Title
Association of Triglycerides With Mortality across CKD Stages in Over 1.3 Million US Veterans

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Abstract 16905: Association of Triglycerides With Mortality across CKD Stages in Over 1.3 Million US Veterans

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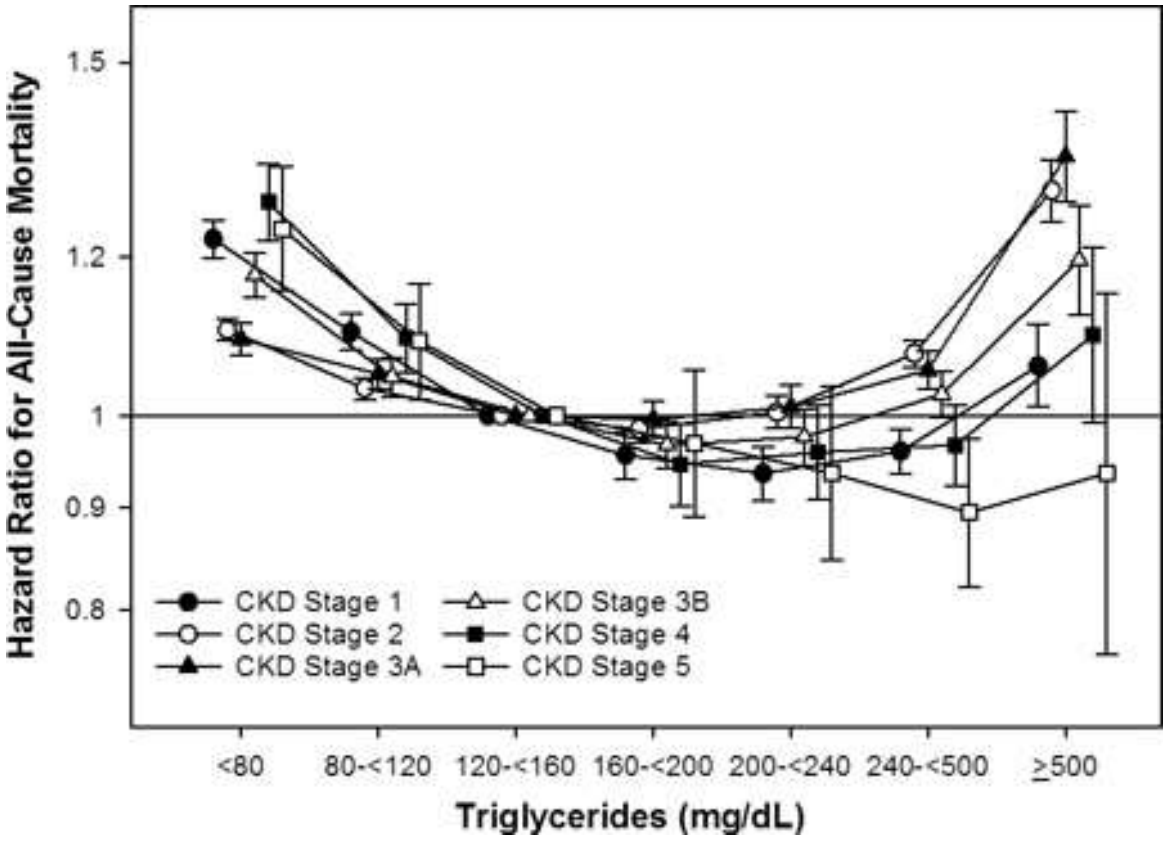
Abstract

Introduction: Prior studies have shown that high serum triglycerides (TG) levels are associated with worse survival in the general population. However, it is unknown if this TG and mortality association differs across chronic kidney disease (CKD) strata.

Methods: We investigated a cohort of 1.3 million US veterans with TG measurements during 2005-2006. CKD stages were created according to estimated glomerular filtration rate (eGFR) at the time of TG measurement. Using Cox models adjusted for age, gender, race, diabetes, and prescription of lipid lowering medications (statins and non-statins), we examined the relationship of TG with all-cause mortality across strata of CKD stage.

Results: Patients were 64+/-13 years old with a median[IQR] baseline TG of 127[87,191] mg/dL and eGFR 75[61,91] mL/min/1.73m^2. The cohort was 39% diabetic, and 57% and 12%, respectively had a statin and non-statin prescription during the baseline period. Patients were followed over a median[IQR] follow-up of 10.5[7,11] years. After adjustment, we observed a U-shaped association, where TG>= 240 mg/dL were associated with a higher risk of all-cause mortality in CKD stages 1-3B (reference: TG 120-160 mg/dL). However, the relationship of higher triglycerides with mortality incrementally decreased across worsening stages of CKD. Among CKD stage 4 patients, TG >=240 mg/dL were not associated with mortality risk, while in stage 5 patients, TG >=240-500 mg/dL were associated with better survival (HR[95%CI]: 0.90[0.82, 0.97]), and TG>= 500 mg/dL trended towards better survival (HR[95%CI]: 0.94[0.76, 1.15]). [Figure]

Conclusions: Hypertriglyceridemia >=240 mg/dL is associated with higher mortality risk across early CKD stages and this association might be paradoxically reversed in later CKD stages. Further studies are needed to evaluate the impact of lipid modulating therapies on these associations in CKD patients according to their stage of disease.



Triglycerides; Epidemiologic methods; Mortality; Renal function; Lipids