

Summary

Nuclear Medicine of Bone

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Bone scintigraphy using ^{99m}Tc -labeled phosphorous compounds was found to be the most frequently ordered nuclear medicine examination in a nationwide survey in Japan, and has been used for the detection of lesions and the evaluation of disease progression and response to therapy in various skeletal diseases.

In this article, we review improvement of the diagnostic sensitivity and specificity for bone metastasis of not only nuclear medicine techniques, such as planar imaging, SPECT, early flow phase imaging and

quantification of bone scintigraphy, and bone marrow scintigraphy but also such recently developed methods as bone mineral measurement, and bone metabolic marker assays. In addition, radionuclide therapy of intractable bone pain due to bone metastasis is also addressed.

Key words: Nuclear medicine of bone, Bone scintigraphy, Bone metastasis, Bone SPECT, Radionuclide therapy.