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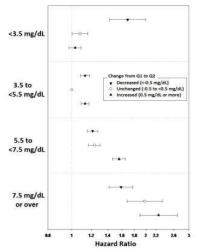
CHANGE IN SERUM PHOSPHORUS AND MORTALITY IN INCIDENT HEMODIALYSIS PATIENTS. Mingliang Feng¹;

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Fluctuations in serum Phosphorus (Phos) level are commonly observed in maintenance hemodialysis (MHD) patients. However, it is unknown as to whether a rise or decline in serum PHOS has an impact upon survival in this population. We hypothesized that, in patients with elevated baseline Phos levels, a rise in serum Phos is associated with an increased mortality risk. Among 96,459 incident MHD patients receiving care from a large national dialysis organization from Jan 2007–Dec 2011, we examined changes in serum Phos levels measured during their baseline (Q1) and subsequent quarters (Q2), which were defined as unchanged (Δ -50 to +50pg/ml), decreased (decline greater than 50pg/ml), and increased Phos (rise greater than 50pg/ml). We examined the association between change in Phos across 4 strata of baseline baseline Phos (<3.5, 3.5 to <5.5, 5.5 to <7.5 and \geq 7.5 mg/dL). using multivariable Cox models adjusted for case-mix and of the

malnutrition and inflammation complex (MICS).

The mean±SD age of the study cohort was 63±15 years, among whom 43% were female, 32% were African-American, and 60% were diabetic. In casemix+MICS adjusted models, an increased Phos was associated with greater mortality risk among patients with a baseline Phos 3.5 to <5.5, 5.5 to <7.5 and ≥7.5 mg/dL (reference group:



unchanged Phos with baseline Phos 3.5 to <5.5mg/dL. An higher risk of death was also observed for patients who had a baseline Phos of <5.5mg/dL and decreased their Phos level.

These findings support the KDOQI recommended Phos target of 3.5 to <5.5mg/dL, and further studies are needed to determine if lowering Phos to this target improves outcomes in HD patients.