

Letter from the Editors

Nuclear Medicine has had a role in the management of patients with breast carcinoma since the introduction of the Strontium-85 bone scan four decades ago. The Technetium-99m phosphate compounds introduced in the early 1970s led to greater utilization. The recent development of lymphoscintigraphic sentinel node localization as well as single photon emission computer tomography (SPECT) and positron emission tomography (PET) studies of both primary breast lesions and nodal spread has broadened the spectrum of our role in assisting management decisions.

Radiographic mammography remains the primary screening procedure for breast cancer. However, it has limitations that often prevent it from distinguishing benign from malignant lesions. As a result, the majority of breast biopsies yield benign lesions. In limited areas of mammographic uncertainty such as fibrocystic disease, scintimammography with ^{99m}Tc -sestamibi, or ^{18}F -fluorodeoxyglucose (FDG) may be of value, although ultrasound and magnetic resonance imaging in these cases are preferred. PET studies have limited value in the detection of axillary node involvement because of the potential presence of undetectable micrometastases, but it does have a valuable role in detecting the extent of possible disease recurrence, both locally and distantly. The roles of the SPECT and PET studies are reviewed by Dr Taillefer and Drs Eubank and Mankoff, respectively, in this issue.

Another aspect of PET is its evolving role in augmenting the ^{99m}Tc -phosphate scan. Lytic lesions in particular may exhibit enhanced glucose metabolism, which is easily detected on FDG-PET studies at times when the conventional

bone scan may be less revealing. The article by Drs Fogelman, Cook, Israel, and Van der Wall provides us with some new insight into this area of study.

Sentinel node localization, mentioned earlier with both lymphoscintigraphy and the intraoperative gamma probe, has rapidly become a standard of care of breast surgery practice. Drs Naomi Alazraki and John Aarsvold have been active in evaluating the changing concepts of how the procedure is best performed. In addition to their paper, we are pleased to include an article from Dr Ron Kaleya and his associates providing a surgical perspective on the procedure.

Labeled antibody studies as reviewed by Dr Sally DeNardo remain more investigative in the study of breast cancer, although the specificity of the targeting offers some promise in the potential therapy of this disease.

Finally, Nuclear Medicine can play a useful role in palliating bone pain for those unfortunate patients who have osseous metastases and have become refractory to chemotherapy. Dr Ted Silberstein has long been a strong advocate of therapeutic radionuclide applications and provides us with an excellent overview of this important area.

This issue of *Seminars in Nuclear Medicine* provides the reader with a state-of-the-art report on Nuclear Medicine's multifaceted role in breast cancer diagnosis, staging, and therapy. Continued developments in several of these areas will define further the role of radionuclide methodology in this important area of oncologic diagnosis and therapy.

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