

## 골신티그라피와 F-18 FDG PET상 모두 음성인 무수히 많은 작은 결절성 골경화 병소들: 유방암환자에서의 Osteopoikilosis

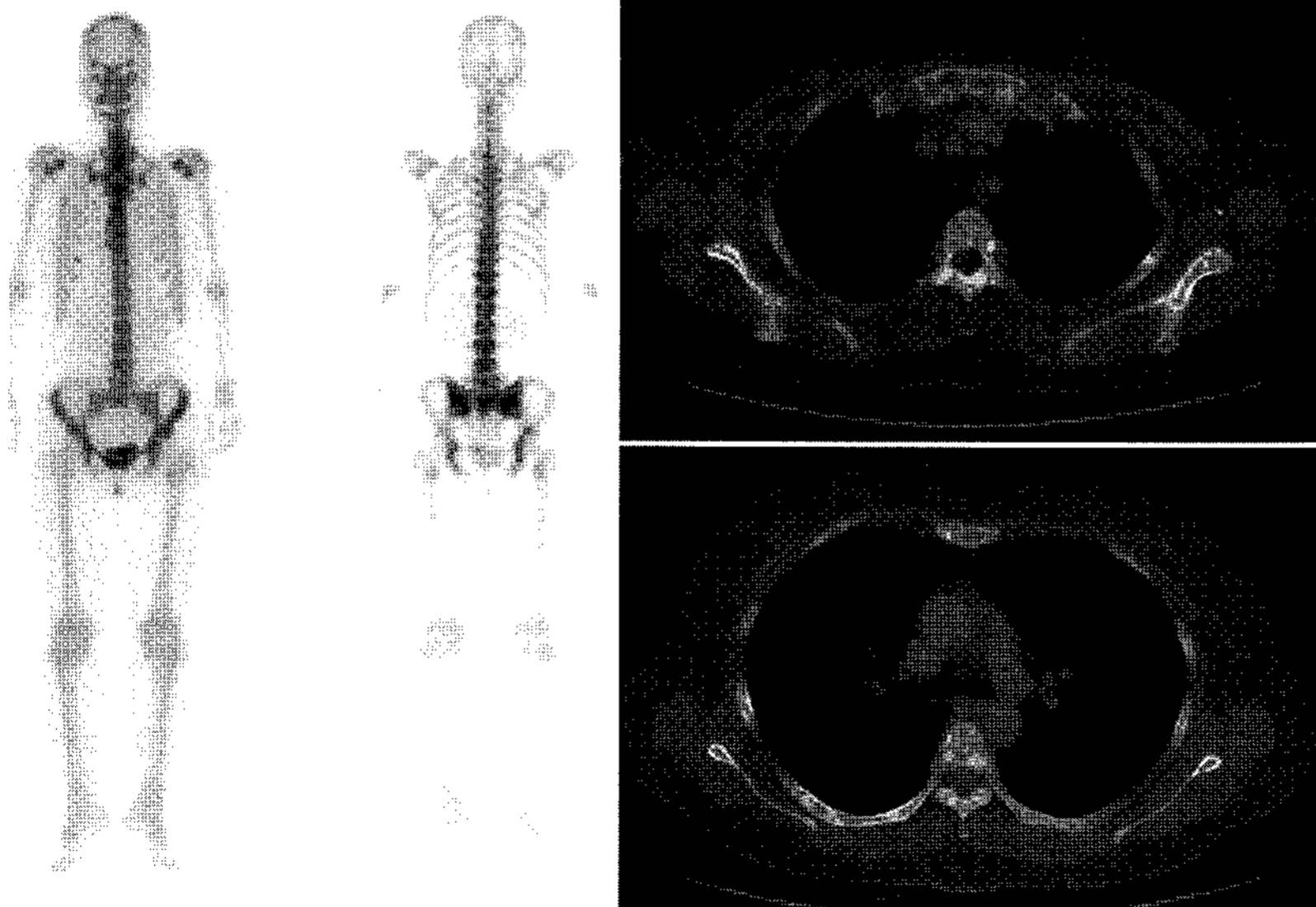
부산대학교병원 핵의학과  
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### Innumerable Small Bony Nodular Sclerotic Lesions with Negative Findings on Both Bone Scintigraphy and F-18 FDG PET : Osteopoikilosis in a Patient of Breast Cancer

Sungmin Jun, M.D., Yong-Ki Kim, M.D., In-Ju Kim, M.D., Hyun-Yeol Nam, M.D. and Bum-Soo Kim, M.D.  
*Department of Nuclear Medicine, Pusan National University Hospital, Pusan, Korea*

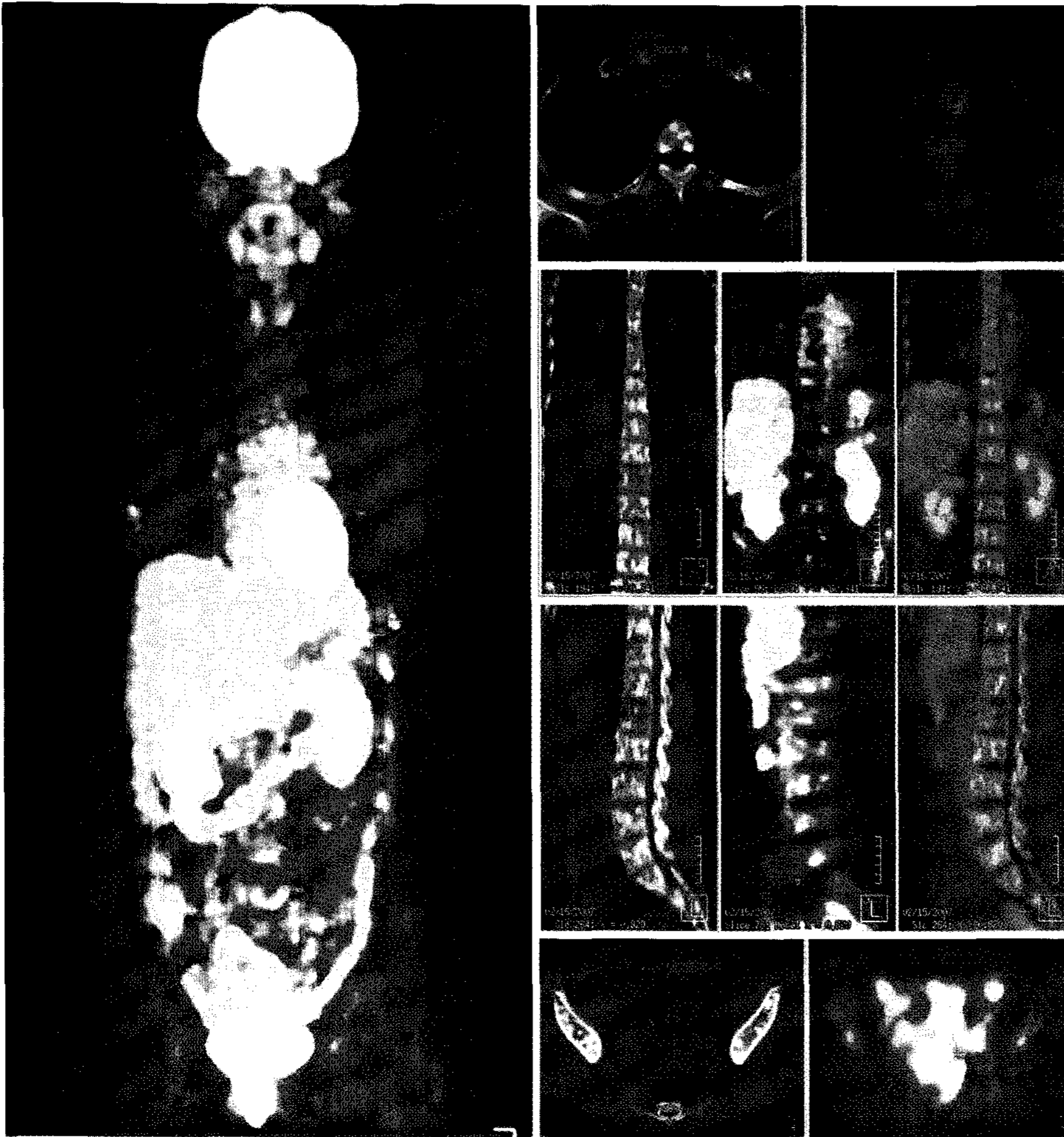
Osteopoikilosis is a rare, benign hereditary disease, which presents multiple osteosclerotic, and small round nodules in the bone. It is usually detected incidentally by radiological examination. A radionuclide bone scintigraphy is essential in distinguishing osteopoikilosis from osteoblastic metastases, because scintigraphic findings are usually normal in patients with osteopoikilosis. However, there have been no reports about F-18 fluorodeoxyglucose (FDG) PET findings in osteopoikilosis. Herein, we wish to report a case of osteopoikilosis with breast cancer, which could not be seen in either bone scintigraphy or F-18 FDG PET/CT. (Nucl Med Mol Imaging 2008;42(3):256-258)

**Key Words:** osteopoikilosis, breast cancer, bone scintigraphy, FDG PET



**Figure 1.** A 46-year-old female with breast cancer visited our hospital. A chest X-ray revealed multiple small, round, sclerotic bony lesions (not shown). Bone scintigraphy and chest CT were checked for evidence of bony metastases. Bone scintigraphy was normal (left); however, CT revealed innumerable small round osteoblastic lesions (right upper and right lower). The patient was presumed to have osteopoikilosis, because this condition typically exhibits multiple osteoblastic lesions with a lack of Tc-99m methylene diphosphonate (MDP) uptake.<sup>1-3)</sup>

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• Address for reprints: In-Ju Kim M.D., Department of Nuclear Medicine, Pusan National University Hospital, 1-10, Ami-dong, Seo-gu, Pusan 602-739, Korea  
Tel: 82-51-240-7389, Fax: 82-51-241-5570  
E-mail: injkim@pusan.ac.kr



**Figure 2.** For the evidence of other visceral metastasis and to rule out the rare type of bony metastasis not to be seen in the bone scintigraphy,<sup>4,5)</sup> an F-18 FDG PET/CT was performed. In the projection image of F-18 FDG PET (left), a mild hypermetabolic lesion (maximum SUV 2.3) was seen in the right breast. PET/CT images revealed innumerable small osteoblastic lesions in the vertebrae, sternum, ribs, and pelvic bones.<sup>6-9)</sup> However, lack of FDG uptake was seen on the PET and PET/CT fusion images, in the small round sclerotic lesions (right). There was no evidence of other visceral metastasis on the PET/CT. We therefore concluded that bony metastases in the whole skeleton, which could not be seen in either bone scintigraphy or F-18 FDG PET/CT, might be extremely rare in this patient, and that this patient had osteopoikilosis.



**Figure 3.** Pelvic X-ray revealed multiple small round and ovoid osteoblastic lesions.<sup>6-10)</sup> In these lesions, a lack of both Tc-99m MDP and F-18 FDG was noted, as seen in Fig 1 and Fig 2.

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