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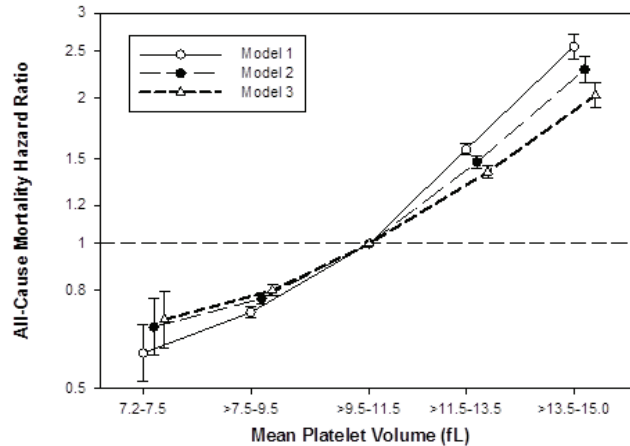
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MEAN PLATELET VOLUME AS A NOVEL RISK FACTOR FOR MORTALITY IN HEMODIALYSIS PATIENTS.

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Higher mean platelet volume (MPV) is an indicator of larger, reactive platelets, and has been associated with a greater risk of cardiovascular (CV) events in the general population. Hemodialysis (HD) patients have a higher burden of CV death, but the association between MPV and mortality in this population is unknown. Among 149,118 adult incident HD patients from a large national dialysis organization during 2007-2011, we examined the association between MPV and all-cause mortality. In co-primary analyses, we categorized MPV as low, normal, and high (7.2-7.5, >7.5-11.5, >11.5 fL, respectively, based on reference



values from the general population), as well as in finer gradations: 7.2-7.5, >7.5-9.5, >9.5-11.5, >11.5-13.5, >13.5-15.0 fL. Baseline (long-term) and time-dependent (short-term) MPV-mortality associations were estimated using Cox models with 3

adjustment levels: unadjusted (Model 1), case-mix (Model 2), and case-mix+laboratory adjusted (Model 3). In baseline and time-dependent analyses, high MPV was associated with higher mortality in Model 3 (ref.: normal MPV): HRs (95%CI) 1.25 (1.22-1.28) and 1.56 (1.52-1.60), respectively. When examined in finer gradations, higher baseline and time-dependent MPV levels were associated with incrementally greater death risk (Fig.: time-dependent MPV). HD patients with higher MPV levels have heightened mortality risk. Further studies are needed to determine if platelet reactivity and thromboembolism are underlying mechanisms for the high MPV-mortality association.