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SUPPLEMENTING DEFICIENT VITAMIN D LEVELS IS ASSOCIATED WITH REDUCED CARDIOVASCULAR RISK

ACC Poster Contributions
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Background: Vitamin D (Vit D) deficiency is prevalent in the U.S. There is a known association of Vit D deficiency with skeletal disease, but recent reports suggest an association with cardiovascular (CV) disease. Low Vit D may represent a marker of CV risk or a causal factor. To address this, we evaluated whether normalizing low baseline Vit D level (< to >30 ng/mL) is associated with a reduction in CV risk

Methods: We prospectively evaluated pts with a low initial Vit D level (<30) and at least one follow-up level (N=9491). The last measured Vit D level was used to determine if normalizing Vit D levels (>30) is associated with a decrease in CV risk. Adjusted Cox regression analysis was utilized to determine associations between the last follow-up Vit D levels and death, coronary artery disease (CAD), myocardial infarction (MI), heart failure (HF), stroke, and renal failure.

Results: Baseline Vit D among deficient pts (57±19 yrs; 77.9% female) was 19.3±6. A total of 4507 (47%) of subjects increased their Vit D to >30. Average Vit D at last draw was 33.1±15.9, compared to 21.9 in non-responders. Increasing Vit D levels to >30 was associated with a decreased risk of death, CAD, HF, and renal failure (see Table).

Conclusions: Our data suggest that normalizing deficient Vit D levels is associated with reduced CV risk and suggest confirmation through clinical trials. Since testing for Vit D is simple and relatively inexpensive, and therapy is safe and easily administered, pts with low levels should be considered for supplementation.

Outcomes	<30 vs. >30
Death	HR=1.30, p=0.04
CAD	HR=1.17, p=0.02
MI	HR=1.33, p=0.21
HF	HR=1.20, p=0.02
Stroke	HR=1.03, p=0.87
Renal Failure	HR=1.32, p<0.0001
Composite Outcome (any of the above)	HR=1.25, p<0.0001