

Table 1 Patient background

	Nx group (n = 98)	NSS group (n = 41)
Mean age at operation (range)	60.7 (26-89)	61.6 (19-83)
Male / female	53/45	30/11
Mean tumor volume (mL) (range)	122.5 (15.8-230.2)	9.8 (1.2-45.4)
Mean maximum tumor diameter (cm) (range)	6.5 (3.2-11.3)	2.6 (1.3-4.6)
Mean sCr (mg/dL) (range)	0.77 (0.4-2.0)	0.89 (0.39-2.52)
eGFR (mL/min/1.73m ²)	74.0 (17.7-124.2)	68.6 (19.3-124.7)
Preoperative renal function		
Normal (elective indication)	77	27
Deteriorated (relative/absolute indication)	21/0	12/2
Reasons for surgery		
Renal cell carcinoma	57	40
Upper urinary tract cancer	9	0
Angiomyolipoma	0	1
Oncocytoma	1	0
Donor	31	0

Table 2 Correlation between predictive and postoperative actual FRV (cm³)

	predictive mean \pm SD	postoperative mean \pm SD	Spearman's ρ (<i>p</i> -value)
<i>1 month after surgery</i>			
Nx (n=98)	160.1 \pm 35.3	173.5 \pm 38.4*	0.96 (< 0.001)
NSS (n=41)	275.9 \pm 77.4	274.5 \pm 73.7	0.99 (< 0.001)
<i>1 year after surgery</i>			
Nx (n=75)	160.2 \pm 37.5	174.6 \pm 41.0 [†]	0.96 (< 0.001)
NSS (n=30)	292.4 \pm 76.1	296.1 \pm 75.6 [‡]	0.98 (< 0.001)

FRV: functional renal volume, SD = standard deviation

* Compared to the predictive RPV, statistically significant ($p < 0.001$)

[†] Compared to the predictive RPV, statistically significant ($p < 0.001$)

[‡] Compared to the predictive RPV, statistically significant ($p = 0.037$)

Table 3

Correlation between predictive and postoperative actual eGFR (mL/min/1.73m²)

	predictive mean \pm SD	postoperative mean \pm SD	Spearman's ρ (<i>p</i> -value)
<i>1 month after surgery</i>			
Nx (n=98)	38.6 \pm 11.0	46.0 \pm 13.7*	0.79 (< 0.001)
NSS (n=41)	66.6 \pm 23.2	62.8 \pm 24.8 †	0.94 (< 0.001)
<i>1 year after surgery</i>			
Nx (n=85)	38.5 \pm 11.3	47.5 \pm 18.6 †	0.79 (< 0.001)
NSS (n=31)	69.7 \pm 20.2	64.2 \pm 22.3 ‡	0.79 (< 0.001)

eGFR: estimated glomerular filtration rate, SD = standard deviation

* Compared to the predictive eGFR, statistically significant ($p < 0.001$)

† Compared to the predictive eGFR, statistically significant ($p < 0.001$)

§ Compared to the predictive eGFR, statistically significant ($p < 0.001$)

‡ Compared to the predictive eGFR, statistically significant ($p < 0.001$)

Table 4
 The mean functional renal parenchymal volumes of normal kidneys on CT or MRI images calculated by five volunteer examiners

Examiner	CT					MRI				
	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10
1	326.1±1.8	256.4±0.7	271.4±1.4	362.3±2.9	239.2±1.1	329.6±3.5	370.5±0.4	370.9±0.4	265.8±0.5	307.0±0.6
2	325.7±1.3	255.7±1.1	271.8±0.7	360.5±1.1	240.1±1.6	332.2±4.3	370.8±0.2	370.6±0.2	265.8±0.6	307.2±0.7
3	326.1±1.3	257.0±1.7	270.8±2.4	361.2±2.3	239.1±1.5	330.5±4.6	370.3±1.5	371.8±1.1	266.7±0.8	307.2±0.5
4	326.7±0.7	256.8±1.2	272.7±1.4	362.3±1.8	239.0±2.2	326.5±4.3	371.1±1.1	371.3±0.4	265.9±0.7	306.9±0.2
5	326.4±0.8	256.4±1.4	271.2±1.2	362.0±1.2	240.7±0.8	324.2±2.6	369.8±0.8	370.9±0.7	265.6±0.7	306.7±0.5
<i>*p</i> value	0.231	0.365	0.215	0.836	0.591	0.404	0.565	0.669	0.310	0.254

mean ± SD, SD = standard deviation, **p* value: inter-group comparison