procedure. It is Du Pont's position that this information should be transmitted to nuclear medicine technologists, nuclear pharmacists and any other individuals preparing a dose of I.V. Persantine® through customer education and training. Such instructions do not appear to be a normal part of a drug's package insert (PI). A review of the PDR indicates that no major parenteral product commercially available in ampules includes a statement requiring that these products be filtered prior to administration.

Second, the authors indicate that although the PI clearly states that the product should be protected from direct light, it is not clear why the I.V. Persantine® injection reacts to light exposure and for how long a period of time I.V. Persantine® can be exposed to light without causing any noticeable degradation of the drug. We offer the following information to clarify this concern. Once I.V. Persantine® is diluted, there is an apparent increase in light sensitivity of the dipyridamole molecule. In studies performed by BIPI, the maximum rate of degradation varied from about 3 hr to 30 hr. The 3-hr rate occurs in diluted (reconstituted) I.V. Persantine®, while the 30-hr rate corresponds to relatively more concentrated aqueous I.V. Persantine® solutions. The degradation rate constant is obviously dependent on the light intensity in the laboratory. Thus originates the I.V. Persantine® package insert statements "avoid direct light", "keep the product in the original carton to provide protection from light until dispensed" and "solution should not be used if discolored." Prudent use of I.V. Persantine® would suggest storing the undiluted ampules in a cabinet, free from direct light subject to the expiration date. After dilution, the material should either be stored free from direct light (ideally) or not longer than about 3 hr when exposed to ambient light (prior to patient administration).

Finally, the last question asked by the authors is why is I.V. Persantine® packaged in a 2-ml ampule containing 10-ml of dipyridamole versus a larger single patient dose ampule or multiple patient dose ampule/vial. The 2-ml ampule is the first commercially available form for I.V. Persantine® because data for this "putup" was submitted in the original NDA to the FDA. We are currently working on alternative putups for I.V. Persantine® that must be submitted for FDA review prior to commercialization.

We hope that this adequately answers the questions outlined by the authors from the Mayo Clinic. If anyone has any further questions, please do not hesitate to call the Du Pont Pharma nuclear cardiology hotline at 1-800-343-7851 for further clarification.

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Detection of Myocardial Validity

TO THE EDITOR: The January 1991 issue of the *The Journal of Nuclear Medicine* contains a Clinicopathologic Conference (CPC) on detection of myocardial viability with PET in a patient with probable ischemic cardiomyopathy.

The case is excellently presented by Dr. Weiss. The discussion by Dr. Eisen is topical, informative, and well-written with pertinent references. I am perplexed however by Fig. 1 in the CPC. These images are planar images (the text states that a "tomographic thallium study was performed . . ."). The legend for Figure 1 indicates that the images "show an anterior and upper septal defect with no redistribution." To this reader's eye the "anterior and upper septal defect" could easily represent normal decreased activity in the LV outflow tract/mitral apparatus. I would assume tomography showed fixed defects in the above-mentioned areas, however, other than LV dilation, the images in Figure 1 are unremarkable.

REFERENCE

1. Weiss D, Eisen HJ, Alavi A. Detection of myocardial viability with positron emission tomography in a patient with ischemic cardiomyopathy. *J Nucl Med* 1991;32:130–135.

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REPLY: The question raised by Dr. Campeau regarding the thallium scans in Figure 1 can be explained by the fact that the patient in the CPC underwent two thallium studies. The first was a tomographic thallium study during cardiac pacing and was performed on September 7, 1989. The patient's heart was paced to 87% of predicted maximum and a large fixed defect was noted in the septum, apex and inferior walls with dilatation of the left ventricle. Only slight improvement was noted in the anteroseptal wall. The patient was then transferred to our institution on September 18, 1989. He underwent a stress-rest thallium study on September 22, 1989. This was a planar study and is shown in Figure 1. For this study, the patient achieved 60% of maximal-predicted heart rate. Scintigraphy revealed a dilated left ventricle with fixed defects in the anterior and upper septal walls consistent with scar. No ischemia was noted. Dr. Campeau is correct that these defects could represent decreased activity normally seen in the LV outflow tract and mitral apparatus, although the anterior defect in the LAO 70° view appears to be too extensive to be a normal variant. The findings described for the planar thallium-stress test shown in Figure 1, which was obtained at our institution, are similar to those reported in the pacing tomographic thallium study performed at the referring institution, except that we did not see the inferior wall defect. We were unable to obtain satisfactory images for reproduction purposes from the initial pacing thallium study. The results of both the tomographic thallium scan at the referring hospital and the planar thallium scan obtained at our hospital and shown in Figure 1 are discussed on page 131 of the CPC.

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Determining Gastric Emptying Rate

TO THE EDITOR: Gastric emptying and its rate are determined by multiple complex factors, many of which are inextricably interelated. There is, however, one variable of a test meal that cannot possibly influence gastric motility except indirectly—its caloric content.

In spite of the obviousness of this thesis, the nuclear medicine gastric motility literature offers a litany of ill-conceived hy-