Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Lentine KL, Schnitzler MA, Xiao H, et al. Racial variation in medical outcomes among living kidney donors. N Engl J Med 2010;363:724-32.

SUPPLEMENTARY APPENDIX

METHODS: ADDITIONAL INFORMATION

Outcome Measures

The International Classification of Disease, Ninth Revision, Clinical Modification (ICD-9-CM) diagnosis codes used to define medical diagnoses in billing claims data were as follows:

Diagnosis	ICD-9-CM Diagnosis Codes
Hypertension	401–405, 362.11
Diabetes mellitus	250, 357.2, 362.0, 366.41, 648.0
Chronic kidney disease (CKD)	585
CKD stages 3 to 5 or ESRD (CKD with dialysis)	585.3–585.6
Cardiovascular disease composite	
Coronary artery disease	414
Myocardial infarction	410.x
Angina	411, 413
Heart failure	398.91, 422, 425, 428, 402.x1, 404.x1, 404.x3, V42.1
Stroke/transient ischemic attack	433–435

Baseline Demographic Variables

Body mass index was reported to the OPTN for 5.3% of the linked donors and so was inadequate for inclusion in analytic models.

An index of neighborhood socioeconomic status (SES) was computed from U.S. Census block-group data linked by ZIP code at nephrectomy according to the Agency for Healthcare Research and Quality (AHRQ)[1] as = 50 + (0.11*median household income score) + (0.08*median property value score) + (-0.10*% below federal poverty line) + (-0.08*% unemployed) + (0.10*% college graduate) + (-0.11*% education <12th grade) + (-0.07*% crowded household). Possible SES

index values range from 0 to 100, with higher values representing higher SES levels. The individual SES indicators included in the index are defined as follows:

SES Indicator	Definition
Income score	Median household income, standardized to range from 0 to 100
Property value score	Median value of owner-occupied property values, standardized to range from 0 to 100
% Below federal poverty line	Percentage of persons below the federally defined poverty line
% Unemployed	Percentage of persons aged 16 years or older in the labor force who are unemployed (and actively seeking work)
% College graduate	Percentage of persons aged $\geq$ 25 years with at least 4 years of college
% Education <12th grade	Percentage of persons aged $\geq$ 25 years with less than a 12th-grade education
% Crowded household	Percentage of households containing one or more person per room

ZIP Code and corresponding Census block-group at donor nephrectomy were available for 3,385 living kidney donors (72.8% of the study sample) who donated in 1995 or later. SES measures according to block-group for these donors were drawn from the 2000 U.S. Census.

Comparison Data for General Population Comorbidity Prevalence

NHANES is a nationally representative health examination study of the U.S. civilian, non-institutionalized population.[2] Race and ethnicity information in NHANES was self-reported. Black Americans and Hispanic Americans of Mexican Ancestry were over-sampled in NHANES 2005–2006 to increase the precision of health information gathered among these minority groups. Unequal selection probabilities and response rates across demographic subgroups in NHANES were adjusted using SAS Proc Surveylogistic.

In the NHANES survey, diagnosed diabetes was defined as participant response of "yes" to the question, "Other than during pregnancy, have you ever been told by a doctor or other health professional that you have diabetes or sugar diabetes?" Diagnosed hypertension was defined as participant response of "yes" to the question, "Were you told on two or more visits that you had hypertension, also called high blood pressure?" Diagnosed CKD was defined as an affirmative response to the question, "Were you ever told you had weak or failing kidneys?" Diagnosed cardiovascular disease was defined as an affirmative response for a history of coronary artery disease, angina, congestive heart failure, heart attack or stroke. These definitions were chosen to estimate the prevalence of diagnosed conditions.

Statistical Analyses

When prevalences are low in a Cox regression model, cumulative hazards and prevalences are approximately equal.

REFERENCES

1. Agency for Healthcare Research and Quality. Creating and Validating an Index of Socioeconomic Status. (Accessed June 28, 1010 at http://www.ahrq.gov/qual/medicareindicators/medicareindicators 3.htm.)

2. National Health and Nutrition Examination Survey. Questionnaires, Datasets and Related Documentation. (Accessed June 28, 1010 at http://www.cdc.gov/nchs/nhanes/nhanes2005-2006/nhanes05_06.htm.)