

INTRODUCTION

- ❖ Kidney transplantation (KTx) is the most common solid organ transplant performed in children and is the optimal treatment for end-stage renal disease.
- ❖ Despite high survival rates following pediatric KTx, long term graft survival is poor, especially in minority populations.
- ❖ Obtaining follow-up care outside of a transplant center may contribute to worse long-term graft outcomes and fragmentation of care.

AIMS

- ❖ Are minority status, socioeconomic status, or other factors associated with increased likelihood of follow-up outside a transplant center among pediatric KTx patients?
- ❖ Is obtaining follow-up care at a non-transplant center associated with worse long-term graft survival?

MATERIALS & METHODS

- ❖ This study used data on pediatric patients (n=10,293) in the United Network for Organ Sharing (UNOS) who underwent KTx between 2003 and 2018 in the United States.
- ❖ Covariates included age, sex, race/ethnicity, insurance coverage, state population density, primary indication for transplant, pretransplant dialysis, time on waitlist, donor type, and year of transplant.
- ❖ Cox proportional hazards models of transferring care outside of a transplant center and of death or graft failure were used to assess the risk for these outcomes.
- ❖ The Cox model of death or graft failure assessed the change in hazard of this outcome after earliest reported follow-up outside a transplant center.

RESULTS

Table 1. Factors associated with increased hazard of follow-up care outside of a transplant center.^b

Variable	HR	95% CI	P
Medicare (Ref: Private)	1.20	1.07, 1.34	0.001
Age	1.03	1.02, 1.04	<0.001

CI, confidence interval; HR, hazard ratio; Ref., Reference; P, significance level (p<0.05)
^bAll other study covariates were included in this model, but are not shown.

Table 2. Factors associated with increased hazard of death or graft failure.^b

Variable	HR	95% CI	P
Follow-up outside a transplant center	1.10	1.004, 1.21	0.041
Medicare (Ref: Private)	1.25	1.14, 1.38	<0.001
African American race (Ref: White)	1.81	1.65, 2.00	<0.001
Female sex (Ref: male)	1.23	1.16, 1.35	<0.001
Pretransplant dialysis	1.11	1.01, 1.22	0.026

CI, confidence interval; HR, hazard ratio; Ref., Reference; P, significance level (p<0.05)
^bAll other study covariates were included in this model, but are not shown.

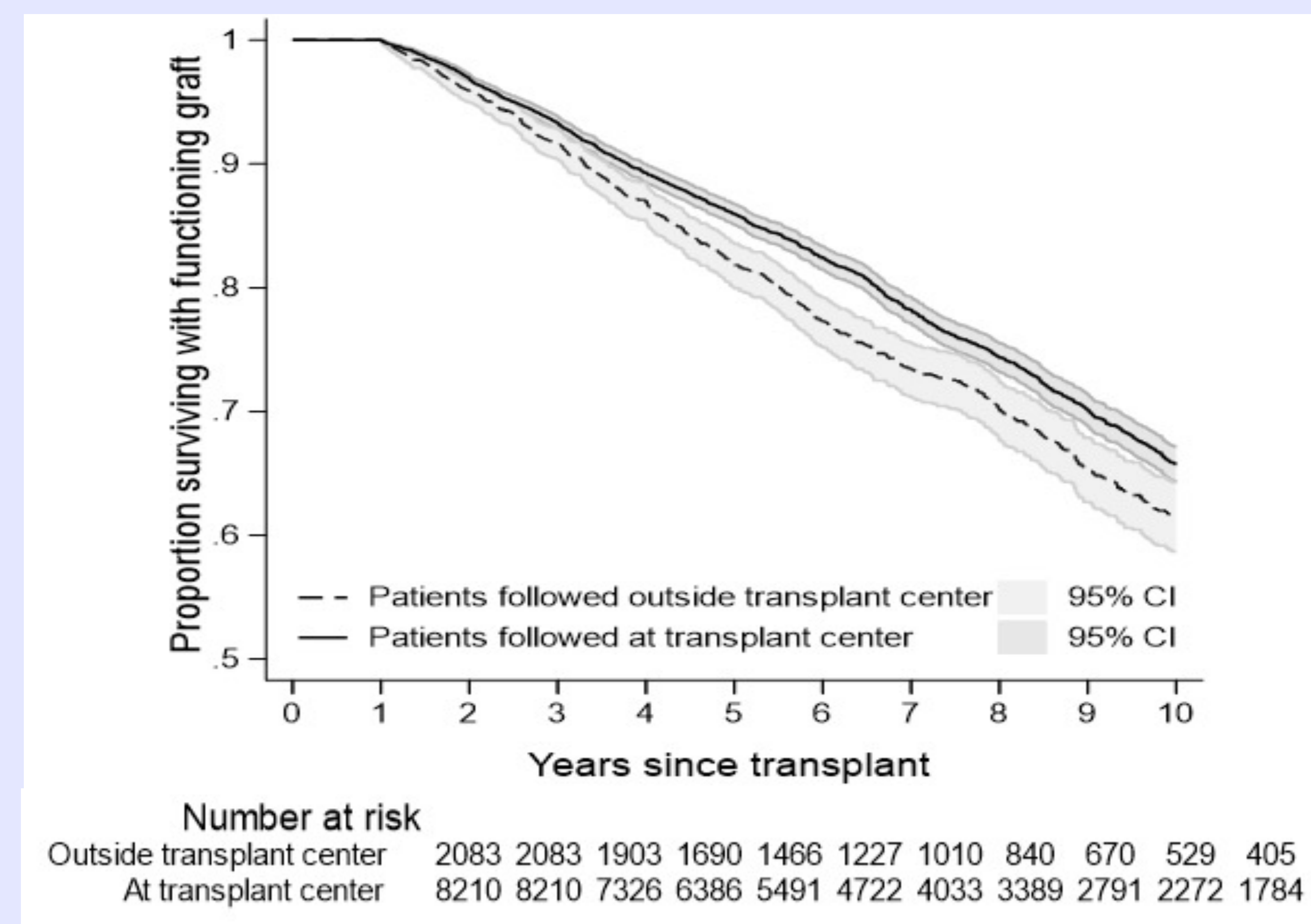


Figure 1. A log-rank test of Kaplan-Meier curves confirmed lower survival among patients followed outside of a transplant center at any point after transplant (p<0.001).

CONCLUSIONS

- ❖ Follow-up care outside of a transplant center was associated with a 10% increased hazard of death or graft failure (Table 2).
- ❖ Minority status and socioeconomic factors were not associated with increased likelihood of follow-up outside a transplant center.
- ❖ African American patients experienced 81% increased hazard of death or graft failure regardless of follow-up location (Table 2).
- ❖ Patients using Medicare at the time of transplant had a 20% increased hazard of receiving follow-up care outside of a transplant center and 25% increased hazard of death or graft failure (Table 1).

FUTURE WORK

- ❖ Further work should focus on understanding why African American KTx patients experience worse outcomes even when receiving follow-up care at a transplant center, and to educate providers on these disparities.
- ❖ Additionally, future work should examine other measures of socioeconomic status including household income, parental education, and zip code of residence
- ❖ Finally, we recommend that transplant centers work toward improving continuity of care and increasing communication with outside clinics to ease transitions of care during the post-transplant period.

REFERENCES

1. Kaspar C, Bholah R, Bunchman TE. A review of pediatric chronic kidney disease. *Blood Purif*. 2016;41(1-3):211-217.
2. Patzer RE, Mohan S, Kutner N, McClellan WM, Amaral S. Racial and ethnic disparities in pediatric renal allograft survival in the United States. *Kidney Int*. 2015;87(3):584-592. doi: 10.1038/ki.2014.345 [doi].
3. Francis A, Johnson DW, Melk A, et al. Survival after kidney transplantation during childhood and adolescence. *Clin J Am Soc Nephrol*. 2020;15(3):392-400. doi: 10.2215/CJN.07070619 [doi].
4. Gill JS, Wright AJ, Delmonico FL, Newell KA. Towards improving the transfer of care of kidney transplant recipients. *Am J Transplant*. 2017;17(1):54-59. doi: 10.1111/ajt.13997 [doi].