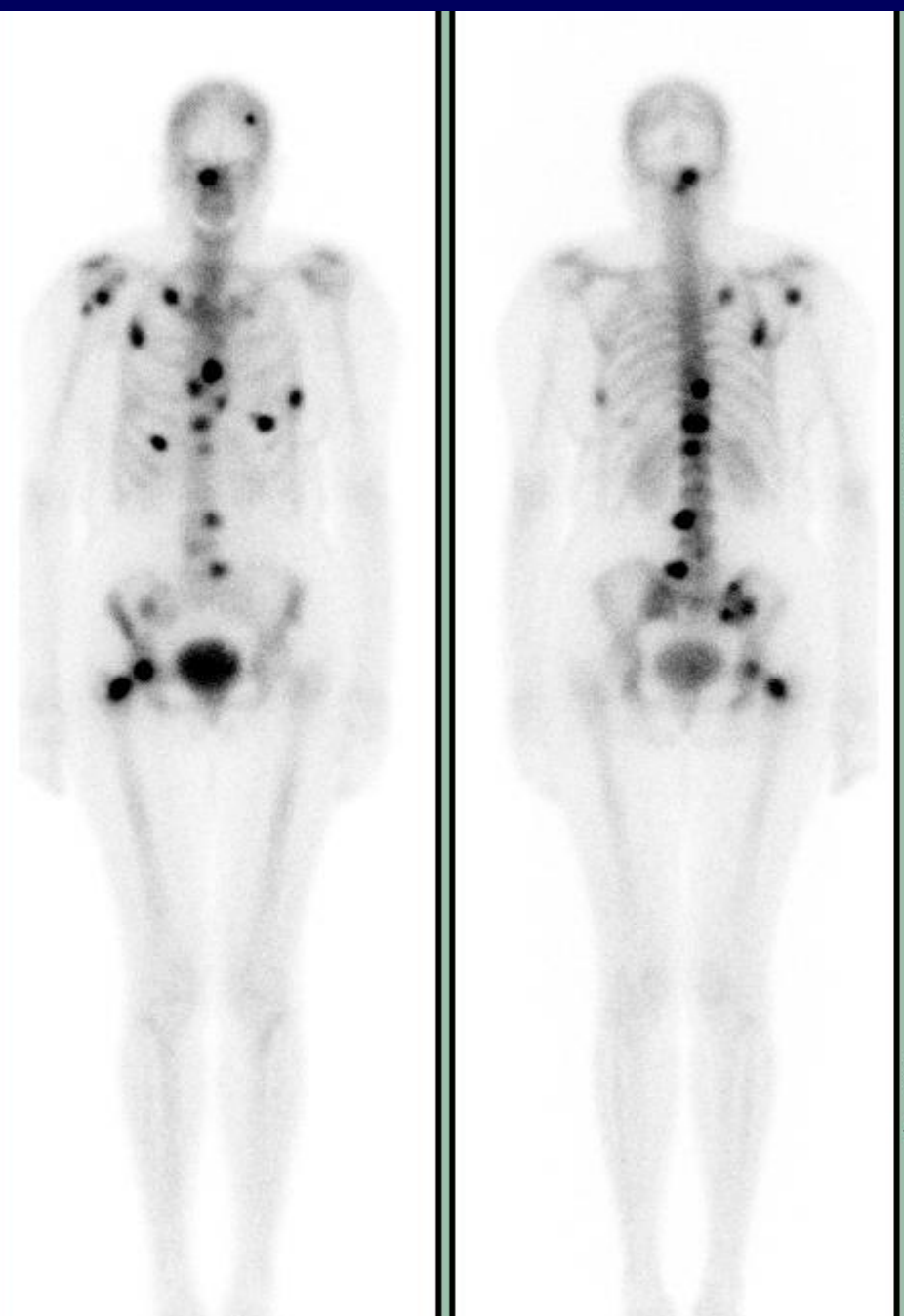
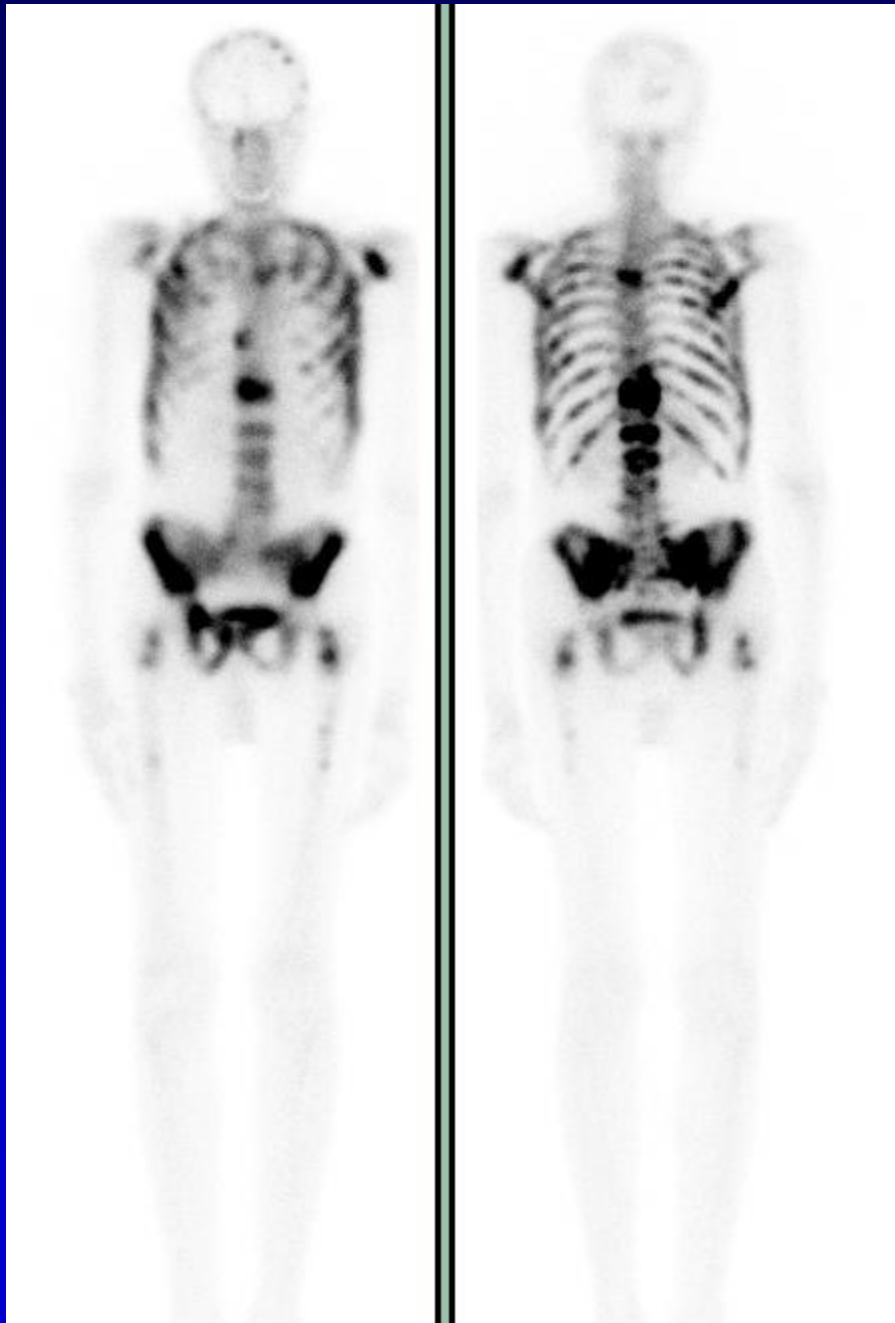


Whole Body Bone Scan: Anterior and posterior images are acquired approximately 2-3 hrs after the intravenous administration of 20-30 mCi of Tc99m MDP/HDP. Additional regional spot views can be acquired in any projection desired. The study is very sensitive for bone abnormalities but is non specific. Most common reason to do a bone scan is to screen for bone metastasis in patients with lung, breast and prostate cancer, as bone mets. from these cancers are osteoblastic. Tracer uptake reflects blood flow and bone turnover. The scan on the left shows normal distribution of the tracer, mild normal soft tissue activity, excretion from the kidneys into the bladder, scoliosis and mild associated degenerative changes in the lumbar spine.



Disseminated Bone Metastasis from breast cancer. Lesions in the vertebral bodies and the femur neck, which are at the risk for pathological fracture should be mentioned separately.



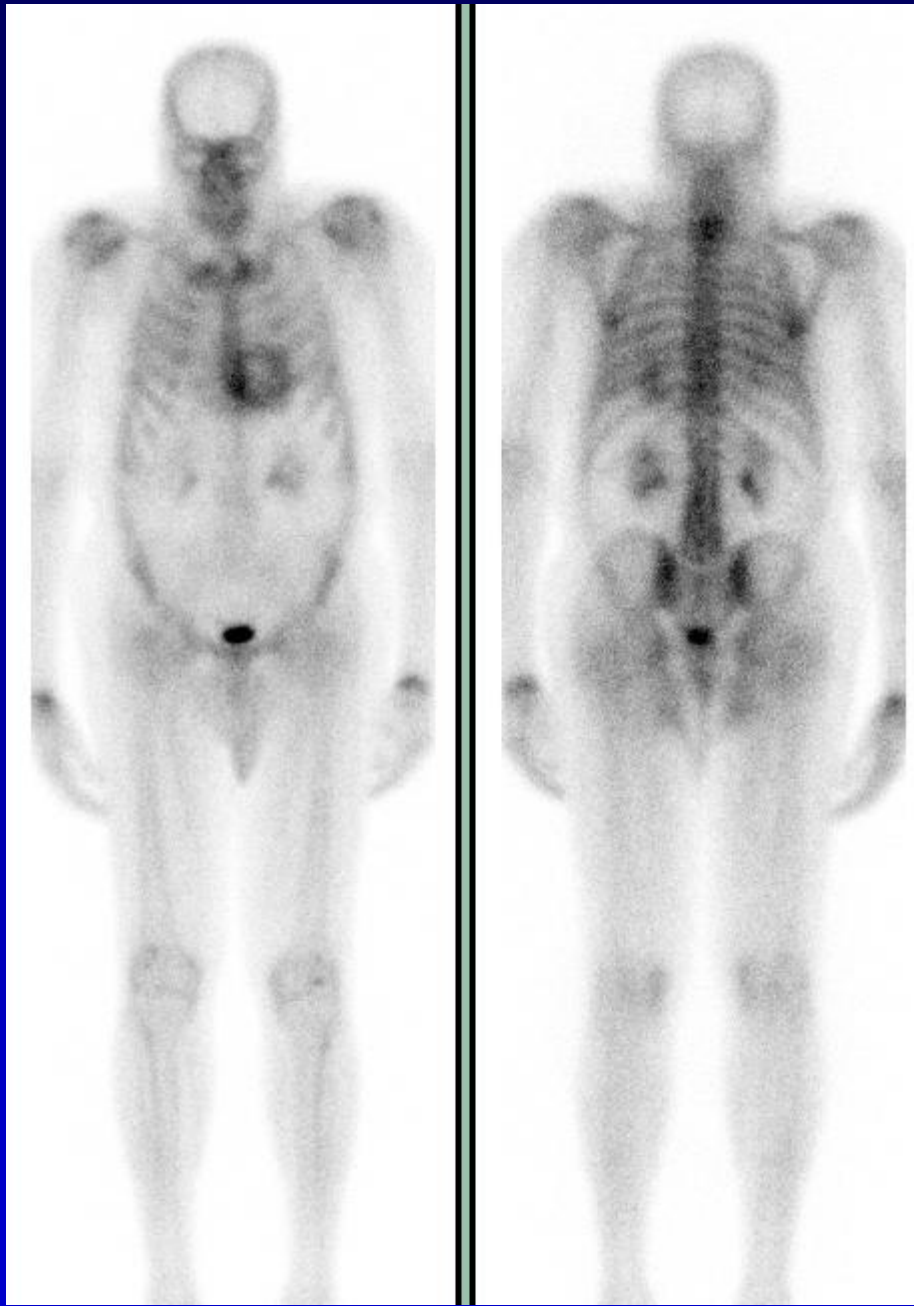
Diffuse metastatic disease, from prostate cancer. In a *super scan* from bone metastasis, there is intense diffuse uptake in the skeleton (in the distribution of active marrow) and minimal activity in the kidneys, bladder, and the soft tissues.



Hypertrophic Pulmonary Osteoarthropathy (HPOA), from lung cancer. HPOA has a variety of causes. Linear cortical uptake can also be seen with shin splints.

Increased tracer activity in the stomach from metastatic calcification. Other causes include free pertechnetate and necrotising enterocolitis. Other organs involved in metastatic calcification are lungs and kidneys.



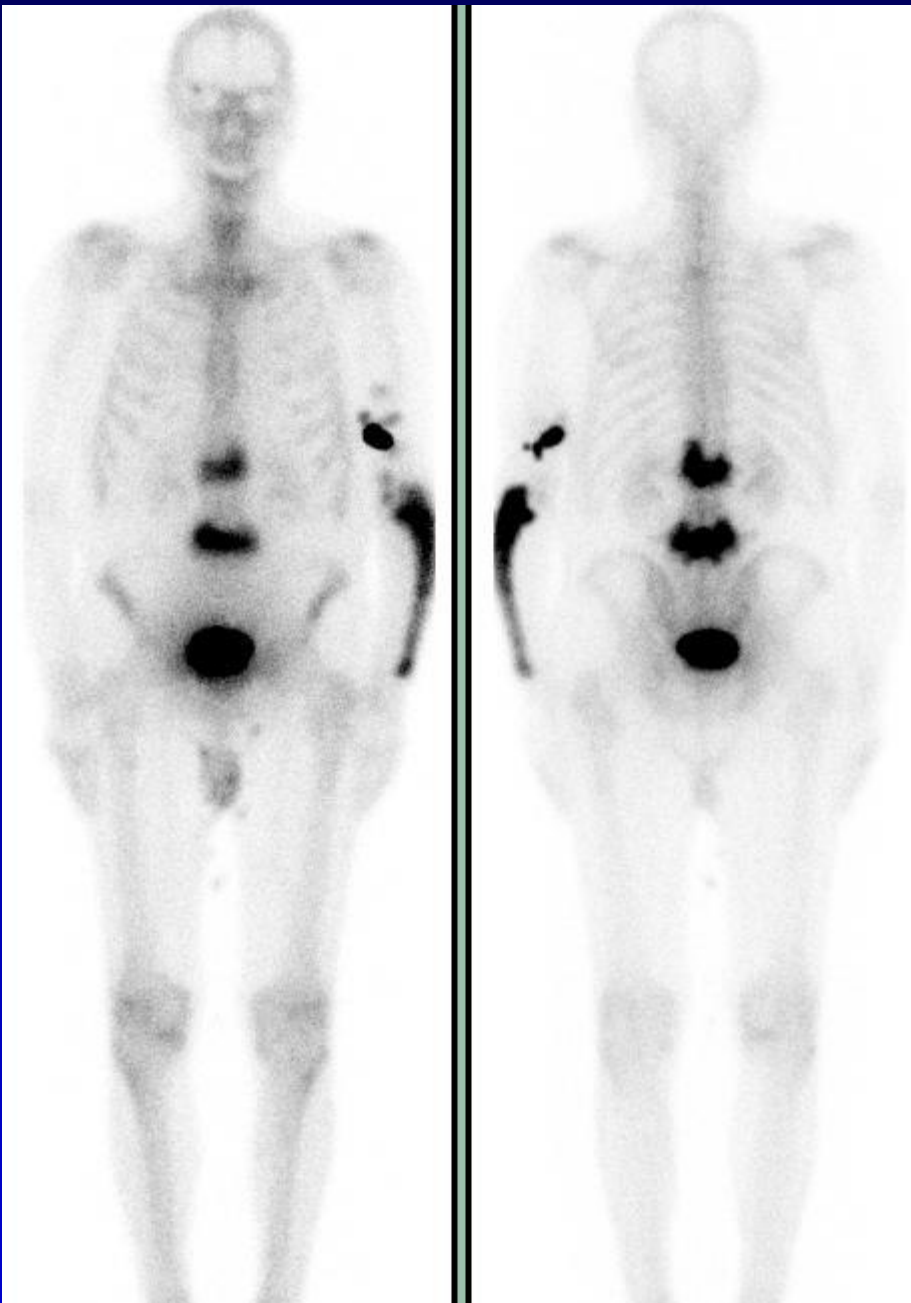


Increased tracer activity in the heart from recent myocardial infarction. Other causes include recent stress test, amyloidosis, cardiomyopathy and adriamycin cardiotoxicity

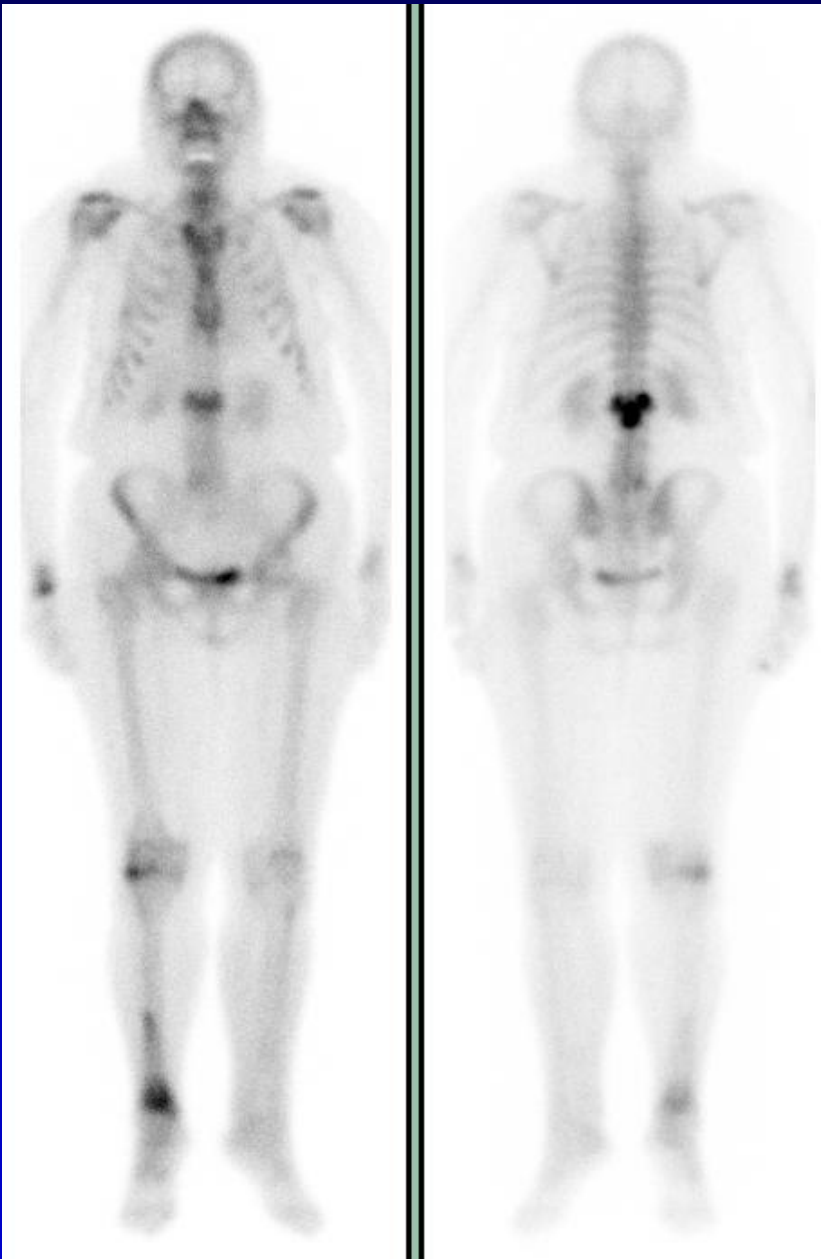
Paget's disease

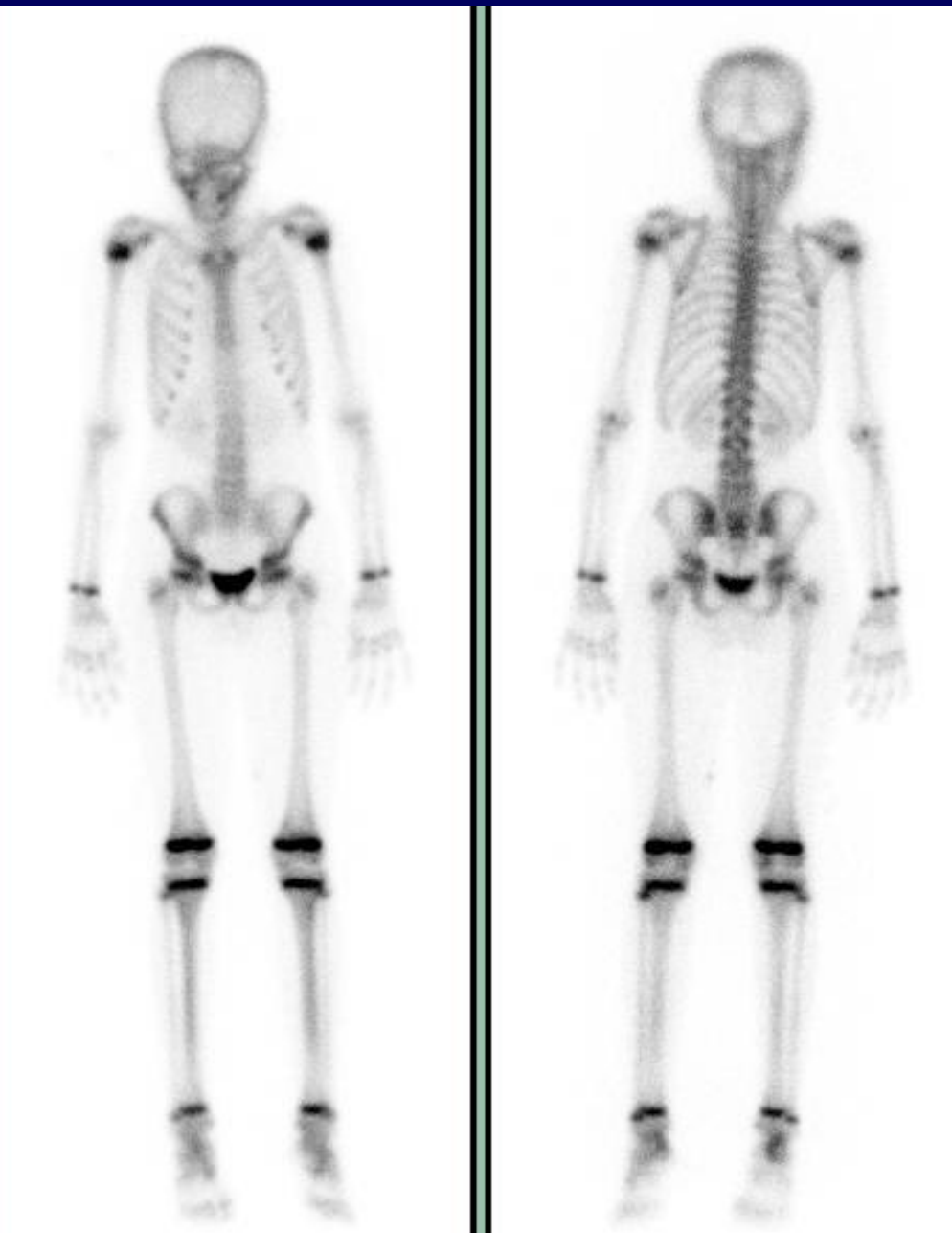


Paget's disease. Involvement of L4 resembles the Mickey mouse sign.

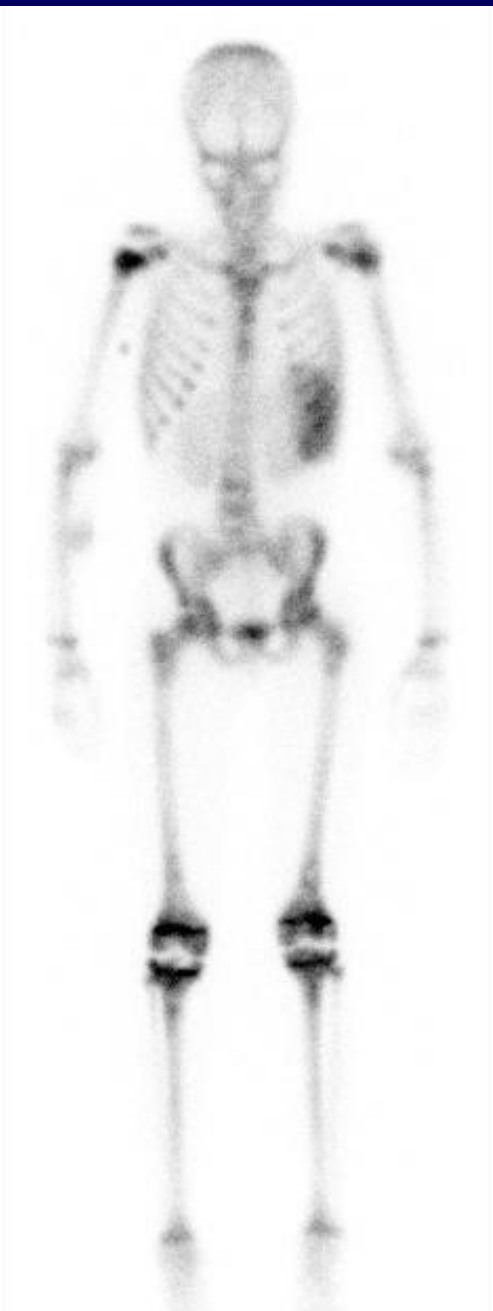


Mickey Mouse sign of Paget's Disease.



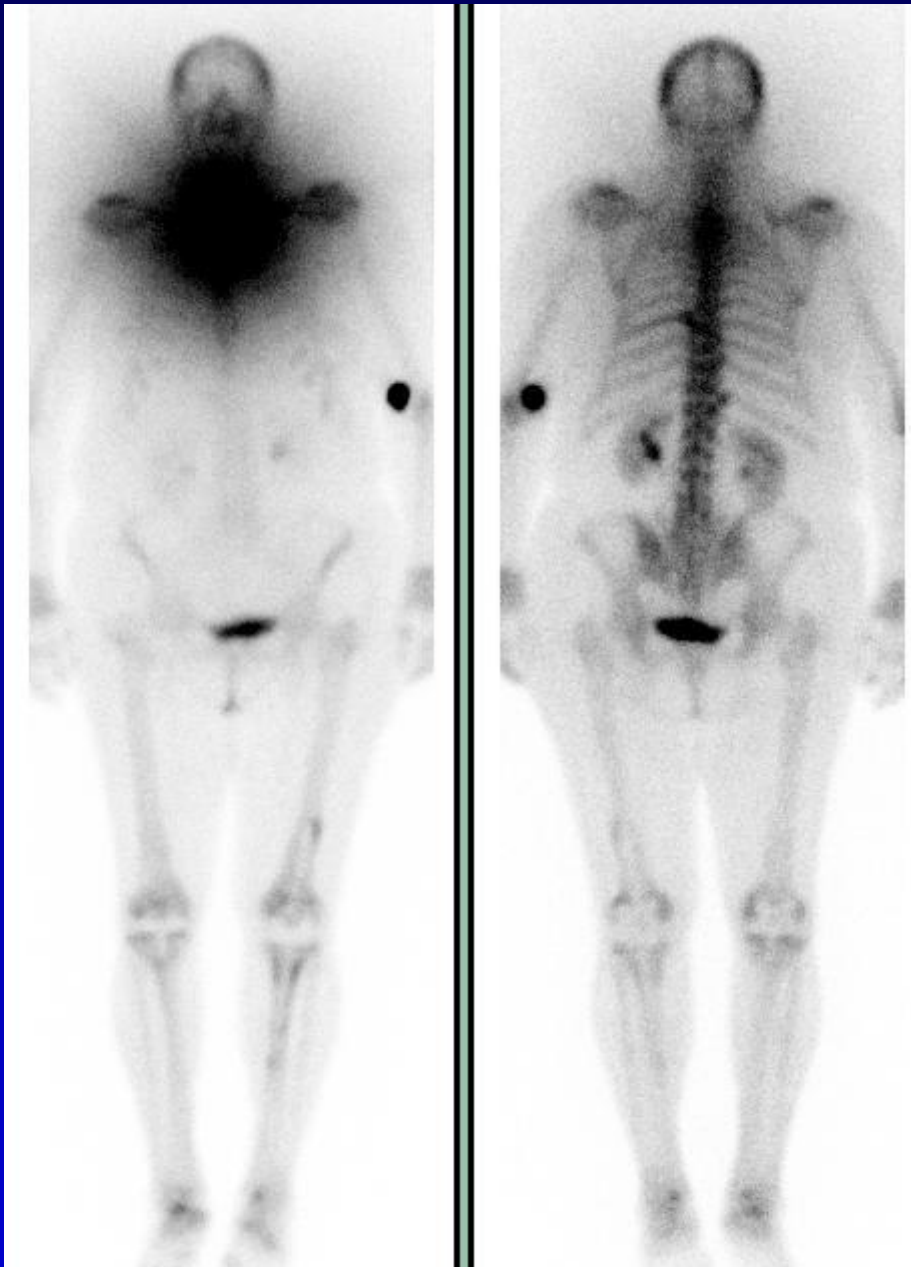


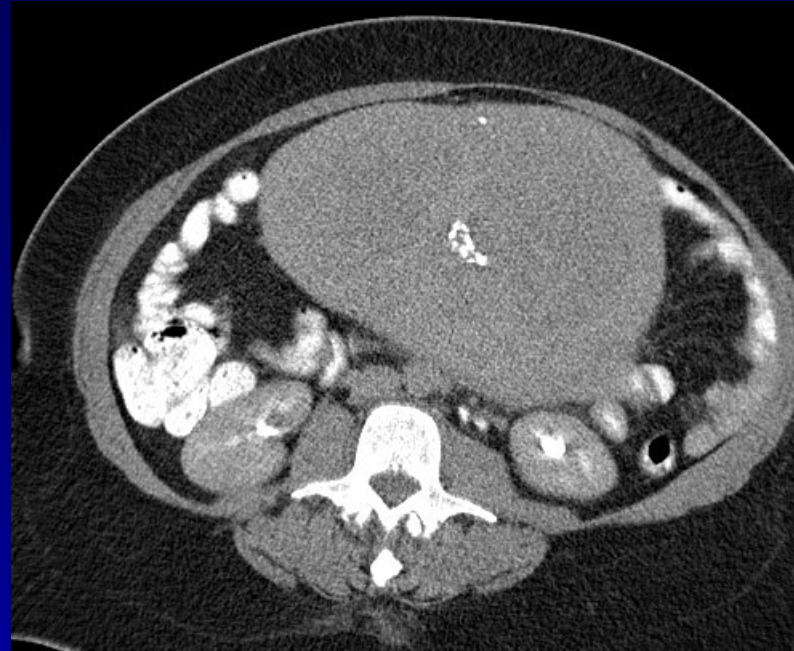
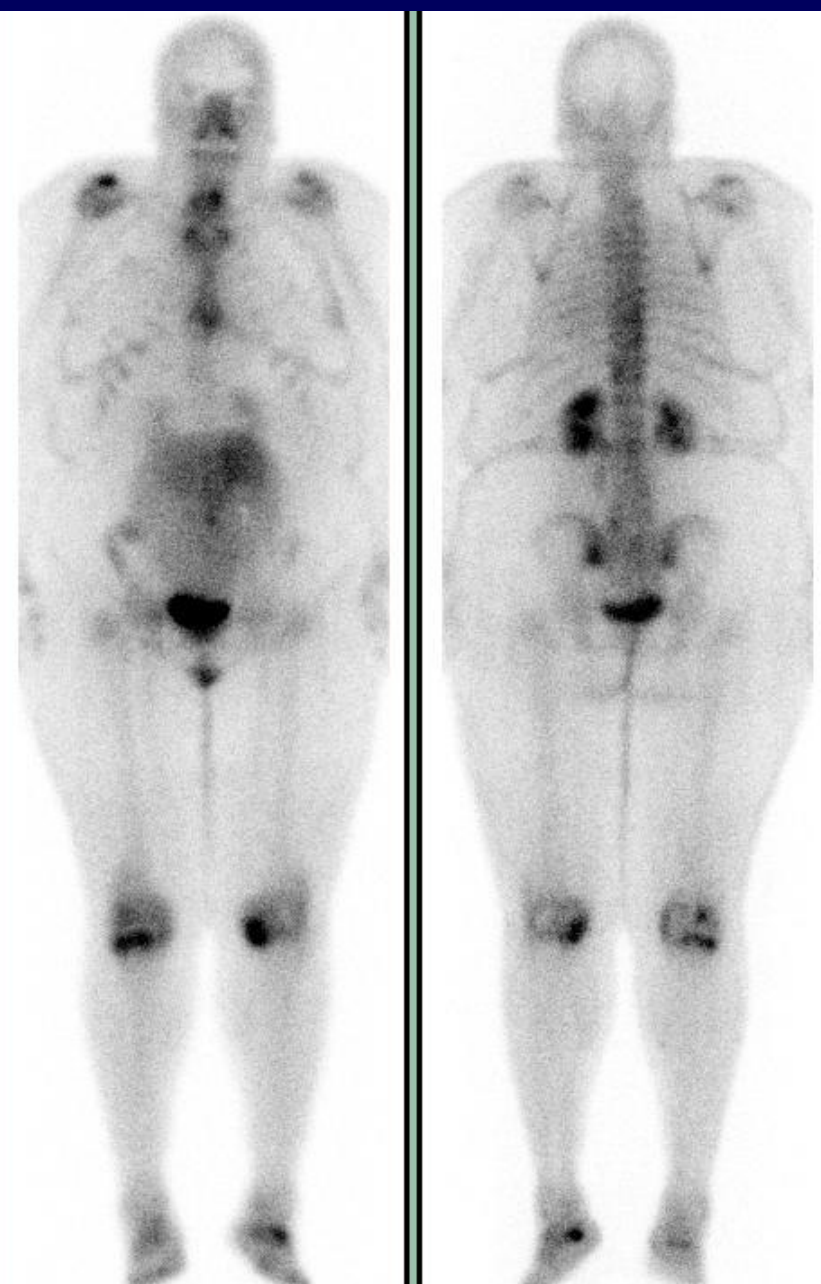
Normal pediatric bone scan showing increased tracer activity in the epiphysis.



Sickle Cell Disease: bone marrow expansion from anemia (increased bone vs soft tissue activity), splenic uptake from repeated infarctions and calcifications. Increased uptake can be seen in the kidneys from iron overload, from multiple transfusions.

Intense activity in the neck from recent I131 therapy for toxic multinodular goiter. Degenerative changes are seen in the spine. Stress related increased periprosthetic activity in the left knee.

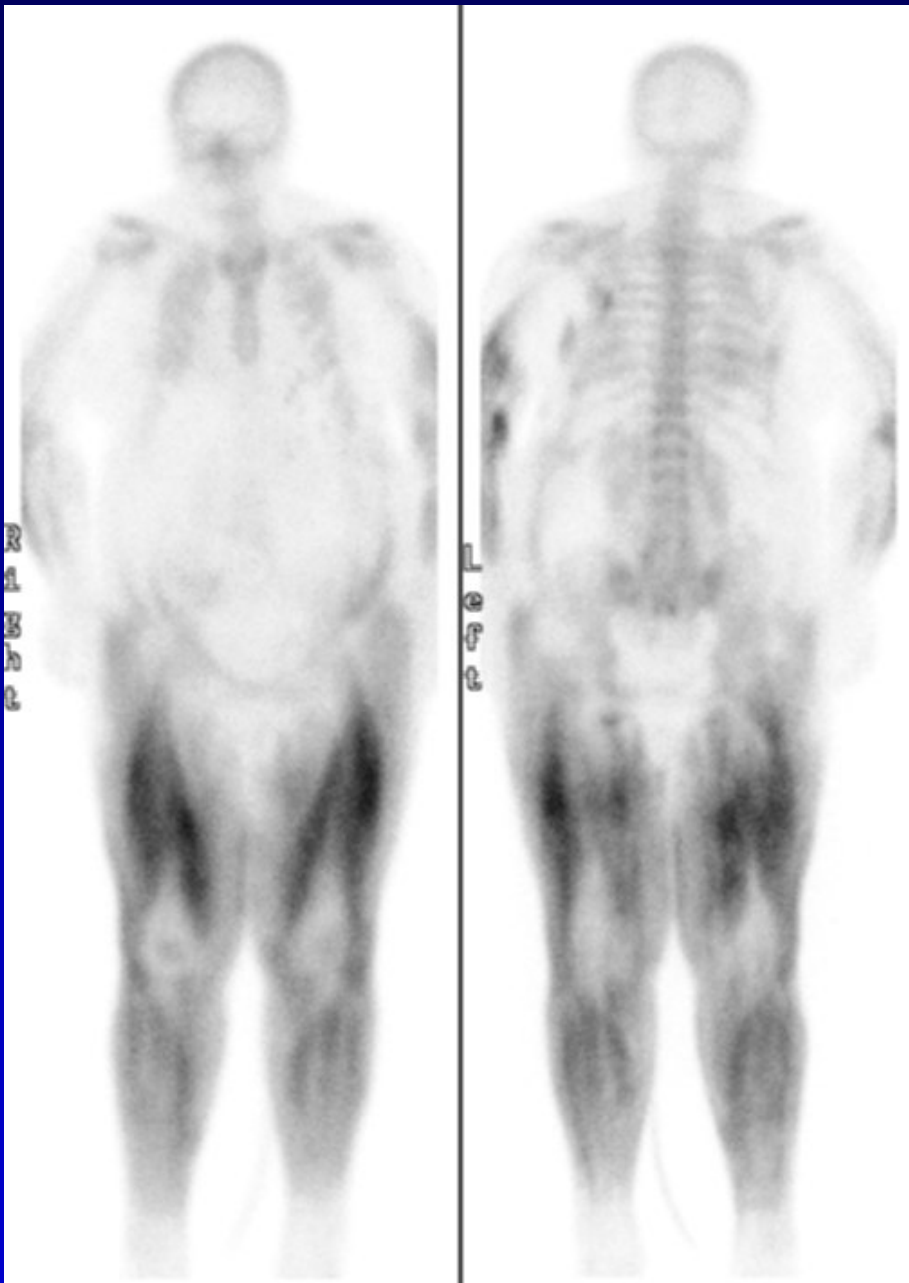




Increased activity in a large fibroid uterus.

Accidental arterial injection of the tracer.

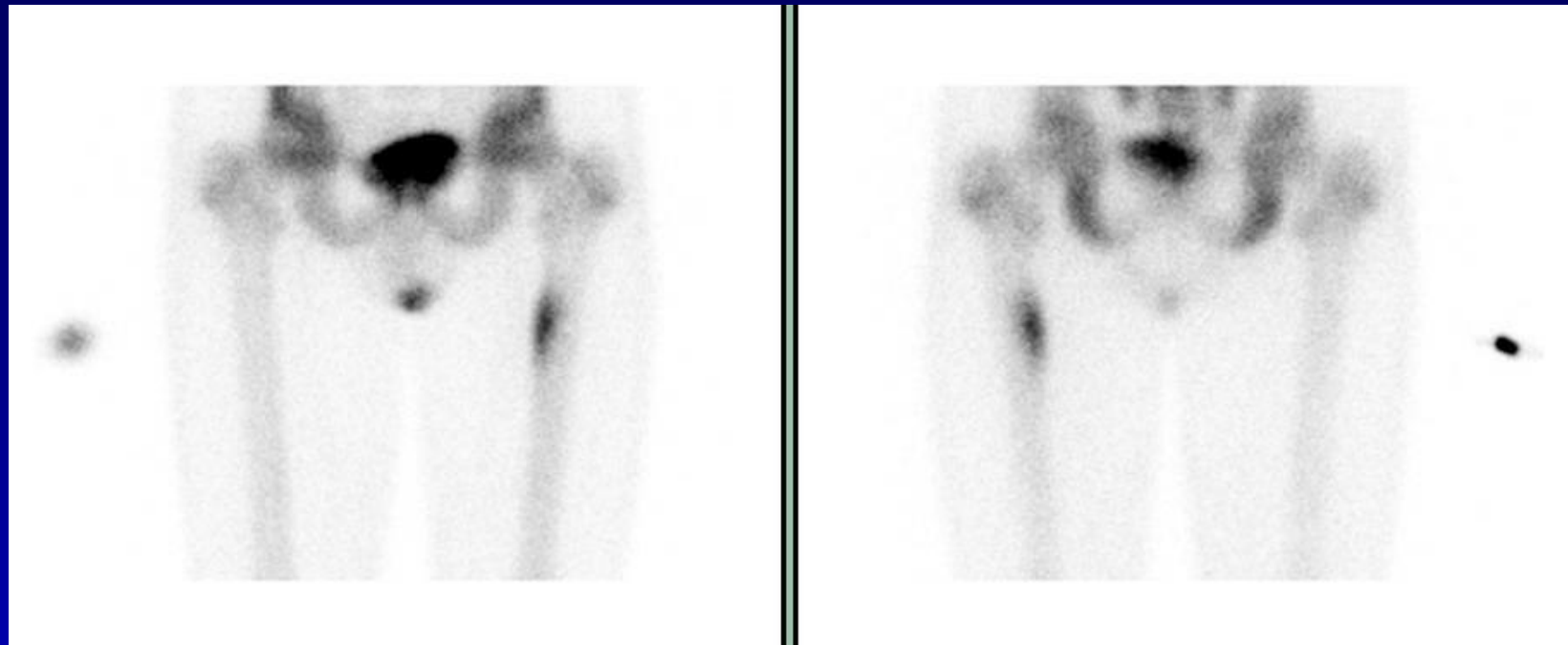




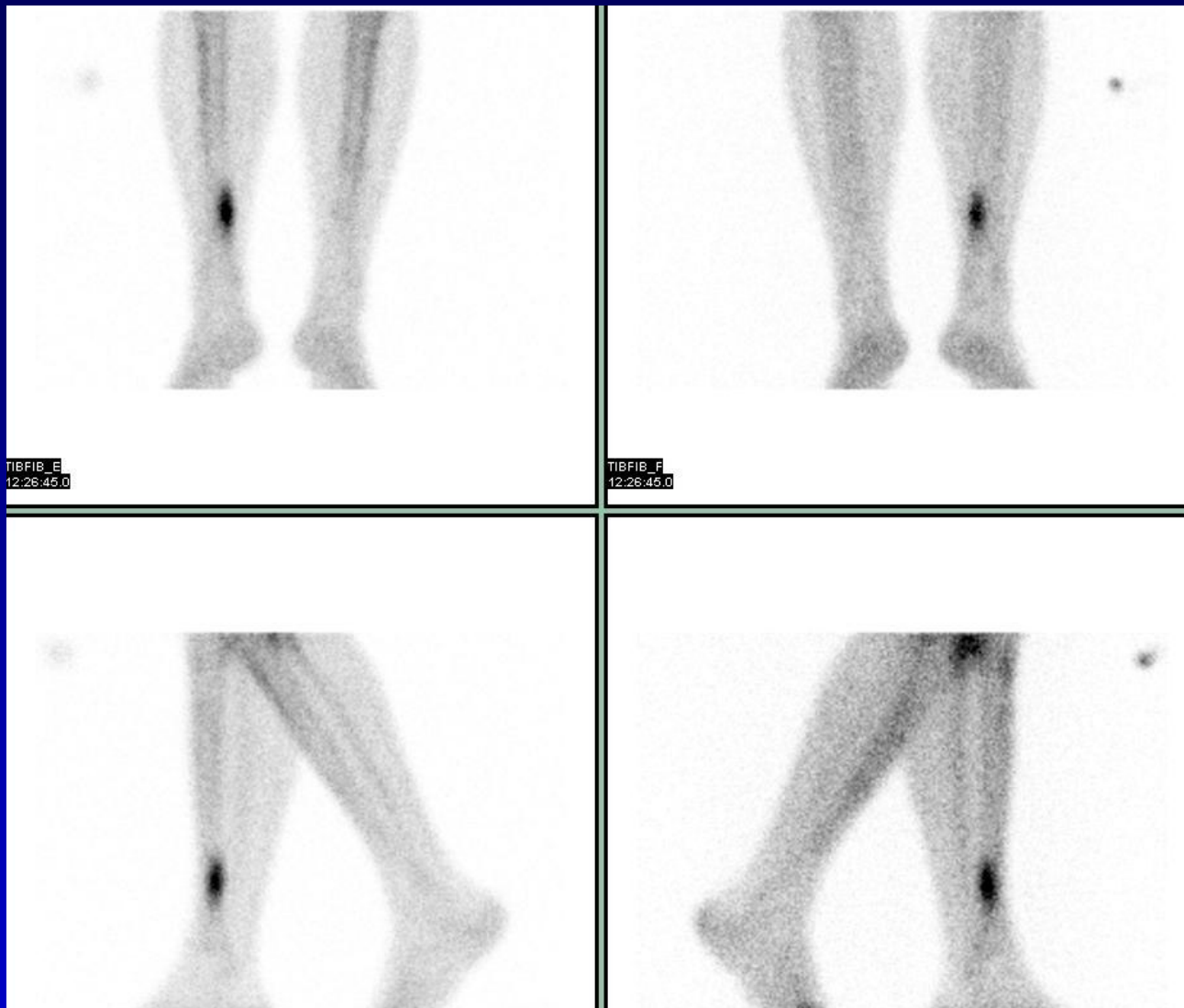
Muscle activity from rhabdomyolysis. Other causes of muscle uptake include myositis occificans, trauma, burns and peripheral vascular disease with ischemia



Diffusely increased bone activity (SUPER SCAN) (increased bone vs soft tissue activity) from hyperparathyroidism. Other causes: Metabolic bone diseases, some hematological diseases, diffuse metastatic disease, and renal osteodystrophy.



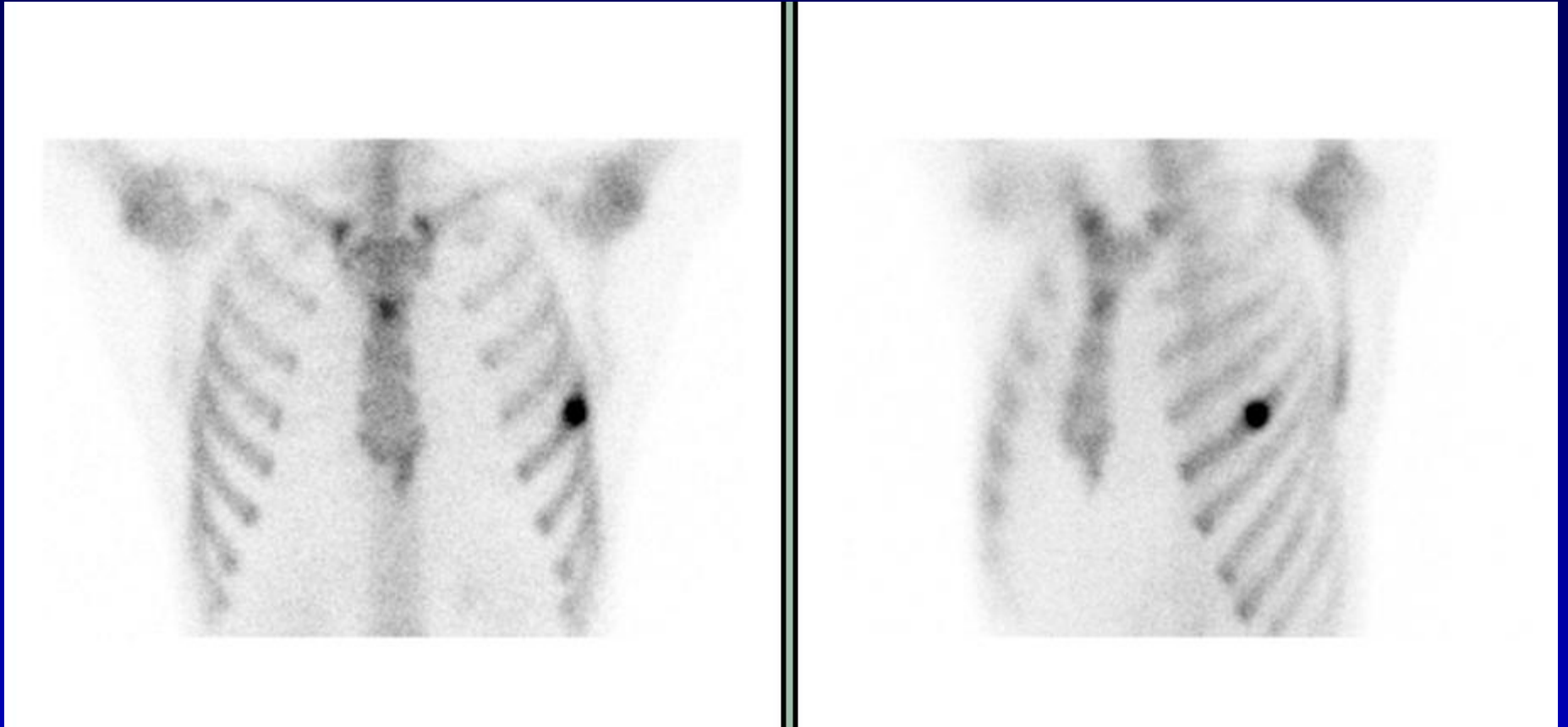
Delayed bone scan images showing stress fracture of the left proximal femur.



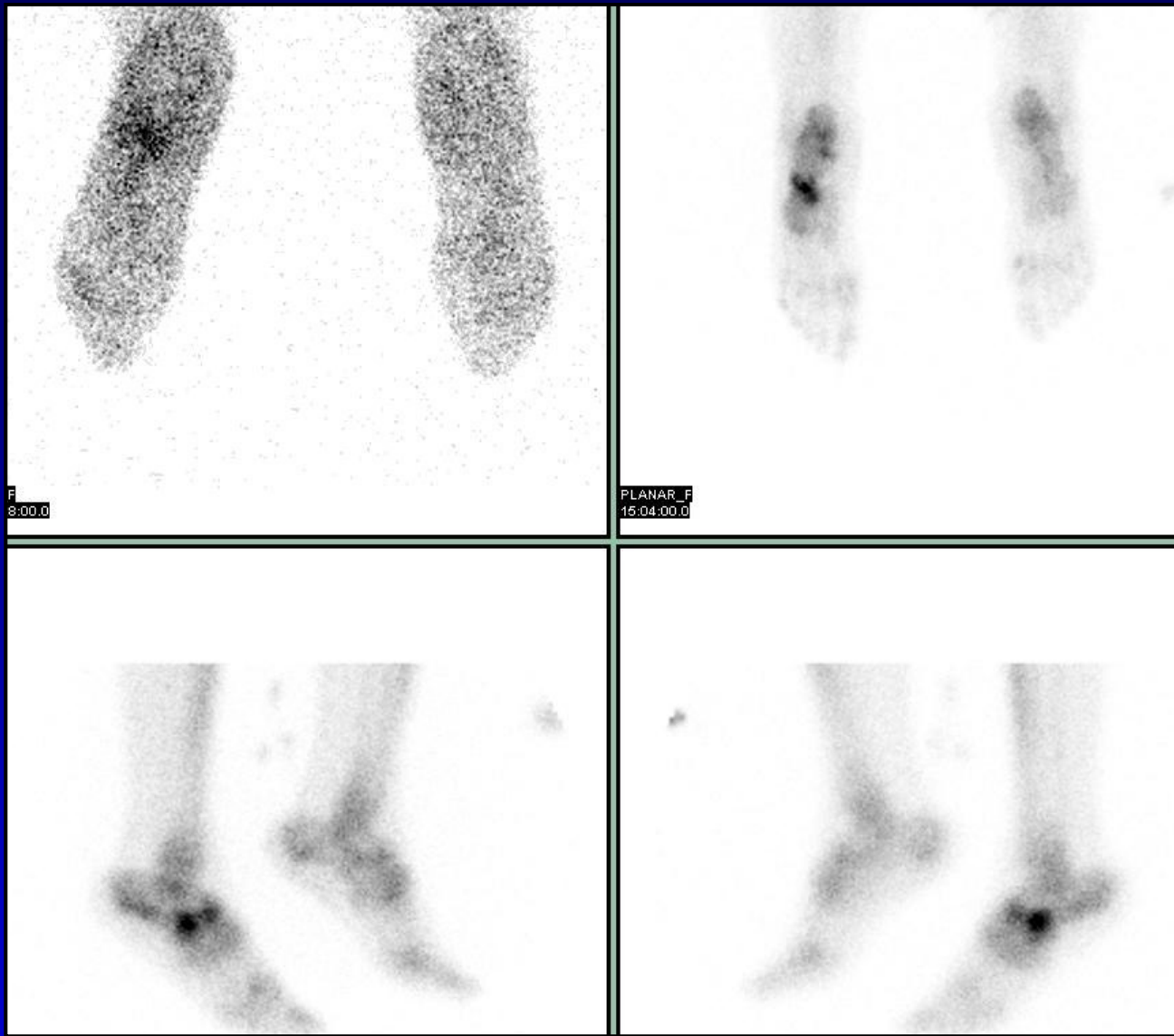
Delayed images from the bone scan of a runner showing stress fracture at the right distal tibial medial cortex.



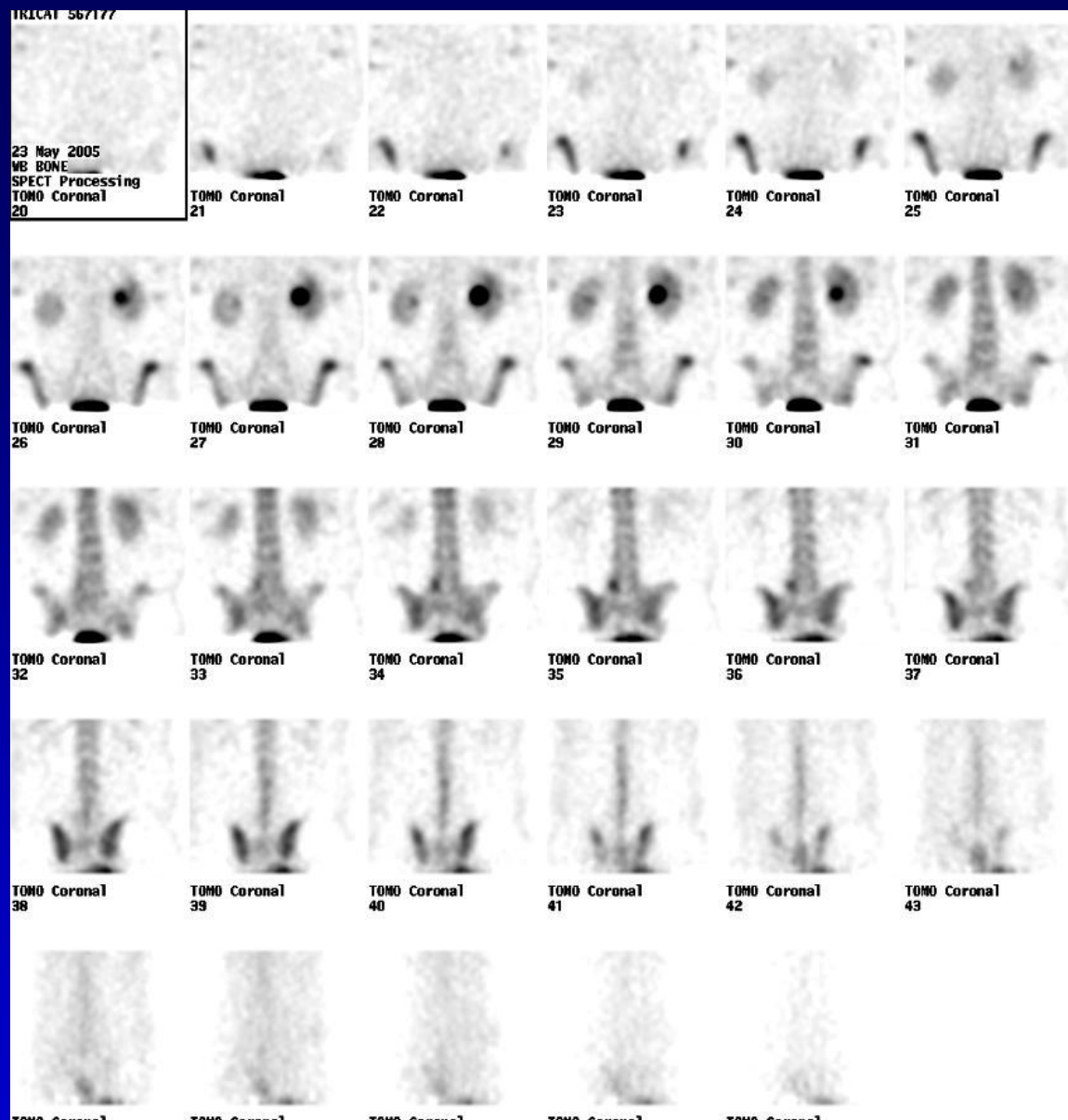
Blood pool and delayed images from the three phase bone scan of a runner showing shin splints. Blood pool images are usually negative



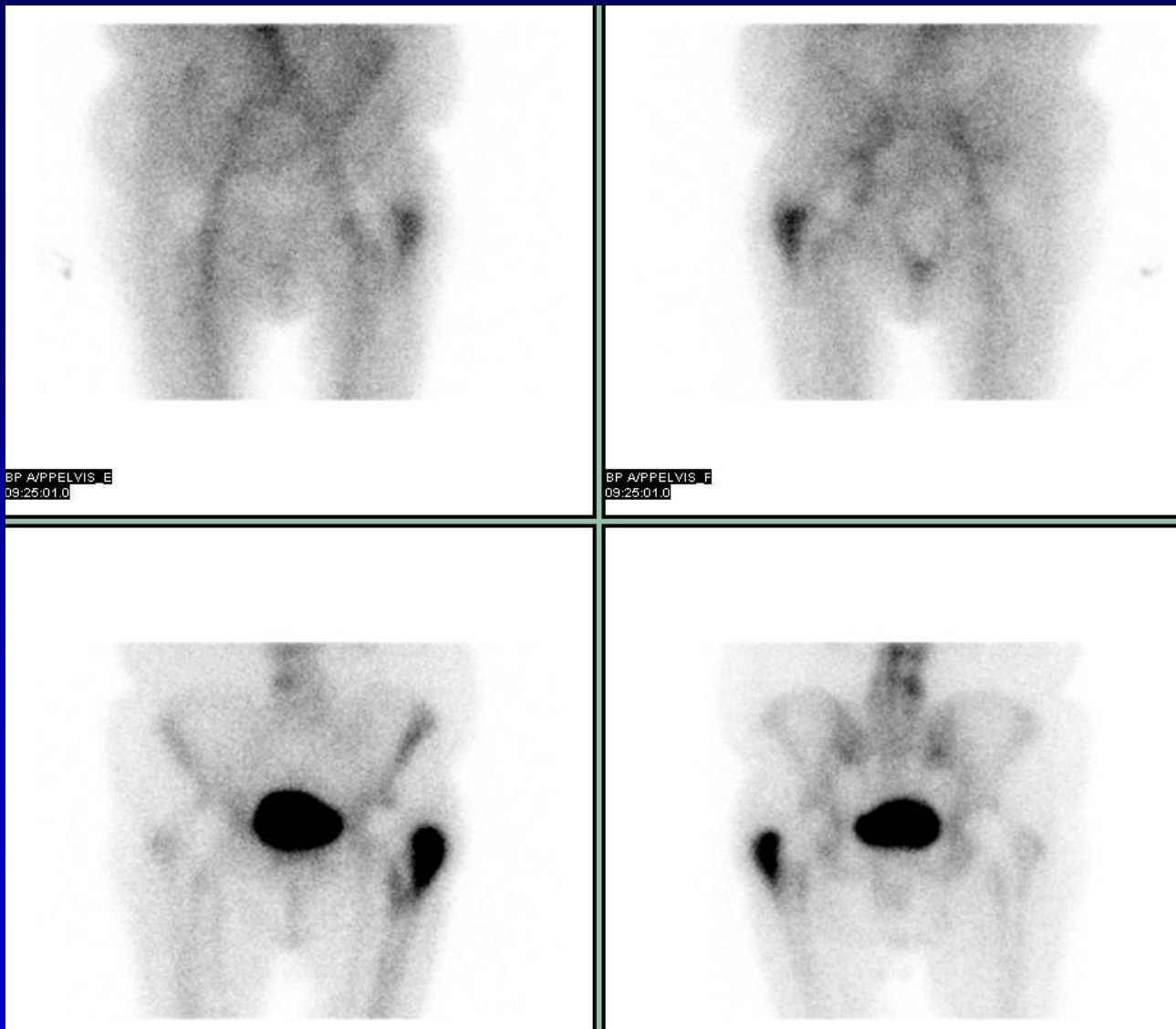
Delayed images from a bone scan showing fracture of the left 6th rib.



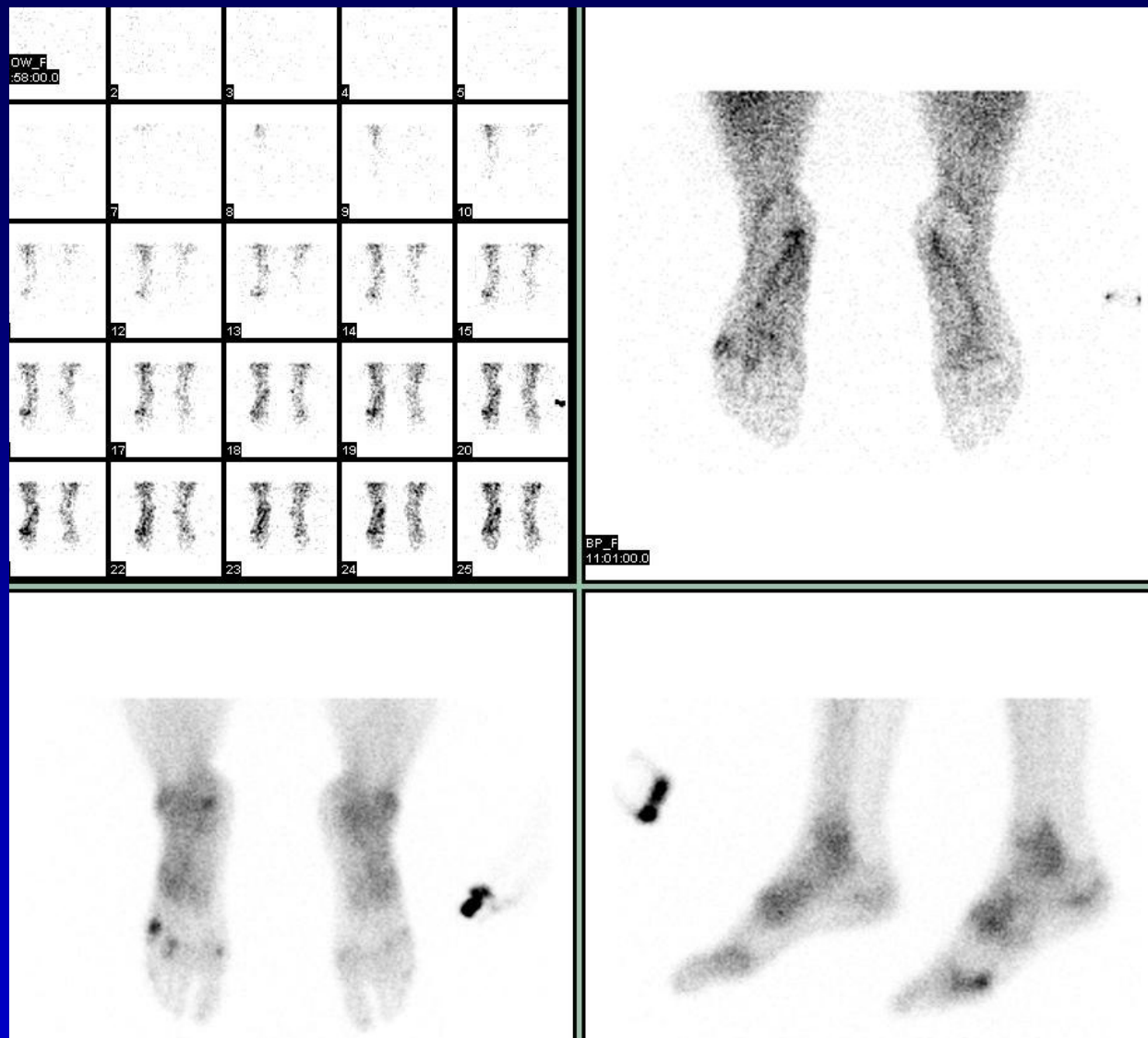
Blood pool and delayed images from a three phase bone scan of a runner showing fracture of the left cuboid.



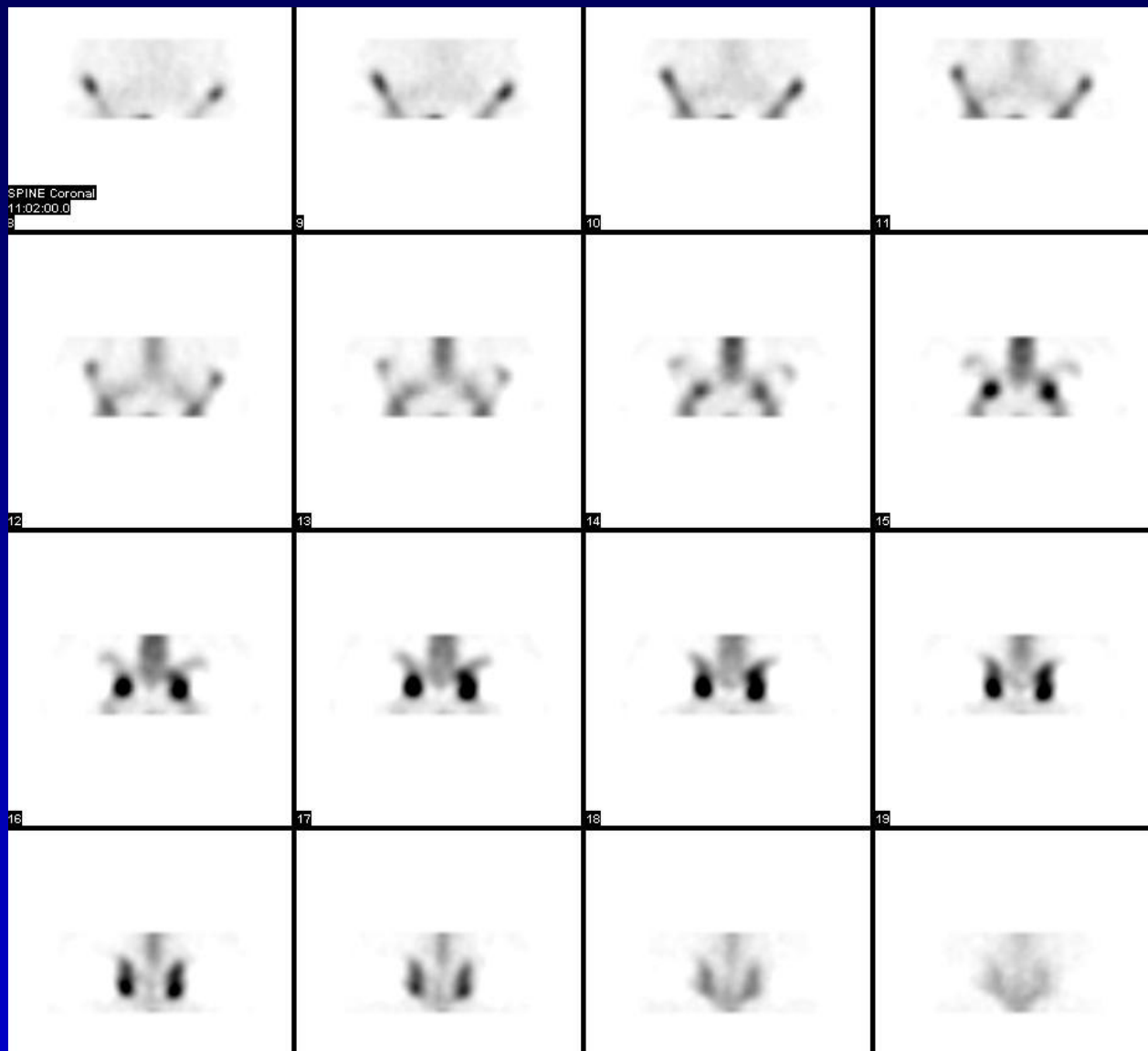
Coronal SPECT images from a bone scan showing spondylolysis of the right L5 posterior element (pars interarticularis fracture)



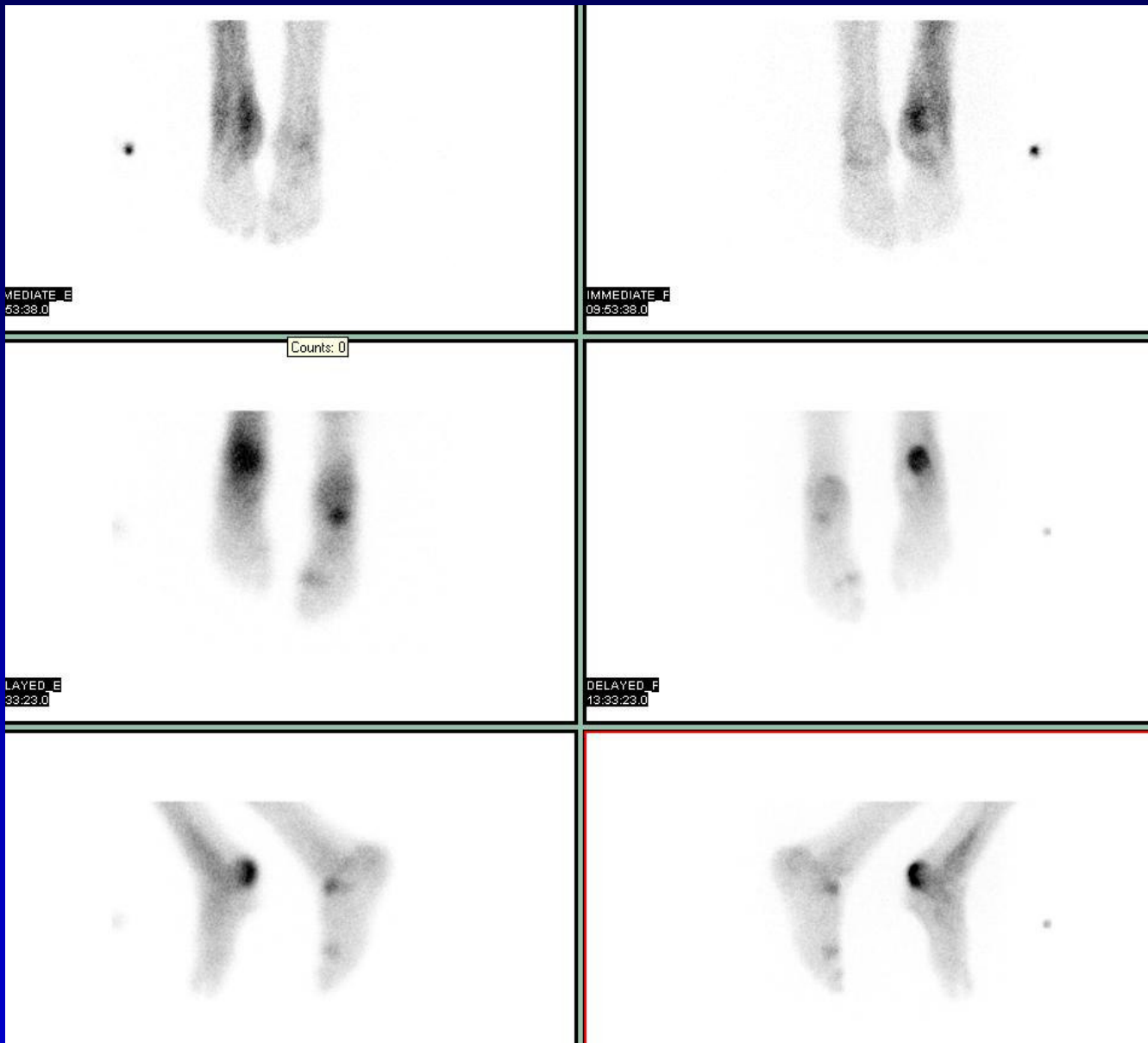
Blood pool and delayed images from a three phase bone scan of a woman, c/o pain after fall, negative X rays, showing fracture of the left greater trochanter.



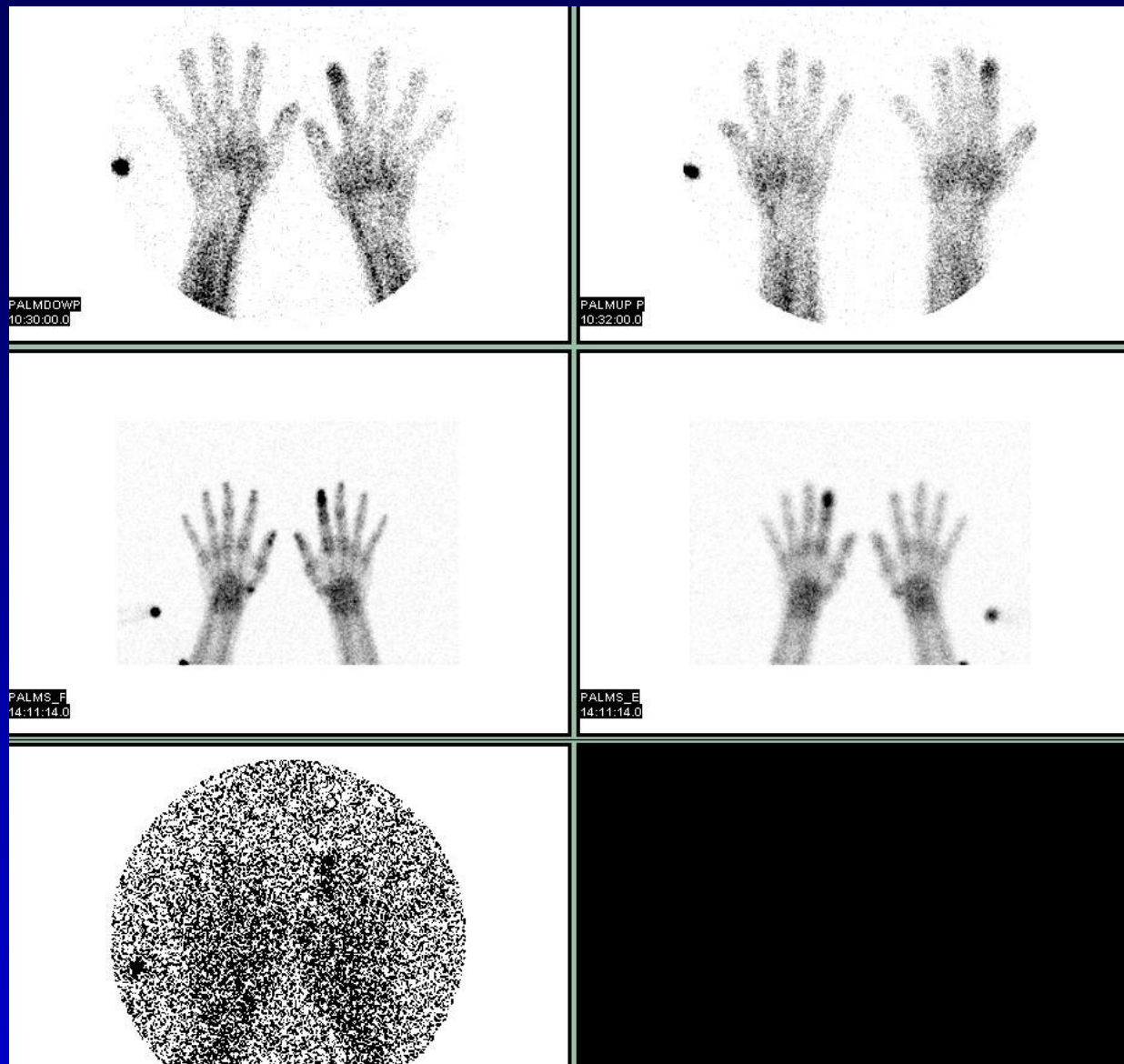
Three phase bone scan of a runner showing fracture of the left 5th distal metatarsal, positive on all three phases and stress related changes in the 1st and 4th metatarsals.



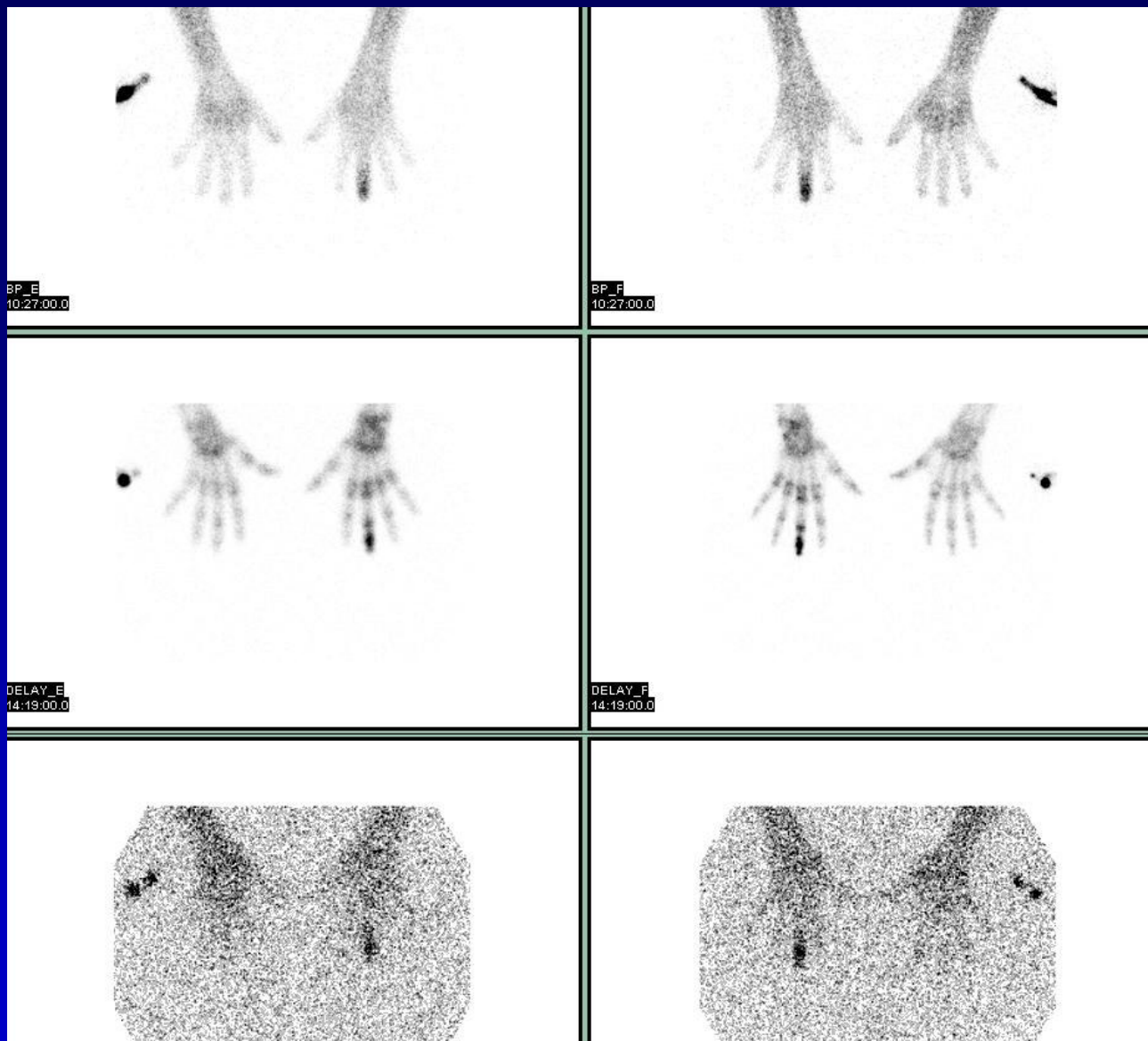
SPECT coronal images showing increased activity in both SI joints, consistent with sacroiliitis.



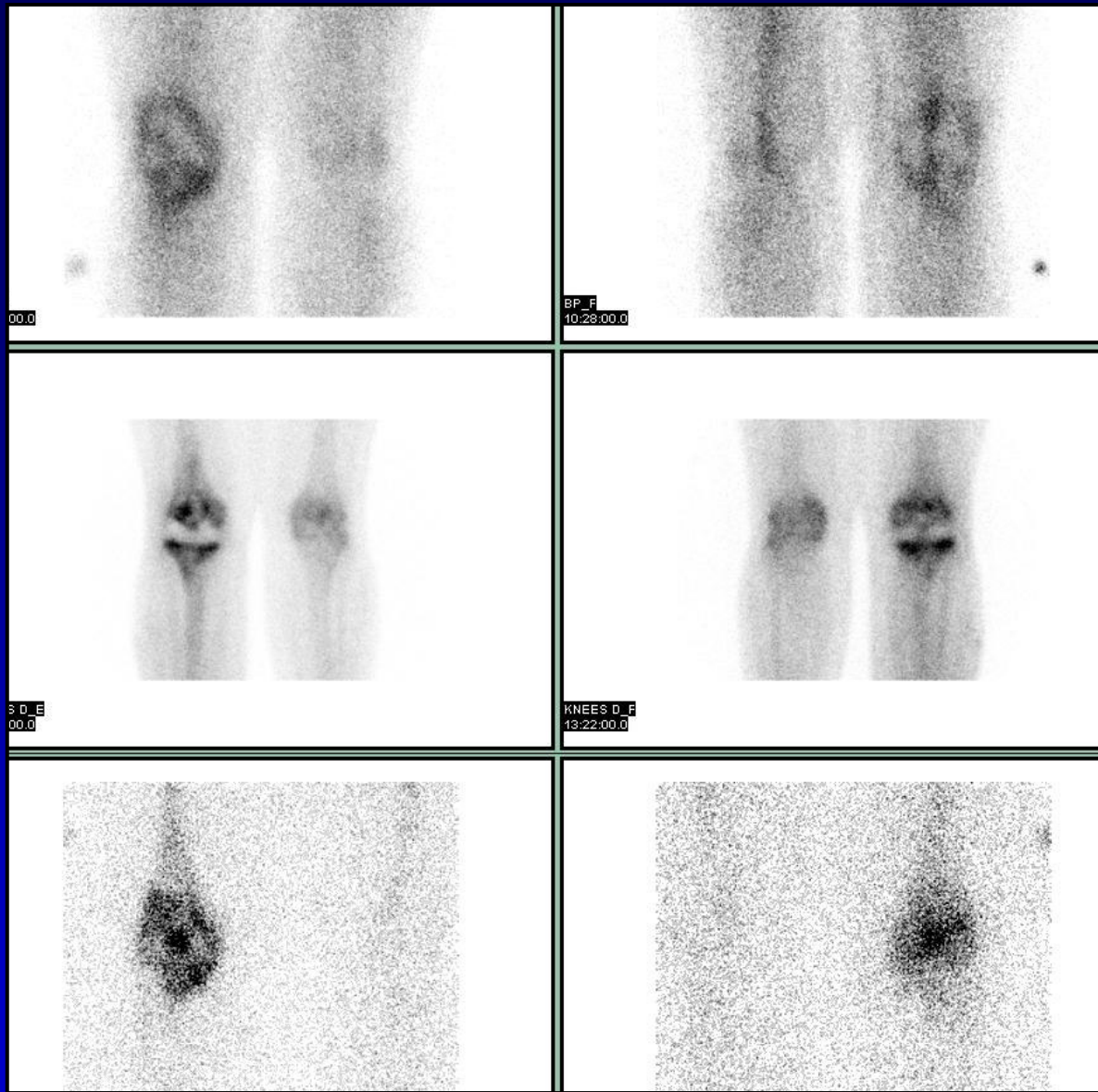
Acute Osteomyelitis of the right calcaneum, positive on all three phases.
Patient presenting with non healing ulcer.



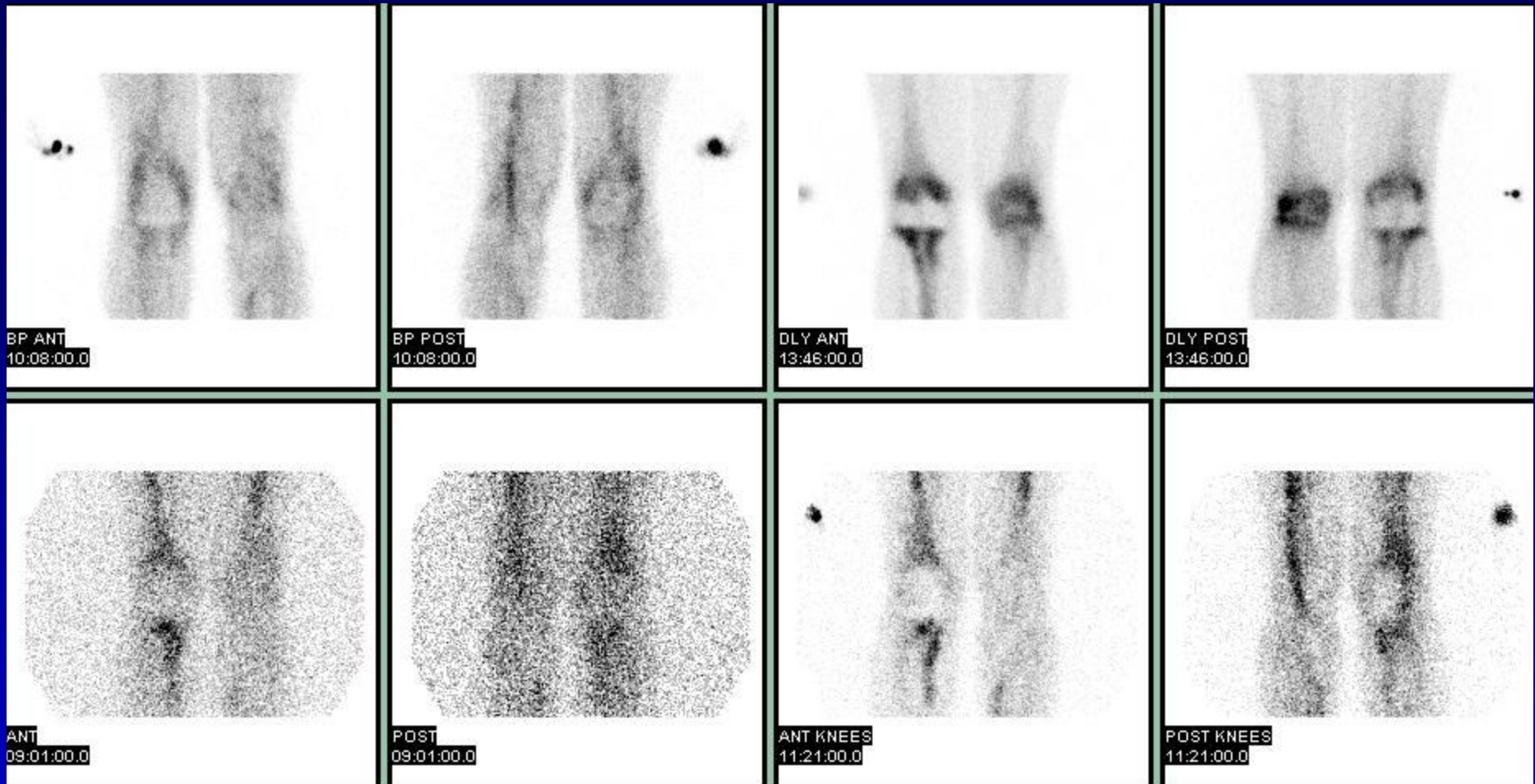
Blood pool and delayed images from the bone scan, and the images from indium scan, showing acute osteomyelitis of the distal phalange of the left index finger.



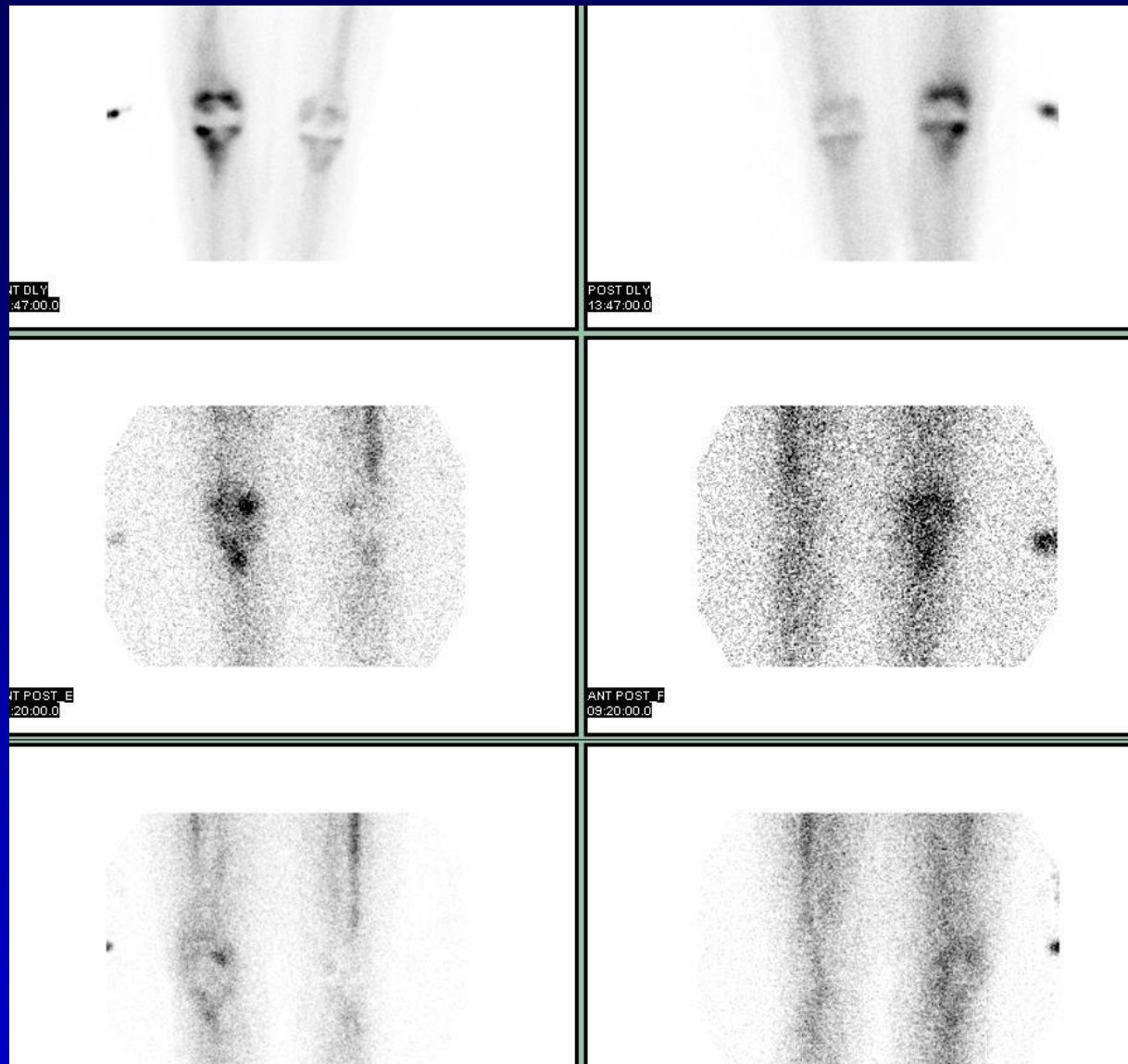
Blood pool and delayed images from the bone scan, and the images from indium scan, showing acute osteomyelitis of the distal phalange of the left middle finger.



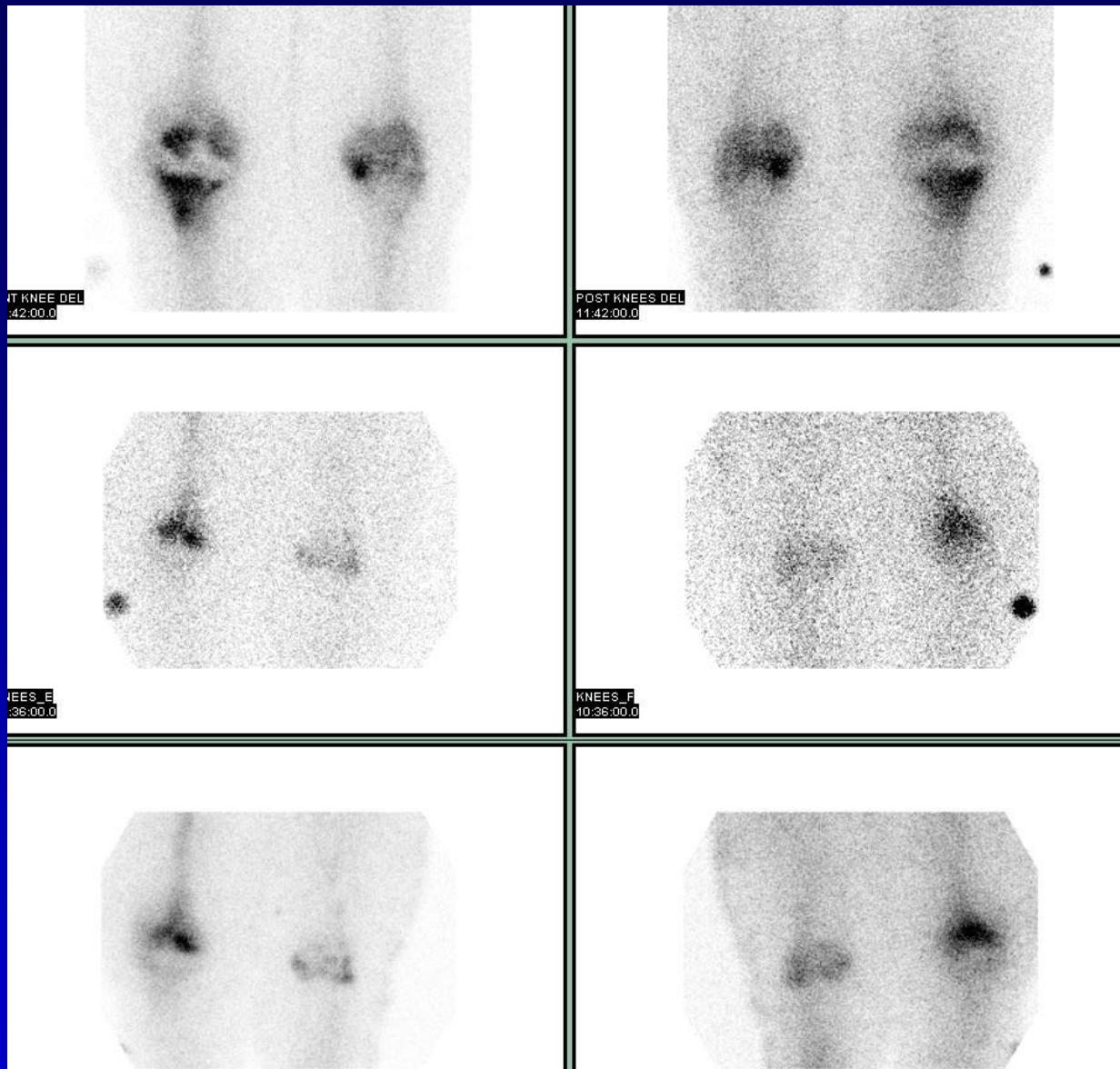
Blood pool images and delayed images from the bone scan, and the indium scan, showing septic loosening of the right knee prosthesis.



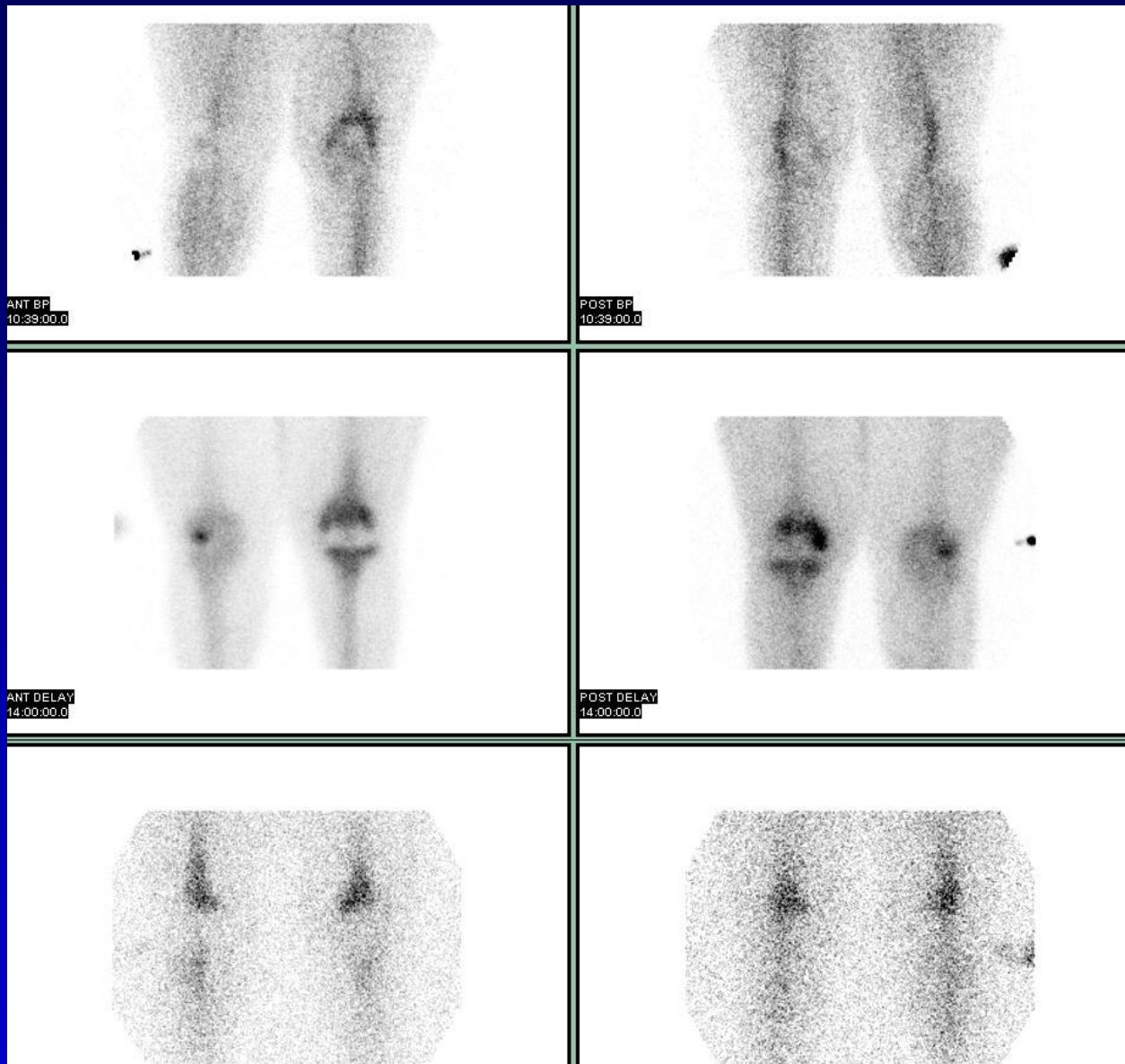
Blood pool images and delayed images from the bone scan, the indium scan, and the marrow scan, showing aseptic loosening of the right knee prosthesis.



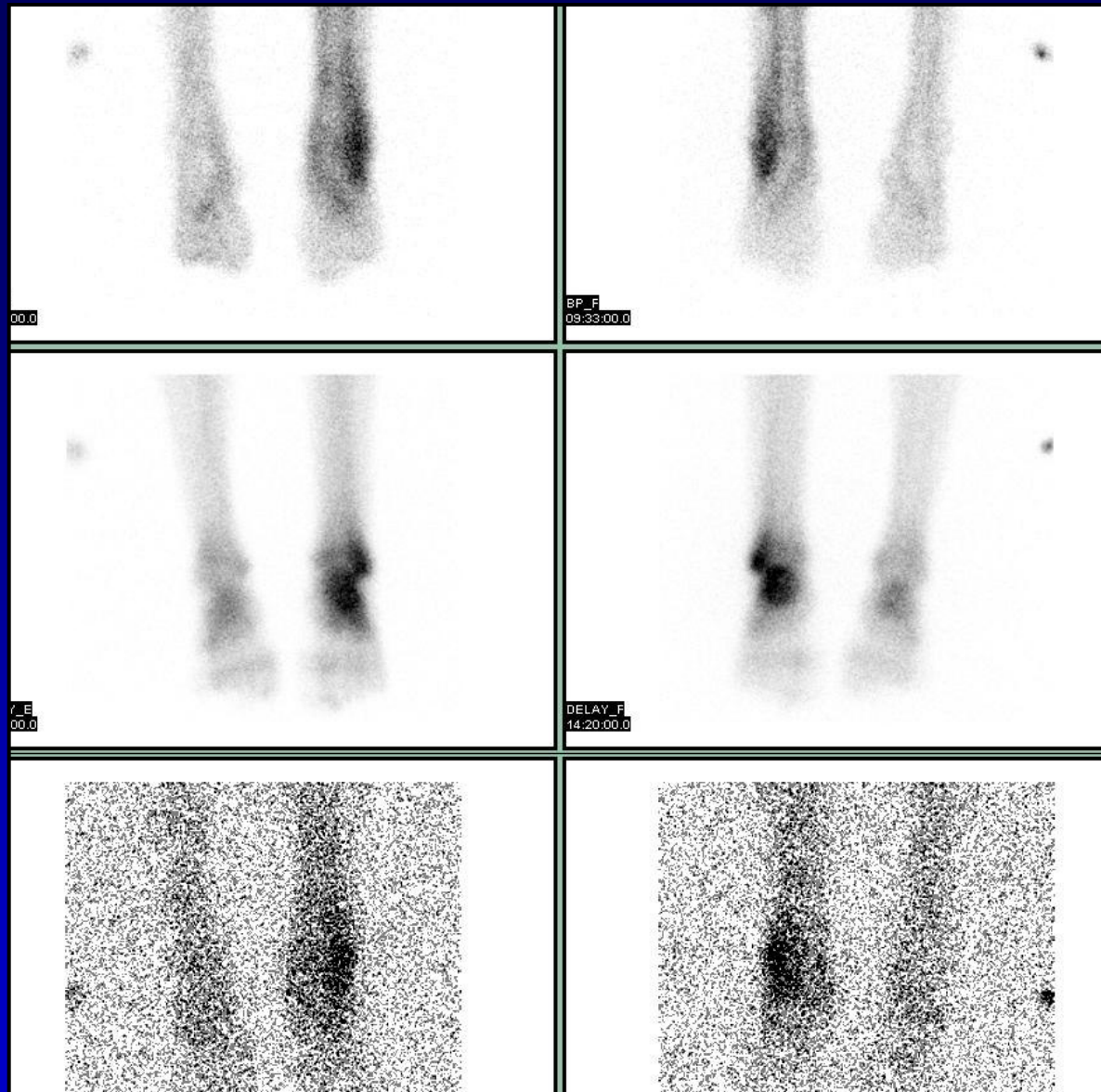
Delayed images from the bone scan, the indium scan, and the marrow scan, showing septic loosening of the right knee prosthesis.



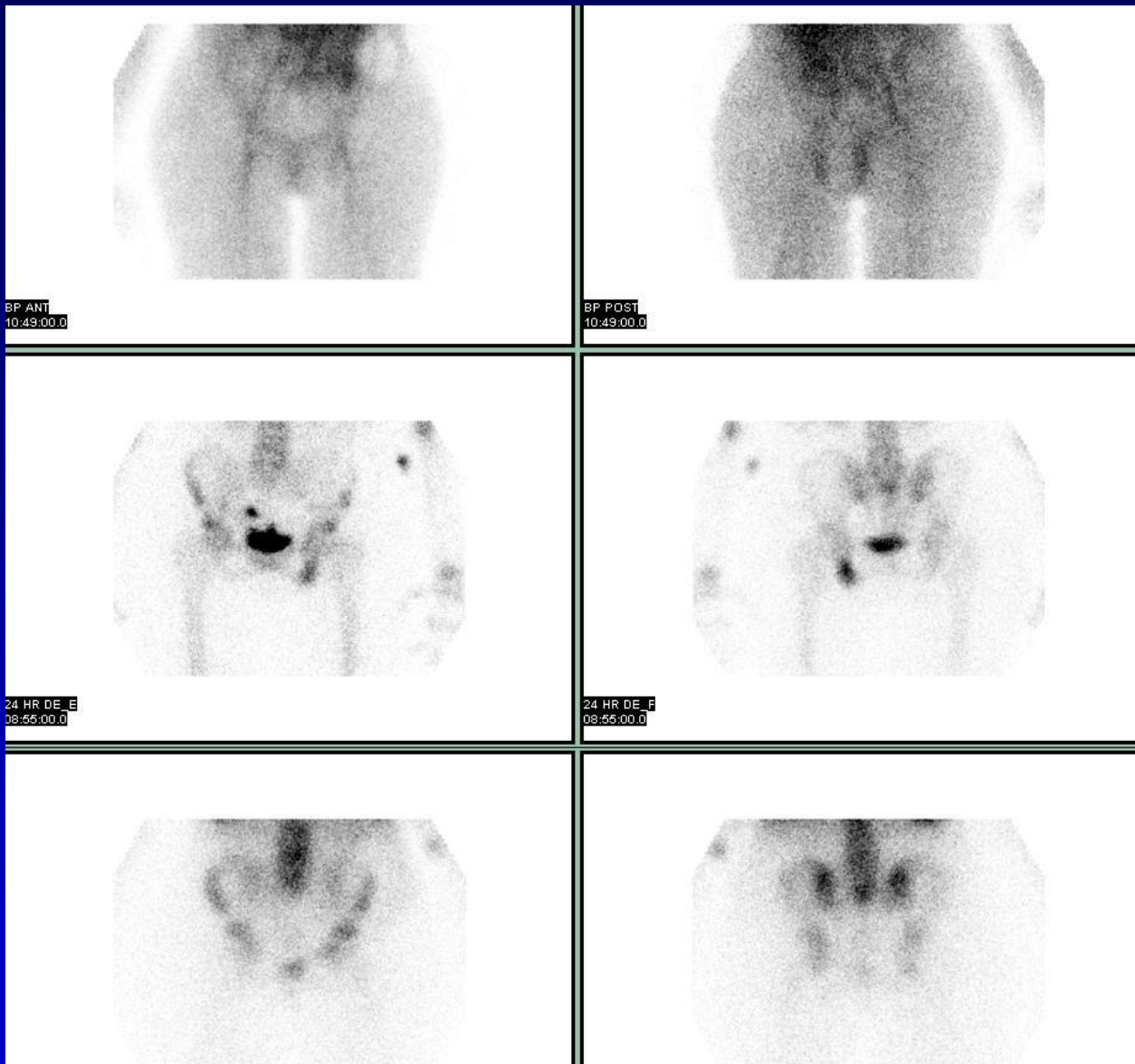
Delayed images from the bone scan, the indium scan, and the sulfur colloid scan showing no definite evidence of acute osteomyelitis.



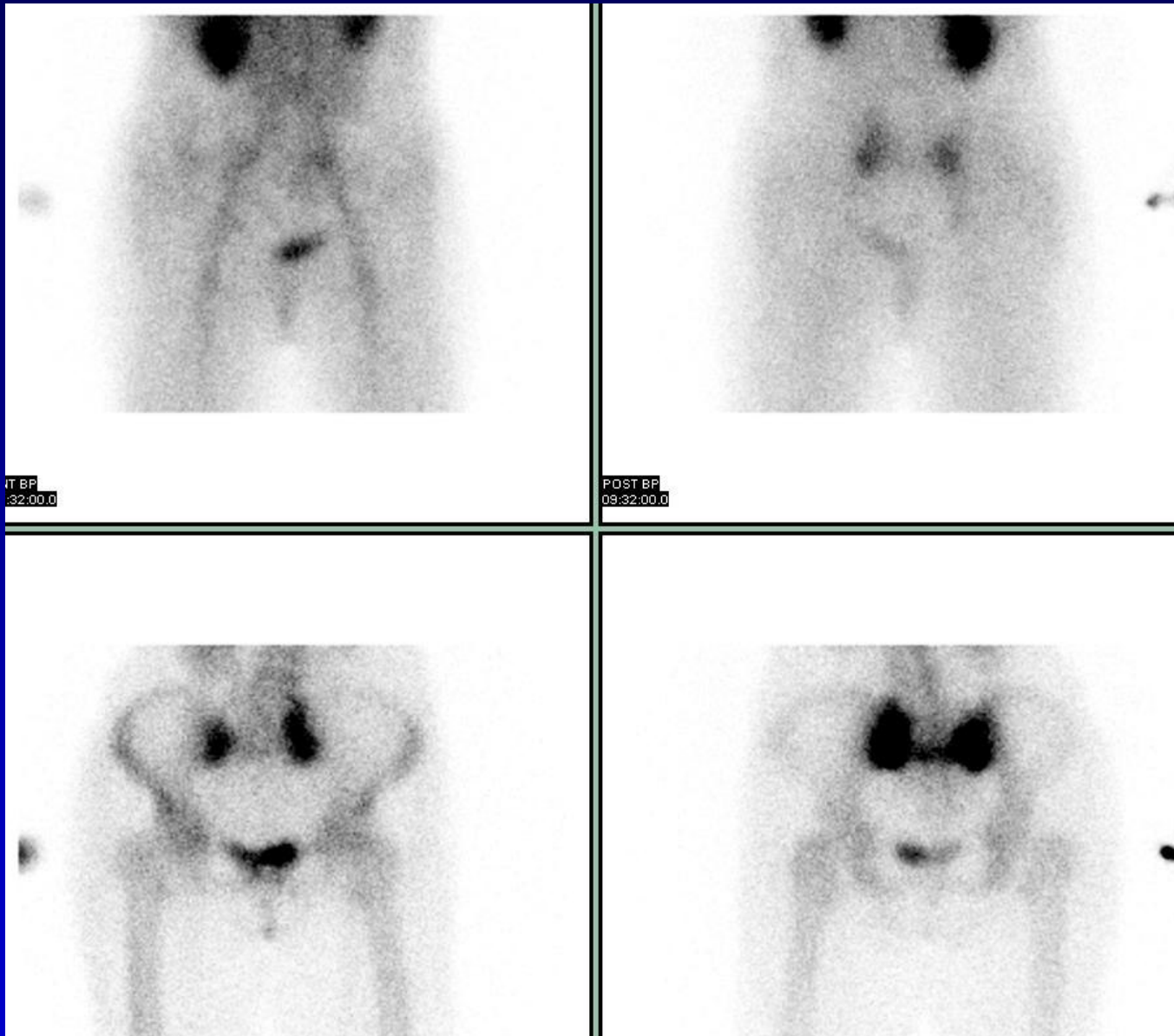
Blood pool and delayed images from the bone scan, and the images from indium scan, showing no definite evidence of acute osteomyelitis.



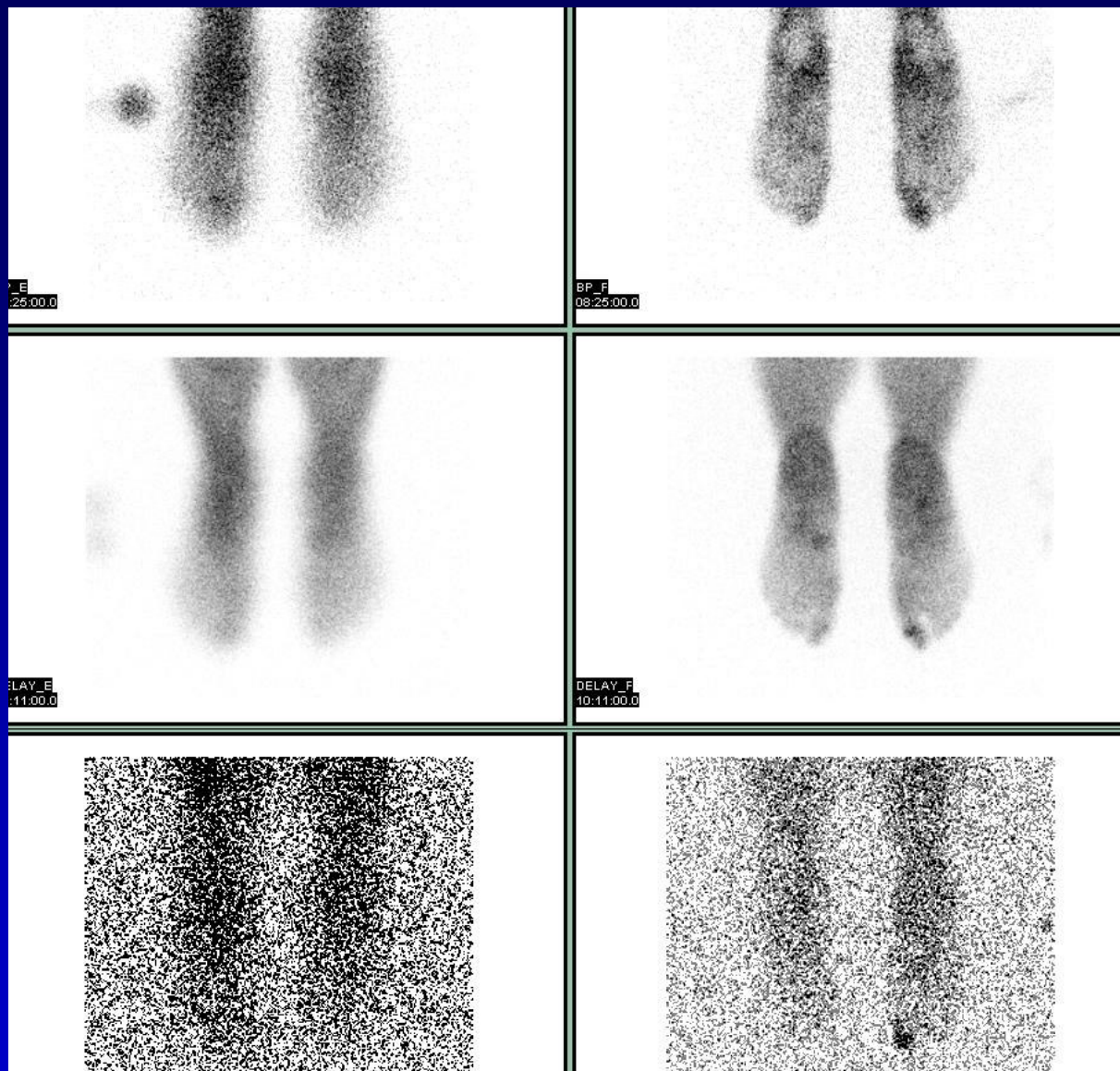
Blood pool and delayed images from the bone scan, and the images from indium scan, showing acute osteomyelitis of the left lateral malleolus.



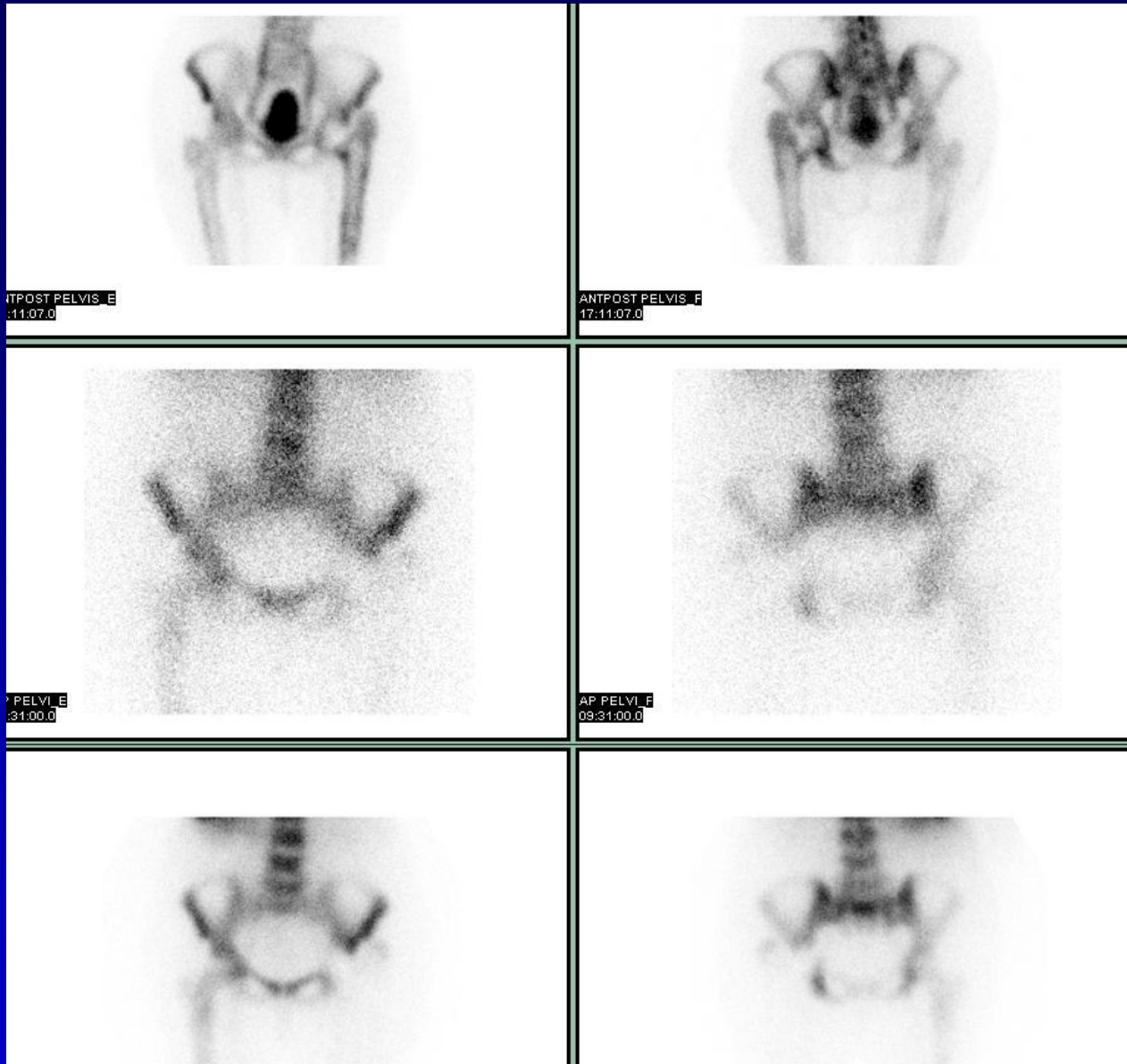
Blood pool and delayed images from the bone scan, and the images from indium scan, showing findings negative for acute osteomyelitis of the left ischium.



Blood pool and delayed images from the bone scan, showing Honda sign of sacral insufficiency fracture.



Blood pool and delayed images from the bone scan, (in a diabetic patient with renal insufficiency), and the images from indium scan, showing acute osteomyelitis of the distal phalange of the right great toe.



Bone, indium, and marrow scan showing no definite evidence of acute osteomyelitis. Increased periprosthetic activity in the left hip is likely from aseptic loosening.