$(a - a_1/a = RF/EF)$. Furthermore, the UIR is not a noisy curve and therefore gamma fitting of the UIR components is not a problem. Indeed, when the UIR is obtained after lagged normal deconvolution, the unit impulse response (constrained to be a non negative sum of lagged normal curves) is well suited for gamma fitting (*1,2*). Theoretically, we agree with Eterović about the fitting before deconvolution, but in real life things are not always so mathematically obvious. We think that pulmonary and LV curve fitting are necessary, because the ends of the curves are noisy and the activity probably does not originate only from recirculation in the concerned compartment.

Finally, we would like to point out that although Eterović demonstrates that this model is better suited for mitral and tricuspid regurgitation, we only used it in mitral and aortic insufficiency: in our series, we studied four patients with pure aortic insufficiency, and correlation with contrast ventriculography was excellent (Patients 19, 20, 23, 24). It should be of interest to test this model in tricuspid regurgitation, as suggested by Eterović, but in this case, gamma curve fitting and deconvolution would probably not be necessary, because of the good curve quality and to the absence of dilution of the radionuclide bolus in the right heart.

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Thallium-201 SPECT in Coronary Artery Disease Patients with Left Bundle Branch Block

TO THE EDITOR: After having finished interpreting 13 thallium stress tests on a busy Monday in our nuclear imaging department, it was with great interest that I read DePuey's article "Thallium-201 SPECT in Coronary Artery Disease Patients with Left Bundle Branch Block," (*J Nucl Med* 1988; 29:1479–1485). On this given day, six patients were studied with single photon emission computed tomography (SPECT) imaging using the bulls-eye program that DePuey et al. discuss and three of these patients had left bundle branch block. Unfortunately, after reading their article on thallium-201 SPECT in patients with LBBB, I really have no further insight into the problem with false-positive studies than I had prior to reading this publication. The major problem I have with this article is the fact that the study population is so small (n = 14). This is an extremely small population of patients from which to generalize major comments regarding the utility of SPECT thallium imaging in patients with LBBB. The kind of information that practicing physicians need to know is what percentage of patients with LBBB will have false-positive thallium studies. This information cannot be reliably obtained when the sample size is so small.

One additional problem I had with the manuscript is that from reading the Methods section, it seems the interpretation of a positive study is based solely on reading bulls-eye polar coordinate maps. While my experience with thallium SPECT scanning using the bulls-eye polar coordinate maps is not extensive (SPECT Tl-201, n = 300; Planar Tl-201, n = 13,000), I have often found myself in a difficult situation where the tomographic sections appear to be normal, while the bulls-eye polar coordinate map is abnormal. Since it is well known that multiple factors can cause false-positive polar coordinate maps, I am reluctant to call an examination positive only in the basis of the polar coordinate map. From DePuey's article it seems that the tomographic sections themselves were not interpreted as part of the study, but that the authors only used bulls-eye information. If this is true, it would be helpful for me to know what percentage of the bulls-eye polar coordinate maps yielded information different from visual interpretation of the tomographic section.

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REPLY: We appreciate Dr. Winzelberg's comments regarding our investigation. When interpreting thallium-201 single photon emission computed tomography (^{201}Tl SPECT) studies, it is absolutely critical to inspect both oblique slices and polar coordinate maps. In our laboratory, in which now over 15,000 patients have been studied with ^{201}Tl SPECT, the 32 planar acquisitions are first viewed in "rotating" cinematic format to detect patient motion, excessive lung activity, tracer-avid visceral structures overlying the myocardium, and soft tissue attenuators. Next, oblique short axis, verticle long axis, and horizontal long axis slices for stress and then delayed images are viewed systematically. Only after a preliminary interpretation is drawn from oblique slice review do we inspect the bulls-eye plots, which aid in assimilation of the complex three-dimensional tomographic data. Finally, standard deviation plots in which patient data are compared to gender-matched normal files are reviewed. With increasing experience and awareness of the many causes of SPECT scan artifacts, very seldom is there discrepancy between interpretations from oblique slice and bullseye plot reviews. In our article only the quantitative analysis of lateral-to-septal myocardial ratios was performed on the bullseye plots alone.

Since for many years the literature has cautioned us of the nonspecificity of regional septal wall motion abnormalities, decreases in ejection fraction during exercise, and septal perfusion defects in patients with left bundle branch block (LBBB), we have discouraged referral of patients with LBBB for equilibrium radionuclide angiocardiography and ^{201}Tl imaging for the diagnosis of coronary artery disease. This is a major reason for our small patient population with cath correlation. We are sometimes referred patients with LBBB who have a low pretest likelihood of coronary disease. If ^{201}Tl SPECT demonstrates only a septal perfusion defect, patients usually do not undergo diagnostic catheterization.

When our manuscript was initially submitted for review, we included an additional ten asymptomatic patients who