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REPLY: My response to the concerns raised by Dr. Bianco are as follows.

1. Our study (*1*) compared FDG with fatty acid uptake in infarcted areas. Additional information concerning ^{201}Tl reinjection would certainly be of interest. In this study, we were limited to the injection of three radioactive tracers. Thallium-201 reinjection would have increased considerably the radiation dose received by the patients.
2. We are in agreement with Dr. Bianco that the comparison between wall motion obtained from ventriculography and scintigraphy by PET and SPECT has its limitations. Nevertheless, it is currently a widely accepted and available method.
3. Because of the above-mentioned difficulty of comparing functional and scintigraphic data, a division of the heart into quadrants was chosen for the comparison of wall motion and scintigraphic data, whereas for the comparison of various scintigraphic data, smaller segments (41 segments per heart) were used. The finding of disparate results by Dr. Bianco was the result of misreading. As we state in the second sentence in the Results section: "Of a total of 128 analyzed quadrants 43 (34%) exhibited ^{201}Tl defects in the redistribution tomogram. Out of these, 23 (53%) had low FDG and oPPA uptake, 13 (30%) normal FDG and oPPA uptake, 1 (2%) low FDG but normal oPPA, and 6 (14%) normal FDG but low oPPA uptake." This means that 19/43 (44%) quadrants with a defect in the ^{201}Tl redistribution tomogram exhibited normal FDG uptake. This is in agreement with 39% in the case of myocardial segments.
4. The negative correlation between free-fatty acid concentration in plasma and myocardial glucose uptake (*2,3*) is well known. The aim of the study was to evaluate the merit of scintigraphy using the iodinated fatty acid derivative oPPA against that using FDG under the metabolic condition that is technically best suited for each scintigraphic procedure. This was done by fasting in the fatty acid studies and by elevating the insulin level (by glucose load) in the FDG studies. Obviously, insulin is the major determinant of FDG uptake. The positive correlation between oPPA and FDG uptake in ^{201}Tl redistribution defects under these metabolic conditions is moderate, but significant.
5. The paper of Liedtke et al. (*4*) referred to by Dr. Bianco reports an increase of palmitate oxidation after relatively mild ischemia (60% flow reduction during 45 min) followed by 1 hr of reperfusion. Fatty acid uptake was not determined in this study. It is improbable that this experimental model characterizes the metabolic situation in patients who have had a myocardial infarction more than 4 wk prior to the study. Furthermore, oPPA traces mainly fatty acid uptake and only a minor proportion undergoes β-oxidation (*5*). Schwaiger et al. (*6*) reported that in the fasting state about one-third of the glucose extracted by the myocardium immediately enters the glycolytic pathway under control conditions. After a 3-hr occlusion and 24-hr reperfusion, the extraction of glucose increased, whereas that of nonesterified fatty acids decreased. About two-thirds of the glucose, which is extracted by the myocardium under this condition, immediately enters the glycolytic pathway. Additional studies using ^{11}C-palmitate also showed a depressed fatty acid uptake to various extents during reperfusion (*7,8*).

In general, the suitability of a tracer as a marker of myocardial viability probably depends on more complex factors, not primarily whether the substrate is the preferential one for reperfused areas. In comparison to the regional myocardial uptake of FDG, the uptake of fatty acids is, for example, much more dependent on myocardial blood flow due to the lower extraction fraction of FDG.

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Development of New Radiopharmaceuticals

TO THE EDITOR: This letter is addressed to all my colleagues in the field of nuclear medicine for their consideration and contemplation.

I have been directly involved in the commercial development of new radiopharmaceuticals for 25 years. I have lived through the transition from virtual freedom in the practice of nuclear medicine to the current restrictive environment. I now want to share with you some of my experiences, insights and perspectives.

The current regulations and restrictions imposed on the practice of nuclear medicine significantly impede growth. However, regulatory agencies are not the greatest impediment to the growth