Item 1. Additional information about methods

A) Outcome assessment: Mortality

Mortality was ascertained by either the dialysis provider or the OPTN. Per provider policy, direct contact by a staff member with the patient or surrogate is made in the event of missed dialysis treatments and there is periodic review of death certificates.[1] The OPTN collects information on mortality from transplant center reporting as well as via linkage to third party registries including the Social Security Death Master file. Wait-listing and kidney transplantation events were ascertained from the OPTN dataset.

B) Covariate assessment

1) Pre-observation dialysis exposure was calculated using the earliest dialysis date provided (the date the patient commenced dialysis treatments either with DaVita or another provider, whichever was earlier). Body mass index (kg/m2) was calculated using the mean of the first 6 post-dialysis weights recorded, but was not consistently available for peritoneal dialysis patients and was only used in secondary analyses.

2) Income quintile: We derived socioeconomic status using dialysis center zip codes. Median household income was estimated using zip codes and 2010 United States census data adjusted for 2014 dollars and categorized into quintiles.[2,3]

3) Laboratory data from dialysis provider: For the analyses of survival on dialysis and time to waitlist registration, we selected the value closest to (but less than 6 months from) the dialysis start date. For the analysis of time to transplantation and survival benefit, we selected the value closest in time to (but within 3 months of) the wait-listing date.

4) Liver disease severity (supplemental analyses)

When sufficient laboratory data were available, we calculated the FIB-4 index, which is derived from laboratory values and highly associated with severity of liver fibrosis. FIB-4 is calculated using aspartate

aminotransferase (AST), alanine aminotransferase (ALT), platelet count, and age: (age [years] x AST [U/L])/((platelet count [109/L]) x (ALT [U/L])1/2). A FIB-4 >3.25 identifies advanced hepatic fibrosis/cirrhosis (METAVIR stages F3 or F4) and FIB-4 <1.45 identifies no/minimal liver fibrosis with a high degree of accuracy in patients with chronic HCV.[4]

5) Patient willingness to accept kidneys from HCV-seropositive donor (secondary analysis)

HCV seropositive candidates have the option to opt-in to receive offers of kidney transplants from HCV-seropositive donor (HCV antibody positive, nucleic acid test positive, or both); this decision is recorded in the OPTN dataset. In this secondary analysis, we adjusted for each candidate's record of having opted in for HCV-seropositive offers (yes/no).

6) Geographical variation in overall waiting time for transplantation (secondary analysis)

We performed secondary analyses for the outcome of kidney transplantation in which we accounted for geographic variation in organ availability by adjusting for donor service area (DSA) waiting time. DSAs are geographic regions served by an organ procurement organization and within which organs are often allocated preferentially. We categorized DSAs according to tertiles of waiting time for transplantation (short, medium. long). This categorization used wait-time accumulated by all candidates listed for kidney transplantation from 2004-2014 in the OPTN dataset.

C) <u>Calculation of time to outcomes</u>

1) For the outcome of mortality while receiving chronic dialysis, survival time was calculated among the entire cohort.

2) For the outcome of waitlisting, we calculated median time to the outcome only among those who were listed.

3) For the outcome of transplantation, we calculated median time to the outcome only among those who achieved transplantation.

D) <u>Missing data</u>

All outcomes were analyzed as a complete case analysis. In secondary analyses, we addressed missing data with multiple imputation using chained equations to impute 10 datasets.[5] For the main multivariable-adjusted Cox models, the reported results represent an average of the imputed results across the datasets; the standard error accounted for uncertainty across the missing data.

References

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