

# UC Irvine

## UC Irvine Previously Published Works

### Title

IMPACT OF THE LONG INTER-DIALYTIC INTERVAL UPON MORTALITY

### Permalink

<https://escholarship.org/uc/item/3852t54g>

### Journal

AMERICAN JOURNAL OF KIDNEY DISEASES, 71(4)

### ISSN

0272-6386

### Authors

You, Amy  
Kalantar-Zadeh, Kam  
Obi, Yoshitsugu  
[et al.](#)

### Publication Date

2018

### 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

## 335

### IMPACT OF THE LONG INTER-DIALYTIC INTERVAL

**UPON MORTALITY:** Amy You<sup>1</sup>, Kam Kalantar-Zadeh<sup>1</sup>, Yoshitsugu Obi<sup>1</sup>, Carola Kleine<sup>1</sup>, Soo Jeong Choi<sup>1</sup>, Inkyong Hur<sup>1</sup>, Csaba Kovesdy<sup>2</sup>, Elani Streja<sup>1</sup>, Connie Rhee<sup>1</sup>. <sup>1</sup>University of California, Irvine, Orange, CA, USA; <sup>2</sup>University of Tennessee Health Science Center, Memphis, TN, USA

Maintenance hemodialysis (HD) is typically prescribed as thrice-weekly treatments with two 1-day and one 2-day intervening intervals between sessions. Growing evidence shows mortality risk peaks the day after the long (2-day) interdialytic interval. It remains unclear if this heightened mortality is due to excess accumulation of uremic toxins/fluid vs. large fluxes associated with HD removal at the end of the interval.

We identified 105,120 patients receiving HD from a large national dialysis organization over 2007-11 who were on stable thrice-weekly HD schedules at least one week prior to death or censoring. We compared all-cause mortality by day-of-week among patients receiving HD on a Monday-Wednesday-Friday (MWF) vs. Tuesday-Thursday-Saturday (TTS) schedule. Among death events occurring on scheduled HD days, we examined whether patients underwent outpatient HD treatment that day (to determine whether the last outpatient treatment prior to death occurred before or at the end of the long interval), and if death events were coincident with a hospitalization (during which inpatient HD could have been administered).

There were 61,152 patients on a stable MWF schedule and 43,968 patients on a stable TTS schedule, among whom 5664 and 4615 death events occurred, respectively. Among both MWF and TTS groups, the highest proportion of deaths were observed the day after the 2-day interval (23.7% and 22.3% on Monday and Tuesday, respectively). Among patients who died the day after the long interval, the majority did not undergo outpatient HD treatment on the day of death; among these, a small proportion had a coincident hospitalization.

Most deaths occurred after the long interval, largely in the absence of an outpatient HD treatment or hospitalization.