

Table S1. Patient demographics and preoperative data

Age (years), mean (SD), range	50 (11.4), 26-73
Gender (n, male/female)	29/24
BMI (kg/m ²), mean (SD), range	24.8 (2.8), 19.0-30.4
Preoperative Double-J stent, n (%)	6(11.3%)
Grade of Hydronephrosis ^a , n (%)	
I	39 (73.6%)
II	11(20.7%)
III	3(5.7%)
IV	0
V	0
Stone property	
Laterality (n, left/ right)	29/24
Largest stone size (mm), mean (SD), range	17.1 (2.9), 11-25
Stone volume (mm ³), mean (SD), range	2555.3 (1057.2), 955.6- 5748.8
Highest stone density (HU), mean (SD), range	1330.6 (274.9), 892-1956
Stone location, n (%)	
Upper ureter	0
Renal pelvic	22 (41.5%)
Upper calix	2 (3.8%)
Middle calix	11 (20.7%)
Lower calix	5 (9.5%)
multiple calixs	13 (24.5%)
Positive urine culture, n (%)	8(15.1%)

^a: Grignon Grading system

Table S2. intraoperative and postoperative data

Operation time (min), mean (SD), range	70.8 (26.9), 36.0-154.0
Not use basket, n (%)	29(54.7%)
Residual Stone	
Largest residual stone (mm), mean (SD), range	1.0 (1.7), 0-6.0
Residual stone volume (mm ³), mean (SD), range	85.1 (187.0), 0-1048.0
Stone volume clearance rate ^b , mean (SD), range	97.7 (4.4), 81.1-100.0
Complete stone-free rate, n (%)	29 (69.8%)
Residual Stone after 1 months, n (%)	6 (11.3%)
Hemoglobin drop (g/dL), mean (SD), range	0.5 (0.6), 0-3.2
Complications, n (%)	4(7.6%)
Fever	2(3.8%)
Emesis	2(3.8%)
Infection	0
Transfusion	0
Perforation	0
Steinstrasse	0

^b: *Stone volume clearance rate* = $\left(1 - \frac{\text{residual stone volume}}{\text{preoperative stone volume}}\right) \times 100\%$