

# UC Irvine

## UC Irvine Previously Published Works

### Title

IMPACT OF BODY MASS INDEX ON THE MORTALITY RISK ASSOCIATED WITH PERITONEAL DIALYSIS VS. HEMODIALYSIS.

### Permalink

<https://escholarship.org/uc/item/5j28s09k>

### Journal

AMERICAN JOURNAL OF KIDNEY DISEASES, 69(4)

### ISSN

0272-6386

### Authors

Obi, Yoshitsugu  
Mehrotra, Rajnish  
Streja, Elani  
[et al.](#)

### Publication Date

2017

### Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

## 219

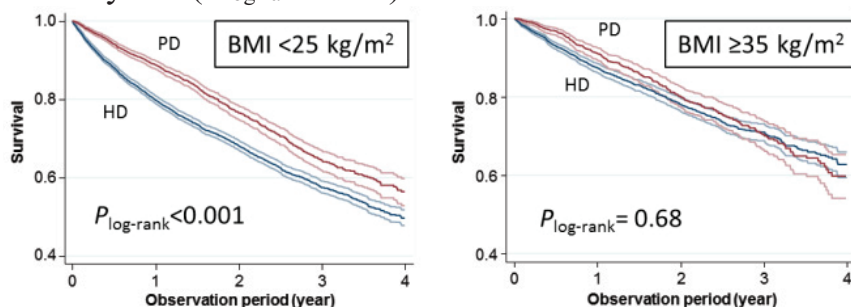
**IMPACT OF BODY MASS INDEX ON THE MORTALITY RISK ASSOCIATED WITH PERITONEAL DIALYSIS VS. HEMODIALYSIS.**

Yoshitsugu Obi<sup>1</sup>; Rajnish Mehrotra<sup>2</sup>; Elani Streja<sup>1</sup>; Mathew B. Rivara<sup>2</sup>; Melissa Soohoo<sup>1</sup>; Connie M. Rhee<sup>1</sup>; Csaba P. Kovesdy<sup>3</sup>; Kamyar Kalantar-Zadeh<sup>1</sup>. <sup>1</sup>Harold Simmons Center, UC Irvine, Orange, CA; <sup>2</sup>Nephrology, Univ. Washington, Seattle, WA; <sup>3</sup>Nephrology, Univ. Tennessee, Memphis, TN.

Peritoneal dialysis (PD), when compared to hemodialysis (HD), has been associated better early survival among patients with end-stage renal disease. However, obese patients are at higher risk of exit site infections, peritonitis, and loss of residual kidney function, which may compromise the survival benefit of PD.

In a national cohort of incident dialysis patients from a large dialysis organization during 2007-2011, a total of 13,179 patients who started PD were matched to 26,358 HD patients by a 1:2 nested matching with replacement procedure based on age, gender, race/ethnicity, cause of ESRD, dialysis vintage, body mass index (BMI), and Charlson comorbidity index.

Overall PD patients showed higher survival compared to matched HD patients ( $P_{\log\text{-rank}} < 0.001$ ), but the interaction term between BMI and dialysis modality had a  $P$ -value of 0.09. The survival advantage of PD versus HD was maintained throughout the follow-up period if BMI was  $< 25 \text{ kg/m}^2$  ( $P_{\log\text{-rank}} < 0.001$ ). A slightly attenuated but still significant association was observed among patients with BMI  $25\text{-} < 35 \text{ kg/m}^2$  ( $P_{\log\text{-rank}} = 0.001$ ). However, among patients with BMI  $\geq 35 \text{ kg/m}^2$ , the initial survival advantage of PD was attenuated over time and lost its significance approximately after 2 years ( $P_{\log\text{-rank}} = 0.68$ ).



In conclusion, the survival benefit of PD versus HD appeared attenuated among morbid obese patients, and was pronounced among non-obese patients.