of tumor thrombi in the main trunk of the renal vein was examined macroscopically. <sup>g</sup>All the patients were classified according to the pathological Tumor-Node-Metastasis (TNM) classification [20].