

Table S1 Clinical, ultrasound, and preimplantation biopsy characteristics of the donor kidneys

Characteristic	Overall (n=94)	Non-AKI (n=50)	AKI (n=44)	P value
Weight, kg	65.84±9.04	63.3±7.35	68.73±9.95	0.003*
Height, cm	168.34±5.78	166.84±6.42	170.05±4.42	0.007*
Cause of death (%)				0.29
Trauma	34 (36.2)	21 (42.0)	13 (29.5)	
Cerebrovascular	54 (57.4)	25 (50.0)	29 (65.9)	
Hypoxic ischemic encephalopathy	6 (6.4)	4 (8.0)	2 (4.5)	
Hypertension, n (%)	36 (38.3)	14 (28.0)	22 (50.0)	0.048*
Diabetes, n (%)	2 (2.1)	0 (0.0)	2 (4.5)	0.42
Na ⁺ , mmol/L	148.5 (144, 158)	150 (146.25, 159)	148 (142.75, 153.75)	0.11
K ⁺ , mmol/L	4.01 (3.38, 4.51)	3.89 (3.17, 4.18)	4.41 (3.51, 4.84)	0.002*
Platelet, 10 ⁹ /L	88 (58.25, 129)	108 (83, 154)	59.5 (41, 91)	<0.001*
INR	1.25 (1.13, 1.47)	1.19 (1.09, 1.27)	1.36 (1.19, 1.57)	<0.001*
Length of stay in ICU, hours	122 (84, 182.75)	136 (89, 229)	119 (82, 177)	0.35
Kidney length, cm	11±0.69	10.98±0.77	11.03±0.6	0.76
Kidney width, cm	5.13±0.63	5±0.6	5.28±0.63	0.06
PSV, cm/s	58.65 (33.33, 89.22)	73.6 (45.6, 96.4)	40.3 (27.7, 65.85)	<0.001*
EDV, cm/s	17 (11.67, 22.5)	21.1 (16.3, 28.4)	12.9 (9.64, 18.5)	<0.001*
Biopsy characteristics				
Percentage of GS	0.05±0.08	0.03±0.05	0.07±0.11	0.005*
Interstitial fibrosis				0.003*
None/mild/moderate/severe	85/3/6/0	50/0/0/0	35/3/6/0	
Tubular atrophy				<0.001*
None/mild/moderate/severe	55/33/6/0	38/12/0/0	17/21/6/0	
Interstitial inflammation				0.007*
None/mild/moderate/severe	83/3/8/0	48/2/0/0	35/1/8/0	
Arterial intimal fibrosis				0.006*
None/mild/moderate/severe	49/38/7/0	33/16/1/0	16/22/6/0	
Arteriolar hyalinosis				<0.001*
None/mild/moderate/severe	44/40/8/2	33/15/0/0	11/23/8/2	
Glomerular thrombi				0.03*
None/mild/moderate/severe	88/3/3/0	50/0/0/0	38/3/3/0	
Acute tubular injury/necrosis				0.02*
None/mild/moderate/severe	56/38/0/0	36/14/0/0	20/24/0/0	

*, statistically significant difference between the AKI and non-AKI groups. The values represent the mean ± SD, median (25th–75th percentiles), or number of patients. INR, international normalized ratio; ICU, intensive care unit; PSV, peak systolic velocity; EDV, end-diastolic velocity; GS, global glomerulosclerosis; AKI, acute kidney injury; SD, standard deviation.

Table S2 Intraobserver and interobserver agreement of TIC parameters

Parameters	Intraobserver			Interobserver		
	ICC	95% CI	P value	ICC	95% CI	P value
ATKA	0.99	0.95, 0.99	<0.001	0.99	0.99, 0.99	<0.001
PIKA	0.96	0.94, 0.97	<0.001	0.94	0.90, 0.96	<0.001
PIKC	0.98	0.97, 0.98	<0.001	0.95	0.92, 0.97	<0.001
PIKM	0.89	0.78, 0.94	<0.001	0.81	0.70, 0.88	<0.001
TTPKA	0.81	0.70, 0.88	<0.001	0.85	0.76, 0.91	<0.001
TTPKC	0.95	0.92, 0.97	<0.001	0.92	0.87, 0.95	<0.001
TTPKM	0.86	0.78, 0.91	<0.001	0.24	-0.007, 0.46	0.03
TI(KA-KC)	0.78	0.66, 0.86	<0.001	0.77	0.64, 0.86	<0.001
TI(KA-KM)	0.79	0.67, 0.86	<0.001	0.31	0.07, 0.52	0.006
TI(KC-KM)	0.89	0.82, 0.93	<0.001	0.32	0.07, 0.53	0.005

TIC, time-intensity curve; ICC, intra-class correlation coefficient; KA, kidney segmental artery; KC, kidney cortex; KM, kidney medulla; AT, arrival time; TTP, time to peak; PI, peak intensity; TI, time interval.

Table S3 Clinical characteristics and early post-transplant renal function in the recipients

Characteristic	Overall (n=92)	Non-AKI (n=50)	AKI (n=42)	P value
Mean age, years	44.49±11.4	44.69±12.61	44.25±9.91	0.86
BMI, kg/m ²	22.24 (20.31, 24.15)	22.53 (20.46, 24.63)	21.53 (20, 23.69)	0.26
Dialysis, n (%)				0.66
No dialysis	8 (8.7)	4 (8.0)	4 (9.5)	
Hemodialysis	54 (58.7)	32 (64)	22 (52.4)	
Peritoneal dialysis	30 (32.6)	14 (28)	16 (38.1)	
Duration of surgery, minutes	276 (241.5, 310.5)	292.5 (248, 320)	262.5 (240, 292.5)	0.04*
Cold ischemia time, minutes	617.27±232.37	643.48±193.87	585.82±270.74	0.25
Post-transplantation index				
DGF, n (%)	26 (28.3)	9 (18)	17 (40.5)	0.03*
Day 3 urine volume, mL	3,395 (2,038.75, 4,347.5)	3,640 (3,132.5, 4,457.5)	2,897.5 (585.5, 3,787.5)	0.003*
Day 7 urine volume, mL	2,880 (2,168.75, 3,626.25)	2,880 (2,500, 3,632.5)	2,900 (1,092.5, 3,547.5)	0.25
Day 3 serum creatinine, μmol/L	524 (332.75, 795.5)	395.5 (276.75, 575.25)	745.5 (474, 945.5)	<0.001*
Day 7 serum creatinine, μmol/L	243.5 (162, 526.5)	183.5 (135, 294.75)	422.5 (212.5, 680.75)	<0.001*
Day 30 serum creatinine, μmol/L	130 (109.5, 206.25)	122 (102.5, 170.5)	136 (118, 258)	0.15
Day 90 serum creatinine, μmol/L	118 (100, 158)	114.5 (97.75, 144.25)	132 (108.5, 166)	0.12
Day 7 eGFR, mL/min/1.73 m ²	38.33 (19.5, 59.89)	41.42 (22.7, 69.54)	32.67 (14.24, 50.98)	0.22
Day 30 eGFR, mL/min/1.73 m ²	64.17±28.22	66.19±28.53	60.4±28.15	0.51
Day 90 eGFR, mL/min/1.73 m ²	66.66 (53.84, 86.02)	70.76 (57.03, 91.69)	63.6 (48.43, 68.05)	0.13

*, statistically significant difference between the AKI and non-AKI groups. The values represent the mean ± SD, median (25th–75th percentiles), or number of patients. BMI, body mass index; DGF, delayed graft function; eGFR, estimated glomerular filtration rate; AKI, acute kidney injury; SD, standard deviation.