

Skeletal Imaging

Function of Bones:

- Protection
- Movement
- Provides Framework
- Contains bone marrow for blood production
- Stores minerals

Skeletal Imaging

Types of Bones

- Long Bones

- Short bones

- Flat bones

- Irregular Bones

Skeletal Imaging

Divisions of the Skeletal System:

-Axial Skeleton

-Appendicular Skeleton

-Joints

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Bone Metabolism:

- Intramembranous Ossification

- Endochondral Ossification

Bone Homeostasis:

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Bone Imaging and Nuclear Medicine

HOMEWORK: DEFINE THE FOLLOWING:

(will be collected, do as much as you can)

-Metastatic Disease:5

-Primary Malignant Bone Tumors:

-Benign Bone Tumors:

-Skeletal Trauma:

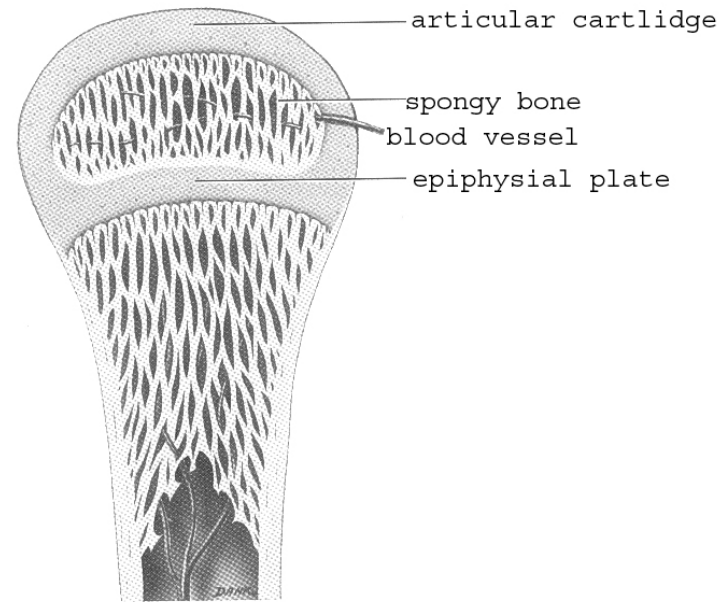
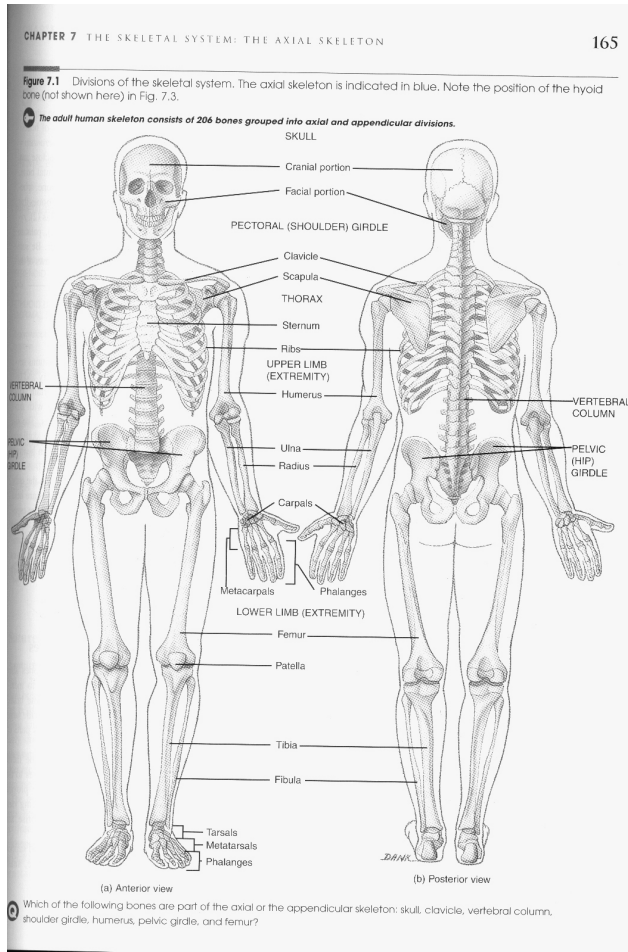
-Athletic Injuries:

-Bone Infarction:

-Osteomyelitis:

-Metabolic Bone Disease:

Skeletal Imaging



Skeletal Imaging

RADIOPHARMACEUTICALS:

Sr-85

Sr-87m

Tc99m MDP/HDP

Skeletal Imaging

Whole Body Bone Imaging and SPECT

Skeletal Imaging

3-phase imaging

Skeletal Imaging

- FOCAL VS. DIFFUSE UPTAKE?

Metastatic bone Imaging:

Indications:

Findings:

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Solitary Lesions:

Superscan:

Flare Phenomenon:

Prostate Ca:

Breast Ca:

Lung Ca:

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Primary Bone Tumors:

Multiple Myelomas:

Benign Bone Tumors:

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Skeletal Trauma:

Intraosseous Trauma:

Child Abuse

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Athletic Injury:

Stress fractures:

Shin Splints:

Rhabdomyolysis:

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Bone infarctions/Osteonecrosis:

Legg-Calve-Pethes disease:

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Osteomyelitis:

Immobile patients:

Diabetic patients:

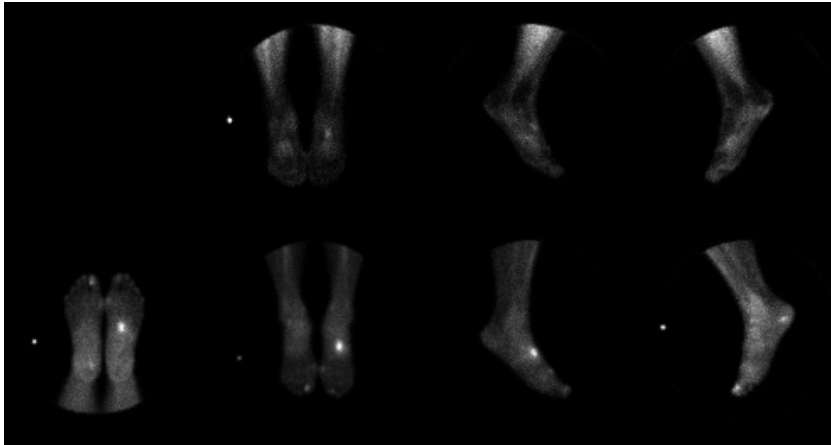
Osteomyelitis vs. cellulitis:

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Metabolic Bone Disease:

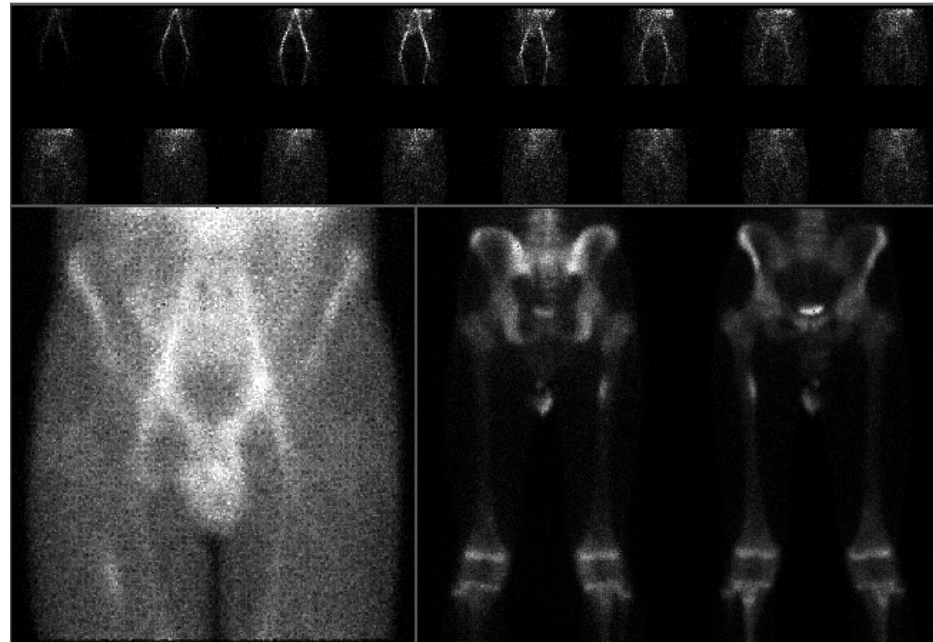
Osteoporosis:

Paget's Disease:



Foot fracture

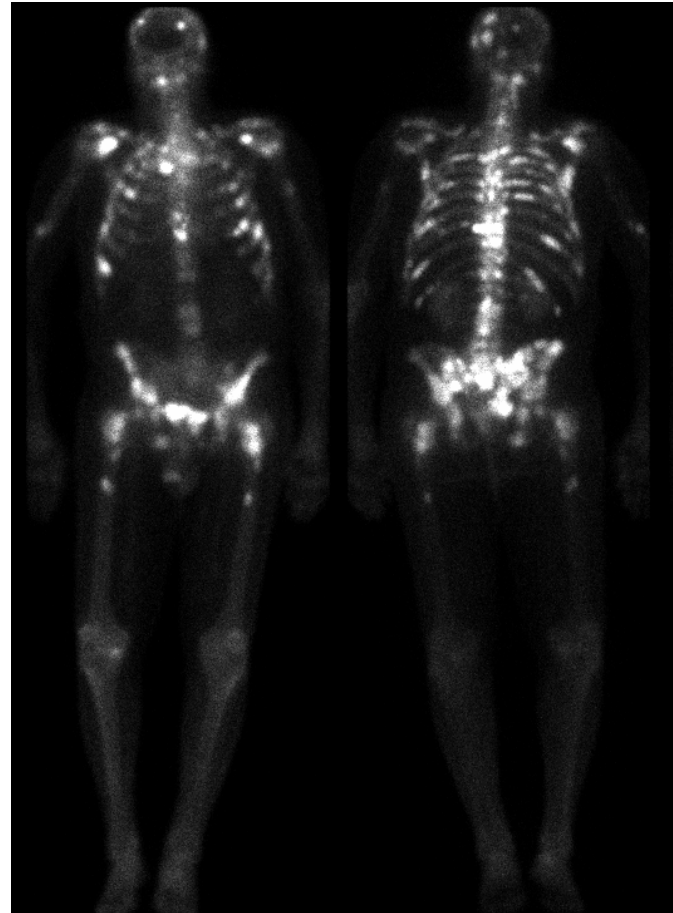
Femur fracture





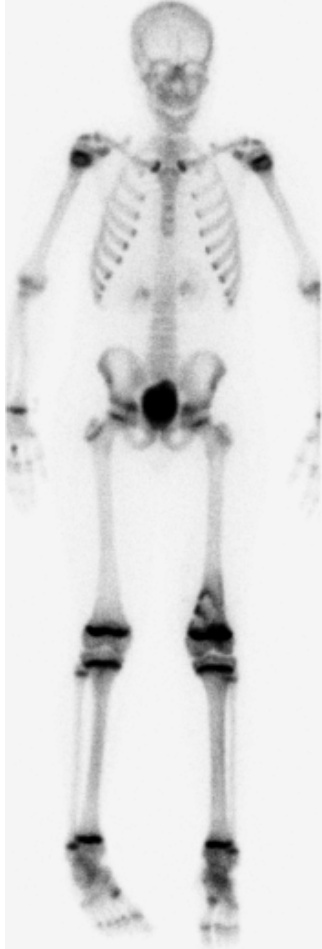
mets

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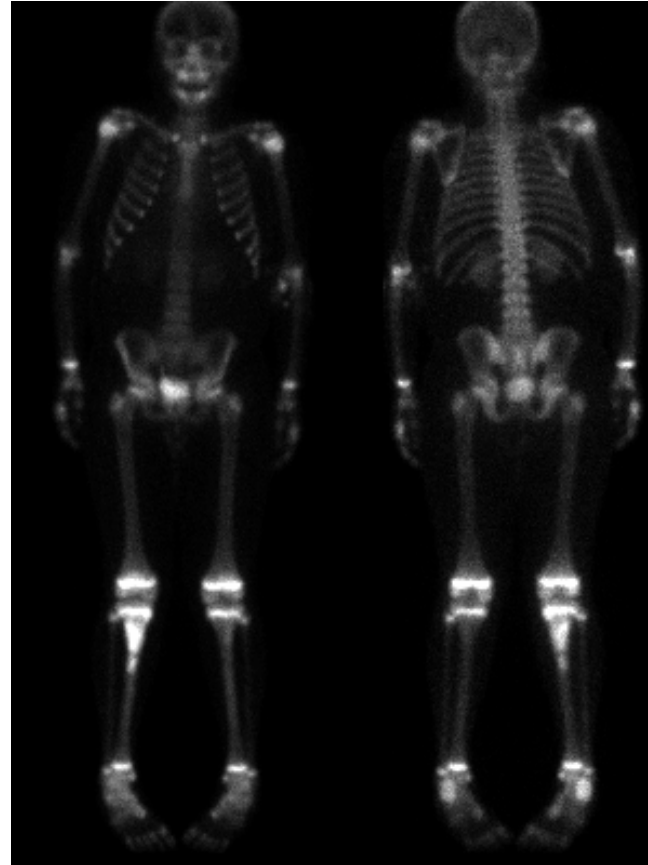


mets

Molloy College NMT Program

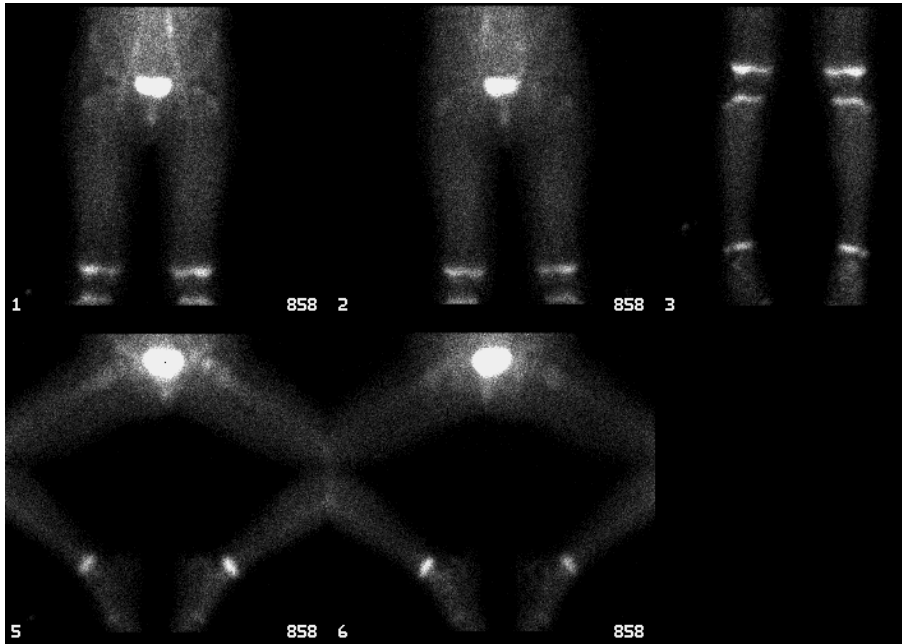


osteosarcoma





pagets



Legg-calve-perthes

osteoblastoma

