BREAST SCINTIGRAPHY WITH ^{99m}Tc-PERTECHNETATE AND ^{67}Ga-CITRATE

We would like to draw the attention of Drs. Richman, Brodey, Frankel, et al (*1*) to our work. Over a 5-year period we also assessed the suitability of ^{67}Ga in the detection of breast cancer (*2–4*). Such imaging properties can only be determined from biokinetic studies. We therefore started detailed investigations in rats (*5,6*). To complement the authors' work we repeat our results below (*5*). Gallium-67 undergoes significant transfer to suckling neonates through mother's milk. Similar accumulation of ^{67}Ga was observed in clinical investigations which showed that ^{67}Ga uptake occurred even in nonlactating women and (what we consider to be of decisive importance) in different amounts in each breast. Thus, even ^{67}Ga concentration in one breast does not present any conclusive evidence for diagnosing breast cancer. We therefore conclude that ^{67}Ga, although undoubtedly valuable in several well-established clinical situations, is not useful in the detection of breast cancer.

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REPLY

We thank our colleagues for their interest in our research and share with them some disappointment that ^{67}Ga did not provide a more sensitive test for breast carcinoma.

Perhaps some points regarding ^{67}Ga concentration in the breast need emphasis. Of particular importance are the clinical observations that ^{67}Ga is concentrated in human breast milk in significant amounts (*1*) and that breast activity occurs in the prelactating patient as well (*2*). Gallium-67 uptake in the breasts has also been reported in an occasional nonlactating woman (*3*) and in one case of gynecomastia (*4*). The use of experimental animals to confirm some of these observations is an interesting refinement.

Diffuse bilateral gallium activity throughout the mammary glands is thus a well-documented phenomenon. Such concentration may occasionally obscure ^{67}Ga localization in a breast carcinoma. However, an abnormal focal accumulation should be distinguishable in all instances from uniform homogeneous ^{67}Ga activity even when present in differing amounts in both breasts in the same patient. When observed, focal tracer increases therefore still warrant further investigation.

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