Response to Letter Regarding Article, “Predictors of Long-Term Survival After Coronary Artery Bypass Grafting Surgery: Results From the Society of Thoracic Surgeons Adult Cardiac Surgery Database (the ASCERT Study)”

We thank Dr Poullis for his careful review of our article, and we are pleased to respond to the issues he has raised. First, our study was confined to patients who underwent isolated coronary artery bypass grafting. However, as in most real-world populations of patients who undergo this procedure, some of those in our study did have mild coexisting valve disease that was not felt to require concomitant repair or replacement. There were even a very few patients with more severe valve disease who, for what were likely to have been unusual circumstances, only had coronary artery bypass grafting. The increased hazard ratios associated with coexisting moderate to severe valvular insufficiency and with progressive aortic stenosis convey an important message that would not have been apparent had we excluded all such patients from our study. The presence of uncorrected, significant coexisting valve disease is associated with an increased risk of long-term mortality for patients who undergo coronary artery bypass grafting, and a decision not to perform concomitant valve surgery must weigh the relative risk (increased operative mortality) and benefits (potential increase in long-term survival), taking into consideration the patient’s age, overall life expectancy, and quality of life.

Second, patients were followed from time of operation until December 31, 2008 (ie, in-hospital deaths were not excluded). Third, we did not define obesity as a body mass index >25 kg/m². Body mass index was analyzed as a continuous variable with a linear and quadratic trend. Hazard ratios were presented at a variety of arbitrarily determined body mass index values (20, 30, 35, and 40 kg/m²) compared with a normal reference value of 25 kg/m². We used the term obesity in a generic sense, primarily in a discussion of the so-called obesity paradox. In our article, this term included patients who were either overweight or obese according to the formal definitions noted in the letter of Dr Poullis. Fourth, our study was limited to patients >65 years of age because our source of long-term follow-up data was Medicare, which is generally limited to this age group. Fifth, glomerular filtration rate is typically estimated as a function of age, sex, race, and creatinine (ie, the Modification of Diet in Renal Disease formula). All these factors were included in our model. Last, our study focused on the prediction of long-term survival conditional only on preoperative patient variables. Consistent with usual practice, it did not include operative (eg, use of the internal mammary artery) or postoperative (eg, complications such as renal failure) variables. However, additional studies are planned to investigate the impact of such factors on long-term survival.

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Disclosures

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