kinase in an in vitro model of cancer cell lines. *Eur J Nucl Med Mol Imaging.* 2005;32:820–827.
6. Cutrone JA, Yospur LS, Khalkhali I, Tolmos J, Devito A, Diggles L. Immunohistologic assessment of technetium-99m-MIBI uptake in benign and malignant breast lesions. *J Nucl Med.* 1998;39:449–453.
7. Cwikla JB, Buscombe JR, Kolasinska AD, Parbhoo SP, Thakrar DS, Hilson AJ. Correlation between uptake of Tc-99m sesta-MIBI and prognostic factors of breast cancer. *Anticancer Res.* 1999;19:2299–2304.

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REPLY: My coauthors and I read with interest the letter from Dr. Papantoniou et al. Much of the letter reports on the use of ^{99m}Tc-(V)DMSA for imaging of breast lesions. We did not use this tracer in our study and have only little experience with it. The authors agree with us that a faint and diffuse sestamibi uptake must not be considered as nonspecific or probably benign. The idea of a scoring system for scintimammography is interesting and must be validated. In our study, invasive—not only in situ—lobular carcinoma was associated with a faintly diffuse and heterogeneous uptake of sestamibi. Therefore, we think that the proposed class 3 should not refer only to a preinvasive component. Differentiating in situ from invasive components within a heterogeneous area of tracer uptake is probably not possible because of the limited spatial resolution of SPECT. After initial validation, such a scoring system could be tested in a prospective, preferably multicentric, clinical setting. A robust scoring system would certainly increase the strength of scintimammography as a second-line breast imaging technique.

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Use of ^{99m}Tc-Sestamibi Scintigraphy in Multiple Myeloma

TO THE EDITOR: We read with great interest the excellent review on imaging of malignant bone involvement by Einat Even-Sapir published in the August issue of *The Journal of Nuclear Medicine* (*1*). We would like to comment on the use of ^{99m}Tc-sestamibi in multiple myeloma. In recent years, different groups have reported a high accuracy for this tracer in the detection of active disease (*2–7*). In particular, ^{99m}Tc-sestamibi scintigraphy has shown a positive predictive value of 100% and a negative predictive value of 83% in the diagnosis of active multiple myeloma and a positive predictive value of 84% and a negative predictive value of 100% in identifying advanced stages (i.e., II or III) of disease (*2*). Positive ^{99m}Tc-sestamibi whole-body results were found in 30% of patients with no evidence of multiple myeloma on a radiologic full skeletal survey, and in the majority (76%), the scintigraphic findings agreed with the subsequent clinical follow-up (*3*). Moreover, there are consistent published data on the use of ^{99m}Tc-sestamibi in follow-up of patients with multiple myeloma (*4–6*). In particular, all patients with a negative ^{99m}Tc-sestamibi result at follow-up were actually in disease remission (either complete or partial), whereas 86% of those with a positive ^{99m}Tc-sestamibi result had disease progression (*4*). Even-Sapir expressed his concern about using ^{99m}Tc-sestamibi in follow-up studies because of the development of multidrug resistance, which may block tracer accumulation (*1*). In our experience, the multidrug-resistant phenotype is characterized by a faster washout of ^{99m}Tc-sestamibi rather than a lower early tracer uptake (*8,9*), and washout rates of ^{99m}Tc-sestamibi were indeed predictive of response to chemotherapy in these patients (10). Therefore, when images are acquired 10 min after tracer injection, the diagnostic accuracy of ^{99m}Tc-sestamibi scanning is not significantly affected by P-glycoprotein overexpression, and patients with multiple myeloma can confidently be monitored with ^{99m}Tc-sestamibi scanning after treatment.

REFERENCES

1. Even-Sapir E. Imaging of malignant bone involvement by morphologic, scintigraphic, and hybrid modalities. *J Nucl Med.* 2005;46:1356–1367.
2. Pace L, Catalano L, Pinto AM, et al. Different patterns of technetium-99m sestamibi uptake in multiple myeloma. *Eur J Nucl Med.* 1998;25:714–720.
3. Catalano L, Pace L, Califano C, et al. Detection of focal myeloma lesions by technetium-99m-sestaMIBI scintigraphy. *Haematologica.* 1999;84:119–124.
4. Pace L, Catalano L, Del Vecchio S, et al. Predictive value of technetium-99m sestamibi in patients with multiple myeloma and potential role in the follow-up. *Eur J Nucl Med.* 2001;28:304–312.
5. Balleari E, Villa G, Garre S, et al. Technetium-99m-sestamibi scintigraphy in multiple myeloma and related gammopathies: a useful tool for the identification and follow-up of myeloma bone disease. *Haematologica.* 2001;86:78–84.
6. Svaldi M, Tappa C, Gebert U, et al. Technetium-99m-sestamibi scintigraphy: an alternative approach for diagnosis and follow-up of active myeloma lesions after high-dose chemotherapy and autologous stem cell transplantation. *Ann Hematol.* 2001;80:393–397.
7. Alexandrakis MG, Kyriakou DS, Passam F, Koukouraki S, Karkavitsas N. Value of Tc-99m sestamibi scintigraphy in the detection of bone lesions in multiple myeloma: comparison with Tc-99m-ethylene diphosphonate. *Ann Hematol.* 2001; 80:349–353.
8. Fonti R, Del Vecchio S, Zannetti A, et al. Functional imaging of multidrug resistant phenotype by ^{99m}Tc-MIBI scan in patients with multiple myeloma. *Cancer Biother Radiopharm.* 2004;19:165–170.
9. Pace L, Catalano L, Del Vecchio S, et al. Washout of ^{99m}Tc-sestamibi in predicting response to chemotherapy in patients with multiple myeloma. *Q J Nucl Med.* 2005;49:281–285.

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