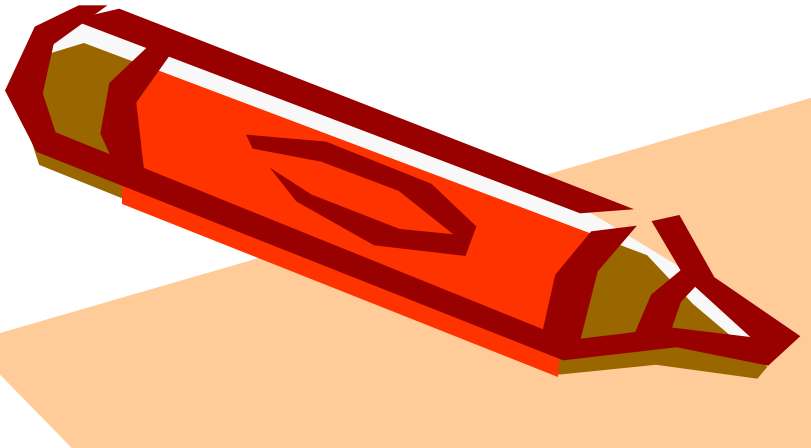


SKELETNI SISTEM

kosti

kostna srž



Scintigrafija kostiju



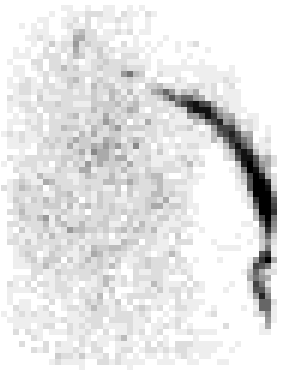
- Najzastupljenija metoda u kli praksi
- Oslikava osteoblastnu aktivnos
- Radiofarmaci na bazi bifosfonata

  MDP,HEDP,HMDP,DPD...

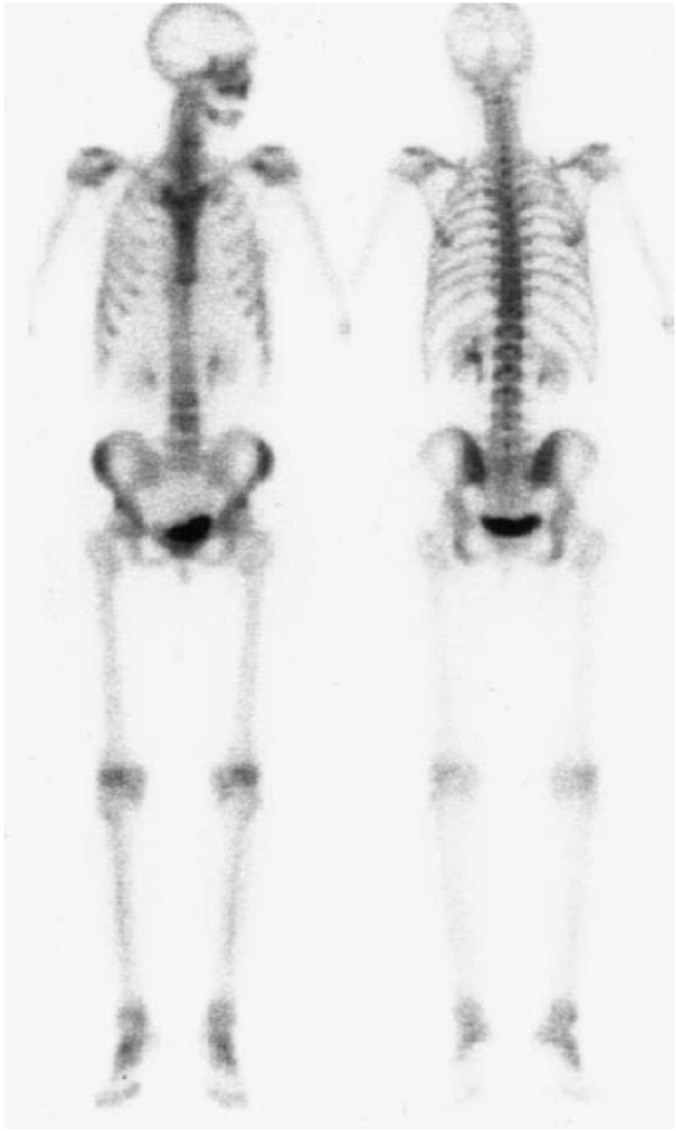
Adsorpcija na kristale hidroksiapatita

protokol metode

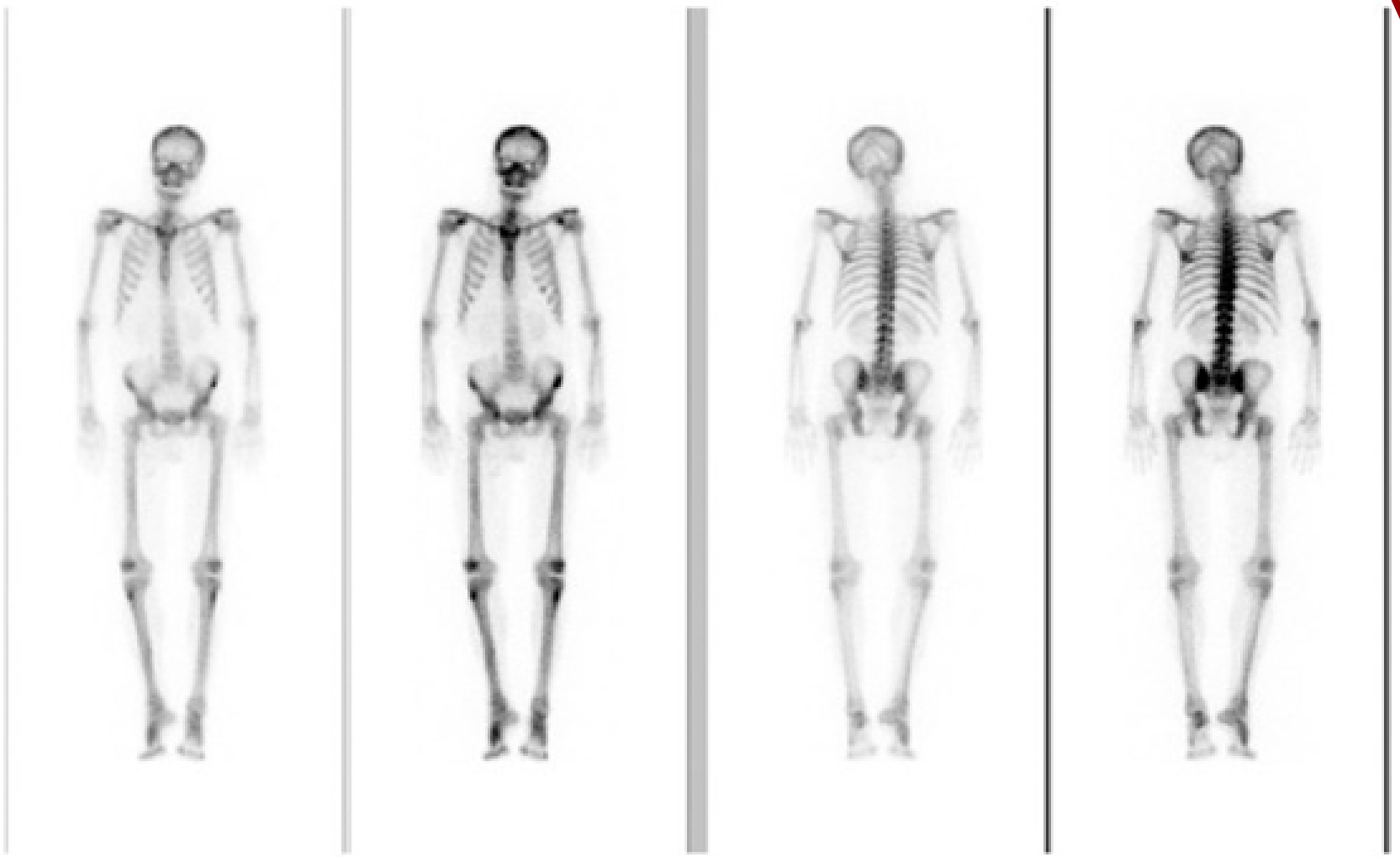
- Pacijentu se ubrizga 740MBq i.v Tc99m DPD
- Snimanje se vrši posle 2h u AP i PA projekciji
- Snima se celo telo i ciljani scintigrami







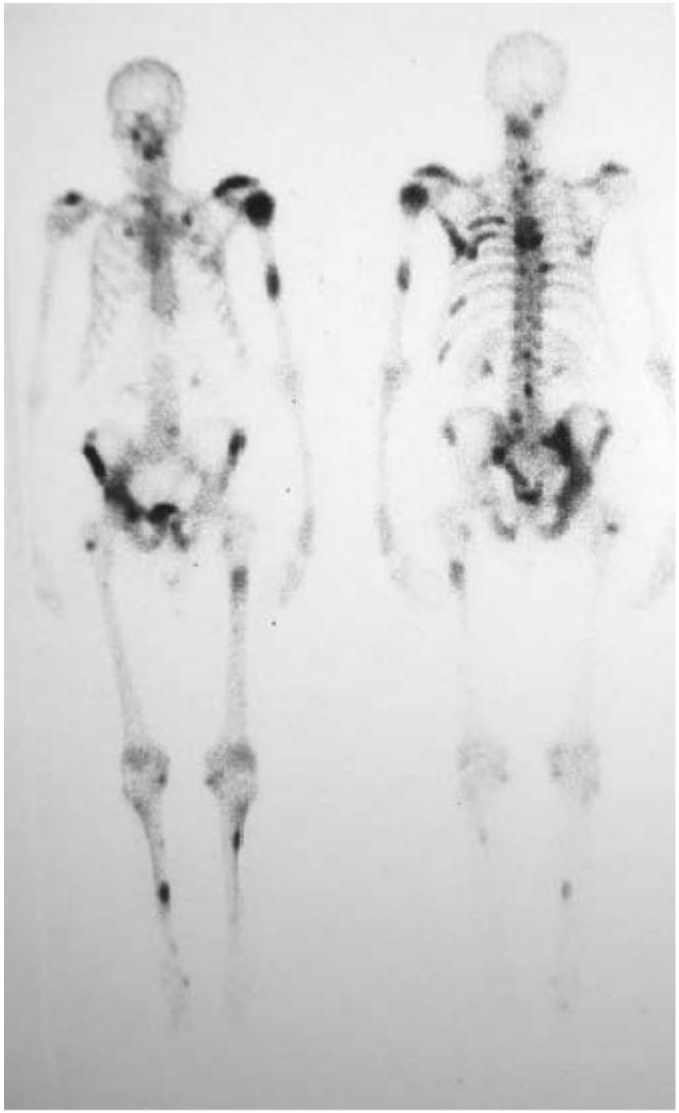
Normalan Tc99m-MDP scintigram



Source: BMC Nuclear Medicine © 1999-2006 BioMed Central Ltd



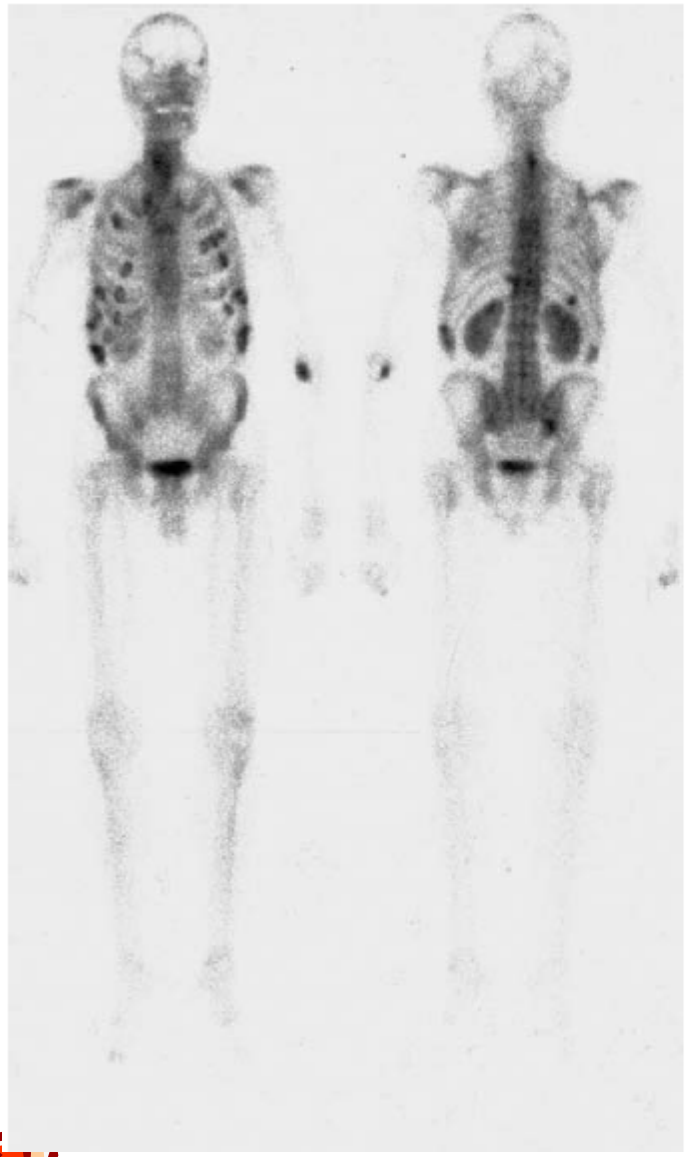
Normalan Tc99m-DPD skeleta u razvoju (uzgredan nalaz je potkovičasti bubreg)

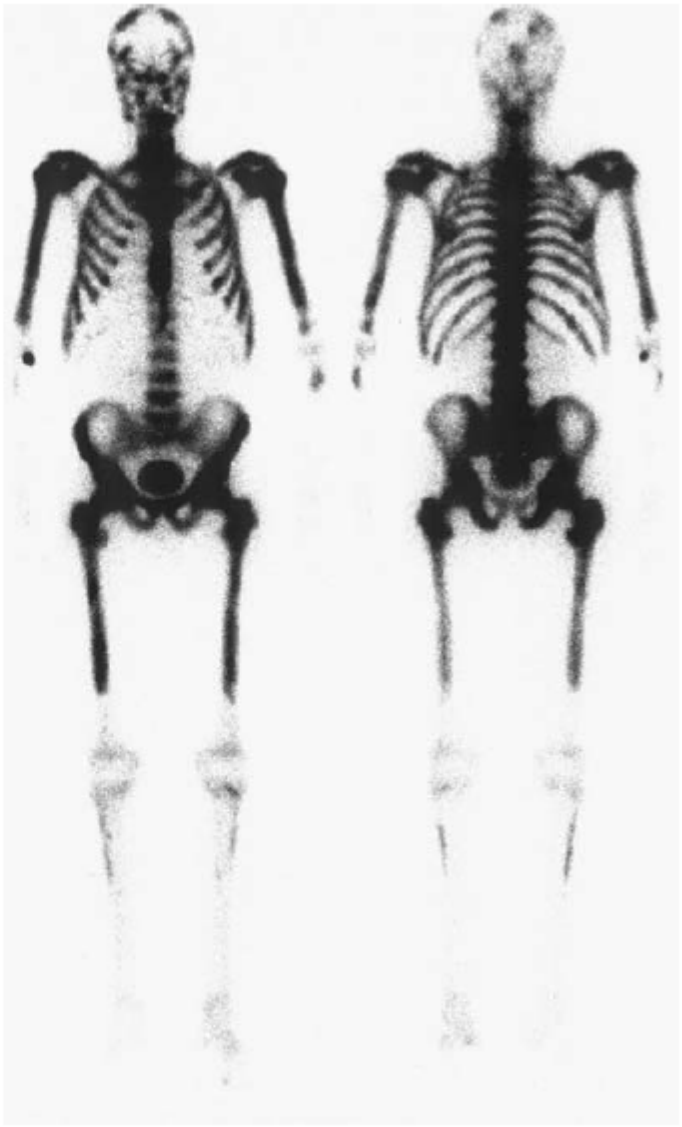




Metastaze Ca prostate

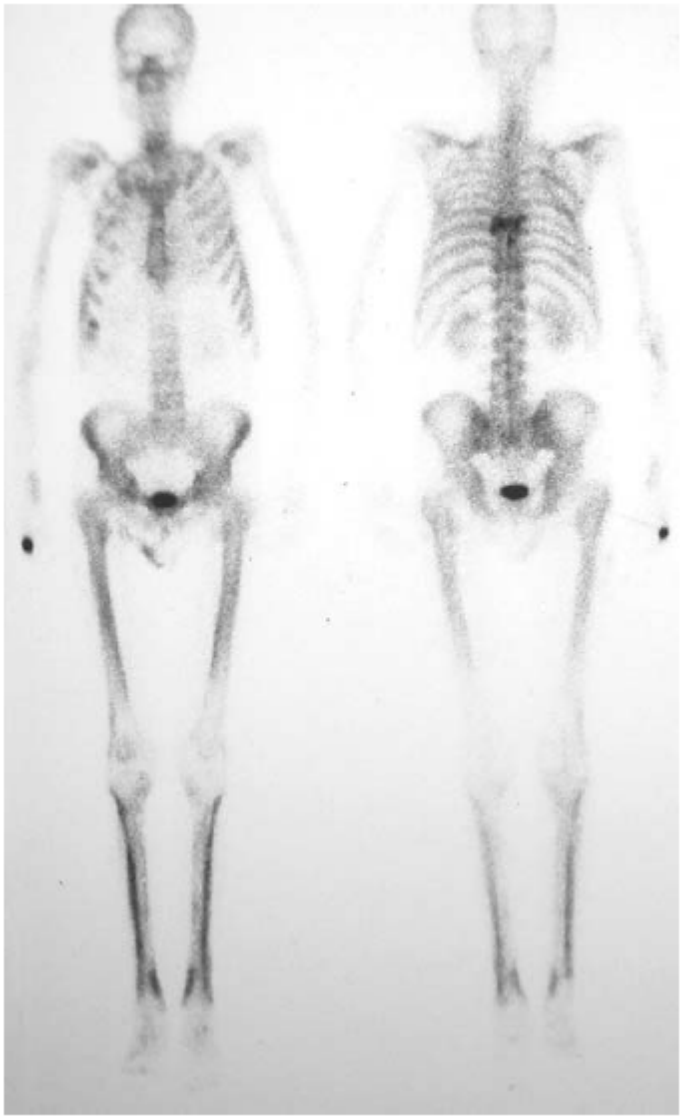
metastaze renalnog Ca
(nefrektomija levo)





Frakture rebara (multipli mijelom)

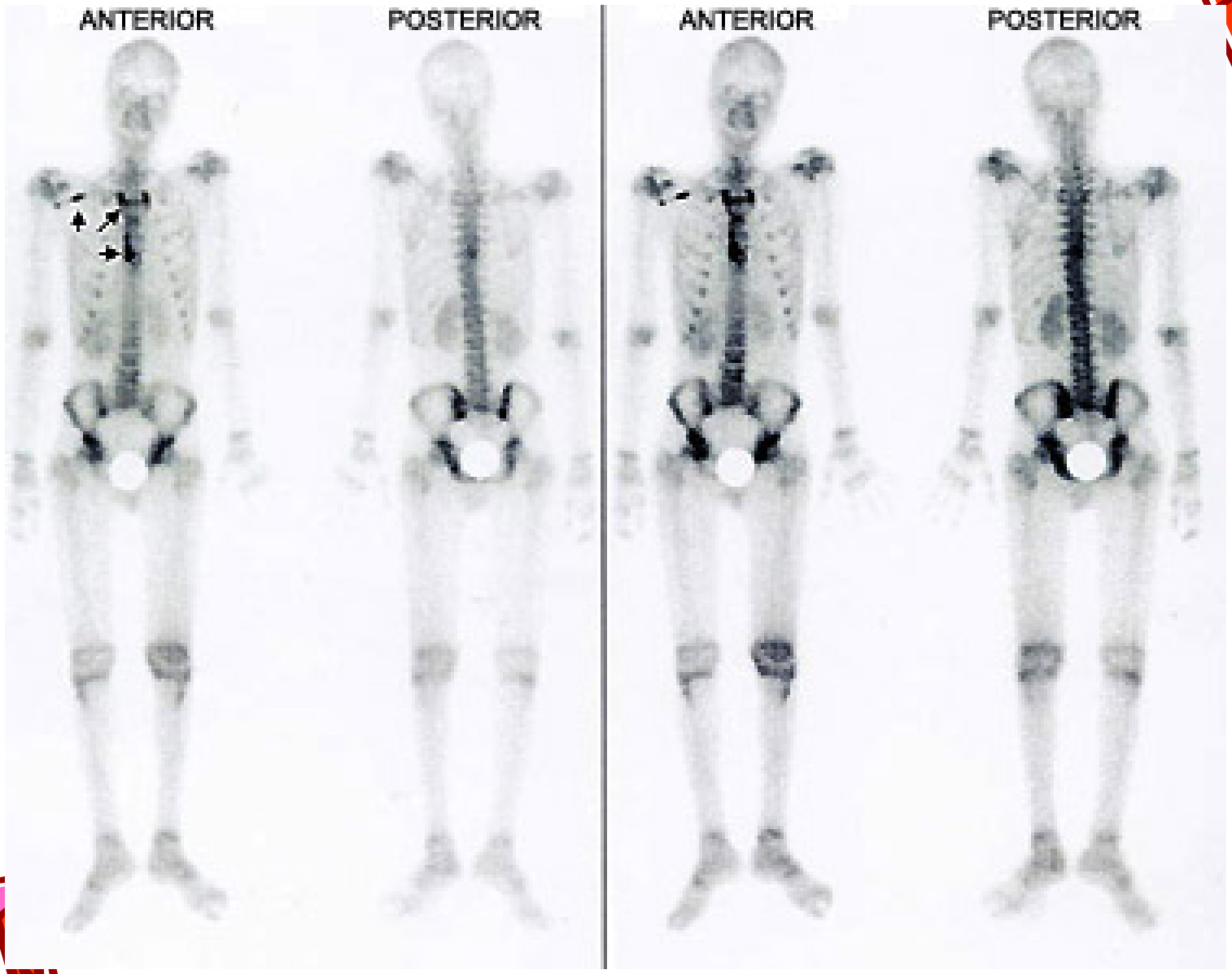
„supersken" Ca prostate (ne vide se bubrezi)

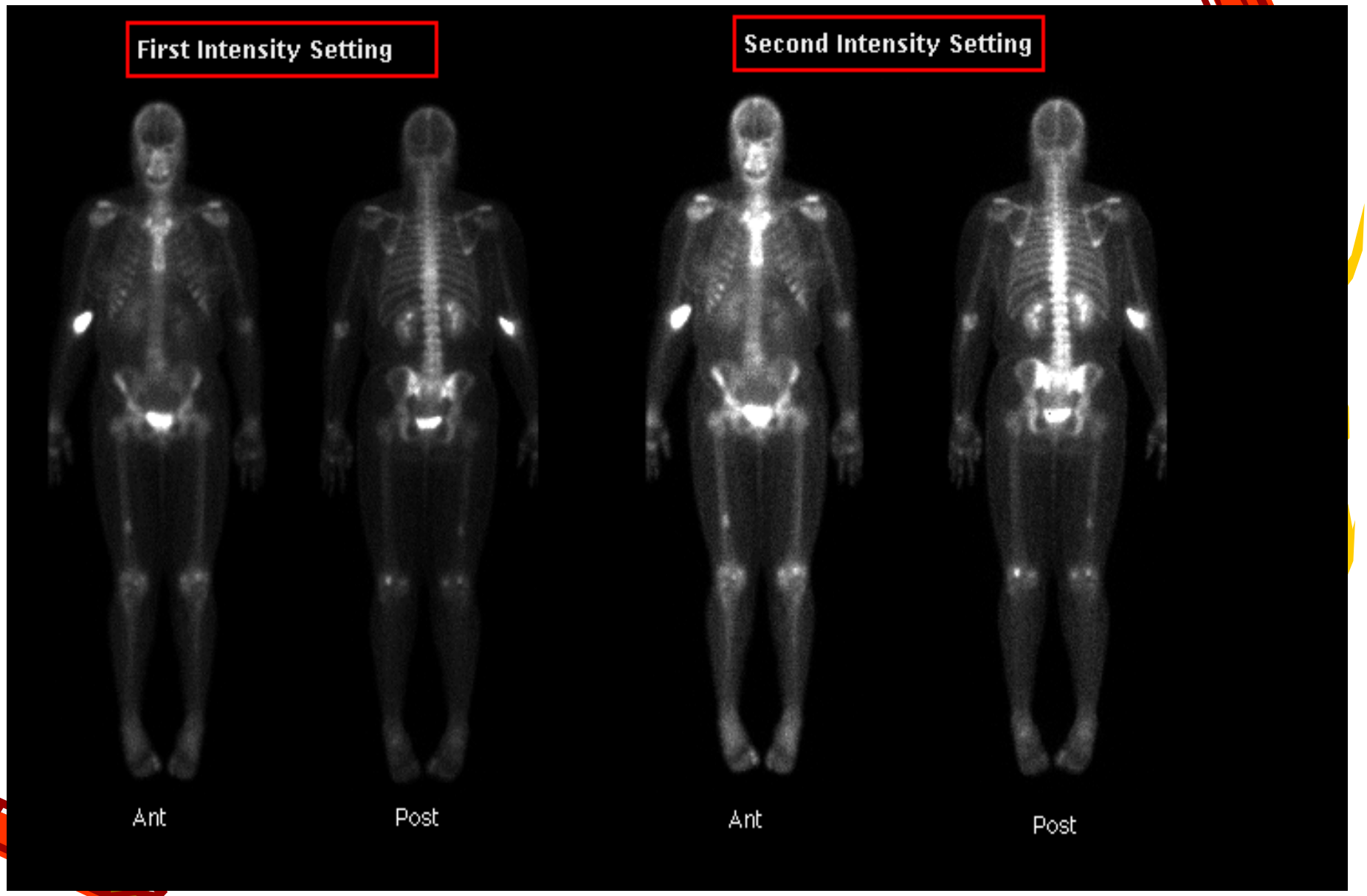


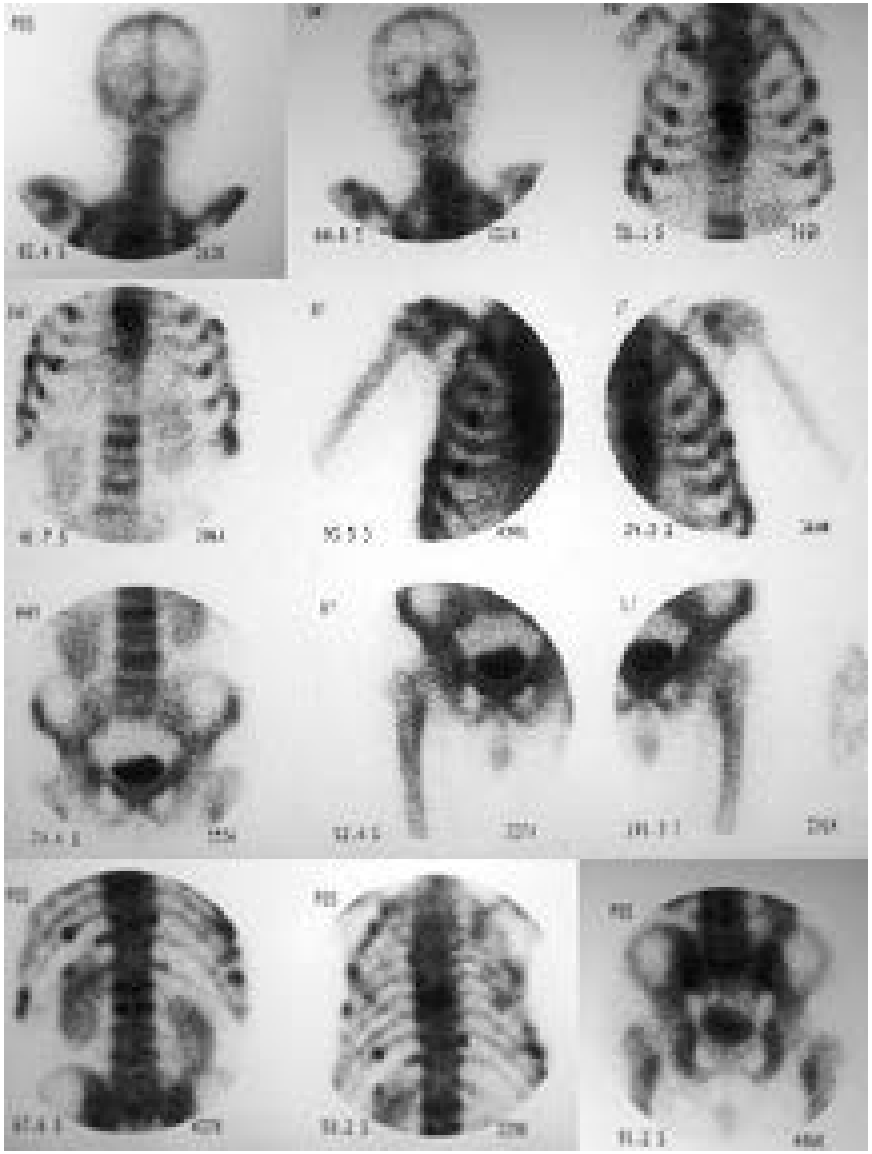
osteopulmonarna distrofija(ekstremiteti) sa metastazama Ca bronhija u kičmi i rebrima



Fraktura L1L2 L5 zbog osteoporoze


ANTERIOR
POSTERIOR
ANTERIOR
POSTERIOR

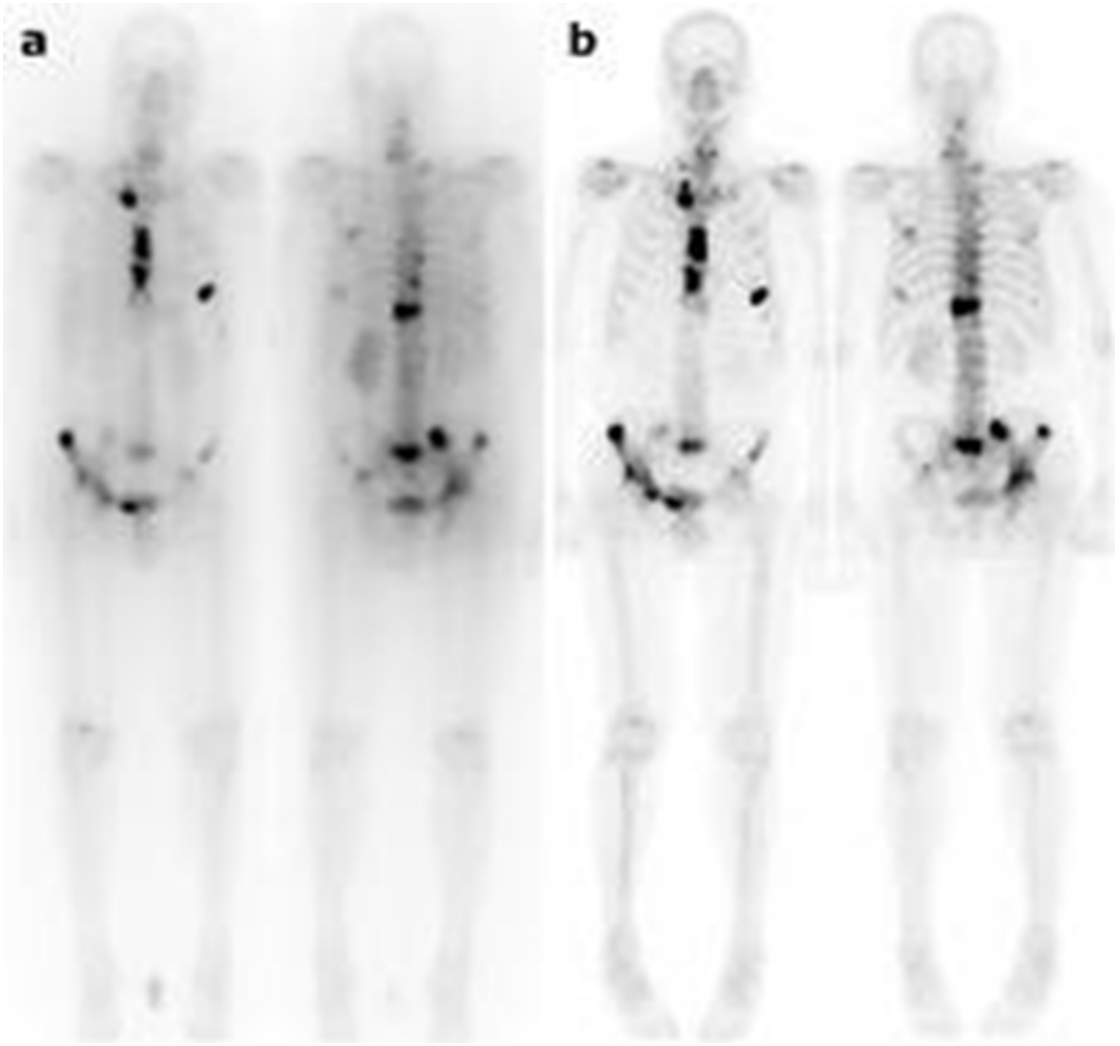

First Intensity Setting
Second Intensity Setting
Ant
Post
Ant
Post

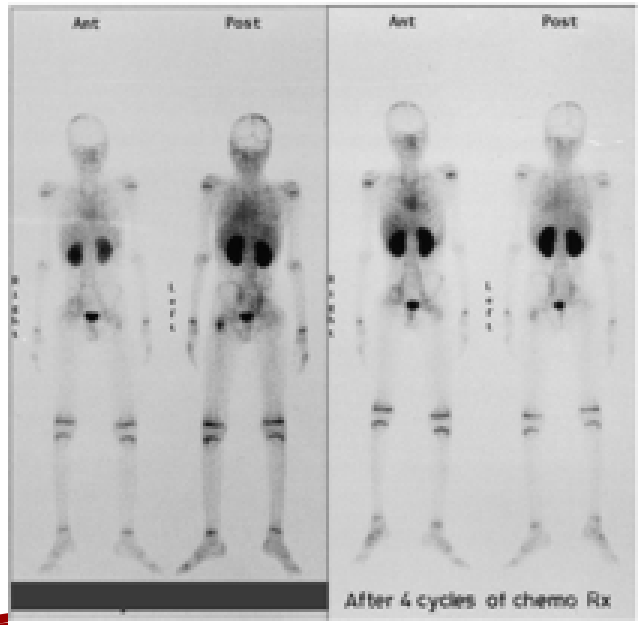


mikrogamaglobulinemija

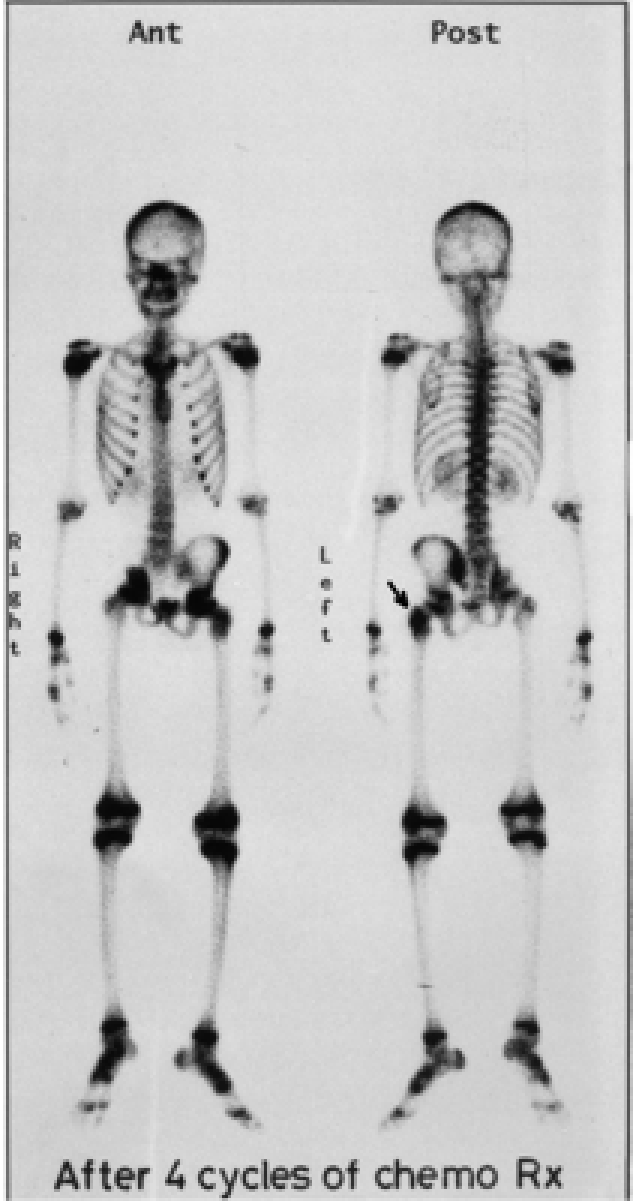

First Intensity Setting
Second Intensity Setting
Ant
Post
Ant
Post

enhondroma


a
b



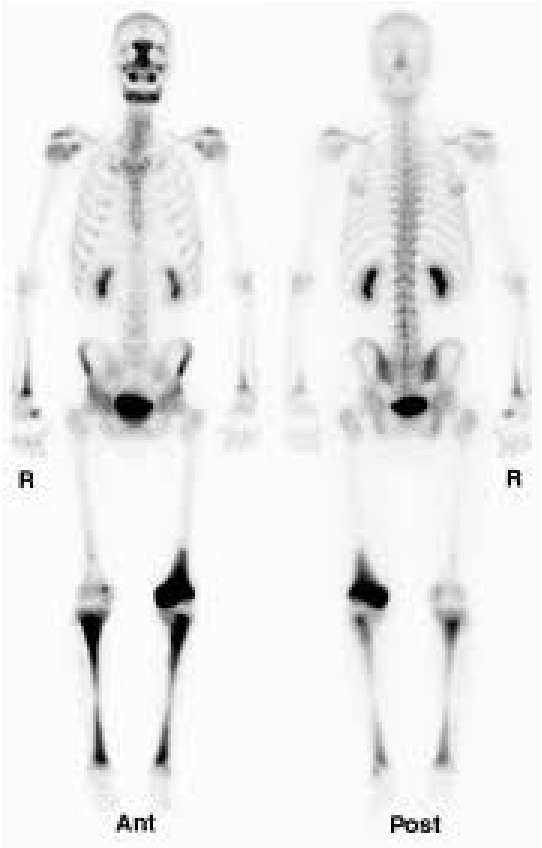
(d) (e)

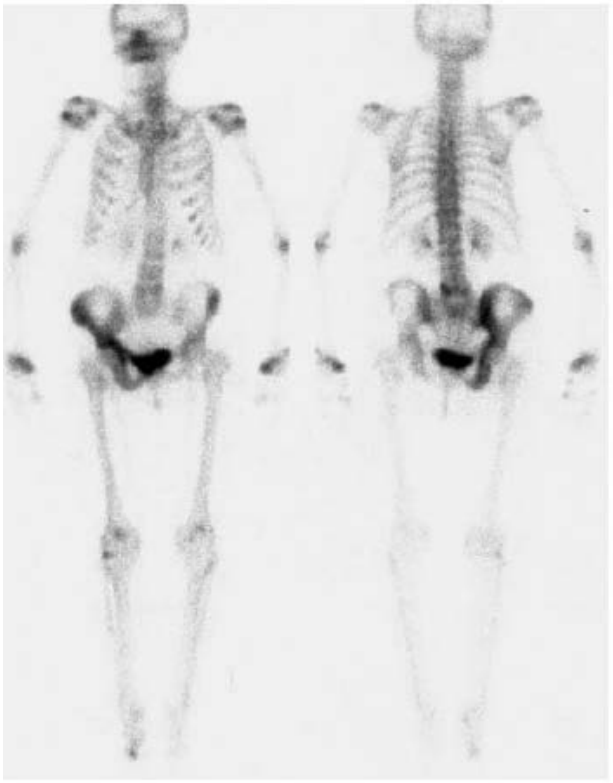


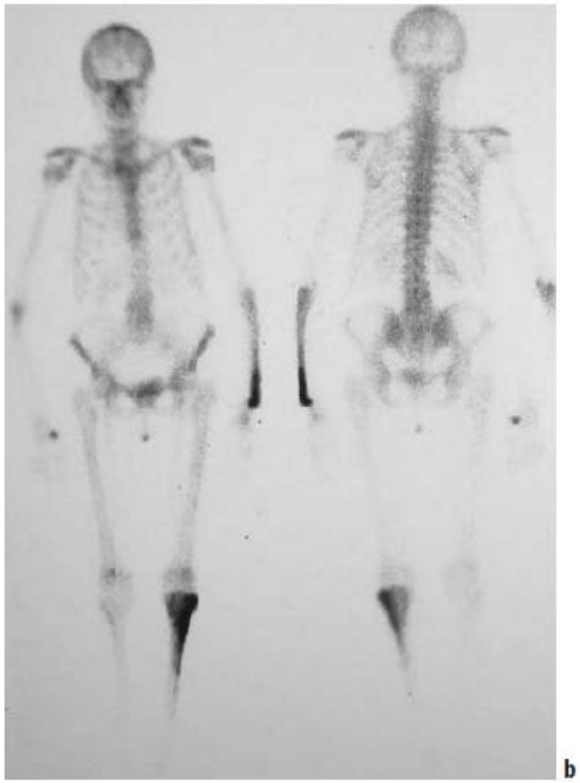
(f)

Fler fenomen

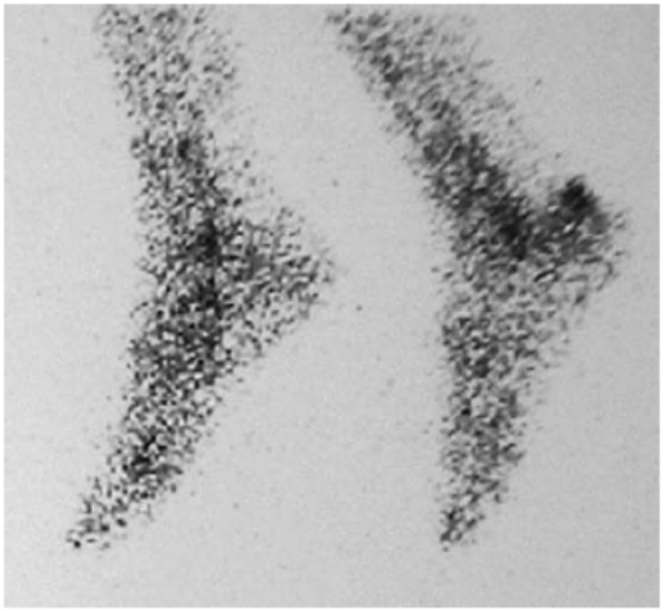
Padžetova bolest



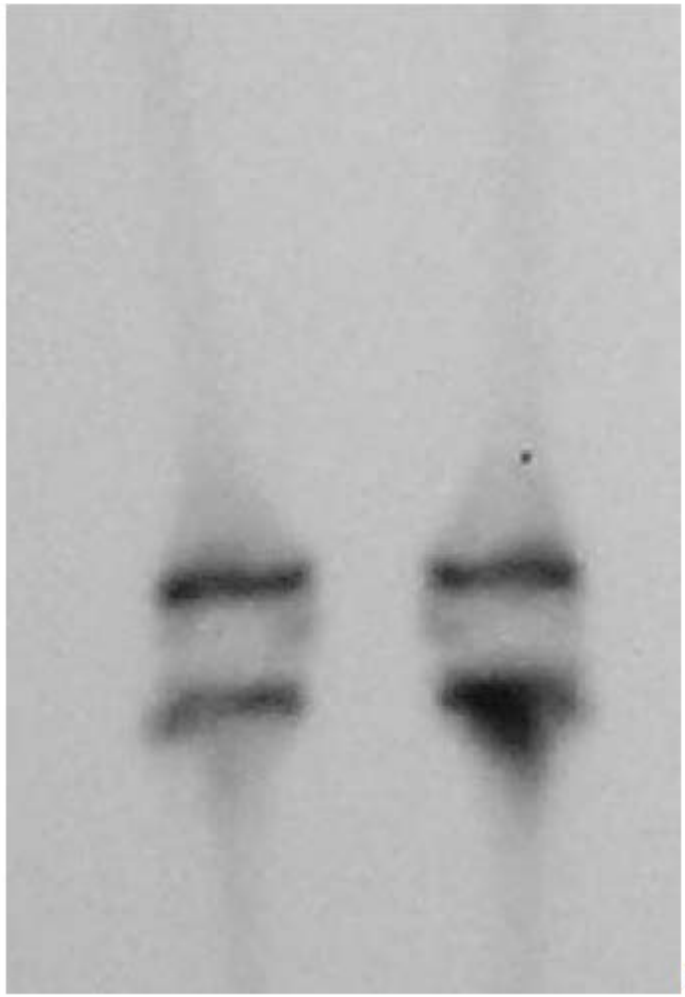






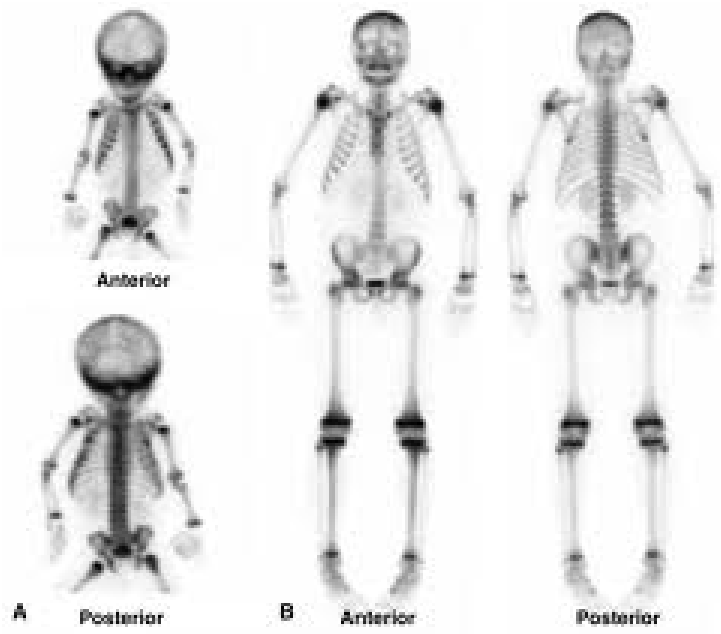


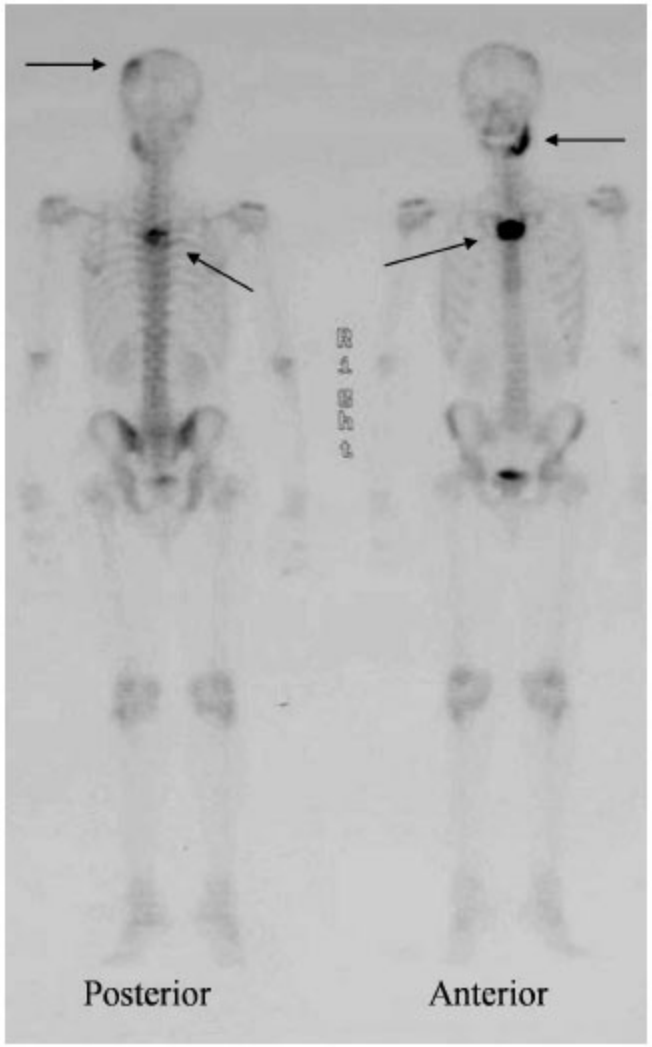




Osteomijelitis kod deteta: metafize i patološko nakupljanje rf u proksimalnom okrajku leve tibije

Trofazni sken: krvni pul i pozni scintigrami


Anterior
A
Posterior
B
Anterior
Posterior


Posterior
Anterior

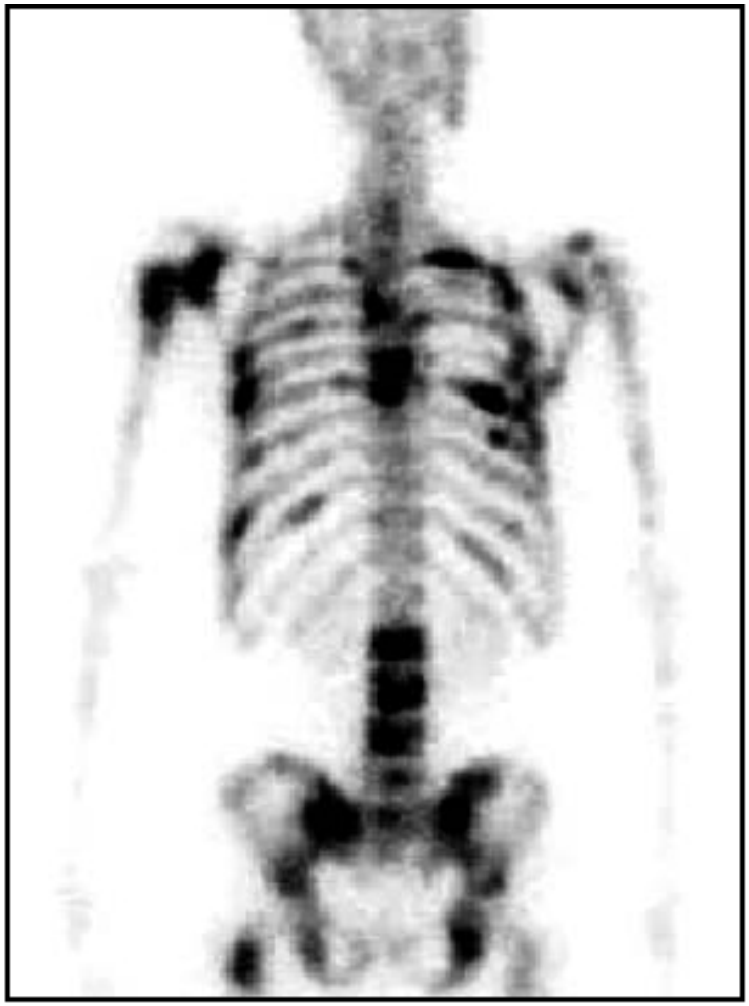
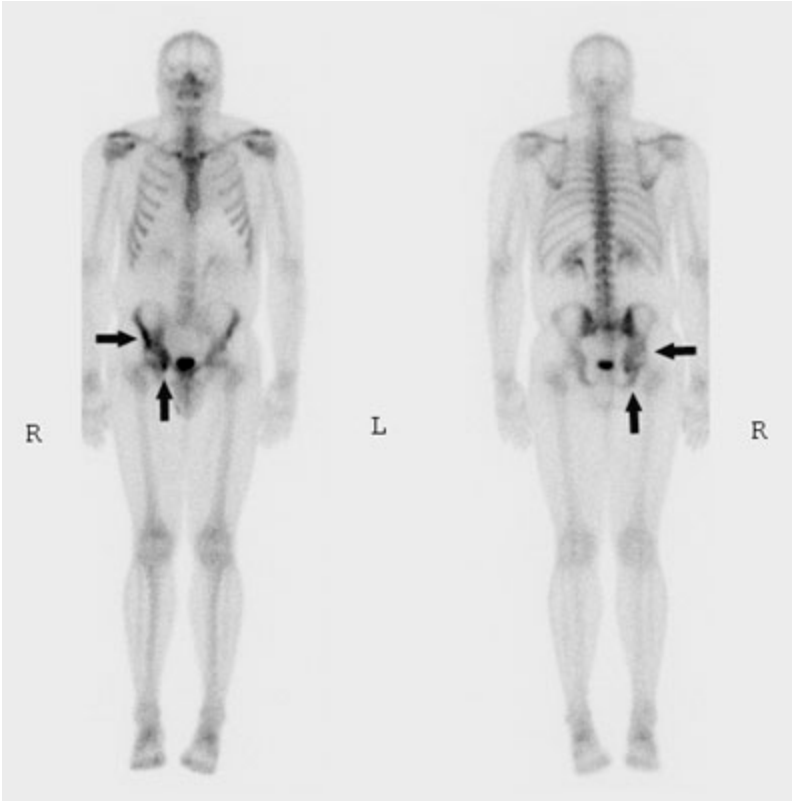
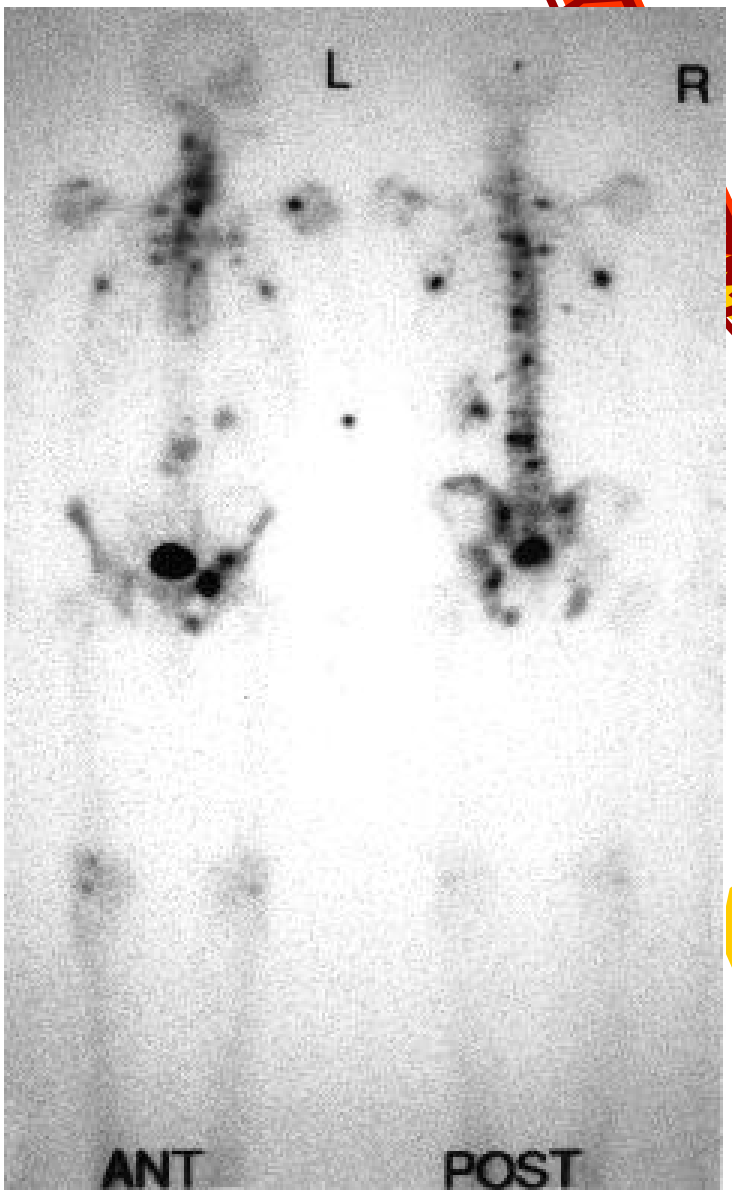


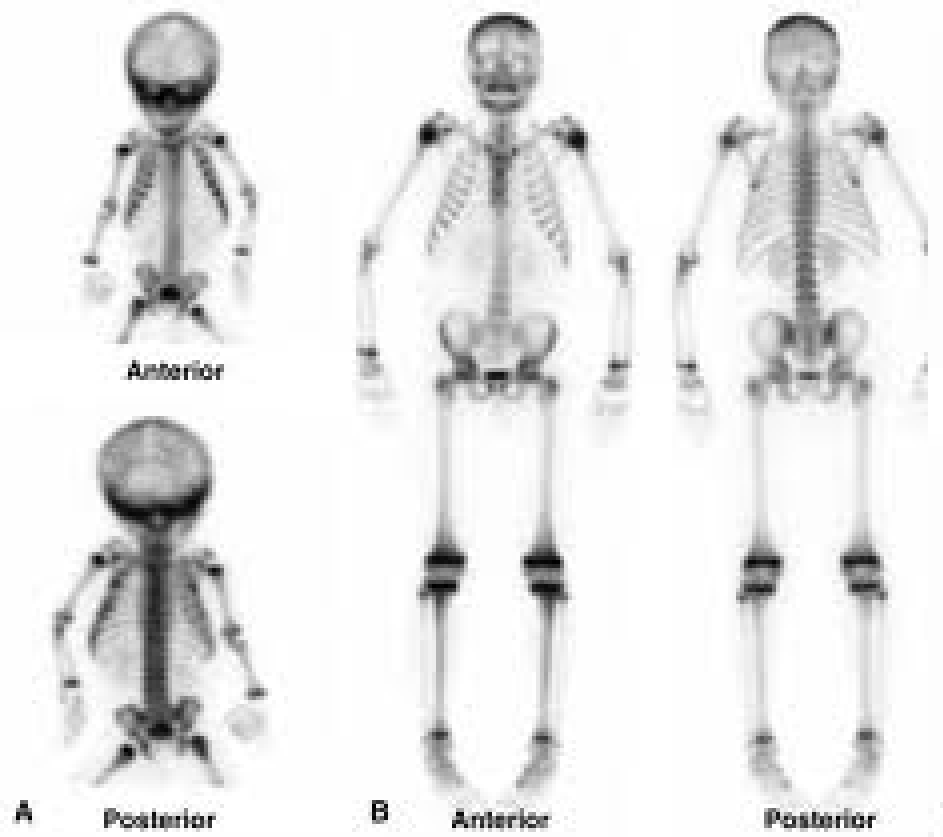


Figure 1: A Grade 1 scan with multiple areas of intense uptake of Tc99m MDP, highly suggestive of skeletal metastases.

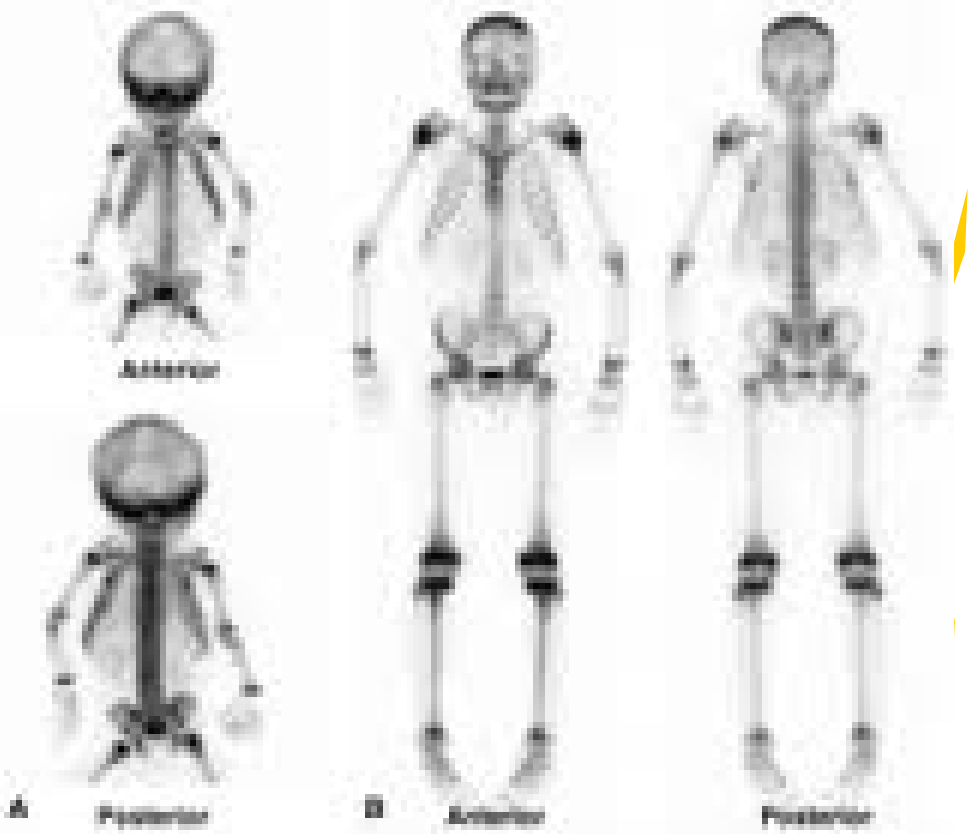




Metastaze karcinoma bubrega



Normalan scintigram



Atletska povreda



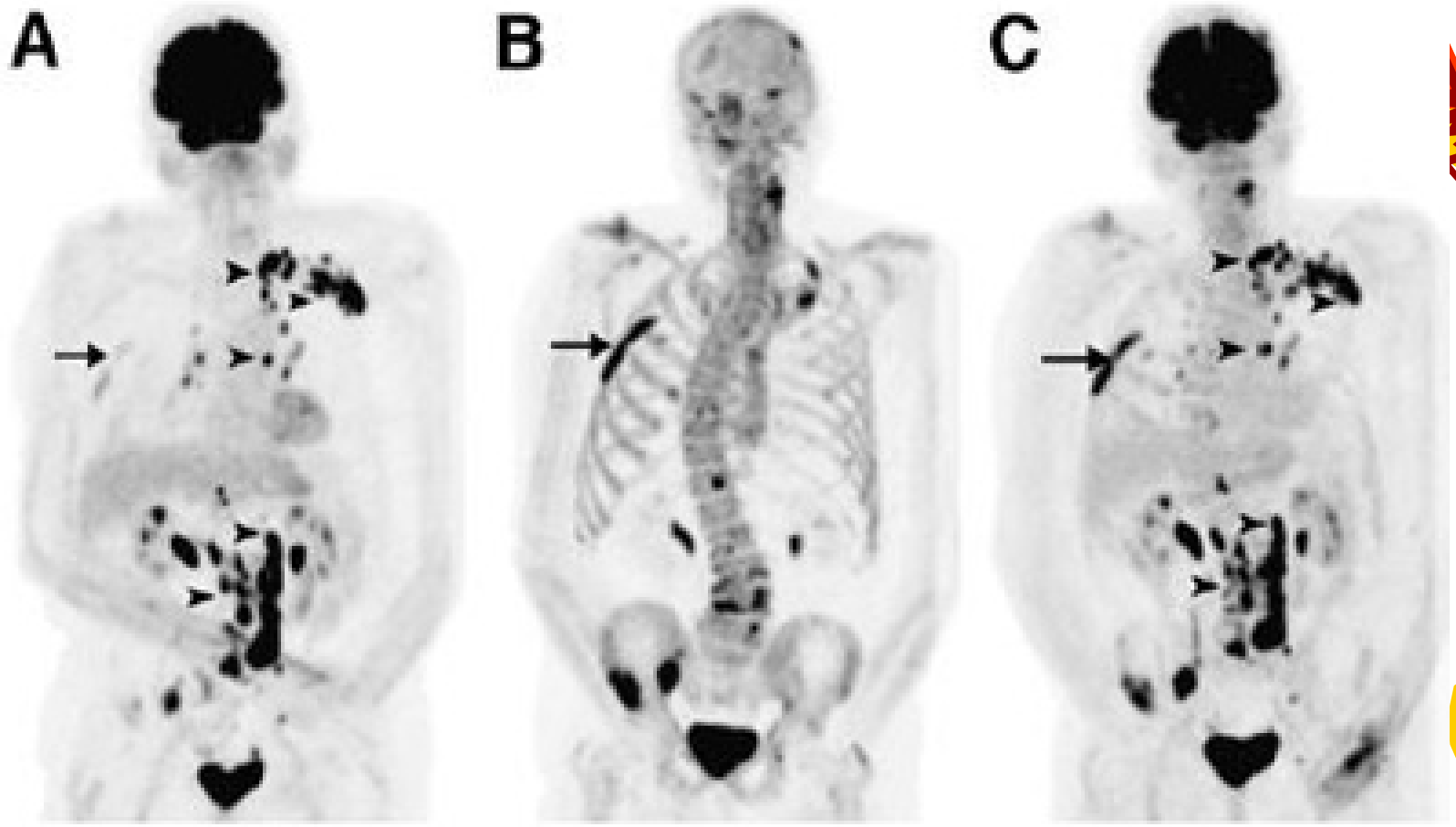
A



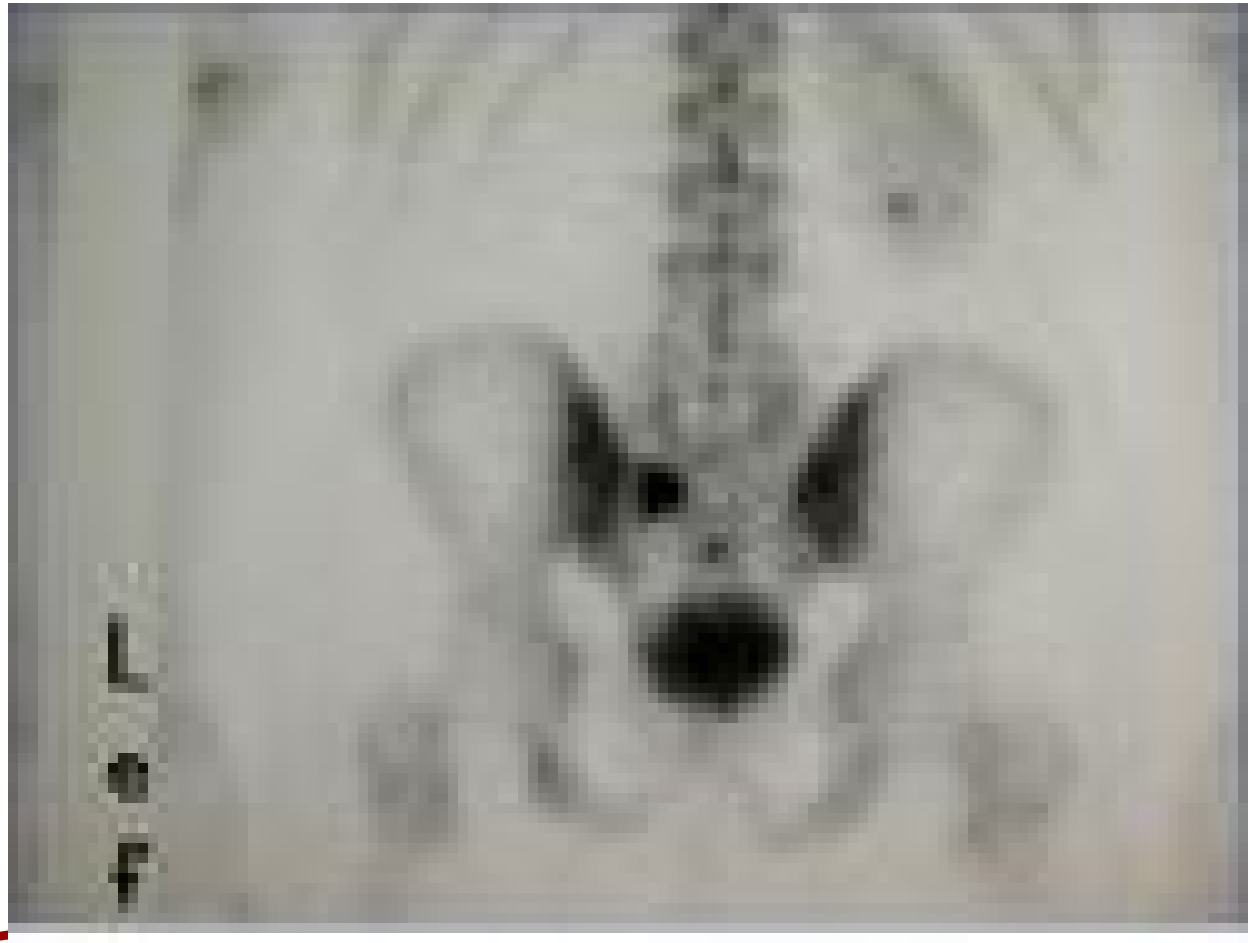
B

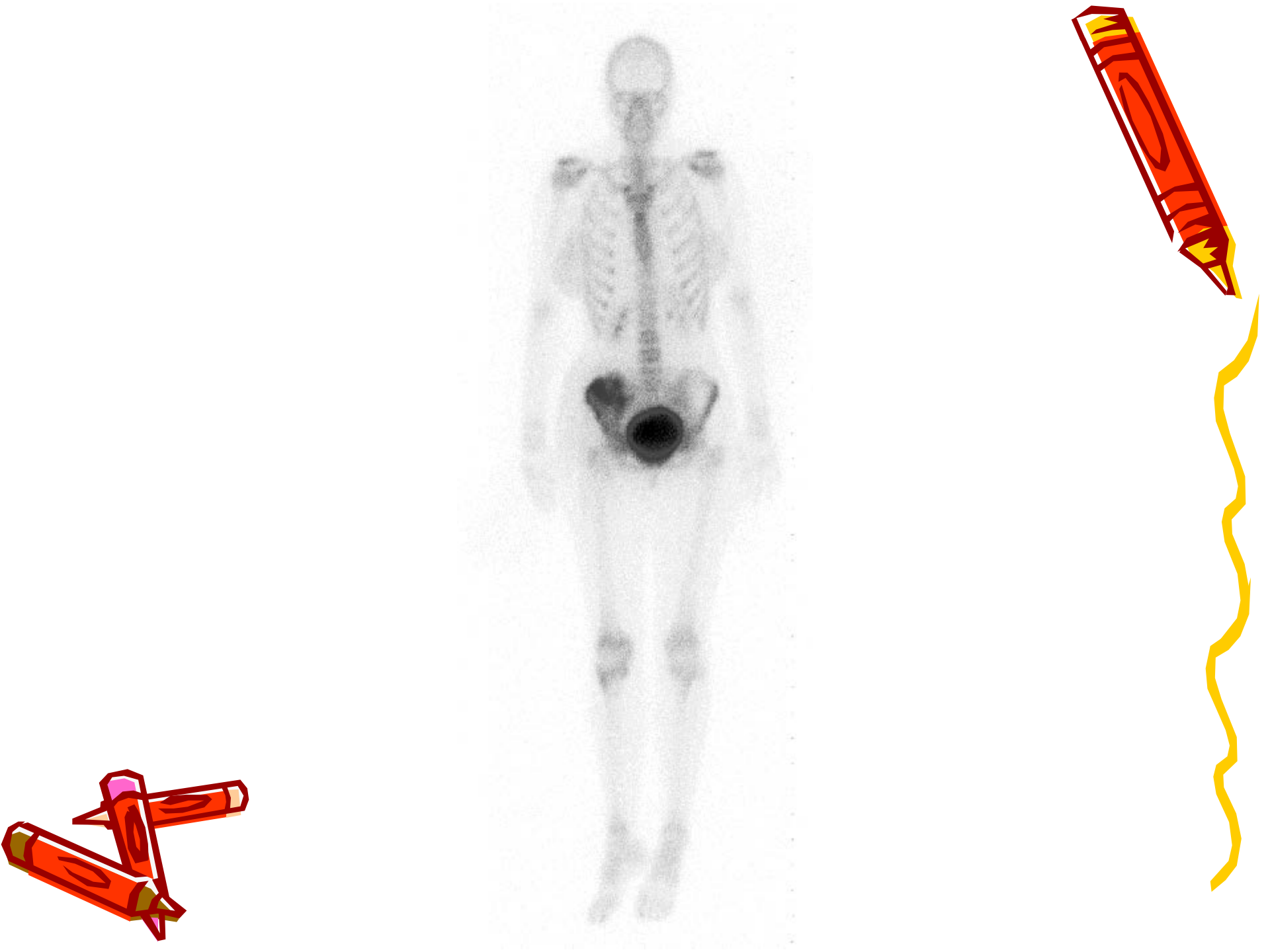
A. Curenje RF iz levog bubrega i metastaze u kostima Ca mokraćne bešike

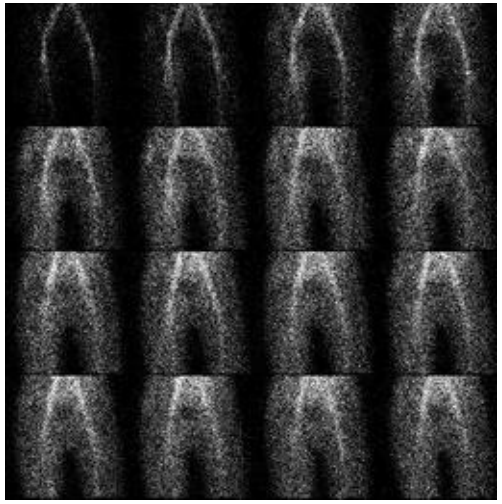
B. Kalcifikovane metastaze koje nakupljaju Tc99m-MDP u jetri

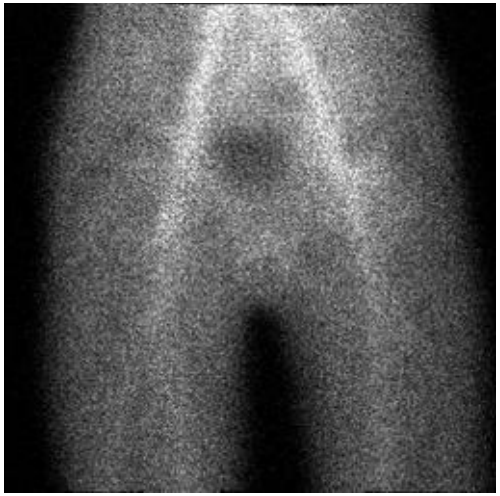


FDG kosne metastaze

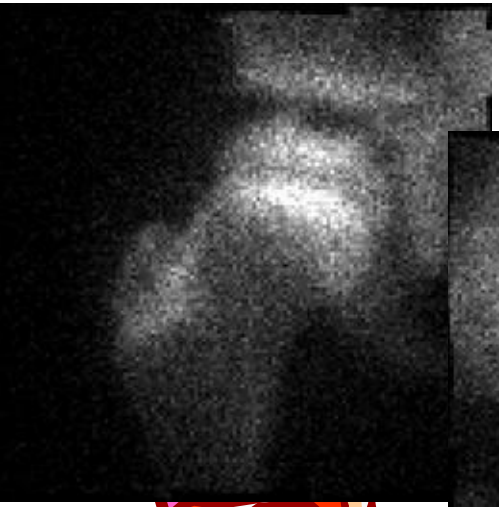

L
e
f

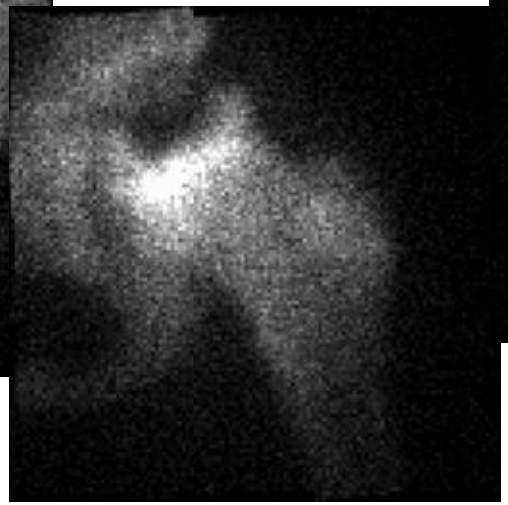


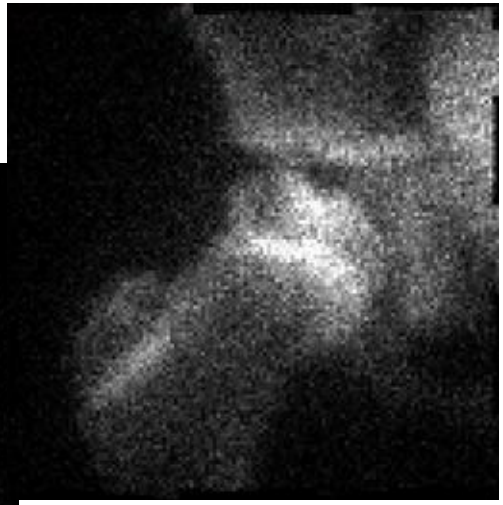


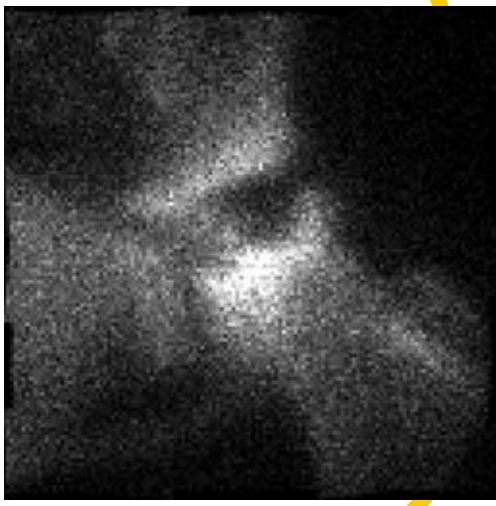








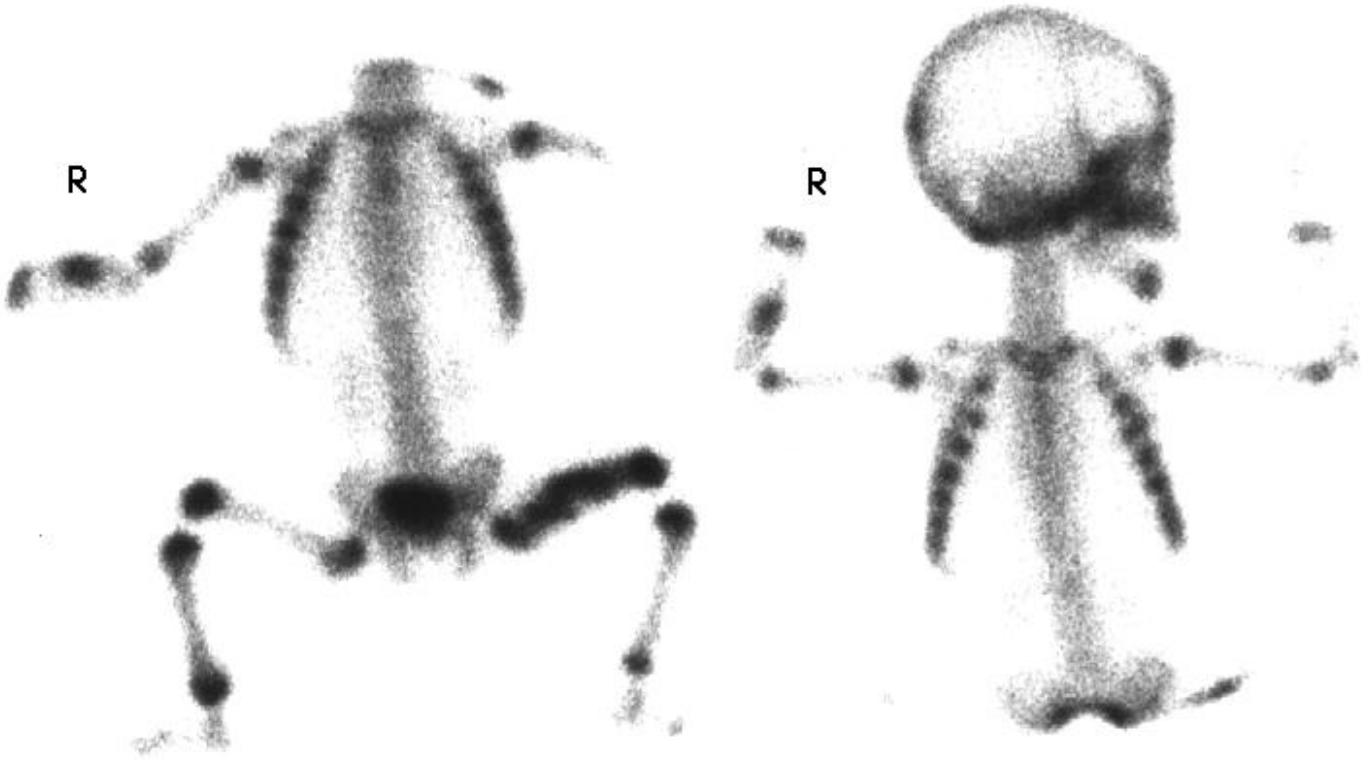


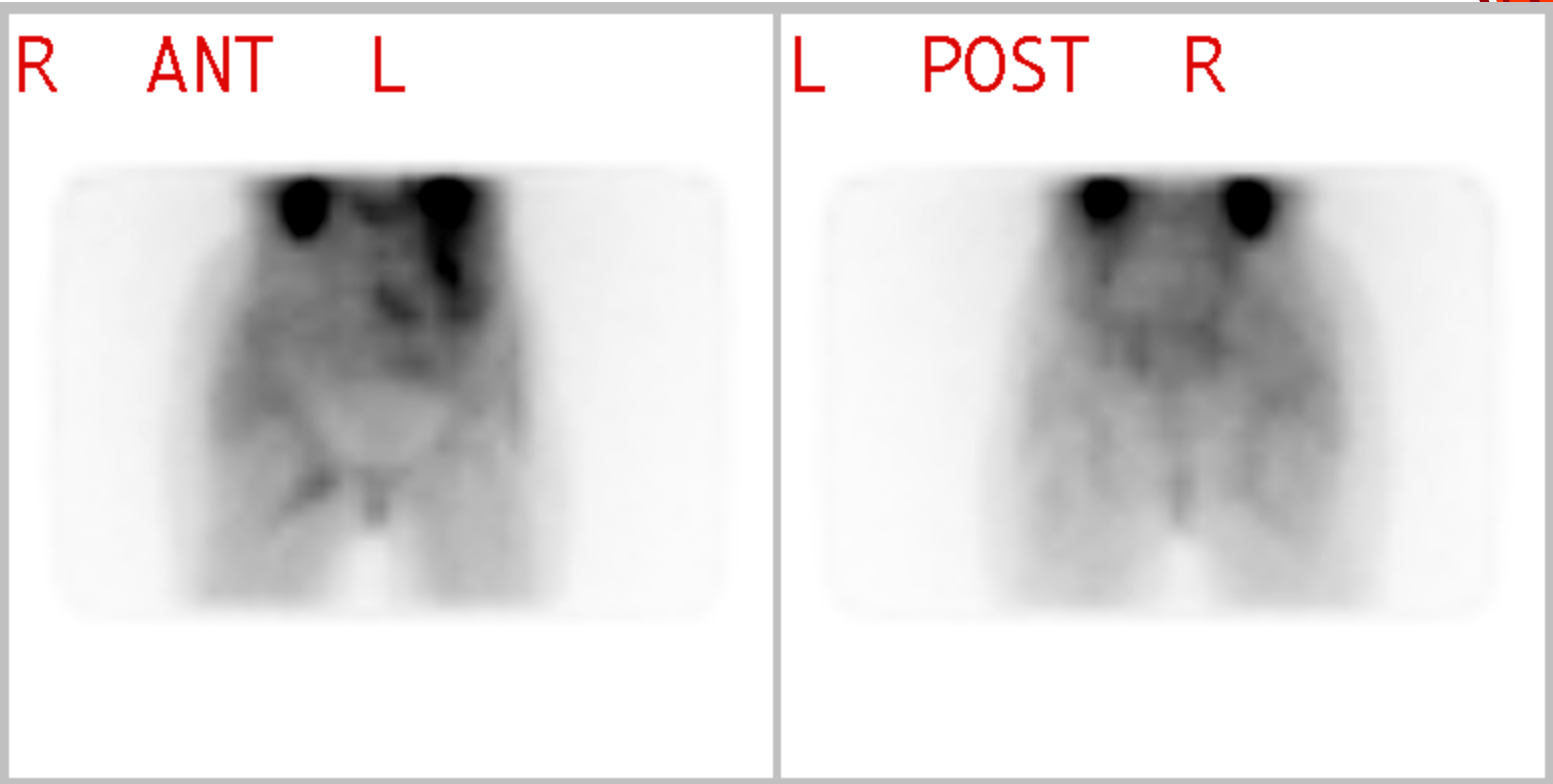


Leg Perthes Calve


ANT

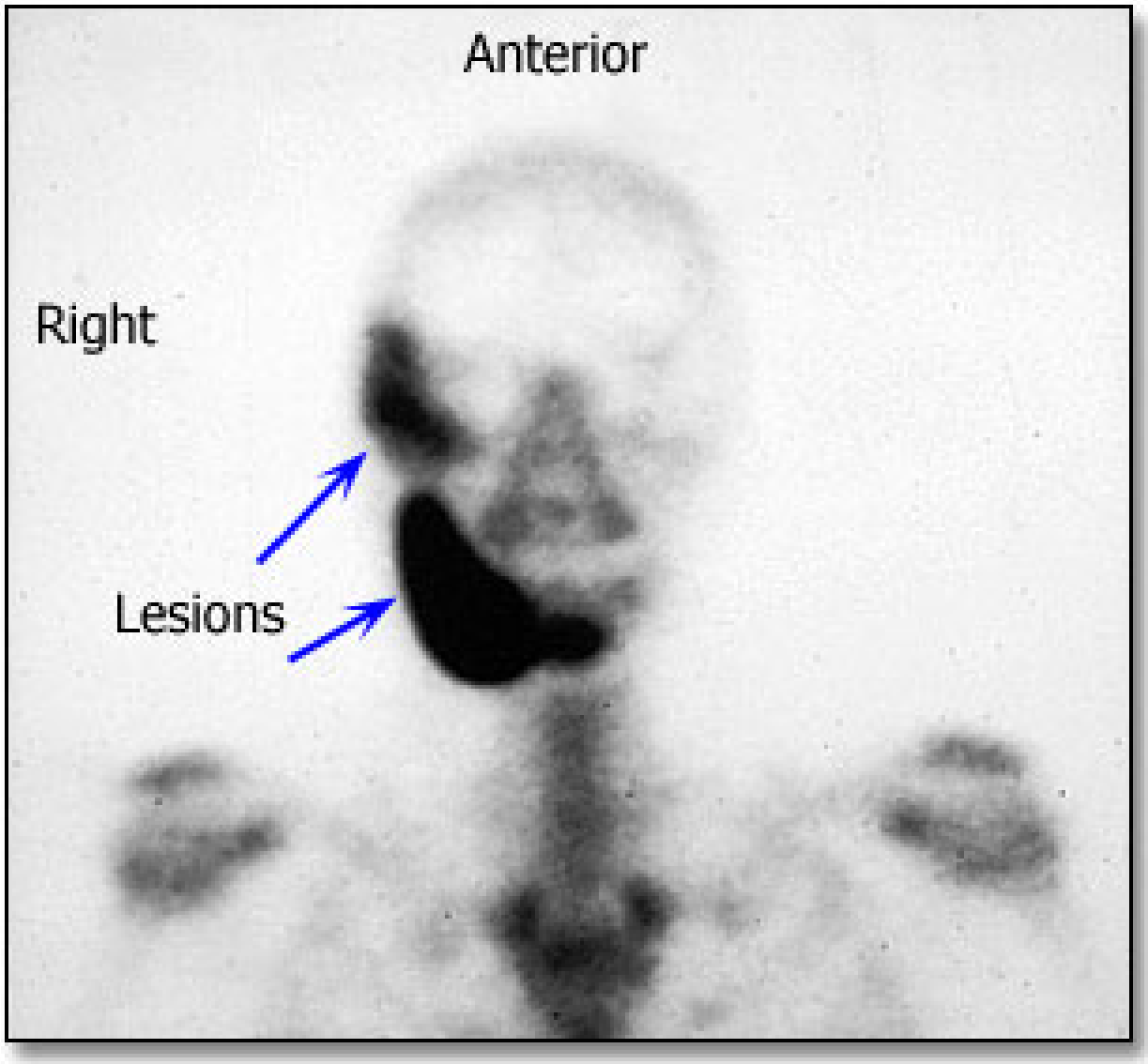

L-LAT
L


R
R



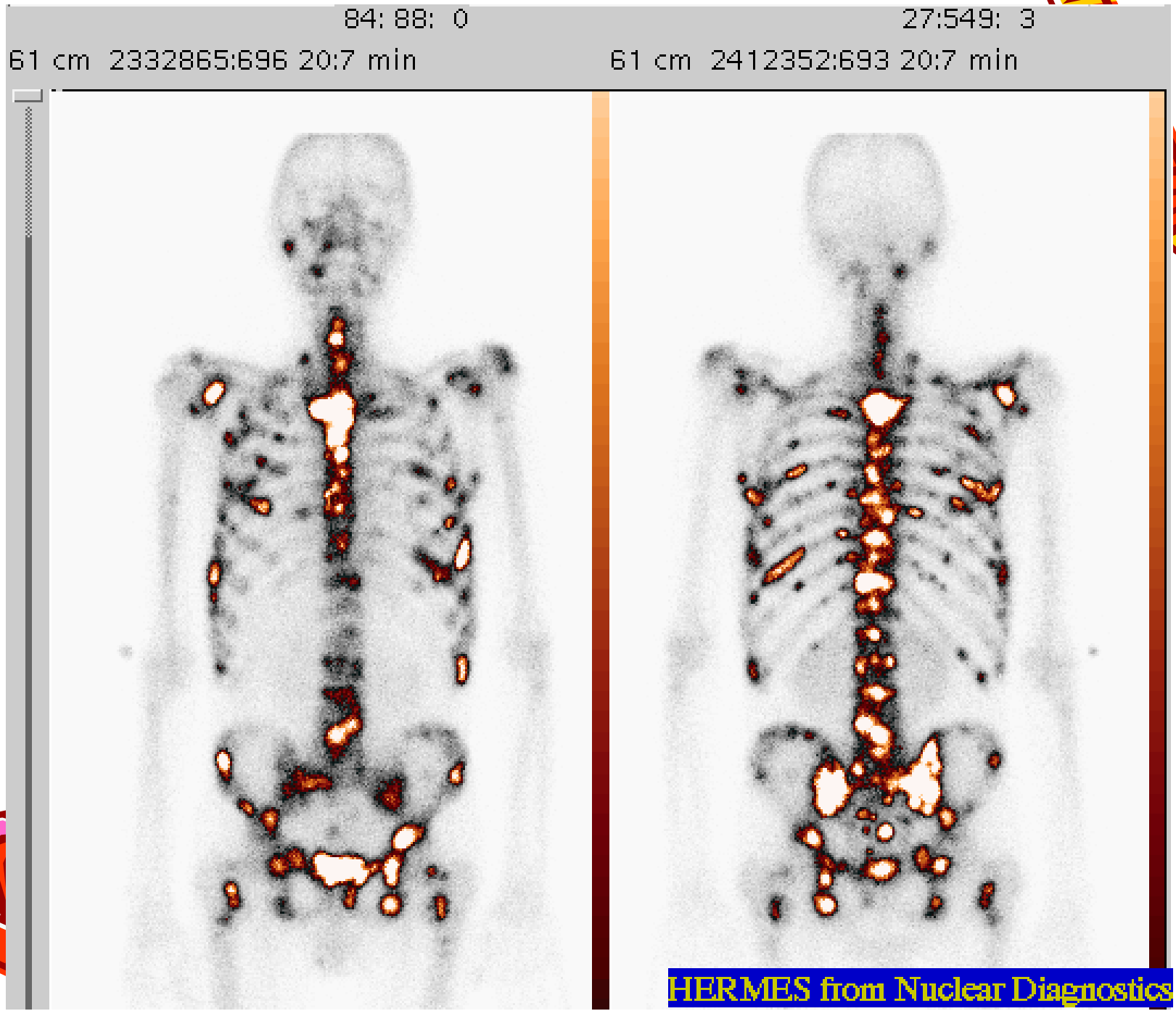
Scintigrafija sa TlCl kao nespecifičnim tumorotropnim agensom

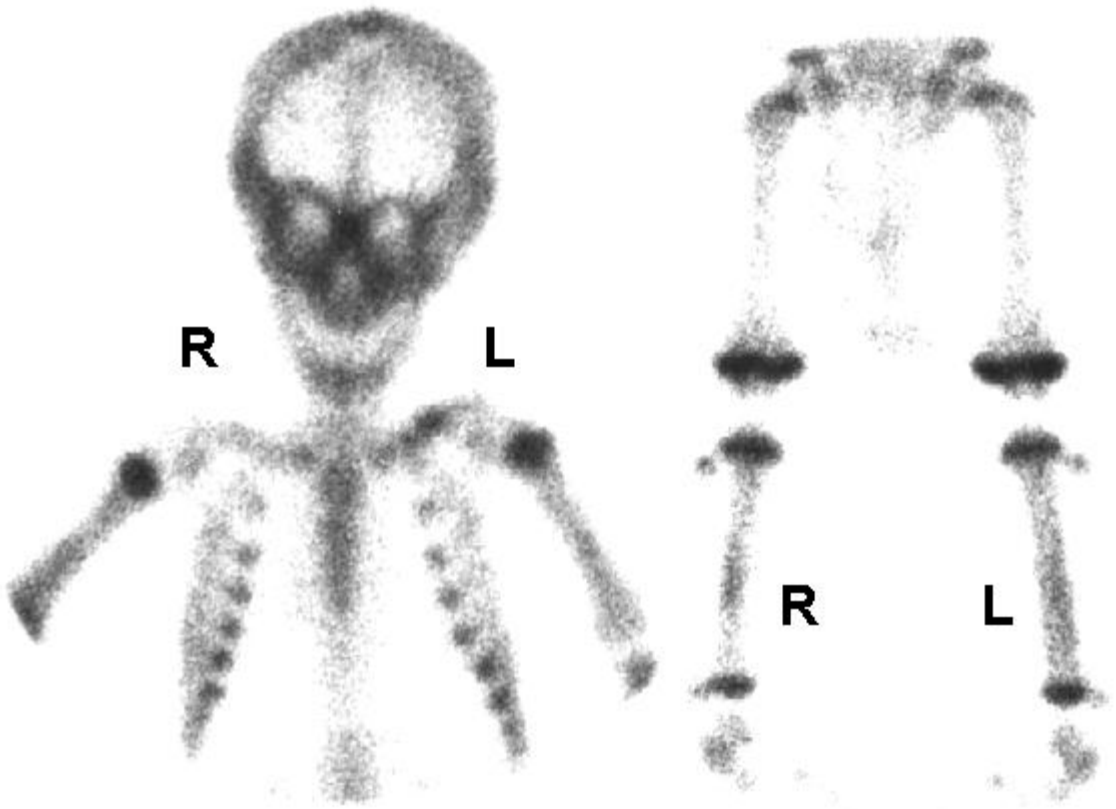



Anterior
Right
Lesions

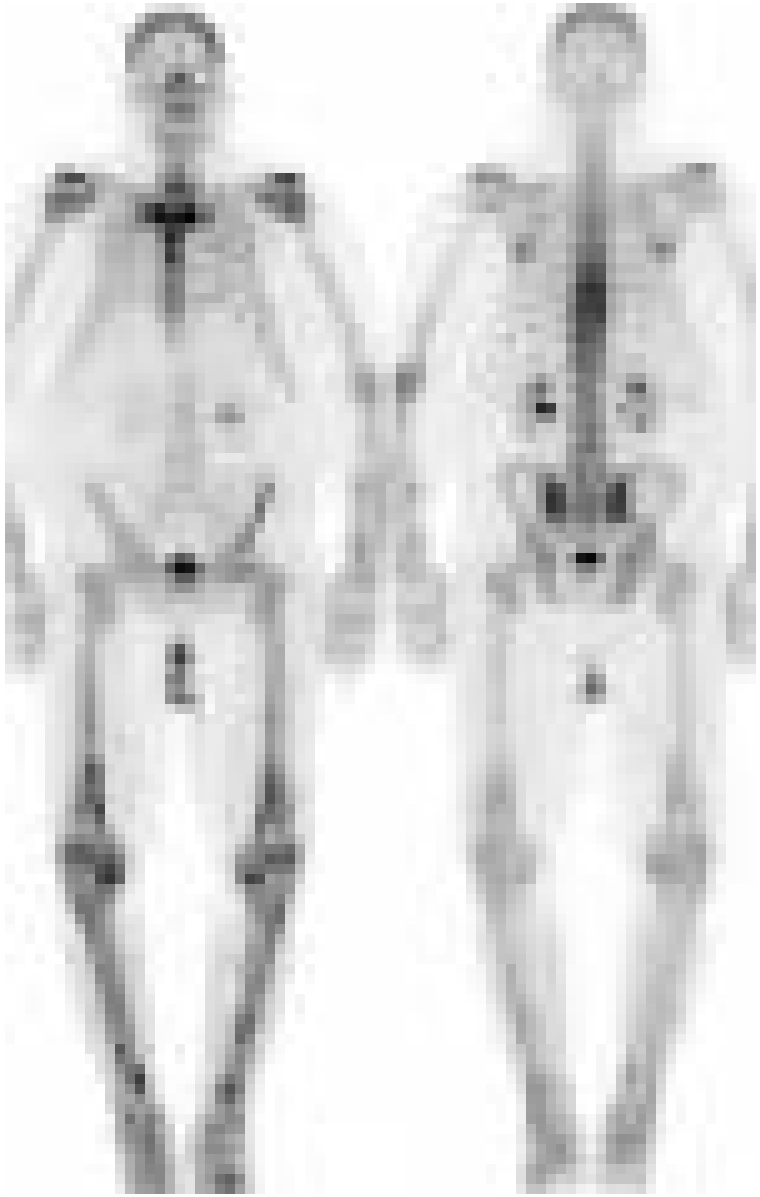

Low Energy High Resolution Collimator


Anterior
Posterior

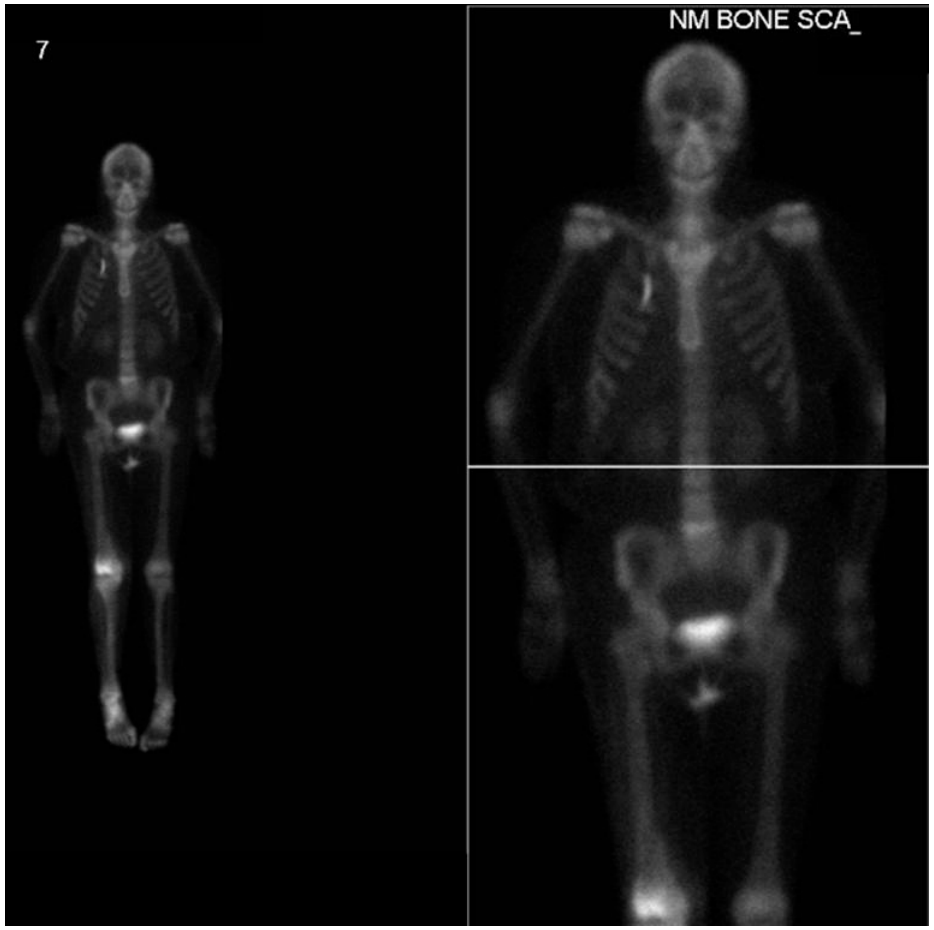

84: 88: 0
61 cm 2332865:696 20:7 min
27:549: 3
61 cm 2412352:693 20:7 min
HERMES from Nuclear Diagnostics



Multipla stres mesta

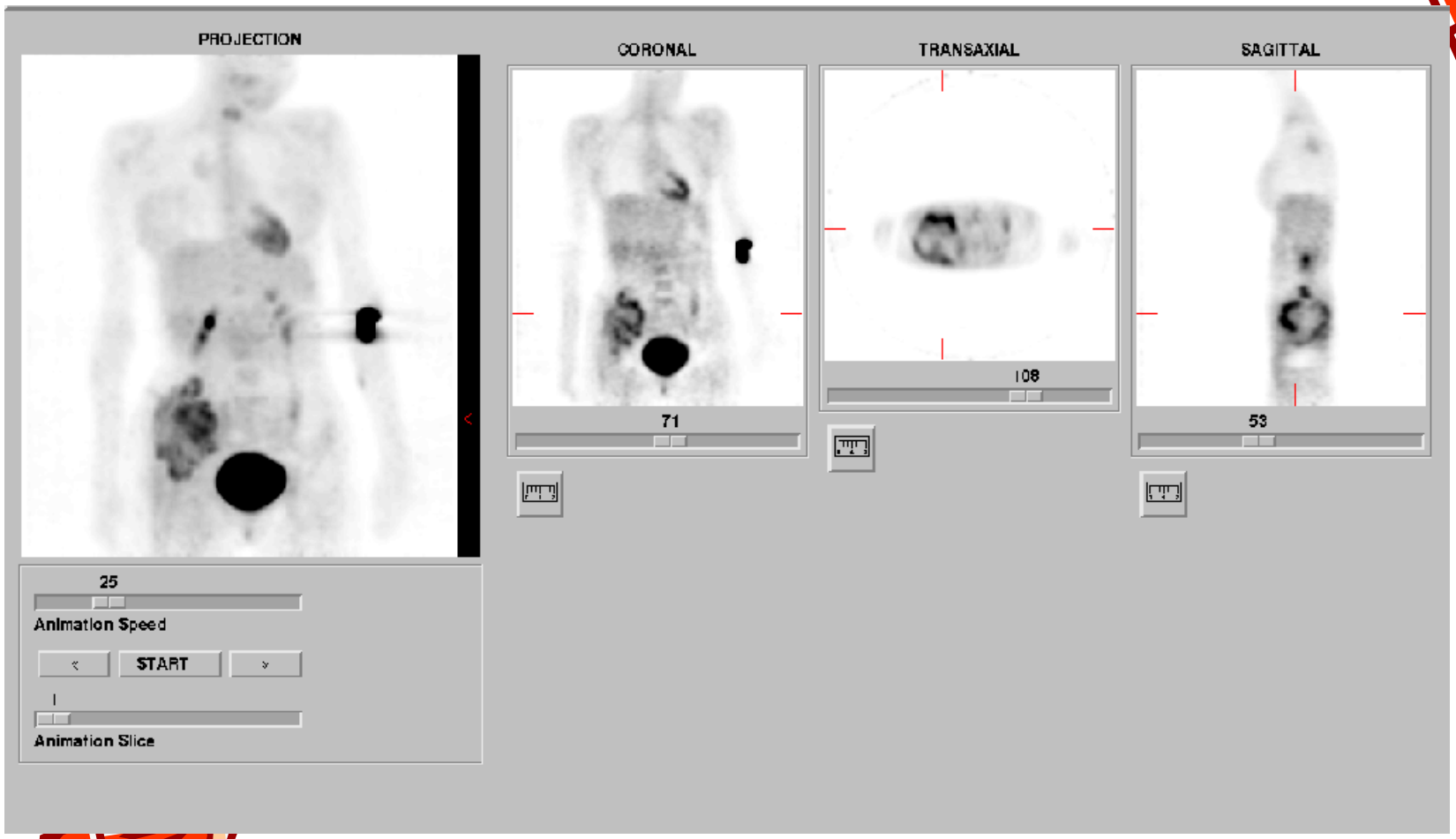


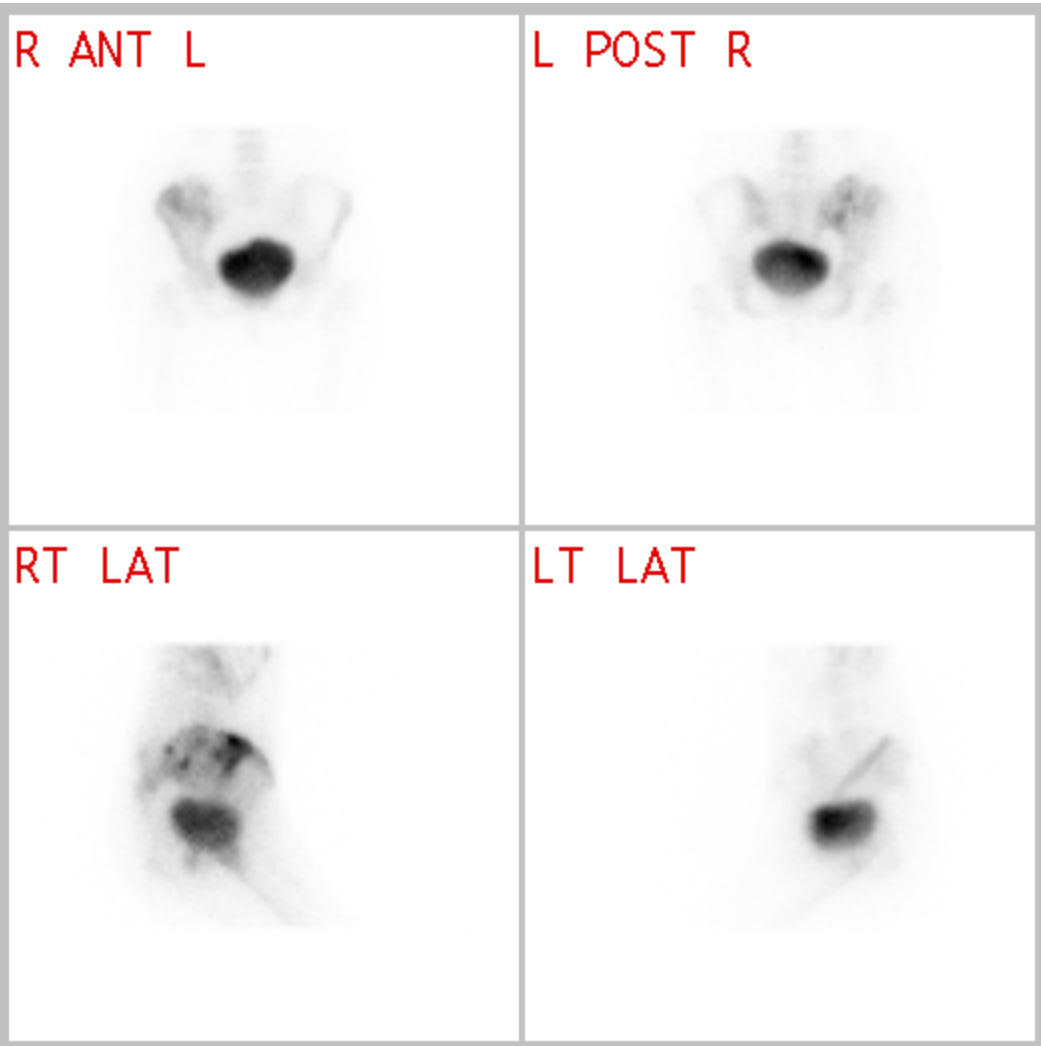

F18 BONESCAN

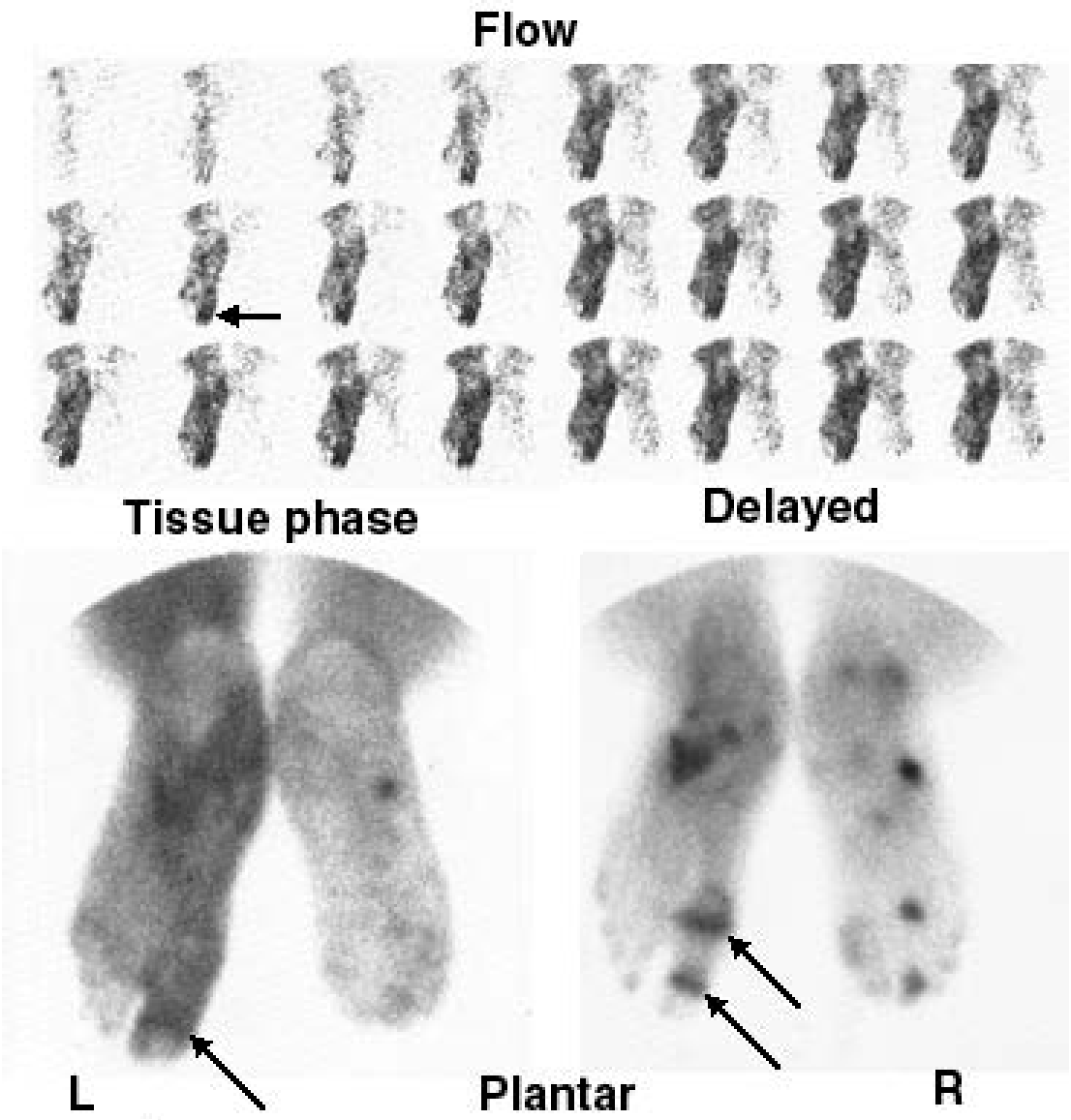




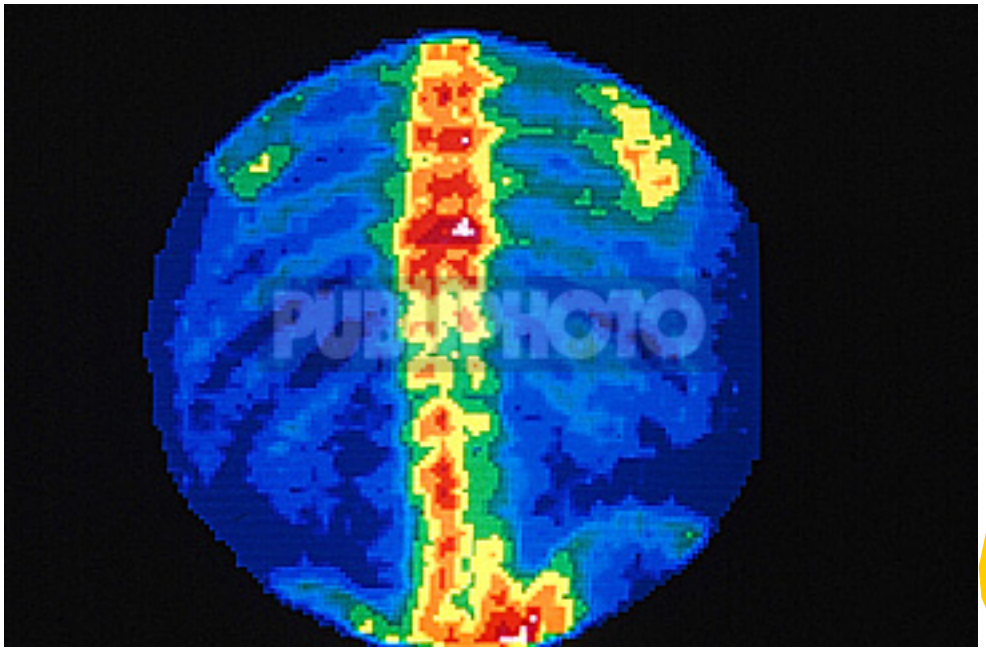
Fuzija rebara


PROJECTION
CORONAL
TRANSAXIAL
SAGITTAL
108
71
53
25
Animation Speed
START
Animation Slice

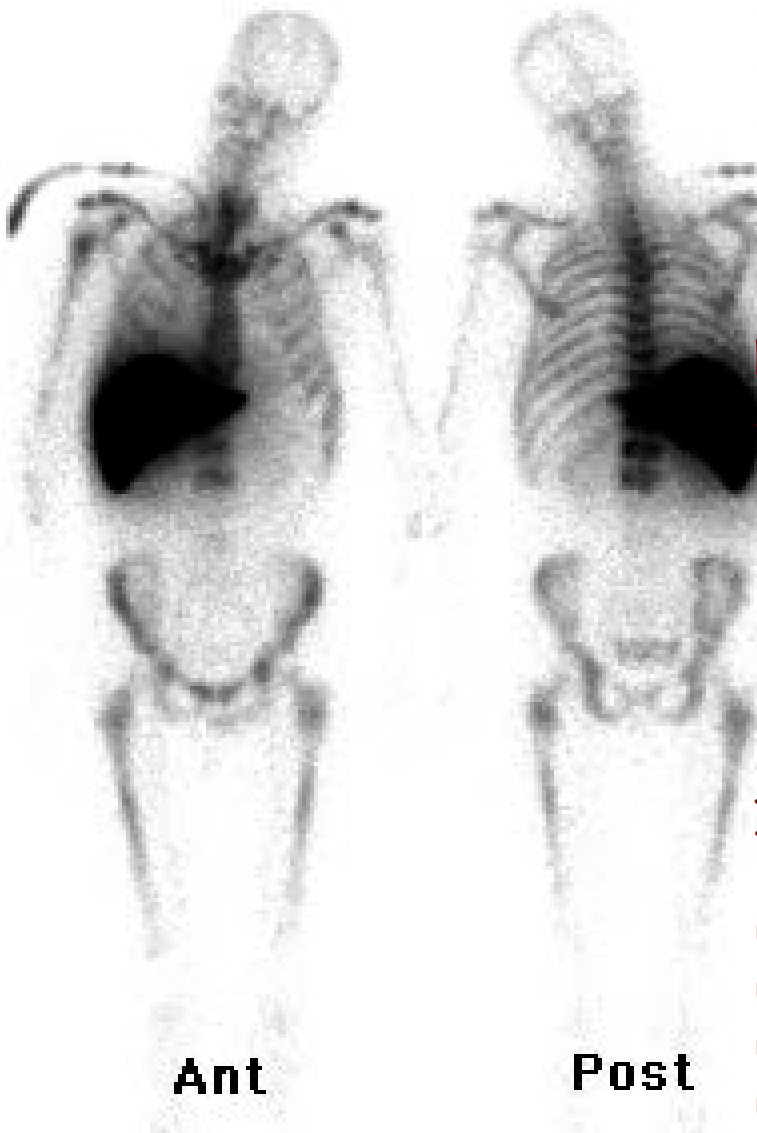

R ANT L
L POST R
RT LAT
LT LAT


Flow
Tissue phase
Delayed
L
Plantar
R





Scintigram kosne srži



radiofarmaci

- Tc 99m mikrokoloid
- antitela na granulocite
- nanokoloid
- Fe^{52}
- Fe^{59}

Normalno ih preuzimaju ćelije RESa
30 minuta posle iv. injekcije nalaze se u

- jetri
- kosnoj srži
- bubrezima
- slezini
- krvi

Indikacije

- Mijelofibroza
- Aplastična anemija
- Policitemija
- Hemolizna anemija
- Leukemija,limfom,Hodgkinova bolest

Ga scintigrafija
Kosne srži



Figure 1. Gallium scintigraphy demonstrated multiple tracer uptake in the skull, spine, bilateral humeri, and femurs.



Ektramedularna hematopoeza

