
We thank Drs Romanens and Miserez for their interest in our study.1 We completely agree with their conclusion that our study cannot be used to argue against the predictive ability of coronary artery calcification (CAC) scores regarding cardiovascular events. The predictive ability of CAC has been demonstrated in numerous studies (please see References 14 and 23 in our article for further reading), and it should be viewed independent of the progression of CAC over 12 months under the effects of lipid-lowering therapy with different intensity.

The statistical power calculations underlying our study were performed considering the primary end point of the study, that is, the percent change of total CAC volume scores between baseline and final determination (after 12 months of atorvastatin treatment). Accordingly, the expected standard deviation of the change of CAC volume scores was considered. The standard deviation of the absolute CAC volume scores could be neglected because these were largely unrelated to the study end point.

It is true that in the end, the standard deviation of the change of CAC volume scores in our study was somewhat greater than the expected 30%. It was 46.5% in the group receiving 10 mg atorvastatin and 35.9% in the group receiving 80 mg atorvastatin. This does not, however, explain the neutral finding. Rather, the study had been planned assuming a positive linear relation between the percent change of total CAC volume scores and the percent change of low-density lipoprotein cholesterol (LDL-C) values. However, the clear relation suggested by Callister et al2 was not observed (see Figure 6 in our article). Indeed, the percent change of total CAC volume scores was independent of LDL-C values or percent change of LDL-C values during the study. This “neutral” finding has been confirmed in other randomized trials of lipid-lowering therapy versus placebo3,4 and more intensive versus standard lipid-lowering therapy.5

Because CAC progression seems to be unrelated to LDL-C values at least during the first years of therapy, it does not appear to be a suitable measurement for assessing lipid-lowering treatment effects. On the other hand, the predictive value of cross-sectional measurements of CAC has been demonstrated repeatedly, and CAC progression does portend its own risk independent of statin therapy and on-treatment LDL-C values.3,6 Despite many questions that remain to be addressed, the current evidence suggests that with measuring CAC, we have a parameter at hand that is complementary to the information derived from risk factor analysis and lipid-lowering therapy rather than being competitive in its prognostic ability.

Disclosures
Drs Achenbach, Erbel, Knollmann, Lahiri, and Schmermund have received research grants or other research support from Pfizer Germany. Drs Achenbach, Erbel, Moshage, and Schmermund have received speakers’ honoraria from Pfizer Germany. Dr Knollmann has served as a consultant/advisor for Pfizer Germany.


(Circulation. 2006;114:e507-e508.)
© 2006 American Heart Association, Inc.
Circulation is available at http://www.circulationaha.org DOI: 10.1161/CIRCULATIONAHA.106.630723

(Continued on page 508.)


Response to Letter Regarding Article, "Effect of Intensive Versus Standard Lipid-Lowering Treatment With Atorvastatin on the Progression of Calcified Coronary Atherosclerosis Over 12 Months: A Multicenter, Randomized, Double-Blind Trial"

Axel Schmermund, Winfried Siffert, Raimund Erbel, Stephan Achenbach, Thomas Budde, Gert Kerkhoff, Yuri Buziashvili, Andreas Förster, Guy Friedrich, Michael Henein, Friedrich Knollmann, Valery Kukharchuk, Avijit Lahiri, Roman Leischik, Werner Moshage, Michael Schartl, Elisabeth Steinhagen-Thiessen, Anja Vogt, Valentin Sinitsyn and Burkhard Wiedeking

Circulation. 2006;114:e507-e508
doi: 10.1161/CIRCULATIONAHA.106.630723
Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2006 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/content/114/12/e507

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Circulation can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Circulation is online at:
http://circ.ahajournals.org//subscriptions/