

# Continued use of Transfusion in the Transplant Waitlist Population, Even Among Non- Sensitized Candidates.

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**United States Renal Data System**

USRDS

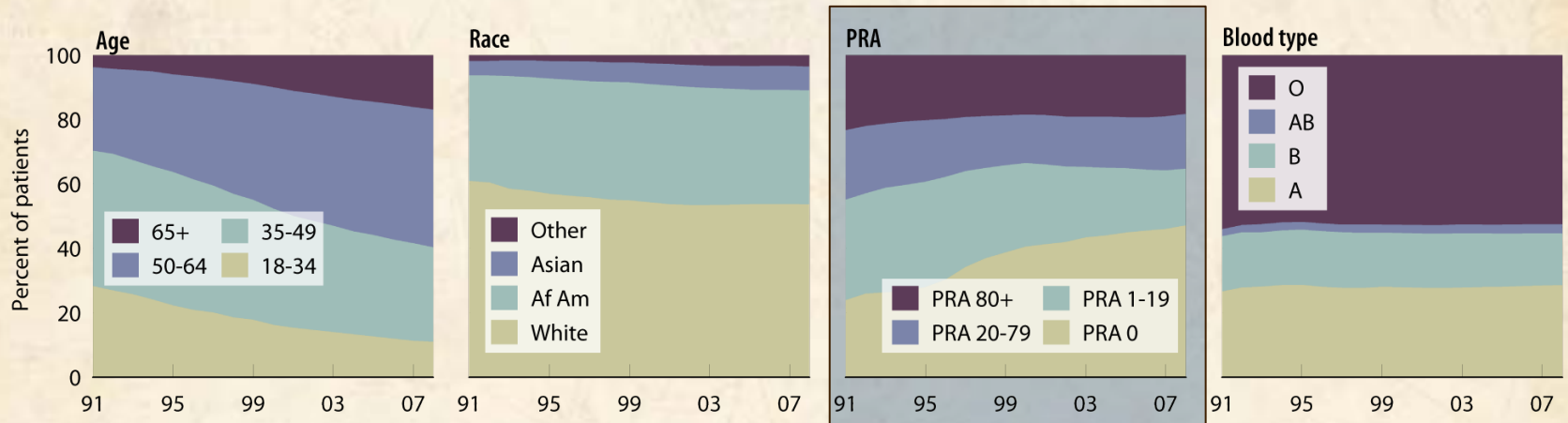
## **Background & Motivation**

- **Sensitized patients spend more time on the kidney transplant waiting list than do non-sensitized patients.**
- **Exposure to blood products via transfusion may result in sensitization, thereby increasing the likelihood of a prolonged waiting time.**
- **We explored the 3-year cumulative incidence of transfusion, stratified by PRA at the time of listing, to see if transfusions were used more sparingly in non-sensitized patients.**



# Distribution of wait-listed patients, by age, race, PRA, & blood type

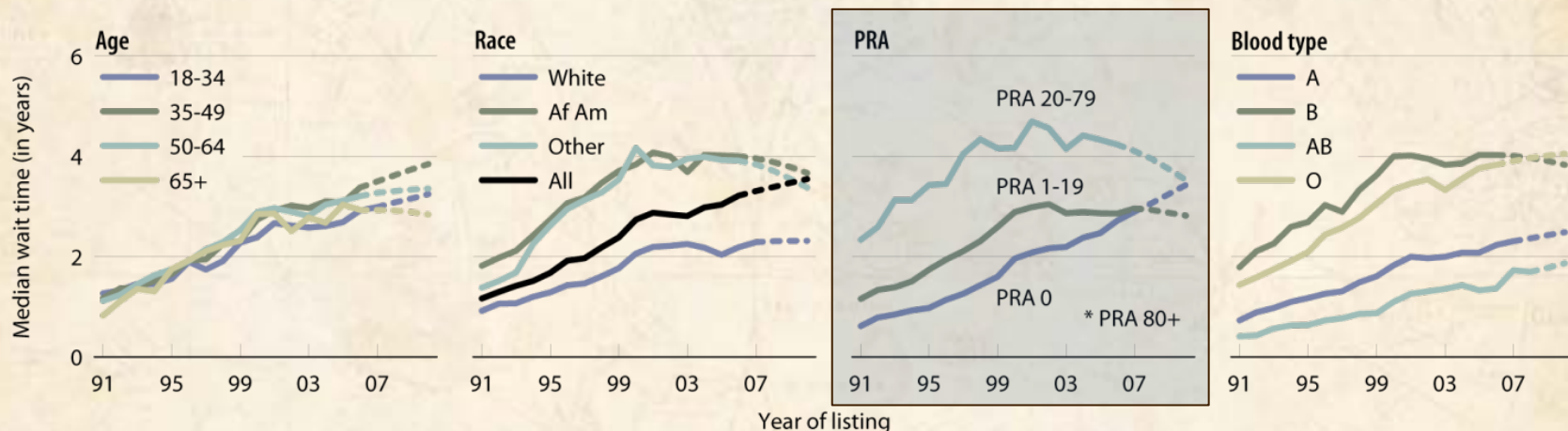
Figure 7.4 (Volume 2)



Patients age 18 & older listed for a kidney or kidney-pancreas transplant on December 31 of each year.

# Observed & projected median wait times by year of listing, overall & by age, race, PRA, & blood type

Figure 7.5 (Volume 2; dashed lines show projected times)



Patients age 18 & older listed for a first-time, kidney-only transplant in the given year; estimates for PRA of 80 & above are unstable & are therefore omitted.

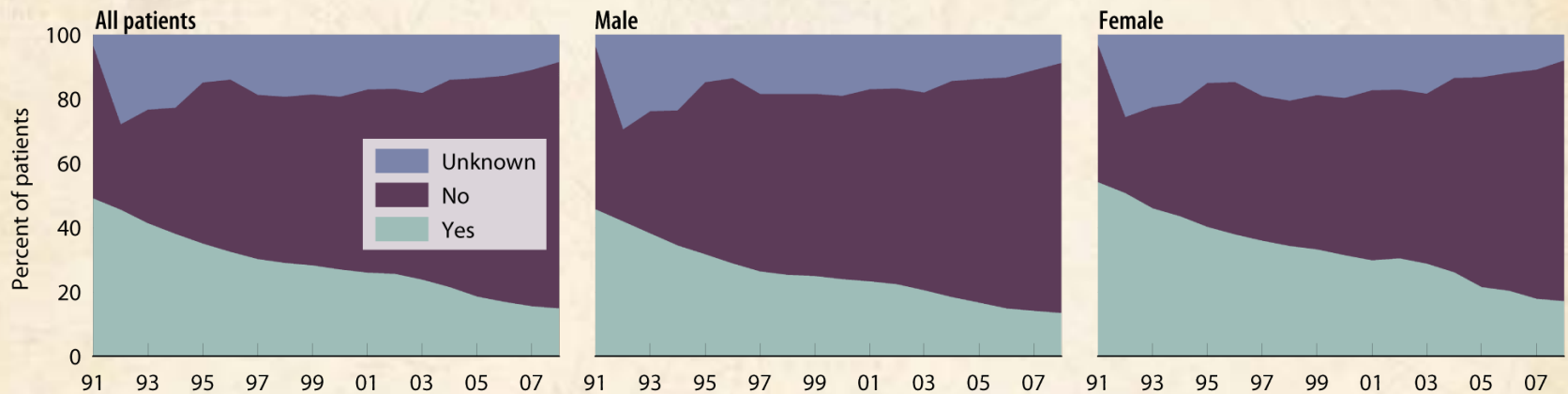


# Population & Methods

- We used USRDS data to define a cohort of adult, ESRD-certified waitlist patients, first listed from 1991-2006, whose primary payer was Medicare (N=110,669).
- We examined pre-listing report of transfusion on the OPTN Transplant Candidate Registration OPTN.
- We examined Medicare inpatient and outpatient claims for evidence of transfusion in the first three years after listing. Using Kaplan-Meier methods, we estimated 3-year cumulative incidence of transfusion, stratified by PRA at the time of listing, with censoring at de-listing, death, and transplant.

# Pre-transplant transfusion status of transplanted patients, by gender

Figure 7.46 (Volume 2)

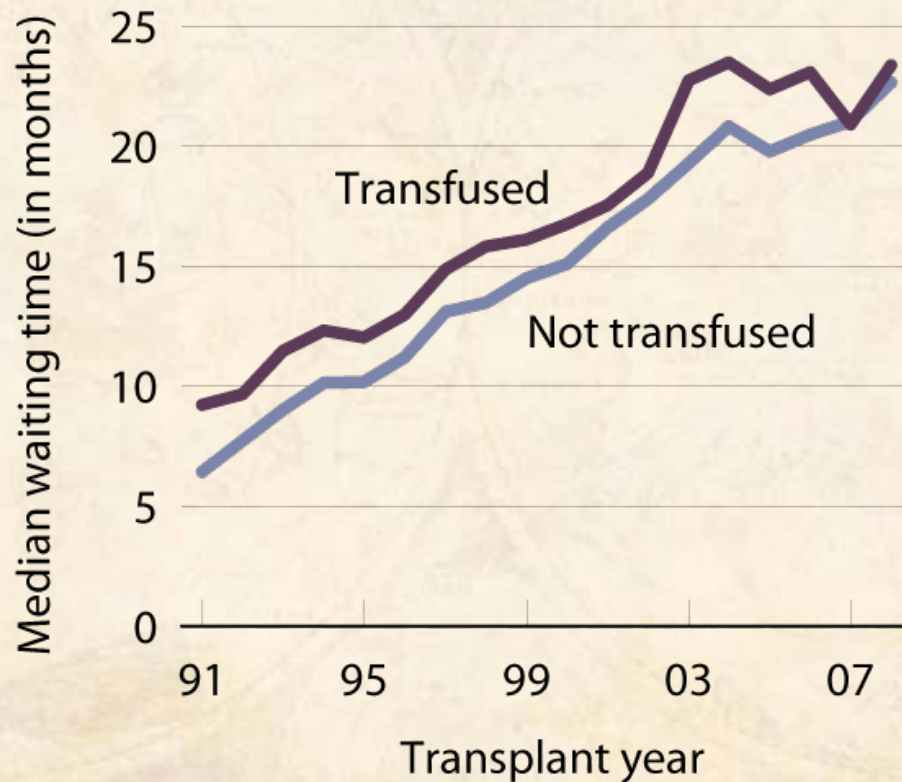


Patients age 18 & older receiving a first-time, kidney-only transplant recipient.



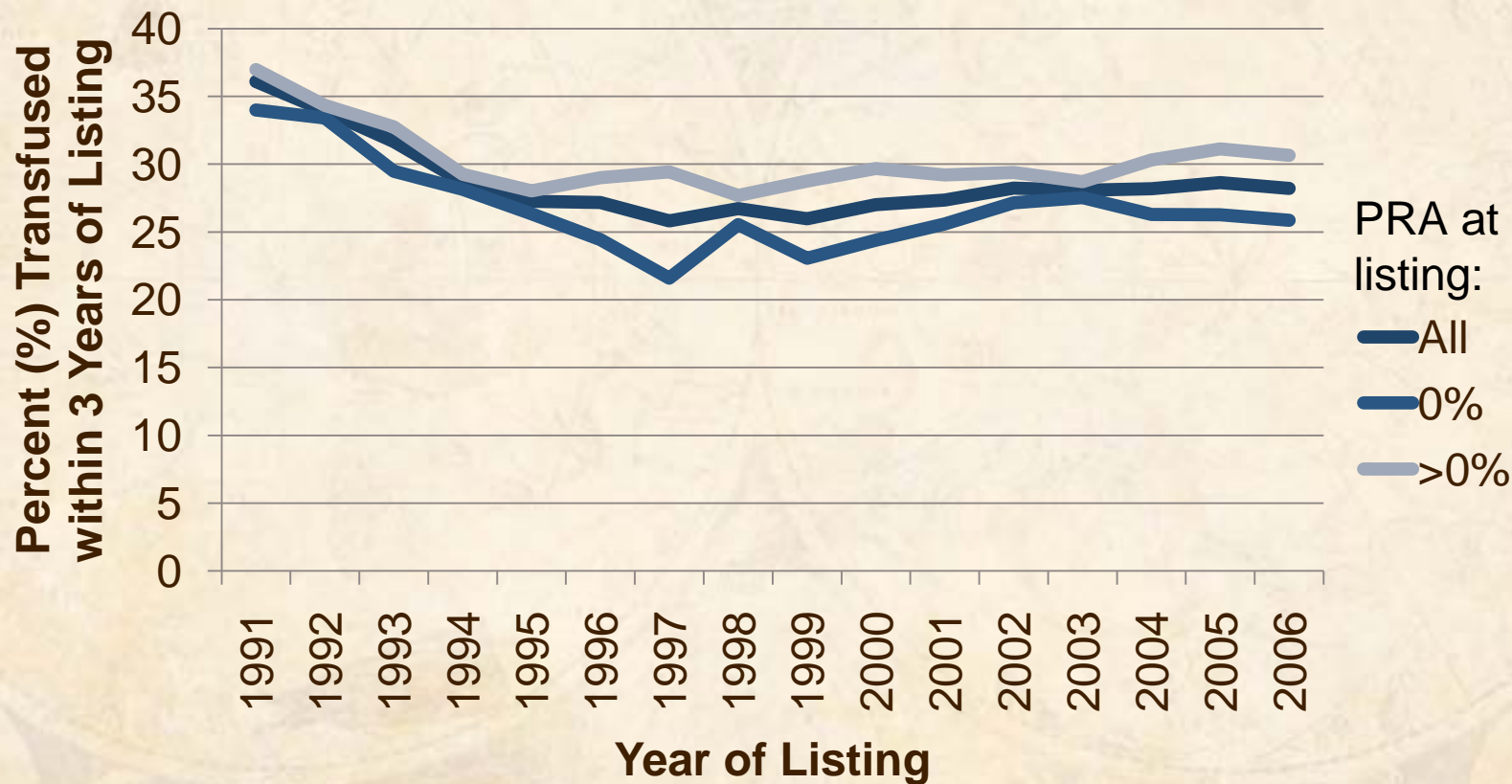
# Median waiting time, by pre-listing transfusion status

Figure 7.47 (Volume 2)



Patients age 18 & older  
receiving a first-time,  
kidney-only, deceased  
donor transplant.

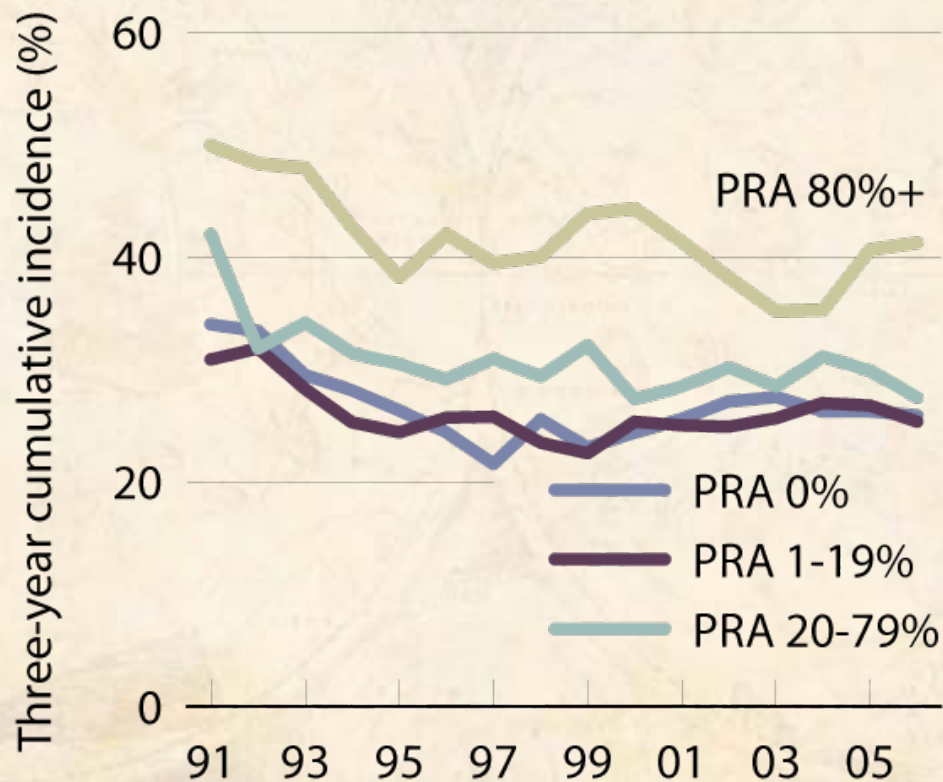
# Three-year cumulative incidence of transfusions in wait-listed patients, by PRA at listing.





# Three-year cumulative incidence of transfusion in wait-listed patients, by PRA at listing.

Figure 7.48 (Volume 2)



Patients age 18 & older with Medicare primary coverage & listed for a kidney transplant in the given year.

# Relationship between Transfusion and Outcomes on the Waiting List

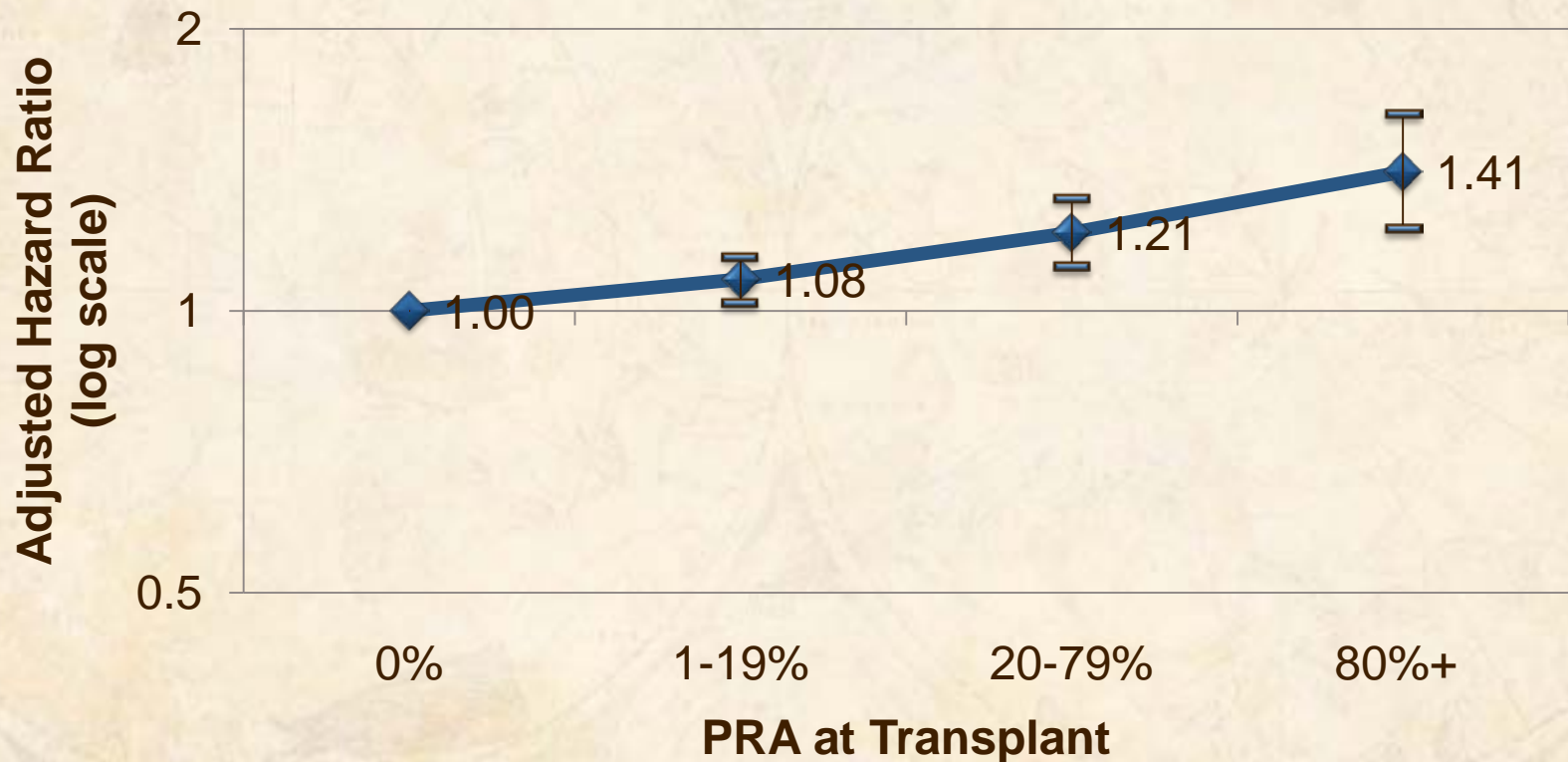


Ibrahim HA, et. al. Blood Transfusions in Kidney Transplant Candidates Are Common and Associated With Adverse Outcomes, *Clinical Transplantation*, in press.

ASN 2010



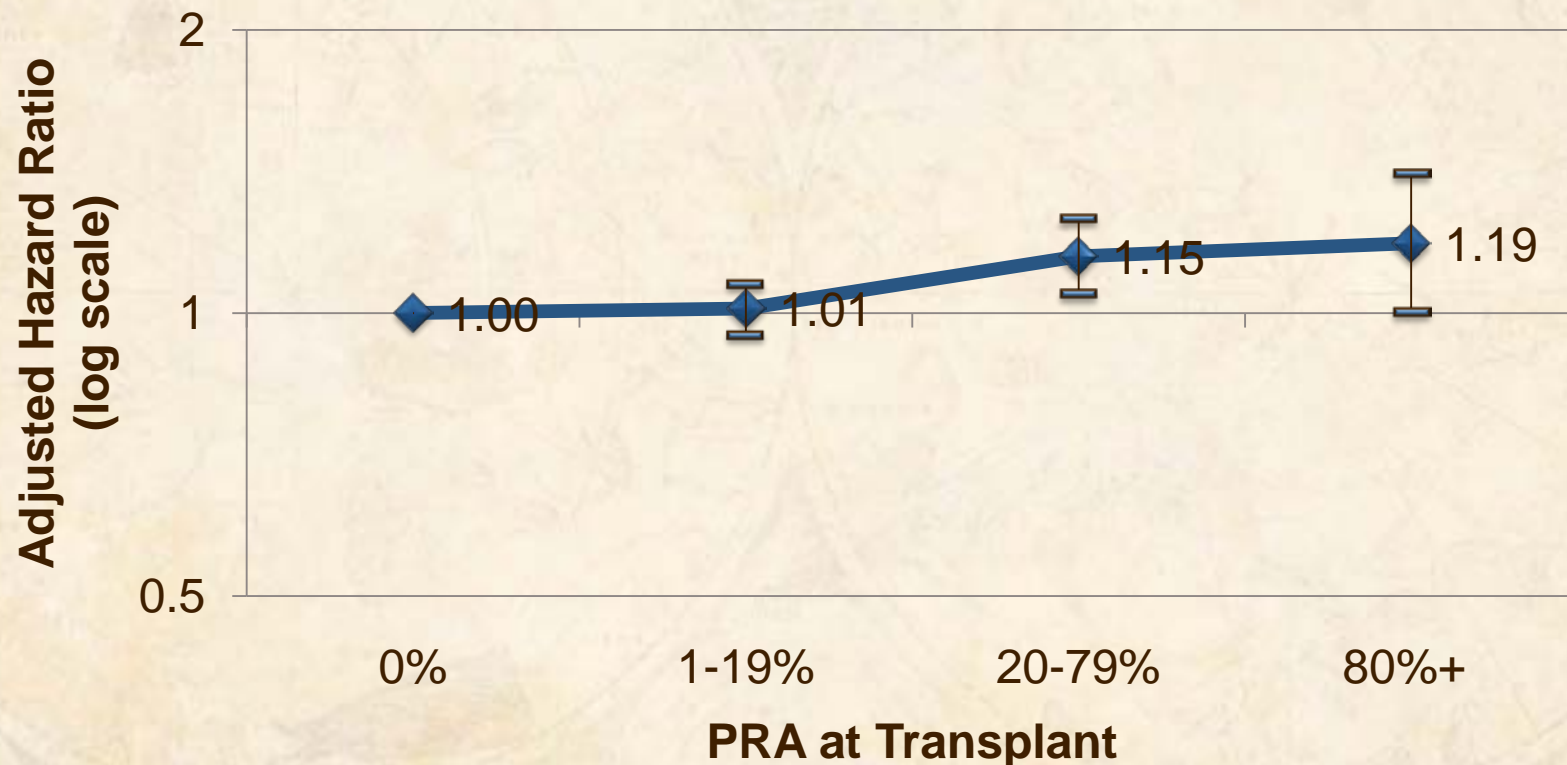
# Relationship between PRA at Transplant and Outcomes: Death-Censored Graft Failure



Ibrahim HA, et. al. Blood Transfusions in Kidney Transplant Candidates Are Common and Associated With Adverse Outcomes, *Clinical Transplantation*, in press.

**ASN 2010**

# Relationship between PRA at Transplant and Outcomes: Death with Functioning Graft



Ibrahim HA, et. al. Blood Transfusions in Kidney Transplant Candidates Are Common and Associated With Adverse Outcomes, *Clinical Transplantation*, in press.


**ASN 2010**

USRDS



# Conclusions

- **Sensitized candidates wait longer for transplant.**
- **28% of wait-listed patients received a transfusion within 3 years of listing.**
- **Non-sensitized patients (PRA of 0% at listing) were as likely as mildly sensitized patients (PRA < 20%) to receive a transfusion.**
- **Highly sensitized patients (PRA 80%+) were more likely to receive a transfusion within 3 years of listing, 41% within 3 years of listing.**
- **Transfusion was associated with decreased likelihood of transplantation.**
- **PRA at transplant remains associated with adverse outcomes.**



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