

Referrer's Guide to PET/CT NaF Imaging at The Brooklyn Hospital Center

Order F-18 NaF PET/CT bone scan instead of Tc-99m MDP bone scan under all established protocols to increase sensitivity and specificity for diagnosing metastasis.

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Functionally, F-18 NaF and Tc-99m MDP are similar; both concentrate in areas of bone remodeling. One major difference between them is NaF has higher contrast. The other major difference is PET has higher spatial resolution than planar imaging or SPECT. These differences allow NaF PET to detect smaller lesions and makes it more sensitive. The CT portion of PET/CT adds anatomical information that makes it more specific than conventional bone imaging.¹

Even-Sapir⁴ measured sensitivity and specificity in patients with high risk prostate cancer. They reported for planar bone scan 70% and 57%, respectively, for SPECT 92% and 82% while for PET/CT 100% and 100%. Hetzel⁵ measured area under the ROC for lung cancer patients and reported for planar bone scan 0.771, for SPECT 0.875 and for PET/CT 0.989. Similar findings were reported by Iagaru¹, Mosavi²