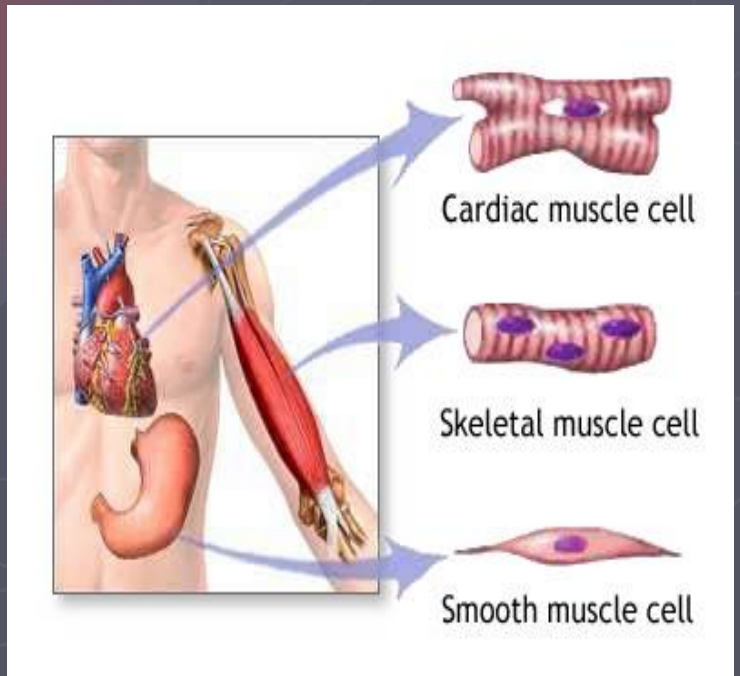
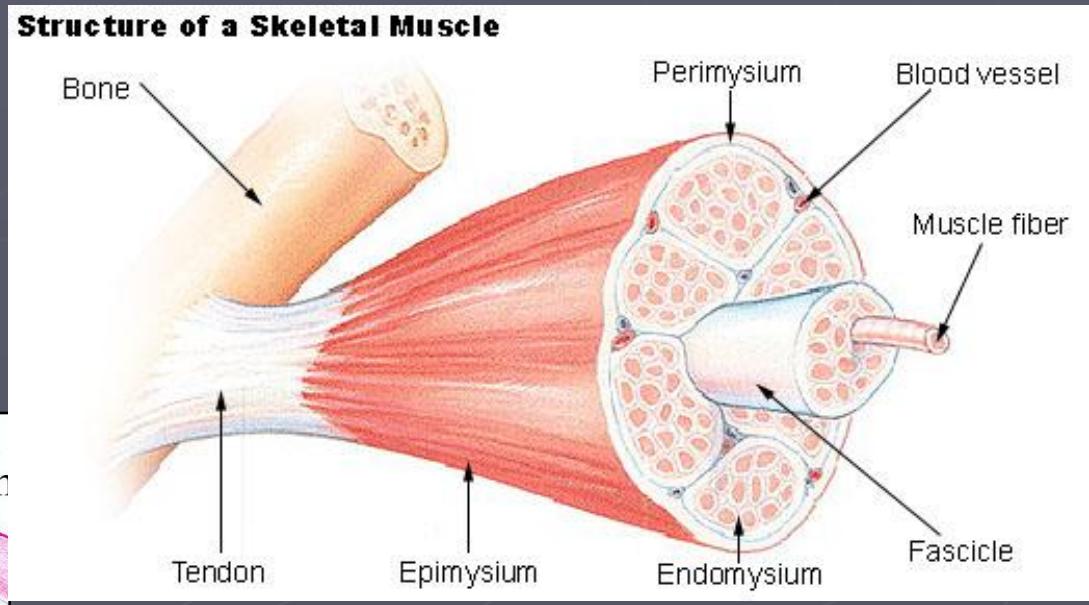
MUSCLE TISSUE (Lab)

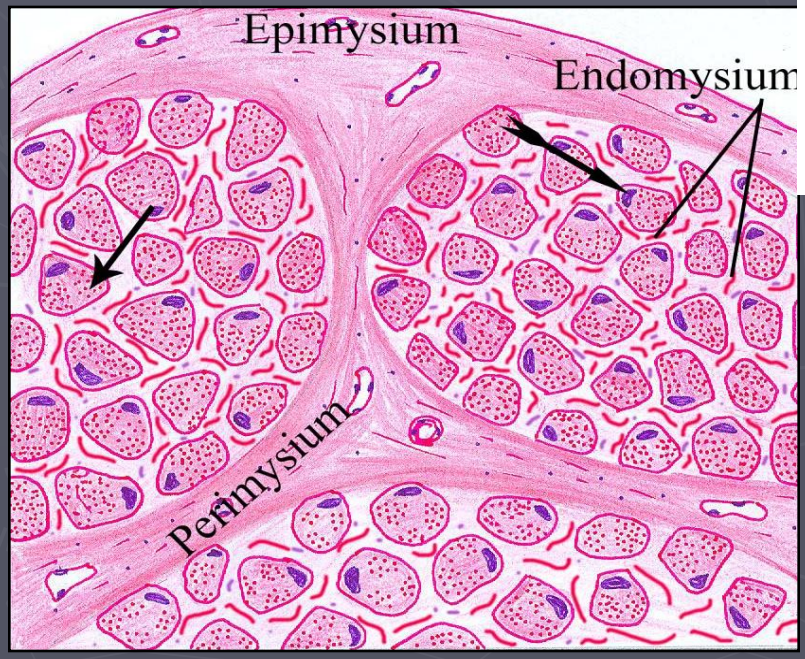
Types of muscles

- **Striated muscle**
  - ***Skeletal***
  - ***Cardiac***
- **Smooth muscle**



The connective tissue component of the skeletal muscle





L.S of skeletal muscle

Skeletal muscle fibers (cells):

-long

-cylindrical in shape

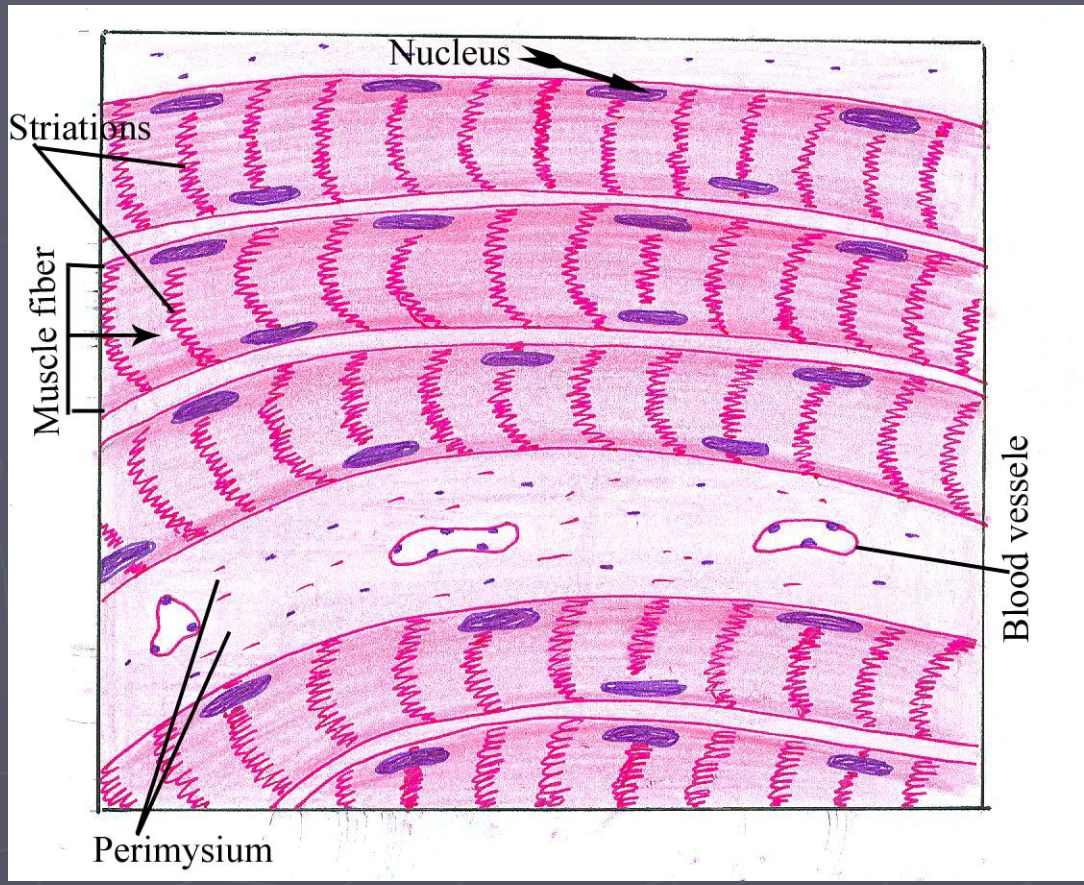
-multinucleated

with ovoid elongated nuclei located just beneath the sarcolemma (cell membrane)

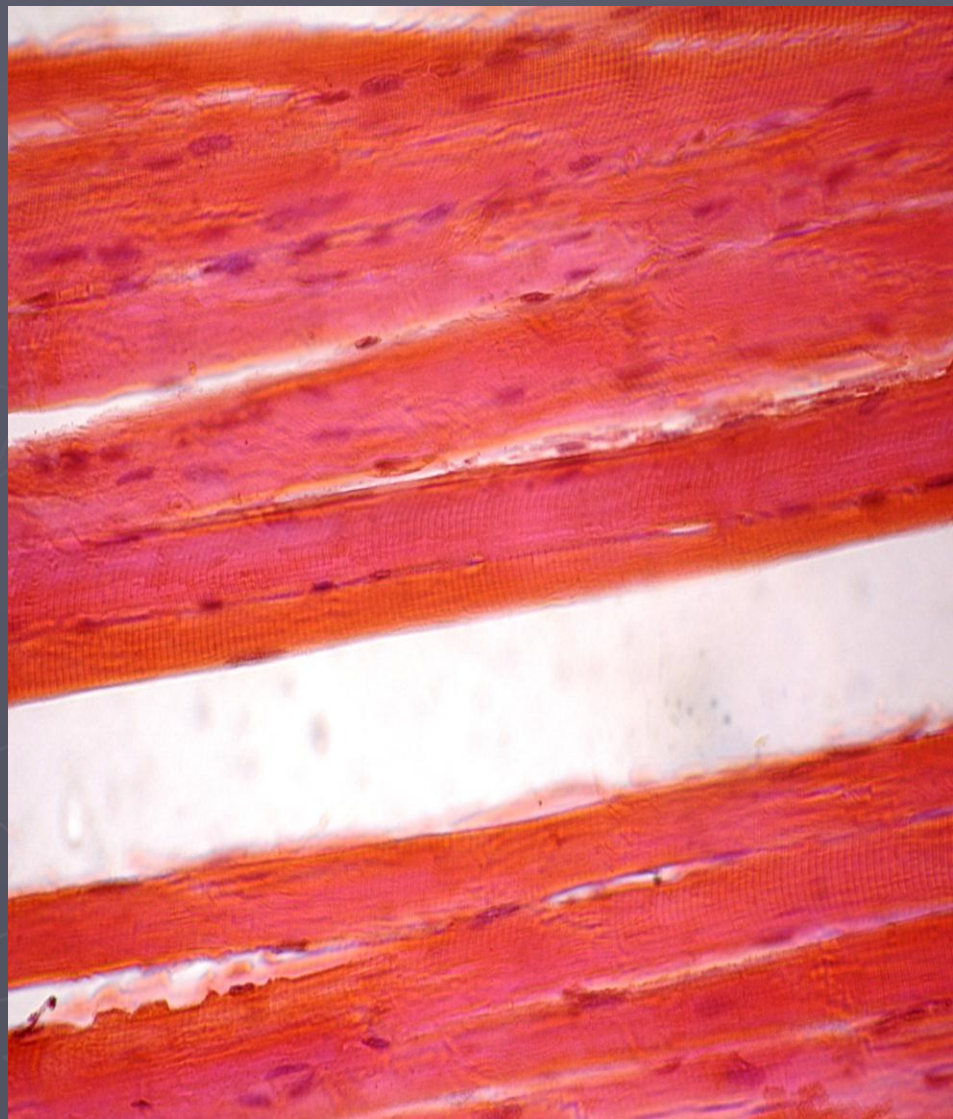
The sarcoplasm (cytoplasm) :

-deeply acidophilic

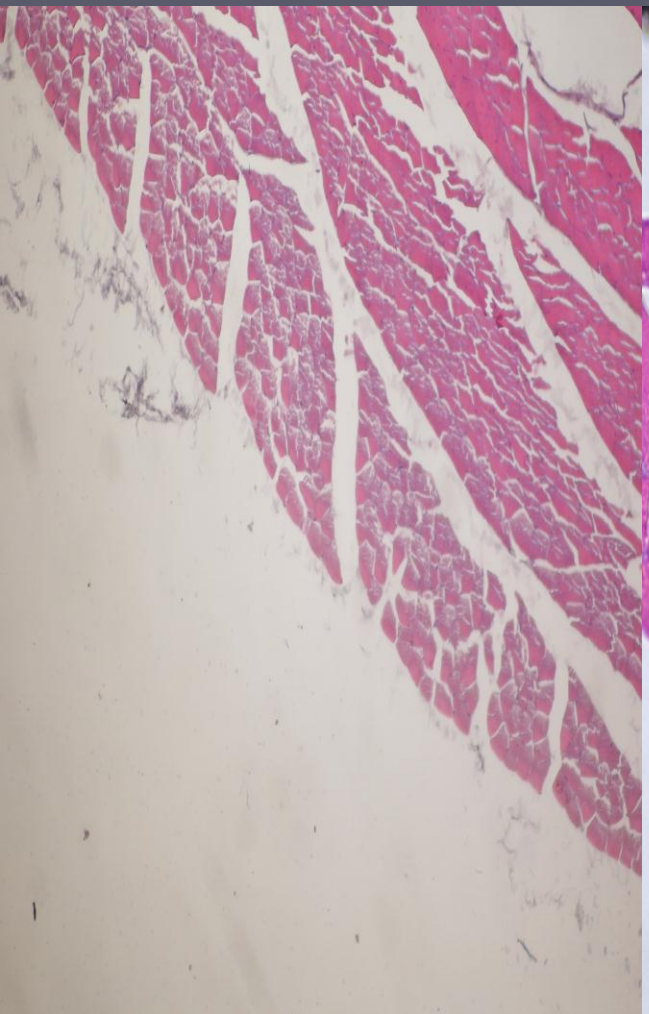
-filled with long, cylinderical, parallel fibrils called myofibrils.

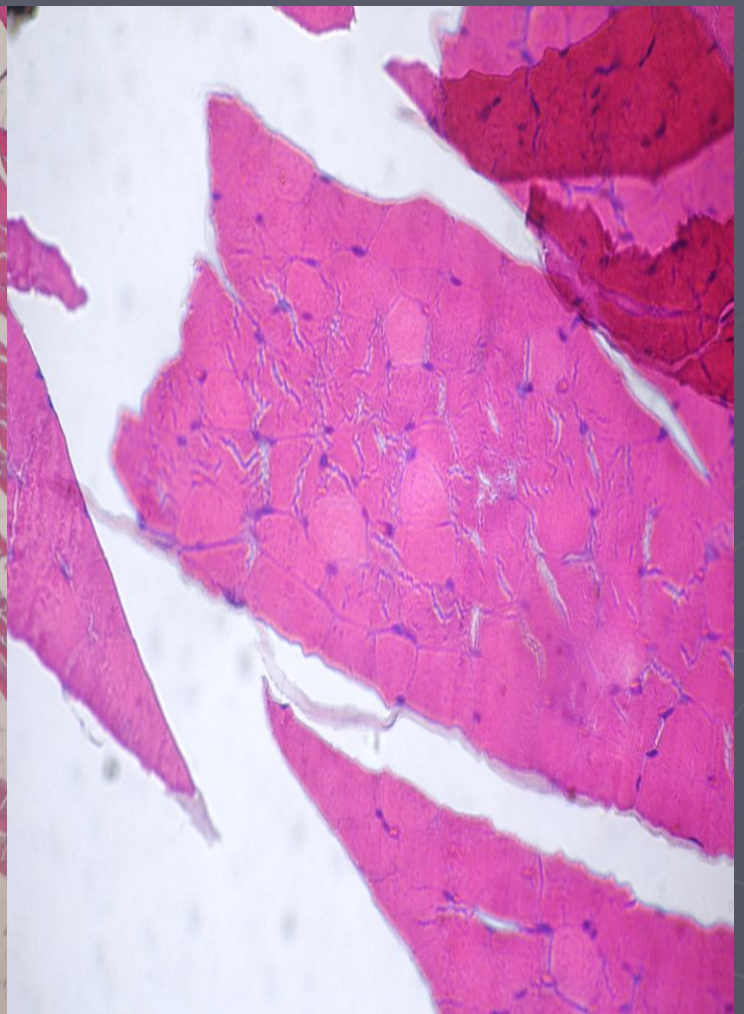


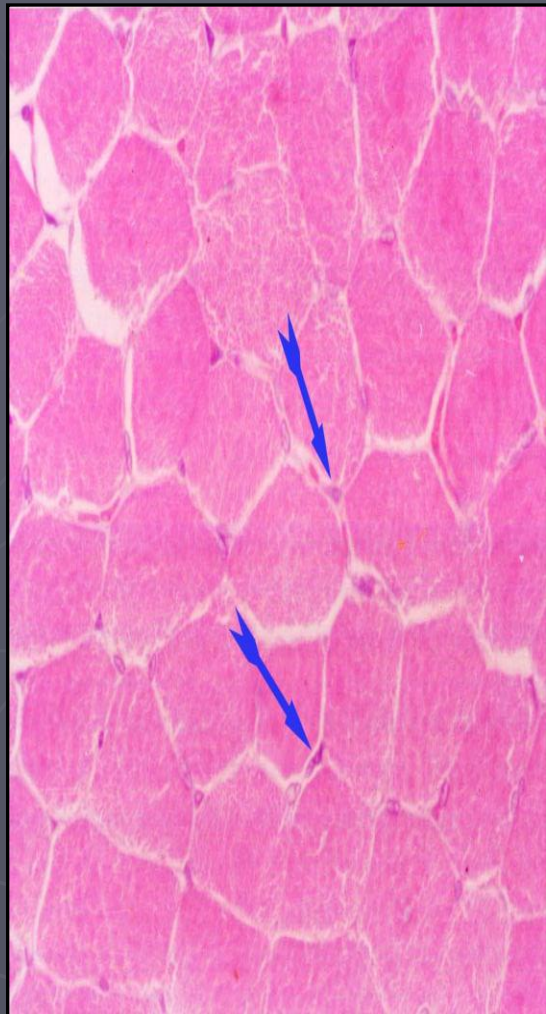
L.S of skeletal muscle



T.S of skeletal muscle







Sarcomere of skeletal muscle

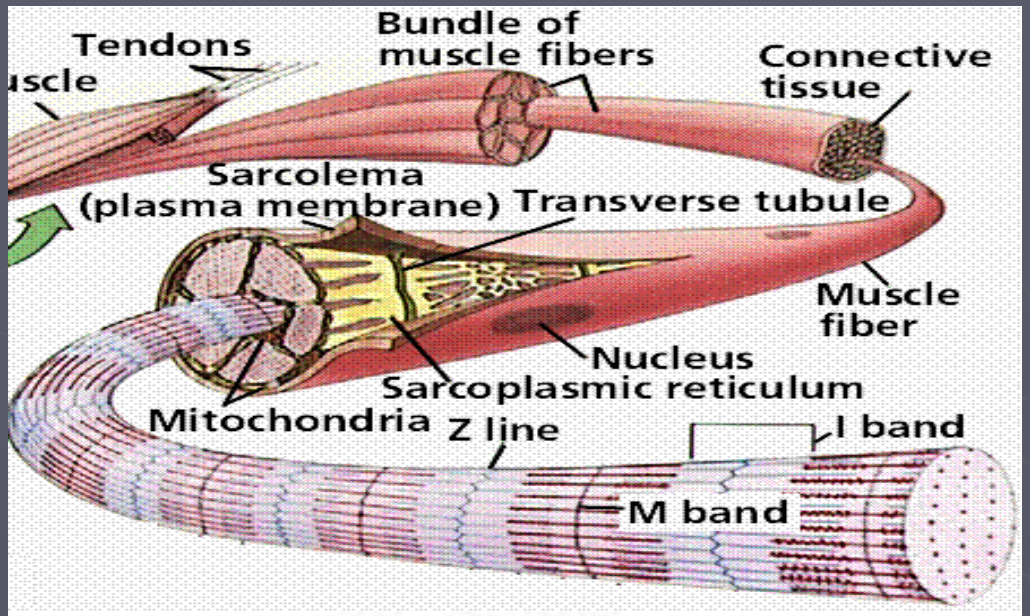
- Each muscle fiber ***(myofiber)*** contains ***myofibrils*** which composed of bundles of ***myofilaments*** which are the contractile elements of striated muscle.

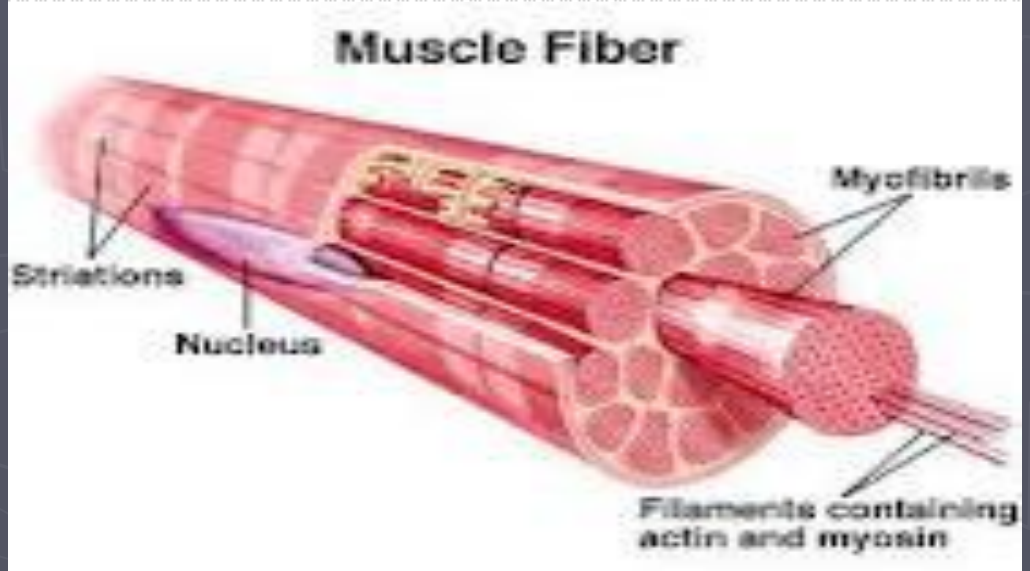
These myofilaments

1- Thin filaments (actin).

2- Thick filaments (myosin).

-The arrangment of actin and myosin filaments gives the myofibrils their ***characteristic regular striation***

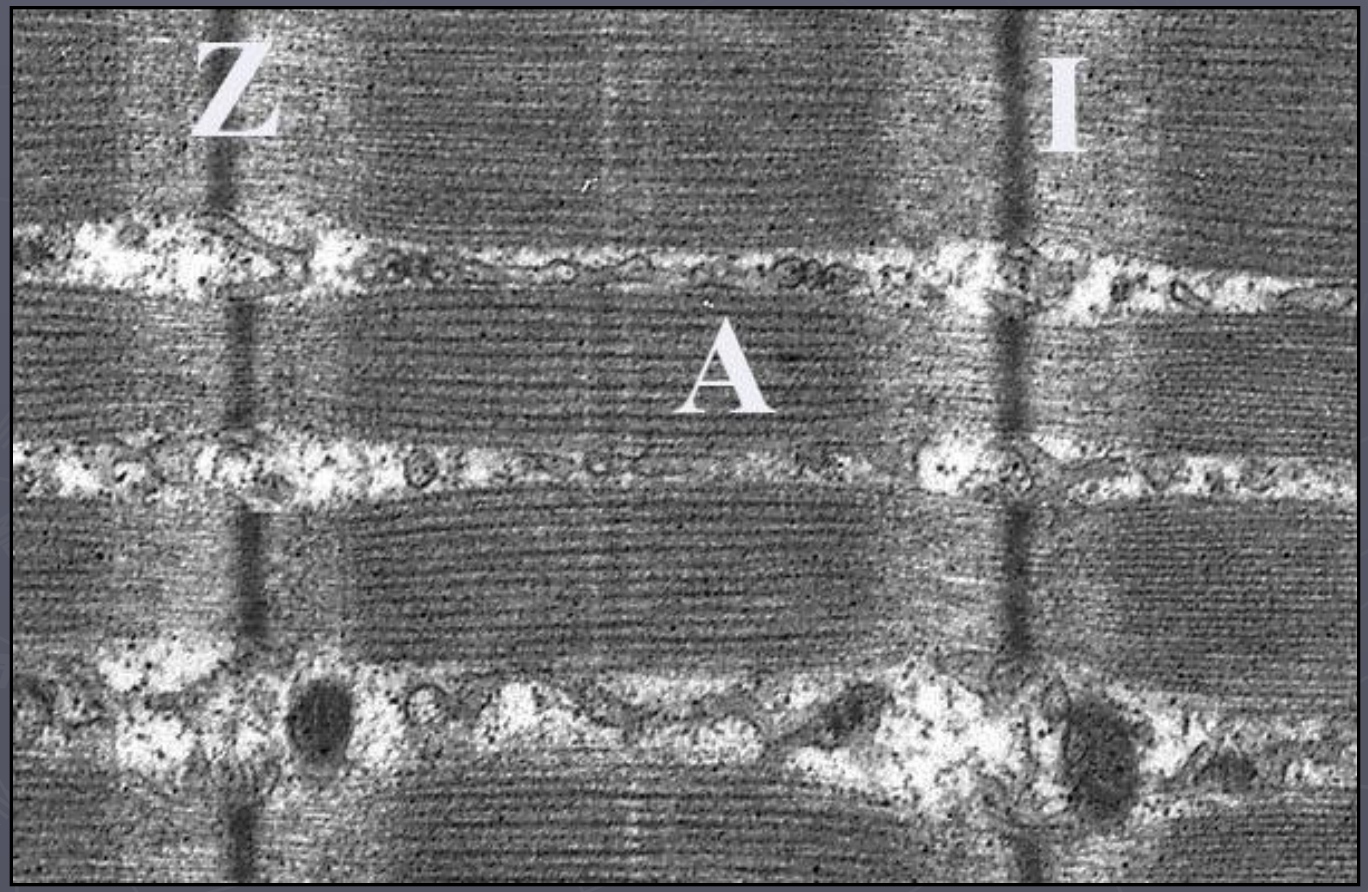




Sarcomere

The smallest repetitive unit in LS of the myofibril is called sarcomere which extends from one Z line to the next.

Sarcomere of skeletal muscle



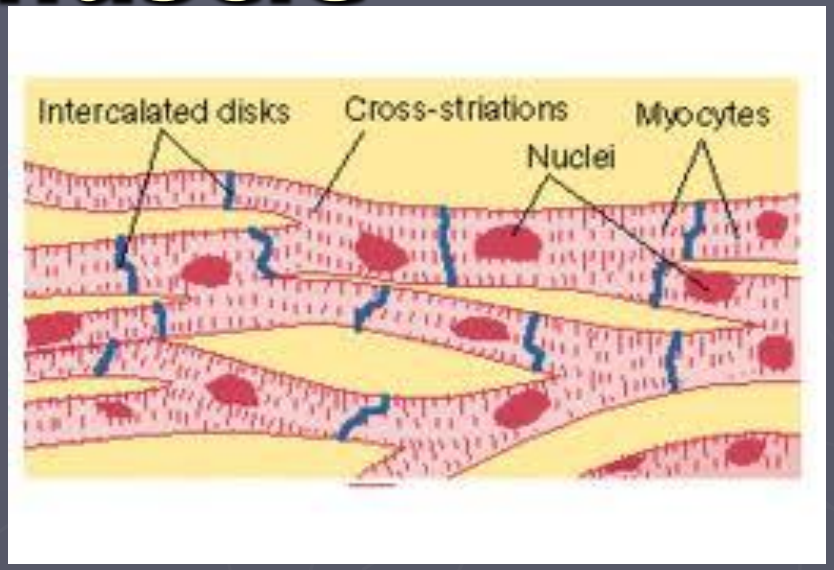
Cardiac muscle

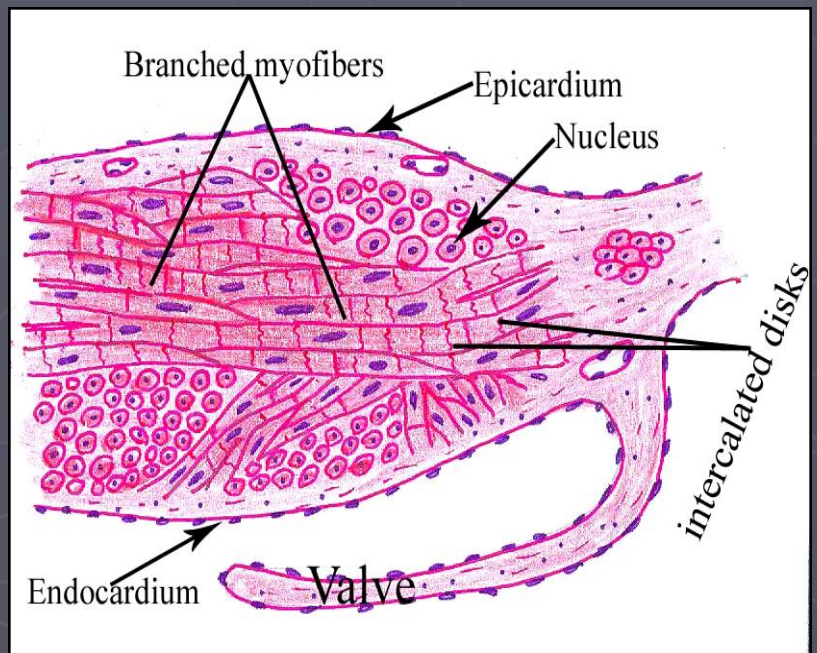
Cardiac muscle fibers

- cylindrical in shape.
- They branch and anastomose with each other.
-composed of several cardiac muscle cells smaller than the skeletal one
-run in different directions

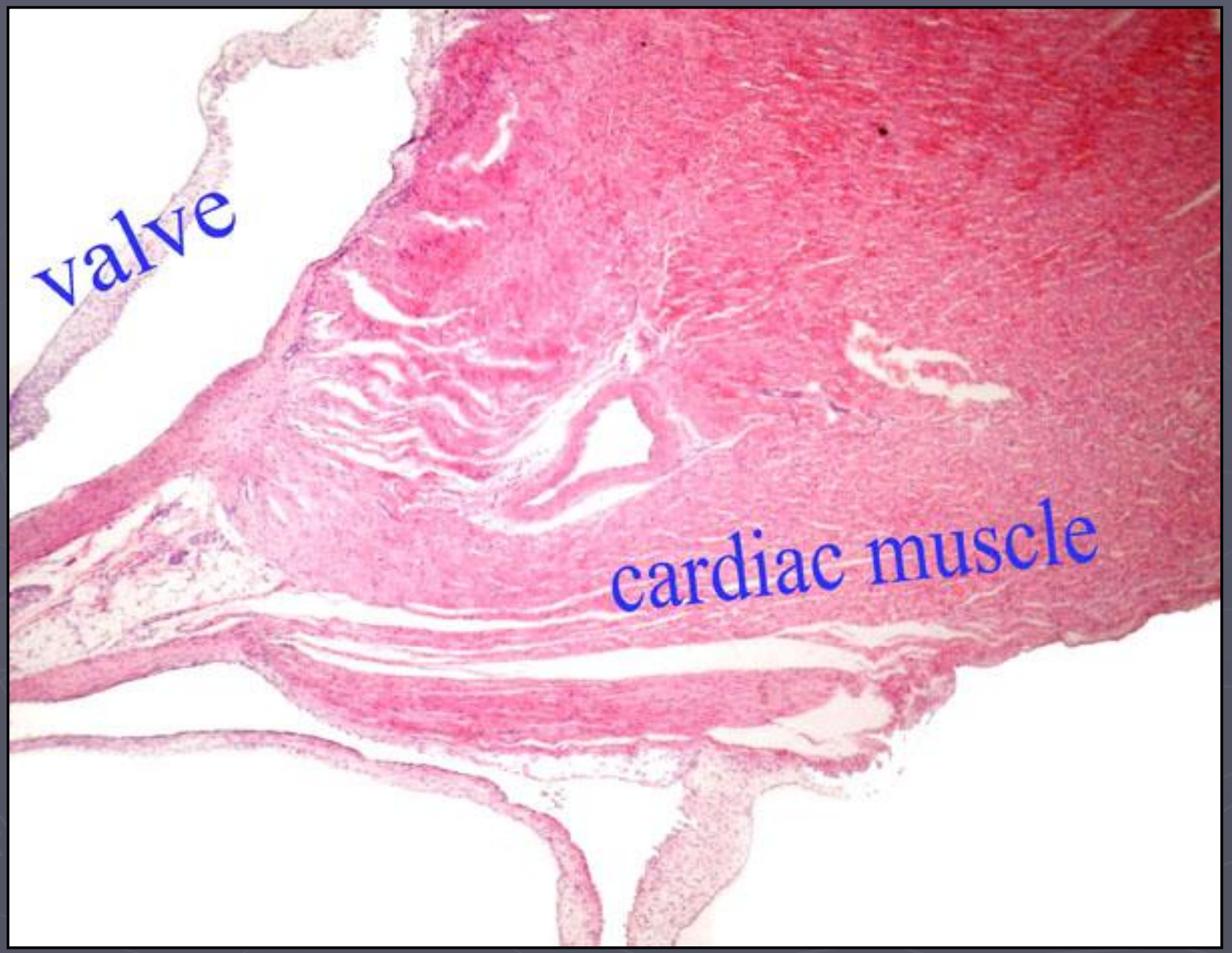
cytoplasm

-binuclated
- Less acidophilic





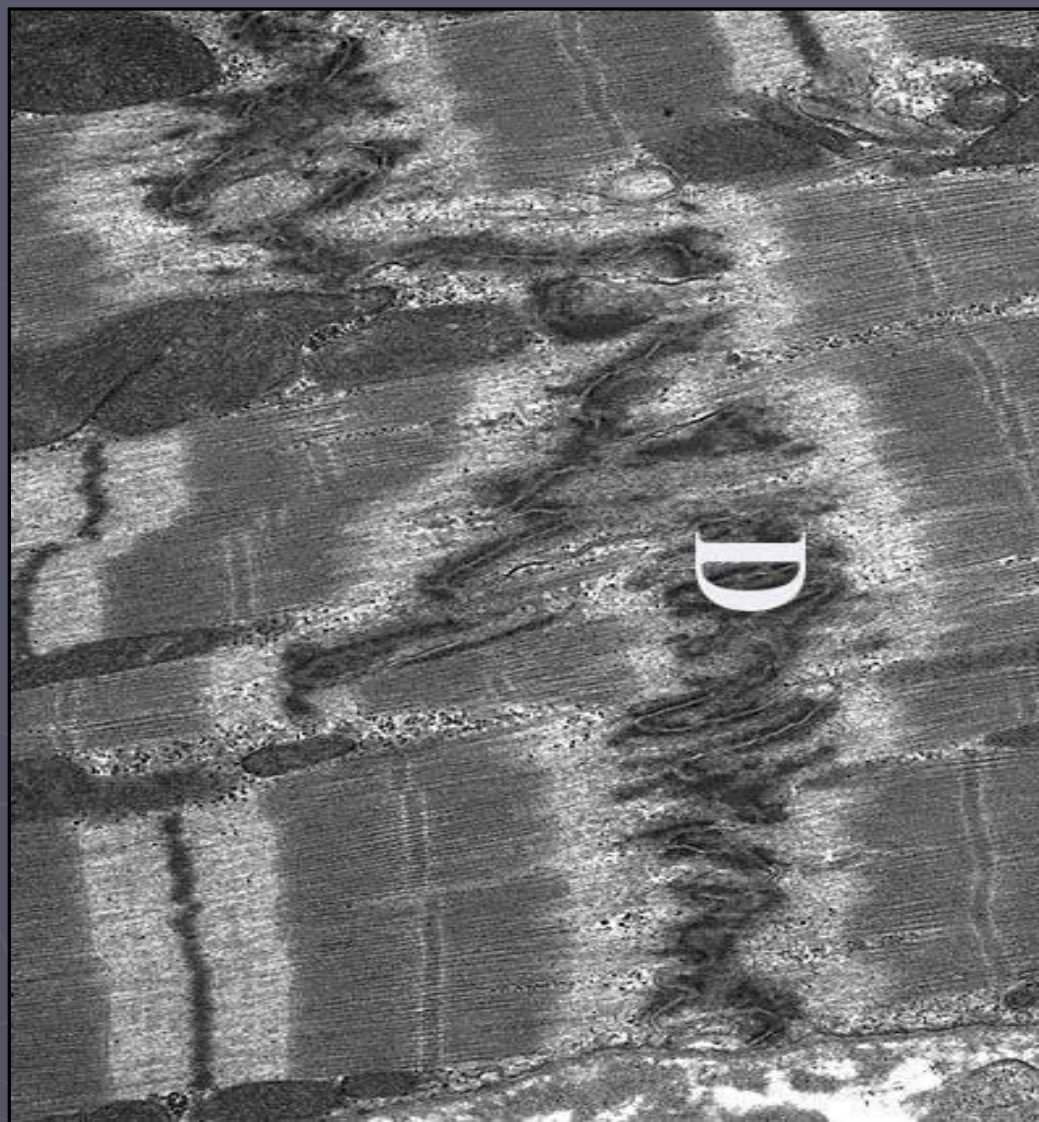
Cardiac muscle & Valve



Intercalated disc of cardiac muscle

Cardiac muscle has the same types and arrangement of myofilaments (thick and thin filaments) as those of skeletal muscle.

- **The intercalated disks (D)** represent the junctional complexes between the cell membranes of 2 successive cardiac muscle cells.




THANKS!
a bunch
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