

Transplant Candidacy for Persons Living with HIV and End-Stage Renal Disease at MUSC

Kyle Crawford, MS3; Ruth O. Adekunle, MD, MSCR
Medical University of South Carolina, Division of Infectious Diseases

Introduction

- Persons Living with HIV (PLWH) and chronic kidney disease progress to end-stage renal disease (ESRD) at a faster rate than HIV-negative individuals.¹
- Unfortunately, there is increasing data to suggest that PLWH are less likely to be waitlisted, despite improved survival after transplant compared to dialysis.^{1,2}
- We reviewed the transplant care continuum among PLWH at the Medical University of South Carolina (MUSC)
- Study Aim: To identify and better understand barriers to kidney transplant in PLWH

Methods

- A retrospective review of PLWH and ESRD who either received care at MUSC Health Care System or were referred for kidney transplant at MUSC between May 1, 2012 and December 31, 2021
- Descriptive statistics were used to analyze demographic and clinical characteristics as well as the transplant care continuum of PLWH and ESRD at MUSC
 - 57 patients met these criteria
 - 45 of these patients were referred for transplant

Conclusions

- The majority (82%) of PLWH with ESRD who were referred for kidney transplant at MUSC started the evaluation process.
- Almost half (49%) of patients were successfully waitlisted for transplant.
- Further interventions are needed to increase access to transplant

Results

Table 1. Basic demographic and HIV-related characteristics of the 45 HIV patients with ESRD who were referred to kidney transplant at MUSC

Age at referral, years, median (range)	52 (26-78)
Male, n (%)	33 (73)
Black race, n (%)	42 (93)
CD4 count at time of evaluation, median (range)	433 (35-996)
Unknown CD4 count, n (%)	4 (9)
Required a change in ARV regimen to accommodate transplant, n (%)	7 (16)
Unknown if change in ARV needed, n (%)	12 (27)

Figure 2. Prevalence of Comorbidities in the Referred Population

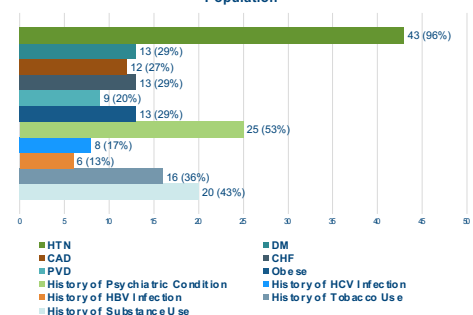


Table 2. Median time in years for the 45 referred patients between starting dialysis and...

Referral (n=38) (range)	3 (0-19)
Starting Transplant Evaluation (n=32) (range)	3 (0-19)
Waitlisting for Transplant (n=19) (range)	5 (0-20)
Transplant (n=13) (range)	7 (1-14)

Figure 1. Common Causes of ESRD within the Referred Population

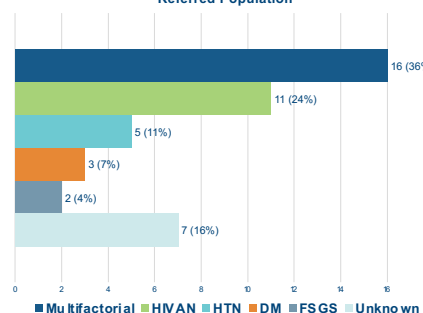


Figure 3. Patient Attrition throughout the Referral Process

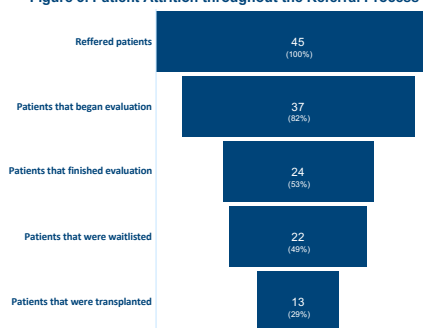


Figure 4. Common Reasons Patients Failed to Complete Transplant Evaluation

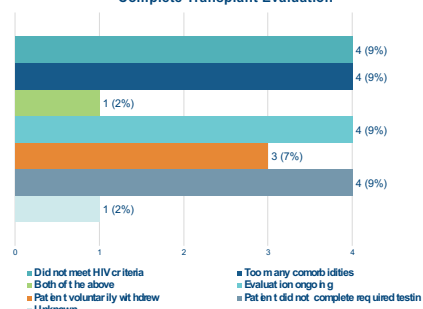


Figure Notes

- Table 1: The population represented by this study is largely male and black. This is likely due to the increased prevalence of HIV in these population. Those of the black race are 4x more likely to develop ESRD as compared to Caucasians and males are 1.5x more likely to develop ESRD as compared to females.^{3,4}
- Figure 1: 15 of the 45 referred patients (33%) received a kidney biopsy
- Figure 3: Of the patients who did not complete evaluation, 8 (18%) were later re-evaluated for transplant
- Table 2: Only 38 of the 45 referred patients are represented on this table because dialysis had not been started before referral or a dialysis start date could not be found

Future Directions

- Create a matched cohort with HIV-negative individual to better understand if there are disparities in access to kidney transplantation among the two populations.
- Perform qualitative interviews with PLWH engaged in the transplant process to learn about their understanding of kidney transplant and transplant options, experience with the transplant process, and challenges they faced surrounding transplantation.

References

- Locke JE, Mehta S, Sawinski D, et al. Access to kidney transplantation among HIV-infected waitlist candidates. *Clinical Journal of the American Society of Nephrology: Clin J Am Soc Nephrol*. 2017;12(3):467-475. doi: 10.2215/CJN.074607.16.
- Malat GE, Boyle SM, Jindal RM, et al. Kidney transplantation in HIV-positive patients: A single-center, 18-year experience. *Am J Kidney Dis*. 2019;73(1):112-118. doi: 10.1053/j.ajkd.2018.02.352.
- Boyle SM, Lee DH, Wyatt CM. HIV in the dialysis population: Current issues and future directions. *Semin Dial*. 2017;30(5):430-437. doi: 10.1111/sdi.12615.
- Nitsch D, Grams M, Sang Y, et al. Associations of estimated glomerular filtration rate and albuminuria with mortality and renal failure by sex: a meta-analysis. *BMJ (Online)*. 2013;346(jan29 1):b2392-f324. doi:10.1136/bmj.f324