

Supplemental Materials

Patient and Center Level Factors Associated with Required Pre-donation Weight Loss among Obese Living Kidney Donors

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Table of Contents

Name	Title
Supplemental Methods	
Table S1	Transplant centers
Table S2	Preop BMI by decade of donation
Table S3	Pooled model results after multiple imputation

SUPPLEMENTAL METHODS

We chose to complement our analysis with multiple imputation, as data were missing for a large number of medical records contributing to identification of metabolic disease. Multiple imputation using chained equations was implemented to account for missing values under the assumption that data were missing at random. Fifty total datasets were imputed using patient preoperative information (whether required to lose weight, BMI, transplant year, age, race, creatinine, systolic blood pressure, diastolic blood pressure, triglycerides, HDL, elevated fasting blood glucose, hypertension) and transplant center characteristics (percent of kidney donations that were living donor by year, median BMI of living donors by year, and transplant center code). Metabolic disease count was recalculated after imputing component factors. Estimates were pooled using Rubin's Rules.

Table S1. Transplant centers

Characteristic	Required to Lose Weight (N=340)	Not Required to Lose Weight (N=757)	Total (N=1097)	p value
Transplant Center				0.004
ALUA	27 (22.3%)	94 (77.7%)	121 (100.0%)	
CACS	1 (33.3%)	2 (66.7%)	3 (100.0%)	
CAPM	6 (35.3%)	11 (64.7%)	17 (100.0%)	
CASF	10 (52.6%)	9 (47.4%)	19 (100.0%)	
CASH	0 (0.0%)	2 (100.0%)	2 (100.0%)	
CASM	2 (50.0%)	2 (50.0%)	4 (100.0%)	
CAUC	0 (0.0%)	3 (100.0%)	3 (100.0%)	
COUC	6 (50.0%)	6 (50.0%)	12 (100.0%)	
CTYN	9 (56.2%)	7 (43.8%)	16 (100.0%)	
FLJM	5 (38.5%)	8 (61.5%)	13 (100.0%)	
FLTG	8 (40.0%)	12 (60.0%)	20 (100.0%)	
GAEM	18 (50.0%)	18 (50.0%)	36 (100.0%)	
GAPH	4 (25.0%)	12 (75.0%)	16 (100.0%)	
ILUI	6 (23.1%)	20 (76.9%)	26 (100.0%)	
INIM	6 (40.0%)	9 (60.0%)	15 (100.0%)	
LATU	1 (25.0%)	3 (75.0%)	4 (100.0%)	
MAMG	2 (28.6%)	5 (71.4%)	7 (100.0%)	
MDJH	34 (33.7%)	67 (66.3%)	101 (100.0%)	
MDUM	1 (100.0%)	0 (0.0%)	1 (100.0%)	
MIHF	4 (19.0%)	17 (81.0%)	21 (100.0%)	

MISM	5 (29.4%)	12 (70.6%)	17 (100.0%)	
MNHC	4 (16.0%)	21 (84.0%)	25 (100.0%)	
MNMC	22 (27.8%)	57 (72.2%)	79 (100.0%)	
MNUM	21 (38.9%)	33 (61.1%)	54 (100.0%)	
MOBH	7 (35.0%)	13 (65.0%)	20 (100.0%)	
NCDU	3 (21.4%)	11 (78.6%)	14 (100.0%)	
NEUN	6 (35.3%)	11 (64.7%)	17 (100.0%)	
NJSB	13 (31.0%)	29 (69.0%)	42 (100.0%)	
NYCP	7 (31.8%)	15 (68.2%)	22 (100.0%)	
NYMS	9 (34.6%)	17 (65.4%)	26 (100.0%)	
NYNY	0 (0.0%)	2 (100.0%)	2 (100.0%)	
NYWC	0 (0.0%)	3 (100.0%)	3 (100.0%)	
OHCC	8 (30.8%)	18 (69.2%)	26 (100.0%)	
OHOU	12 (21.4%)	44 (78.6%)	56 (100.0%)	
OHTC	4 (66.7%)	2 (33.3%)	6 (100.0%)	
OHUC	3 (33.3%)	6 (66.7%)	9 (100.0%)	
OHUH	2 (50.0%)	2 (50.0%)	4 (100.0%)	
ORGS	0 (0.0%)	1 (100.0%)	1 (100.0%)	
ORUO	1 (7.7%)	12 (92.3%)	13 (100.0%)	
PAHE	0 (0.0%)	1 (100.0%)	1 (100.0%)	
PAPT	6 (31.6%)	13 (68.4%)	19 (100.0%)	
PAUP	1 (100.0%)	0 (0.0%)	1 (100.0%)	
TNVU	11 (29.7%)	26 (70.3%)	37 (100.0%)	
TXHS	15 (17.6%)	70 (82.4%)	85 (100.0%)	

TXMH	9 (81.8%)	2 (18.2%)	11 (100.0%)	
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TXSP	1 (100.0%)	0 (0.0%)	1 (100.0%)	
TXTX	1 (33.3%)	2 (66.7%)	3 (100.0%)	
VAFH	5 (41.7%)	7 (58.3%)	12 (100.0%)	
VAHD	1 (100.0%)	0 (0.0%)	1 (100.0%)	
VANG	4 (66.7%)	2 (33.3%)	6 (100.0%)	
VAUV	1 (25.0%)	3 (75.0%)	4 (100.0%)	
WISL	1 (100.0%)	0 (0.0%)	1 (100.0%)	
WIUW	7 (31.8%)	15 (68.2%)	22 (100.0%)	

Table S2. Preop BMI by decade of donation

		Required to Lose Weight		Not Required to Lose Weight	
Transplant Decade	N total	Preop BMI [Mean kg/m ² (SD)] (N=340)	p-value	Preop BMI [Mean kg/m ² (SD)] (N=1097)	p-value
			0.20		0.13
1979 – 1989	7	30.8 (-)		33.2 (1.9)	
1990 – 1999	74	33.5 (2.0)		32.9 (2.8)	
2000 – 2009	540	34.0 (3.3)		32.9 (2.9)	
>=2010	476	33.4 (2.8)		32.4 (2.1)	

Table S3. Pooled model results after multiple imputation

	Were required to lose weight prior to their donation, OR (95% CI)	P
Transplant Year	1.05 (1.03, 1.08)	<0.001
Age	1.00 (0.99, 1.02)	0.65
Race		
(White)	1.0	
(Black/African American)	0.83 (0.53, 1.31)	0.43
(Asian/Pacific Islander)	0.63 (0.18, 2.12)	0.45
(American Indian/Alaskan Native)	0.86 (0.06, 12.46)	0.91
(Other)	1.21 (0.59, 2.44)	0.60
Gender (Female)	0.97 (0.69, 1.37)	0.86
Percentage of Living Donations	0.99 (0.98, 1.00)	<0.05
Creatinine	1.02 (0.44, 2.35)	0.97
BMI	1.14 (1.08, 1.21)	<0.001
Median BMI of Center Living Donors		
20 - 25	1.0	
25 – 30]	0.82 (0.38, 1.79)	0.63
30 - 37]	0.51 (0.10, 2.78)	0.44
Metabolic Disease Count	0.93 (0.78, 1.10)	0.40
History of Hypertension	1.62 (1.00, 2.65)	0.05
n	1097	