

routine needs in view of the lack of adequate information on the biological variables in any organ dose calculation.

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#### REFERENCE

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### EFFECTS OF BREAST PROSTHESIS ON $^{99m}\text{Tc}$ -STANNOUS-POLYPHOSPHATE BONE SCANS

We reviewed with considerable interest the letter by Milder, et al (1) in the March 1973 issue of the *Journal*, having noticed the same finding in our own department on several liver scans.

In addition, we have observed a similar phenomenon in the anterior view of many of our bone scans, especially since we began using  $^{99m}\text{Tc}$ -stannous polyphosphate. It seems that the lower energy photons of  $^{99m}\text{Tc}$  are much more readily absorbed by the breast prosthesis than are the more penetrating radiations of  $^{85}\text{Sr}$  and  $^{18}\text{F}$ .

Admittedly, abnormalities on a bone scan usually present as a "hot" rather than a "cold" area; however, we think it quite conceivable that an area of

increased uptake might be missed because of absorption of low-energy photons by the prosthesis. Therefore, we think it advisable to remove such devices before scanning and would like to share our opinion with our colleagues elsewhere.

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1. MILDER MS, LARSON SM, SWANN SJ, et al: False-positive liver scan due to breast prosthesis. *J Nucl Med* 14: 189, 1973

### PITFALL IN THE PROTOCOL OF THE HUMAN PLACENTAL LACTOGEN TEST

Radioimmunoassay studies are becoming a common procedure in most community hospitals. Most protocols for these studies are well written. However, we have found a problem in the protocol of the Human Placental Lactogen Radioimmunoassay Study (Amersham/Searle, HPL Immunoassay Kit Working Protocol, Nov. 1972) since it failed to specify the type of molded plastic tube necessary for secondary containment.

We recently performed the HPL test with poor results. These poor results were manifested by poor formation of the precipitate, inability to centrifuge adequately the precipitate, erratic counting rates, and an inconsistent and poor standard curve. We were able to trace the poor results to the use of flat-bottom molded plastic tubes. Because the type of molded plastic tube was not specified in the Amersham/Searle protocol, we had used Abbott Laboratories  $\text{T}_3$  flat-bottom plastic tubes for secondary containment.

We since have corrected the problem by using round-bottom molded plastic polystyrene tubes (Kimble, sterile culture tubes with caps, sizes  $10 \times 75$  mm or  $12 \times 75$  mm). Although it is well known that glass containers for secondary containment in the gamma counters using  $^{125}\text{I}$  should be avoided and molded plastic tubes should be used, Amersham/Searle failed to specify in its protocol what type of plastic tubes should be used. We recommend the protocol be amended to state that round-bottom molded plastic polystyrene tubes should be used for secondary containment when performing the Human Placental Lactogen Study.

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### REDUCTION OF THE EFFECTS OF SCATTERED RADIATION ON A SODIUM IODIDE IMAGING SYSTEM

In a recent article Bloch and Sanders outlined a method for reducing the effects of scattered radiation on a sodium iodide imaging system (1). We agree that this procedure does indeed diminish the

effects of scatter but have found it to have serious shortcomings.

Recently one of the authors (Lensink) proposed a similar system (2). It was abandoned when severe