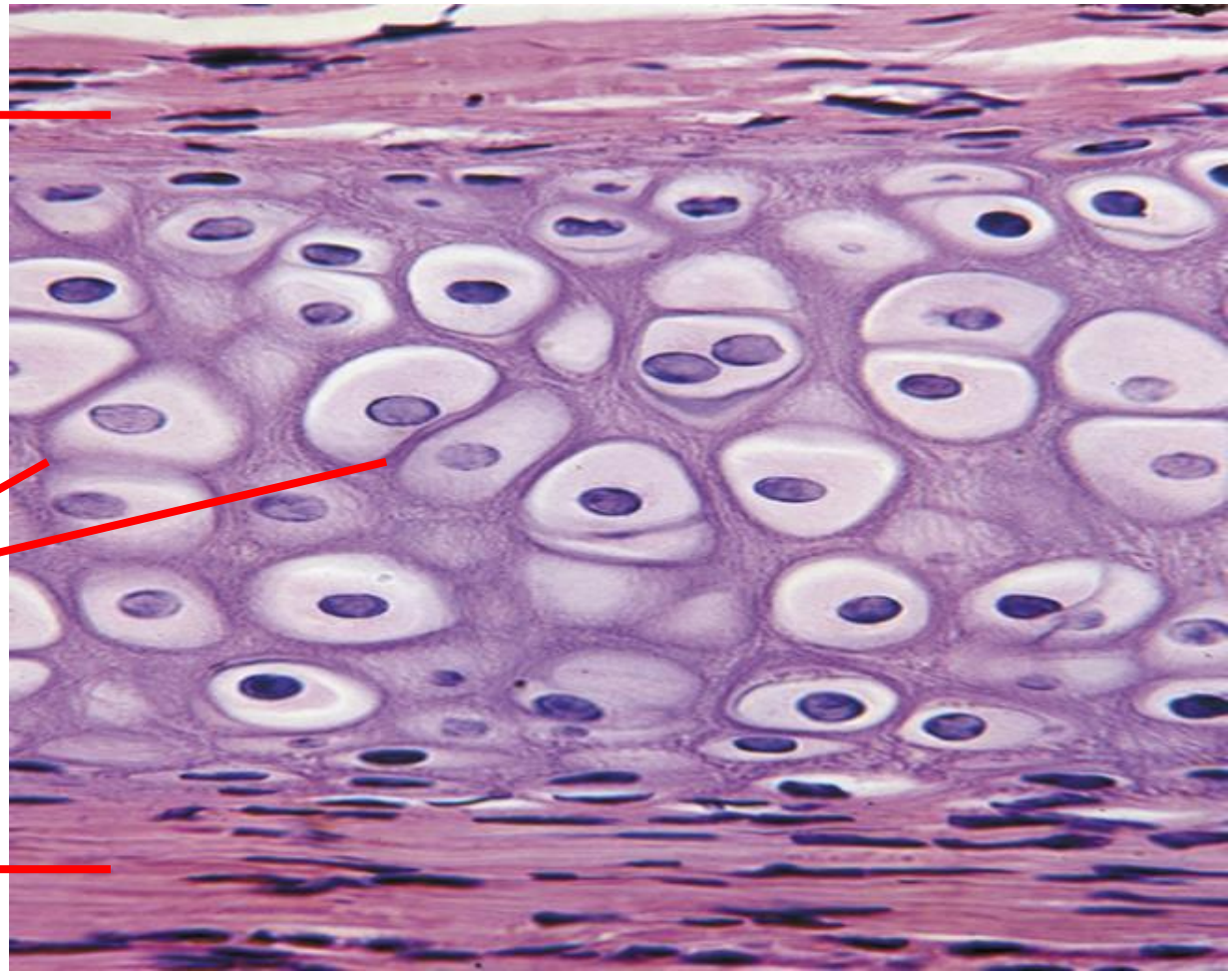
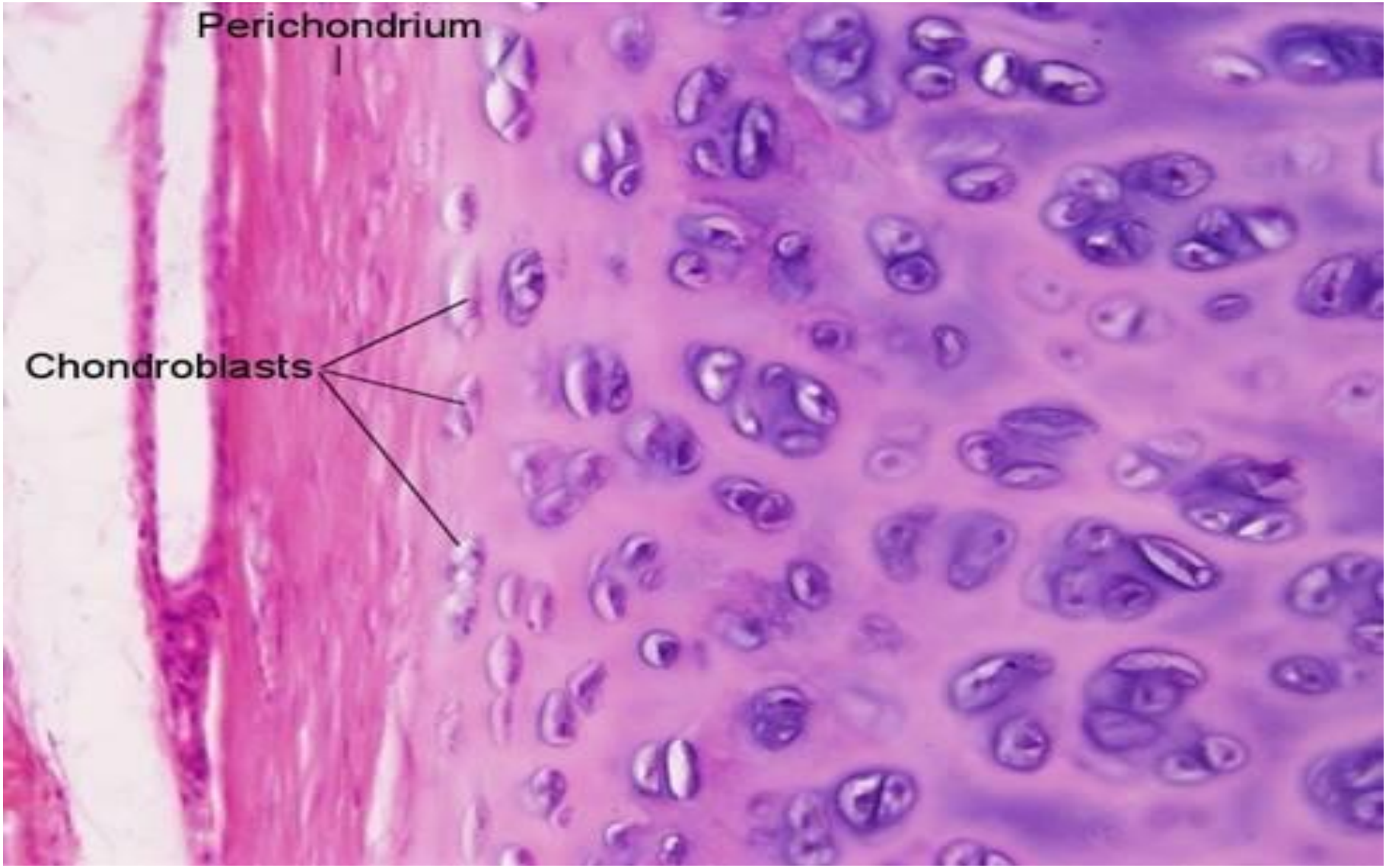
HISTOLOGY LAB 3
CARTILAGE+ BONE

Ass. Prof Dr. Heba Hassan Abd El-Gawad

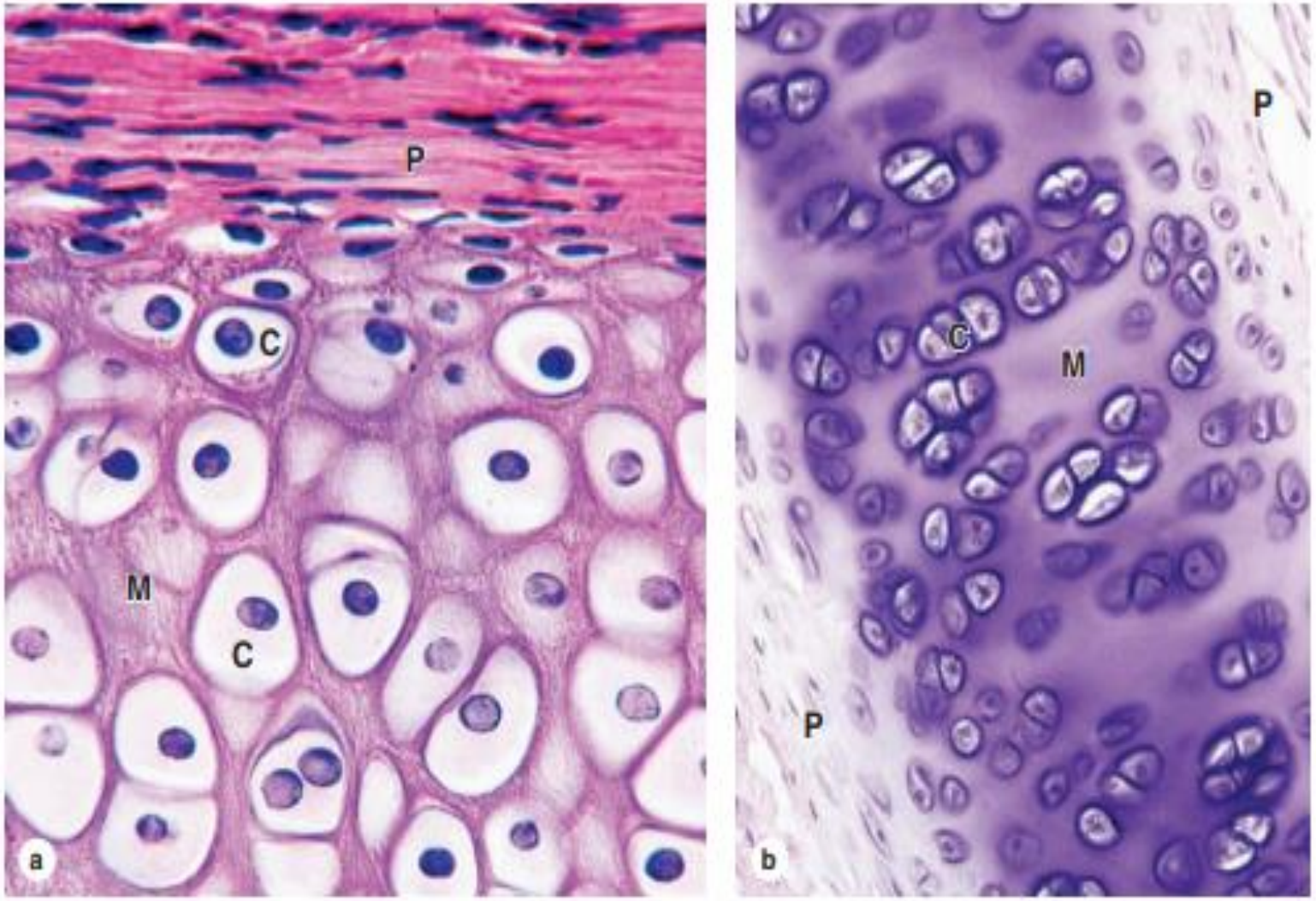
Hyaline cartilage



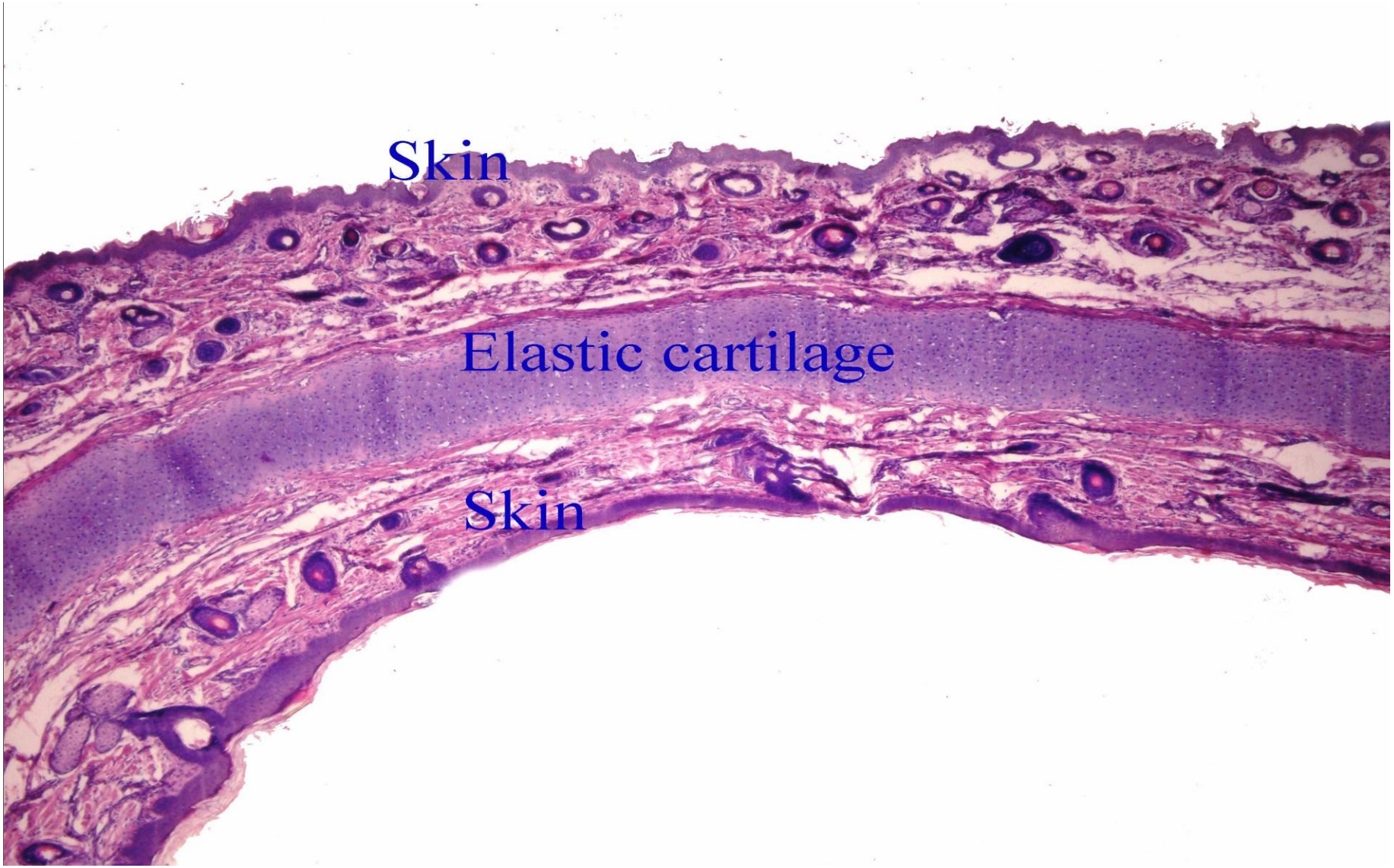
Hyaline cartilage



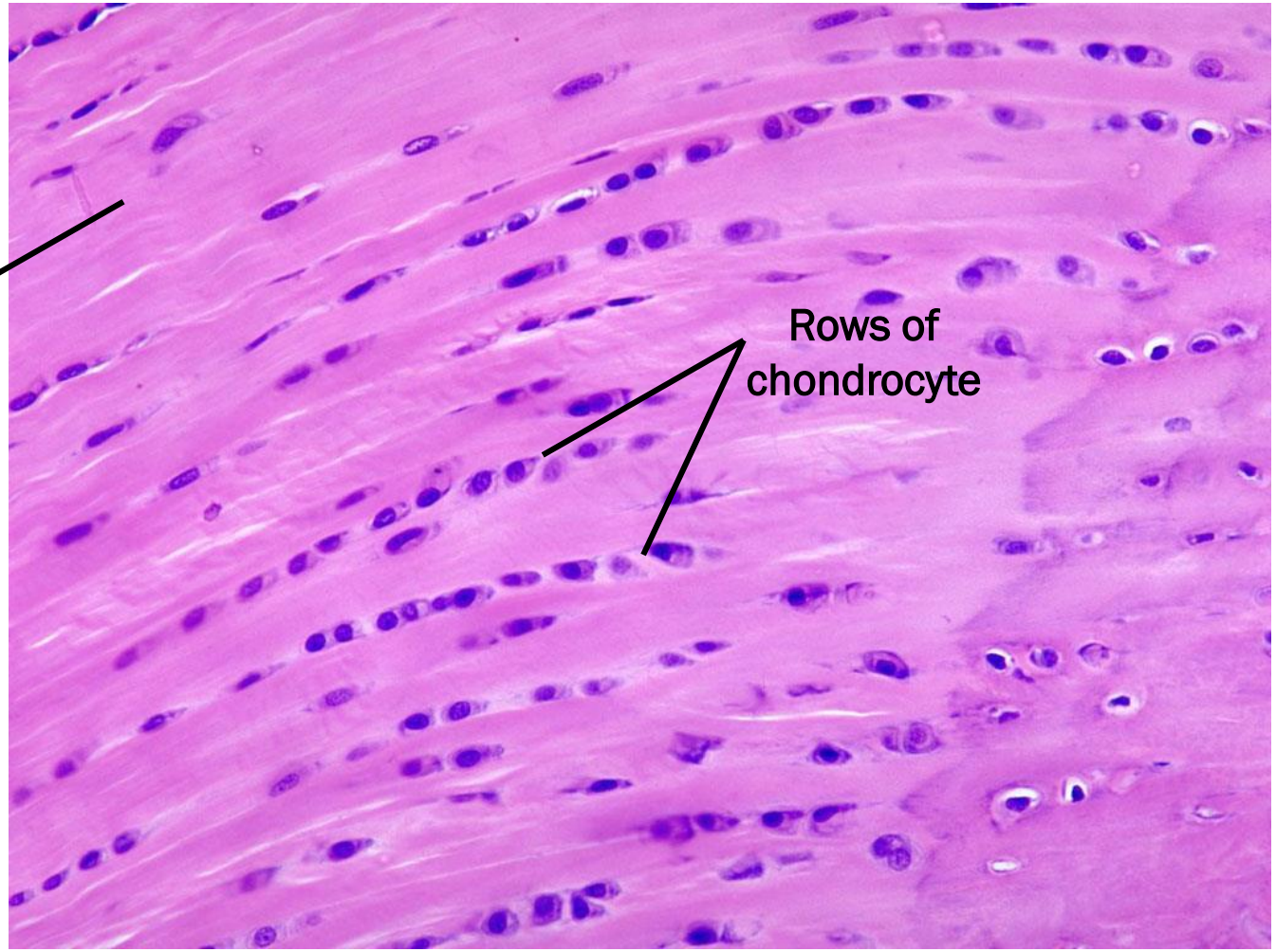
Hyaline cartilage



Elastic cartilage



FIBROCARTILAGE

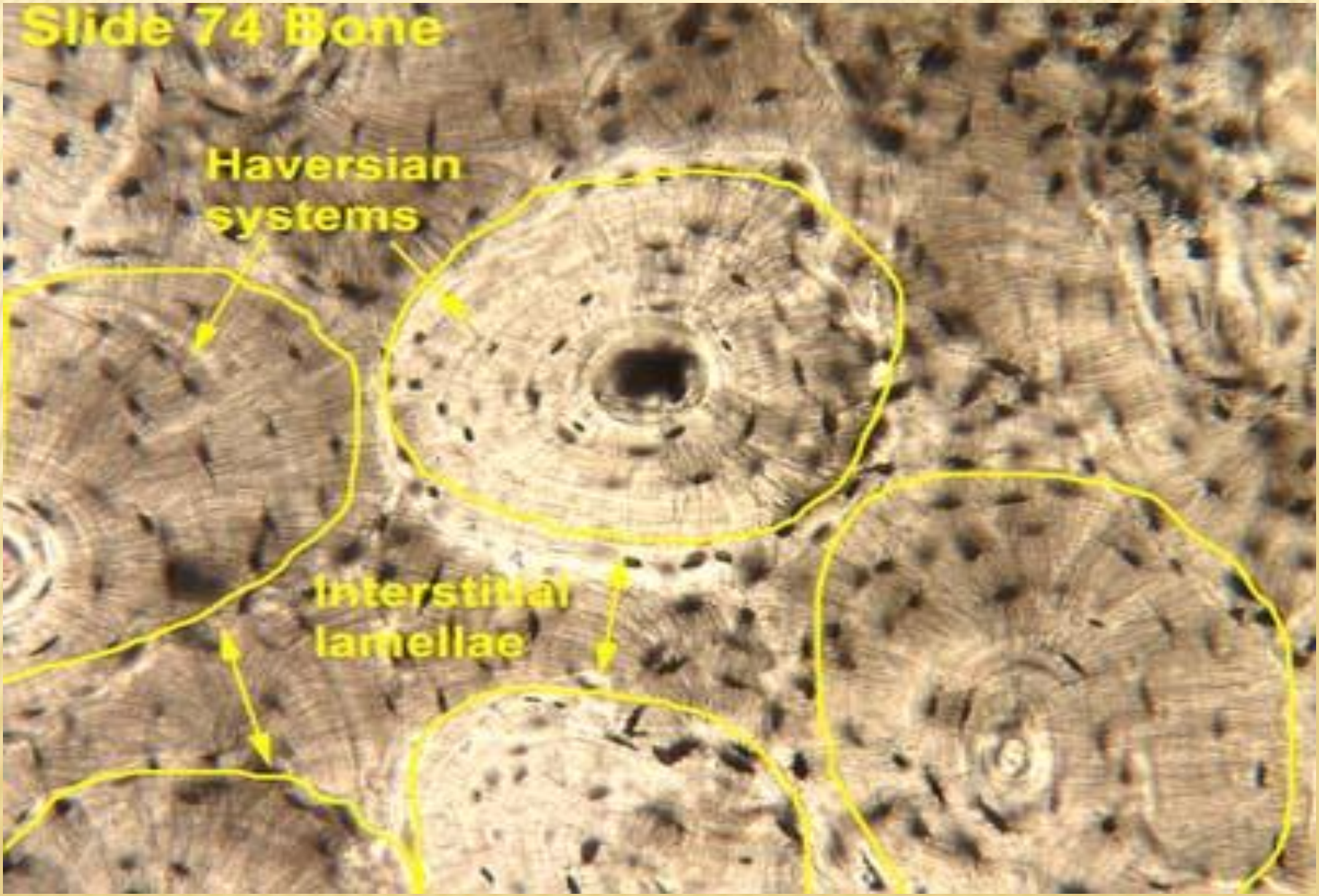


BONE

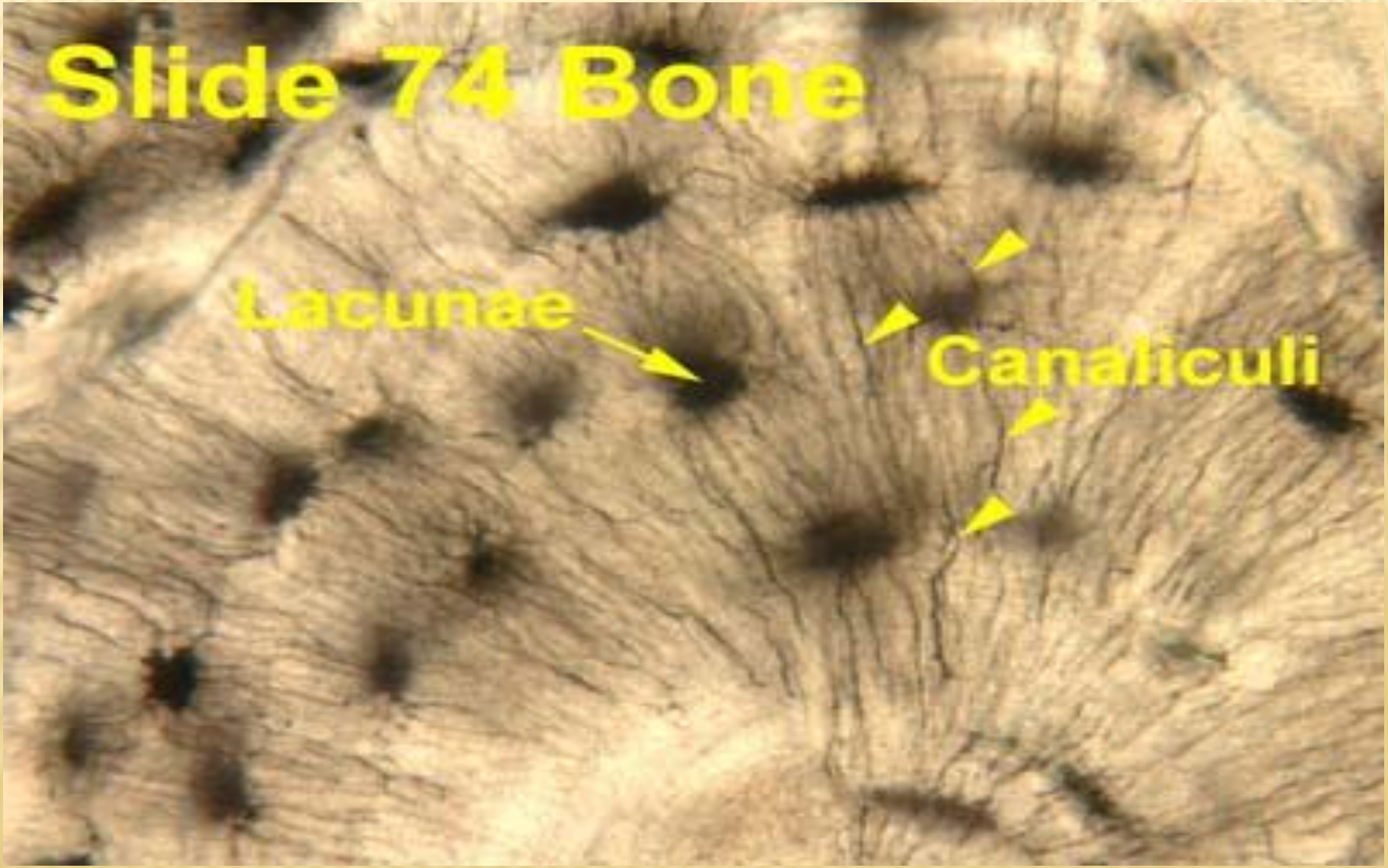
- ***Preparation of bone tissue for microscopic examination:***
  - Because bone is a hard tissue there are two methods to prepare it for microscopic study.

- **Decalcified sections:** the bone is treated with dilute acid solution (5%nitric acid) to remove the inorganic component. Then thin sections are prepared and stained in ordinary manner. In this method the cells and the organic components of bone are preserved.
- **Ground section:** It is carried out by grinding a thin piece of bone until it become transparent. Sections are obtained and examined with the microscope. No stains can be used and the bone cells are destroyed, so lacunae and canaliculi appear black due to the entrapped air.

Compact Bone (ground preparation)

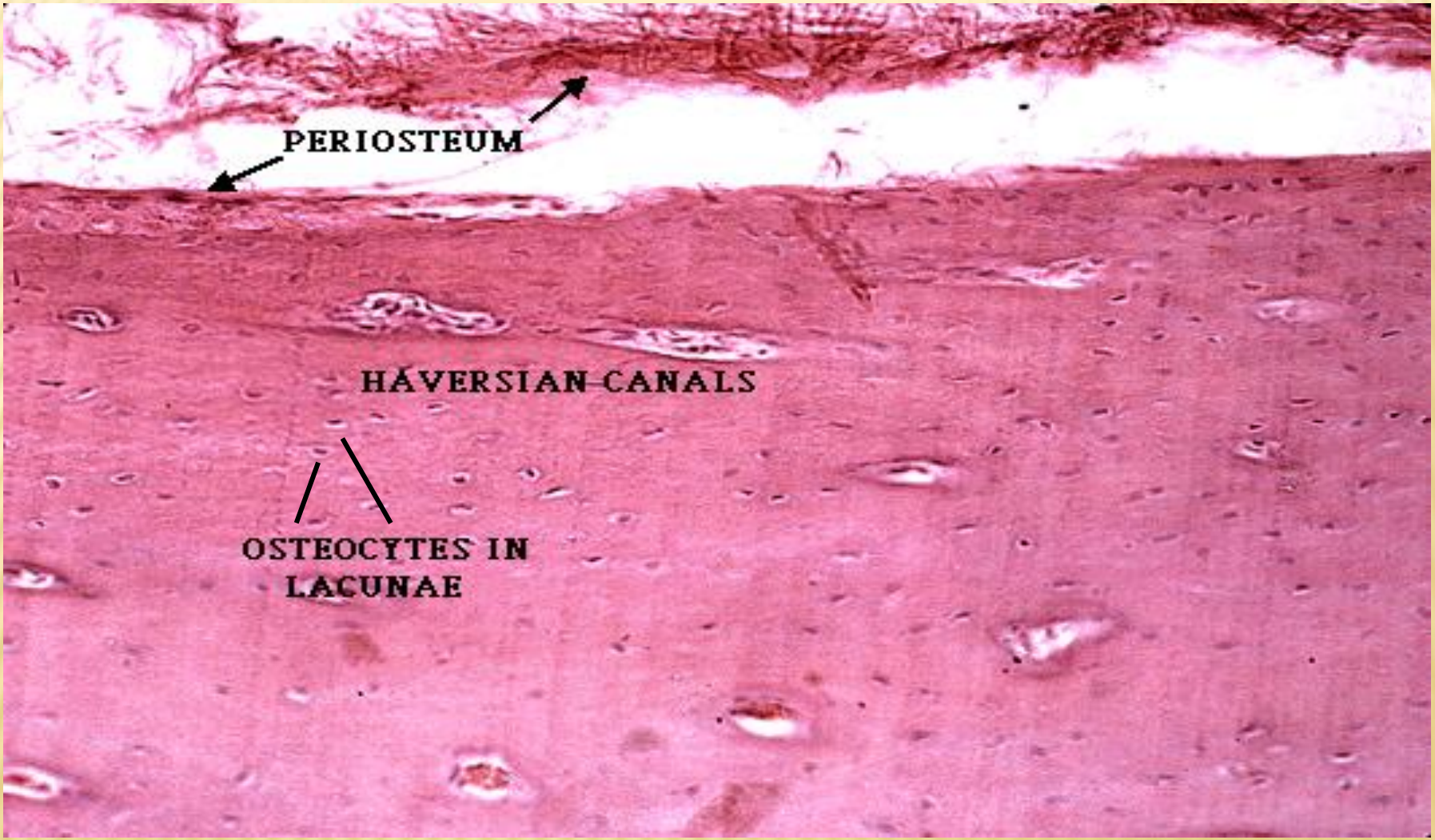


Compact Bone (ground preparation)

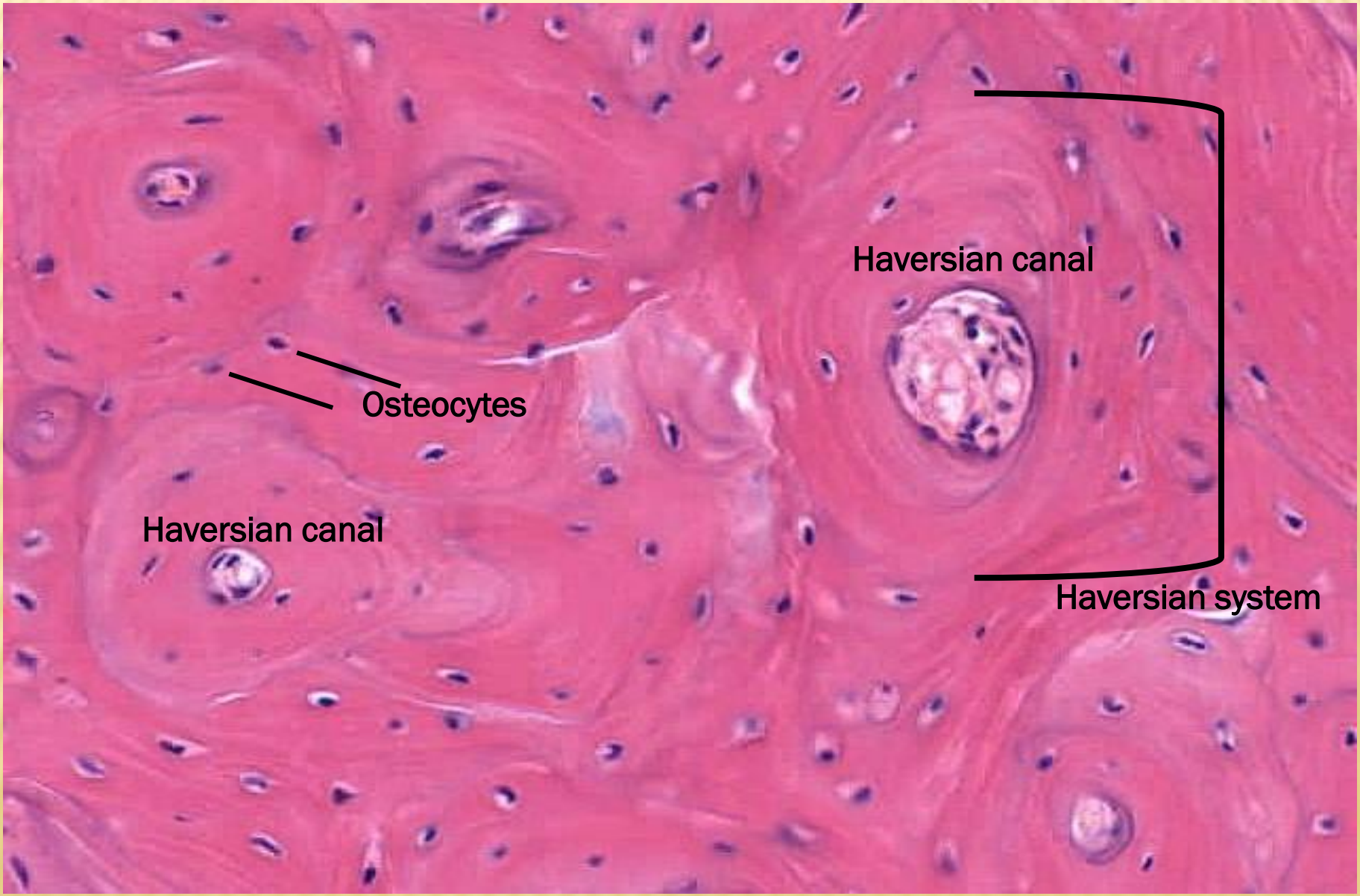


Decalcified Compact Bone

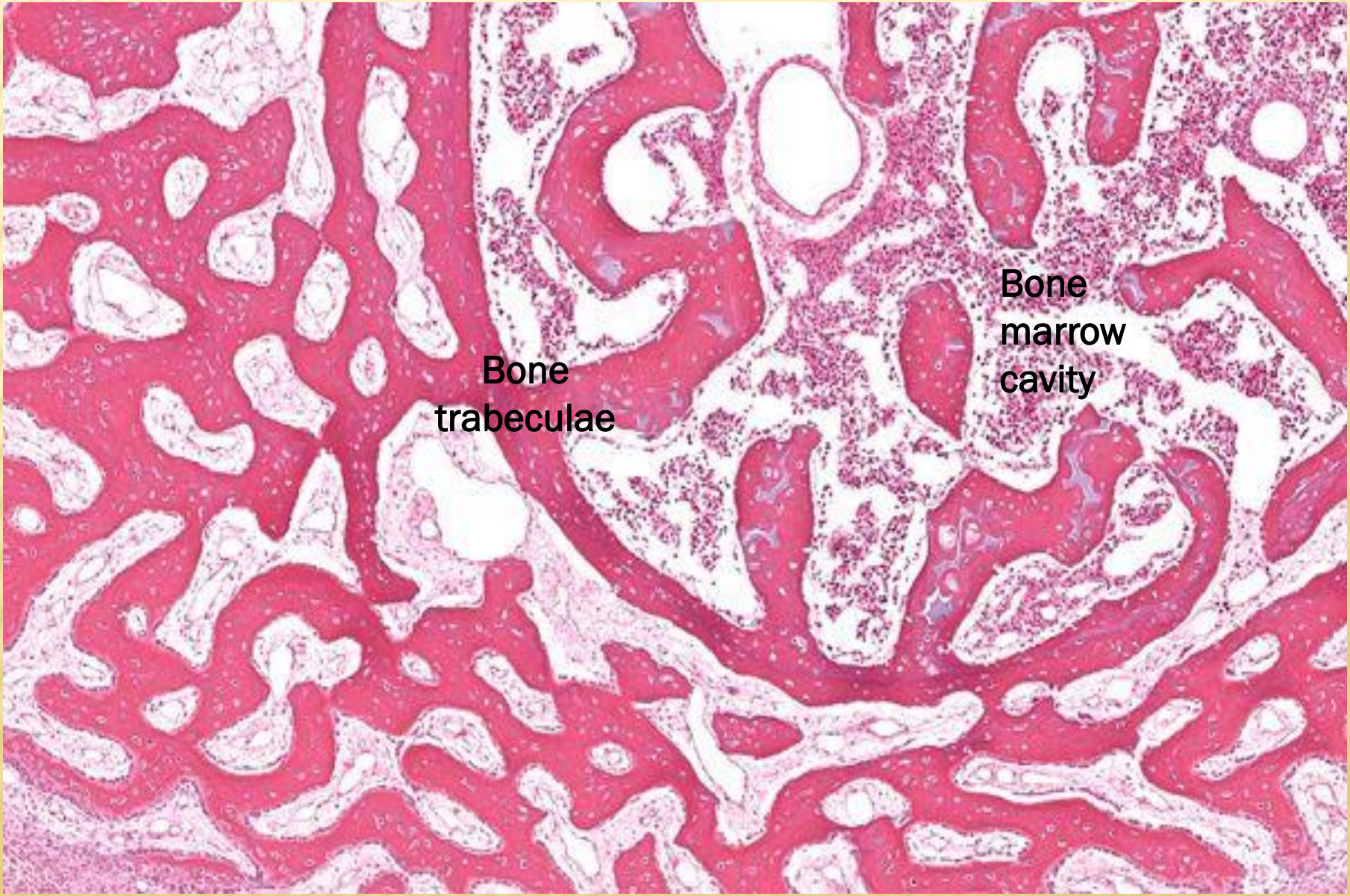
Decalcified Compact Bone



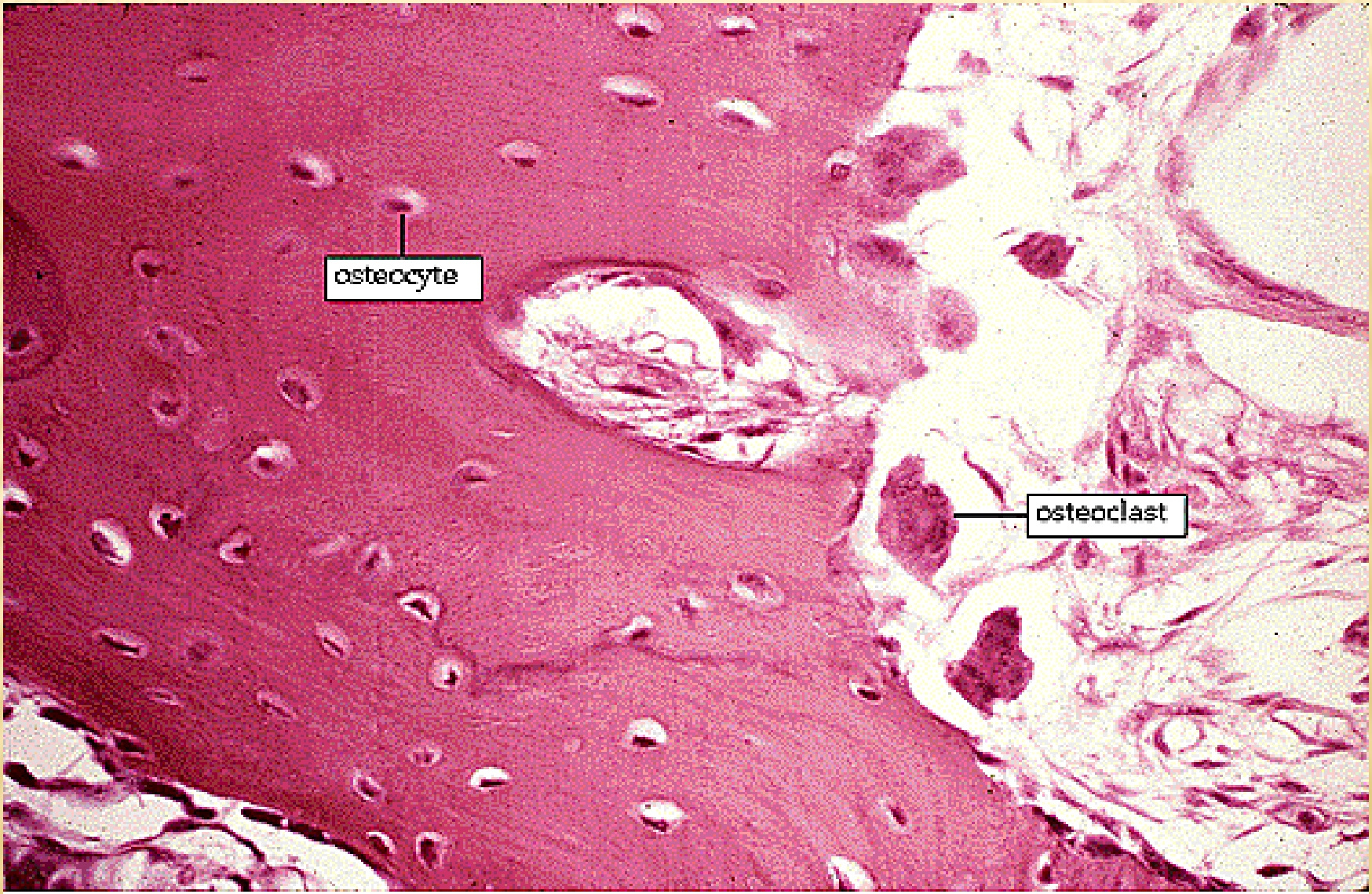
Decalcified Compact Bone



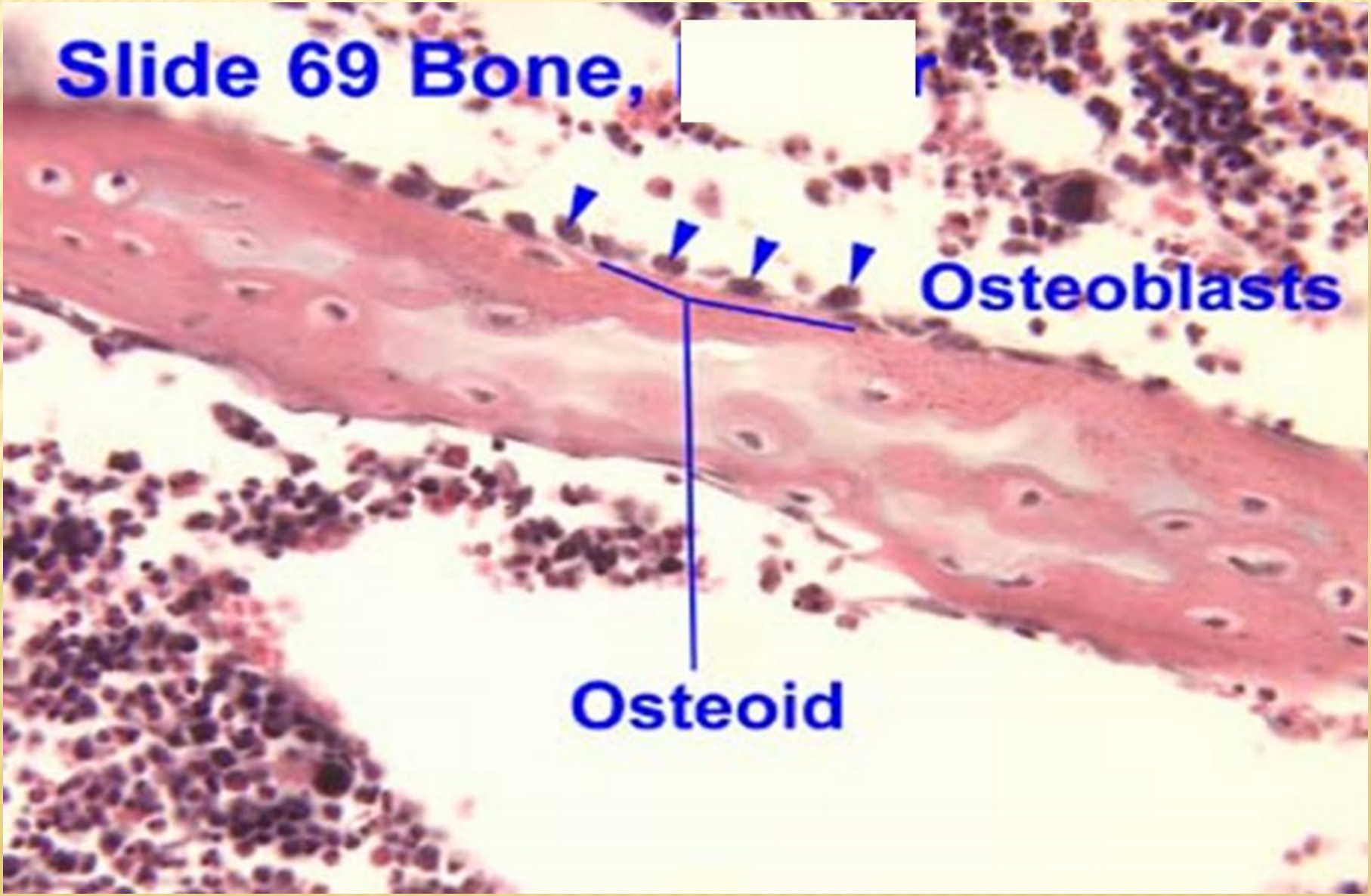
Cancellous Bone



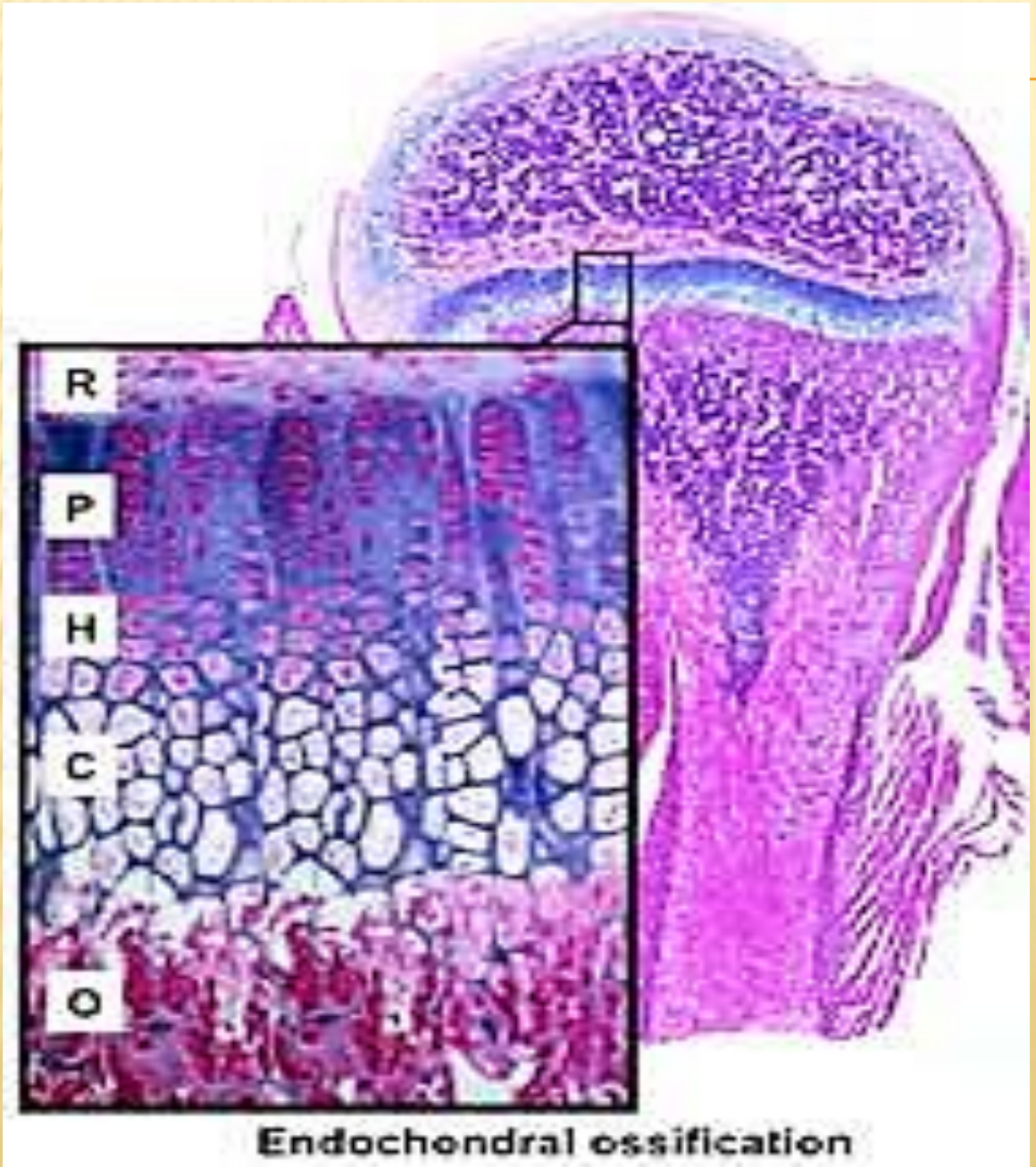
Cancellous Bone



Cancellous Bone



epiphyseal plate



R= resting zone

P= proliferative zone

H= hypertrophic zone

C-= calcifiction zone

O= ossification zone

THANK YOU