JACC VOI. 57, NO. 24, 2011 June 14, 2011:2454-60

patient. A CAC-based reclassification has implications for preventive therapy strategies for patients at intermediate cardiac risk that need to be tested in a prospective, randomized manner (4,5).

*John W. McEvoy, MB Khurram Nasir, MD, MPH Roger S. Blumenthal, MD

*Ciccarone Center for the Prevention of Heart Disease Johns Hopkins Hospital 600 North Wolfe Street, Blalock 524C Baltimore, Maryland 21287 E-mail: jmcevoy1@jhmi.edu

doi:10.1016/j.jacc.2010.11.070

REFERENCES

- Elias-Smale SE, Proenca RV, Koller MT, et al. Coronary calcium score improves classification of coronary heart disease risk in the elderly: the Rotterdam study. J Am Coll Cardiol 2010;56:1407–14.
- McEvoy JW. Coronary artery calcium score and cardiovascular event prediction. JAMA 2010;304:741–2, author reply 2.
- Koller MT, Steyerberg EW, Wolbers M, et al. Validity of the Framingham point scores in the elderly: results from the Rotterdam study. Am Heart J 2007;154:87–93.
- 4. Taylor AJ, Cerqueira M, Hodgson JM, et al. ACCF/SCCT/ACR/ AHA/ASE/ASNC/SCAI/SCMR 2010 appropriate use criteria for cardiac computed tomography: a report of the American College of Cardiology Foundation Appropriate Use Criteria Task Force, the Society of Cardiovascular Computed Tomography, the American College of Radiology, the American Heart Association, the American Society of Echocardiography, the American Society of Nuclear Cardiology, the Society for Cardiovascular Angiography and Interventions, and the Society for Cardiovascular Magnetic Resonance. J Am Coll Cardiol 2010;56:1864–94.
- McEvoy JW, Blaha MJ, DeFilippis AP, et al. Coronary artery calcium progression: an important clinical measurement? J Am Coll Cardiol 2010;56:1613–22.

Reply

We agree with the comments of Dr. McEvoy and colleagues regarding our paper (1) that there is an urge to implement coronary artery calcium (CAC) cutoff scores in clinical practice to enhance cardiovascular risk stratification in the individual patient. This especially pertains to persons at intermediate cardiovascular risk, in whom risk management strategies are least clear. Yet, we do not think that reporting the absolute CAC score reclassification cutoffs we would have found by using the classic Framingham Risk Score instead of our Framingham "refitted" model would be helpful. The Framingham Risk Score is designed for a population 30 to 74 years of age (2). Our study focuses on the elderly, of whom a substantial proportion is older than 75 years of age. Previous research within the Rotterdam study has pointed out that the Framingham Risk Score does not fit well in our population (3). Thus, cutoffs derived in our cohort using the Framingham Risk Score would not be meaningful.

Of course, in a utopia we would be able to overcome the inaccuracy of available "general" risk functions. However, we think it would be helpful to create more tailored risk functions for populations with specific demographics and/ or presence of cardiovascular symptoms. Empirically derived cutoffs from these populations are more likely to apply to the individual patient, although they should be tested in comparable study populations before they can be safely used in clinical practice. So, despite the urgent need for CAC cutoffs in cardiovascular risk stratification of the individual patient, we feel that abundant research still has to be performed before CAC cutoff scores can safely be used in clinical practice.

*Suzette E. Elias-Smale, MD Jacqueline C. M. Witteman, PhD

*Department of Epidemiology Erasmus Medical Center P.O. Box 2040 Rotterdam, Zuid-Holland 3000 DR the Netherlands E-mail: s.elias@erasmusmc.nl

doi:10.1016/j.jacc.2011.02.031

REFERENCES

- Elias-Smale SE, Proenca RV, Koller MT, et al. Coronary calcium score improves classification of coronary heart disease risk in the elderly: the Rotterdam study. J Am Coll Cardiol 2010;56:1407–14.
- Wilson PW, D'Agostino RB, Levy D, Belanger AM, Silbershatz H, Kannel WB. Prediction of coronary heart disease using risk factor categories. Circulation 1998;97:1837–47.
- 3. Koller MT, Steyerberg EW, Wolbers M, et al. Validity of the Framingham point scores in the elderly: results from the Rotterdam study. Am Heart J 2007;154:87–93.

Nonrandomized Data on Drug-Eluting Stents Compared With Coronary Bypass Surgery Caution With Interpretation

In a recent issue of the Journal, Park et al. (1) presented long-term follow-up results from the Asan-Multivessel Registry in which patients are followed after percutaneous coronary intervention (PCI) with drug-eluting stents (DES) or coronary artery bypass grafting (CABG) for the treatment of multivessel coronary artery disease. After 5 years, similar rates of death or the composite endpoint of death, myocardial infarction, or stroke were found in the DES and CABG groups. This is the first paper to compare these groups after such long follow-up, but it should be highlighted that this is a nonrandomized study. To date, only the SYNTAX (Synergy Between PCI With TAXUS and Cardiac Surgery) trial compared patients randomized to DES or CABG and after 1 year already showed that DES failed to reach noninferiority to CABG (2). A possible explanation for the contradicting results of Park et al. (1) is that apart from baseline characteristics (age, sex, body mass index) and comorbid conditions (hypertension, hyperlipidemia, diabetes requiring insulin, heart failure, prior myocardial infarction), the severity of multivessel disease is less worse than in the SYNTAX trial (Table 1), with an overall SYNTAX coronary score that is much lower in the DES group (SYNTAX trial 28.4% vs. 17.4% in the present study). The SYNTAX trial also included more than twice as many patients with a left main