

**ACC.15**

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JACC March 17, 2015  
Volume 65, Issue 10S**Non Invasive Imaging (Echocardiography, Nuclear, PET, MR and CT)****ASSESSING LEVEL OF AGREEMENT FOR ATHEROSCLEROTIC CARDIOVASCULAR DISEASE RISK CATEGORIZATION BETWEEN CORONARY ARTERY CALCIUM SCORE AND THE AMERICAN COLLEGE OF CARDIOLOGY/AMERICAN HEART ASSOCIATION CARDIOVASCULAR PREVENTION GUIDELINES AND POTENTIAL IMPACT ON TREATMENT RECOMMENDATIONS**

Poster Contributions

Poster Hall B1

Saturday, March 14, 2015, 3:45 p.m.-4:30 p.m.

Session Title: Non Invasive Imaging: CT/Multimodality, Angiography, and Non-CT Angiography

Abstract Category: 16. Non Invasive Imaging: CT/Multimodality, Angiography, and Non-CT Angiography

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**Background:** The 2013 American College of Cardiology/American Heart Association Cardiovascular Prevention Guidelines utilize new pooled cohort equations (PCE) to predict 10-year risk of atherosclerotic cardiovascular disease (ASCVD) events which form the basis of treatment recommendations. We sought to study the level of agreement in predicted ASCVD risk by CAC-score and PCE-calculated models and the potential impact on therapy of additional CAC testing.

**Methods:** We studied 687 consecutive patients (mean age 54 years, 72% men) that had a coronary calcium study at our institution. Clinical & imaging data were recorded. ASCVD risk was calculated utilizing published PCE-based algorithm. CAC-based risk was categorized by previously published recommendations. Risk stratification comparisons were made and level of agreement calculated.

**Results:** In the cohort, mean ASCVD PCE-calculated risk was 5.3% and mean CAC score was 80 Agatston units (AU). Of the intermediate PCE-calculated risk (5% to < 7.5%) cohort, 85% had CAC score <100 AU (Table). Of the cohort categorized as Reasonable to Treat per the ASCVD prevention guidelines, 40% had a CAC score of 0 AU and an additional 44% had CAC scores >0 but < 100 AU.

**Conclusion:** For the patients with intermediate risk of ASCVD (PCE-calculated risk of 5% to < 7.5%), CAC testing further refines risk assessment in a significant number of patients. This can assist clinicians in conducting an evidence-based discussion with their patients to determine whether to start therapy.

CAC Score versus ACC/AHA ASCVD Prevention Risk Score: Kappa=0.23 ±0.029						
			Pooled Risk Score			Total
			<5%	5-7.49%	>=7.5	
CAC Score	0-99	Count	416	77	90	583
		% within CAC score Category	71.4%	13.2%	15.4%	100.0%
		% within Pooled Risk Score Categories	94.5%	84.6%	57.7%	84.9%
	100-299	Count	19	9	31	59
		% within CAC score Category	32.2%	15.3%	52.5%	100.0%
		% within Pooled Risk Score Categories	4.3%	9.9%	19.9%	8.6%
	>=300	Count	5	5	35	45
		% within CAC score Category	11.1%	11.1%	77.8%	100.0%
		% within Pooled Risk Score Categories	1.1%	5.5%	22.4%	6.6%
Total		Count	440	91	156	687
		% within CAC score Category	64.0%	13.2%	22.7%	100.0%
		% within Pooled Risk Score Categories	100.0%	100.0%	100.0%	100.0%