

**Supplementary Table 1.** ICD-9, ICD-10 and CPT code for disease states and procedures

Category	ICD 9–DX	ICD 10–DX	Procedure	ICD 9–Proc	ICD 10–Proc	CPT
Kidney cancer	189, 189.0	C64, C64.1, C64.2, C64.9	Open radical nephrectomy	55.5, 55.52	0TT00ZZ, 0TT10ZZ	50220, 50225, 50230
			Laparoscopic radical nephrectomy	N/A	0TT04ZZ, 0TT14ZZ	50545, 50546
			Robotic assisted radical nephrectomy	Above+17.4, 17.41, 17.42, 17.43, 17.44, 17.45, 17.49	Above+8E0W4CZ, 8E0W7CZ, 8E0WXCZ, 8E0W0CZ, 8E0W3CZ, 8E0W8CZ	Above+S2900 (HCPCS)
			Open partial nephrectomy	55.39, 55.4	0TB00ZZ, 0TB07ZZ, 0TB10ZZ, 0TB17ZZ	50240
			Laparoscopic partial nephrectomy	N/A	0TB03ZZ, 0TB04ZZ, 0TB08ZZ, 0TB13ZZ, 0TB14ZZ, 0TB18ZZ	50543
			Robotic assisted partial nephrectomy	Above+17.4, 17.41, 17.42, 17.43, 17.44, 17.45, 17.49	Above+8E0W4CZ, 8E0W7CZ, 8E0WXCZ, 8E0W0CZ, 8E0W3CZ, 8E0W8CZ	Above+S2900 (HCPCS)

ICD, International Classification of Diseases; CPT, Current Procedural Terminology.