

female population, this group was excluded from this analysis. The 37-month matrix for the distribution of events and the presence of coronary calcium for asymptomatic men is detailed in Table 1.

Finally, assuming a sensitivity of 30%, a specificity of 98%, and a 10-year event risk of 10%, the positive predictive value of a non-0 calcium score would be 13.5%, and the negative predictive value of a 0 calcium score would be 99%, numbers in line with published data.

*Alan Boyar, MD

*Advanced Body Scan of Newport
20311 SW Acacia Street, Suite 630
Newport Beach, California 92660
E-mail: doc@docboyar.com

doi:10.1016/j.jacc.2006.03.011

REFERENCES

1. Arad Y, Goodman KJ, Roth M, Newstein D, Guerci AD. Coronary calcification, coronary disease risk factors, C-reactive protein, and atherosclerotic cardiovascular disease events: the St. Francis Heart Study. *J Am Coll Cardiol* 2005;46:158–65.
2. Kondos GT, Hoff JA, Sevrakov A, et al. Electron-beam tomography coronary artery calcium and cardiac events: a 37-month follow-up of 5635 initially asymptomatic low- to intermediate-risk adults. *Circulation* 2003;107:2571–6.

REPLY

In reply to Dr. Boyar's letter, using data from Figure 2 in our study (1) and rounding off, we calculated a sensitivity of 0.94 and a specificity of 0.33 for all calcium scores ≥ 1 . The values in our Figure 2, 0.91 and 0.39, respectively, differ slightly because the computer program that generated Figure 2 grouped all square roots less than the next whole number with the previous whole number. Thus, calcium scores of 1, 2, and 3, with square roots of 1.0, 1.4, and 1.7, respectively, were all plotted as corresponding to a value of 1.0 on the abscissa. Calcium scores of 4 to 8, with square roots of 2.0 to 2.8, were lumped together as 2, and so on. We apologize for any confusion created by Figure 2 in our report (1).

We are not aware of any standard that a threshold means $>$ the threshold value rather than \geq the threshold value. In the case of calcium scores of 0, we chose ≥ 0 because this makes a useful *reductio ad absurdum* point about the test, and because we believed the rest of the graph makes better sense if the threshold values were included.

*Alan D. Guerci, MD, FACC
David Newstein, DrPH

*St. Francis Hospital
100 Port Washington Boulevard
Roslyn, New York 11576
E-mail: alan.guerci@chsli.org

doi:10.1016/j.jacc.2006.03.010

REFERENCE

1. Arad Y, Goodman KJ, Roth M, Newstein D, Guerci AD. Coronary calcification, coronary disease risk factors, C-reactive protein, and atherosclerotic cardiovascular disease events: the St. Francis Heart Study. *J Am Coll Cardiol* 2005;46:158–65.

Left Atrial Remodeling in Competitive Athletes

Pelliccia et al. (1), as so frequently in the past, have added to our knowledge of "athlete's heart." One can only agree with their conclusions, but I believe their quantitative results might have been significantly different had they not restricted the search for prolonged P-wave duration to leads I, II, and V_1 . Except for V_1 , use of the limb leads only puts us in the anachronistic standards of the 1920s when there were only three leads (2). (Curiously, some current textbooks still rely on lead II.) We have shown several times that one needs to evaluate all 12 leads of the standard electrocardiogram (ECG) to get true P-wave durations. Indeed, if we had relied on lead II only, we would have recognized only just over one-half of the prolonged P waves despite utilizing calibrated magnifying gratitudes (2,3). Indeed, leads V_3 and V_4 gave substantially more prolonged P waves than did lead II. Another quantitative effect of the protocol may have occurred because the investigators used M-mode echocardiography when it is quite clear that, when assessing the left atrium volumetrically, two-dimensional echocardiography would have significantly been more sensitive (4).

*David H. Spodick, MD, DSc

*University of Massachusetts Medical School
Medicine/Cardiology
Division of Cardiovascular Medicine
55 Lake Avenue North
Worcester, Massachusetts 01655
E-mail: spodickd@ummhc.org

doi:10.1016/j.jacc.2006.03.009

REFERENCES

1. Pelliccia A, Maron BJ, Di Paolo FM, et al. Prevalence and clinical significance of left atrial remodeling in competitive athletes. *J Am Coll Cardiol* 2005;46:690–6.
2. Frisella ME, Robinette MM, Spodick DH. Interatrial block: pandemic prevalence concealed by anachronistic electrocardiographic standards. *Clin Cardiol* 2005;28:381–3.
3. Ariyaratnam V, Asad N, Tandar A, Spodick DH. Interatrial block: pandemic prevalence, significance, and diagnosis. *Chest* 2005;128:970–5.
4. Goyal SB, Spodick DH. Electromechanical dysfunction of the left atrium associated with interatrial block. *Am Heart J* 2001;142:823–7.

Competitive Athletes and Left Atrial Remodeling

In a recent issue of the *Journal*, Pelliccia et al. (1) assessed the prevalence and clinical significance of left atrial (LA) enlargement in competitive athletes. Enlarged LA size was common and present in 20% of examined athletes, and we agree with the investigators that the possible determinants of these changes remain incompletely resolved. They found that LA enlargement occurred in association with left ventricular (LV) enlargement and were largely dependent on the type of sport practiced, with cycling, rowing, and canoeing showing maximal impact. In their opinion these changes are due to the increased preload as they revealed normal resting LV diastolic filling and systolic function.

Rowing and cycling represent typical strength and endurance sports involving combined dynamic and static exercise of large