

Comparing Mortality-Predictability of Serum Albumin Levels between Hemodialysis and Peritoneal Dialysis Patients

Rajnish Mehrotra, MD, FASN²; John J. Sim, MD⁵; Uyen Duong, MPH¹; Lilia R Lukowski, MPH¹; Allen R Nissenson, MD, FASN⁴; Csaba P Kovesdy, MD³; Kamyar Kalantar-Zadeh, MD, MPH, PhD^{*1}

¹Harold Simmons Center, Harbor-UCLA, Torrance, CA; ²David Geffen School of Medicine at UCLA, Los Angeles, CA; ³Salem VA MC, Salem, VA; ⁴DaVita, Denver, CO; and ⁵Kaiser Permanente, Los Angeles, CA

INTRODUCTION

- Serum albumin is an independent and strong predictor of mortality in both hemodialysis (HD) and peritoneal dialysis (PD) patients. It is not known if this mortality predictability is different between HD and PD.

METHODS & RESULTS

- We examined a large and contemporary cohort of all HD and PD patients who underwent dialysis treatment for at least 90 days in any DaVita dialysis clinic from July 2001 through June 2006 with survival follow-up till June 2007.
- Associations with all-cause mortality were examined in Cox models.
- We identified 120,592 HD and 12,269 PD patients who had serum albumin measurements during their base calendar quarter.
- HD patients were 62±16 years old and included 45% women and 32% African Americans.
- PD patients were 54±16 years old and included 47% women and 22.6% African Americans.

METHODS & RESULTS

- HD and PD patients were divided into 8 albumin increments of albumin <3g/dL and ≥4.2g/dL and 0.2 g/dL intervals in-between.
- Taking HD patients with albumin 4.0-<4.2g/dL as a reference, we found that in any given albumin groups, PD patients had better survival than HD patients even after extensive multivariate adjustment (Figure 1).

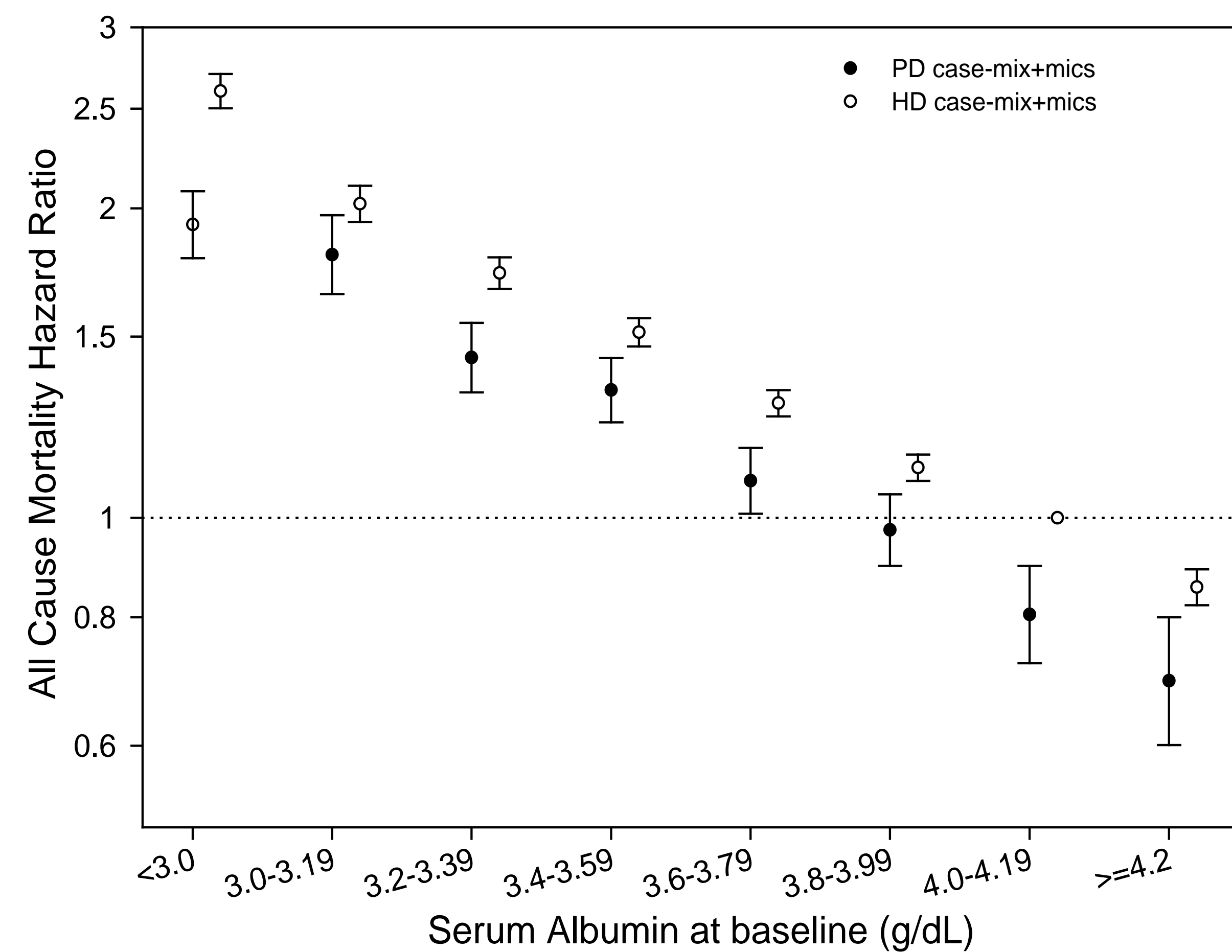


Figure 1. All cause mortality hazard ratios and baseline serum albumin.

CONCLUSIONS

- In this large nationally representative cohort of HD and PD patients higher serum albumin was associated with greater survival
- PD patients appeared to have a superior survival rate compared to HD patients with the same serum albumin level.

KEY LEARNINGS

- ✓ This study showed that high level of serum albumin is associated with better survival. In particular, the result suggests that serum albumin should be remained above 4.0 g/dL.
- ✓ Trials to examine the association between serum albumin and outcomes in HD vs. PD are indicated.

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