

## DIFFERENTIAL DIAGNOSIS OF COMMON BONE LESIONS

### Diffusely dense (sclerotic) bones

Radiographic signs of secondary hyperPTH?

Renal osteodystrophy

Small calcified spleen?

Sickle cell disease

Splenomegaly?

Myelofibrosis

Predominantly affecting the axial skeleton?

Diffuse osteoblastic metastases

Pathologic fractures?

Osteopetrosis

Others

Pyknodysostosis  
Mastocytosis  
Fluorosis  
Normal variant - Athlete

### Ivory (diffusely sclerotic) vertebral body

History of prostate or breast cancer?

Osteoblastic metastasis

Expansion of the vertebral body?

Paget disease

Paraspinal soft-tissue mass?

Lymphoma

### Lucent epiphyseal (and epiphyseal equivalent) lesion epiphyseal equivalents include apophyses, patella, carpal bones, and calcaneus.

Epiphysis closed?  
Eccentric?

**mnemonic: GEIChA**

Abuts articular surface?

Giant cell tumor

Under age 30?

Eosinophilic granuloma

Epiphysis closed?  
(more likely to be metaphyseal if the physes are still open)

Infection

Eccentric?

Chondroblastoma

Expansile?

Aneurysmal bone cyst

### Expansile or lytic rib lesion

**mnemonic: FAMEB**

Ground-glass matrix?

Fibrous dysplasia

Expansile?

Aneurysmal bone cyst

Soft tissue component?

Metastasis/Multiple myeloma/  
Plasmacytoma

Chondroid matrix?

Enchondroma

Radiographic signs of secondary hyperPTH?

Brown tumor

# Below 30



# Above 30

