



431 Histology team

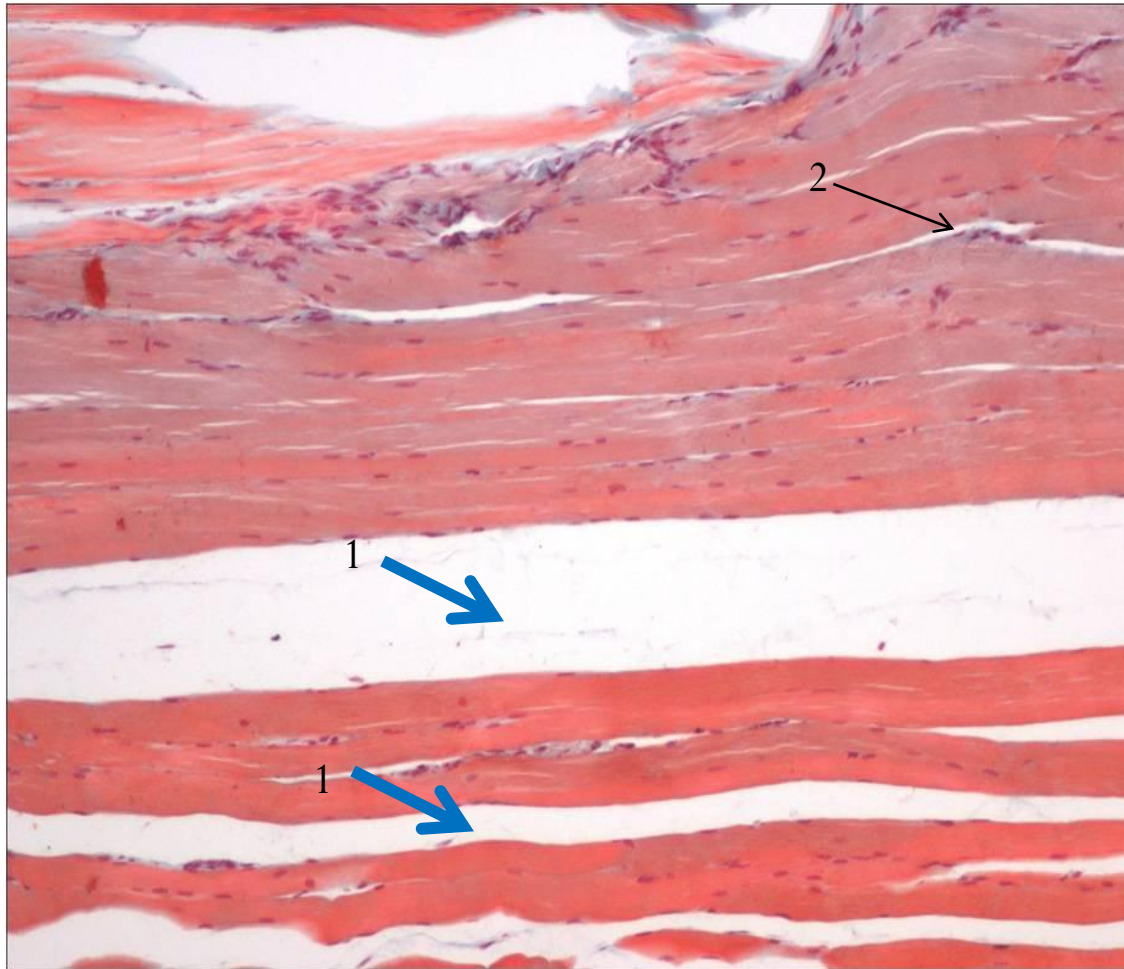
Muscles:

1- Skeletal.

2- Cardiac.

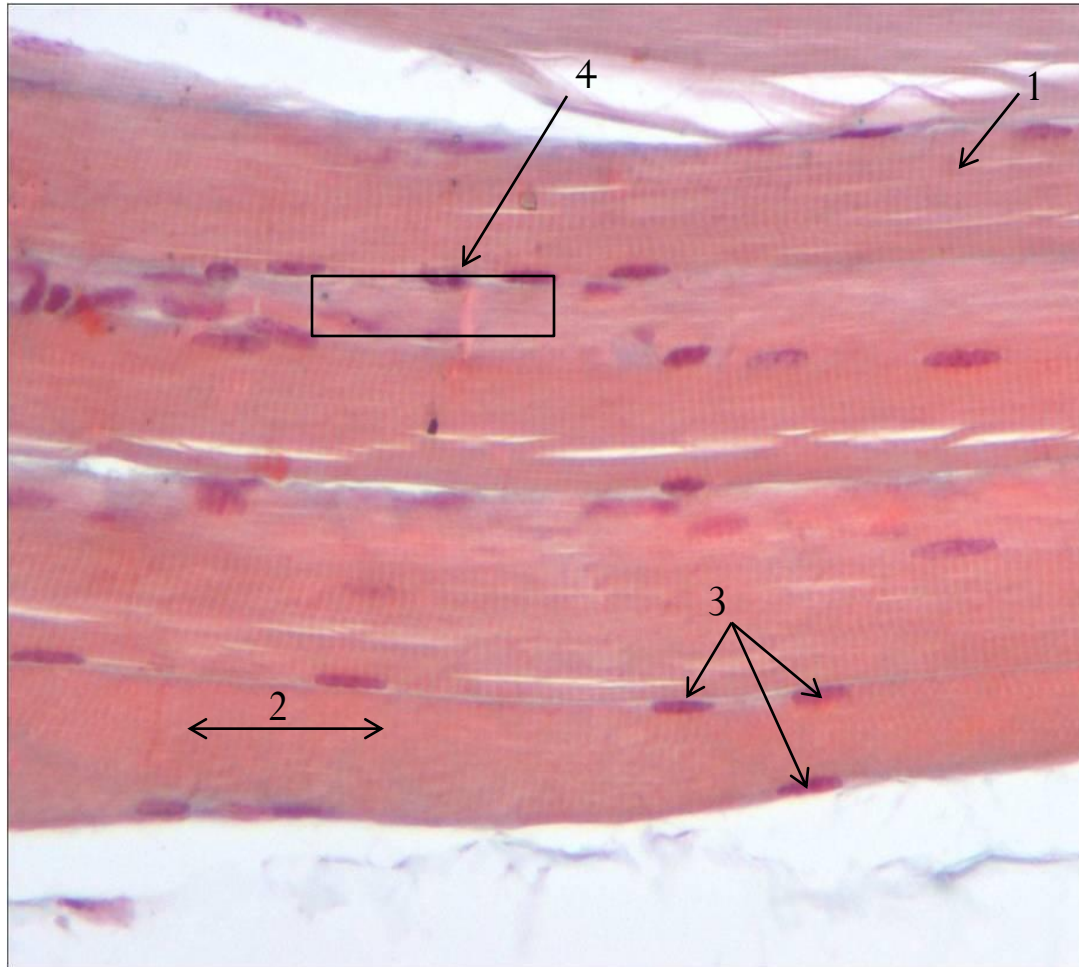
3- Smooth.

Skeletal Muscles L



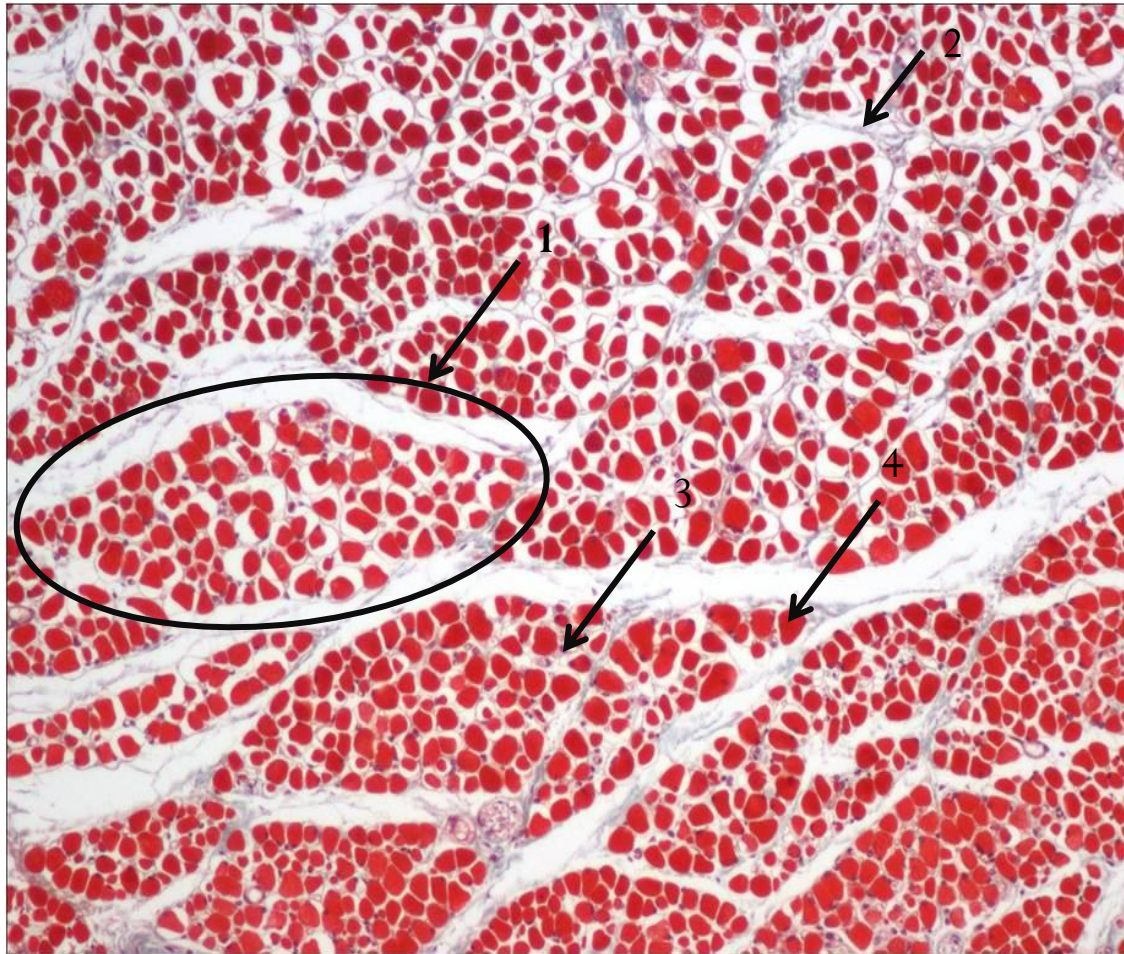
- 1. Perimysium.
- 2. Endomysium (C.T).

Skeletal Muscles L “higher magnification”



- 1. Striations.
- 2. muscle fibers (cells) “longitudinally cut”.
- 3. Nuclei “peripheral, flattened, Multinucleated ”
- 4. Endomysium (C.T).

Skeletal Muscles_T



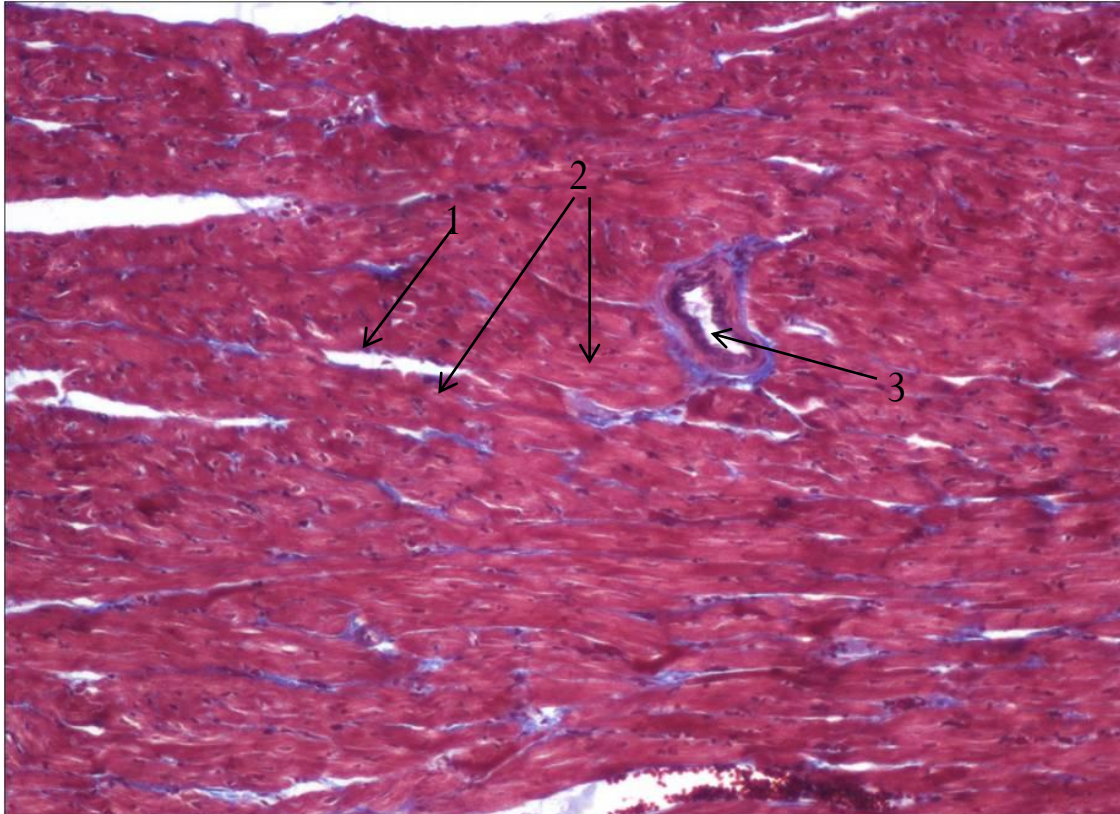
- 1. Skeletal Bundle.
- 2. Perimysium.
- 3. Endomysium.
- 4. T.S. of skeletal muscle fiber.

Skeletal Muscles T “Higher magnification”



- 1. Nucleus of skeletal muscle cell.
- 2. Endomysium.
- 3. Perimysium.

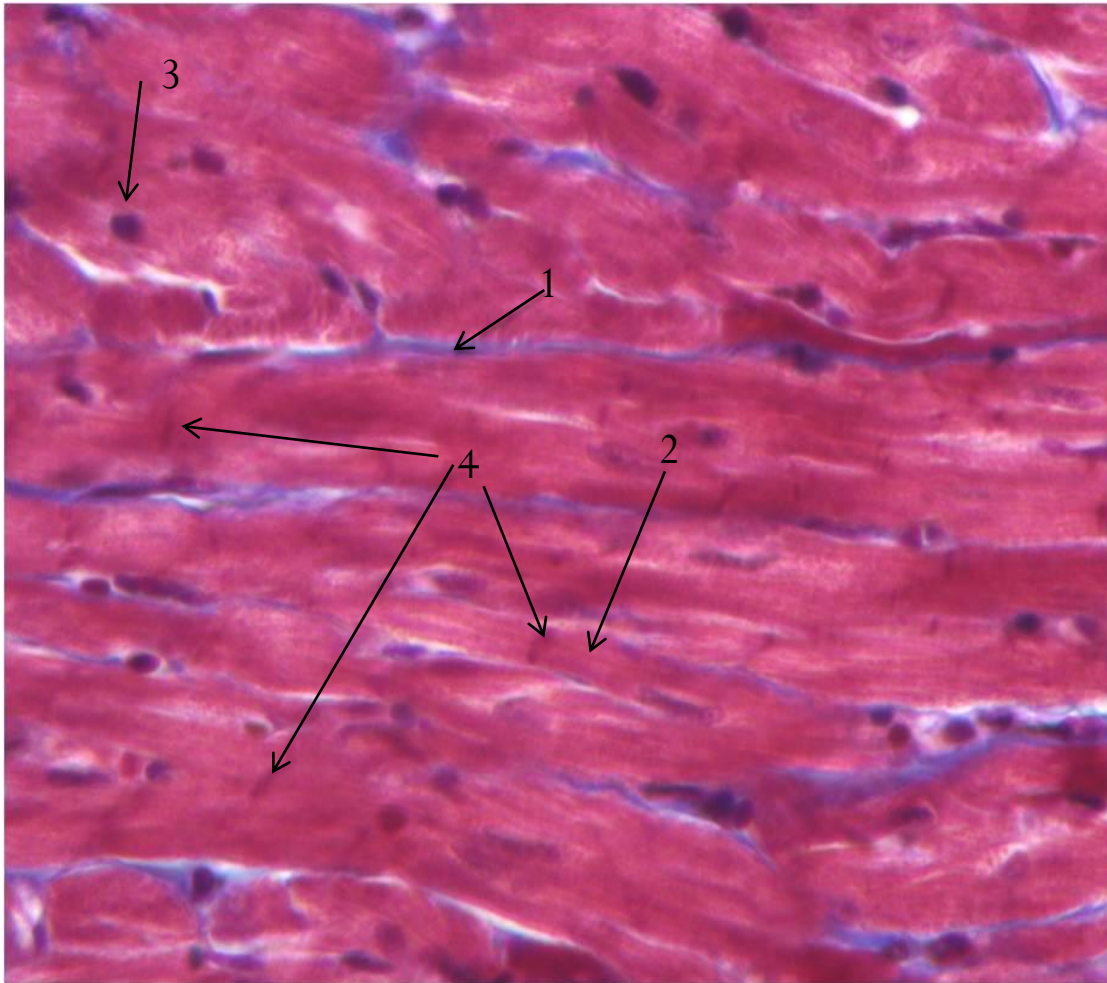
Cardiac Muscles



- 1. C.T between Muscle fibers (endomysium).
- 2. Cardiac Muscle fibers (cells) “branching”
- 3. Blood Vessels.

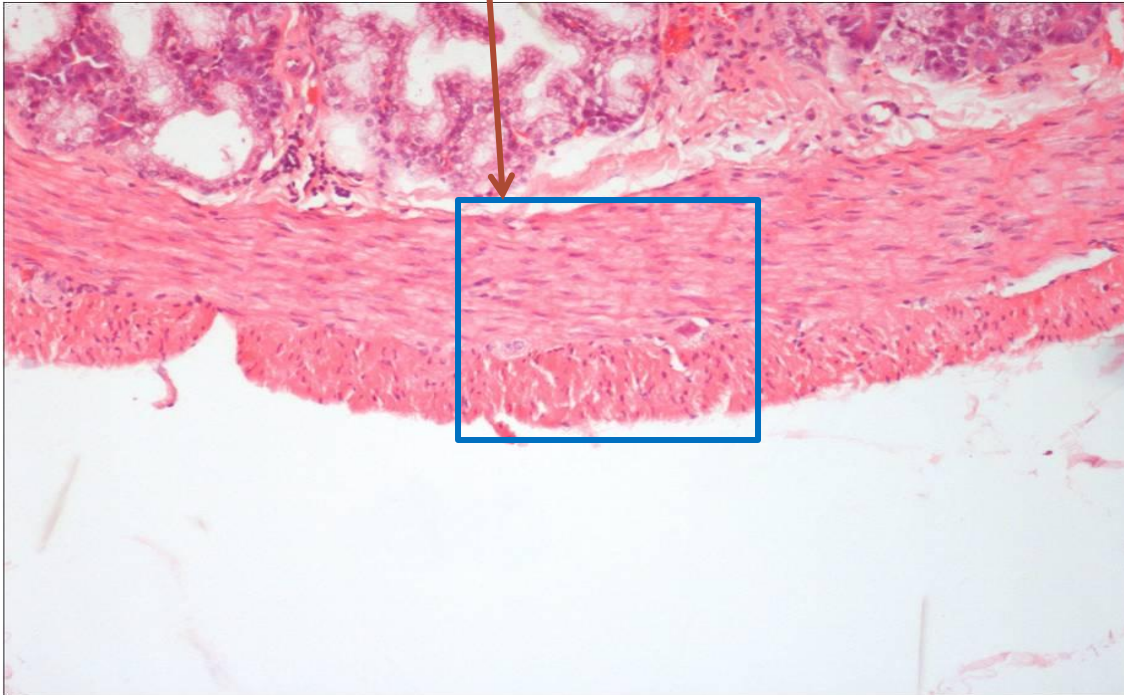
Sites:
myocardium

Cardiac Muscles “Higher Magnification”



- 1. C.T between muscle fibers (endomysium)
- 2. Cardiac Muscle fibers (cells)
- 3. Nucleus (oval and central)
- 4. Intercalated disc.

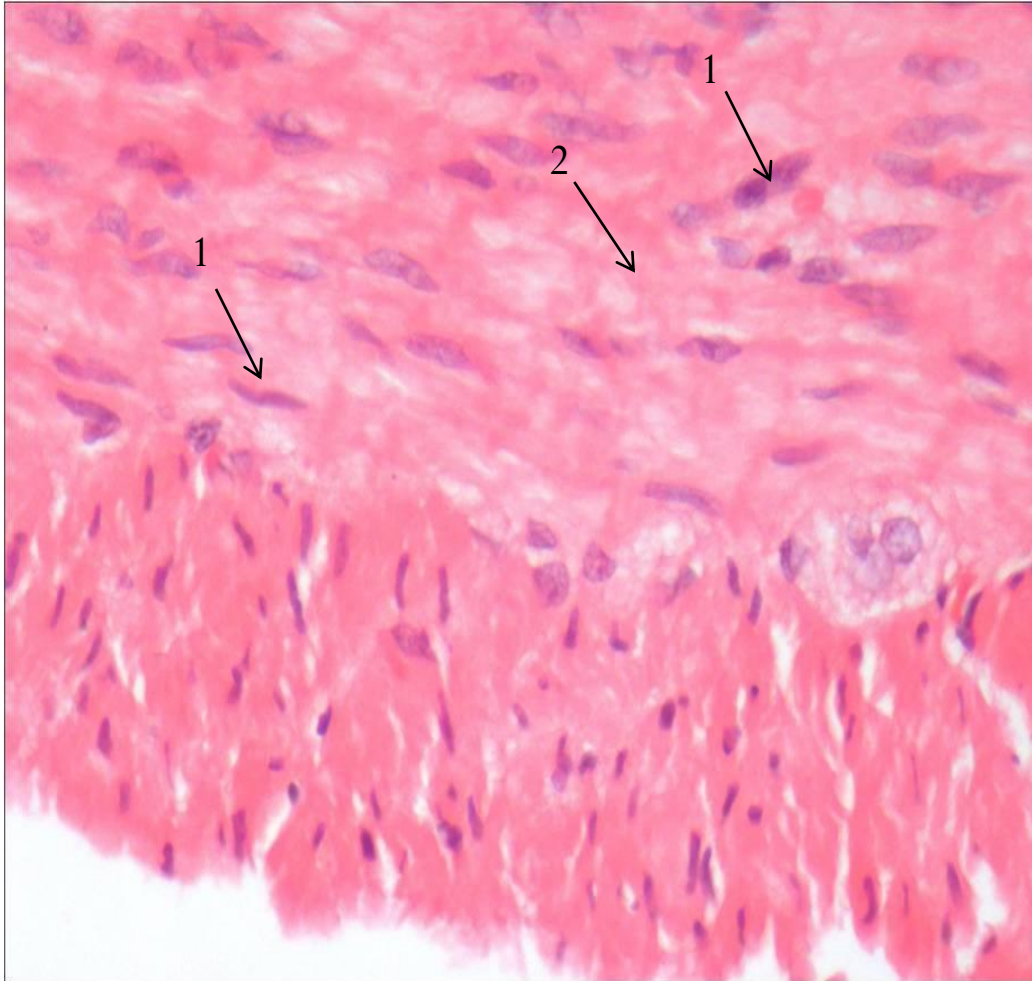
Smooth Muscles



Sites:

- 1- walls of blood vessels
- 2- viscera as in stomach and intestine

Smooth Muscles “higher Magnification”



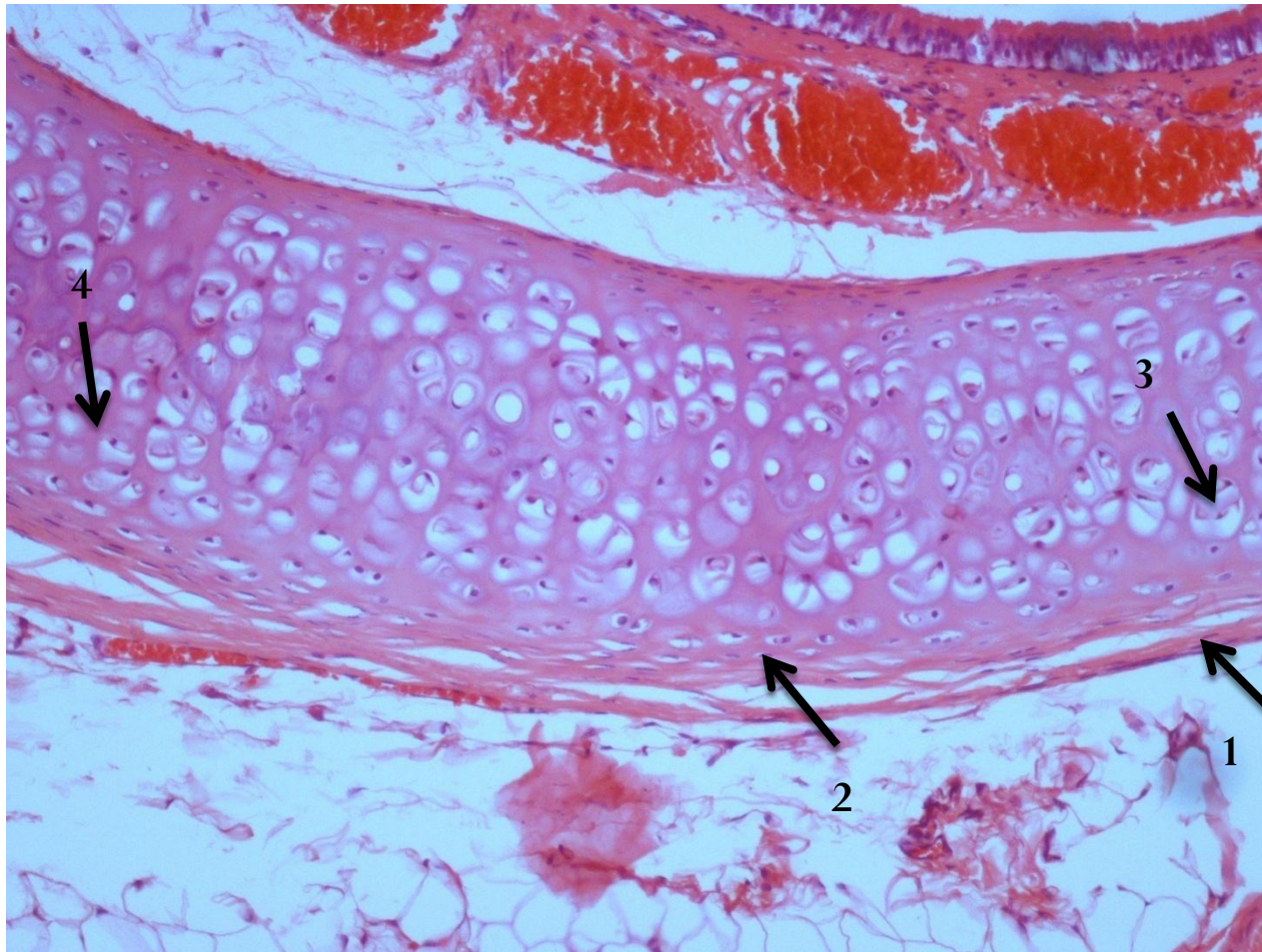
- 1.Nuclei
“ Mononucleated, oval & central in position”
- 2.Fibers “Fusiform in shape (spindle-shaped)”

Cartilage:

1- Hyaline cartilage.

2- Elastic cartilage

Hyaline cartilage

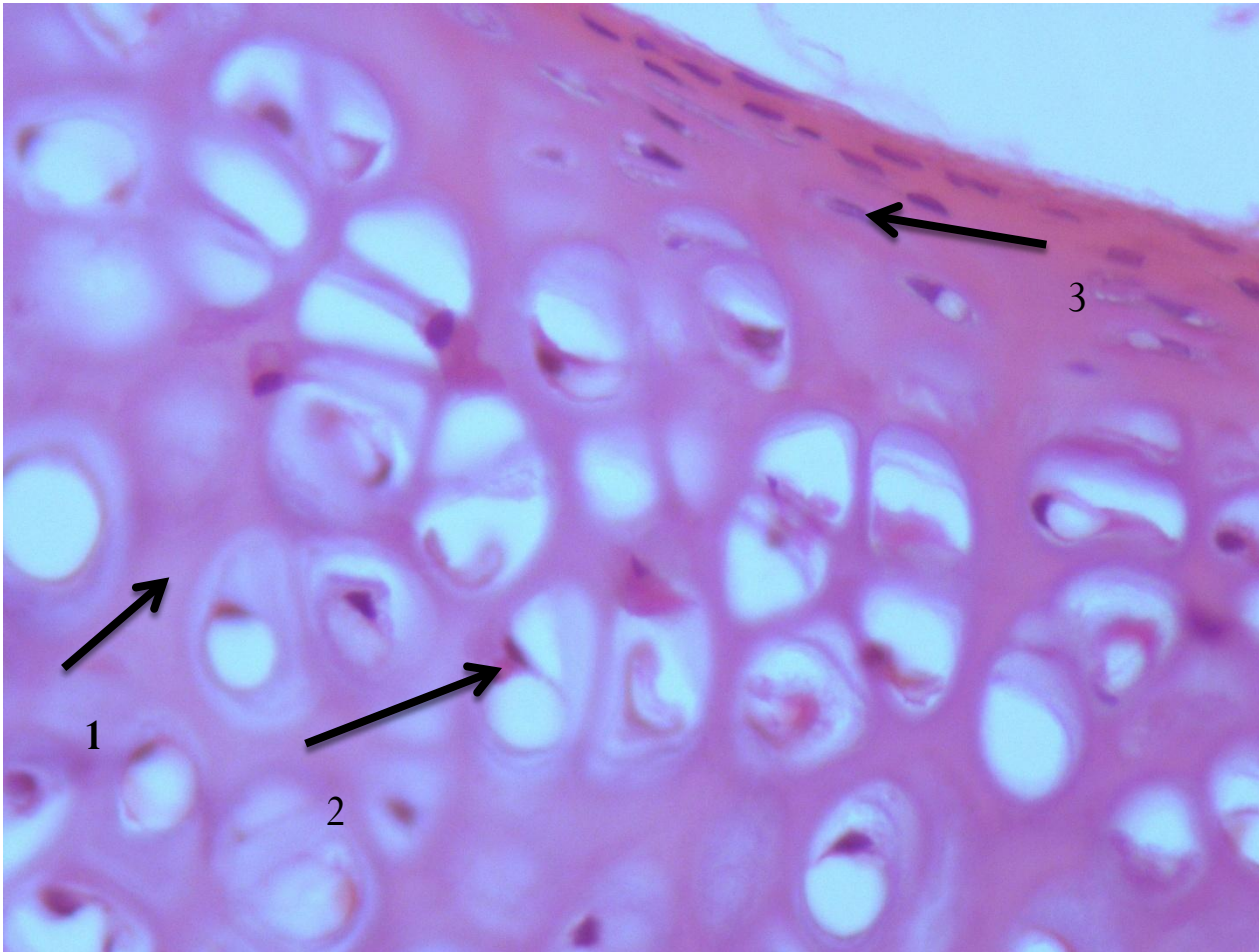


- 1-perichondrium.
- 2-Chondroblast(no lacuna).
- 3-Chondrocytes(in lacuna, it can be found in clusters, maximum 8 cells (cell nest).
- 4-Glass appearance matrix.

Site:

- *Fetal skeleton.
- *Costal cartilages.
- *Nose, trachea and bronchi.
- *articular surface of bone.

Hyaline cartilage (higher magnification)



- 1- Glass appearance matrix.
- 2- Chondrocyte.
- 3- Chondroblast.

Elastic Cartilage

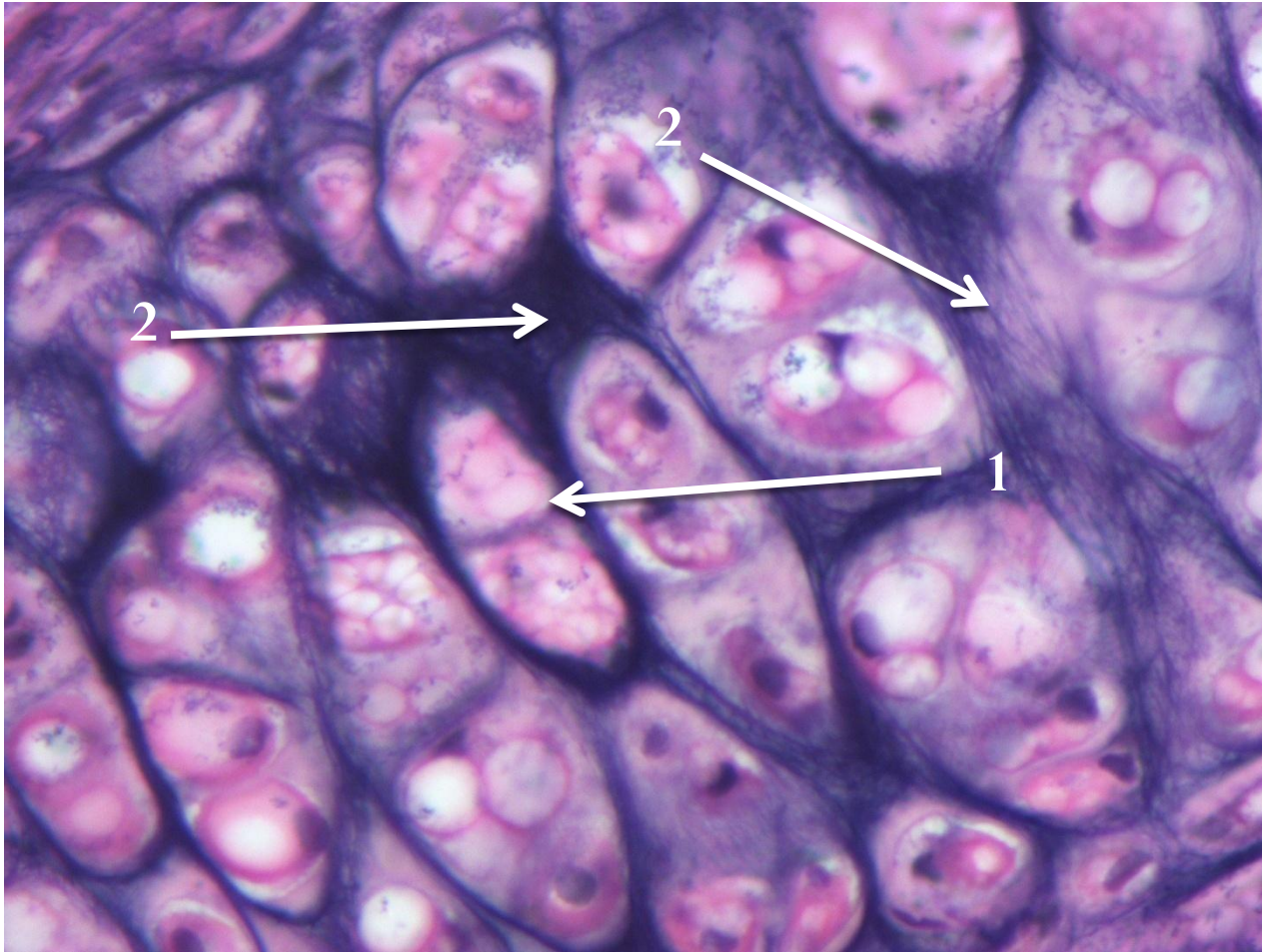


1-Perichondrium.
2-Chondrocyte.
3-Elastic fibers in the matrix.

Site:

*External Ear.
*Epiglottis.

Elastic cartilage (higher magnification)



1-Chondrocyte.

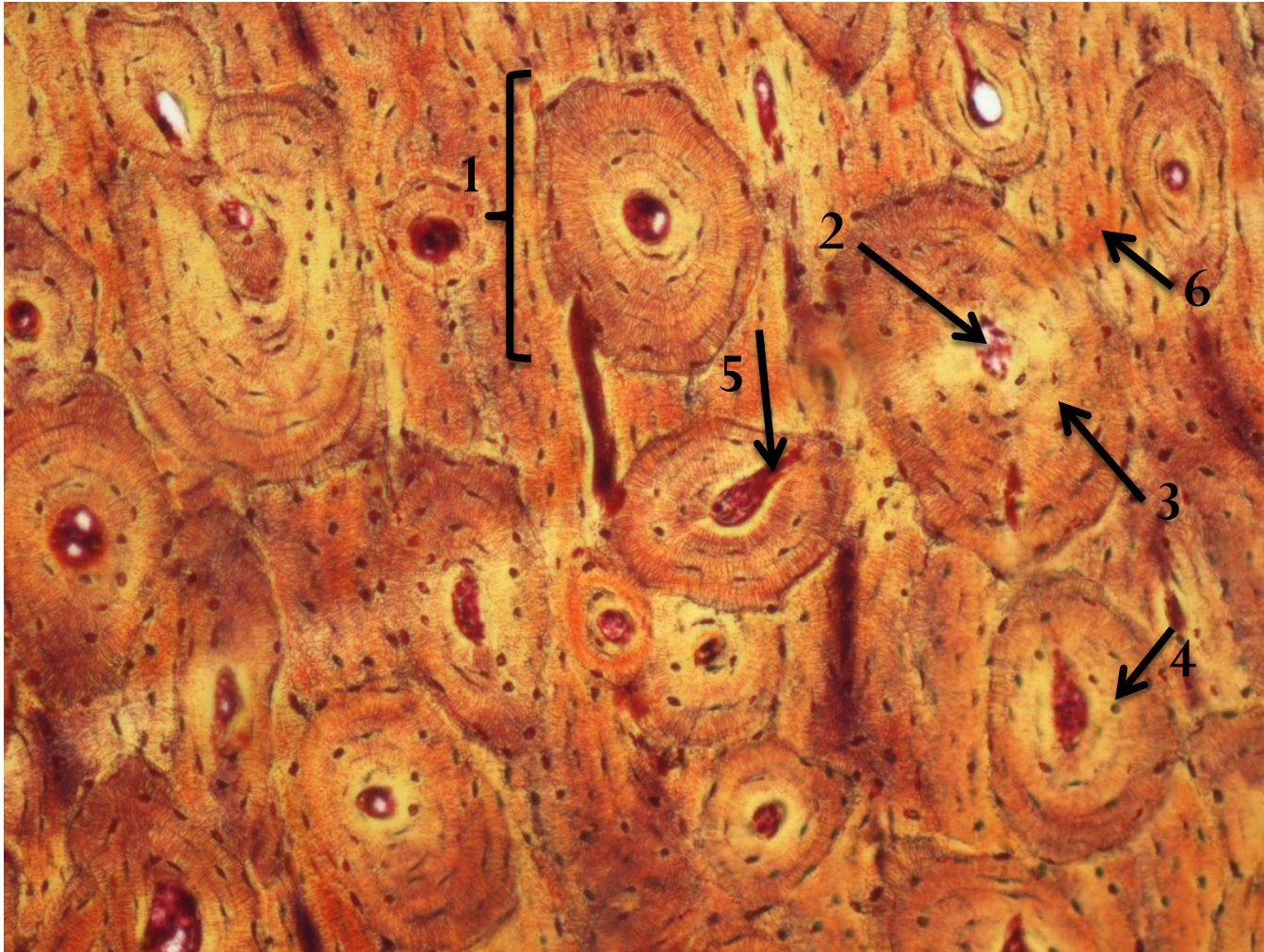
2-Elastic fibers in
the matrix.

Bones:

1- Compact.

2- Spongy(cancellous).

Compact Bone



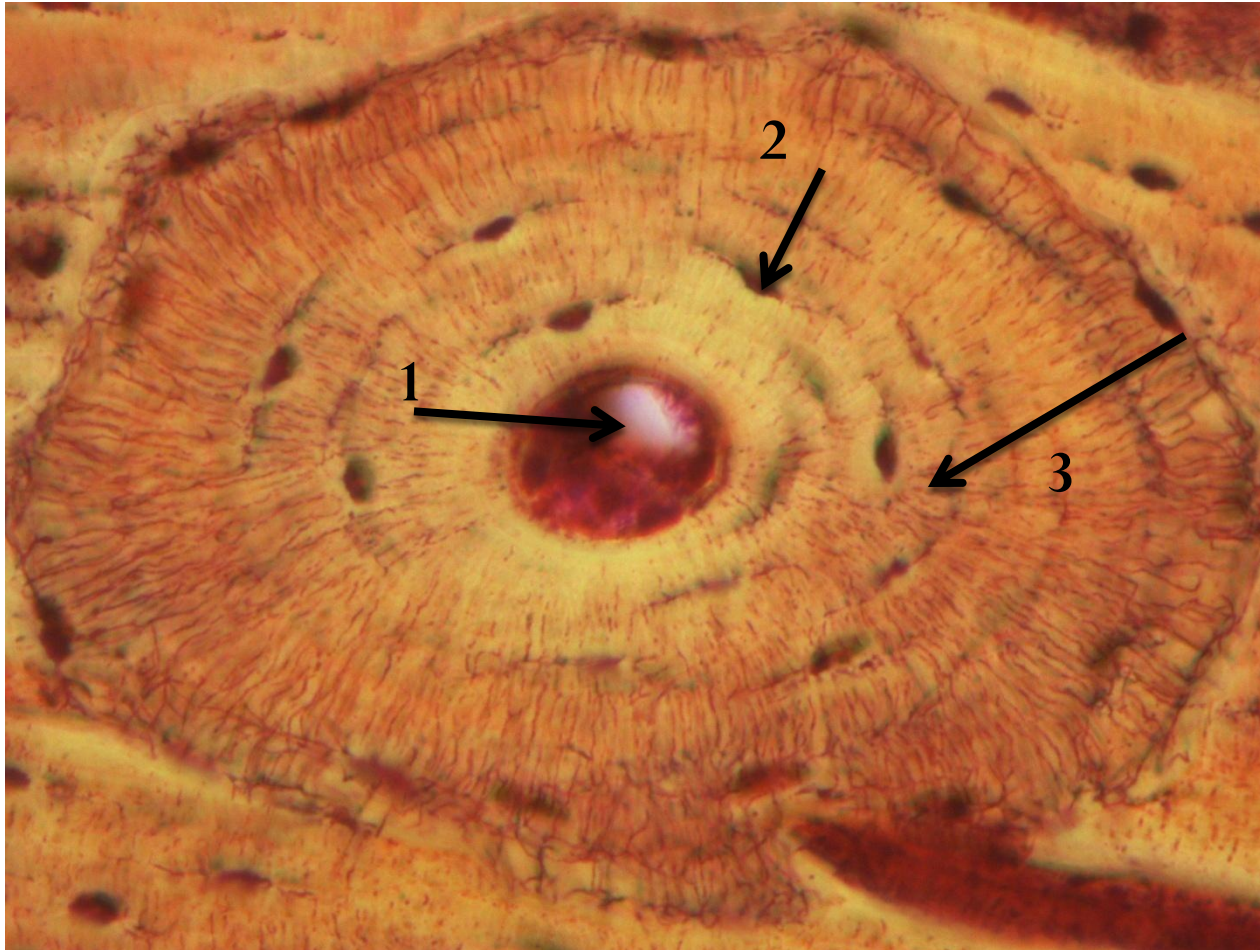
- 1- Haversian System (Osteon).
- 2- Haversian Canal.
- 3- Bone Lamellae.
- 4- Osteocyte.
- 5- Volkmann's canal.
- 6- Interstitial lamellae.

Site:

* Found in diaphysis of long bones.

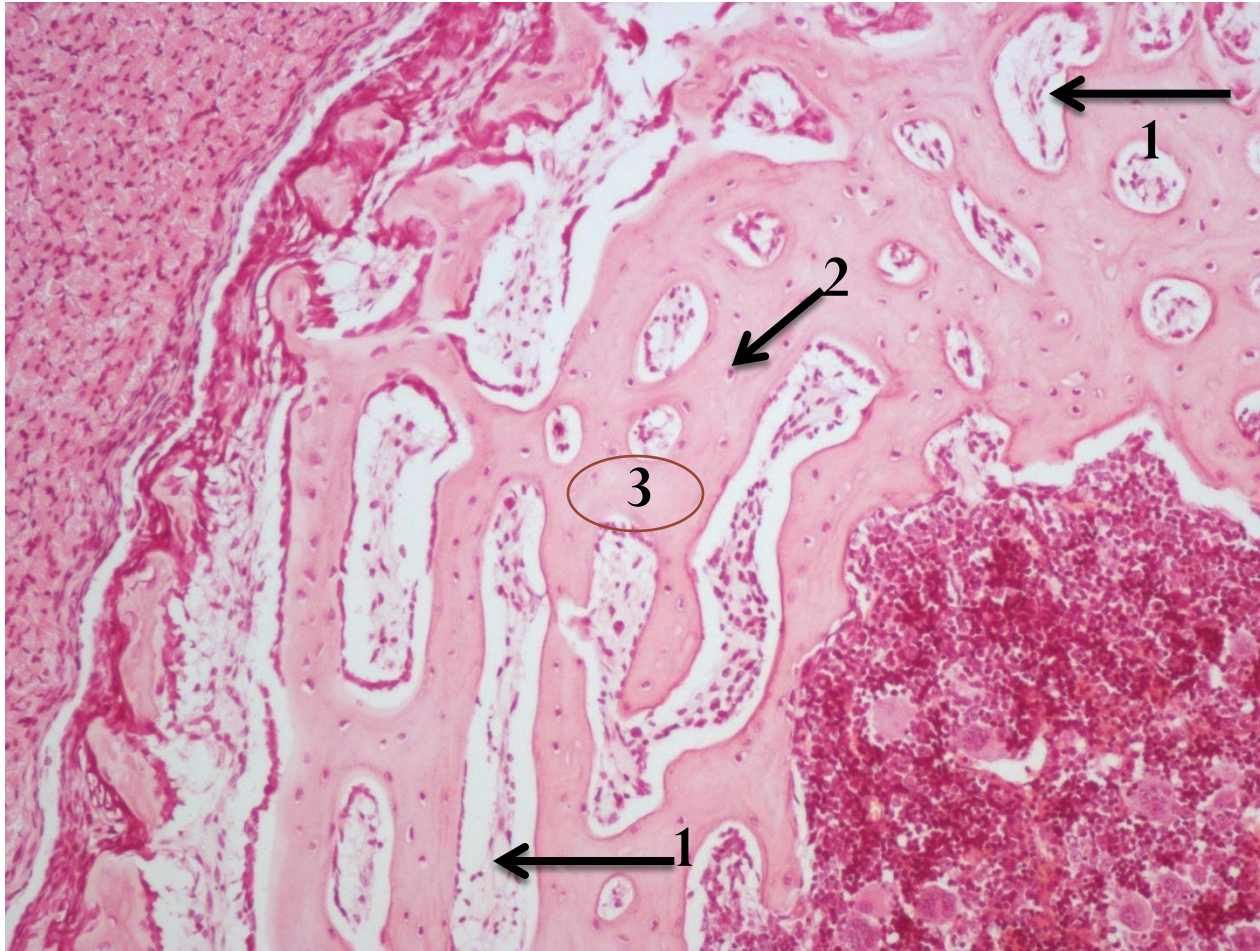
Compact Bone (higher magnification)

Haversian system or osteon



- 1- Haversian canal.
- 2- Osteocyte.
- 3- Lamellae

Cancellus or Spongy Bone



- 1- Bone Marrow Spaces.
- 2- Osteocyte
- 3- **Irregular** bone trabeculae.

Site:

* Found in flat bones and epiphysis of long bones.

Spongy Bone or cancellus (higher magnification)



The cells in the The endosteum are 2 types:
1- Flat: Osteogenic (stem cells).
2- Round: Osteoblast
3. Irregular bone trabeculae
4. Osteocyte.
5. Bone marrow space.

NO HAVERSIAN SYSTEM IN SPONGY BONE.