

Muscle

- Contractile tissue
- Three type-
 - Skeletal muscle
 - Cardiac muscle
 - Smooth muscle
- Muscle tissue consist of elongated cells called as muscle fibers. Cytoplasm of the musclecell is called sarcoplasm which is surrounded by sarcolemma. Each muscle cell contain myofibril, which in turn contain two type of contractile protein filaments actin & myosin

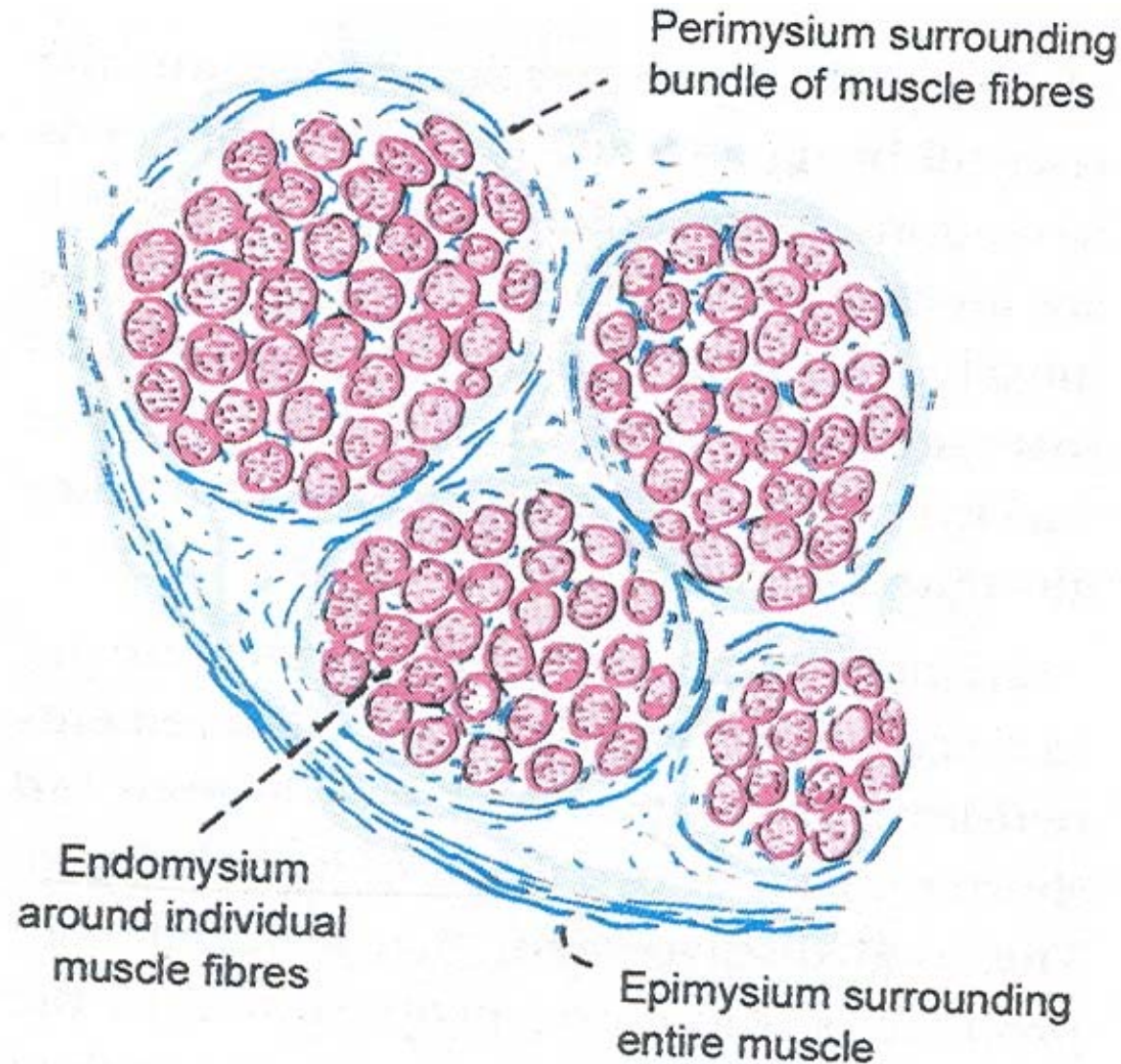
Skeletal muscle

- Made up of long cylindrical fibers(up to 30 cm)
- Diameter varies from 10-60 micro metre
- Each fiber has hundreds of nuclei
- Nuclei are elongated and lie along its periphery
- Cytoplasm is filled with myofibrils which are arranged in groups called of Conheim

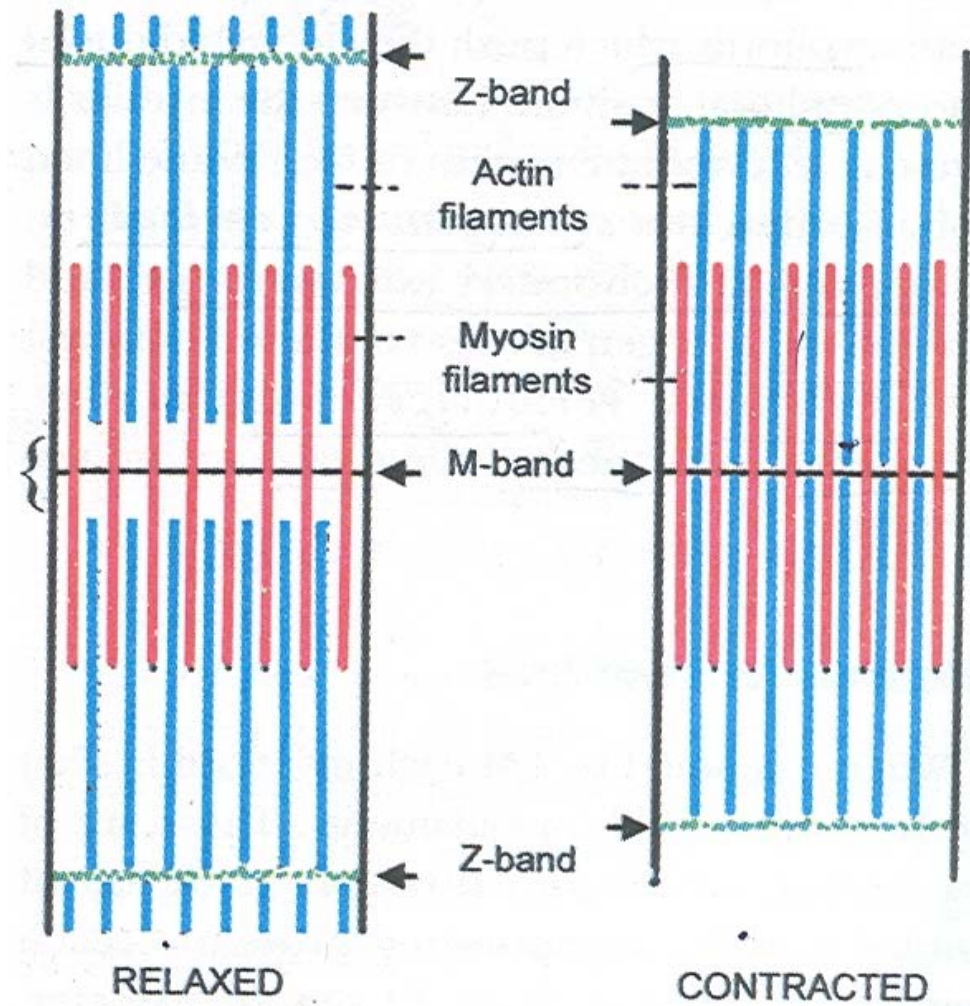
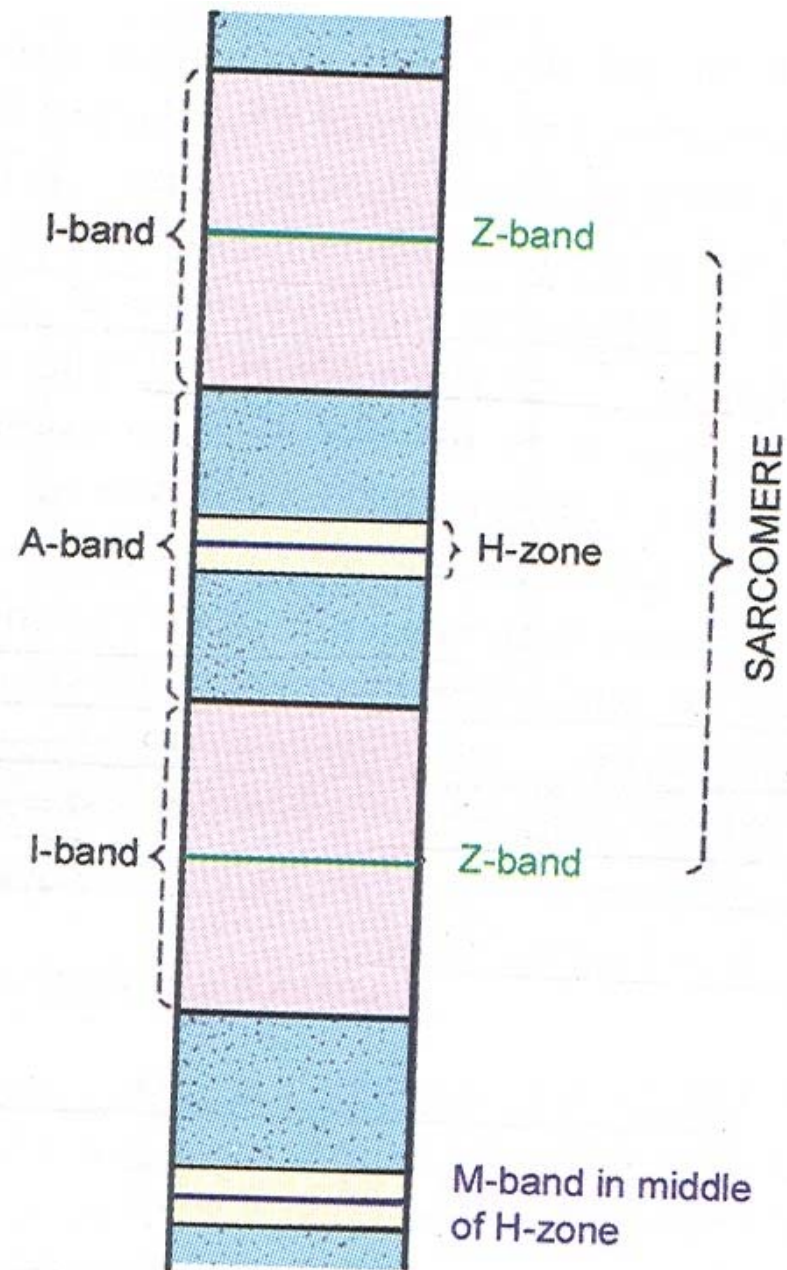
Skeletal muscle of tongue



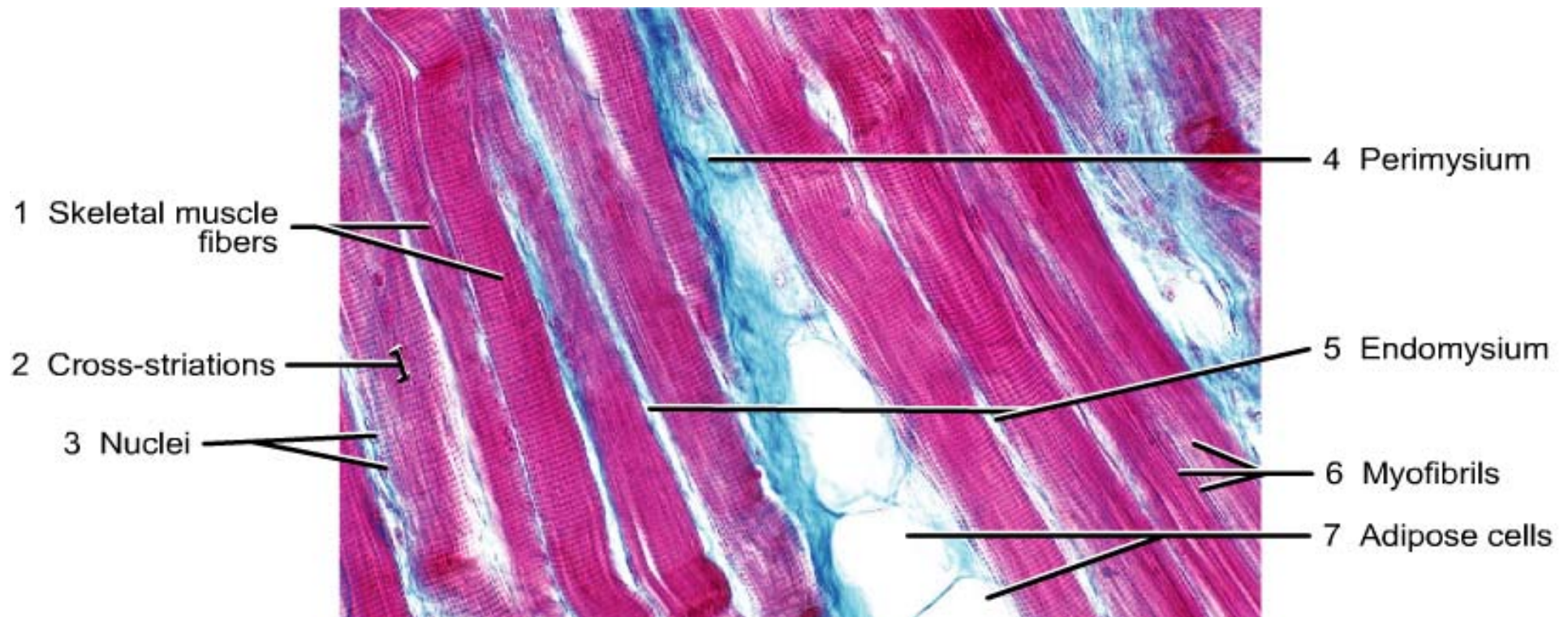
Connective tissue present in relation to skeletal muscle



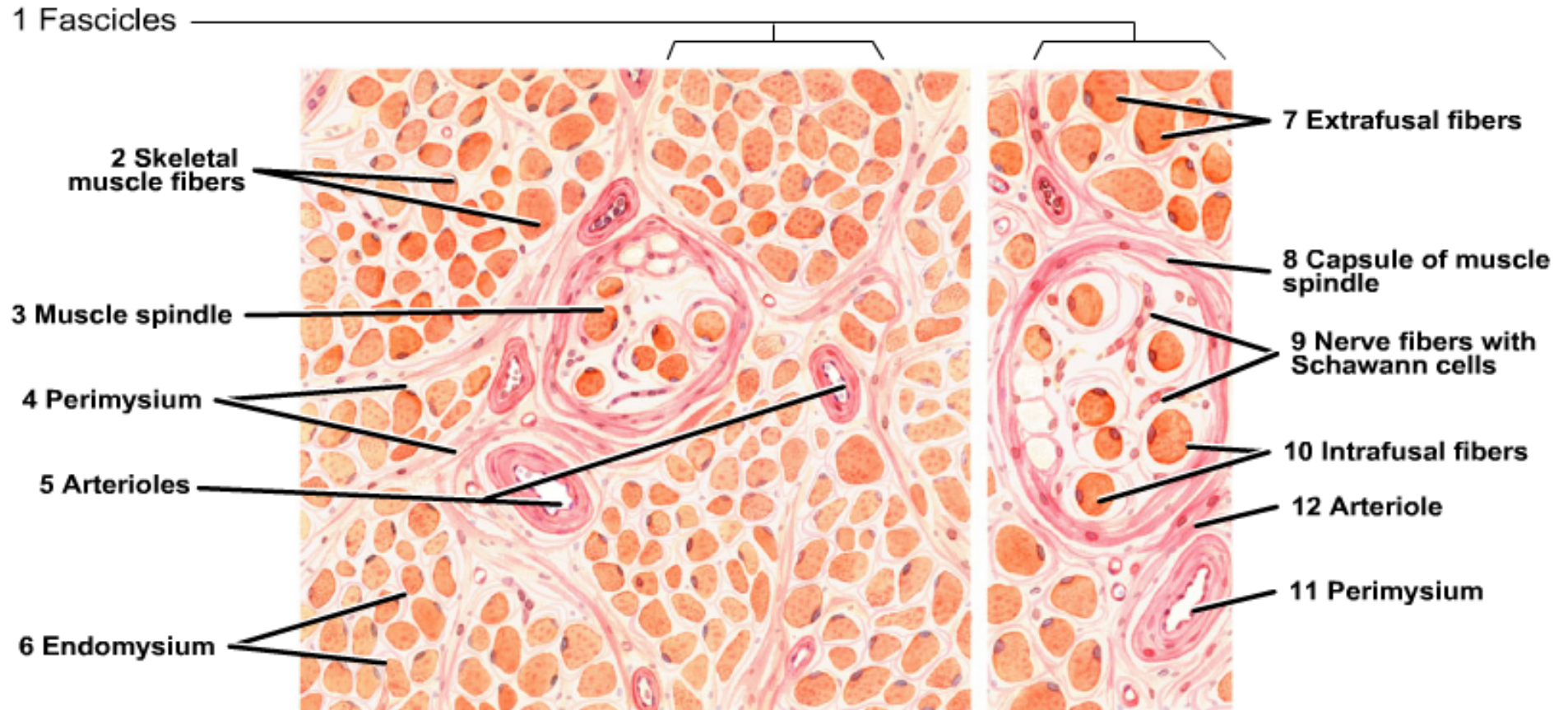
- Striations in the muscle are seen in alternate dark & light bands
- Dark bands are called A – bands
- Light bands are called are called I bands
- Running across the midline of I band there is a thin line called Z band
- Center of A band is crossed by H band (zone)
. Running thru the center of which is a M band



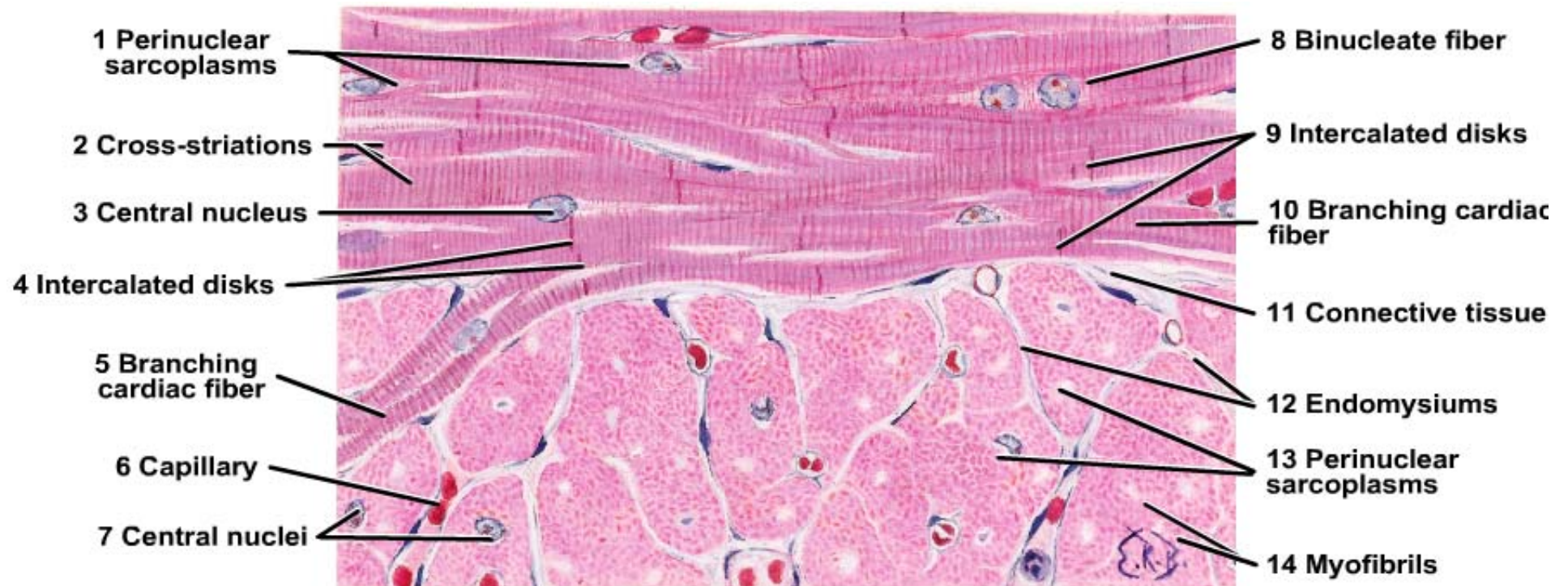
Skeletal muscle of tongue



Skeletal muscle in trasverse section



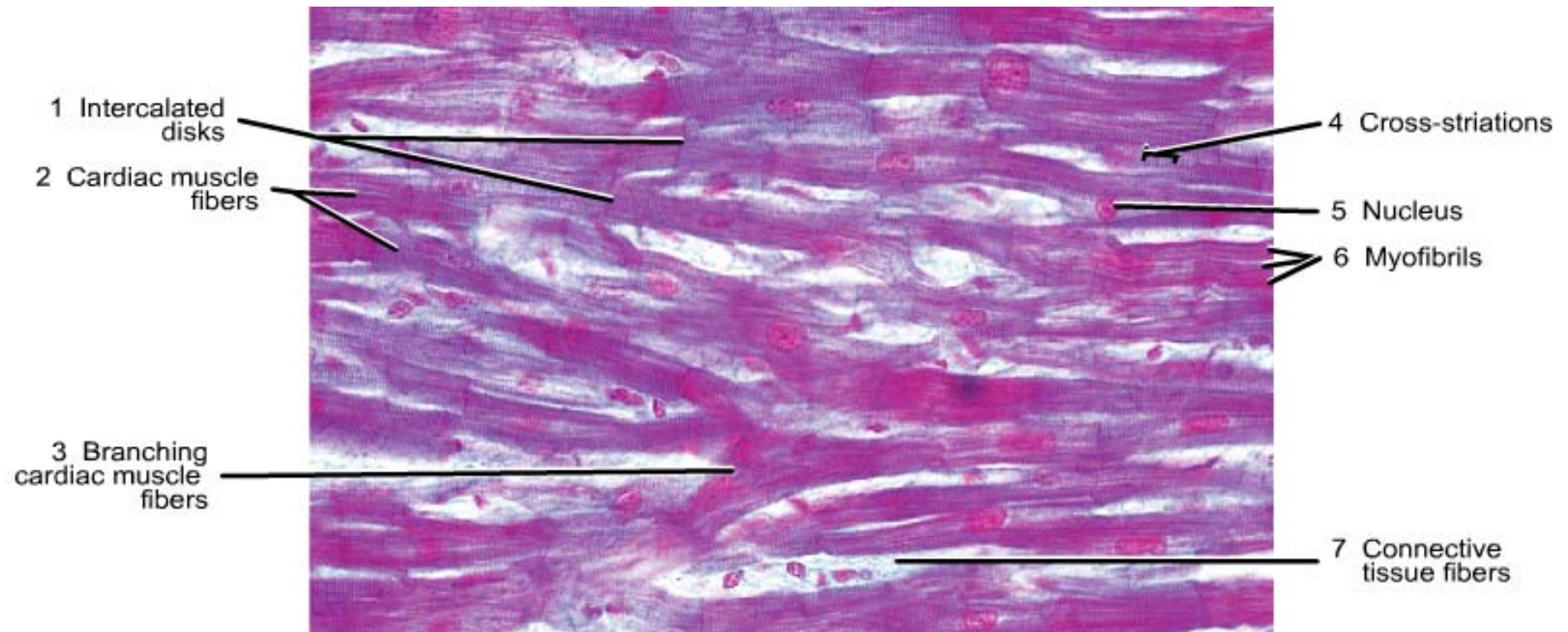
Cardiac muscle



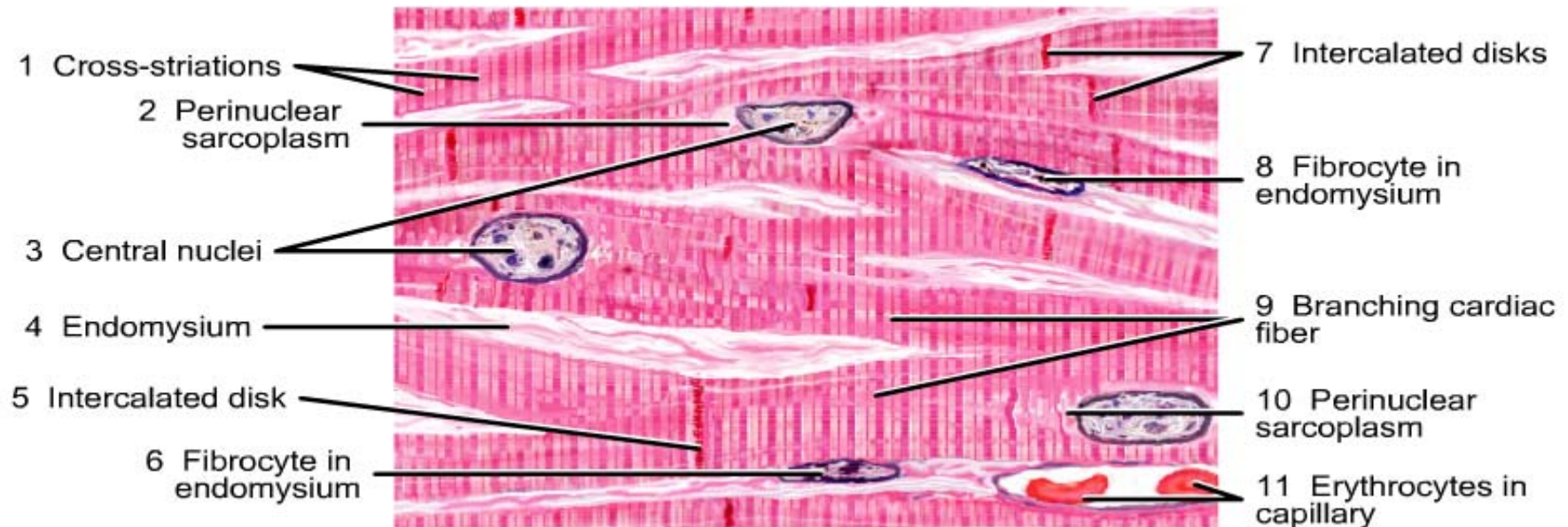
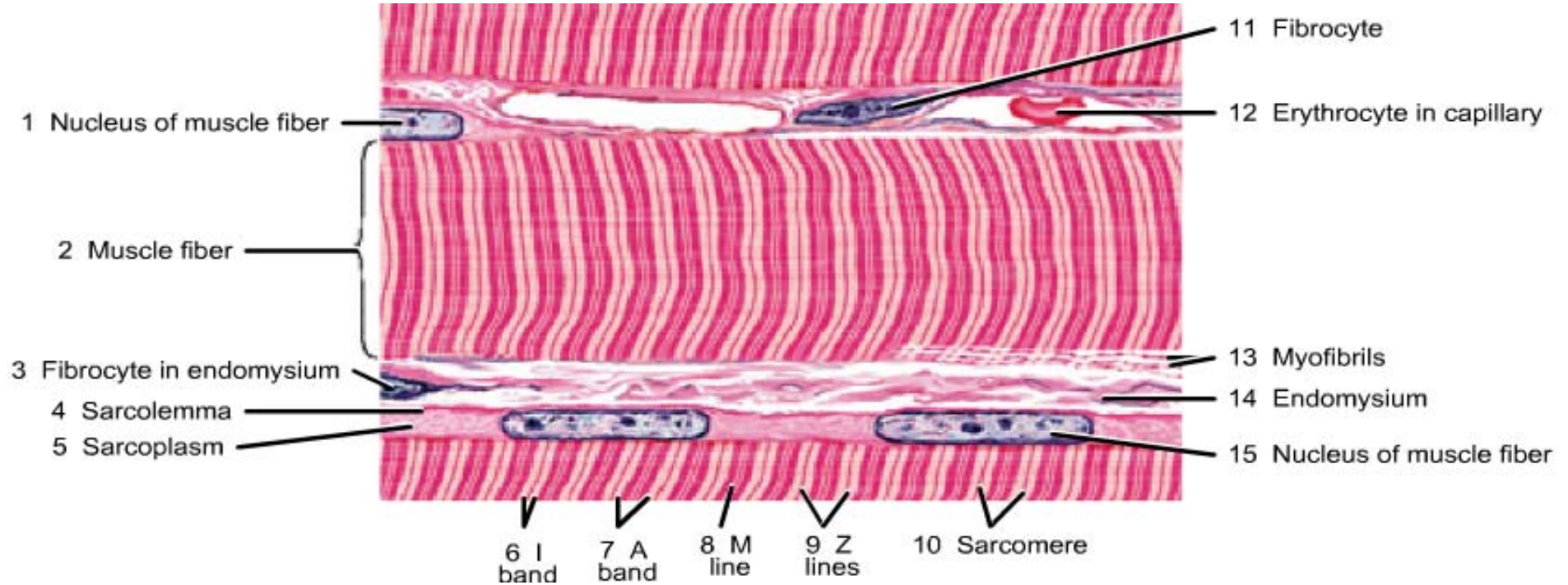
- Cardiac muscle is made up of elongated fibers
- Myofibrils show striations similar to skeletal muscle
- Fibers do not run in strict parallel fashion but branch and anastomose with each other to form a network
- Each cardiac fiber is having its own nucleus
- Nucleus of each myocyte is located centrally
- Sarcoplasm contains large mitochondria

- Junctions between the Adjoining cardiac myocyte are seen as dark staining transverse line running across as intercalated disc
- Cardiac muscle is involuntary

Cardiac muscle



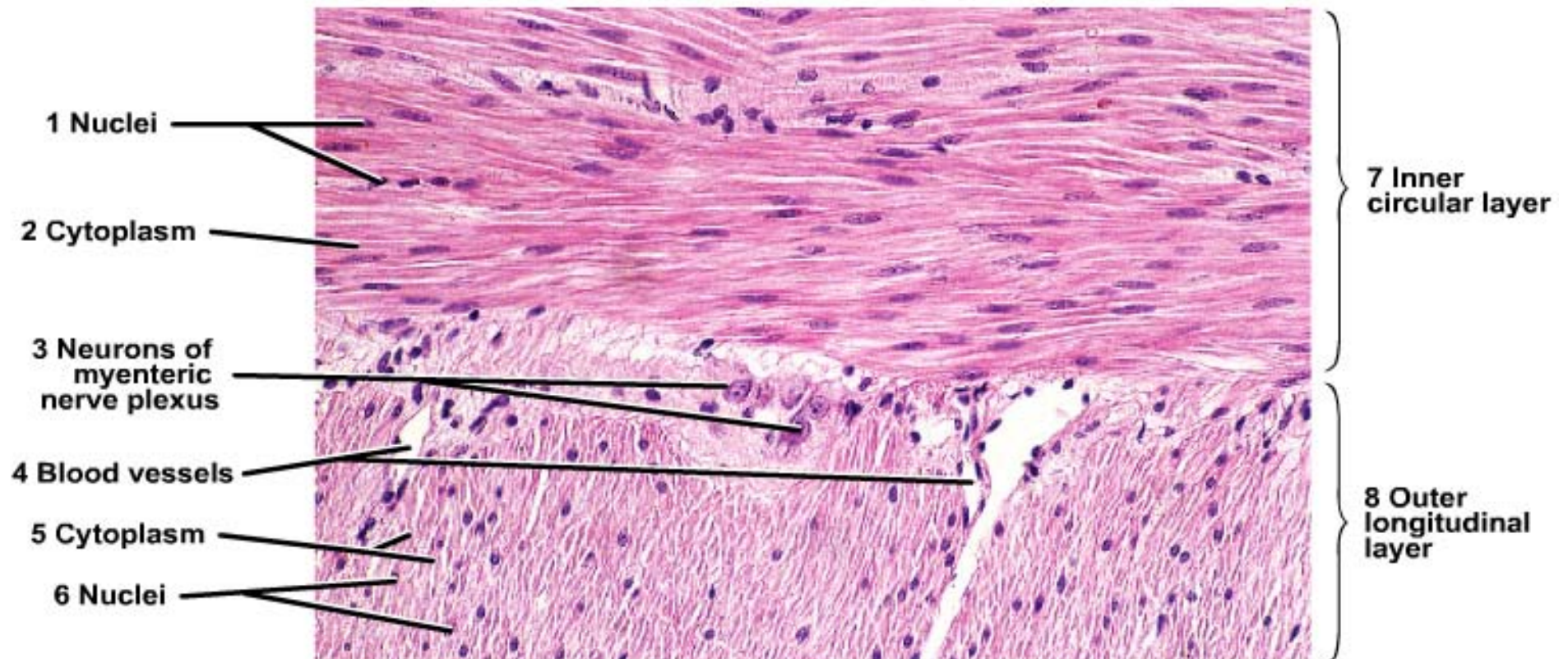
Cardiac & skeletal muscle



Smooth muscle

- Called no striated
- Made up of spindle shaped cells
- Nucleus is oval & elongated lies in the central part of the cell
- Sarcoplasm has indistinct longitudinal striations
- Fibers aggregated to form fasciculi

Smooth muscle layer of small intestine



Smooth muscle of small intestine

