

Changes in Serum Albumin over 6 Months are Associated with Significant Changes in Survival among Peritoneal Dialysis Patients

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INTRODUCTION

- Higher serum albumin is a strong predictor of greater survival compared to other outcome predictors in dialysis patients. It is not known whether the increase or decrease in serum albumin levels over time are associated with better or worse survival in chronic peritoneal dialysis (CPD) patients independent of their baseline serum albumin and other covariates.

METHODS

- We examined all CPD patients who underwent PD treatment for at least 90 days in any DaVita dialysis clinic from July 2001 through June 2006 and followed-up to June 2007.
- Changes in albumin within -0.1 and +0.1g/dL over 6 month were considered stable (reference group). Patients whose serum albumin changed beyond +/-0.1 g/dl were subdivided into decrements or increments of 0.1 g/dL.
- We identified 8,568 CPD patients whose serum albumin was measured both at baseline and during the next 6 months, and who remained in the cohort through the first 6 months.
- The cohort averaged 54±16 years old and included 47% women, 22% African Americans, and 15% Hispanics.

RESULTS

- After adjusting for baseline serum albumin, demographics, and surrogates of malnutrition-inflammation-cachexia syndrome (MICS) the patients whose albumin ranged between 0.2 and 0.3 g/dl and >0.3 g/dl had all-cause death hazard ratio (HR) and 95% confidence interval (95% CI) of 1.3(1.1-1.4) and 1.6(1.4-1.8), respectively (see Figure 1).
- A rise in albumin more than 0.3 g/dl exhibited a death HR of 0.8(0.7-0.9).

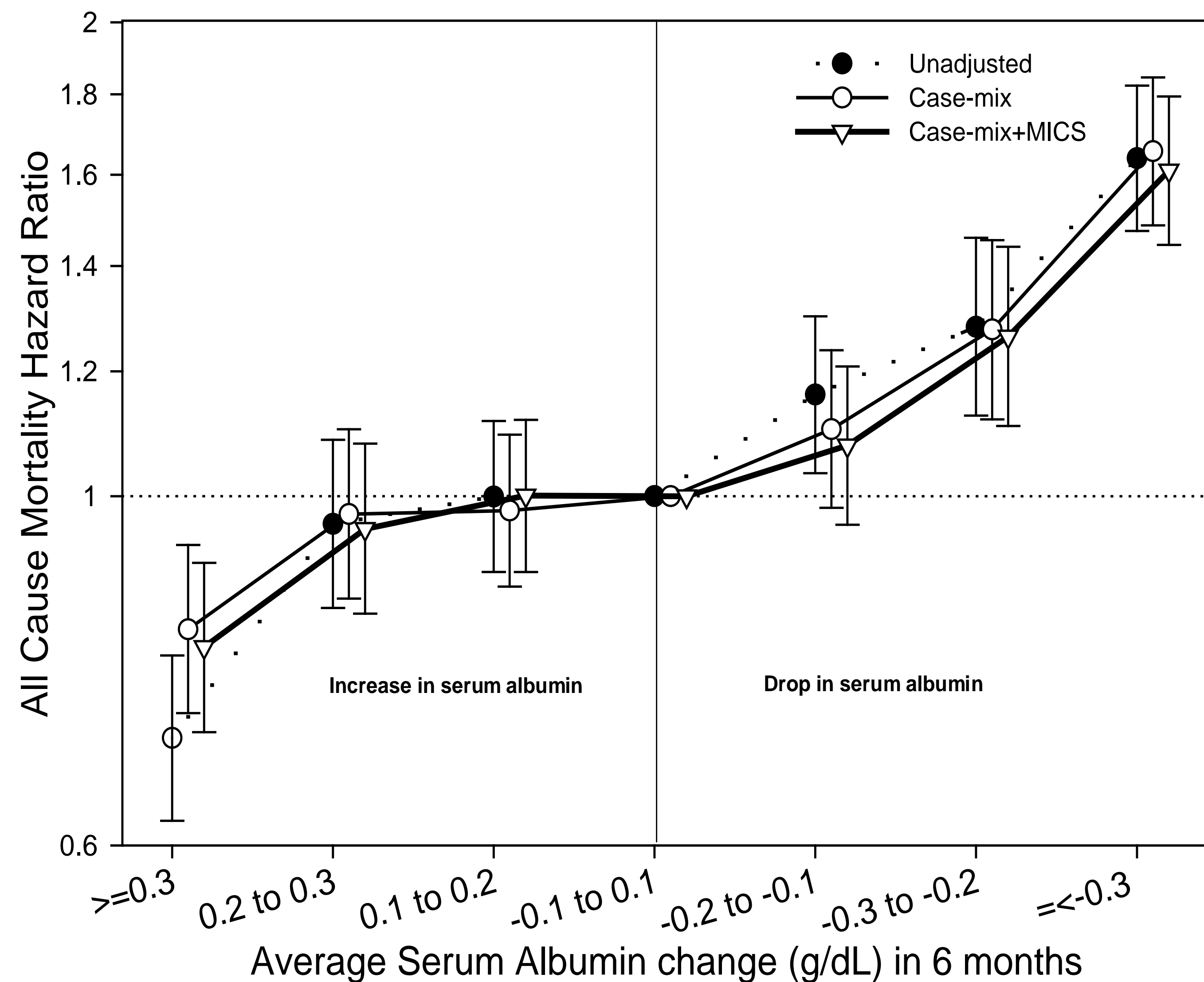


Figure 1. All cause mortality hazard ratios and six-month albumin change

CONCLUSIONS

- Changes in serum albumin in CPD patients were associated with better survival.

KEY LEARNINGS

- ✓ The results of this study showed that an increase of 0.3 g/dL or more in serum albumin during the first six months of PD treatment was associated with better survival.
- ✓ Interventional studies to modulate serum albumin levels in an effort to improve CPD outcomes are indicated.

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