**PATTERNS OF REFERRAL AND IMMEDIATE CLINICAL IMPACT OF CORONARY ARTERY CALCIUM SCORING**

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*Background*: Coronary artery calcium scoring (CACS) is gaining recognition as a risk stratifying tool in coronary atherosclerosis. We aimed to evaluate community based referral patterns for CACS and its potential immediate impact on statin therapy.

*Methods*: We retrospectively reviewed records and images of consecutive patients who underwent CACS.

*Results*: Thirty-five adults (mean age 58 years, 51% men, 94% white, 8% diabetic, 45% hypertensive, 31% smoker, 70% family history of heart disease, 69% overweight or obese) had CACS for cardiovascular risk estimation; 22 (62%) by cardiologists and 12 (37%) by primary care physicians. Overall, 25% had chest pain and negative stress test while 75% were asymptomatic. Distribution of ASCVD scores in 32 eligible patients were as follows: 46% <5%; 43% > 7.5%; 9% 5%-7.5%. CACS distribution was: 28% 0; 31% 1-100; 26% 101-300; and 14 % >300. CACS of 0 was present in 40%, 33%, and 21% of those with ASCVD scores of <5%, 5%-7.5%, and >7.5%, respectively. Overall, ASCVD risk score was reclassified based on CACS in 13 of 32 patients (40%). This led to a change in management in 21/35 (60%) including initiation of statin in 17/29 (58%) not already on therapy, discontinuation of stain in 2/6 (33%) on prior therapy and in dose titration of statin in 2/6 (33%) patients. CACS of 0 was present in 10 patients with ASCVD score of 1-19 (6.2±5.5)%, MESA score of 0.3-5.3 (2.4±1.4)%, Framingham risk score of <1-16 (7±5.2)%, and MESA arterial age <1-5 (2.6±1.5)% [p=0.02 for ASCVD vs MESA and p=0.02 for Framingham vs MESA arterial age].

*Conclusion*: In this small, retrospective study, wide heterogeneity was noted in cardiovascular risk factor profile of patients referred for CACS. Despite such differences, CACS provided important incremental information that impacted immediate cholesterol lowering medication use