

BONE SCINTIGRAPHY

Dr.E.Gharepapagh
Nuclear Medicine



COMMON RADIOTRACER:

^{99m}Tc -MDP

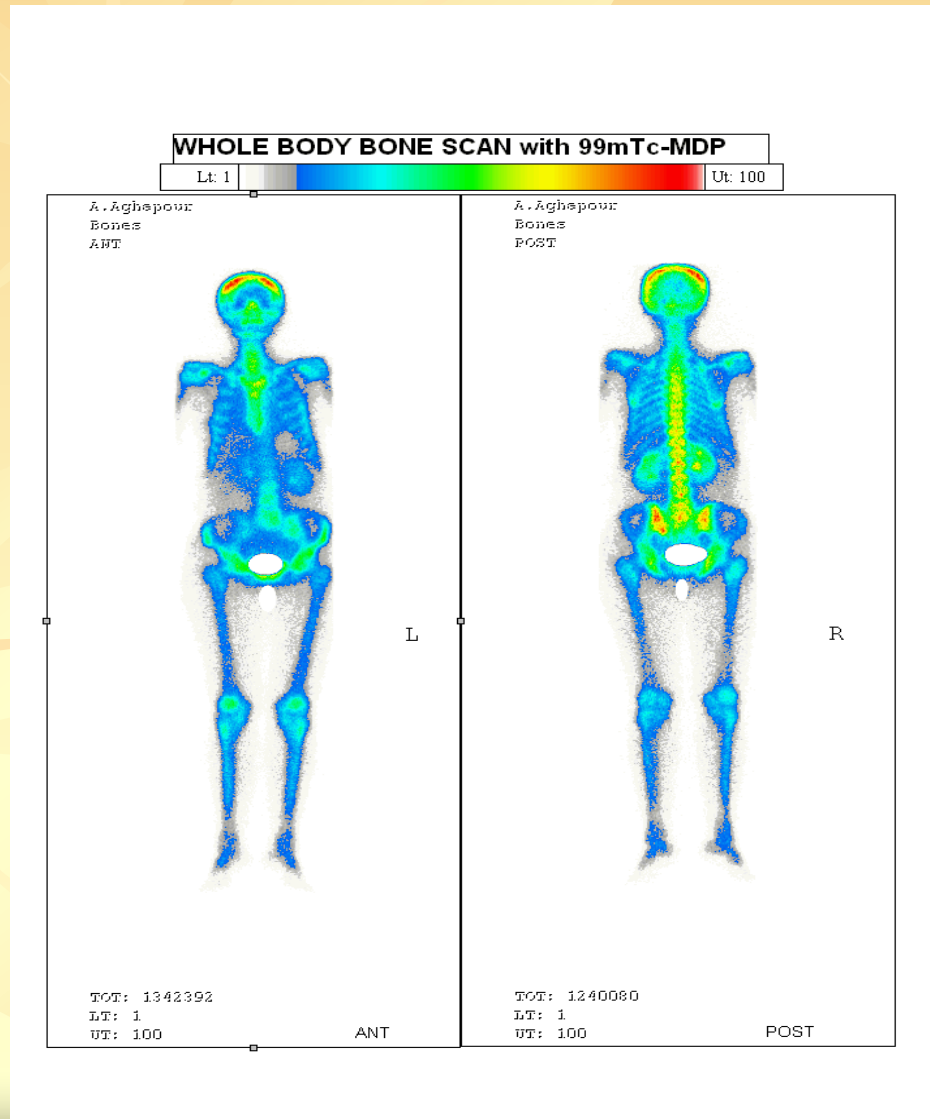


INDICATIONS

- SKELETAL METASTASIS
- PRIMARY BONY TUMORS
- INFECTION(OSTEOMYELITIS)
- AVN
- SKELETAL PAIN
- TRAUMA(STRESS,OCCULT & MULTIPLE FX)
- METABOLIC BONE DISORDERS

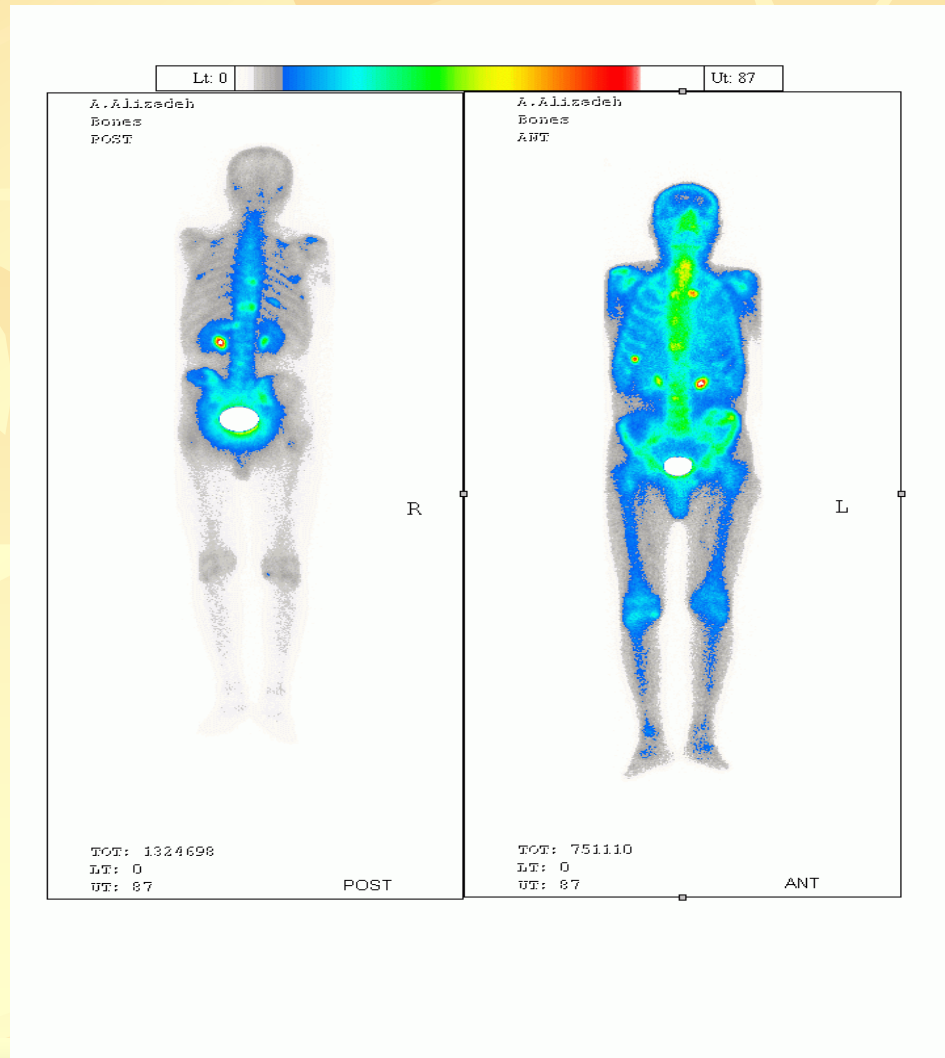


NORMAL BONE SCAN



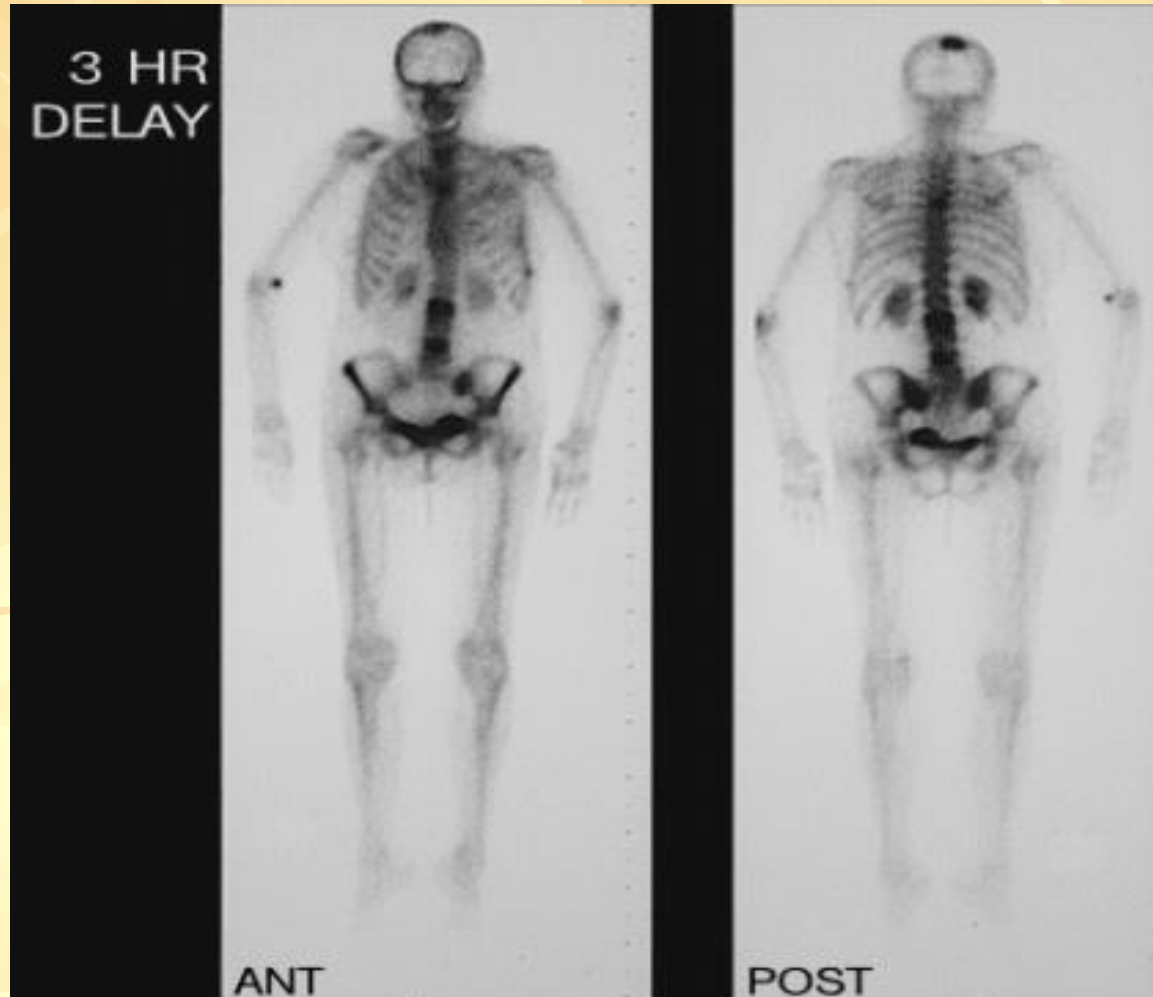
SKELETAL METASTASIS

■ LUNG CANCER

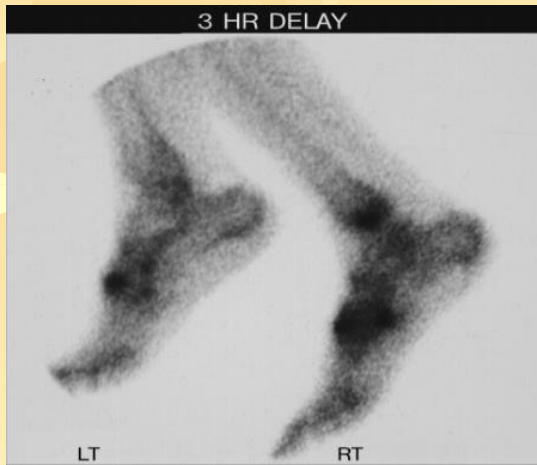


SKELETAL METASTASIS

- BREAST
CANCER



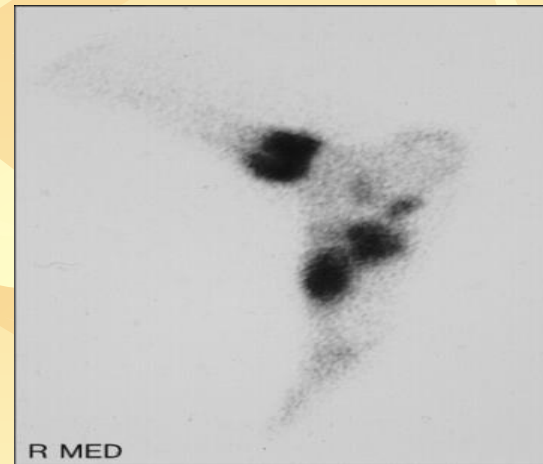
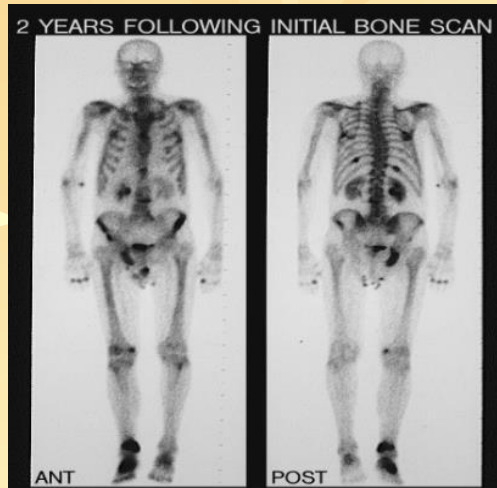
SKELETAL METASTASIS



- Prostatic cancer(early phase):normal x-ray



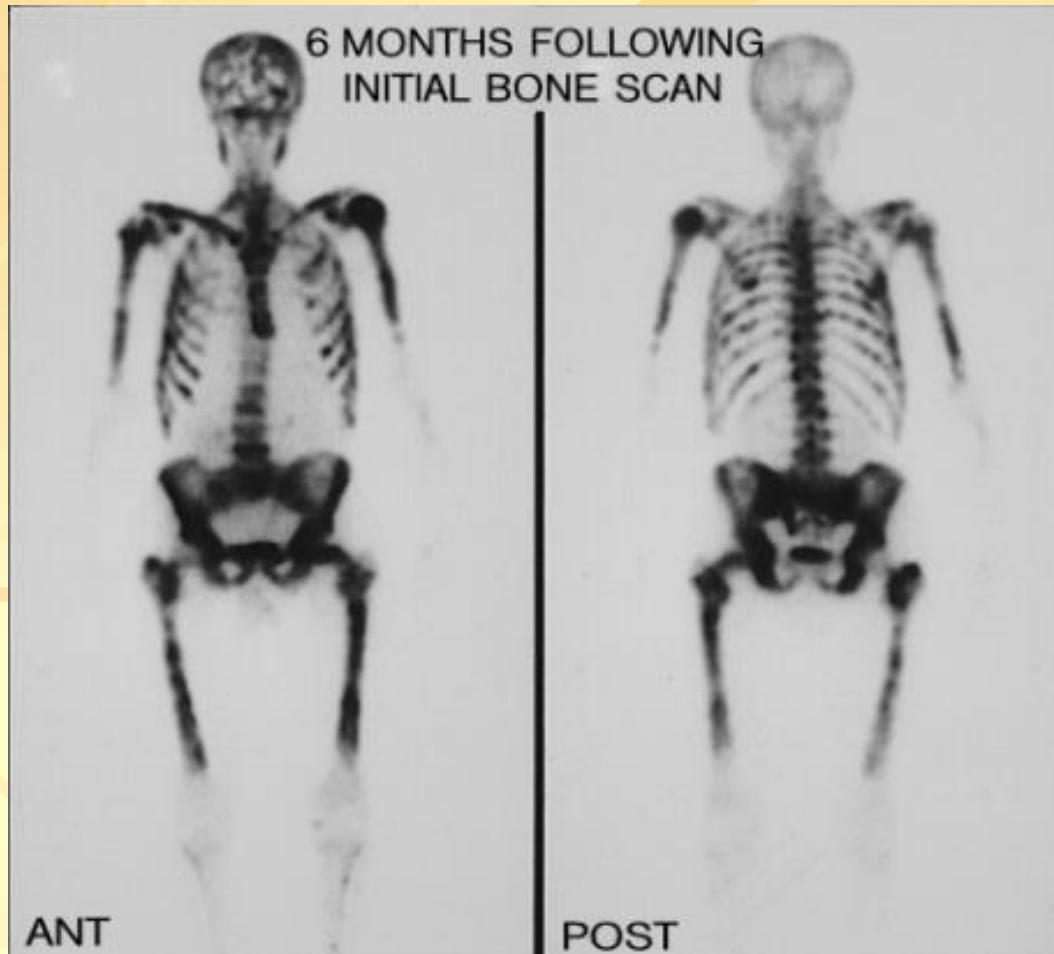
SKELETAL METASTASIS



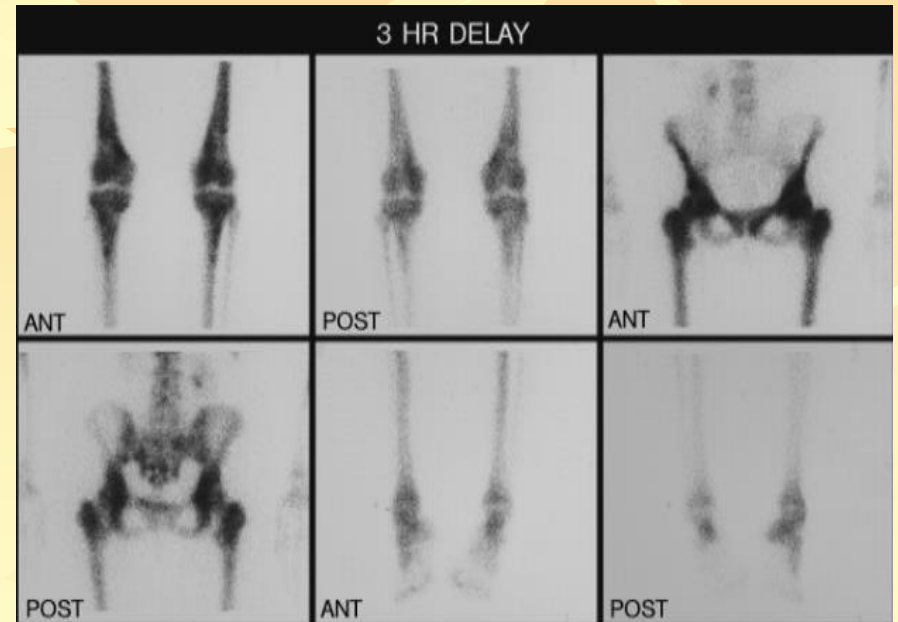
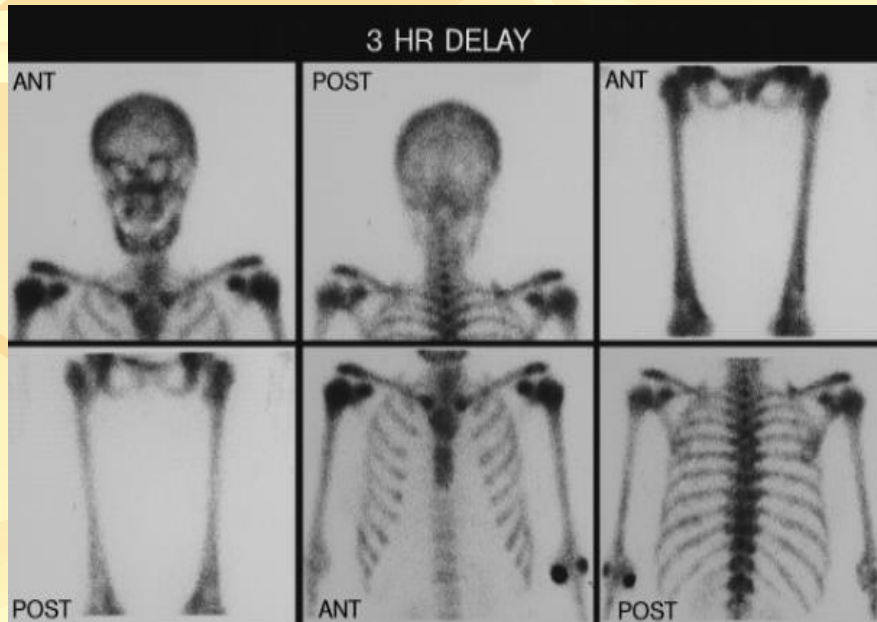
- Two years later: lytic lesions on x-ray



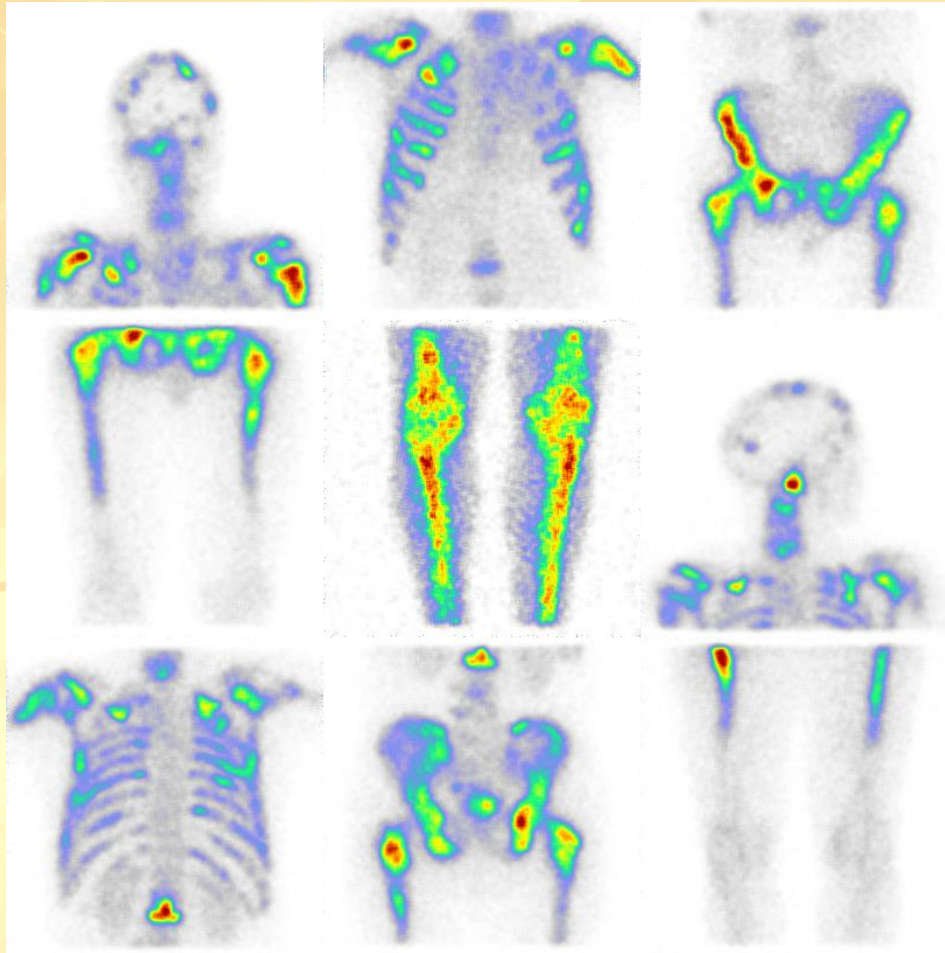
SUPER SCAN(PROSTATE CA.)



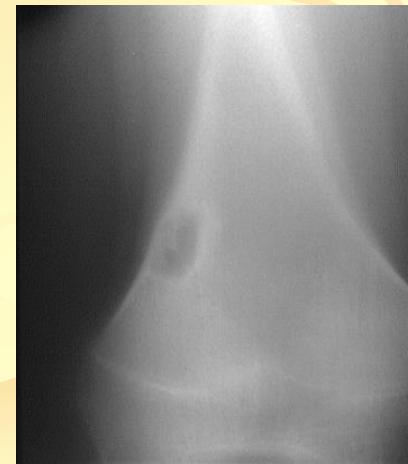
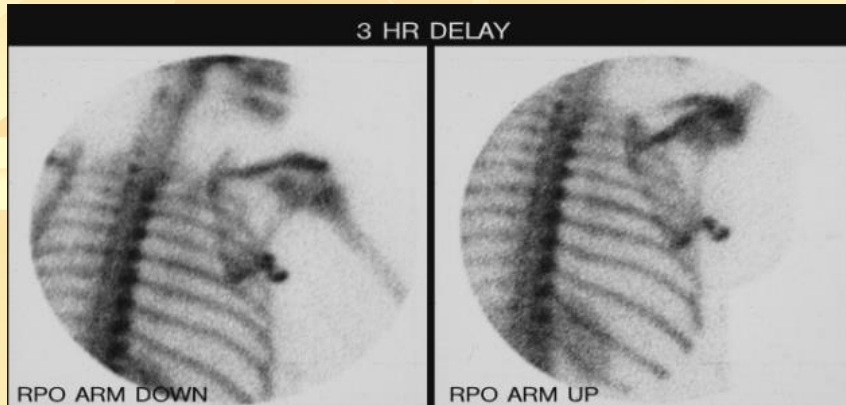
SUPER SCAN(BREAST CA.)



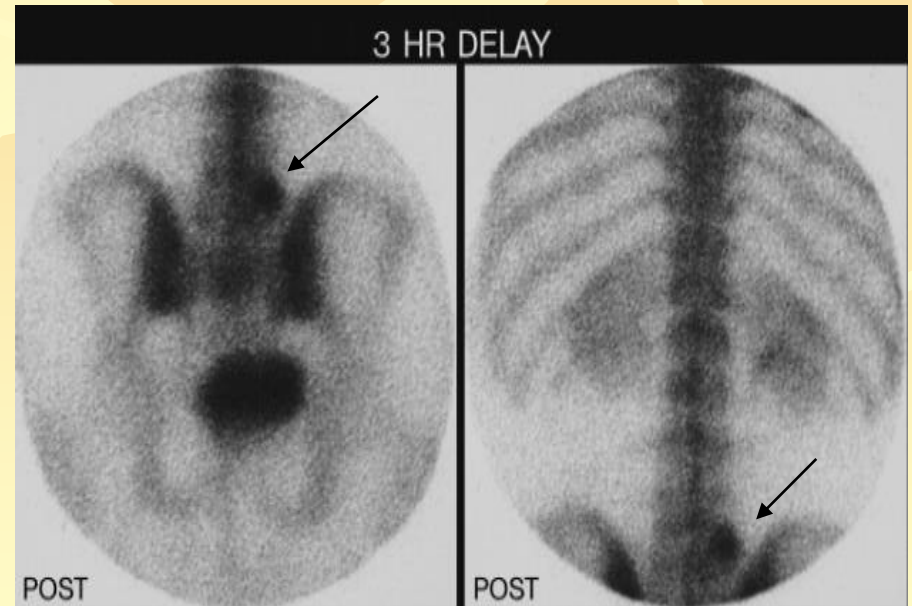
SUPER SCAN(PROSTATE CA.)



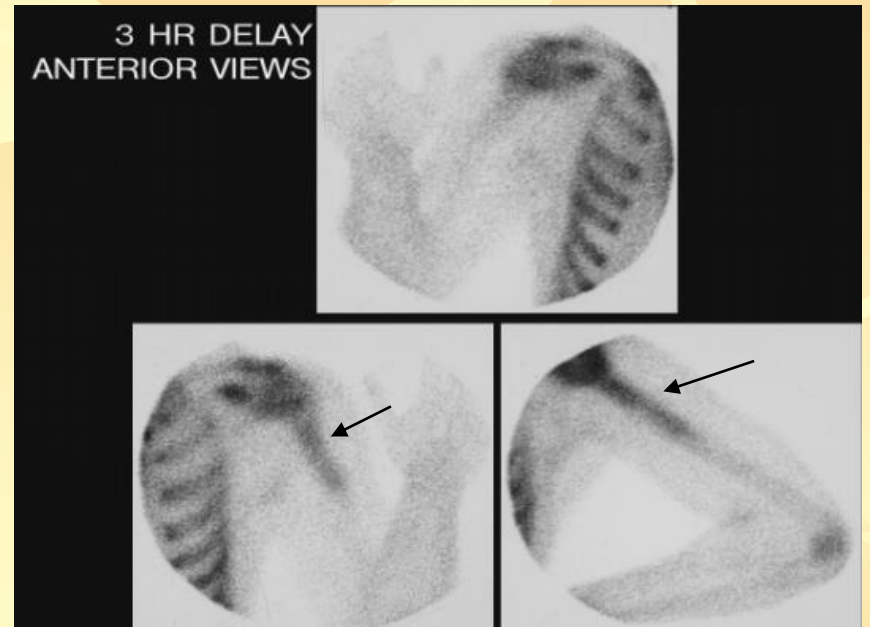
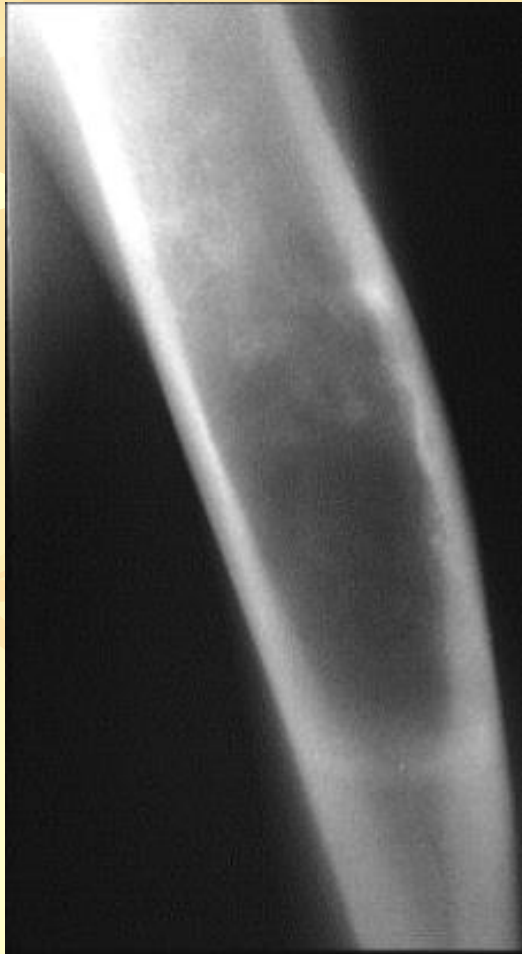
OSTEOCHONDROMA OF THE Rt.SCAPULA&NON-OSSIFYING FIBROMA OF DISTAL Rt.FEMUR



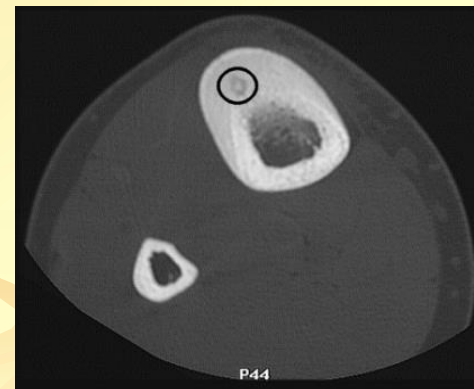
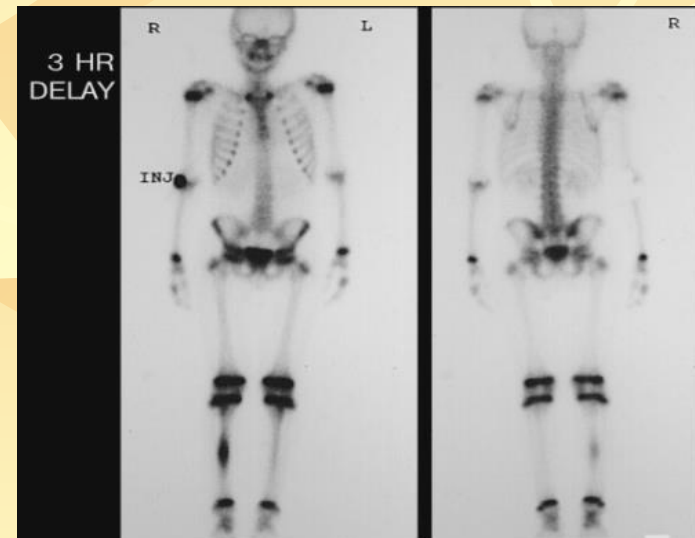
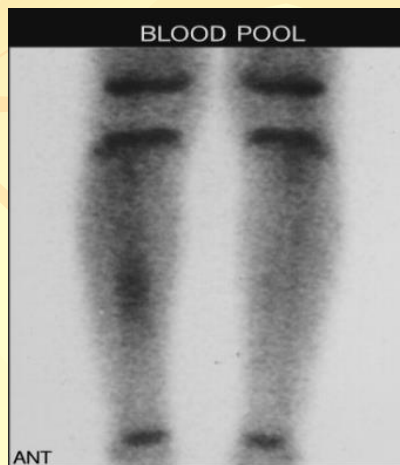
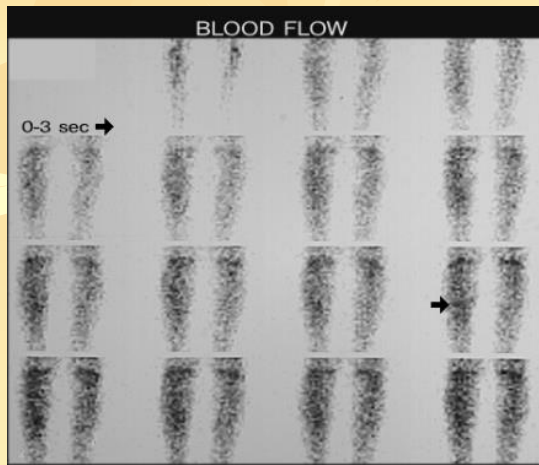
OSTEOBLASTOMA(Rt.L5 pedicle)



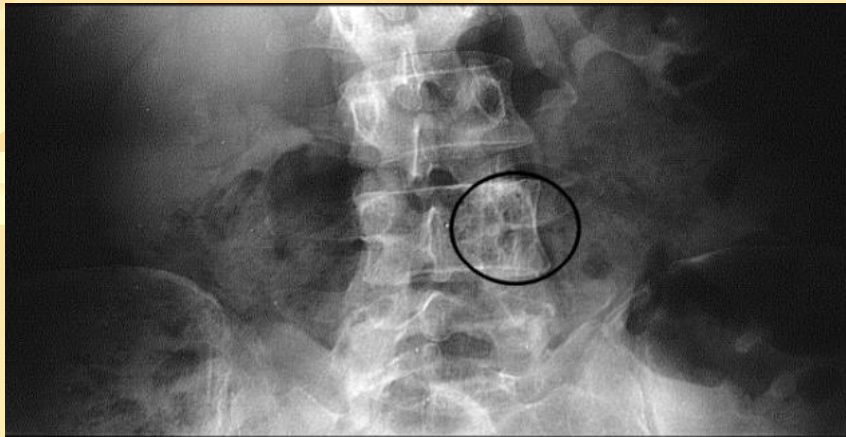
UNICAMERAL BONE CYST



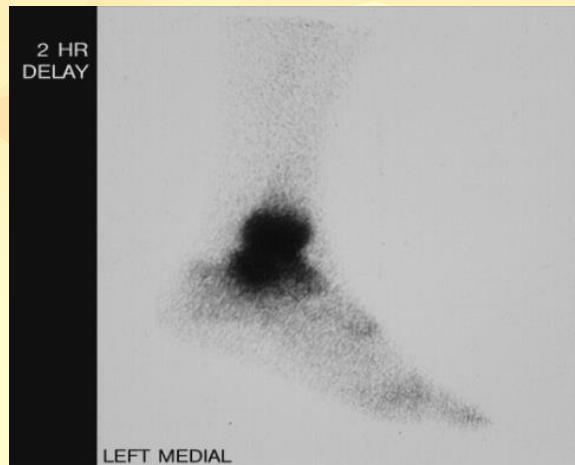
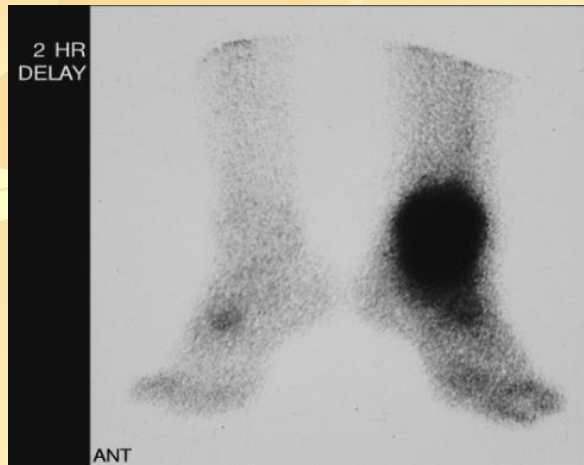
OSTEOID OSTEOMA



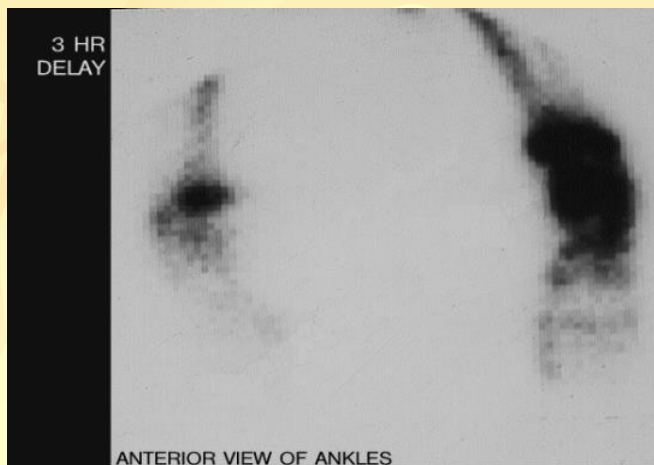
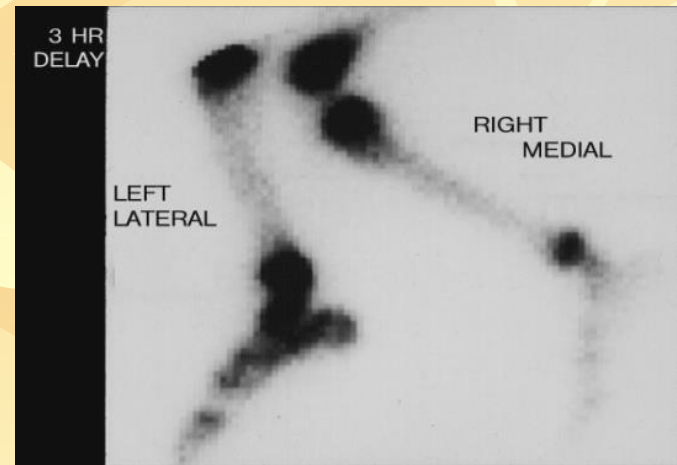
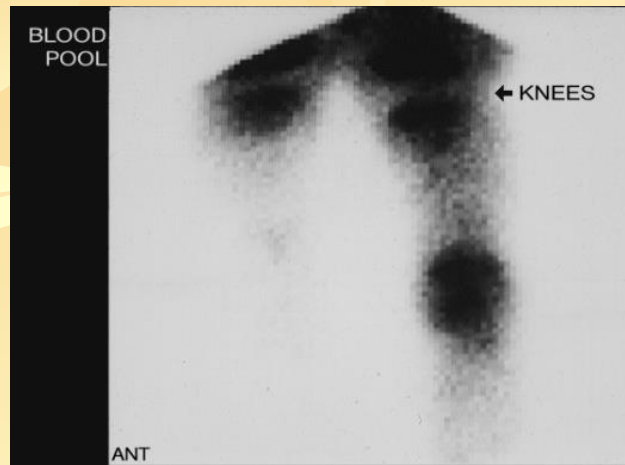
HEMANGIOMA of the L4



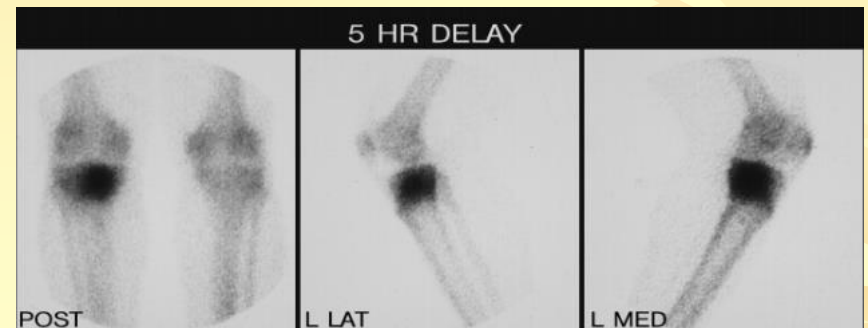
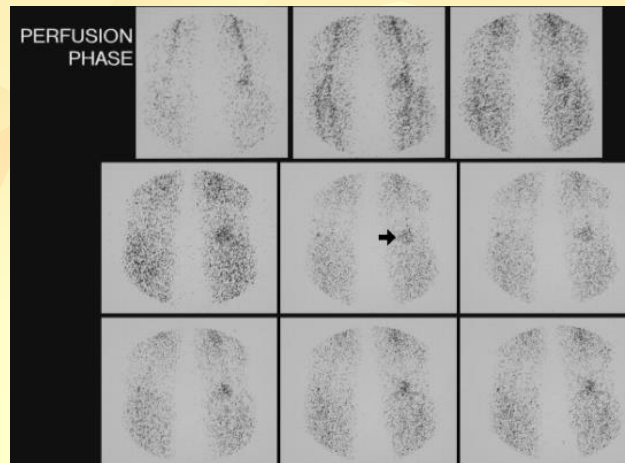
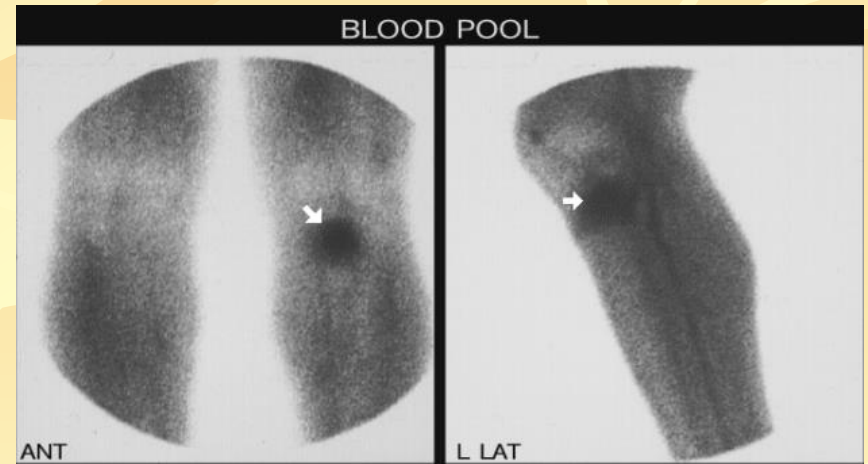
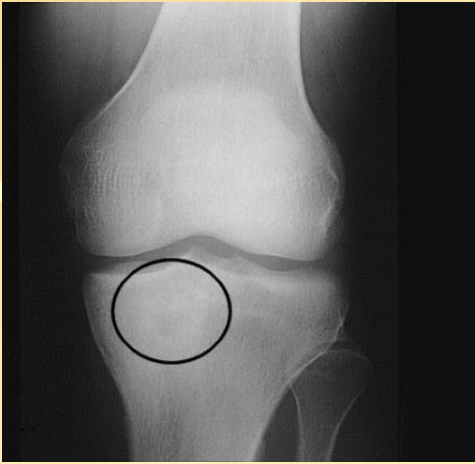
TUBERCULOUS ARTHRITIS



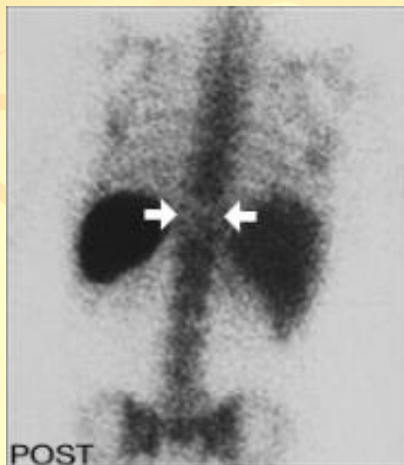
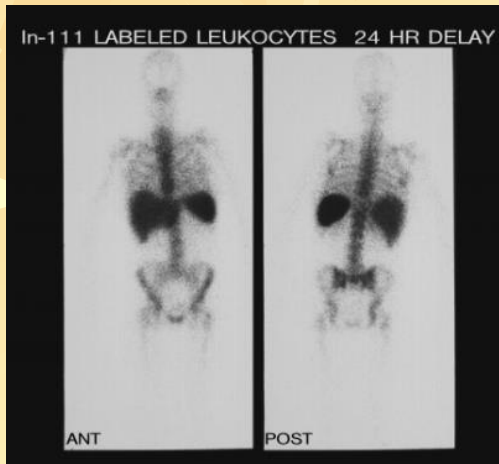
SEPTIC ARTHRITIS(Lt.ankle)



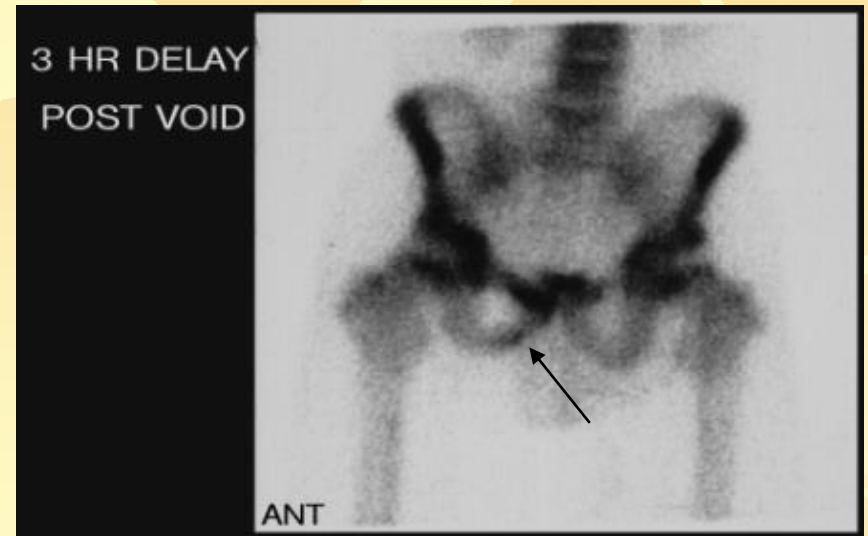
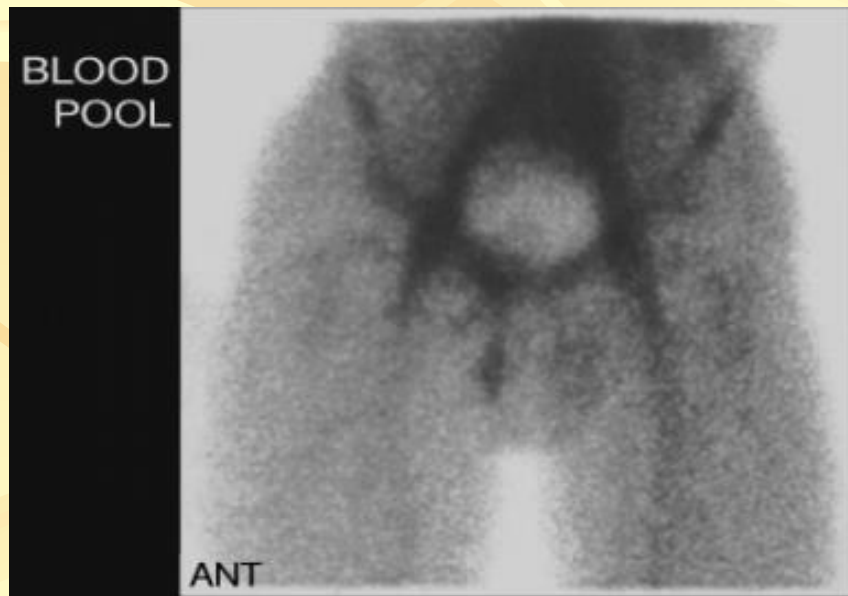
BRODIE'S ABSCESS



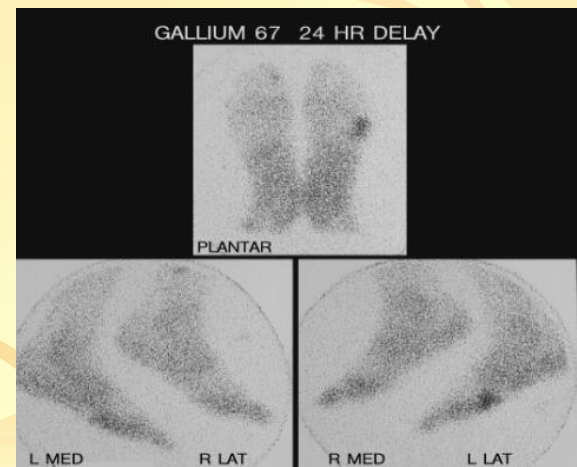
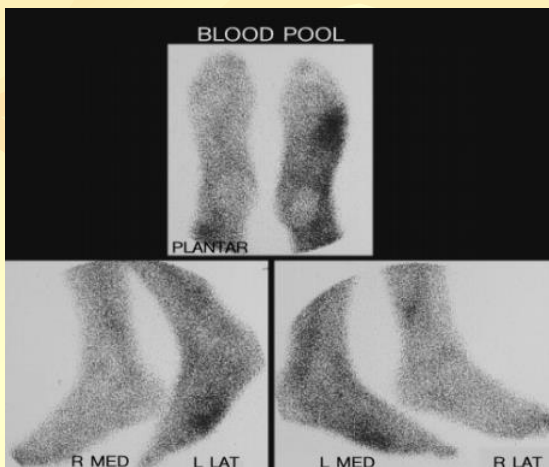
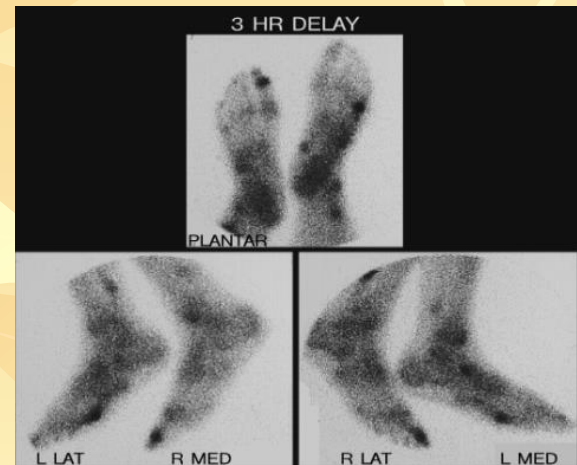
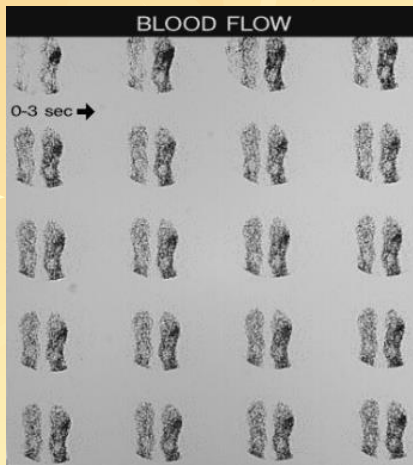
VERTEBRAL BODY ABSCESS (^{111}In -WBC scan)



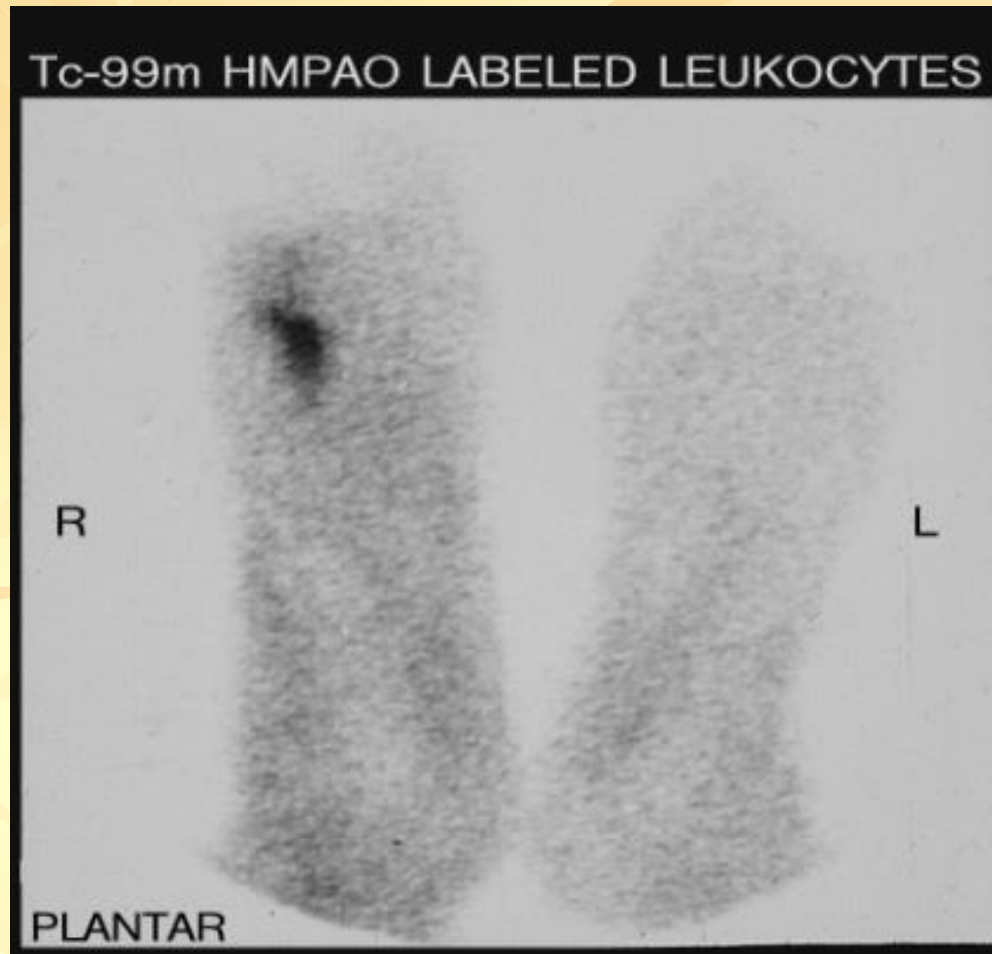
Osteomyelitis of Rt. Sup. Pubic Ramus



DIABETIC FOOT(osteomyelitis)



^{111}In -WBC Scan



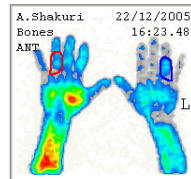
ACUTE OSTEOMYELITIS

(Lt.4th phalange)

NAME A.Shakuri	BIRTH DATE 81.0 y	STUDY ID
DOCTOR	ORGAN Bones	VIEW ANT
STUDY DATE 22/12/2005	RADIONUCLID Tc-99m	ACTIVITY 25.0 MBq

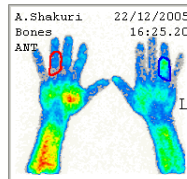
Lt: 0  Ut: 100
Lt: 0  Ut: 100

Perfusion Phase



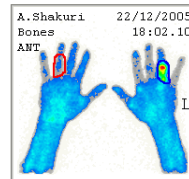
Phase duration : 60 sec.

Bloodpool Phase



Frame duration : 150 sec.

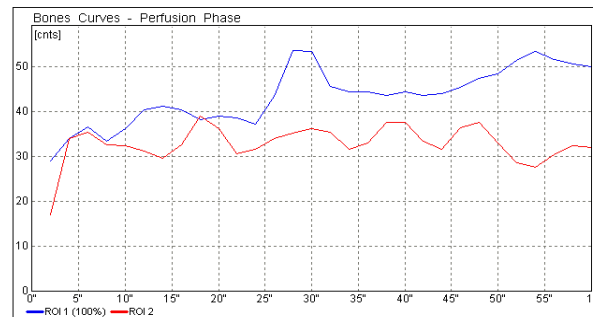
Skeletal Phase



Frame duration : 450 sec.

ROI 1 (100%)		ROI 2	
ROI 1 (100%) / ROI 2			
Bloodpool Ratio			
Skeletal Ratio			

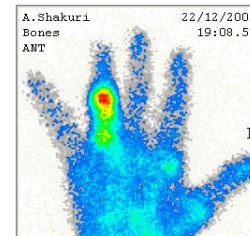
2.19
4.58



NAME A.Shakuri	BIRTH DATE 0.0 y	STUDY ID
DOCTOR	ORGAN Bones	VIEW ANT
STUDY DATE 22/12/2005	RADIONUCLID Tc-99m	ACTIVITY 25.0 MBq

Lt: 0  Ut: 100

Skeletal Phase



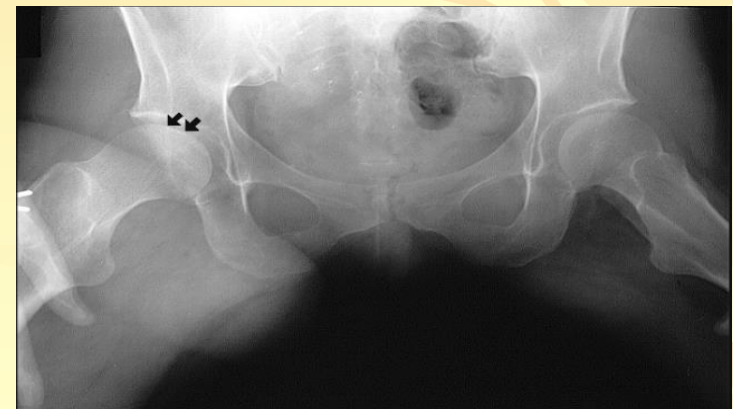
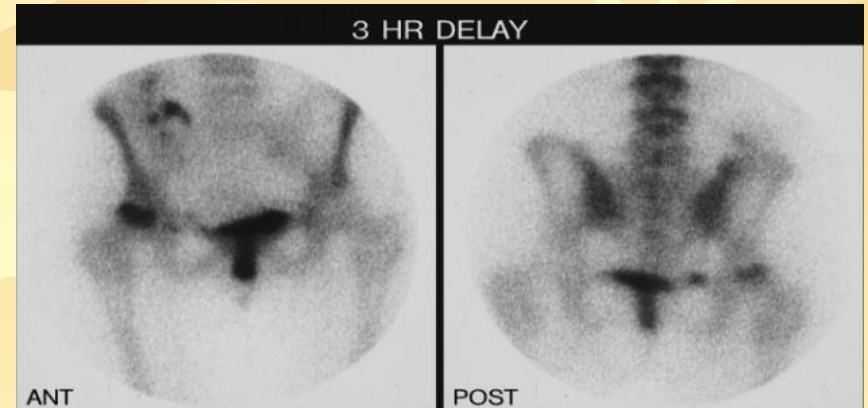
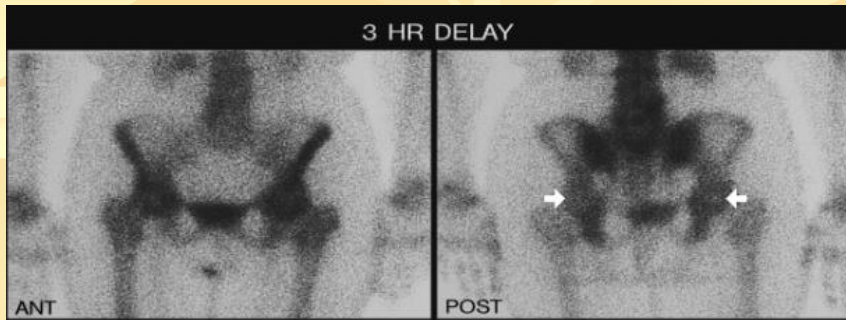
Frame duration : 425 sec.

ROI 1 (100%)		ROI 2	
ROI 1 (100%) / ROI 2			
Skeletal Ratio			

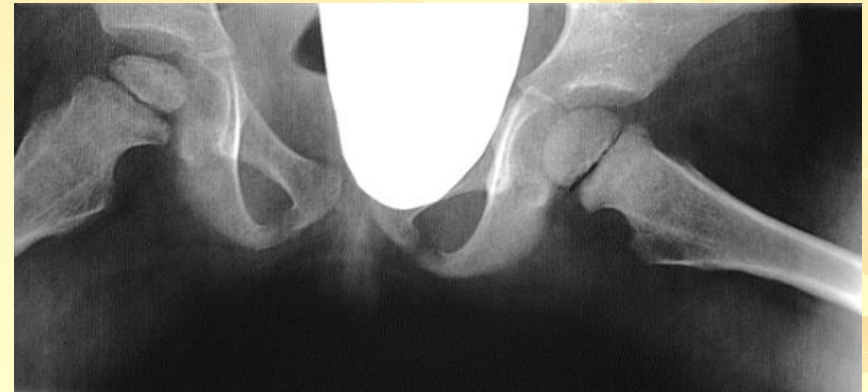
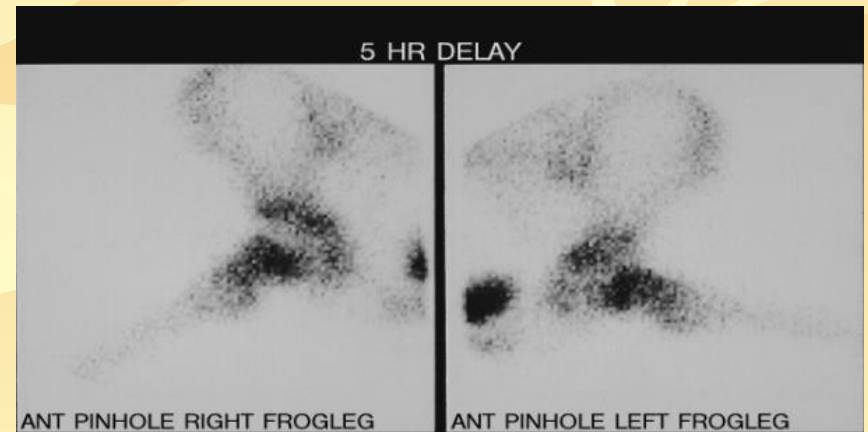
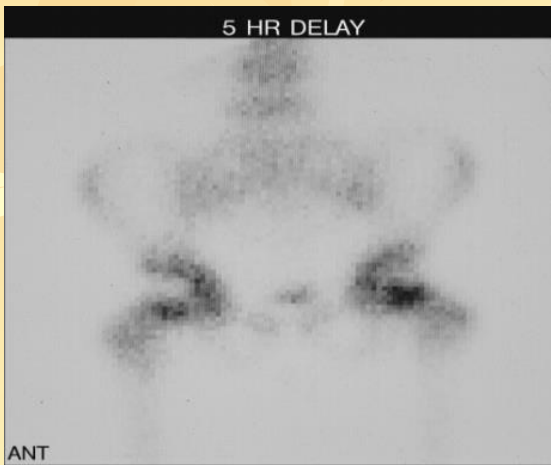
0.00



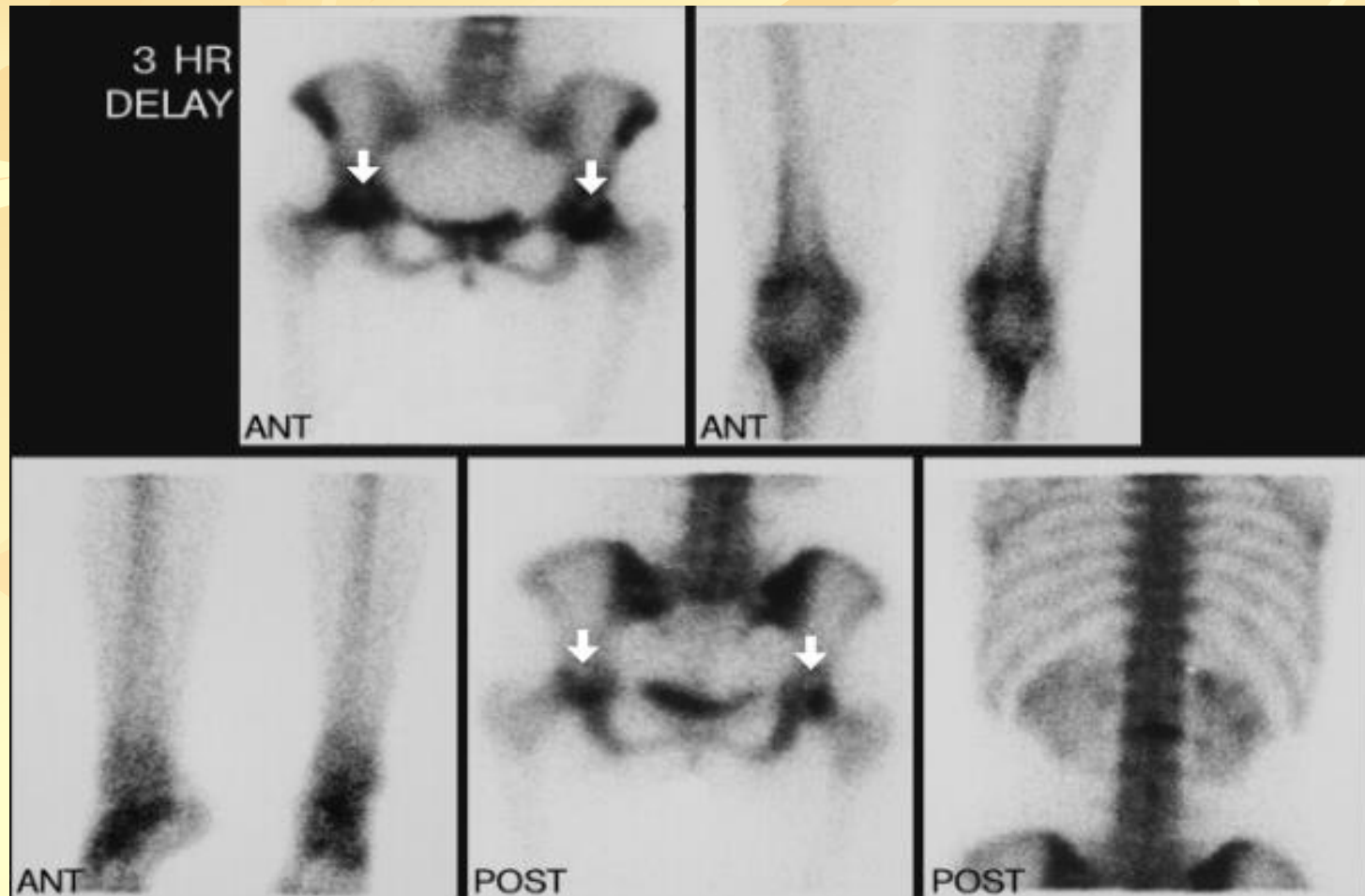
AVN of the Femoral Heads (steroid therapy)



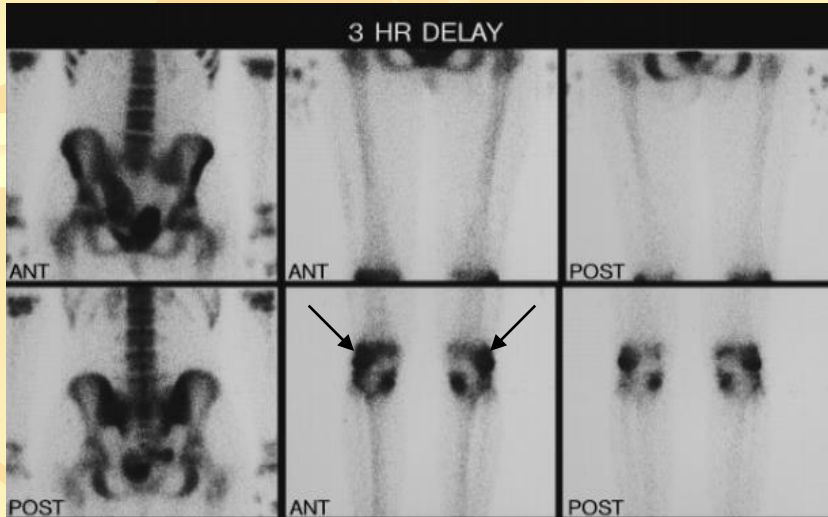
LEGG-CALVE-PERTHES DISEASE(Rt.)



AVN(SLE with Long Term Steroid Therapy)



AVN (Post Renal Transplant)

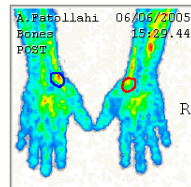


SCAPHOID'S AVN (Healing Phase)

NAME A.Fatollahi	BIRTH DATE 0.0 y	STUDYID
DOCTOR Dr.Mour	ORGAN Bones	VIEW POST
STUDYDATE 06/06/2005	RADIONUCLID Tc-99m	ACTIVITY 25.0 MBq

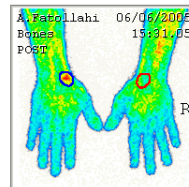
Lt: 0  Ut: 100
Lt: 0  Ut: 100

Perfusion Phase



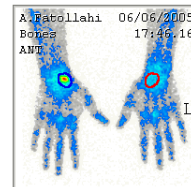
Phase duration : 60 sec.

Bloodpool Phase



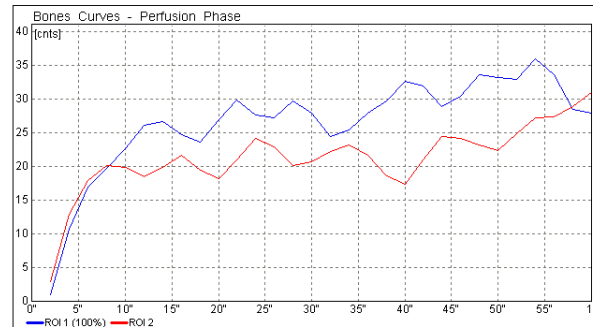
Frame duration : 244 sec.

Skeletal Phase



Frame duration : 221 sec.

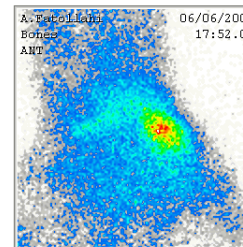
ROI 1 (100%)	ROI 2
ROI 1 (100%) / ROI 2	
Bloodpool Ratio	1.53
Skeletal Ratio	1.74



NAME A.Fatollahi	BIRTH DATE 0.0 y	STUDYID
DOCTOR	ORGAN Bones	VIEW ANT
STUDYDATE 06/06/2005	RADIONUCLID Tc-99m	ACTIVITY 25.0 MBq

Lt: 0  Ut: 83

Skeletal Phase



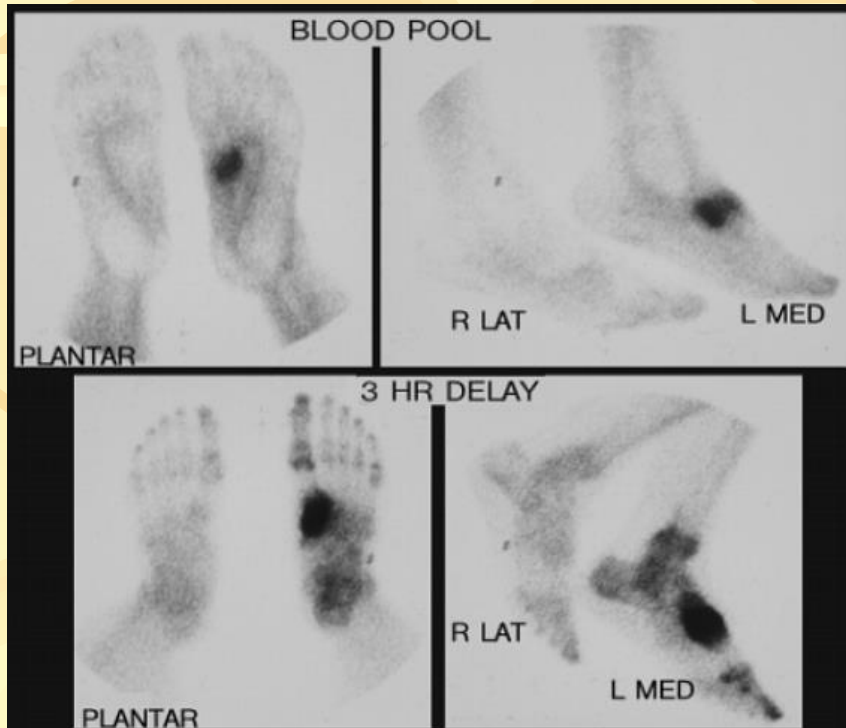
Frame duration : 683 sec.

ROI 1 (100%)	ROI 2
ROI 1 (100%) / ROI 2	
Skeletal Ratio	0.00



STRESS FRACTURE

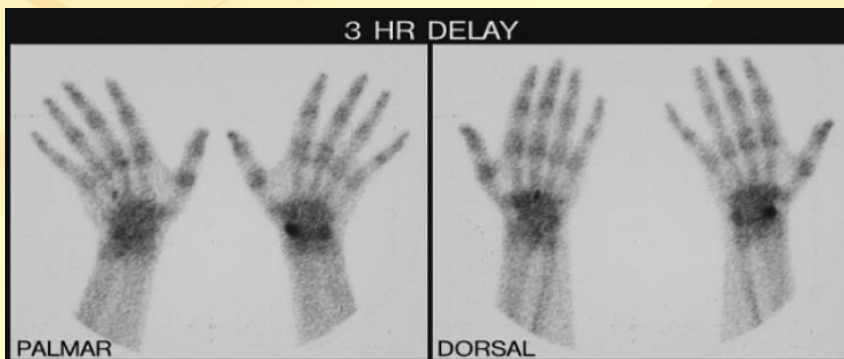
(Base of the 1st metatarsal)



STRESS Fx.of the Lt.Tibia (previously resected fibula)



ACUTE Lt.NAVICULAR Fx. (normal early X-Ray)



Stress Fracture of Lt. Tibia



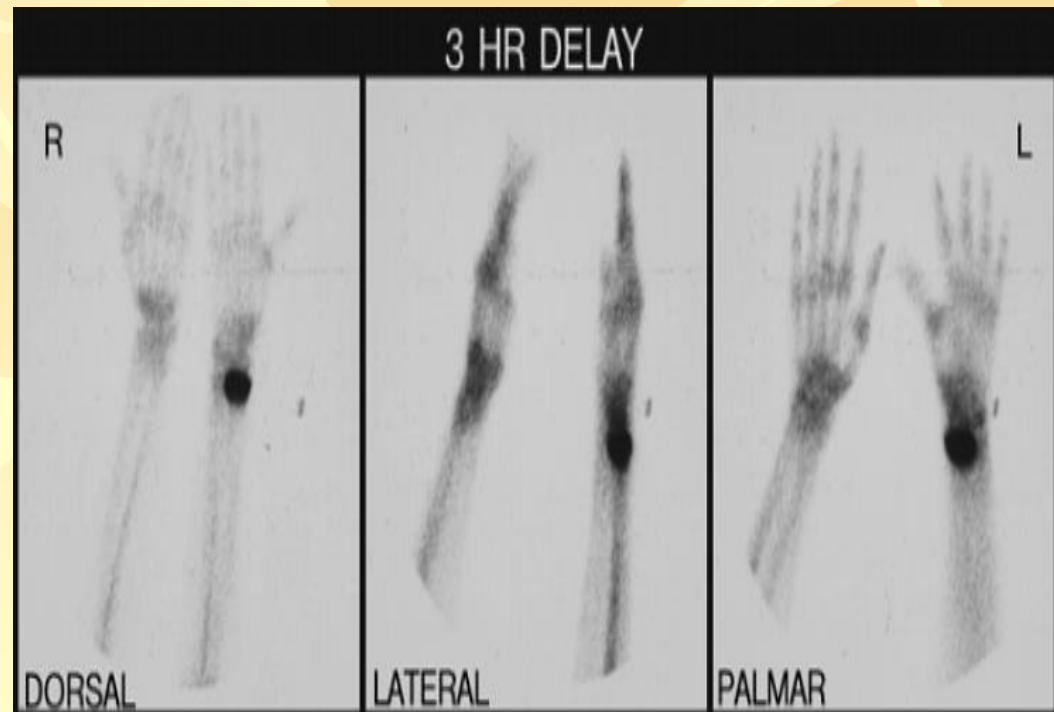
One mo.before scan



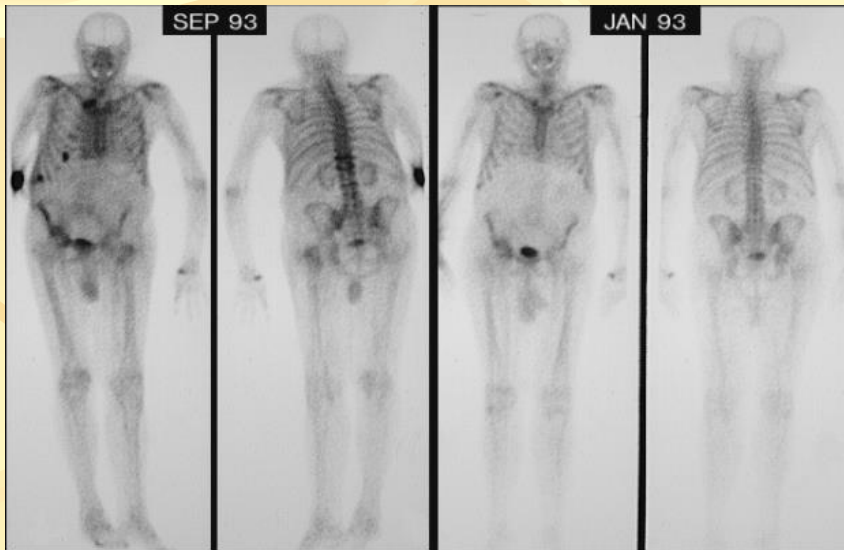
One mo.after scan



Occult Fracture of Distal Lt. Radius (post injury)



Multiple Trauma with Vertebral Body Compression Fx.



2 ys.ago



Last X-ray

