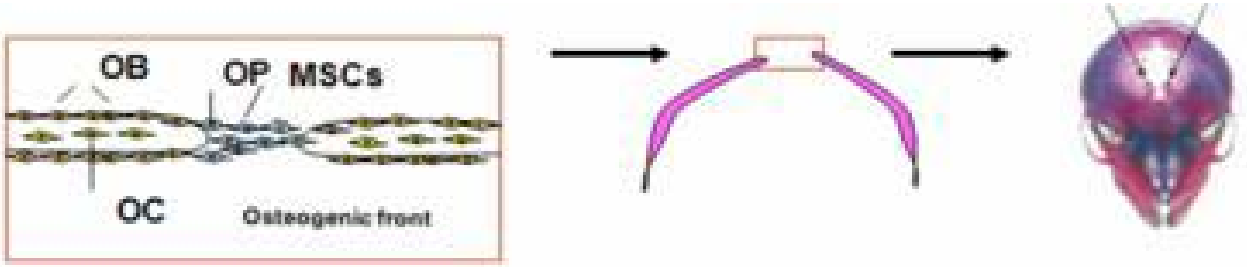
Biology

BONE TISSUE

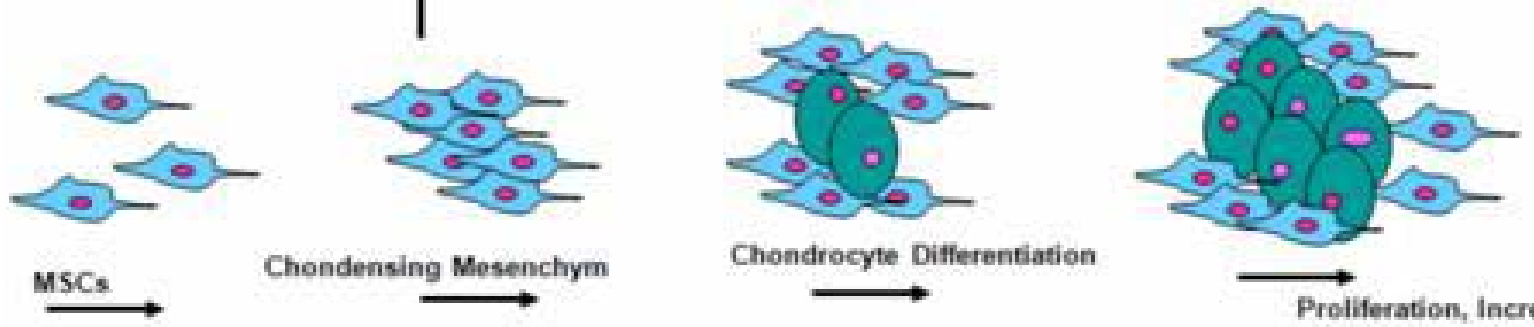
(CONTINUED)

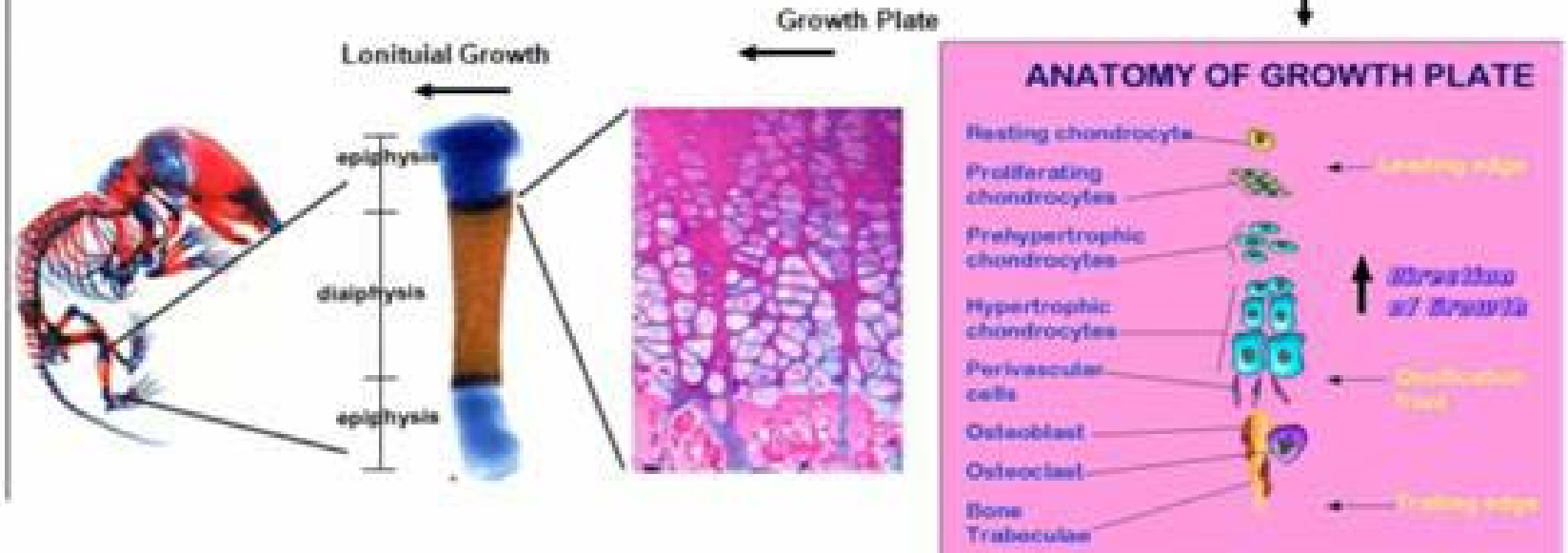
Osteogenesis

Intramembranous Ossification

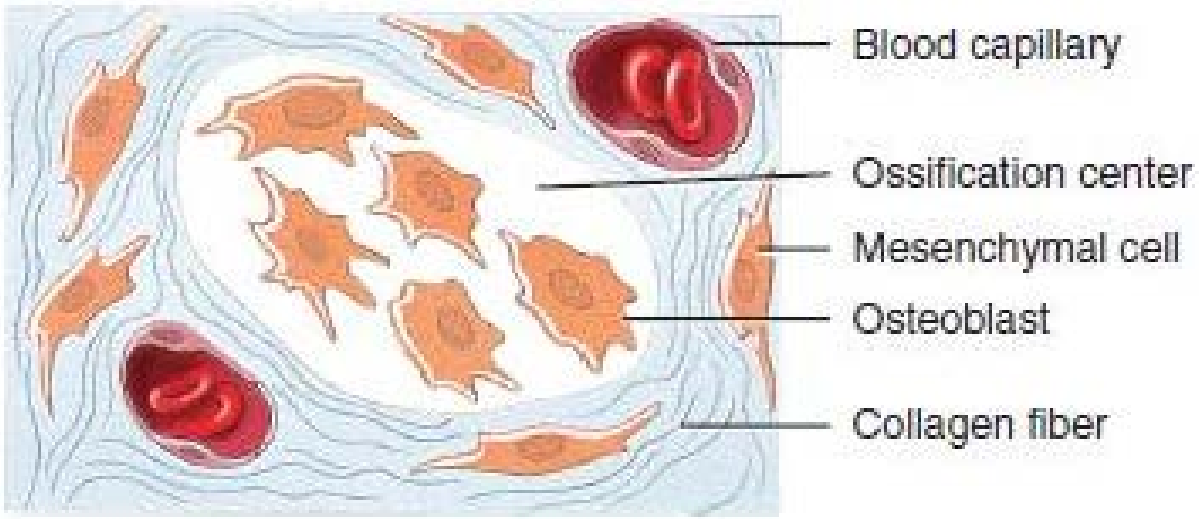


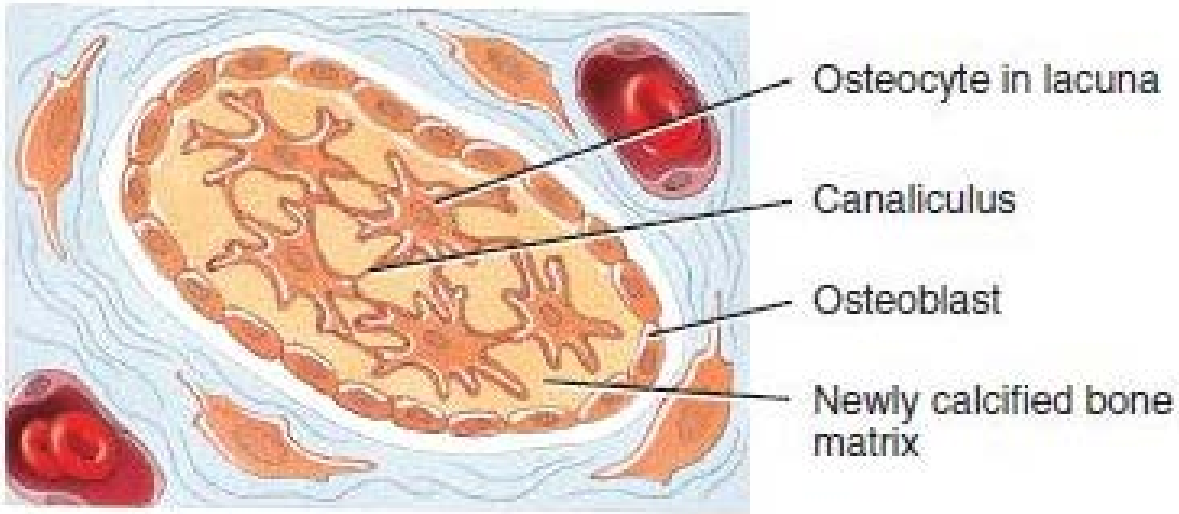
Endochondral Ossification

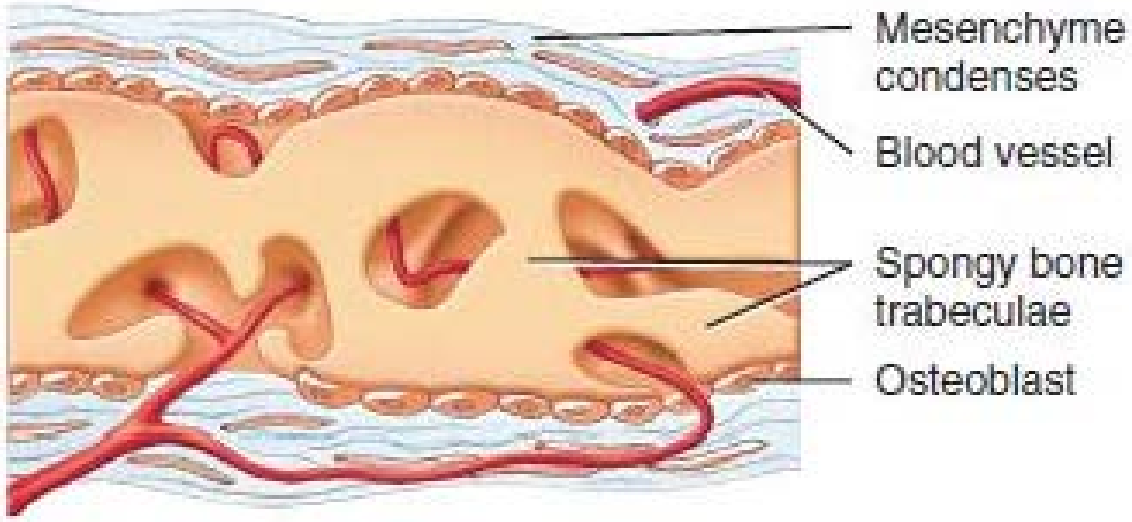


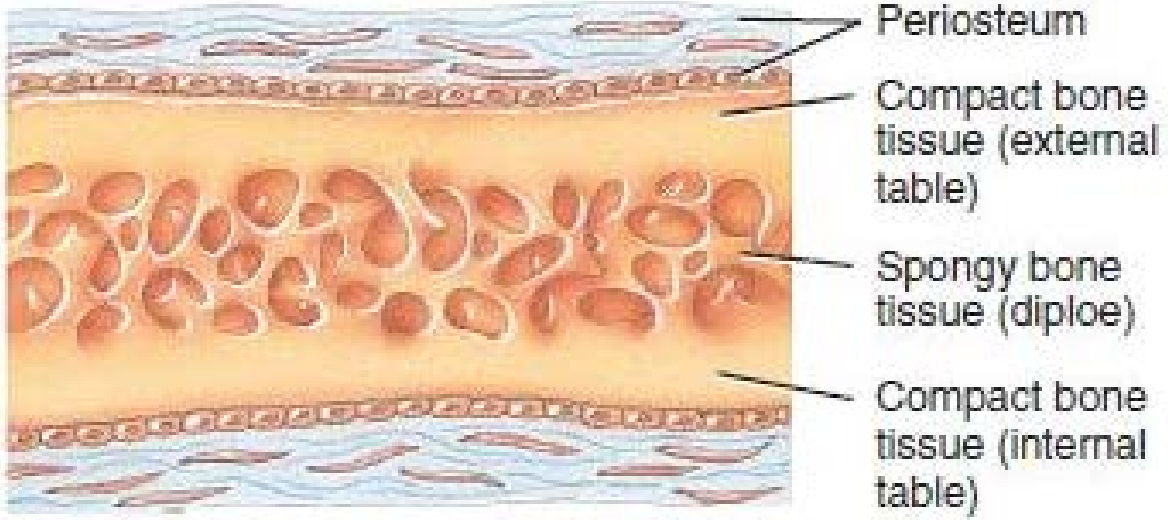


Intramembranous Ossification

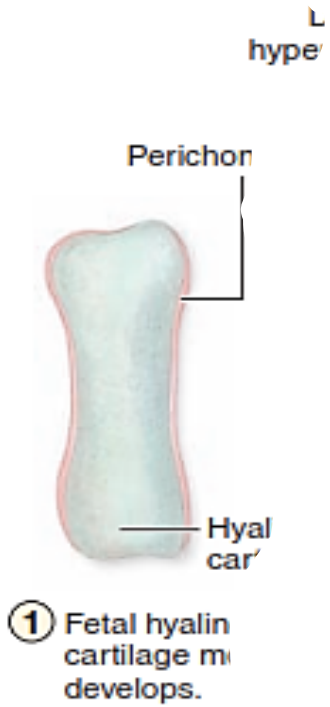


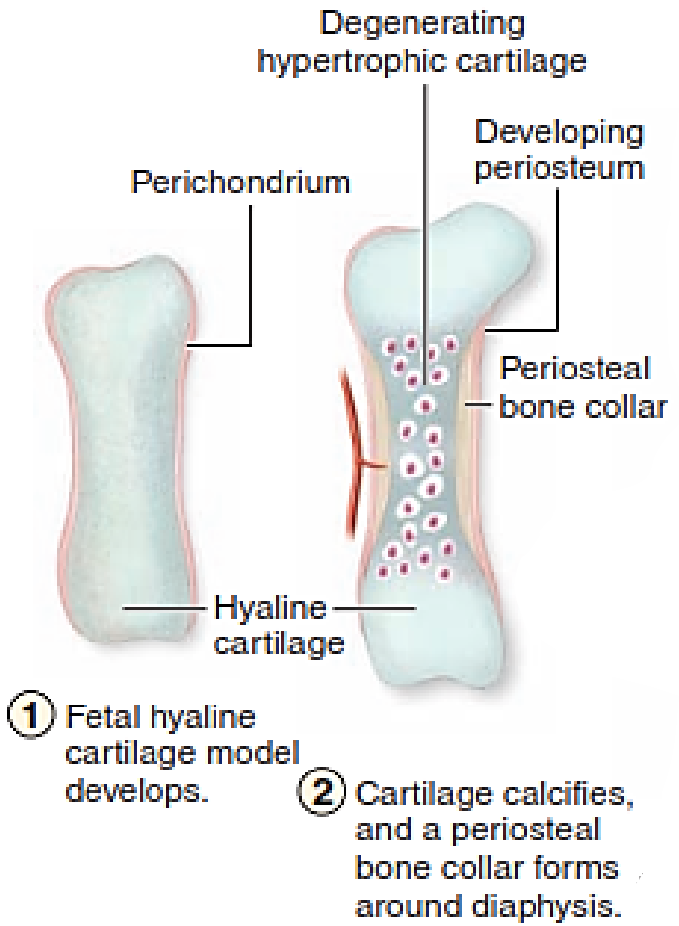


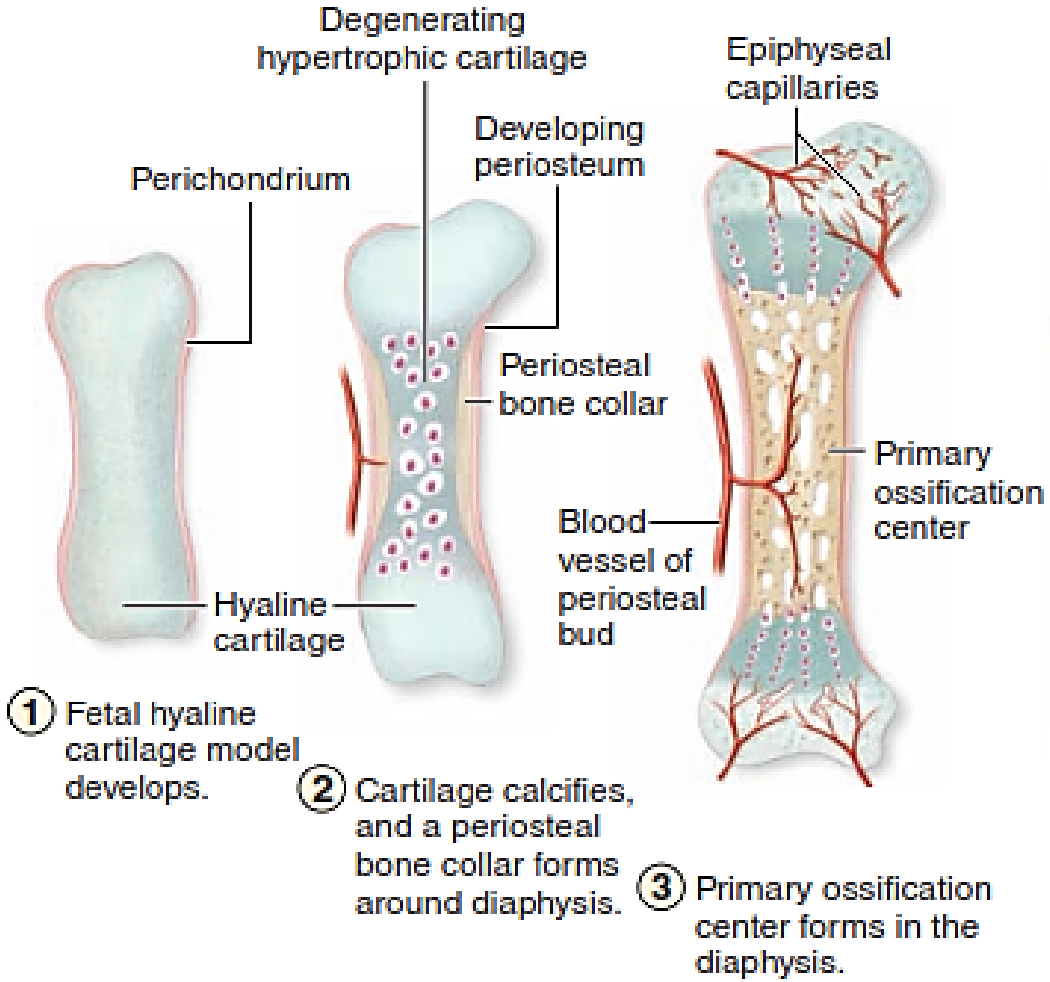




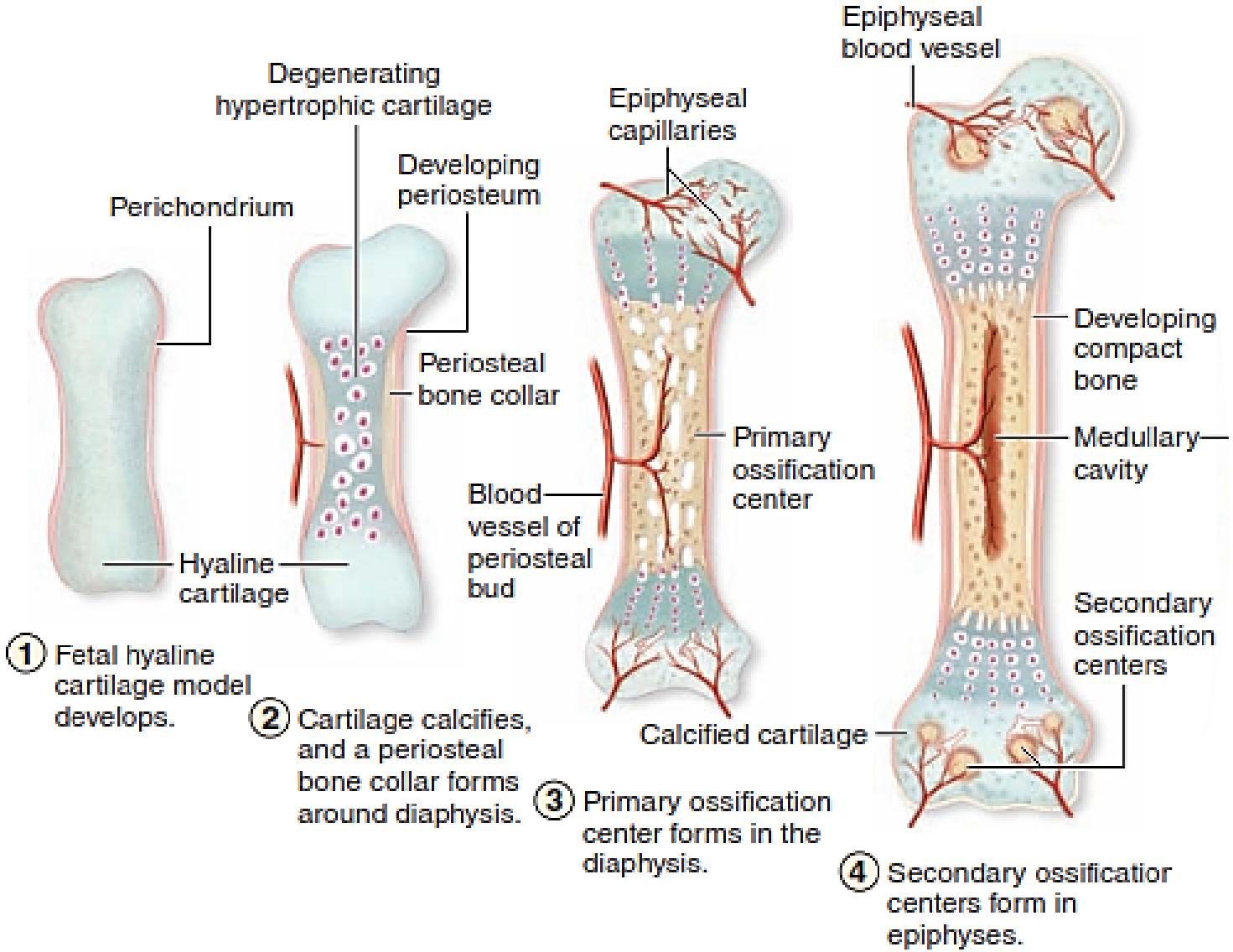
Endochondral ossification



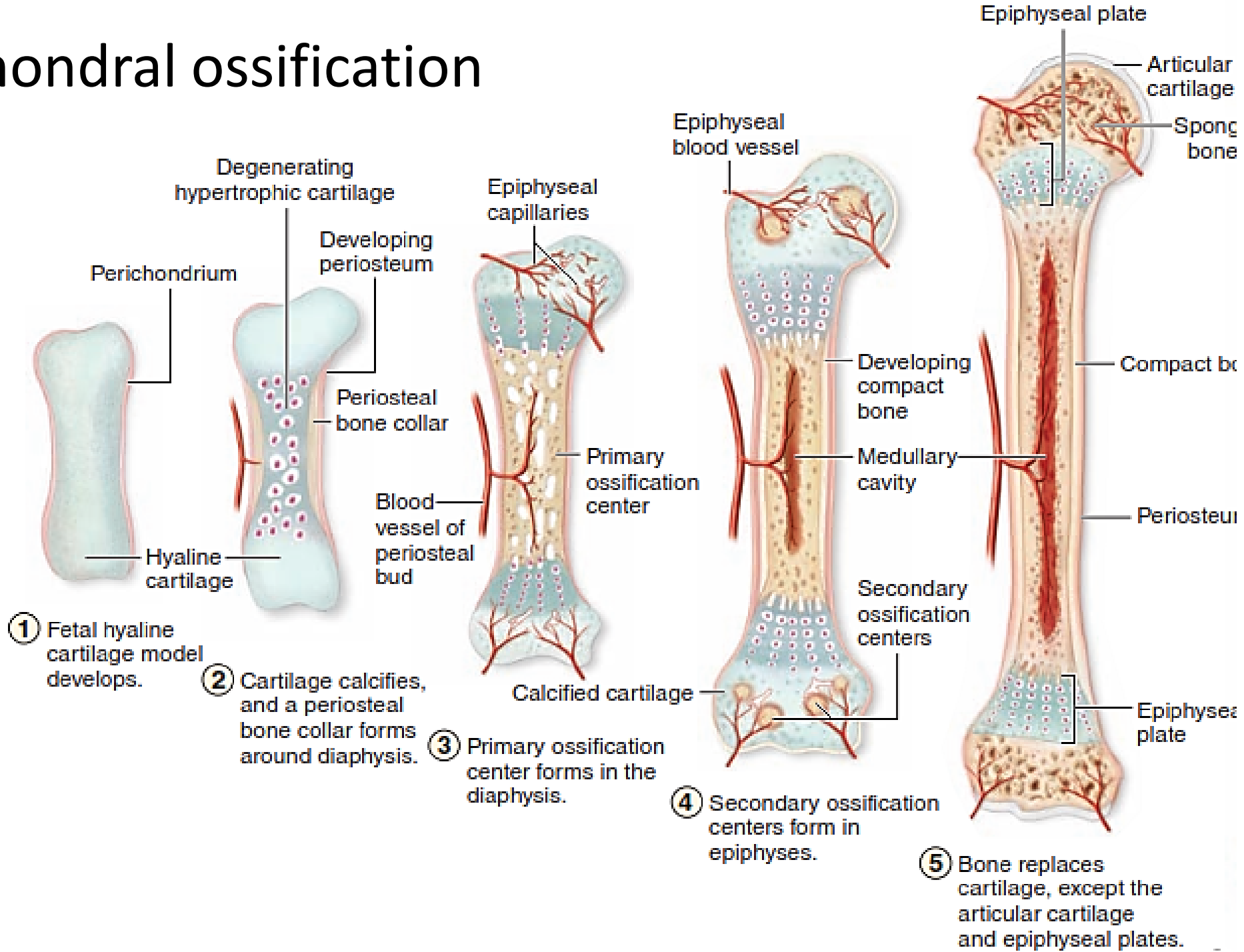

Degenerating hypertrophic cartilage
Developing periosteum
Perichondrium
Periosteal bone collar
Hyaline cartilage
1 Fetal hyaline cartilage model develops.
2 Cartilage calcifies, and a periosteal bone collar forms around diaphysis.


Degenerating hypertrophic cartilage
Epiphyseal capillaries
Developing periosteum
Perichondrium
Periosteal bone collar
Primary ossification center
Blood vessel of periosteal bud
Hyaline cartilage
1 Fetal hyaline cartilage model develops.
2 Cartilage calcifies, and a periosteal bone collar forms around diaphysis.
3 Primary ossification center forms in the diaphysis.

Endochondral ossification



Endochondral ossification



EPIPHYSEAL CARTILAGE (GROWTH PLATE)

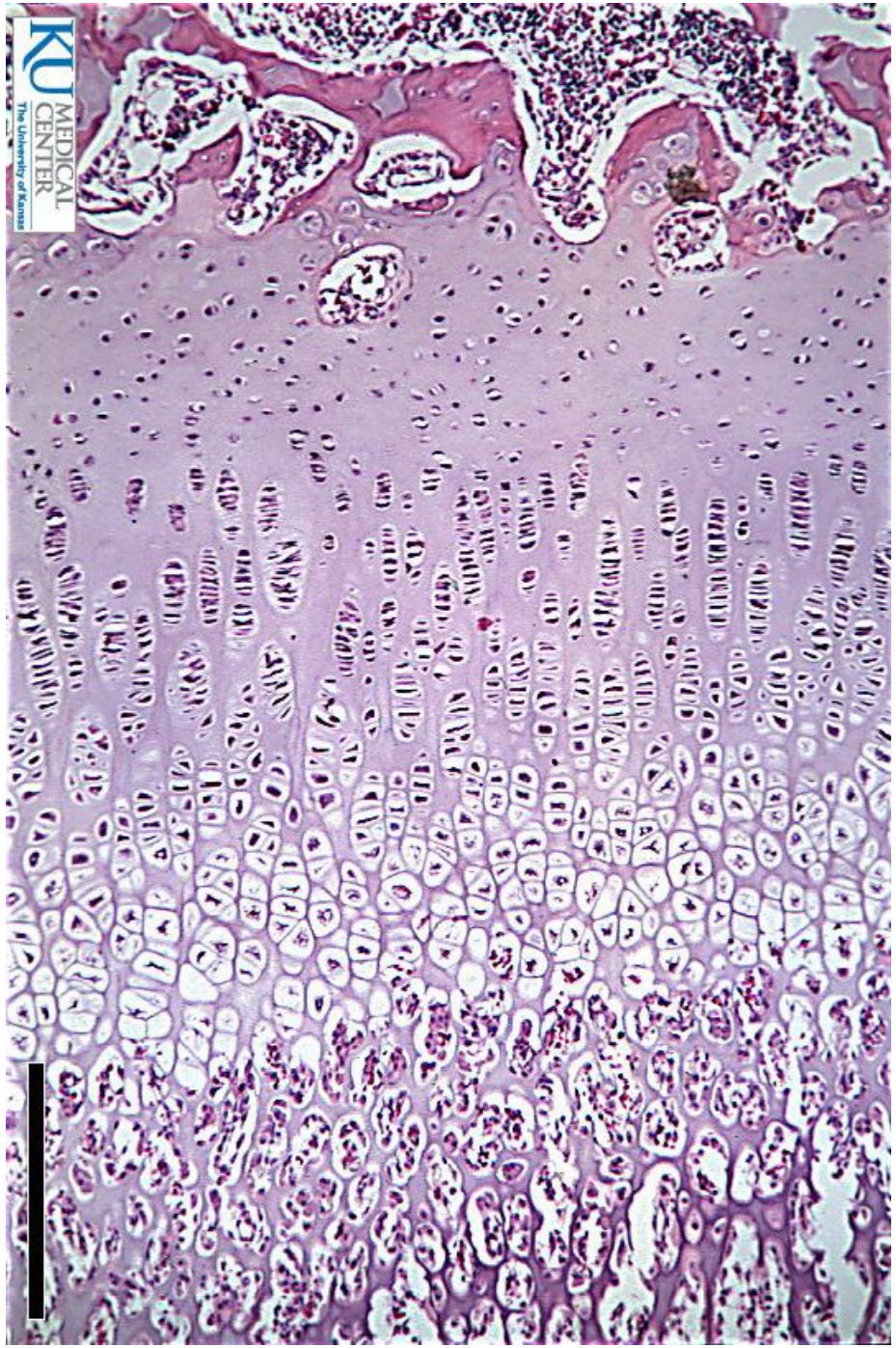
Resting zone

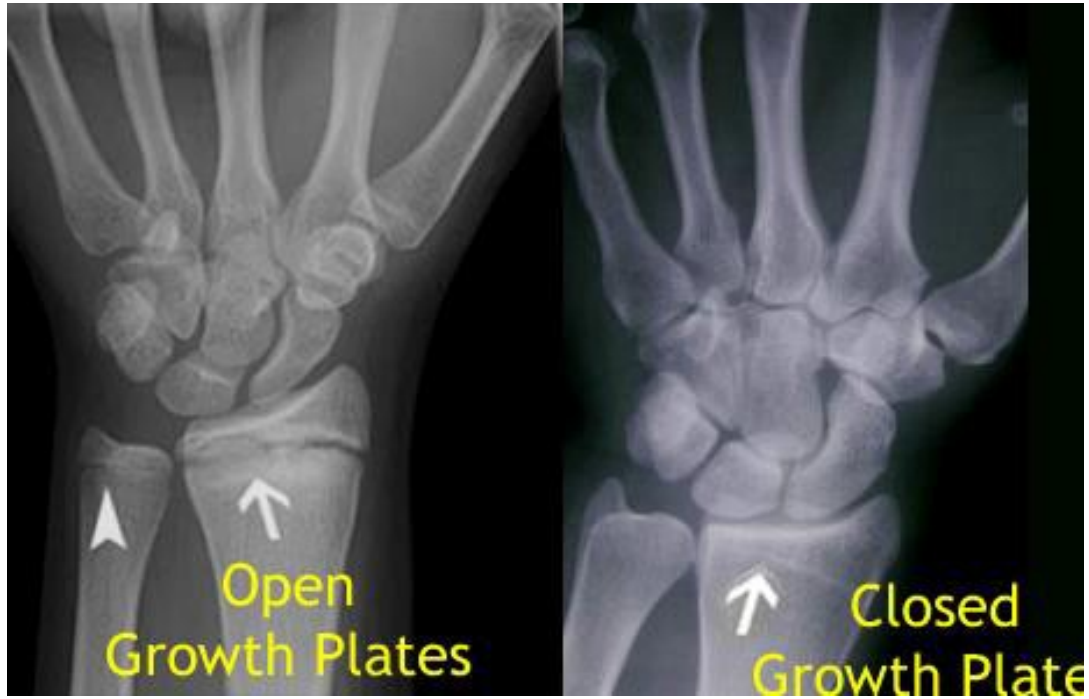
Proliferative

Hypertrophic

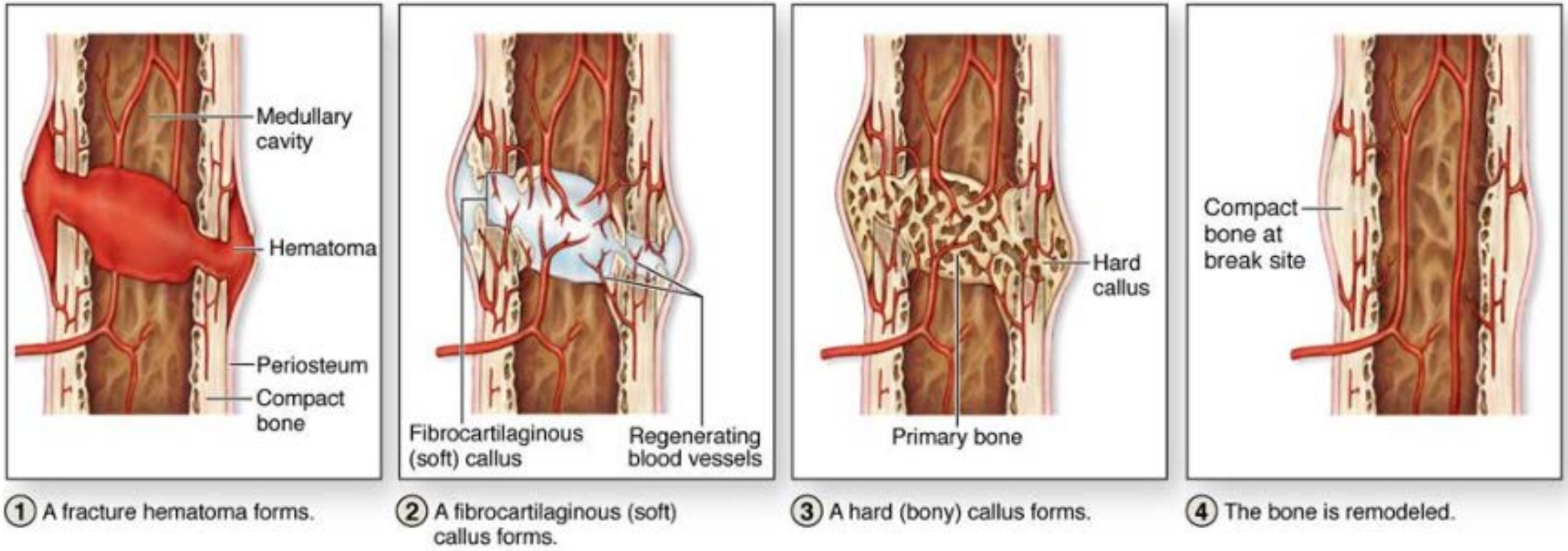
Calcification

Ossification

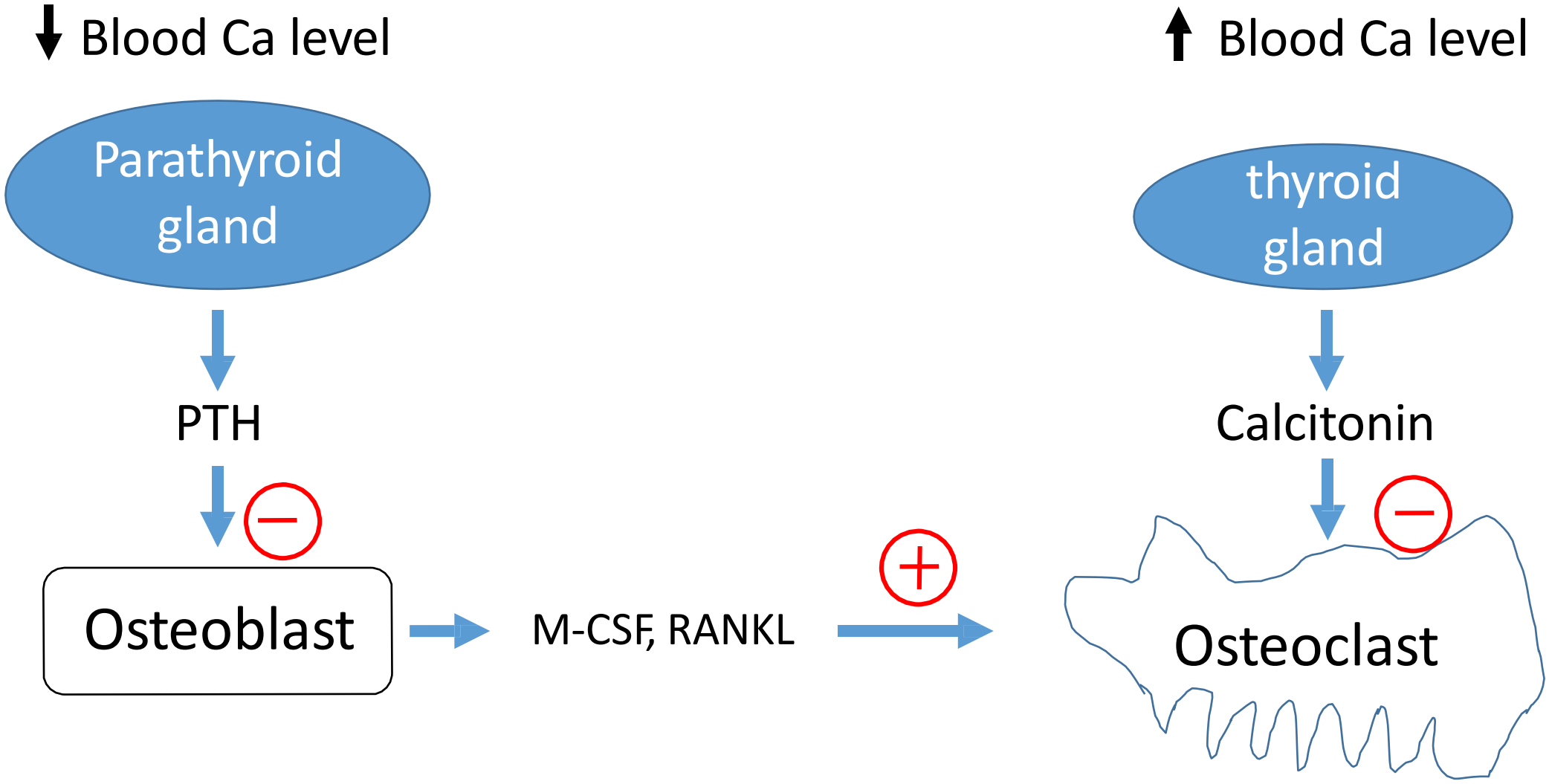




Fracture Repair

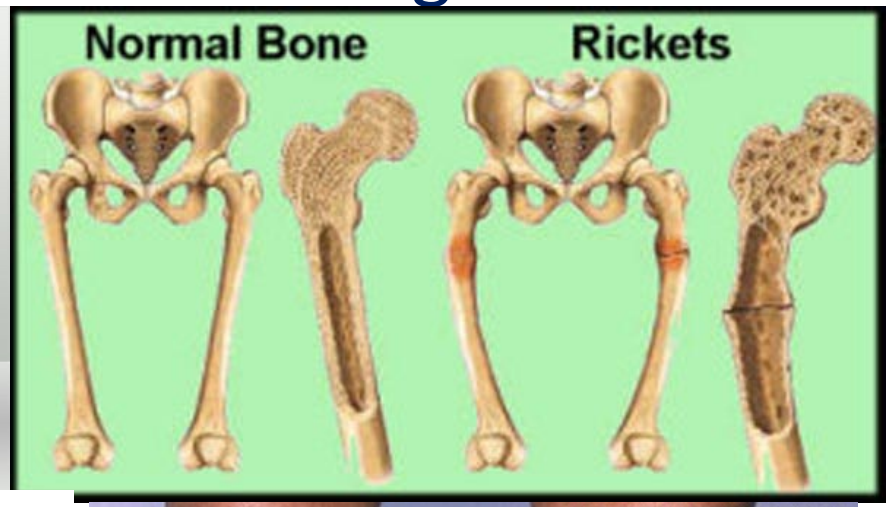


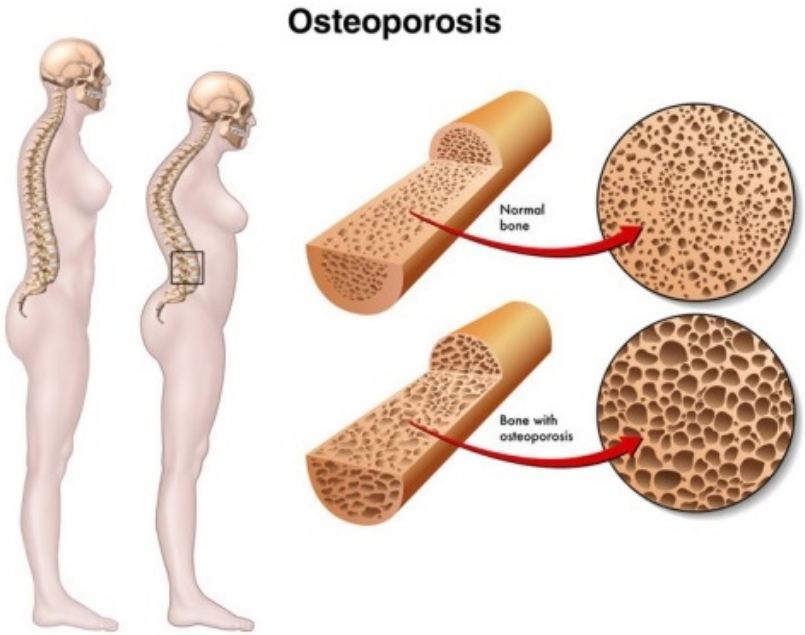
METABOLIC ROLE OF BONE

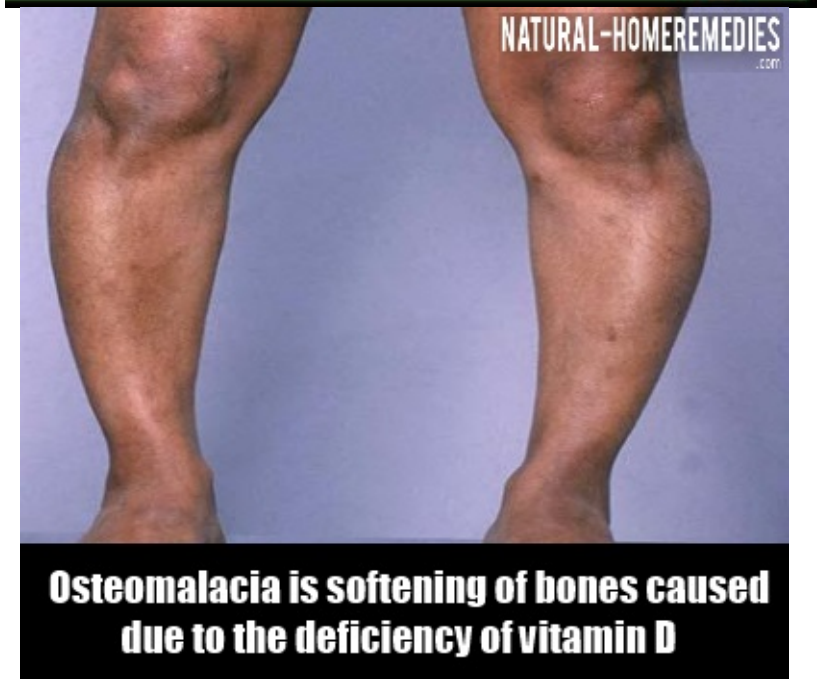


Clinical notes:
Nutritional Deficiencies and Bone Remodeling

- Rickets
- Osteomalacia
- osteoporosis







THANK YOU