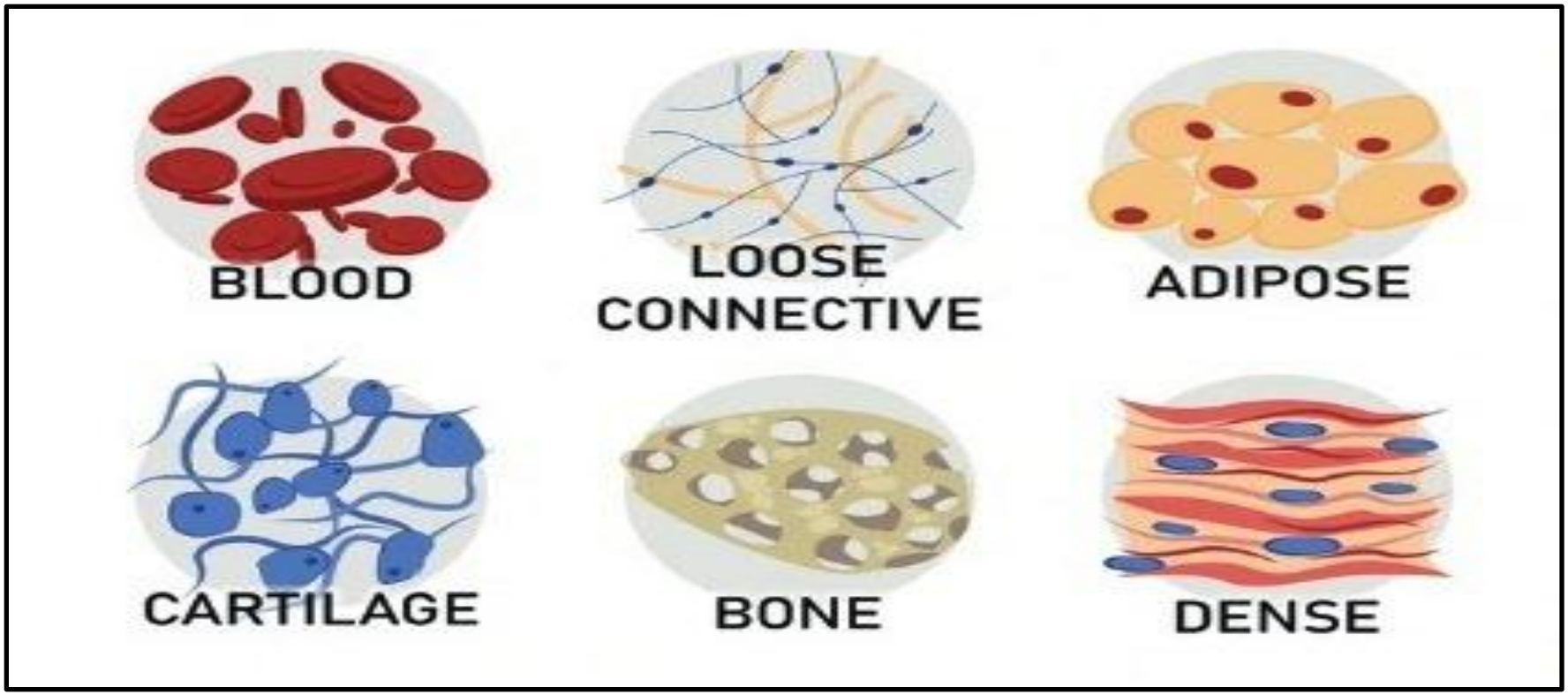
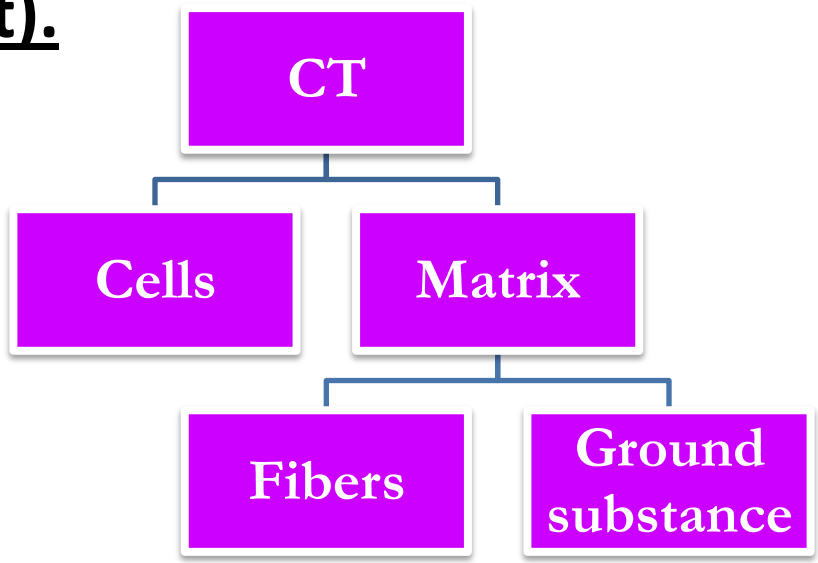
Connective tissue
(Lab)

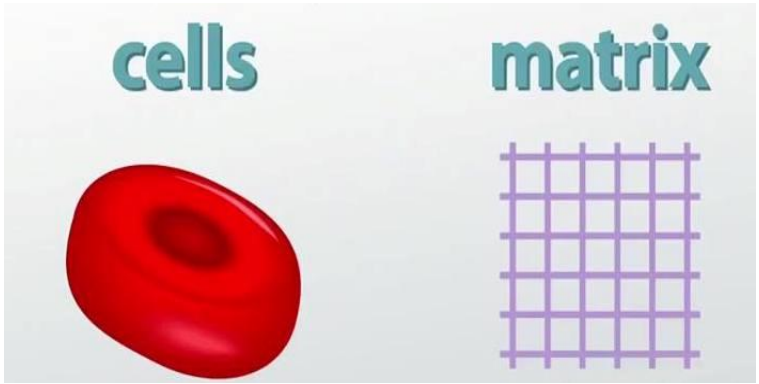


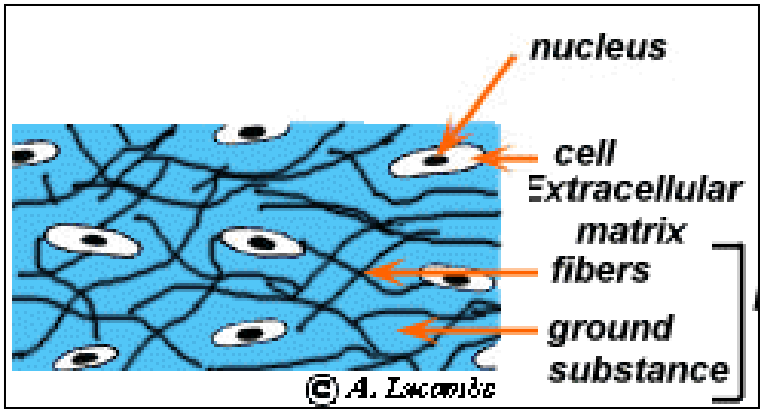
By
Dr. Heba Sharaf Eldin
Associate Professor of Histology & Cell Biology

Composition of C.T.

- **Connective tissue cells (less-widely separated)**
- **Extracellular substance (Matrix) (More- the major constituent).**







Connective tissue cells

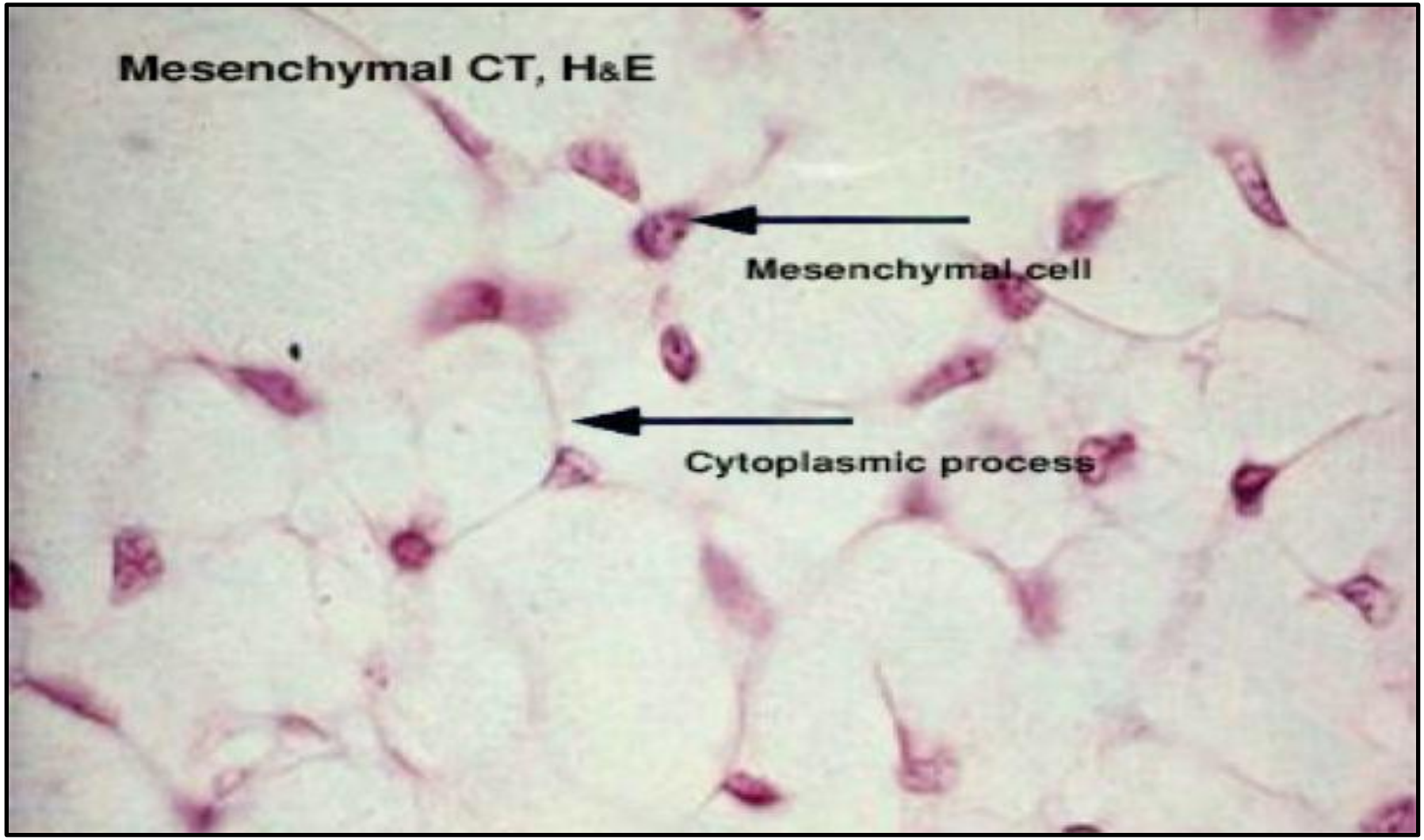
A- Fixed cells

- UMC
- Fibroblasts
- Adipocytes

B- Transient cells

- Macrophage
- Mast cells
- Plasma cells

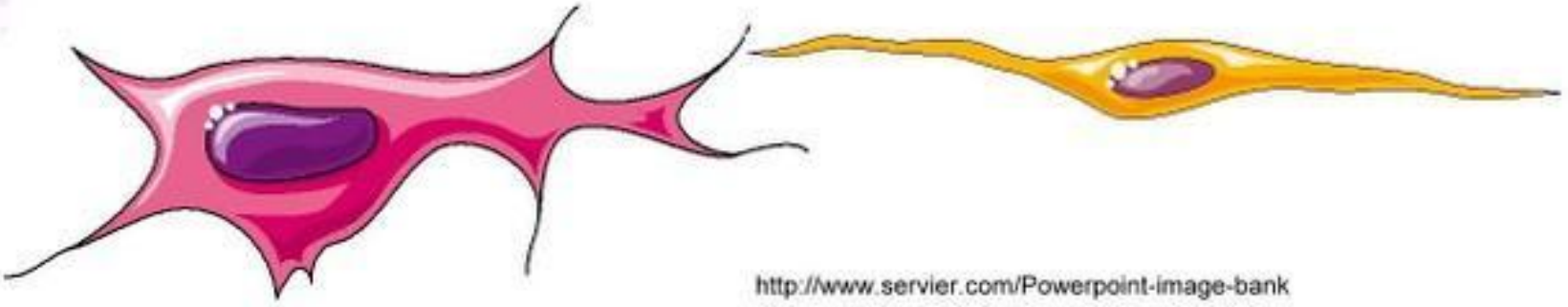
Mesenchyme (UMC)

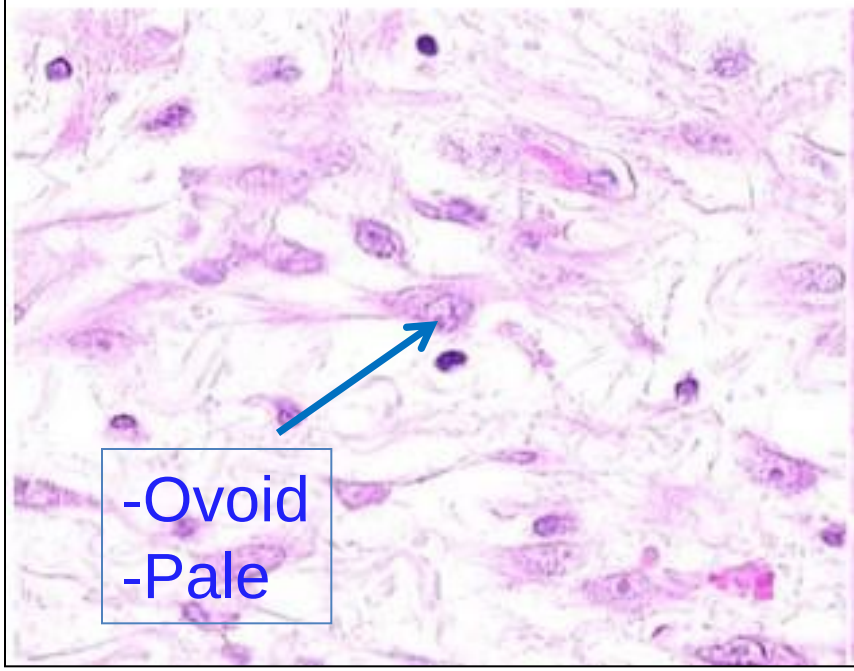


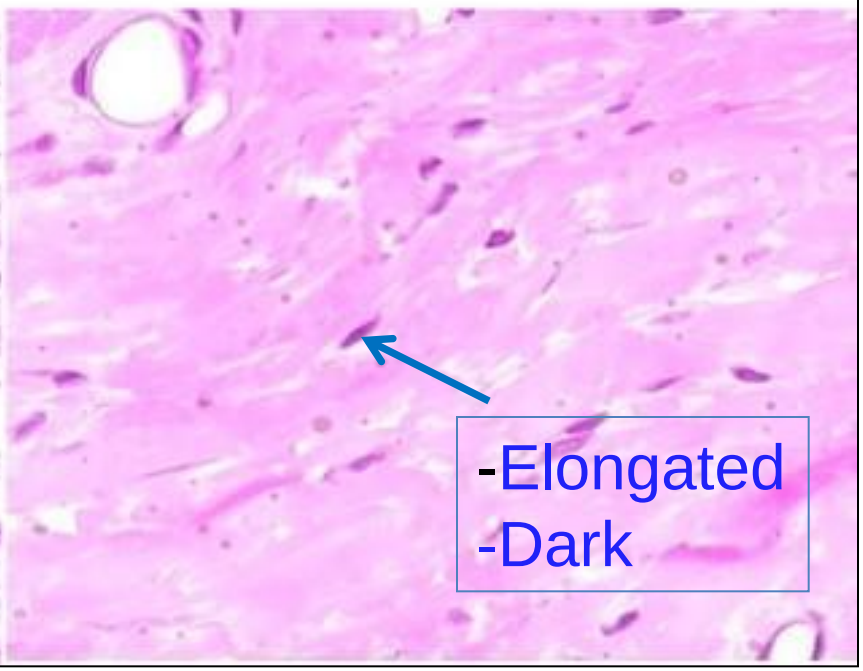
Fibroblast

Tissue culture-Phase contrast microscopy

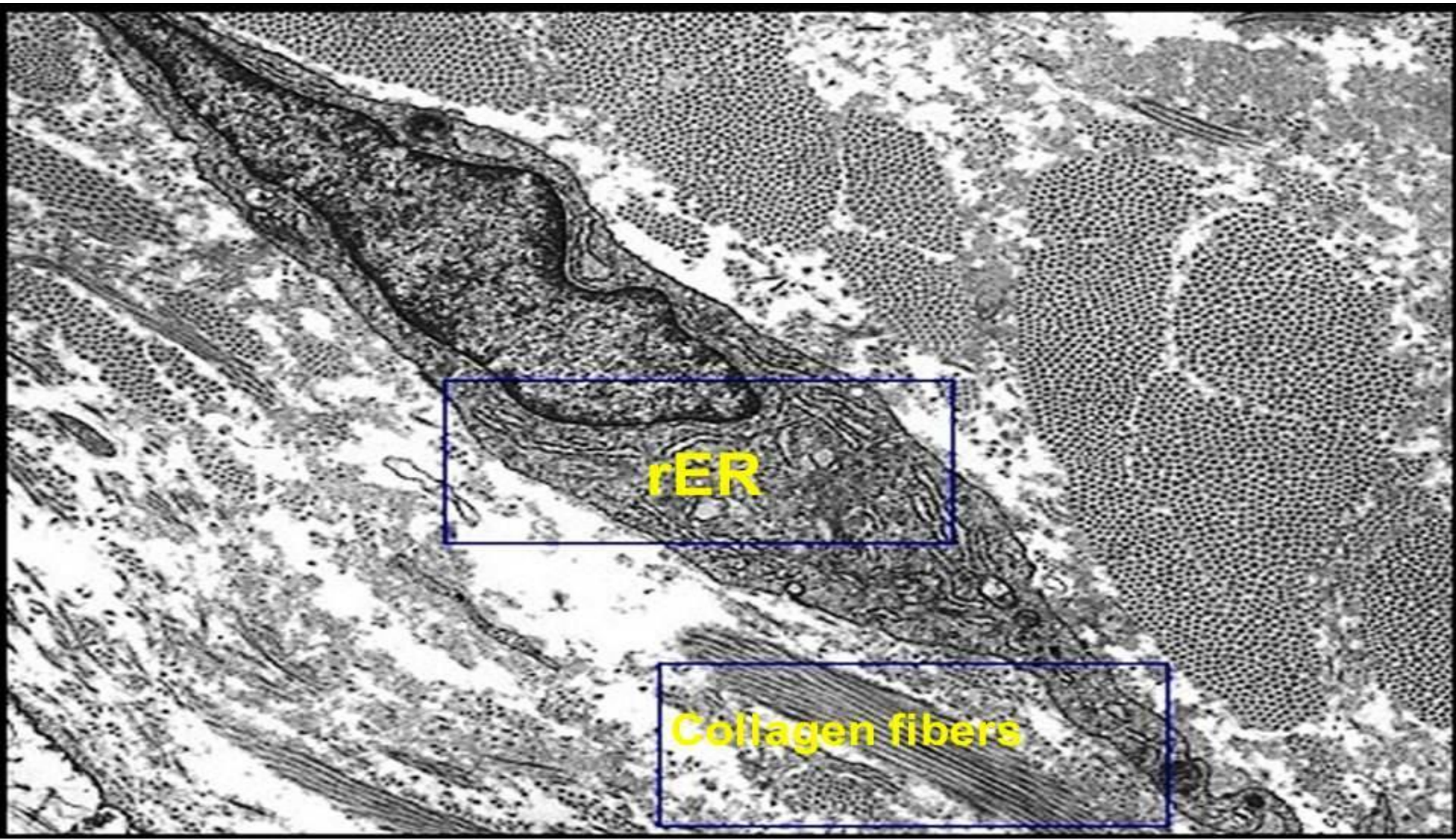
Fibroblast **(H&E)** **Fibrobocyte**





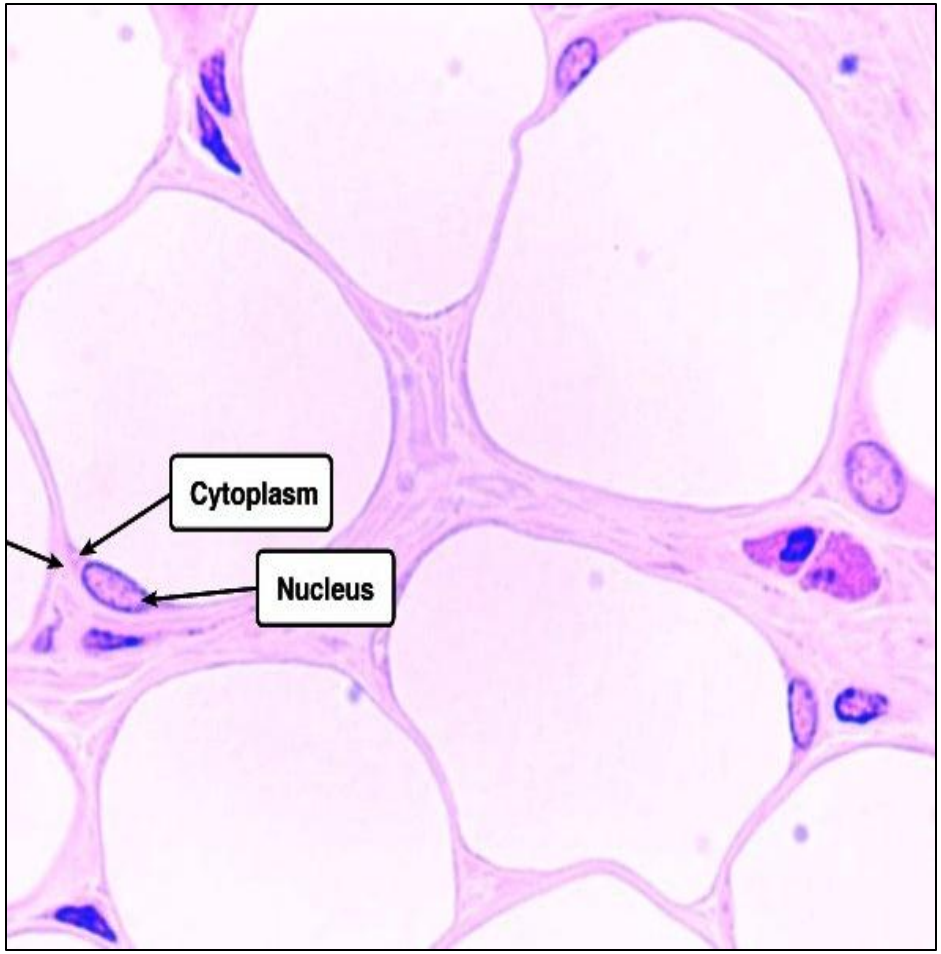


Fibroblast (EM)

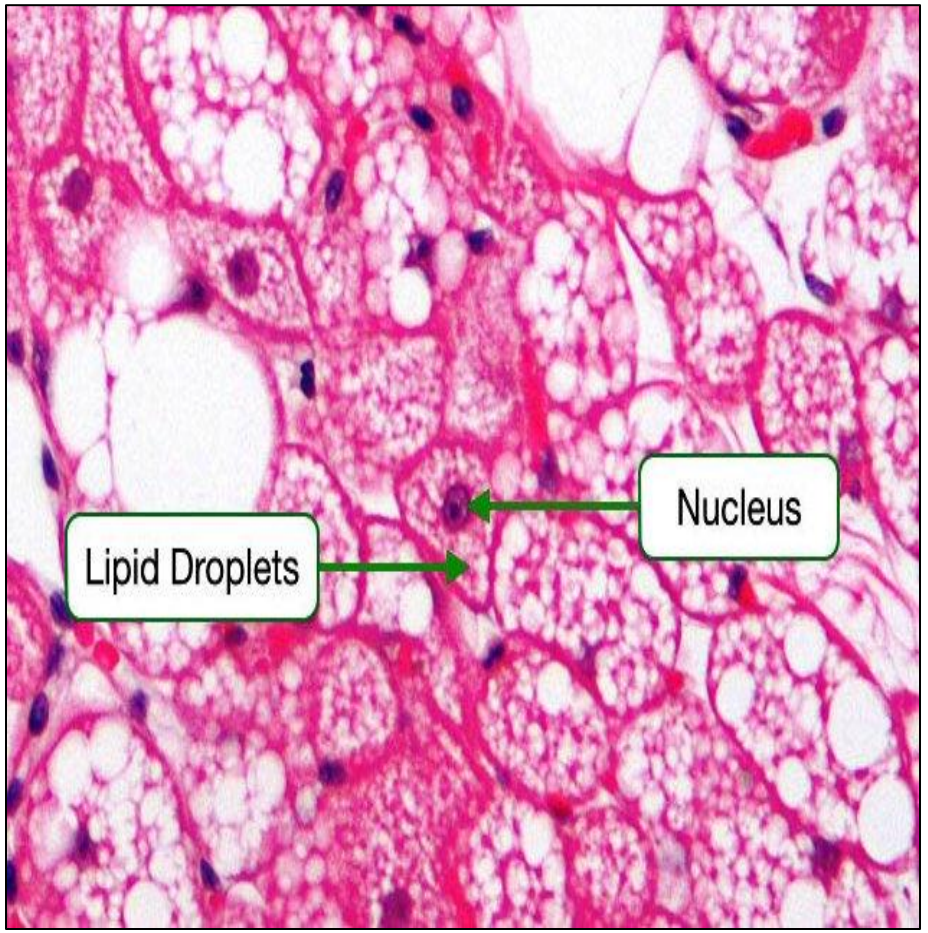


Adipocytes (H&E)

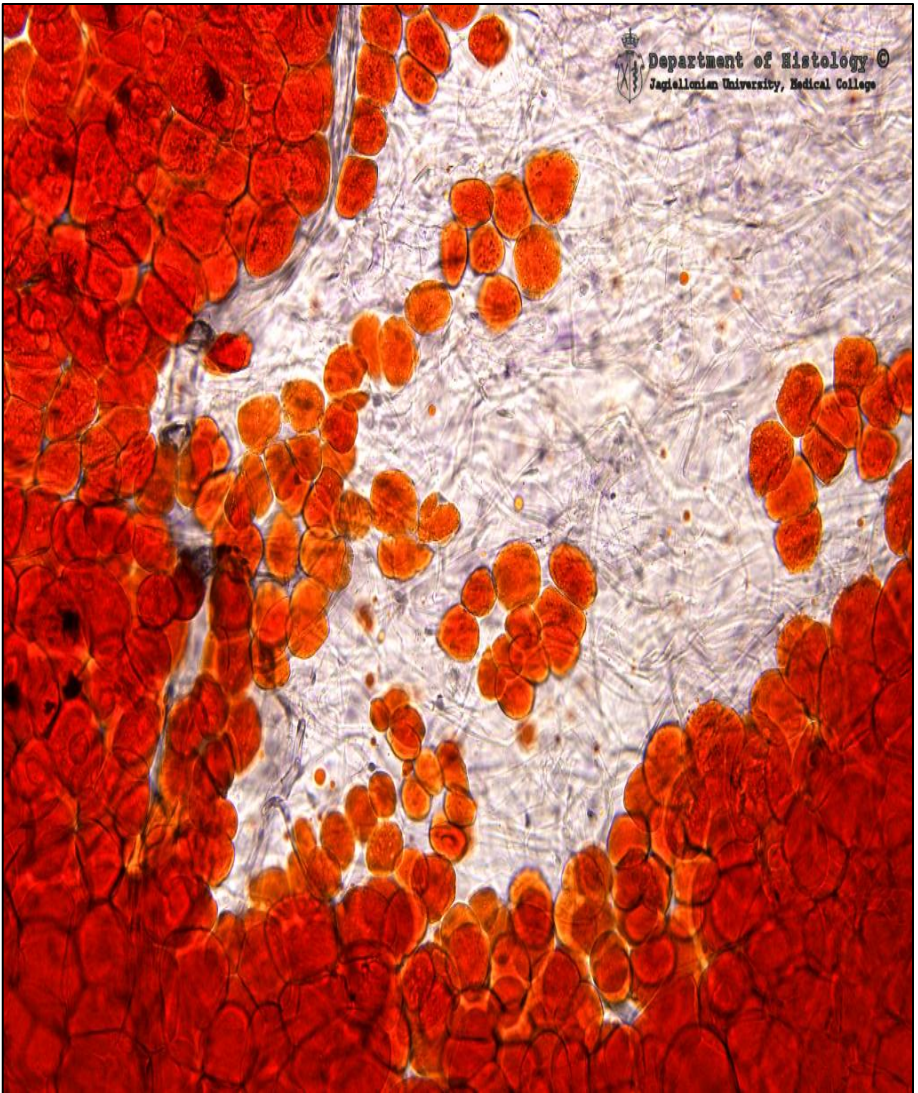
Unilocular



Multilocular

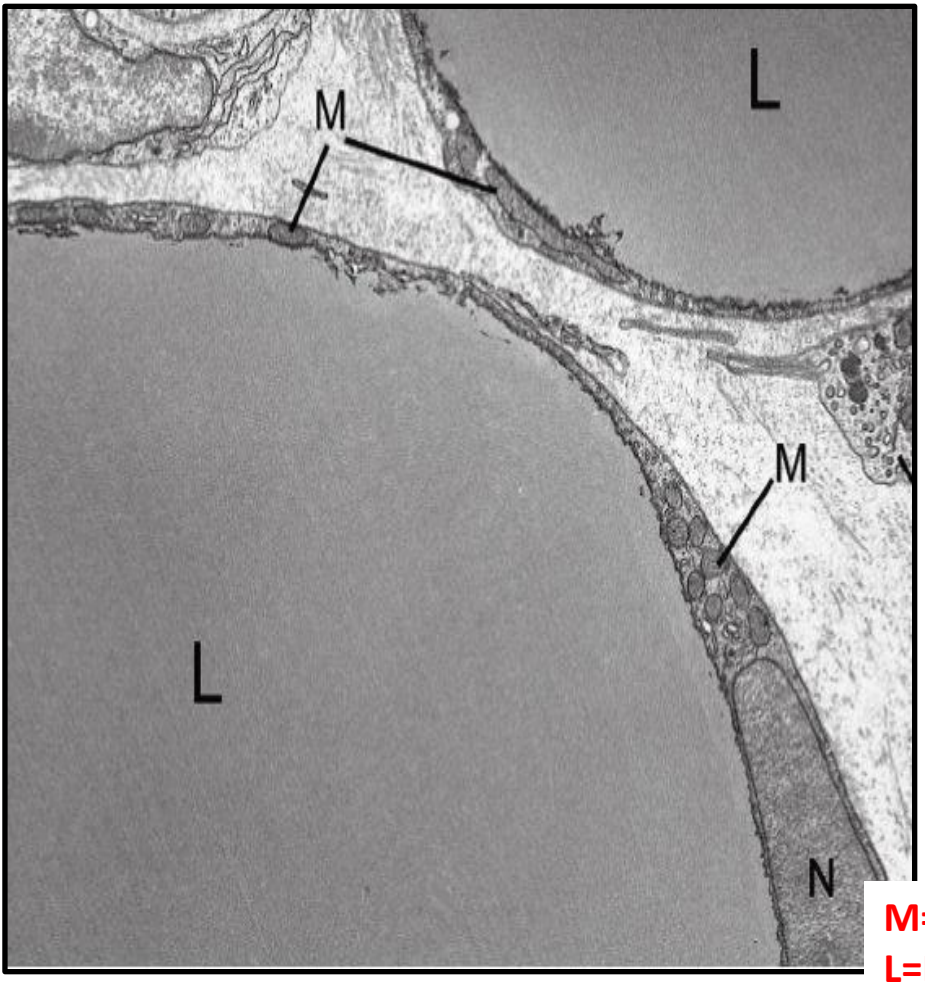


Adipocytes (Sudan III)

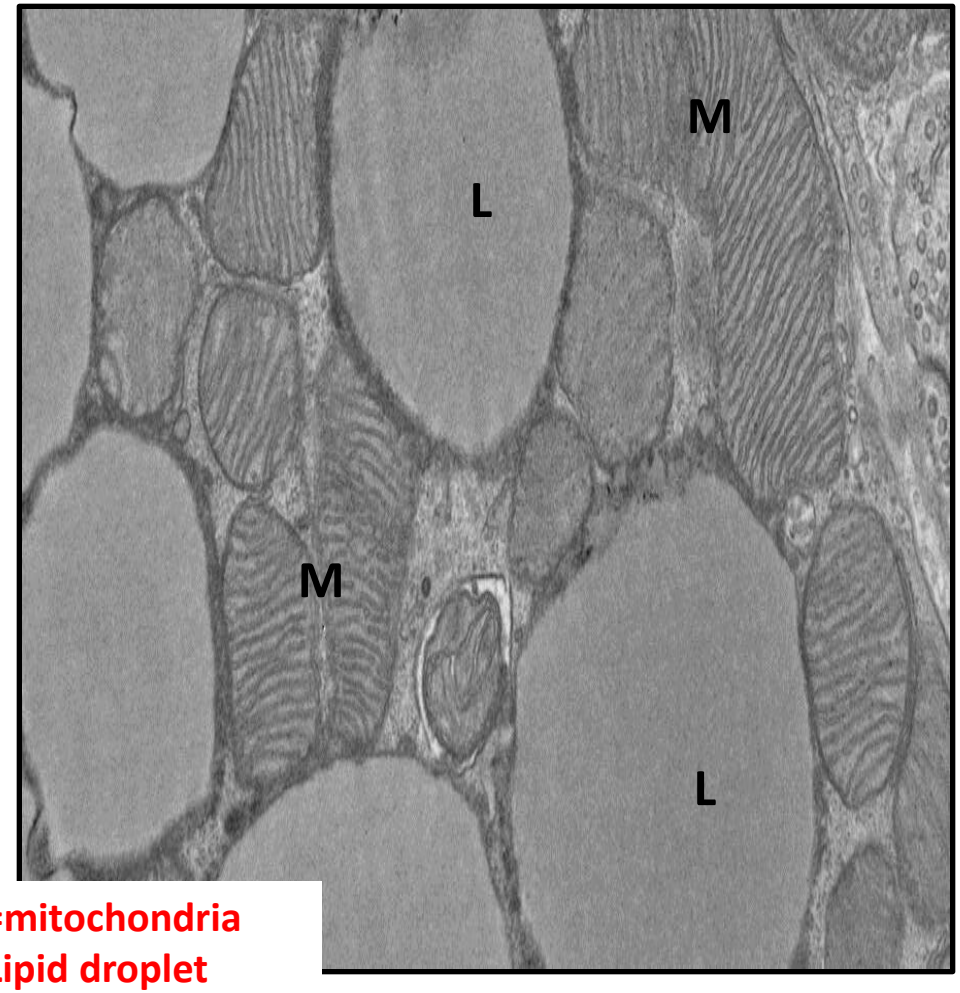


Adipocytes (EM)

White fat

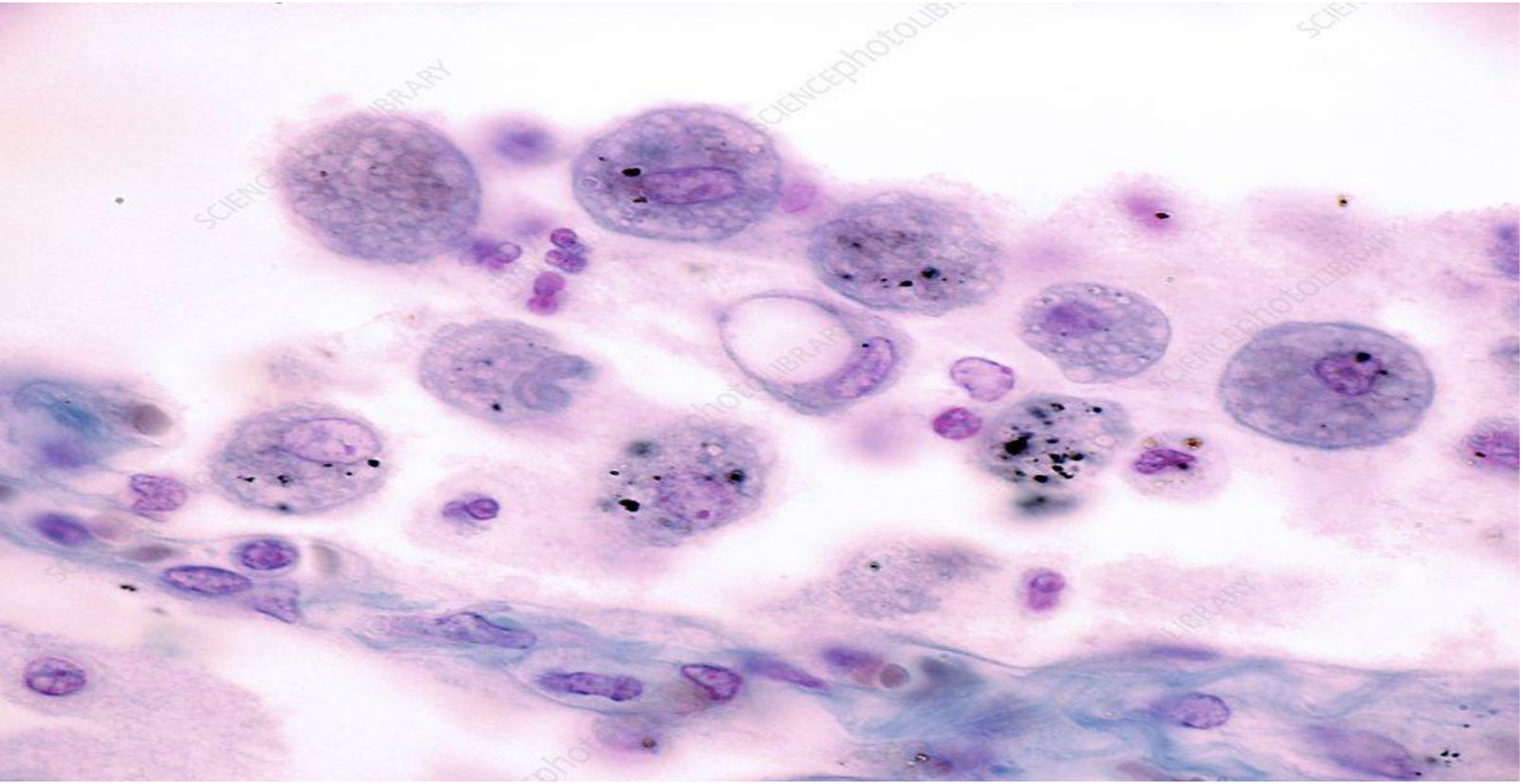


Brown fat



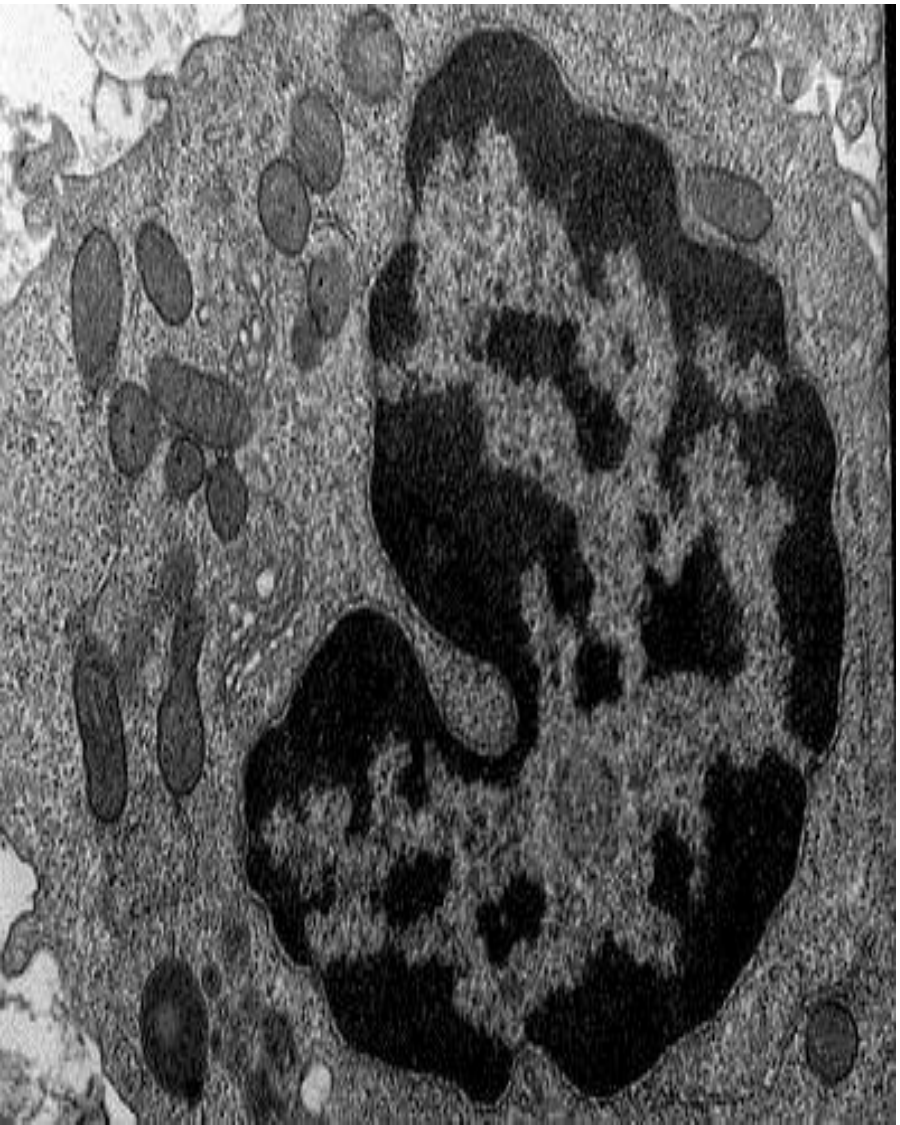
M=mitochondria
L=Lipid droplet

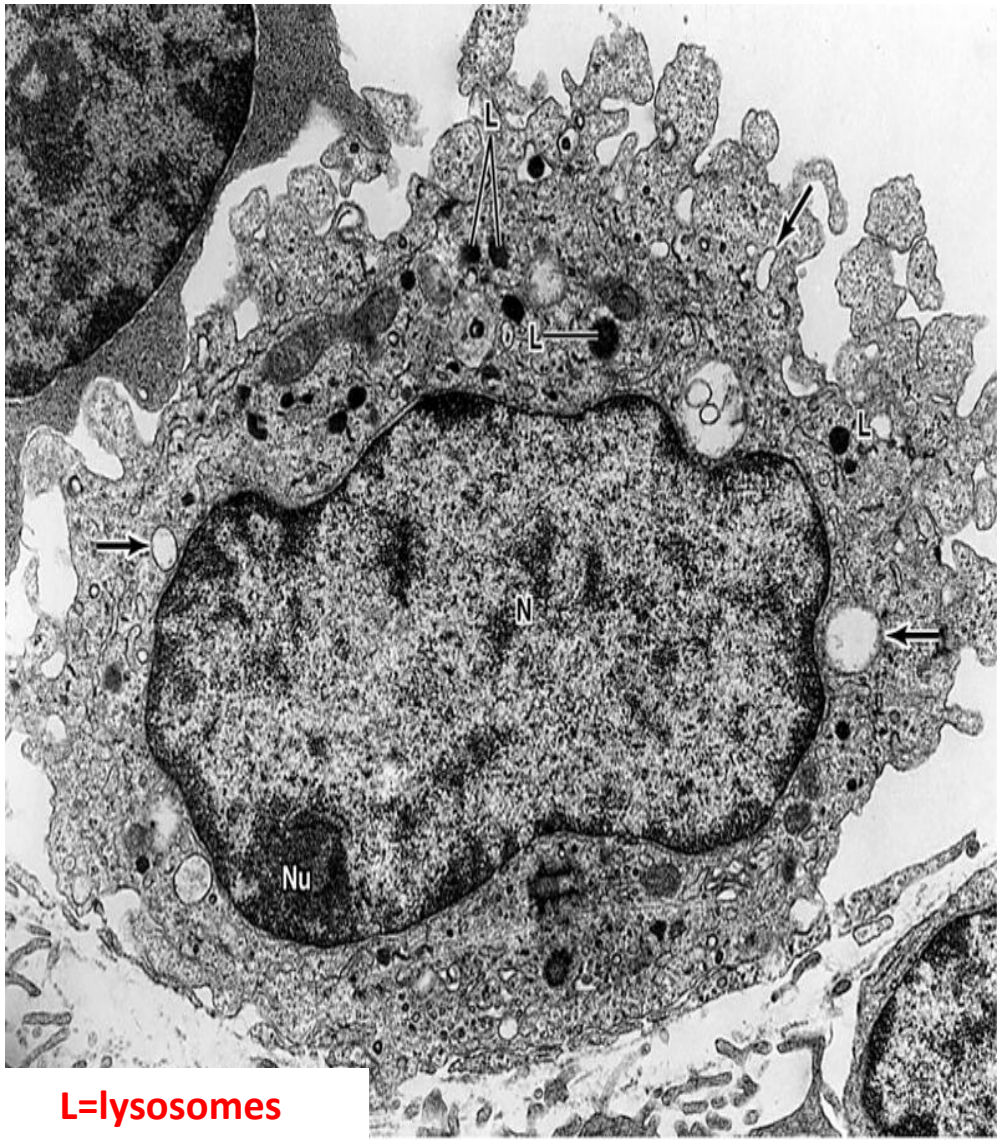
Macrophage (LM)



Alveolar macrophages(Dust cells-Lung)

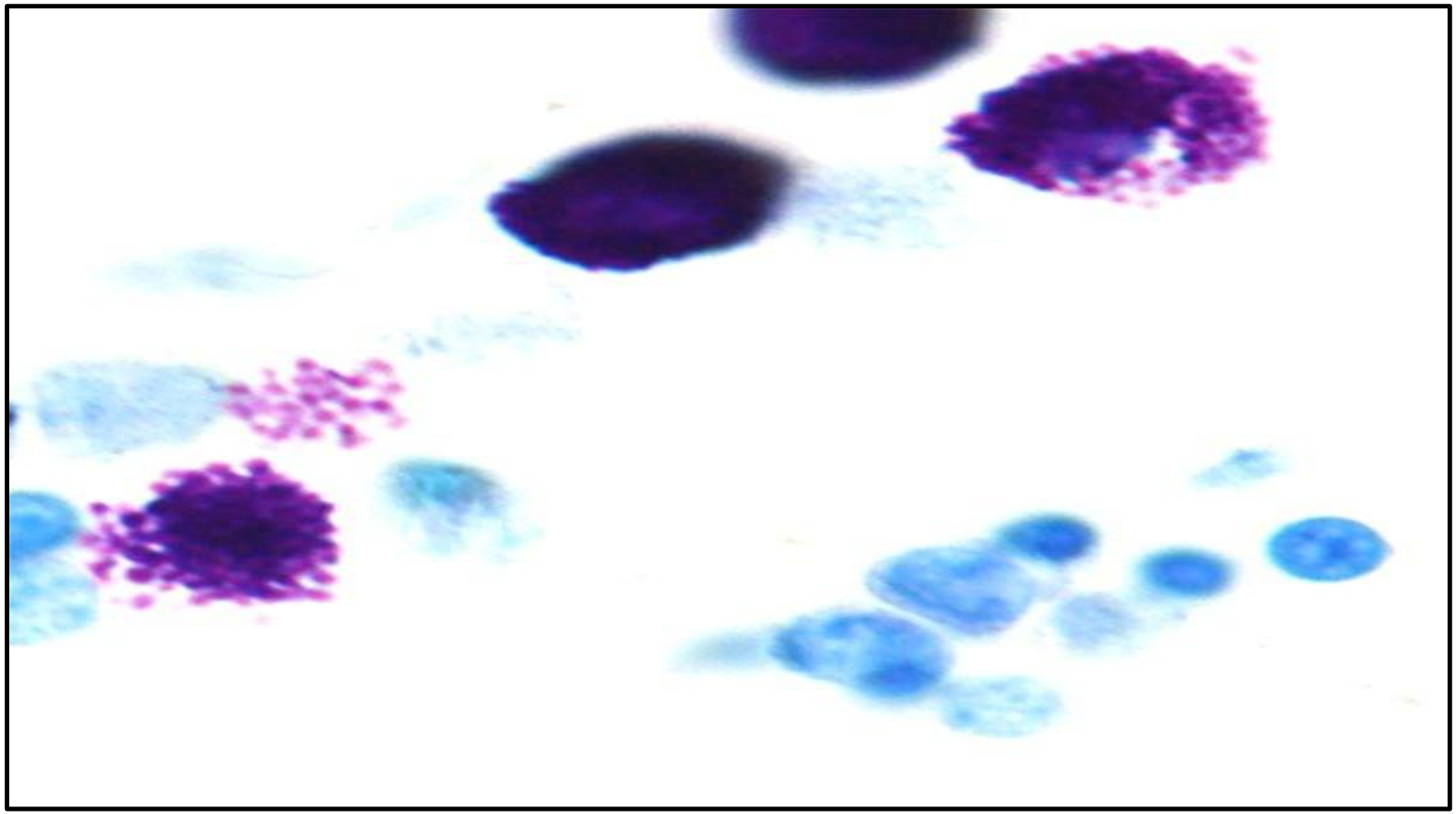
Macrophage (EM)



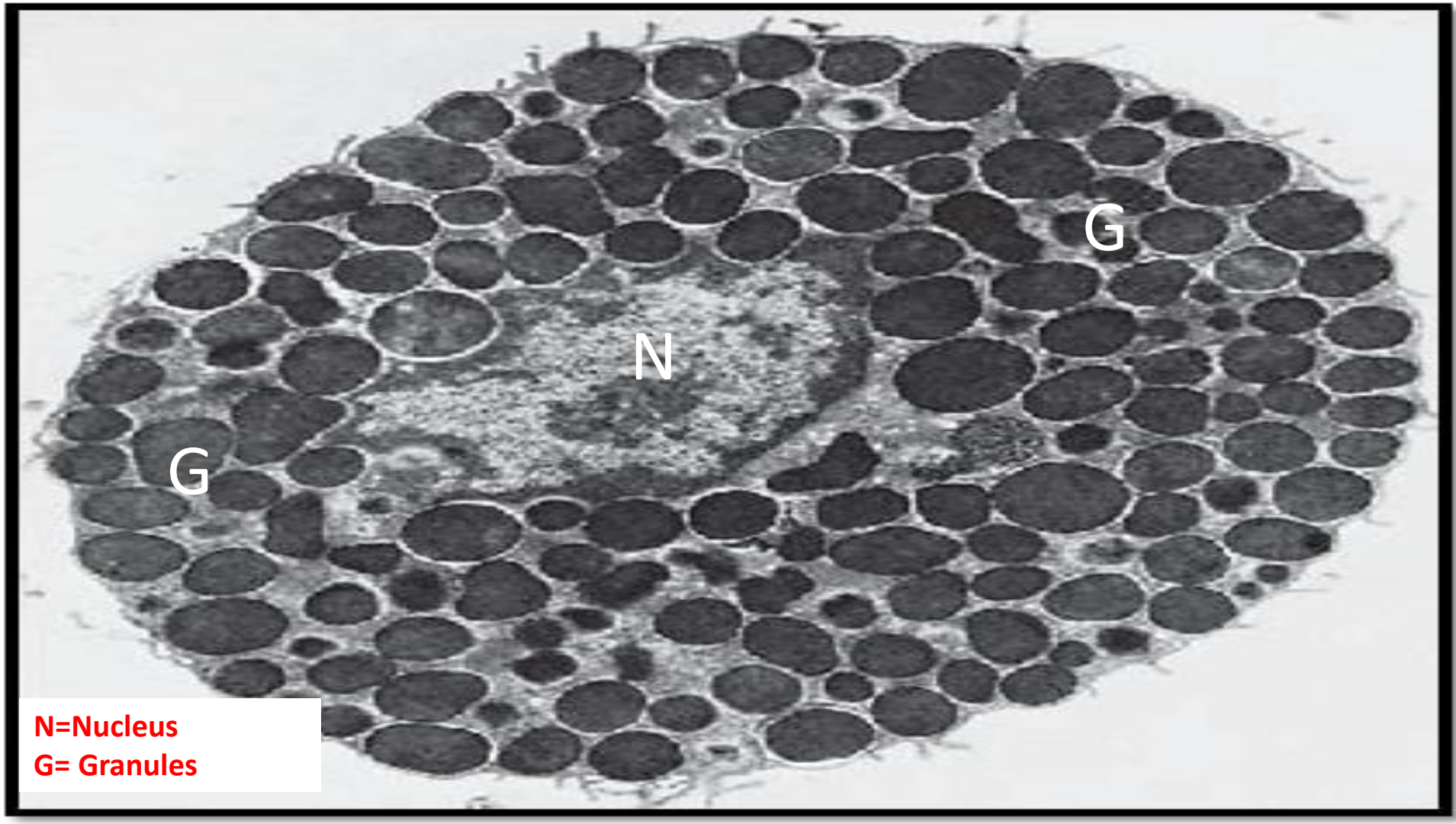


L=lysosomes

Mast cell (Toluidine Blue)

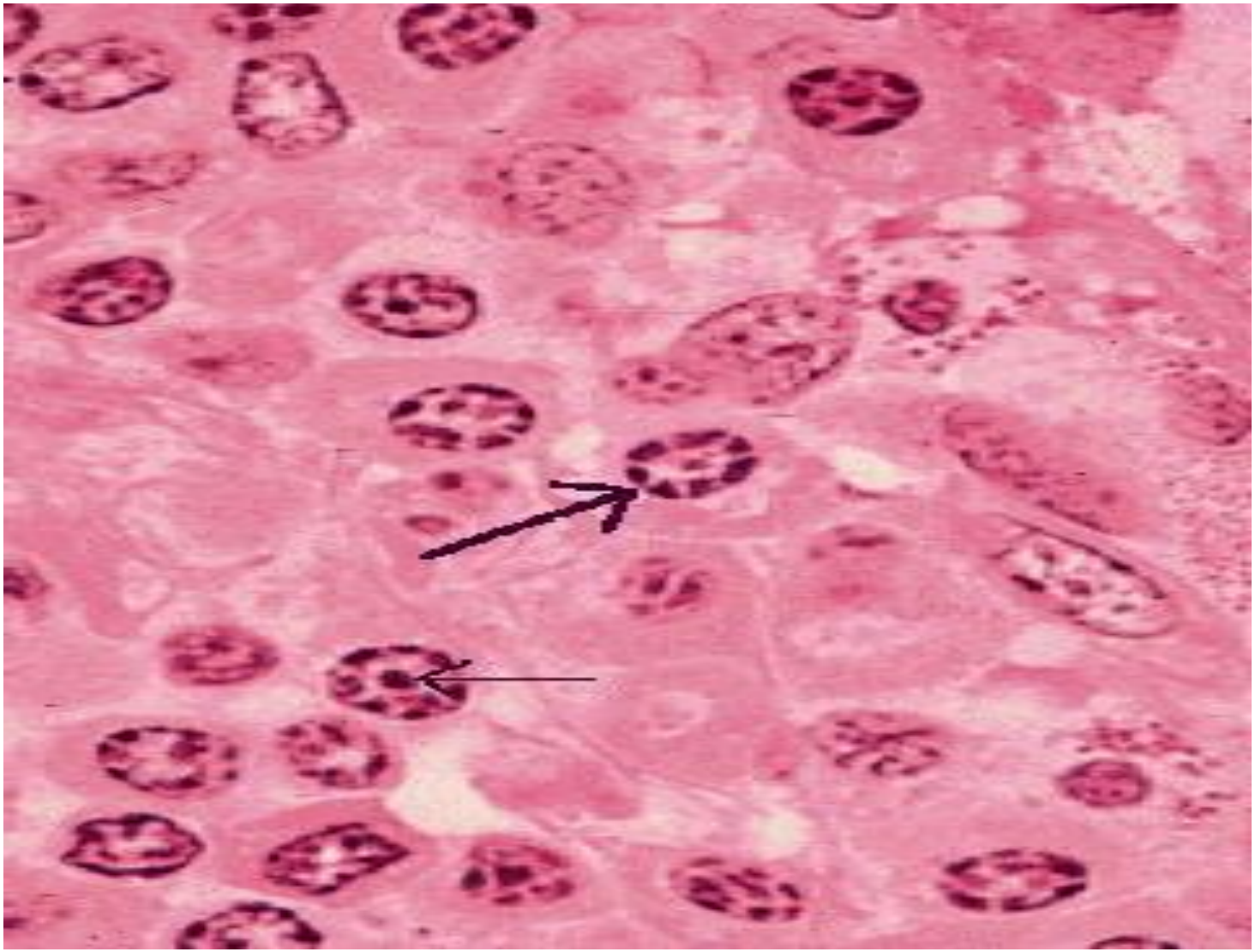


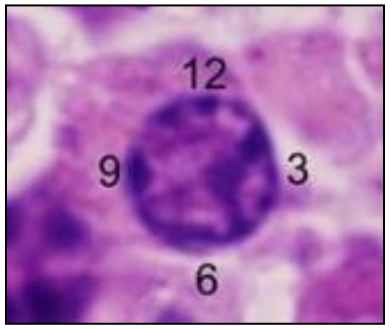
Mast cell (EM)



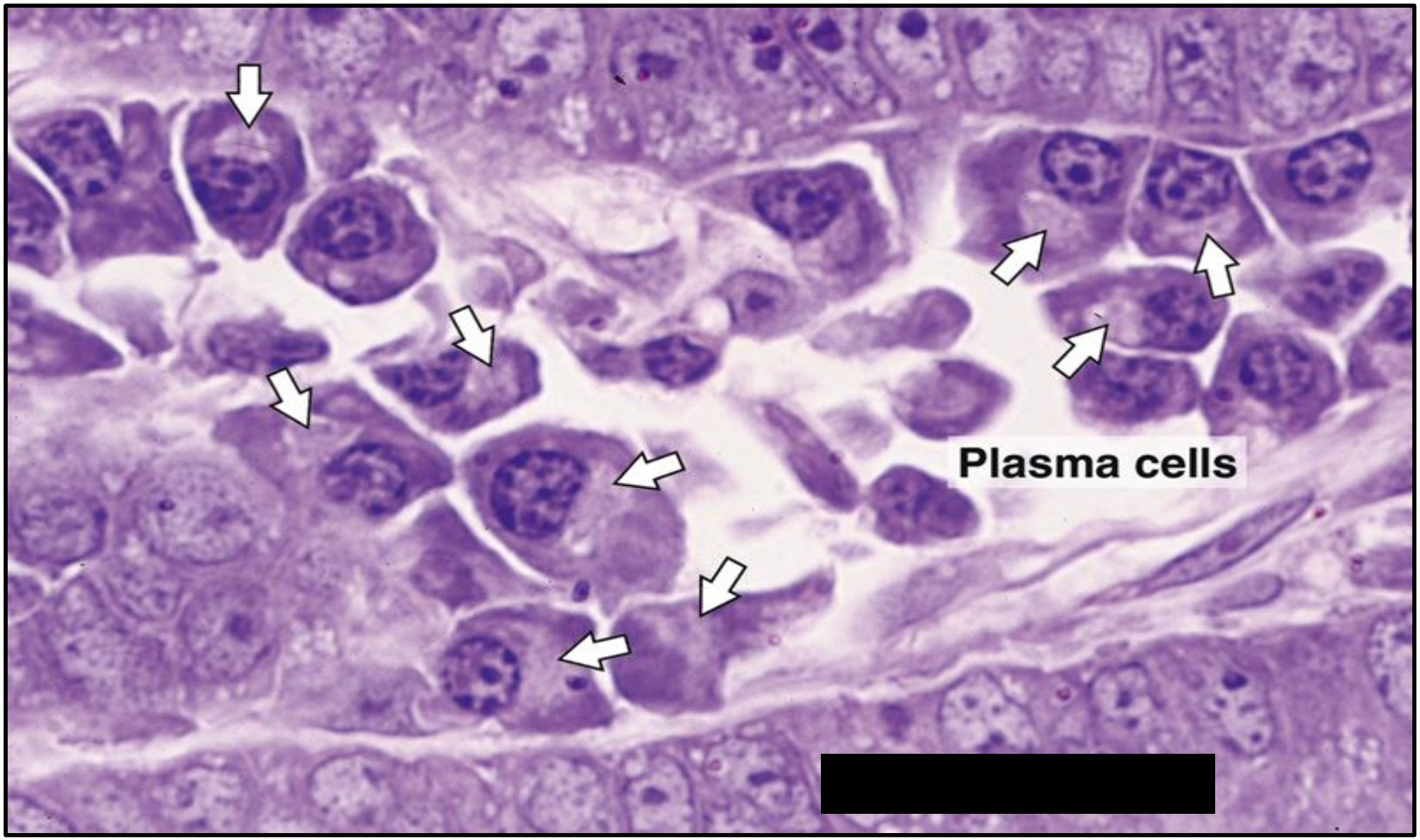
Plasma cell (LM)

(Clock-face appearance) or (cartwheel)

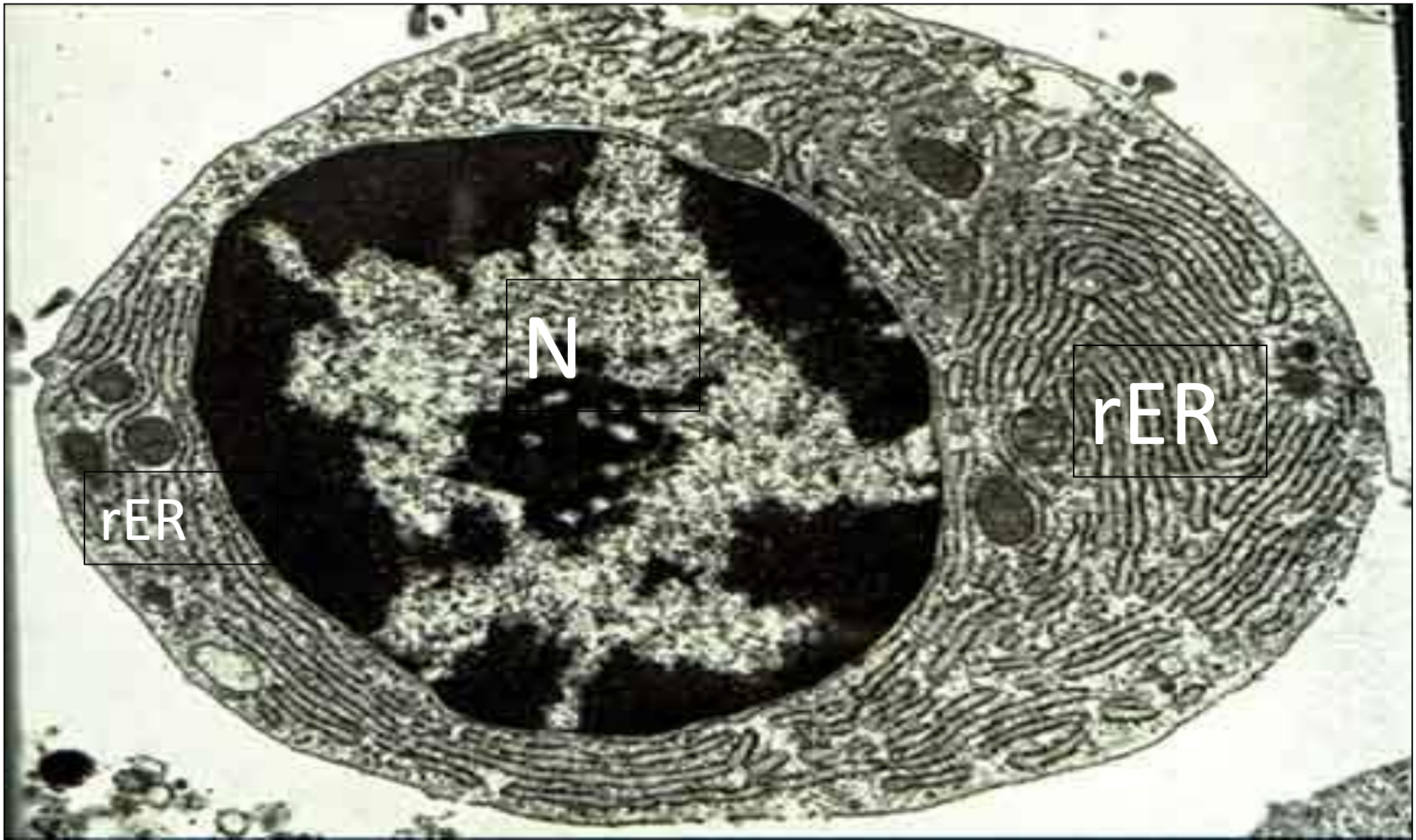




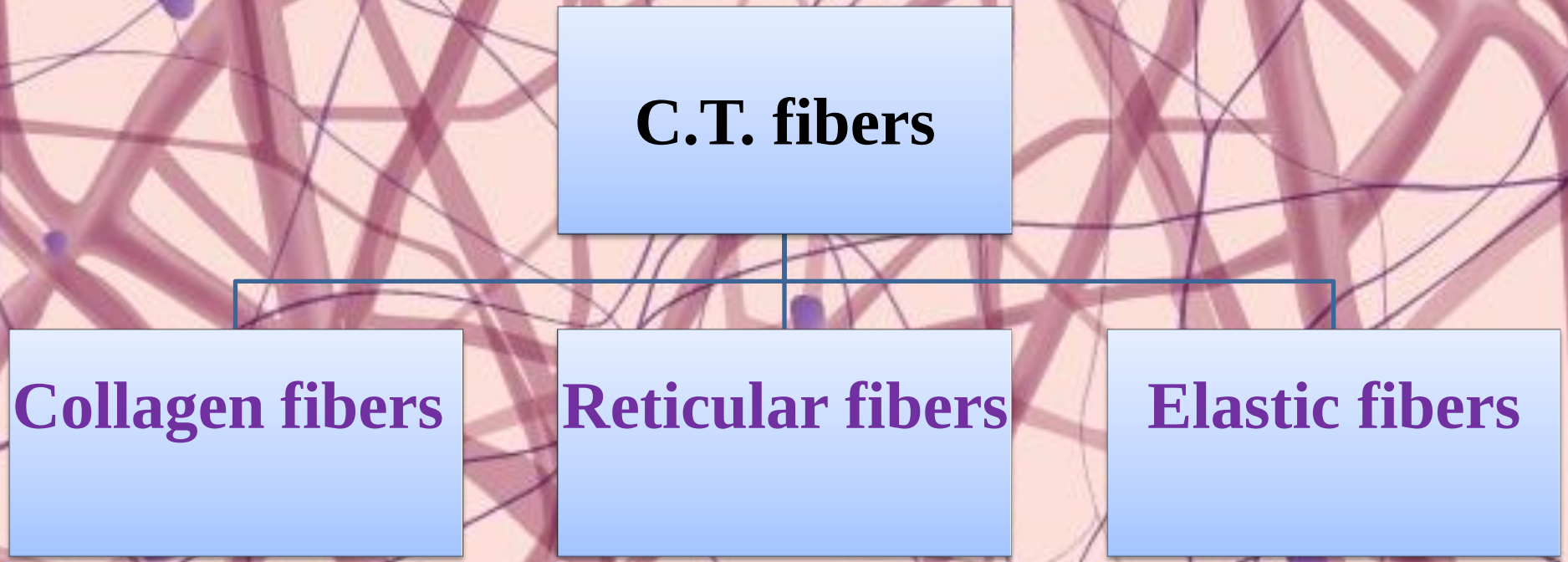
Plasma cell (LM-Negative Golgi image)



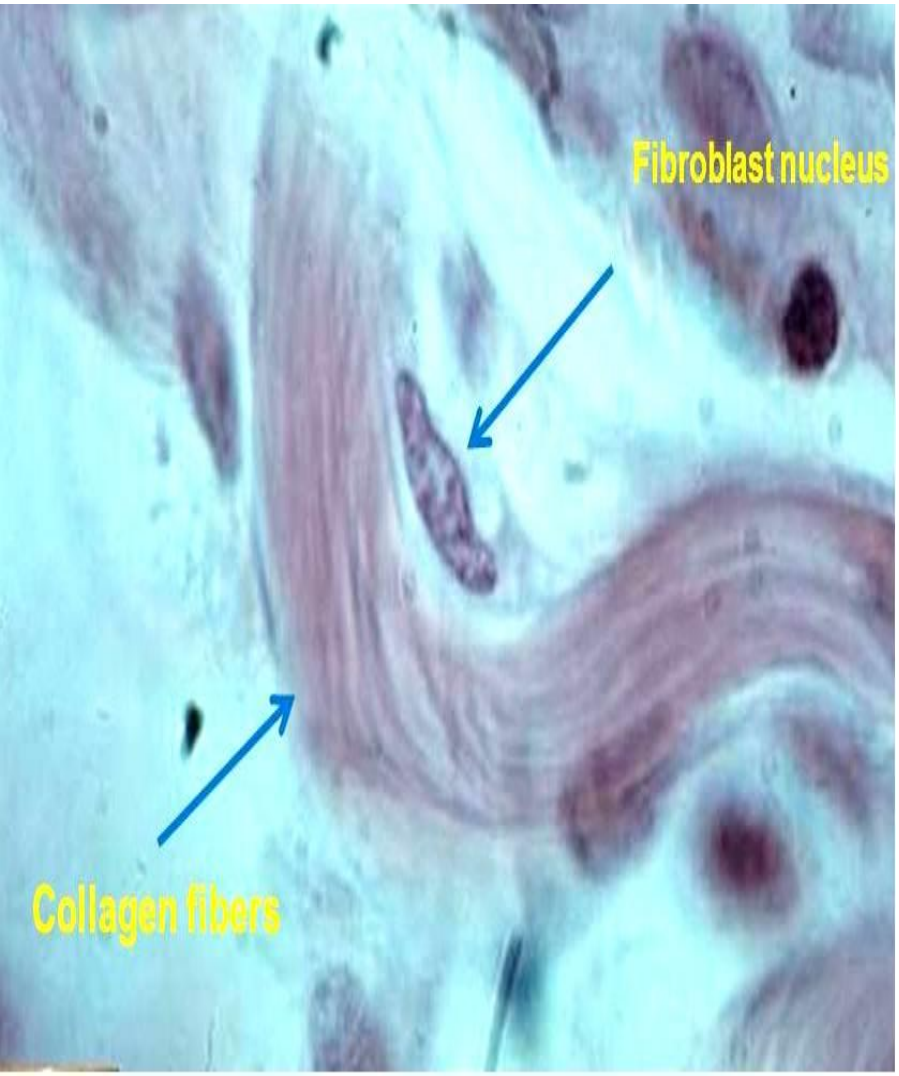
Plasma cell (EM)

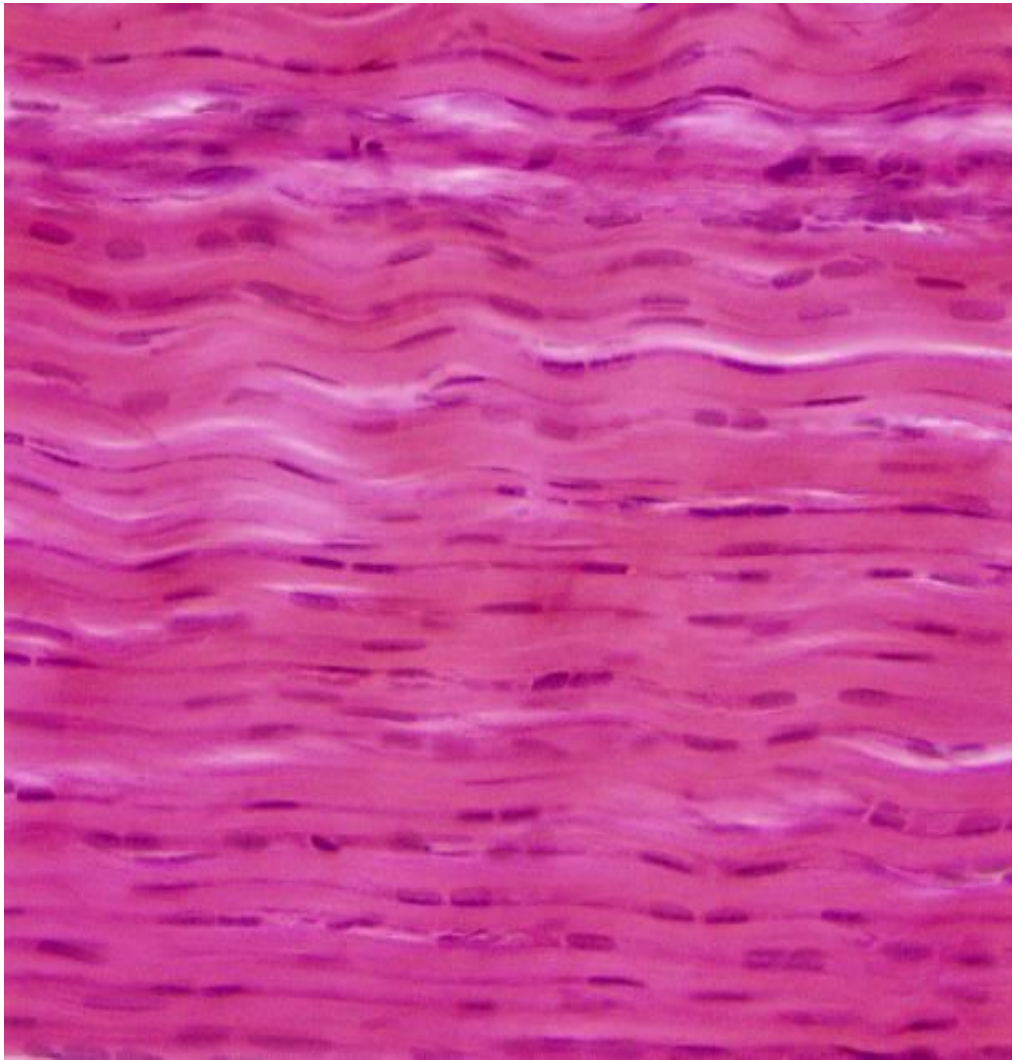


2-Connective tissue fibers

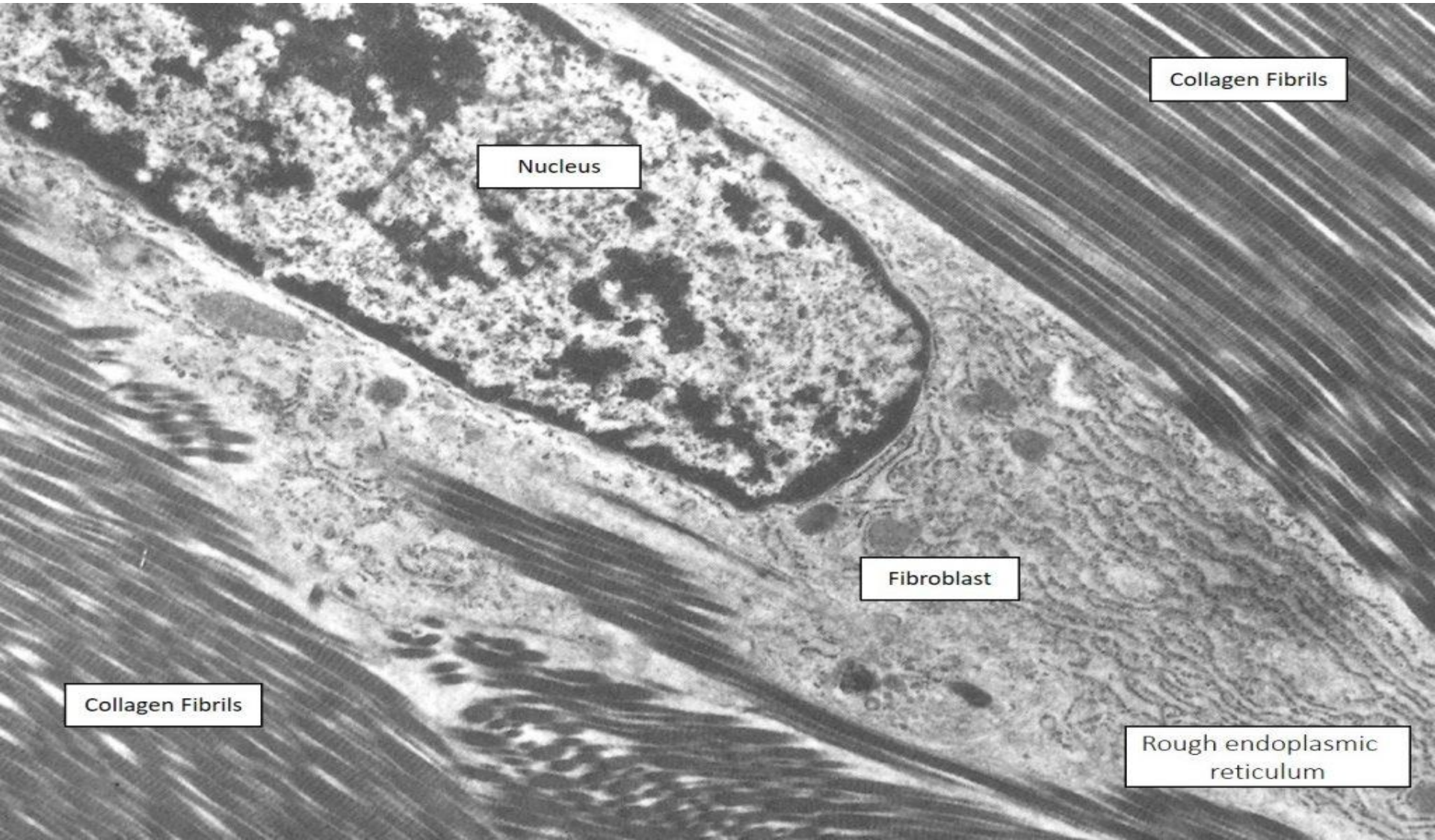


Collagen fibers (LM)

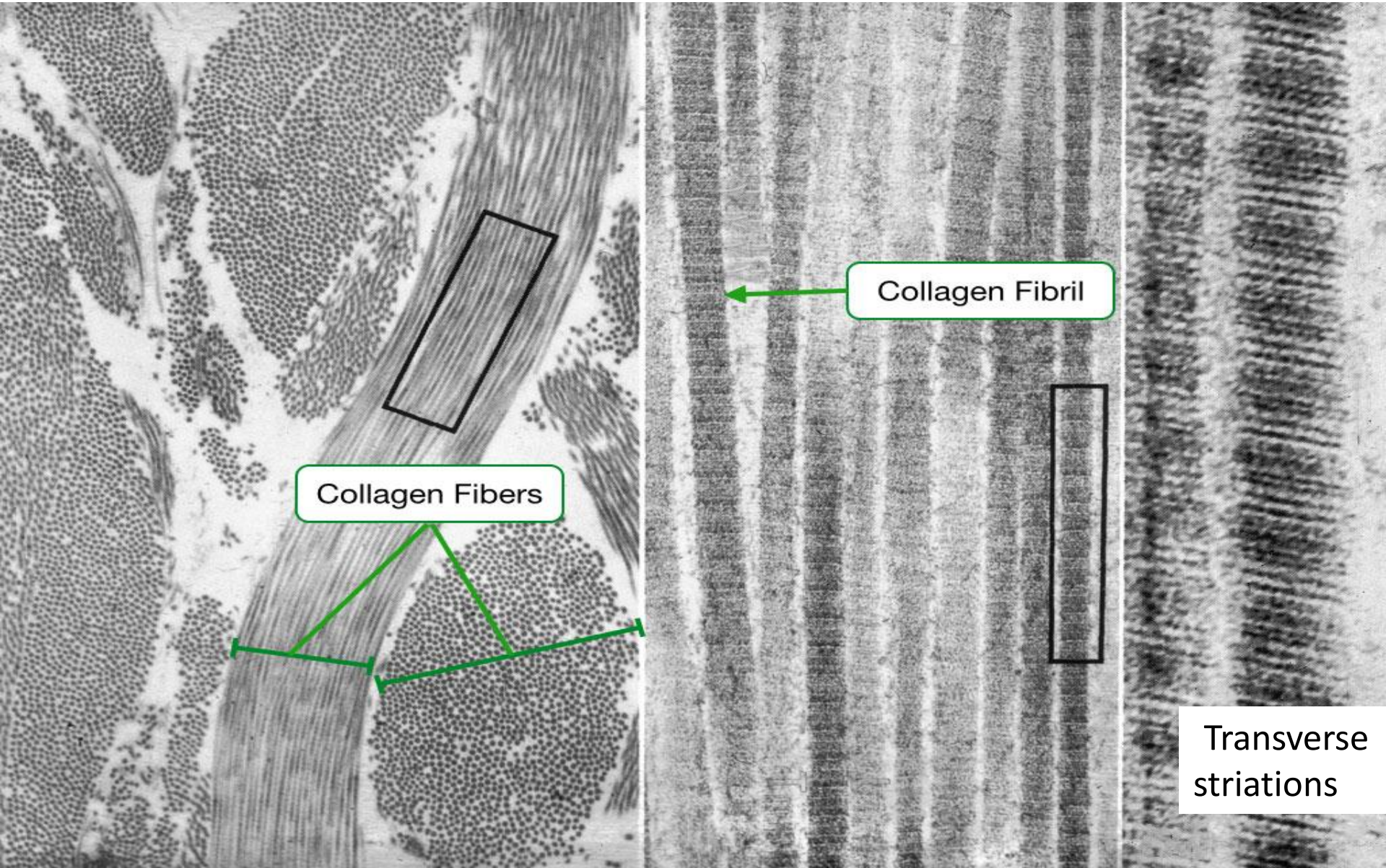




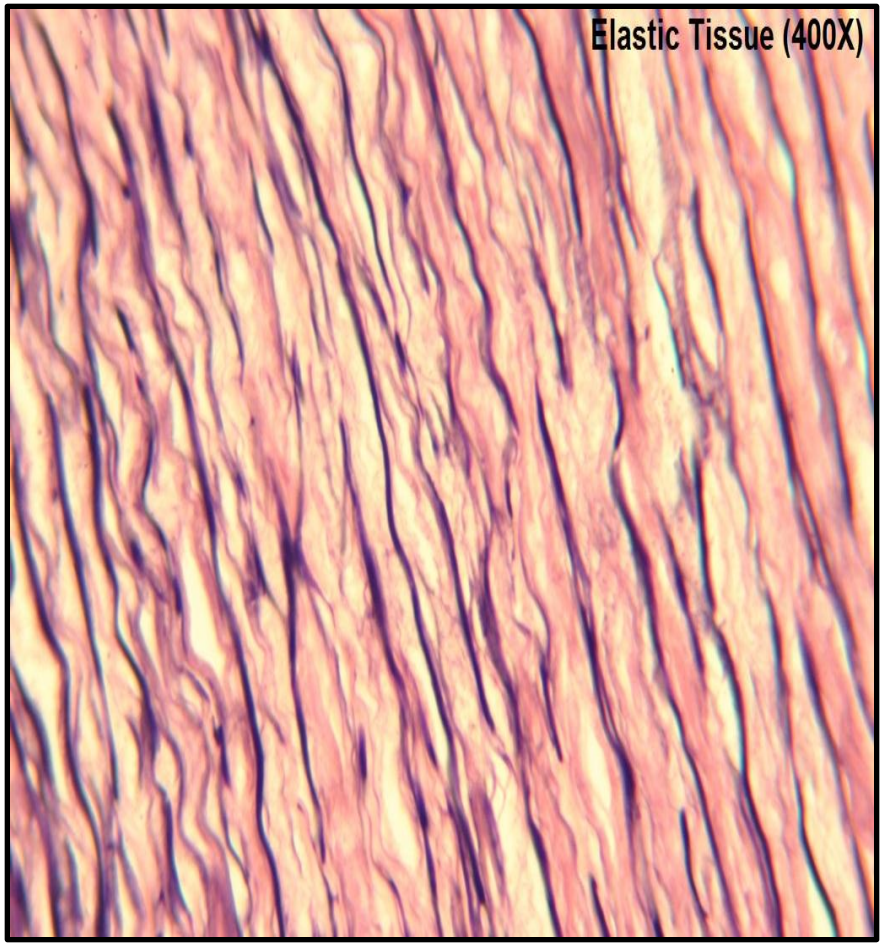
Fibroblast &Collagen fibers (EM)



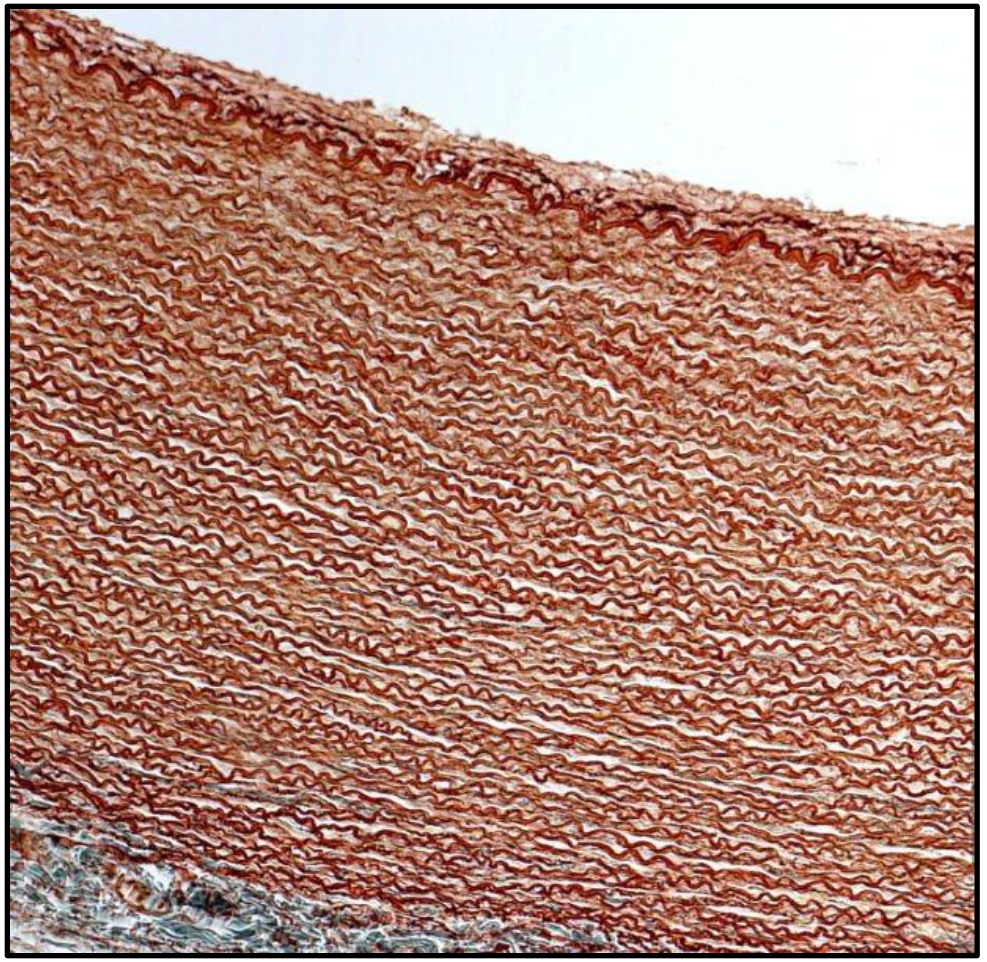
Collagen fibers (EM)



Elastic fibers(LM)

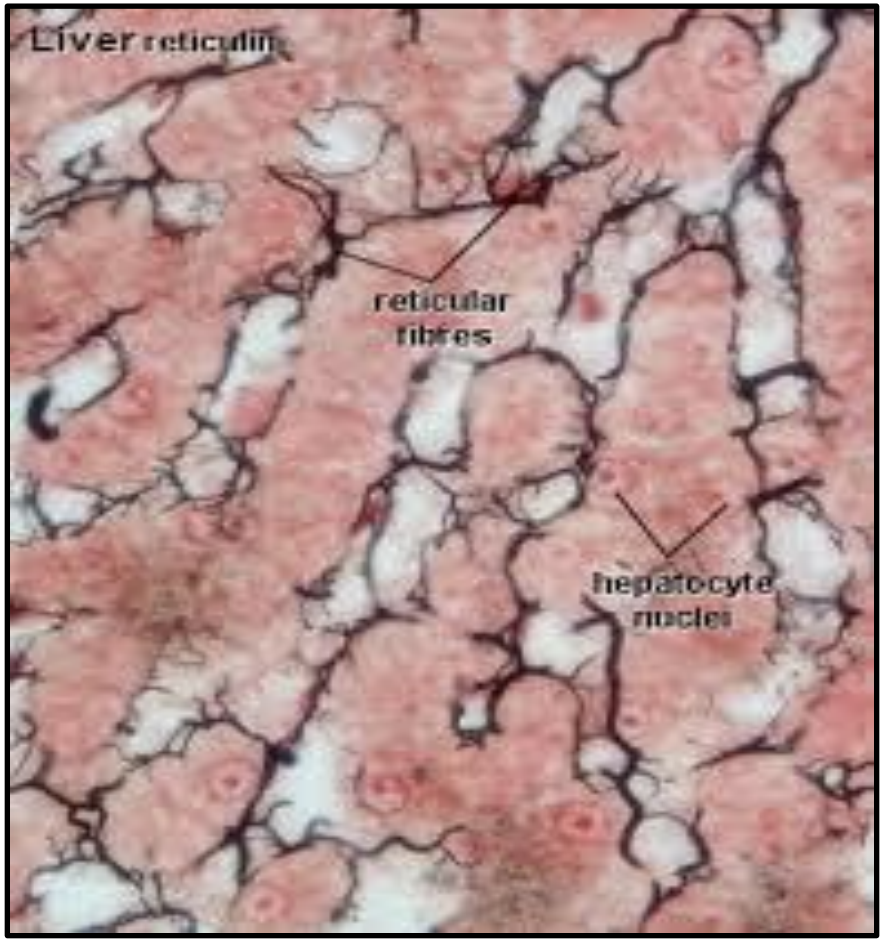


(H&E)

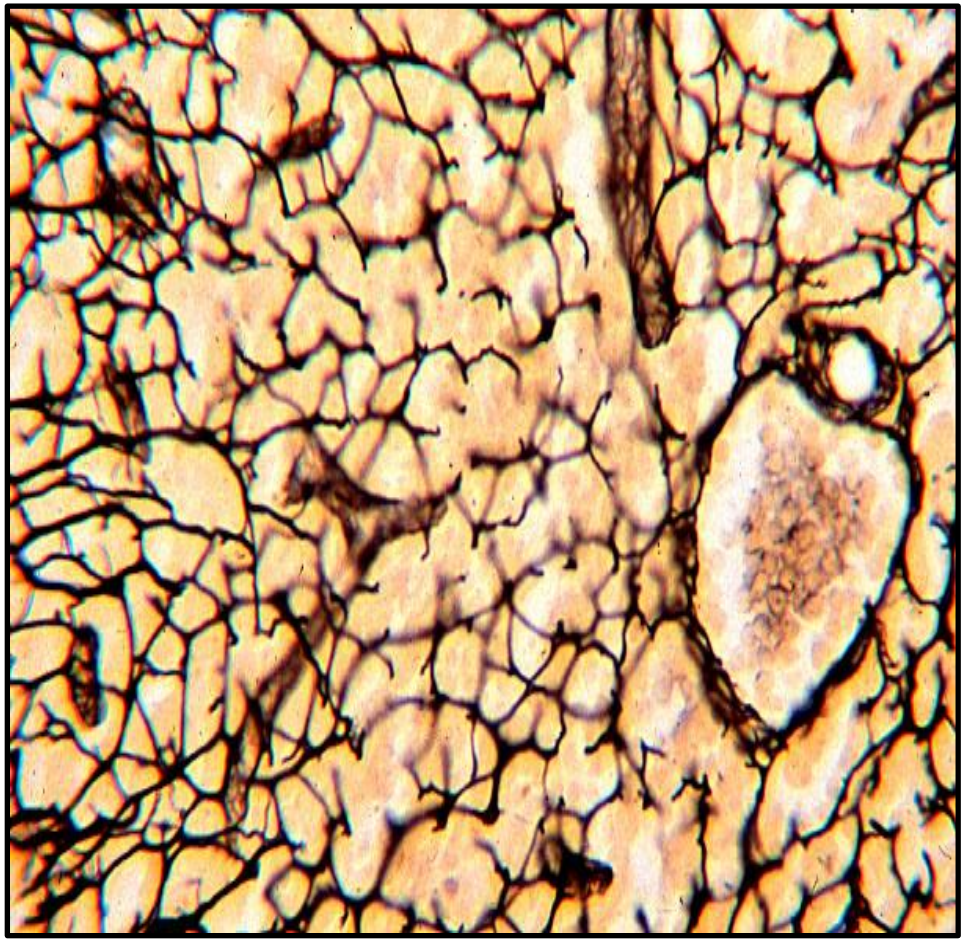


Aorta (orcein)

Reticular fibers(LM)



(H&E)



sliver)

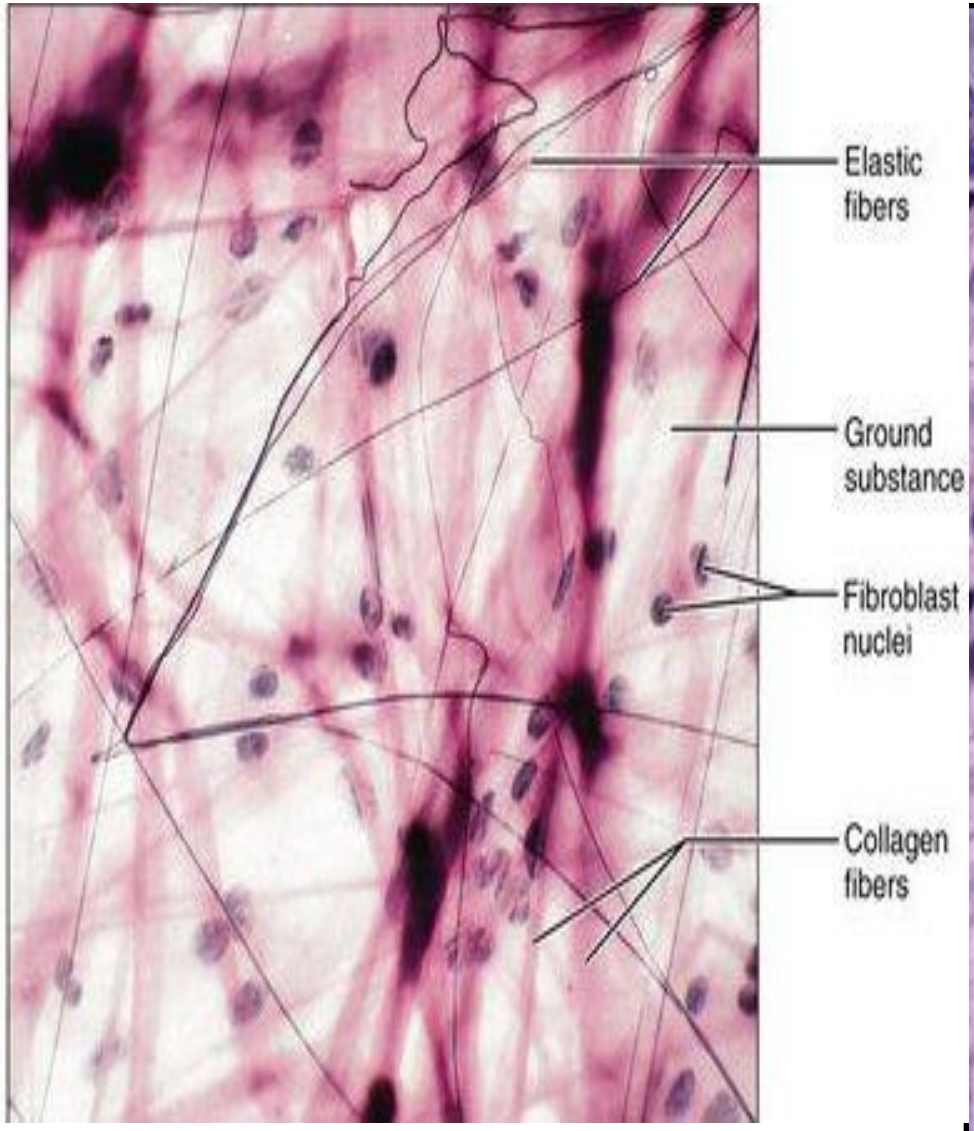
Classification of C.T.

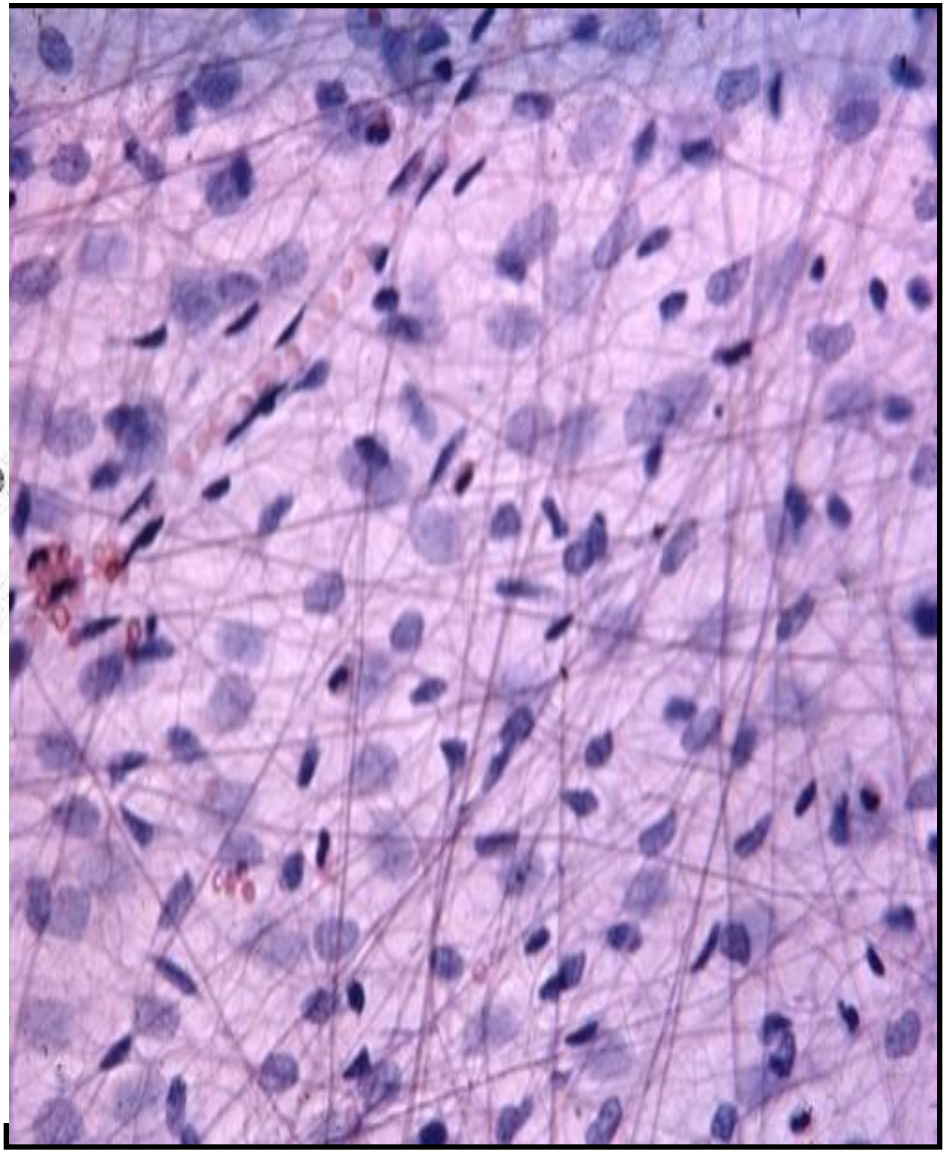
C.T. proper
-Loose C.T.
-Dense C.T

Specialized C.T.
-Adipose
- Reticular
- Mucous
- Elastic

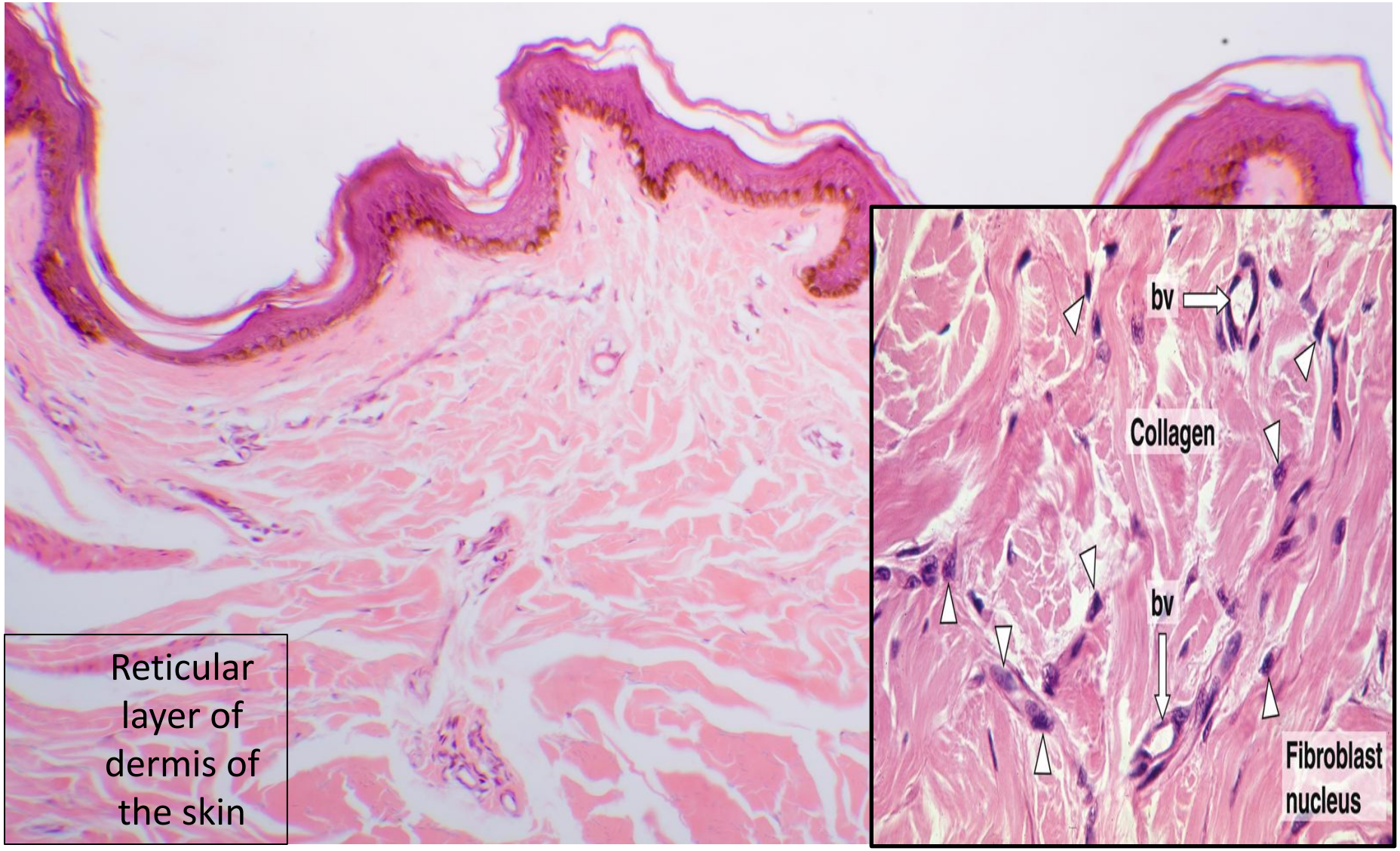
Supporting C.T.
- Bone
- Cartilage

Loose (areolar) connective tissue

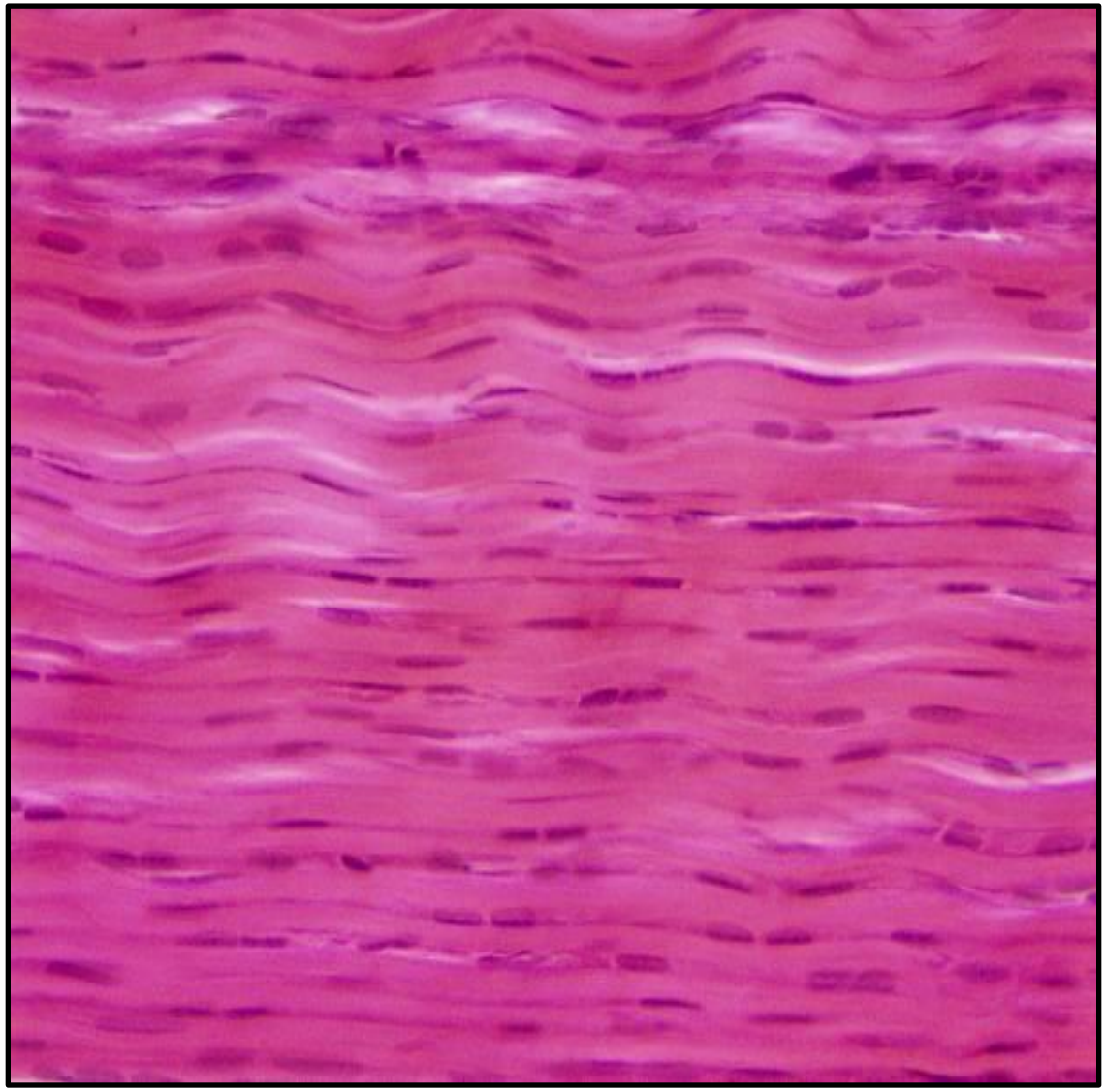


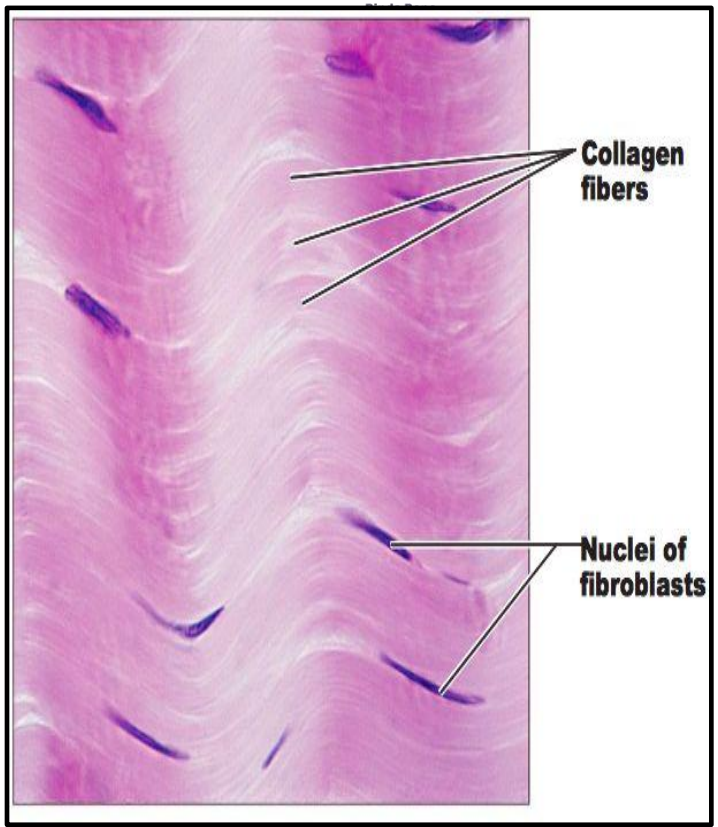


Dense irregular connective tissue

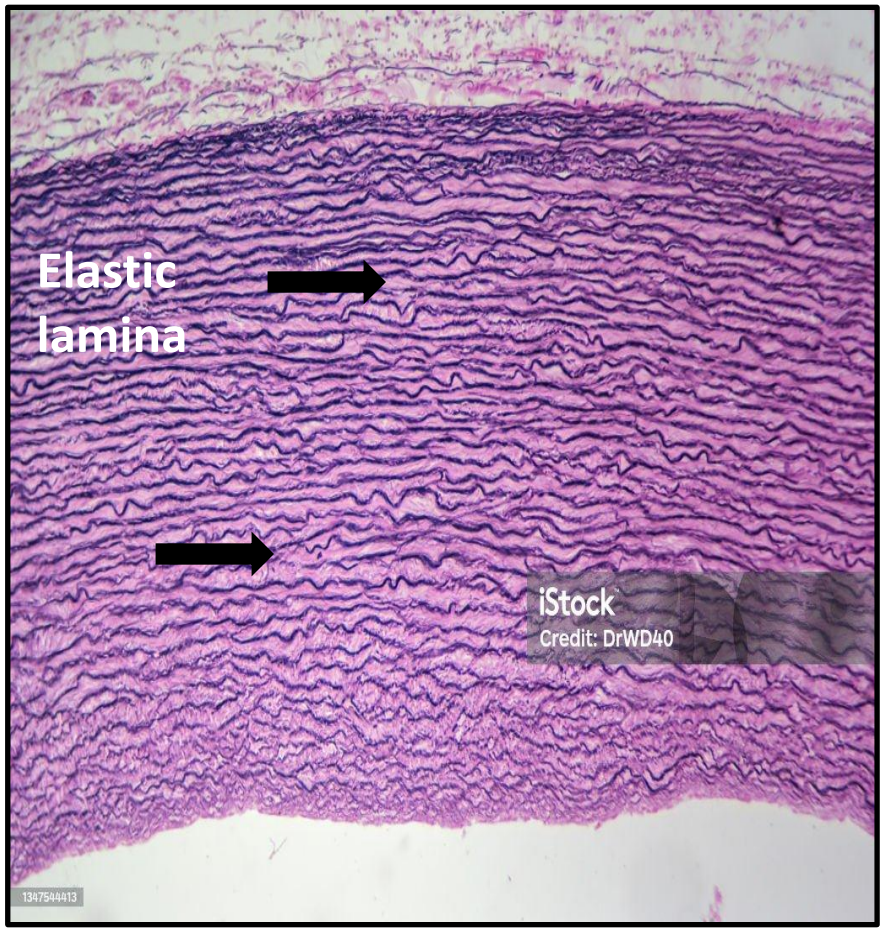


Dense regular connective tissue

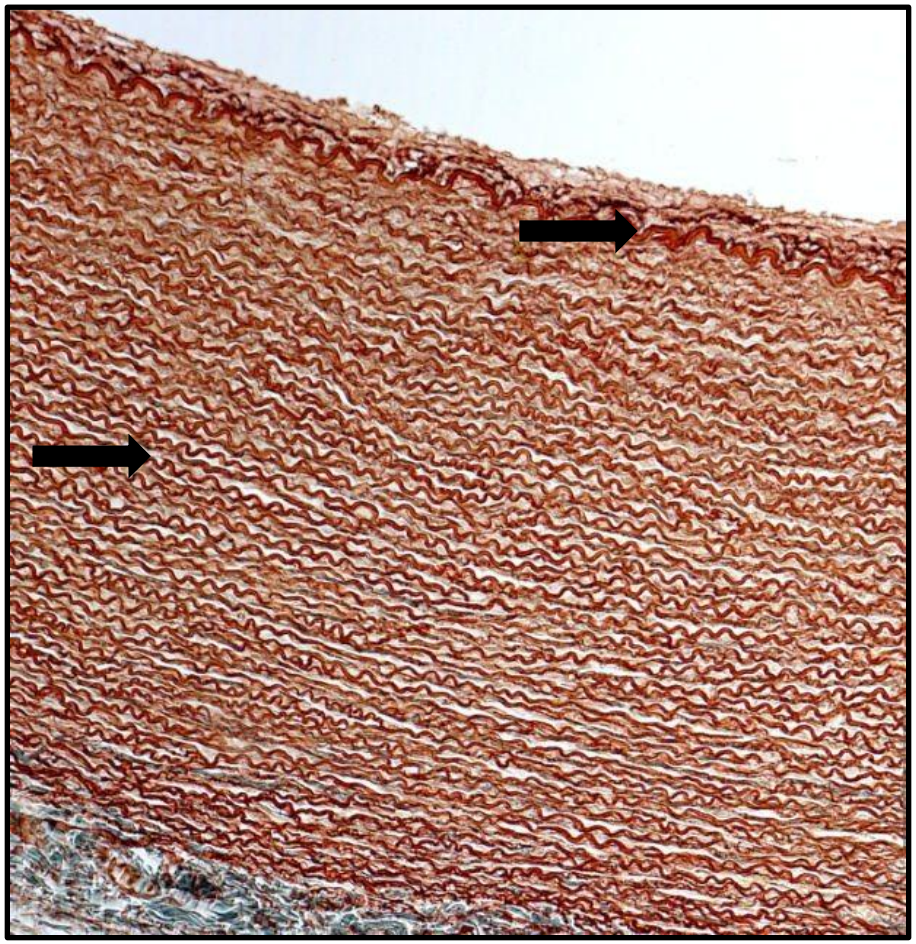




Elastic C.T.

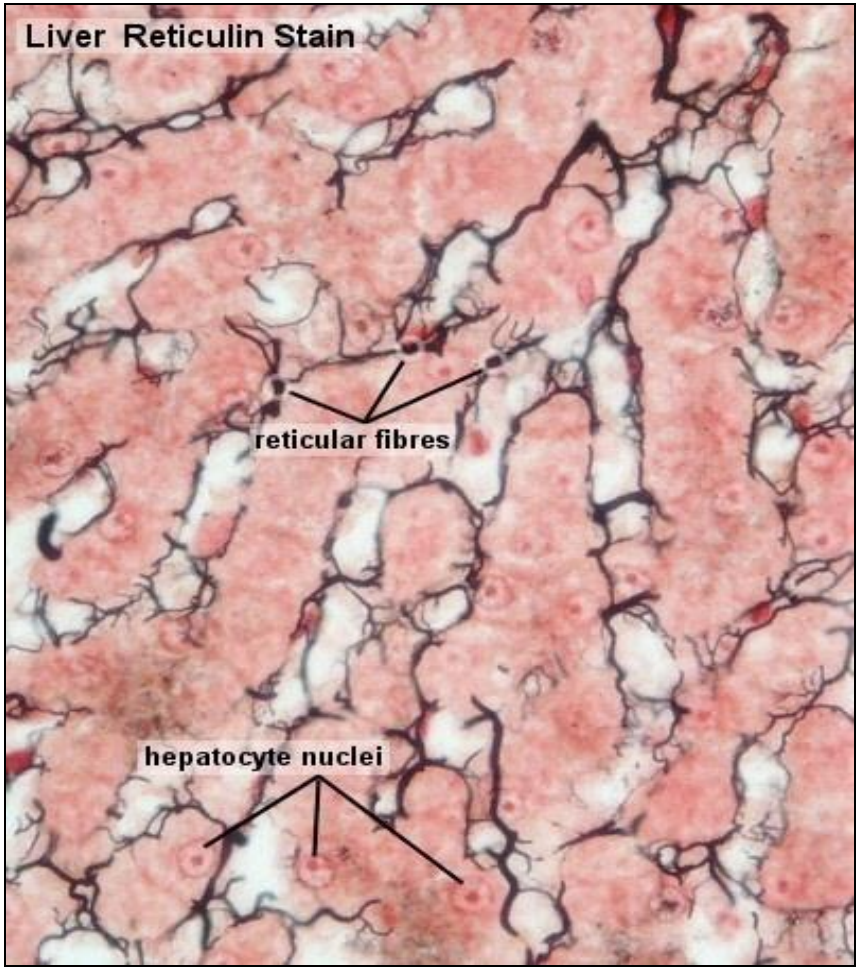


Aorta (H&E)

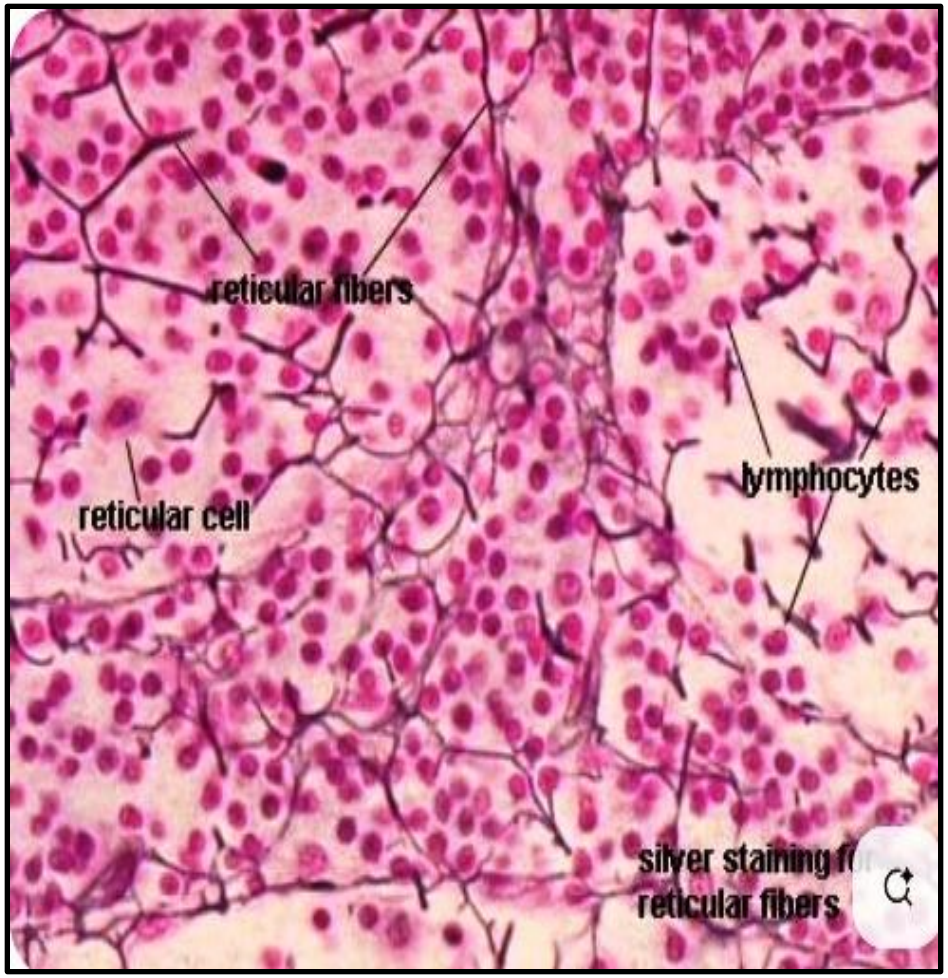


Aorta (orcein)

Reticular C.T.

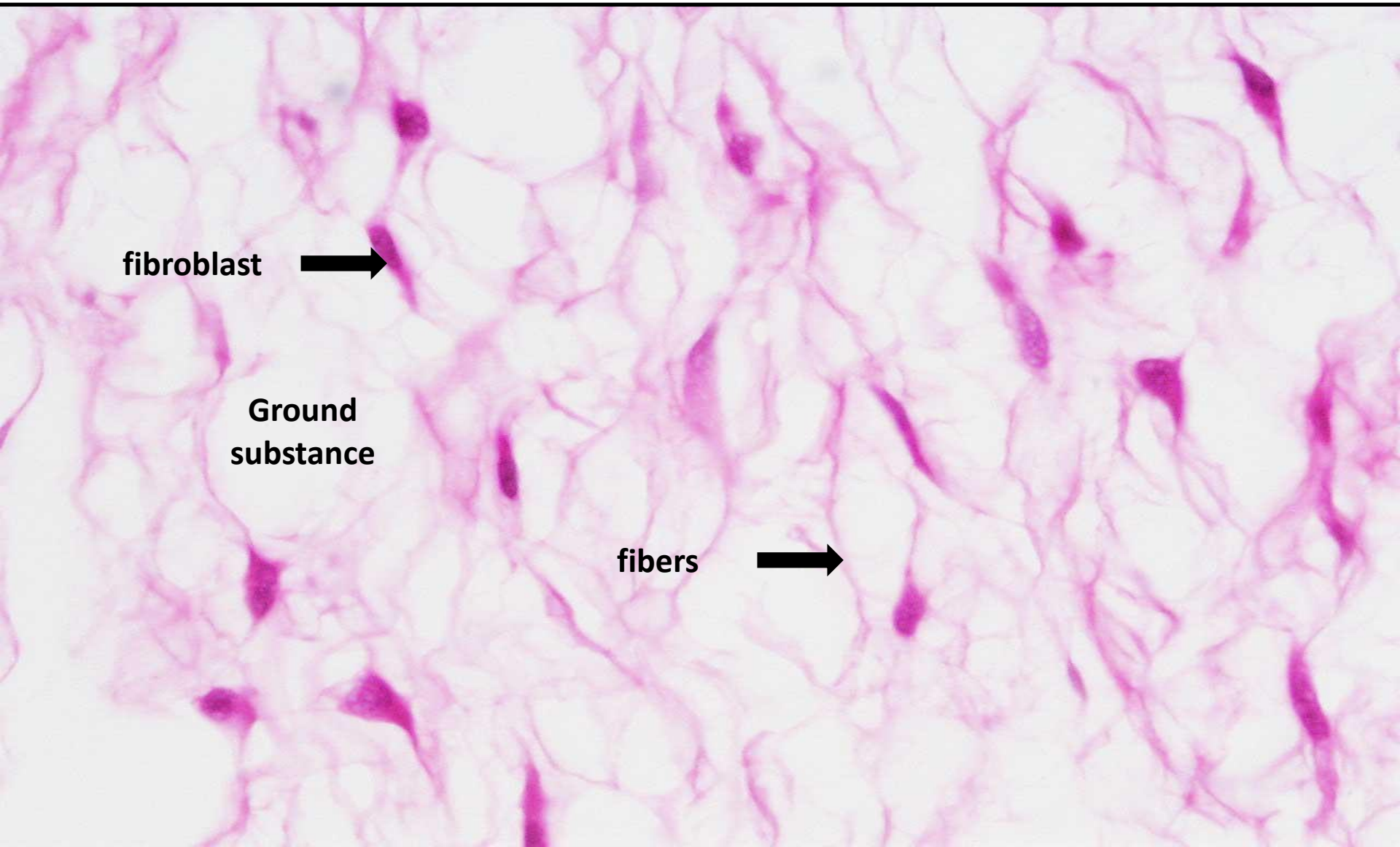


Liver

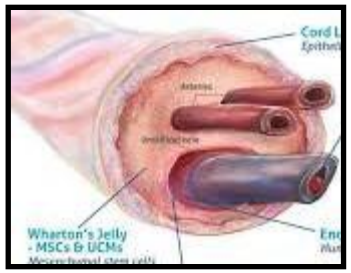


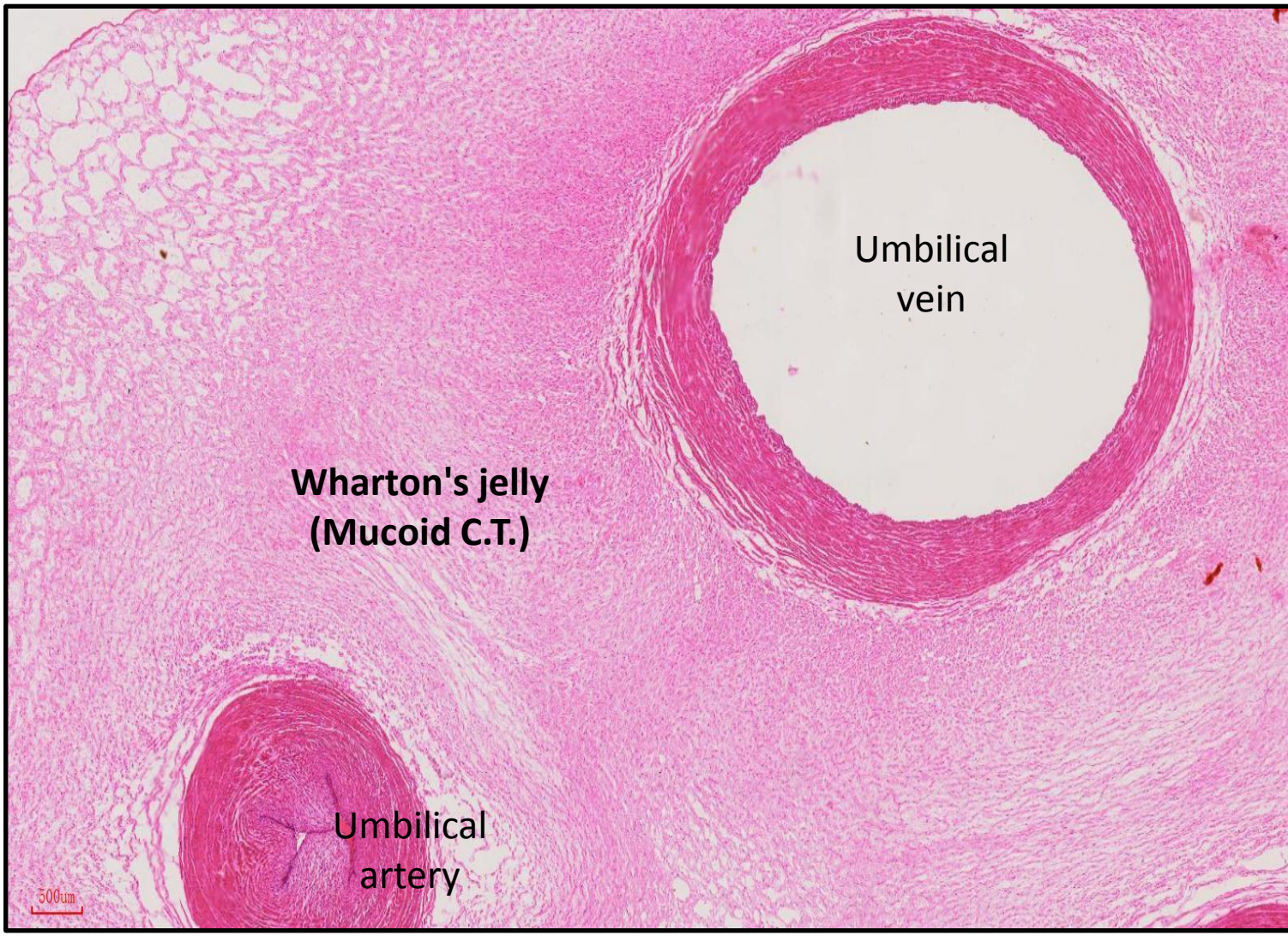
Lymph node-sliver stain

Mucoid C.T.

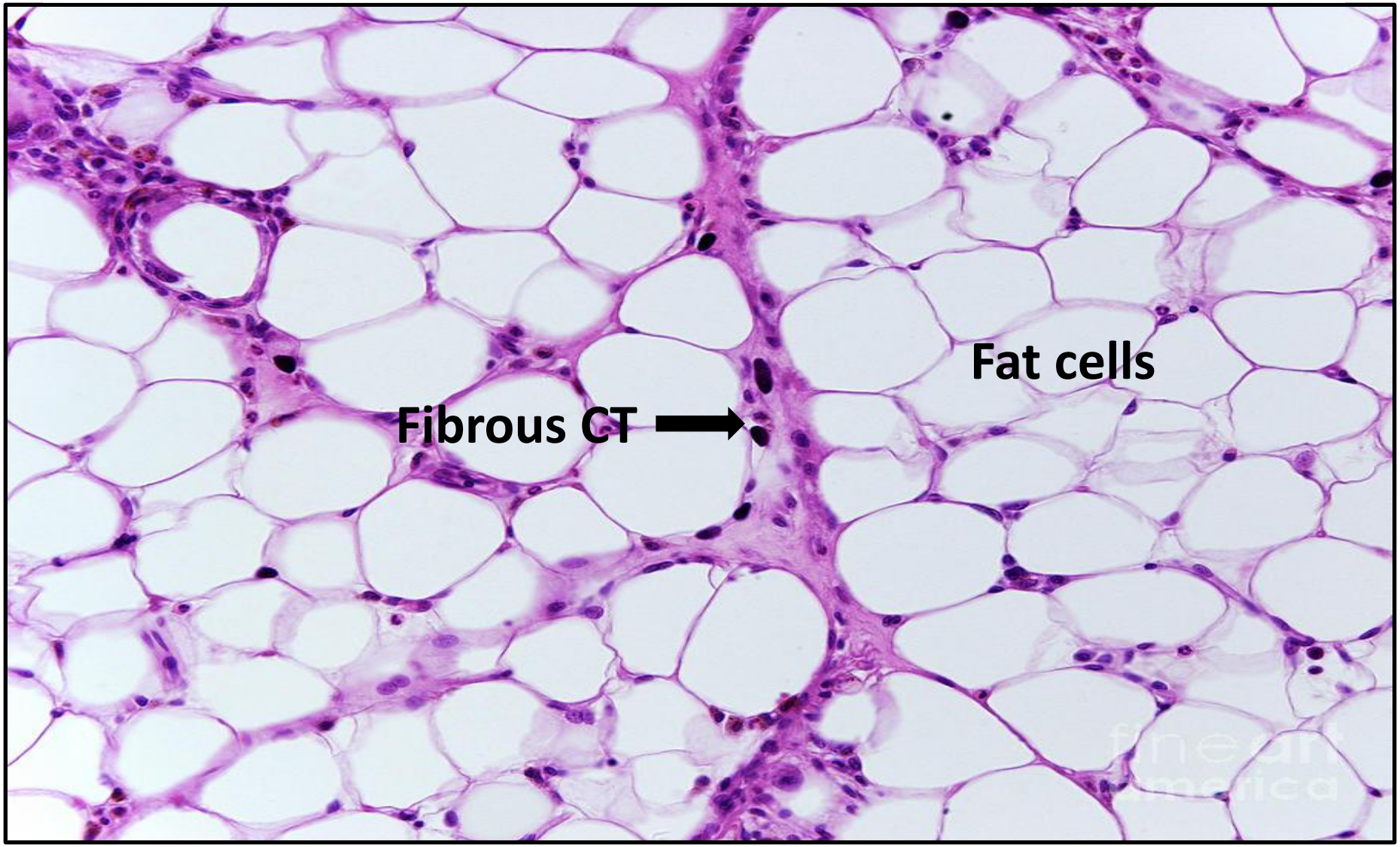


Umbilical cord(Mucoid C.T.)



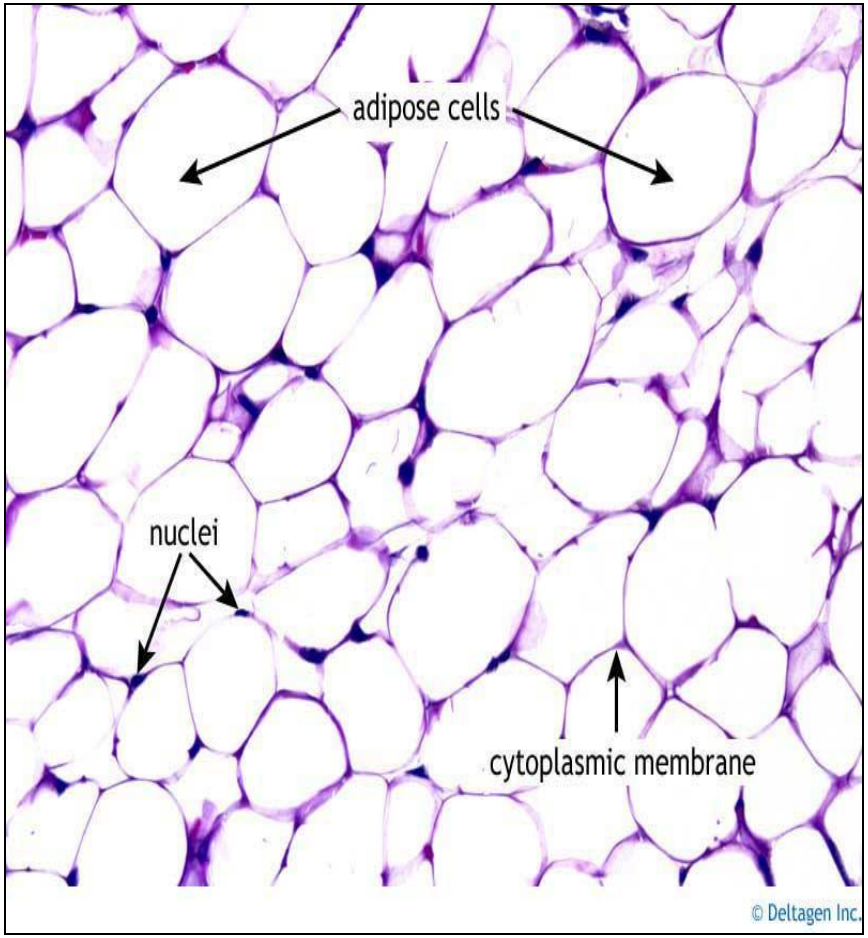


Unilocular (white) adipose C.T.

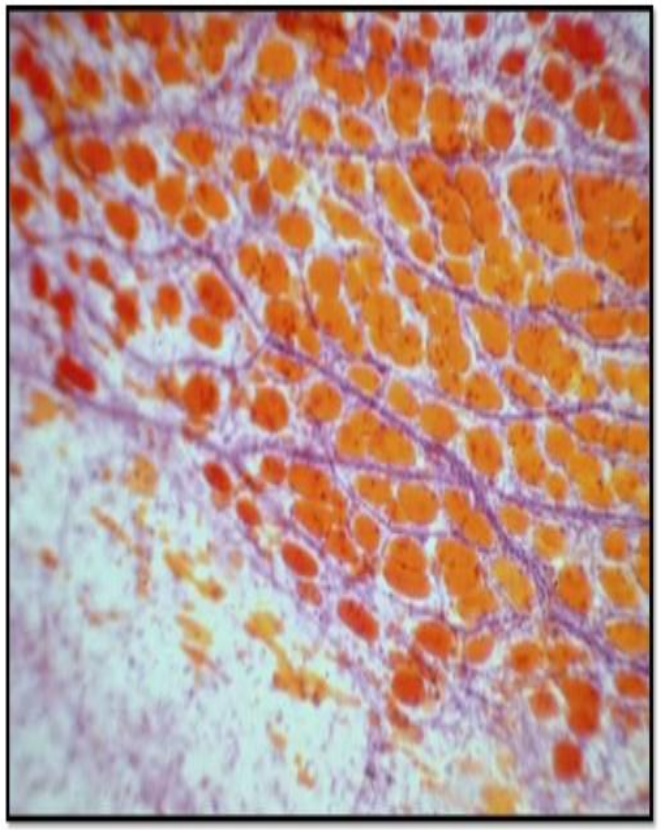


Unilocular (white) adipose C.T.

H&E



L.M. Adipocytes stained with Sudan III



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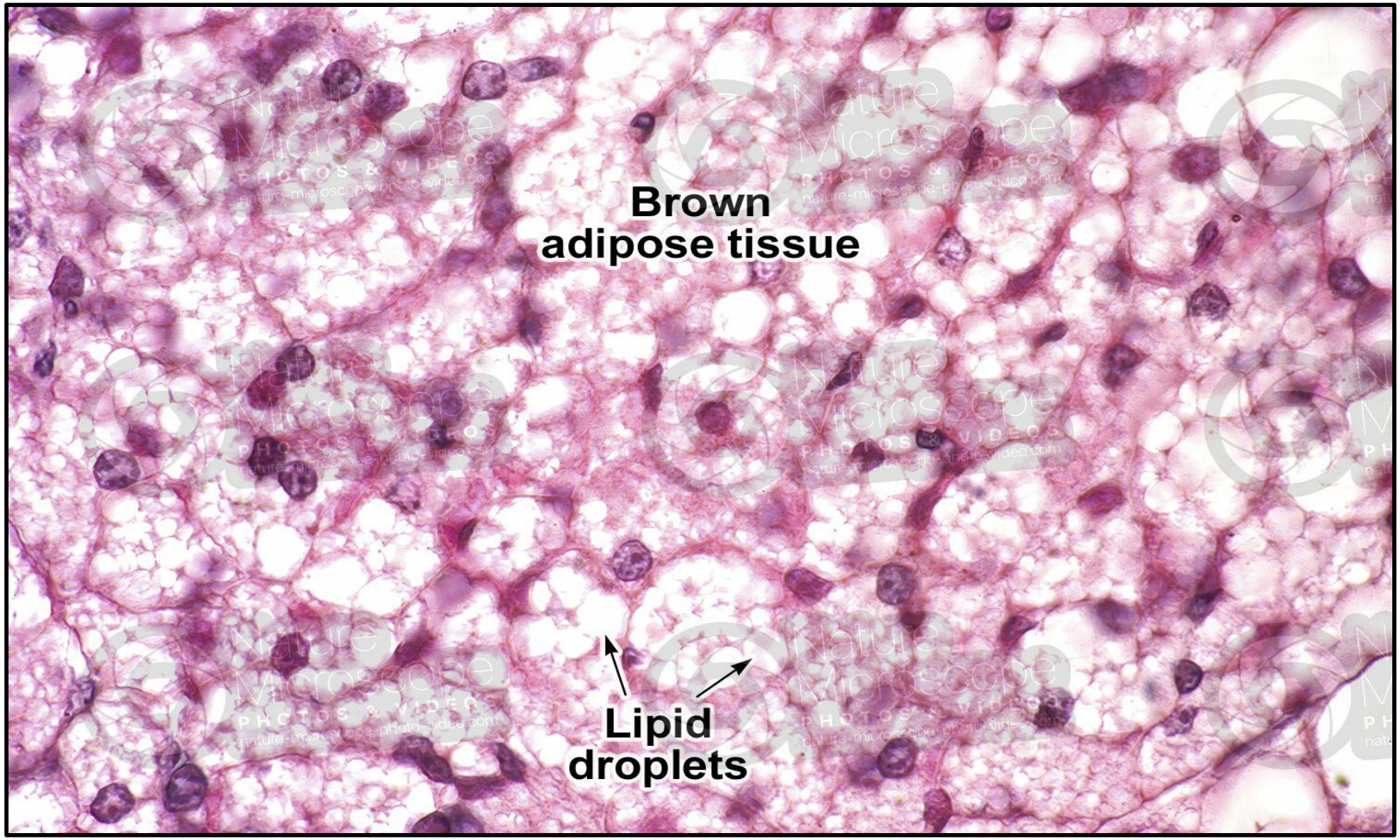
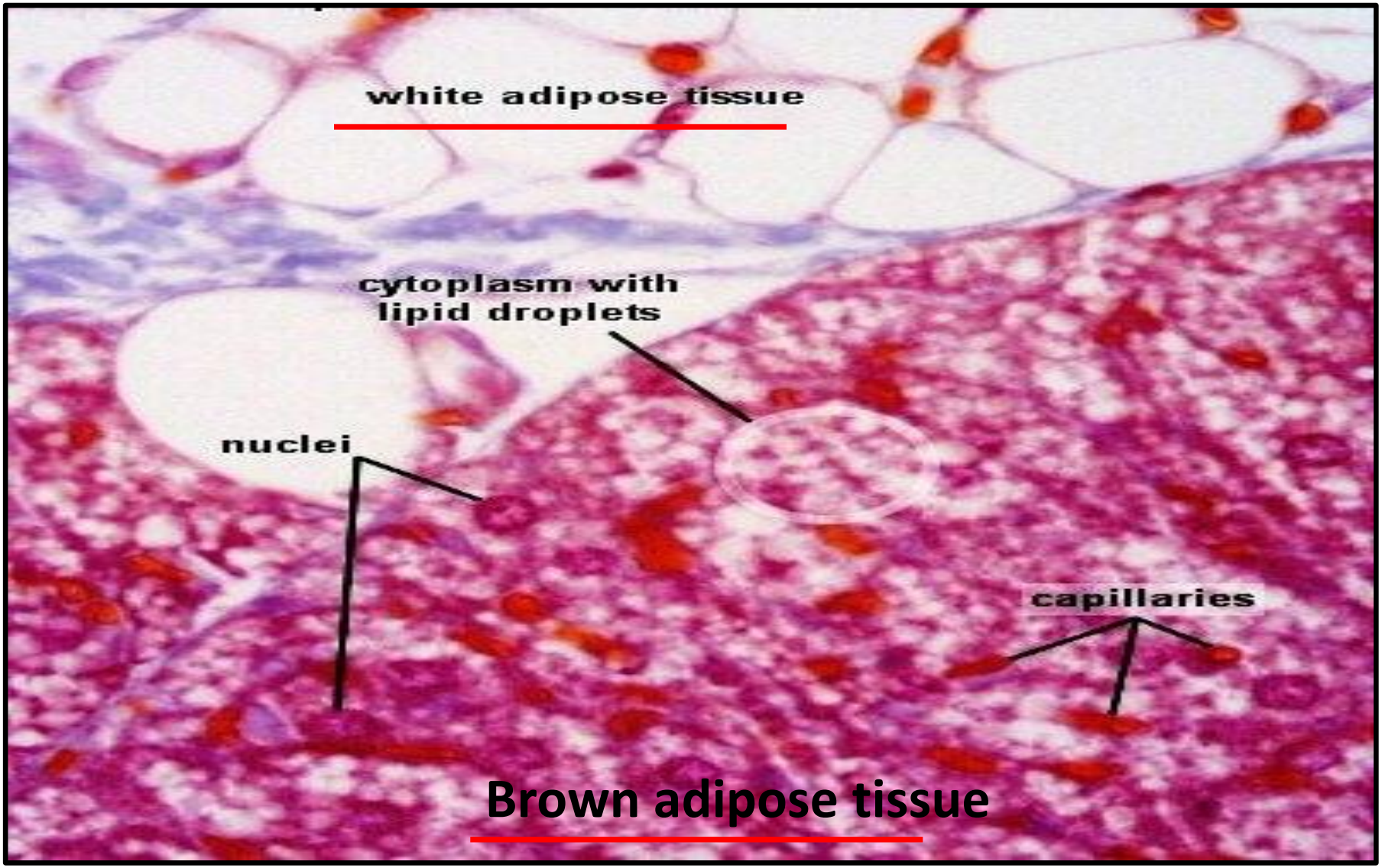
Multilocular (Brown) adipose C.T.



White & Brown adipose C.T.



Thank you