REPLY
We appreciate the supportive data provided by Van Norman and Posner regarding an enhanced risk in these patients with coronary artery disease who underwent percutaneous transluminal coronary angioplasty (PTCA) prior to noncardiac surgery (NCS). In contrast to the study cited in their letter (1), our study (2) covered a later time period (1996 to 1998) and included only patients who had undergone coronary stent implantation within six weeks of NCS. Although our conclusions are similar, that there is a paradoxical increase in risk, we find this risk to be demonstrated only in those patients whose NCS occurred within two weeks of stent implantation.

Hence, their suggestion that NCS be postponed 40 to 90 days after coronary intervention may not be applicable to stented patients.

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REFERENCES

Reduced Global Myocardial Thallium Uptake—An Important Marker of Severe Coronary Artery Disease
We read with interest the study by Kwok et al. (1). Their study examines a cohort of patients with a single abnormal territory on thallium perfusion imaging, but in whom 26% are shown to have severe three-vessel or left main disease (3VLMD) on angiography. The authors present the clinical concern that individuals with a single territory defect rather than those with multi territory disease will be less likely to be referred for angiography and therefore be denied potential revascularization and improved long-term outcome.

The report, therefore, highlights the importance of clinical and exercise variables for identifying 3VLMD, and the results would support the rationale for performing perfusion imaging with exercise stress rather than pharmacologic methods wherever possible.

Regarding the thallium imaging itself, however, an important radionuclide marker of severe disease that would have strongly affected the model was not employed. It is accepted that insufficient stress or the presence of collateral blood supplies may produce small defects. Of more concern is whether severe 3VLMD limits the flow to all territories, thereby reducing global myocardial thallium uptake. Two possibilities may result: either one artery will harbor the most critical lesion, thereby producing a single territory perfusion defect relative to the other abnormal territories, or rarely, an apparently normal scan may be produced due to perfectly symmetrical, proximal three-vessel disease. To identify these possibilities, a simple estimate of global myocardial thallium uptake can be the discriminatory factor (2). Rather than simply comparing myocardial and lung thallium uptake, a ratio of left ventricular thallium counts (minus background region) compared with administered injection dose (calculated as the difference between presyringe and postsyringe counts over 10 s) could be expressed. This method in a group of 90 patients undergoing diagnostic coronary angiography increases sensitivity for detecting three-vessel disease from 77% with perfusion scoring alone to 95% with the myocardial uptake score included, with no reduction in specificity (3). In a concluding remark, the authors also express enthusiasm for future ECG gating of images. We have demonstrated that this will notably increase sensitivity and specificity for patients with coronary disease (4).

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CAD detection because planar imaging (which has lower sensitivity compared with single photon emission computed tomography (SPECT) for any CAD) was used (3). Balanced ischemia (apparently normal scans due to symmetric reduction in flow reserve in all three coronary territories) is a concept that was derived when planar imaging was common. We have previously shown that true "balanced ischemia" occurs in <5% of all patients with triple-vessel CAD using SPECT imaging (5).

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