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Reply to the Editor:

My coauthors and I thank Drs Kourliouros, Roberts, and Jahangiri for their interest in our recent study.¹ We do not disagree with their suggestion that different statins may exhibit varying degrees of pleiotropic effects (eg, anti-inflammatory effects), and thus believe that their hypothesis that statins may have differential abilities to prevent postcardiothoracic surgery (CTS) atrial fibrillation is not unreasonable. It is, however, important to note that the intent of our nested cohort study was to assess whether statins as a class are associated with reductions in post-CTS atrial fibrillation when used in patients who already have a high background use of β -blockers (84%) and appreciable use of prophylactic amiodarone (44%), rather than to evaluate individual statins or a dose-response relationship.¹ Our primary analysis was worthwhile, because a large proportion of patients in ARMYDA-3—the only randomized controlled trial designed to assess the effect of a statin (atorvastatin at 40 mg/d) on post-CTS atrial fibrillation as a primary end point—did not receive β -blockers (arguably the criterion standard preventative strategy), and virtually none received prophylactic amiodarone.² This treatment pattern likely explains the high incidence of post-CTS atrial fibrillation (57%) seen in the ARMYDA-3 control group.

Despite the criticism by Kourliouros, Roberts, and Jahangiri of our dose-response analysis, we believe that it provides valuable data to support the claim of a dose-response effect of statins on post-CTS atrial fibrilla-

tion. We would have liked to evaluate different statins and doses independently; however, the relatively small number of patients receiving a statin and the heterogeneous uses of different statins and doses by patients enrolled in the cohort would have resulted in an underpowered analysis.¹ That being said, we applaud the work of Kourliouros, Roberts, and Jahangiri in conducting an additional analysis to further the research in this area.³ Ultimately, as Kourliouros, Roberts, and Jahangiri suggest, all nonrandomized studies likely suffer from some degree of bias or confounding, which is why a randomized, controlled trial will be needed to determine definitively whether different statins exhibit different abilities to prevent post-CTS atrial fibrillation and whether dose-response relationships do, in fact, exist.

Craig Ian Coleman, PharmD
University of Connecticut School of Pharmacy
Storrs, Conn

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Box lesion or not—Still unsettled question

To the Editor:

I read with interest the article by Voeller and associates¹ in the April 2008 issue of the *Journal*. This is a single center study looking at occurrences of atrial arrhythmias on follow-up in patients who had the Cox maze IV procedure with and without box lesions. Although the authors have acknowledged several limitations, I would like to point out another important limitation. Over 60% of the patients had concomitant procedures, and a significant proportion of

them had valve operations, which is a significant confounder for occurrence of postoperative atrial arrhythmias. Analysis of the lone Cox maze IV group would probably offer better insight into the benefit of the box lesion. However, the numbers seem to be so small that there may not be adequate power for this analysis. I will look forward to any follow-up data in the future from the authors.

Uma N. Srivatsa, MD
Internal Medicine/Cardiology
University of California—Davis
Sacramento, CA 95670

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Aortic valve replacement dilemma: mechanical or biological prosthesis?

To the Editor:

The selection of the appropriate prosthesis for aortic valve replacement (AVR) is still open to debate in the case of patients in the sixth and seventh decades of life. Recently Brown and colleagues,¹ from Mayo Clinic, reported in the *Journal* on an interesting retrospective study about this topic. By means of patient matching according to clinical features, they observed in their population a survival advantage after aortic valve replacement with a mechanical prosthesis relative to a bioprosthesis. Brown and colleagues¹ stated that the study was subject to selection bias and noted that despite case matching and statistical analysis, surgical bias cannot be eliminated. Also, in our opinion, it is virtually impossible to avoid all biases and confounding factors in clinical studies. Nevertheless, the recording of aortic valve replacement as associated or not with coronary artery bypass grafting simply as a binary variable could be quite misleading in drawing conclusions from data analysis. In fact, age being equal, surgeons could elect to implant a bioprosthesis rather than a mechanical valve in patients affected by more severe coronary artery disease. Both the extent—isolated single-vessel disease versus triple-vessel disease—and the