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### BACKGROUND

• Though medication adherence is essential for graft survival, non-adherence to immunosuppressants post-kidney transplant is common (30-35%)<sup>1</sup>, potentially leading to poor quality of life and increased healthcare costs.

### OBJECTIVE

• The objective of this study was to examine the association between graft survival and adherence in kidney transplant recipients.

### METHODS

- This retrospective, observational cohort study used claims data from a single, large national pharmacy chain (claims data from 2013-2016) and post-transplant follow-up data from the OPTN database (data from post-transplant to 2016).
- The sample included adult deceased donor kidney-only transplant recipients (most recent transplant if more than one) who had  $\geq 2$  pharmacy claims for any immunosuppressant  $\geq$ 150 days apart in the 12-months after their first fill in the study period (2013-2016).
- Proportion of days covered (PDC) by any immunosuppressant for 12-months after first fill was calculated as a measure of adherence (defined as PDC  $\geq$ 80%). Graft survival was defined as having a surviving graft at the end of the study period.
- Logistic regression was used to estimate the association between adherence and graft survival controlling for covariates (age at transplant, time since transplant, gender, race/ethnicity, copay, number of prescriptions for chronic conditions, pharmacy insurance plan, brand medication usage, digital fills, filling at a transplant specialized pharmacy, receiving financial assistance, the interaction between brand medication usage and receiving financial assistance, and the interaction between age and adherence).

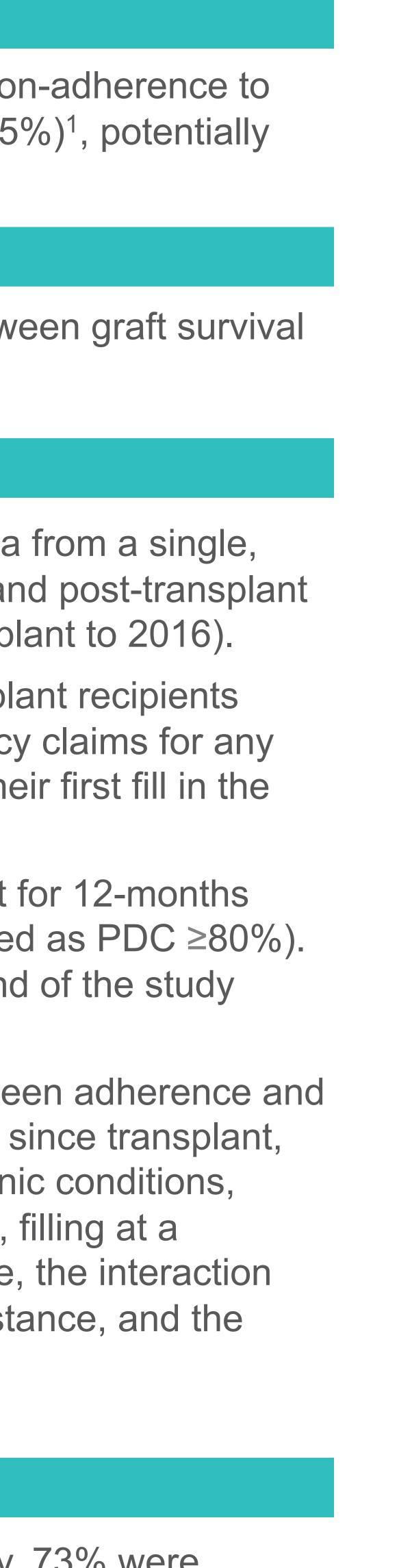
## RESULTS

- Of the 14,703 kidney transplant recipients eligible for the study, 73% were adherent and 85% had a surviving graft (range: 1 to 9,780 days post-transplant; median: 969 days).
- Approximately 77% of those patients whose grafts survived and 64% of those whose grafts failed were adherent (Figure 1).

Reference: <sup>1</sup>Hofmeyer BA, Look KA, Hager DR. Refill-Based Medication Of Days Covered and Medication Possession Ratio. J Manag Care Spec Pharm. 2018;24(4):367-372.

Presented at the 2019 National Association of Specialty Pharmacy, September 9 – 12, 2019, Washington, DC. This research was conducted. For more information on this presentation, please contact : research@walgreens.com. ©2019 Walgreen Co. All rights reserved.

# Medication adherence and graft survival among kidney transplant recipients



## **RESULTS Continued**

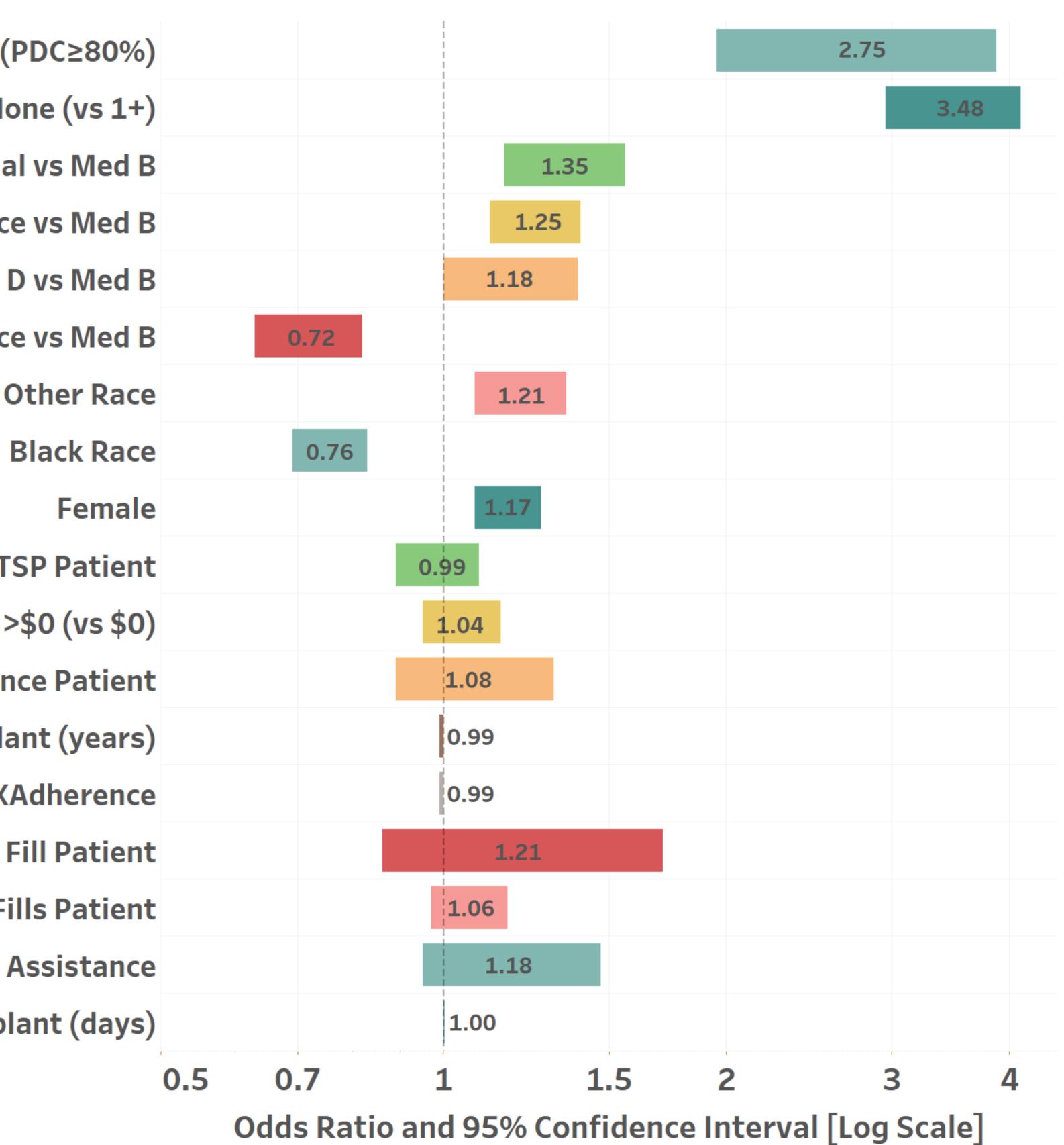
RESULIS CONTINUED						
		sted number a tients by graf		rtion of ad	herent vs	Figure 2. Adjusted odds ratio and 95 for kidney graft survival
Graft failed				Graft survived		Adherent (P
2,500				76.8%		Post-index Comorbidity Nor
	64.0%		9,000	8,747		Payor - Commercial
	2,124					Payor - Multiple Insurance
2,000			8,000			Payor - Medicare Part D
2,000						Payor - Other Insurance
			7,000			Ot
1,500			6,000			B
		36.0% 1,194	5,000			TS Copay >\$
						Financial Assistanc
1,000			4,000			
					23.2%	Age at Transplan
			3,000		2,638	Age at TransplantXA
			2 000			Digital Fi
500			2,000			Generic (vs Brand) Medication Fill
			1,000			Generic MedicationXReceived No Financial As
			1,000			Time since Transpla
0			0			
	Adherent	Non-adheren	t	Adherent	Non-adherent	

- (vs. Medicare Part B) (*OR*=1.35, [1.16, 1.56]; *p* <.001; Figure 2).

#### CONCLUSION

• After adjusting for covariates, the odds of having a surviving graft were higher for adherent patients than for non-adherent patients (OR=2.75, [1.95, 3.87]; p<.001; Figure 2). • Other notable factors associated with graft survival included having no post-index prescriptions (OR=3.48, [2.95, 4.11]; p < .001) and commercial insurance

• This analysis suggests that adherent patients were more likely to have a surviving graft than those who were not adherent to immunosuppressants. • As medication adherence behaviors may vary across patient populations, future studies should aim to show which patient behaviors contribute to medication adherence.



## 95% confidence intervals from logistic regression modeling