

Younger black patients undergoing dialysis have higher risk of death compared to white patients

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Even though overall black patients have a lower risk of death while receiving dialysis than white patients, this applies primarily to older adults, as black patients younger than 50 years of age have a significantly higher risk of death, according to a study in the August 10 issue of *JAMA*.

"Of more than 500,000 individuals with end-stage renal disease (ESRD) in the United States, approximately one-third are black, and the relative incidence of ESRD is 3.6 times higher among black than white patients. Moreover, racial disparities in quality of and access to care for patients with kidney disease are well-documented. Compared with white patients, fewer black patients with [chronic kidney disease](#) (CKD) are under the care of a [nephrologist](#), and their rates of referral for [peritoneal dialysis](#) and [kidney transplantation](#) are significantly lower," according to background information in the article. Also, black patients who receive dialysis are less likely to receive an adequate dialysis dose and achieve [target hemoglobin levels](#), metrics associated with decreased dialysis survival.

"Despite the disparity in care, current thinking, supported by more than 30 previous studies, is that black patients receiving dialysis survive longer than their white counterparts," the authors write. "This observation is paradoxical given racial disparities in access to and quality of care, and is inconsistent with observed lower survival among black

patients with chronic kidney disease."

Lauren M. Kucirka, Sc.M., of the Johns Hopkins University School of Medicine, Baltimore, and colleagues conducted a study to examine if age is an effect modifier of the [racial disparities](#) seen in dialysis survival, and whether differential rates of kidney transplantation modify the risk of death in [dialysis patients](#). The study included data on 1,330,007 incident end-stage renal disease patients, as captured in the United States [Renal Data System](#) between January 1995 and September 2009 (median [midpoint] potential follow-up time, 6.7 years).

An analysis of the data indicated that overall, black patients had a lower rate of death while receiving dialysis. Of new ESRD patients of all ages entering the study, 57.1 percent of black and 63.5 percent of white patients died as dialysis recipients. Also, 9.1 percent of black and 12.4 percent of white patients received kidney transplants, with 25.7 percent of transplants in black patients provided from live donors compared with 42.8 percent in white patients.

However, the researchers found, the relationships between race, dialysis survival, and transplantation were substantially modified by patient age, with opposite inferences in the younger age groups. When stratifying by age and treating kidney transplantation as a competing risk, black patients had significantly higher mortality than their white counterparts at ages 18 to 50 years (nearly twice the risk of death for ages 18-30), as opposed to patients ages 51 years and older.

"... the demonstration of significant age-based effect modification of the racial differences in dialysis survival is novel, challenging conventional wisdom and identifying a significant disparity among younger black patients that needs to be addressed," the authors write.

They add that the methods used in this study allow them to infer that

"the 2-fold increased hazard of death on dialysis in younger black patients is composed of 2 distinct components: one of differential rates of transplantation and one of biology (or some interaction between biology and socioeconomic factors). Blacks are much less likely to receive a transplant from a live donor; as such interventions to reduce transplant disparities should prioritize the improvement of live donation rates for blacks."

"Determining why younger black patients are at increased risk of death as dialysis recipients is critical in order to improve clinical decision making and inform policies aimed at achieving equity in ESRD care," the researchers conclude.

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