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The graft and patient survival of kidney transplantation according to ethnicity in US Kidney Transplant Recipients

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Objectives: African American kidney transplant recipients experience disproportionately high rates of graft loss. The aim of this analysis was to use a UNOS data set that contains detailed baseline and longitudinal clinical data to establish and quantify the impact of the current overall graft loss definition on suppressing the true disparity magnitude in US AA kidney transplant outcomes.

Methods: Longitudinal cohort study of kidney transplant recipients using a data set created by United Network for Organ Sharing (UNOS), including 266,128 (African American 70,215, Non-African American 195,913) transplant patient between 1987 and December 2016. Multivariable analysis was conducted using 2-stage joint modeling of random and fixed effects of longitudinal data (linear mixed model) with time to event outcomes (Cox regression).

Results: 195,913 non-African American (AA) (73.6%) were compared with 70,215 AA (26.4%) recipients. 10-year-graft survival of AA in all era is lower than that of non-AA (31% in deceased kidney transplants (DKT) AA recipient and 42% in living kidney transplantation (LKT) non-AA recipient). 10-year-patient survival of AA with functioning graft in all era is similar that of non-AA. Multivariate Cox regression of factors associated with patient survival with functioning graft are acute rejection within 6 months, DM, hypertension and etc. Pre-transplant recipient BMI in AA show the trend as a protective factor in patient survival with functioning graft although not significantly in statistics

Conclusions: African American kidney transplant recipients experience a substantial disparity in graft loss, but not patient death with functioning graft.