account may improve the utility of IMA in predicting serious cardiac outcomes.

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We thank Giuseppe Lippi and colleagues for their comments. The average serum level of IMA that they reported in their study (94 μ/mL, 97.5% confidence interval 84-104 μ/mL) is higher than the 2 cutoffs we employed: 85 μ/mL (suggested by the manufacturer) and 80 μ/mL. In our paper we indicated that we explored multiple IMA thresholds (including 100 μ/mL) but this did not alter our findings.[1] Therefore, in patients presenting with chest pain who have not yet experienced a serious cardiac outcome, IMA appears to be a poor predictor of serious cardiac outcomes.

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Questioning the benefits of statins

The assessment by Douglas Manuel and associates[1] of the 2003 Canadian dyslipidemia guidelines[2] is welcome, but they overlooked the all-cause mortality issue, where statins have essentially failed to deliver.[1] There are no statin trials with even the slightest hint of a mortality benefit in women,[3-5] and women should be told so. Likewise, evidence in patients over 70 years old shows no mortality benefit of statin therapy: in the PROSPER trial there were 28 fewer deaths from coronary artery disease in patients who received pravastatin versus placebo, offset by 24 more cancer deaths.[6]

The failure of statins to decrease all-cause mortality is possibly best illustrated by atorvastatin: while both the ASCOT[7] and TNT[8] trials found that atorvastatin therapy decreased the risk of cardiovascular events, in the ASCOT trial (placebo v. 10 mg atorvastatin daily) the all-cause mortality curves effectively touched at mean study end (3.3 years) and in the TNT trial (10 v. 80 mg of atorvastatin daily) there were 26 fewer deaths from coronary artery disease in patients taking the higher dose offset by 31 more noncardiovascular deaths at median study end (4.9 years). Incidentally, the ASCOT trial failed to find a cardiac benefit of statin therapy in women and patients with diabetes.

The Web site of the ALLHAT study says it best:[9] "trials [primarily in middle-aged men] demonstrating a reduction in [coronary artery disease] from cholesterol lowering have not demonstrated a net reduction in all-cause mortality." What is the point of decreasing the number of "events" without decreasing overall mortality, when the harm caused by the side effects of statin therapy is factored in?

The failure of statins to reduce all-cause mortality clearly supports the call for more effective approaches. Guidelines should reflect this finding, certainly in their recommendations for women and probably in those for most men too.

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9 ALLHAT: the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial [Web site]. Houston: Coordinating Center for Clinical Trials. Available: http://allhat.sph.uth.tmc.edu/study/study.cfm (accessed 2005 Oct 12).

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The recently published controversy on the 2003 Canadian dyslipidemia guidelines[1-3] should be cause for some reflection on the utility of guidelines. The back-and-forth dialogue was reminis-

cent of what does, or should, occur daily in the offices of Canada's family physicians.

Family doctors see patients with various values, resources, education levels, motivations, fears, preferences, degrees of risk aversion and levels of understanding. Their task is to define treatment goals consistent with all these patient attributes and then base management decisions on those goals. Guidelines, where available, should contribute to the discussion but should rarely be the sole determinant of a patient's treatment goals. Just as from a population health perspective we must weigh benefit with cost and lost opportunity, so must we do with each individual. Guidelines must inform us but should not necessarily compel us.

Unfortunately, as our primary care system comes under more and more stress, the family physician's ability to discuss individual treatment goals, as opposed to simply applying guidelines, is diminished. It is easier to titrate a drug to a guideline or laboratory end point. Furthermore, achievement of such end points is often easily measured and therefore this goal is attractive to administrators. This may not, however, be best for patients when evaluated in the context of treatment goals, population outcomes and system costs.

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Eddie Vos and Colin Rose are concerned that we overestimated the benefit of statins in women and older people in our analysis[1] of the Canadian recommendations for dyslipidemia management.[2] On the other hand, Jacques Genest and colleagues accused us of underestimating the benefit of statins.[3] Others suggest that statins have a small or no relative benefit in people at low risk of developing cardiovascular disease.[4]

Debates about the relative benefit of statins are welcomed but do not change the main findings of our analysis, because a patient's underlying risk of cardiovascular disease is in many cases more important than the precise relative risk reduction.[5] Statins have a very small absolute benefit in people at low risk and a very high absolute benefit in people at high risk. The 2003 Canadian dyslipidemia guidelines[2] inappropriately fail to recommend treatment of many Canadians at the highest risk of developing cardiovascular disease while recommending treatment of markedly more individuals at low risk.

If we assumed a higher relative benefit of statins in our analysis, as Genest and colleagues suggested, it would be even more apparent that the guidelines should recommend treatment to people at high risk who are not currently offered statins. However, because the baseline risk of death is very small in groups at low risk of developing cardiovascular disease, even with a higher relative benefit of statins very few deaths would be avoided in these people. If we assumed a lower relative benefit of statins, as Vos and Rose suggest, the absolute benefit in populations at low risk would no longer be extremely small (as we found in our original analysis) but would be virtually undetectable, or statin therapy would possibly even have to be considered harmful. In the end, the take-home message remains the same: statins are beneficial in people at high risk of cardiovascular disease and not clinically important in those at low risk.

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Correction

In a recent Review article,[1] the amount for saline, as indicated in the caption for Fig. 1, should have read 0.45% (not 45%).

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