

## TRANSPLANTATION

**Risk of graft loss in adolescent kidney allograft recipients**

A retrospective analysis of 168,809 primary renal transplant recipients has found that adolescent kidney transplant recipients have the highest risk of graft loss among recipients aged up to 55 years. “The realization that this age group is at an increased risk of graft loss as they are becoming young adults should prompt providers to give specialized care and attention to these adolescents in the transition from [paediatric] to adult-focused care,” explain the researchers.

To define the age at which renal transplant recipients are at greatest risk of graft loss and to examine the factors that affect graft loss, Kenneth Andreoni and colleagues used data from the Organ Procurement and Transplantation Network to assess graft outcomes among first recipients of a renal allograft transplanted between 1987 and 2010. “Like other transplant professionals, we see compliance as being a real challenge in the paediatric and in the young-adult population,” says Andreoni. “We wanted a more granular look at the age of patients

who are most at risk of graft loss so that we could focus on improved tools to help this patient group.”

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The researchers found that adolescent kidney transplant recipients aged 14 to 16 years at the time of transplantation had the highest risk of graft loss. This increased risk started at 1 year after transplantation and increased at 3, 5 and 10 years. Two variables—donor type (living versus deceased) and insurance type (government versus private)—interacted significantly with outcomes at age of transplant. Over a median follow-up of 5 years, the risk of death among 14-year-old allograft recipients was 175% greater in the deceased donor–government insurance group than in the living donor–private insurance group. By contrast, the

risk of death was similar between the living donor–government insurance and deceased donor–private insurance groups.

Ethnicity also influenced the risk of graft failure; black recipients had a significantly higher risk of graft failure than white recipients (HR 1.72 for death-censored graft failure [95% CI 1.68–1.75]). The highest performing group of 14–16-year-old black recipients (living donor–private insurance) had worse outcomes than the lowest performing non-black group (deceased donor–government insurance). “The fact that black adolescents had inferior graft outcomes compared to non-blacks was known, but the degree of difference by donor type and insurance group has not previously been appreciated,” states Andreoni.

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