

Supplemental Table 1: The Proportion of Patients Undergoing Preemptive Kidney Re-transplant Stratified By Where Follow-Up Care Was Last Provided at the Time the Preceding Graft Failed

Transplant Status	Care At Time Preceding Graft Failed Provided By				
	Transplant Center	Non-Transplant Center Specialty Physician	Primary Care Physician	Other	Missing
Preemptive	864 (11.5%)	140 (7.6%)	19 (5.9%)	229 (8.7%)	1630 (15.6%)
Non-Preemptive	6,281 (88.5%)	1650 (92.4%)	292 (94.1%)	2358 (91.3%)	8585 (84.4%)

Missing data n=10,481 (46.0%)

p-value < 0.001

Supplemental Table 2: Median Age and Sex Proportion at the Time of First and Repeat Preemptive and Non-Preemptive Kidney Transplant

	Median Age (Q25, Q75)	Female Sex (%)	Male Sex (%)
First Transplant			
Preemptive	53 (42, 62)	16,663 (18.9%)	22,637 (16.3%)
Non-Preemptive	53 (42, 61)	71,402 (81.1%)	115,991 (83.7%)
Repeat Transplant			
Preemptive	46 (37, 55)	2,054 (15.6%)	2,299 (12.5%)
Non-Preemptive	45 (35, 54)	11,108 (84.4%)	16,149 (87.5%)

Supplemental Table 3: Last Available Estimated Glomerular Filtration Rate Prior to Preemptive Kidney Transplant (by MDRD equation)

	First PKT GFR (Q25, 275)	P-value	Repeat PKT GFR (Q25, 275)	P-value
All	13.9 (10.7, 17.5)	-	15.1 (11.6, 18.5)	-
Sex				
Male	14.4 (11.0, 18.0)	P < 0.001	15.8 (12.5, 19.1)	P < 0.001
Female	13.3 (10.1, 16.9)		14.2 (11.0, 17.5)	
Race				
White	13.9 (10.7, 17.4)	Ref	15.1 (11.7, 18.5)	Ref
Black	14.6 (10.8, 18.7)	P < 0.001	15.7 (11.9, 19.0)	P = 0.113
Hispanic	13.4 (10.4, 17.0)	P < 0.001	14.2 (11.3, 17.3)	P = 0.024
Other	14.1 (10.7, 17.3)	P = 0.883	15.1 (10.9, 17.3)	P = 0.403

Supplemental Table 4: Adjusted Hazard Ratio for Death-Censored Graft Failure with Preemptive Retransplant Versus Non-Preemptive Retransplant and Preemptive First Transplant Versus Non-Preemptive First Transplant

Variable	Repeat Transplant	First Transplant
	HR (95% CI)	HR (95% CI)
Preemptive Transplant	0.72 (0.65-0.81)	0.67 (0.64-0.70)
Employment		
Full Time	Ref	Ref
Part Time/Full Time	0.94 (0.72-1.21)	0.90 (0.80-1.01)
Part Time	1.04 (0.91-1.18)	1.08 (1.02-1.15)
Unemployed	1.06 (0.98-1.15)	1.09 (1.06-1.13)
Retired	0.89 (0.74-1.07)	1.02 (0.96-1.07)
Education		
None/Grade School	Ref	Ref
High School	1.12 (0.93-1.35)	1.10 (1.04-1.17)
College/Technical School	1.04 (0.86-1.26)	1.04 (0.98-1.10)
Bachelor Degree	0.97 (0.79-1.19)	0.93 (0.87-1.00)
Graduate School	0.86 (0.68-1.09)	0.89 (0.82-0.97)
Female Sex	0.94 (0.88-1.01)	0.98 (0.96-1.01)
Race		
White	Ref	Ref
Black	1.44 (1.33-1.56)	1.67 (1.62-1.72)
Hispanic	0.87 (0.78-0.98)	0.94 (0.90-0.98)
Other	0.76 (0.63-0.92)	0.94 (0.88-0.99)
Comorbidities		
Coronary Artery Disease	0.97 (0.85-1.12)	1.03 (0.98-1.08)
Hypertension	0.83 (0.76-0.90)	0.95 (0.92-0.99)
Peripheral Vascular Disease	0.96 (0.79-1.16)	1.11 (1.03-1.18)
Diabetes	0.98 (0.89-1.07)	1.09 (1.05-1.12)
Body Mass Index (kg/m²)		
<18.5	Ref	Ref
18.5- < 25	1.06 (0.90-1.25)	1.01 (0.93-1.10)
25- < 30	1.15 (0.96-1.36)	1.08 (0.99-1.18)
30 - <35	1.27 (1.06-1.52)	1.22 (1.12-1.33)
≥ 35	1.56 (1.29-1.90)	1.33 (1.21-1.45)
PRA		
<20	Ref	Ref
20- <80	1.07 (0.99-1.15)	1.01 (0.96-1.05)
≥ 80	1.09 (1.00-1.19)	1.08 (0.99-1.17)
Live Donor	0.78 (0.72-0.84)	0.77 (0.75-0.79)
Age		
<40	Ref	Ref
40- <60	0.67 (0.62-0.72)	0.60 (0.58-0.62)
≥ 60	0.64 (0.56-0.74)	0.54 (0.52-0.57)
ABO		
O	Ref	Ref
A	1.04 (0.97-1.12)	0.98 (0.95-1.01)
B	0.98 (0.88-1.10)	0.98 (0.94-1.02)
AB	1.02 (0.88-1.20)	0.93 (0.87-0.99)

