

ment, reconciles the seemingly contradictory experiences we have referred to. Apparently, indium is taken up by the normal spleen but to an extent that does not allow visualization of this organ during whole-body imaging as usually performed. Figure 1 presents $^{111}\text{InCl}_3$ posterior whole-body images in two different patients: a control patient of normal health (studied as part of ongoing research), and a patient 5 years postsplenectomy. No significant difference in the amount of activity in the splenic area is visible.

Definite splenic visualization is probably an abnormal finding. However, the lack of correlation between the amount of indium in the spleen assessed scintigraphically and the presence of erythropoietic elements assessed histologically, noted by McNeil (5), as well as the lack of correlation between the ^{52}Fe and ^{111}In whole-body images in patients with red cell aplasia, noted by Merrick himself (1), indicate that the ultimate significance of ^{111}In splenic

uptake remains to be established.

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REFERENCES

1. MERRICK MV, GORDON-SMITH EC, LAVENDER JP, et al: A comparison of ^{111}In with ^{52}Fe and $^{99\text{m}}\text{Tc}$ -sulfur colloid for bone marrow scanning. *J Nucl Med* 16: 66-68, 1975
2. STAUB RT, GASTON E: ^{111}In -Chloride distribution and kinetics in hematologic disease. *J Nucl Med* 14: 456-457, 1973
3. TOUYA JJ, ANSELMI OE, FIGUEROA WG, et al: Indium-transferrin metabolism in comparison with iron metabolism. *J Nucl Med* 15: 539, 1974
4. FARRER PA, SAHA GB, KATZ M: Further observations on the use of ^{111}In -transferrin for the visualization of bone marrow in man. *J Nucl Med* 14: 394-395, 1973
5. MCNEIL BJ, HOLMAN BL, BUTTON LN, et al: Use of indium chloride scintigraphy in patients with myelofibrosis. *J Nucl Med* 15: 647-651, 1974

THE AUTHORS' REPLY

In reply to the point made by Dr. Vieras, our experience in rats (1), mice, and humans (unpublished data) is that the specific activity of indium in the spleen is not significantly different from that found in the liver. We agree that it is not always possible to visualize the spleen as clearly as the liver, but factors such as levels of activity in the blood and the size of the patient are undoubtedly contributory factors.

We note that in the cases illustrated by Dr. Vieras, the kidneys are clearly demonstrated. In our experience this occurs only when the serum transferrin is almost fully saturated. Differences in the iron

saturation of different groups of patients may therefore be a further factor contributing to the discrepancies noted between the two medical centers.

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REFERENCE

1. MERRICK MV, NUNN AD, THAKUR ML, et al: The influence of ligand on the tissue distribution of carrier free ^{111}In in the rat. *Int J Nucl Med Biol* 2: 45-48, 1975

PERFORMANCE OF SCINTILLATION CAMERAS

At the Society of Nuclear Medicine 22nd Annual Meeting in Philadelphia June 17-20 many people witnessed the most splendid nuclear medicine technical exhibit ever. However, it was not possible to see how well these most attractive-looking instruments actually perform, and during several sessions many practitioners expressed an interest in the performance specifications and in methods of checking the quality of instruments presently in the field.

We have been interested in the performance of nuclear instrumentation for some time, and prior to the meeting we contacted all manufacturers of scintillation cameras and asked them for their performance data. Because of the great interest in this kind

of information expressed during the Philadelphia meeting, we think it should be made generally available to the nuclear medicine community. In addition to some standard information Table 1 gives the intrinsic resolution of each scintillation camera—that is, its spatial resolution without a collimator—as the width of the lead bars that can still be resolved and also as the full width at half-maximum (FWHM) of the line spread function. The spectral energy resolution refers to the FWHM of the photopeak. The methods for measuring the deadtime are still under investigation. The data submitted by some manufacturers refer to the detector proper while others refer to the complete system. A particular data stor-