Supplemental Material Table of Contents

Supplemental Table 1: Characteristics of adult kidney failure patients, stratified by race, at time of initial transplant clinic visit

		White (n=1,561)	Black (n=1,452)
Demographics			
Age, mean years (SD)		567 (13)	53 (13)
Sex, N (%)	Male	950 (61)	824 (57)
	Female	611 (39)	628 (43)
Center, N (%)	Johns Hopkins	1,352 (87)	1,385 (95)
	University of Michigan	209 (13)	67 (5)
Dialysis modality, N (%)	Hemodialysis	654 (42)	920 (64)
	Peritoneal dialysis	175 (11)	162 (11)
	None (pre-emptive transplant)	717 (46)	357 (25)
Time on dialysis, mean years (SD)*		2.1 (2.7)	2.6 (3.0)
Socioeconomic Status (SES)			
Highest Level Education Attained, N (%)	Grade School	44 (3)	129 (9)
	High School	529 (34)	605 (42)
	Two-year technical degree	140 (9)	115 (8)
	College	530 (34)	394 (27)
	Graduate School	312 (20)	201 (14)
	Declined to answer	2 (0.1)	6 (0.4)
Annual Income, N (%)	< $50,000	405 (26)	502 (35)
	$50,000 – 100,000	379 (24)	268 (19)
	≥ $100,000	401 (26)	202 (13)
	Declined to answer	376 (24)	480 (33)
Employment status, N (%)	Not employed	926 (59)	974 (67)
	Employed	629 (40)	473 (33)
	Declined to answer	6 (0.4)	5 (0.3)
Comorbidities			
BMI in kg/m^2, mean (SD)		29 (6)	29.5 (6.4)
Obese (BMI ≥30 kg/m^2), N (%)	No	948 (61)	809 (56)
	Yes	602 (39)	630 (43)
	Unavailable	11 (0.7)	13 (0.9)
Tobacco Use, N (%)	Never	995 (65)	977 (67)
	Former	458 (29)	330 (23)
	Current	100 (6)	140 (10)
History of myocardial infarction, N (%)	No	1,379 (88)	1,338 (92)
	Yes	180 (12)	113 (8)
	Unavailable	2 (0.1)	1 (0.1)
	No	962 (62)	860 (59)

History of congestive heart failure, N (%)	Yes	122 (8)	187 (13)
	Unavailable	477 (31)	405 (28)
Diabetes, N (%)	No	932 (60)	791 (55)
	Yes	627 (40)	659 (45)
	Unavailable	2 (0.1)	2 (0.1)
Diabetes with complications, N (%)	No	1161 (74)	1039 (72)
	Yes	400 (26)	413 (28)
	Unavailable	0 (0)	0 (0)
Peripheral vascular disease, N (%)	No	1,447 (93)	1,365 (94)
	Yes	114 (7)	86 (6)
	Unavailable	0 (0)	1 (0.1)
Cerebral vascular disease, N (%)	No	1,463 (94)	1,357 (94)
	Yes	96 (6)	91 (6)
	Unavailable	2 (0.1)	4 (0.3)
COPD, N (%)	No	1,447 (93)	1, 369 (94)
	Yes	105 (7)	79 (5)
	Unavailable	9 (0.6)	4 (0.3)
Rheumatologic disease, N (%)	No	1,467 (94)	1,332 (92)
	Yes	89 (6)	111 (8)
	Unavailable	5 (0.3)	9 (0.6)
Peptic ulcer disease, N (%)	No	1,493 (96)	1,402 (97)
	Yes	62 (4)	44 (3)
	Unavailable	6 (0.4)	6 (0.4)
Liver disease (moderate-severe), N (%)	No	1,511 (97)	1,389 (96)
	Yes	44 (3)	61 (4)
	Unavailable	6 (0.4)	2 (0.1)
HIV, N (%)	No	1,554 (100)	1,359 (94)
	Yes	7 (0.5)	91 (6)
	Unavailable	0 (0)	2 (0.1)
Dementia, N (%)	No	1,550 (99)	1,446 (100)
	Yes	7 (0.5)	5 (0.3)
	Unavailable	4 (0.3)	1 (0.1)
History of leukemia, N (%)	No	1,554 (100)	1,448 (100)
	Yes	7 (0.5)	3 (0.2)
	Unavailable	0 (0)	1 (0.1)
History of lymphoma, N (%)	No	1,538 (99)	1,444 (100)
	Yes	22 (1)	7 (0.5)
	Unavailable	1 (0.1)	1 (0.1)
History of metastatic cancer, N (%)	No	1,537 (99)	1,434 (99)
	Yes	19 (1)	15 (1)
	Unavailable	5 (0.3)	3 (0.2)

*Time on dialysis calculated for hemodialysis and peritoneal dialysis. Of the 1,911 individual on dialysis at time of study enrollment, 716 (37%) had no time on dialysis information available.

Supplemental Table 2: Difference for inactive time on waitlist with standard deviation

		Years (SD)	P-value
Race	White	1.3 (1.3)	0.001
	Black	1.6 (1.4)	
Socioeconomic Status			
Education	More than HS	1.3 (1.2)	<0.001
	Less than or equal to HS diploma	1.6 (1.4)	
Income	>$50,000 per year	1.3 (1.2)	0.01
	≤$50,000 per year	1.6 (1.4)	
Employment	Employed	1.3 (1.3)	0.03
	Unemployed	1.5 (1.4)	
Comorbidities			
Obese (BMI ≥30 kg/m^2)	Not obese	1.4 (1.2)	0.03
	Obese	1.6 (1.4)	
Tobacco Use	Never smoker	1.5 (1.4)	0.8
	Ever smoker	1.4 (1.2)	
History of myocardial infarction	No	1.4 (1.3)	0.8
	Yes	1.5 (1.3)	
History of congestive heart failure	No	1.4 (1.3)	0.09
	Yes	1.6 (1.3)	
Diabetes,	No	1.3 (1.3)	0.003
	Yes	1.6 (1.4)	
Diabetes with complications	No	1.4 (1.3)	0.09
	Yes	1.6 (1.5)	
Peripheral vascular disease	No	1.4 (1.3)	0.02
	Yes	1.8 (1.4)	
Cerebral vascular disease	No	1.5 (1.3)	0.7
	Yes	1.4 (1.0)	
COPD	No	1.4 (.3)	0.008
	Yes	1.9 (1.8)	
Rheumatologic disease	No	1.4 (1.3)	1.0
	Yes	1.4 (1.2)	
Peptic ulcer disease	No	1.3 (1.3)	0.8
	Yes	1.5 (1.6)	
Liver disease (moderate-severe)	No	1.5 (1.3)	0.2
	Yes	1.1 (1.1)	
HIV	No	1.4 (1.3)	0.8
	Yes	1.5 (1.3)	
Dementia	No	1.4 (1.3)	0.1
	Yes	2.7 (2.3)	
History of leukemia	No	1.4 (1.3)	0.8
	Yes	1.7 (2.4)	
History of lymphoma	No	1.3 (1.3)	0.006
	Yes	2.5 (1.8)	
History of metastatic cancer	No	1.4 (1.3)	0.4
	Yes	1.8 (1.7)	

Supplemental Table 3: Sensitivity analyses testing of mediation of SES and comorbidity on listing for kidney transplant within one year between black versus white kidney failure patients or receipt of kidney transplant between black versus white kidney transplant candidates on the waitlist using inverse odds ratio weighting.

Potential Mediator	Listing for Kidney Transplant		Receipt of Kidney Transplant	
	Adjusted HR (95% CI) associated with black race	Proportion of racial disparity attributed to mediator (95 % CI)‡	Adjusted IRR (95% CI) associated with black race	Proportion of racial disparity attributed to mediator (95 % CI) ‡
Primary Analysis	0.90 (0.83-0.97)	58 (44-85()*	0.88 (0.78-0.99)	4 (-6-68)
Excluding cancer and dementia	0.90 (0.83-0.97)	59 (46-83)*	0.89 (0.78-1.00)	7 (-3-90)
Excluding University of Michigan	0.91 (0.85-0.98)	64 (50-90)*	0.87 (0.78-0.97)	1 (-3-35)
Adjusted for dialysis modality and time on dialysis	0.92 (0.83-1.02)	60 (42-162)*	0.84 (0.74-0.96)	2 (-7-39)
Adjusted for Kidney Allocation System change on 12/4/14	---	---	0.90 (0.81-1.01)	19 (3-135)
Adjusted for donor status	---	---	0.94 (0.84-1.05)	30 (7-314)
Adjusted for year of study	0.89 (0.82-0.97	54 (41-79)*	0.90 (0.80-1.01)	15 (0.1-143)
Multiple imputation chained analysis (MICE)	0.85 (0.78-0.92)	42 (33-58)*	0.89 (0.80-0.99)	11 (0-76)
Candidates listed in first year	---	---	0.88 (0.77-0.998)	10 (-3-96)
Total time on waitlist	---	---	0.87 (0.77-0.97)	2 (-7-48)

The observed disparity (total effect) model is the association of race on outcome without accounting for individual mediator variables. The subsequent models show the residual disparity (direct effect) on the outcome after accounting for mediator(s) listed in the first column.

† Base model adjusted for age, sex, and transplant center. Receipt of kidney transplant is also adjusted for cause of ESRD and ABO status.

‡ The percent (%) attributed to the mediator estimates how much of the observed disparity acts through the mediator and was calculated by {(HR-1)-(HR*-1)}/(HR-1) where HR=observed disparity and HR*=residual disparity. Bootstrap analysis was used to derive standard errors. Mediators of statistical significance (p<0.05) are denoted with an asterisk (*).

Supplemental Table 4: Stratified analysis testing mediation of SES and comorbidity on listing for kidney transplant within one year between black and white kidney failure patients using inverse odds ratio weighting.

| | ≤$50,000 per year | | >$50,000 per year | |
	Adjusted HR (95% CI) associated with black race	Proportion of racial disparity attributed to mediator (95 % CI)‡	Adjusted HR (95% CI) associated with black race	Proportion of racial disparity attributed to mediator (95 % CI)‡
Observed disparity (base model)	0.78 (0.68-0.89)	---	0.84 (0.76-1.01)	---
SES and Comorbidity	0.89 (0.78-1.02)	51 (31-122)*	0.90 (0.78-1.05)	40 (25- -390)

The observed disparity (total effect) model is the association of race on outcome without accounting for individual mediator variables. The subsequent models show the residual disparity (direct effect) on the outcome after accounting for mediator(s) listed in the first column.

† Base model adjusted for age, sex, and transplant center.

‡ The percent (%) attributed to the mediator estimates how much of the observed disparity acts through the mediator and was calculated by {(HR-1)-(HR*-1)}/(HR-1) where HR=observed disparity and HR*=residual disparity.

Bootstrap analysis was used to derive standard errors. Mediators of statistical significance (p<0.05) are denoted with an asterisk (*).