Title

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Multimodality Imaging

PROGRESSION OF CORONARY CALCIUM AND ALL-CAUSE MORTALITY IN PERSONS WITH END STAGE RENAL DISEASE

Poster Contributions
Saturday, May 15, 2021, 9:45 a.m.-10:30 a.m.

Session Title: Multimodality Imaging: CT 1
Abstract Category: 26. Multimodality Imaging: CT

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Background: Previous studies show predictive values of coronary artery calcium (CAC) progression on all-cause mortality in the general population. However, there is limited information on the impact of CAC progression in end stage renal disease (ESRD) patients.

Methods: We evaluated 146 ESRD subjects who had underwent 2 clinically indicated non-contrast gated CT scans of the heart [CAC scan] to measure CAC progression, CAC was then annualized for analysis. Subjects were followed until death, or last confirmed provider visit as censoring date. Time to death/censoring were evaluated by Kaplan Meyer analysis stratified by CAC progression. Multivariate Cox proportional hazard regression models were used to compute hazard ratios (HRs) for the association between CAC progression and death.

Results: Overall, all-cause mortality was seen in 95 individuals (66%) during a mean follow-up of 7.9+-5.4 years (51% men, 63% diabetic). Just over 86% (126) ESRD subjects had CAC >0 at baseline. Subjects who died from any cause had significantly higher CAC and CAC progression. ESRD subjects with an annualized CAC progression score greater than 131 were associated with increased risk for all-cause mortality (hazard ratio [HR] 2.35; 95% confidence interval [CI] 1.42 - 3.89: p= 0.0008).

Conclusion: All-cause mortality was twice as likely in ESRD patients if their CAC score progression was >131/year.