

Supplementary Table 1. Detailed Clinical Description of All Eight Study Donors and Experimentally Manipulated Variants, along with Actual Outcomes for Real-life Reference Cases

Offer Characteristics																														Outcomes										
Donor ID	Offer Variant #	Kidney Biopsied?	Biopsy Type	% Glomerulosclerosis - if biopsied	Interstitial Fibrosis	Vascular Changes	Acute Changes ¹	Donor KDPI	PHS Increased Risk	Renal Length (cm)	Renal Width (cm)	Surgical Damage	Anatomical Abnormalities ²	Projected Cold Ischemic Time (hours)	DCD Donor	Donor History of Diabetes	Donor History of Hypertension	Donor Initial Creatinine	Donor Peak Creatinine	Donor Recent Creatinine	Candidate HLA Mismatch (A:B:DR)	Candidate EPTS	Donor Age	Candidate Age	Candidate Waiting Time (yrs)	DSA Med Waiting Time (yrs)	Candidate CPRA	Candidate Current Diabetes Status	Candidate Years on Dialysis	Candidate Gender	Donor Gender	Candidate Weight (lbs)	Donor Weight (lbs)	Candidate Height	Donor Height	Donor BMI	Transplant or Discard? ³	Recipient Most Recent Status ⁴	Recipient Most Recent eGFR ⁵	Follow-up length (years)
A	'Poor' Biopsy	Yes	needle	29%	Mild	Mild	a	62%	No	10.5	5	No	e	22	Yes	No	No	1.2	1.2	1	2, 1, 0	36%	49	53	0.6	5.0	94%	No		F	F	192	212	5ft 2in	5ft 2in	38.8	T	A	33.5	4
A	No Biopsy	No						62%	No	10.5	5	No	e	22	Yes	No	No	1.2	1.2	1	2, 1, 0	36%	49	53	0.6	5.0	94%	No		F	F	192	212	5ft 2in	5ft 2in	38.8				
A	'Good' Biopsy	Yes	needle	6%	Mild	Mild	a	62%	No	10.5	5	No	e	22	Yes	No	No	1.2	1.2	1	2, 1, 0	36%	49	53	0.6	5.0	94%	No		F	F	192	212	5ft 2in	5ft 2in	38.8				
B	'Poor' Biopsy	Yes	wedge	19%	Mild	Mild	b	76%	No	10	4.5	No	No	28	Yes	No	No	1.2	1.2	0.6	1, 1, 2	56%	54	60	5.8	9.0	0%	No	5.8	M	M	218	126	6ft 0in	4ft 11in	25.3	T	A	82.8	4
B	No Biopsy	No						76%	No	10	4.5	No	No	28	Yes	No	No	1.2	1.2	0.6	1, 1, 2	56%	54	60	5.8	9.0	0%	No	5.8	M	M	218	126	6ft 0in	4ft 11in	25.3				
B	'Good' Biopsy	Yes	wedge	3%	Mild	Mild	b	76%	No	10	4.5	No	No	28	Yes	No	No	1.2	1.2	0.6	1, 1, 2	56%	54	60	5.8	9.0	0%	No	5.8	M	M	218	126	6ft 0in	4ft 11in	25.3				
C	'Poor' Biopsy	Yes	wedge	13%	Mild-mod.	Severe	a	83%	No	12	6	No	No	13	No	No	No	0.9	0.9	0.7	2, 2, 2	38%	64	45	6.3	4.0	0%	No	6.3	M	F	164	134	5ft 7in	5ft 3in	23.7	T	A	49.5	3
C	No Biopsy	No						83%	No	12	6	No	No	13	No	No	No	0.9	0.9	0.7	2, 2, 2	38%	64	45	6.3	4.0	0%	No	6.3	M	F	164	134	5ft 7in	5ft 3in	23.7				
C	'Good' Biopsy	Yes	wedge	13%	Mild-mod.	Minimal	a	83%	No	12	6	No	No	13	No	No	No	0.9	0.9	0.7	2, 2, 2	38%	64	45	6.3	4.0	0%	No	6.3	M	F	164	134	5ft 7in	5ft 3in	23.7				
D	'Poor' Biopsy	Yes	wedge	5%	Mild-mod.	Absent	a	80%	No	13	7	No	No	19	No	No	Yes	0.55	1.44	1.37	1, 1, 2	33%	47	56	2.4	4.0	0%	No	2.4	M	F	262	142	6ft 0in	5ft 1in	26.2	T	A	49.9	3
D	No Biopsy	No						80%	No	13	7	No	No	19	No	No	Yes	0.55	1.44	1.37	1, 1, 2	33%	47	56	2.4	4.0	0%	No	2.4	M	F	262	142	6ft 0in	5ft 1in	26.2				
D	'Good' Biopsy	Yes	wedge	5%	Absent	Absent	a	80%	No	13	7	No	No	19	No	No	Yes	0.55	1.44	1.37	1, 1, 2	33%	47	56	2.4	4.0	0%	No	2.4	M	F	262	142	6ft 0in	5ft 1in	26.2				
E	No Biopsy	No						77%	Yes ⁶	12	5.5	No	No	23	No	No	No	0.9	5.9	4.6	1, 2, 2		59	52	1.1	3.0	0%		6.2	F	M	181	155	5ft 6in	5ft 11in	21.6				
E	'Good' Biopsy	Yes	wedge	2%	Mild	Absent	c	77%	Yes ⁶	12	5.5	No	No	23	No	No	No	0.9	5.9	4.6	1, 2, 2		59	52	1.1	3.0	0%		6.2	F	M	181	155	5ft 6in	5ft 11in	21.6	T	A	70.2	4
F	No Biopsy	No						47%	No	11	8	No	f	16	No	No	No	1	5.4	5.4	0, 0, 0	8%	32	42	0.8	6.0	81%	No		F	F	153	152	5ft 3in	5ft 1in	28.7	D			
F	'Good' Biopsy	Yes	wedge	3%	Absent	Absent	c	47%	No	11	8	No	f	16	No	No	No	1	5.4	5.4	0, 0, 0	8%	32	42	0.8	6.0	81%	No		F	F	153	152	5ft 3in	5ft 1in	28.7				
G	No Biopsy	No						91%	No	12	5	No	No	24	No	No	No	1.18	4.02	4.02	1, 2, 2	78%	57	61	2.2	4.0	0%	Type II	2.2	M	M	197	110	5ft 9in	5ft 10in	15.4				
G	'Good' Biopsy	Yes	wedge	3%	Absent	Mild	a	91%	No	12	5	No	No	24	No	No	No	1.18	4.02	4.02	1, 2, 2	78%	57	61	2.2	4.0	0%	Type II	2.2	M	M	197	110	5ft 9in	5ft 10in	15.4	T	A	50.3	3
H	No Biopsy	No						51%	Yes ⁶	12	6	No	No	17	No	No	Yes	1.35	6.98	6.75	0, 2, 2	22%	35	50	2.2	8.0	0%	No	2.2	M	M	231	254	5ft 7in	5ft 10in	36.4	D			
H	'Good' Biopsy	Yes	wedge	6%	Absent	Absent	d	51%	Yes ⁶	12	6	No	No	17	No	No	Yes	1.35	6.98	6.75	0, 2, 2	22%	35	50	2.2	8.0	0%	No	2.2	M	M	231	254	5ft 7in	5ft 10in	36.4				

One offer in each pair or triplet was based on a real offer sent in DonorNet. Outcomes of these real offers (transplanted or discarded) are shown to the right. Only outcomes for control offers, which were based on real offers sent through DonorNet, are shown.

[1] a = No significant tubular injury, cortical necrosis or glomerular fibrin thrombi observed; b = Mild tubular injury, cortical necrosis or glomerular fibrin thrombi observed; c = Mild tubular injury noted, no significant cortical necrosis or glomerular fibrin thrombi observed; d = Moderate tubular injury noted, no significant cortical necrosis or glomerular fibrin thrombi observed; [2] e=Yes, clear 1cm cyst; f=Yes, infarcted areas with petechia and hematomas in greyish color; [3] T=Kidney transplanted, D=Offer refused, kidney discarded; [4] A=Recipient alive, graft functioning; [5] using most recent year follow-up form creatinine and MDRD formula; [6] PHS Reason = On hemodialysis within the last 12 months