

Repetition of the tissues

Epithelial tissue

Connective tissue, cartilage, bone

Muscle tissue

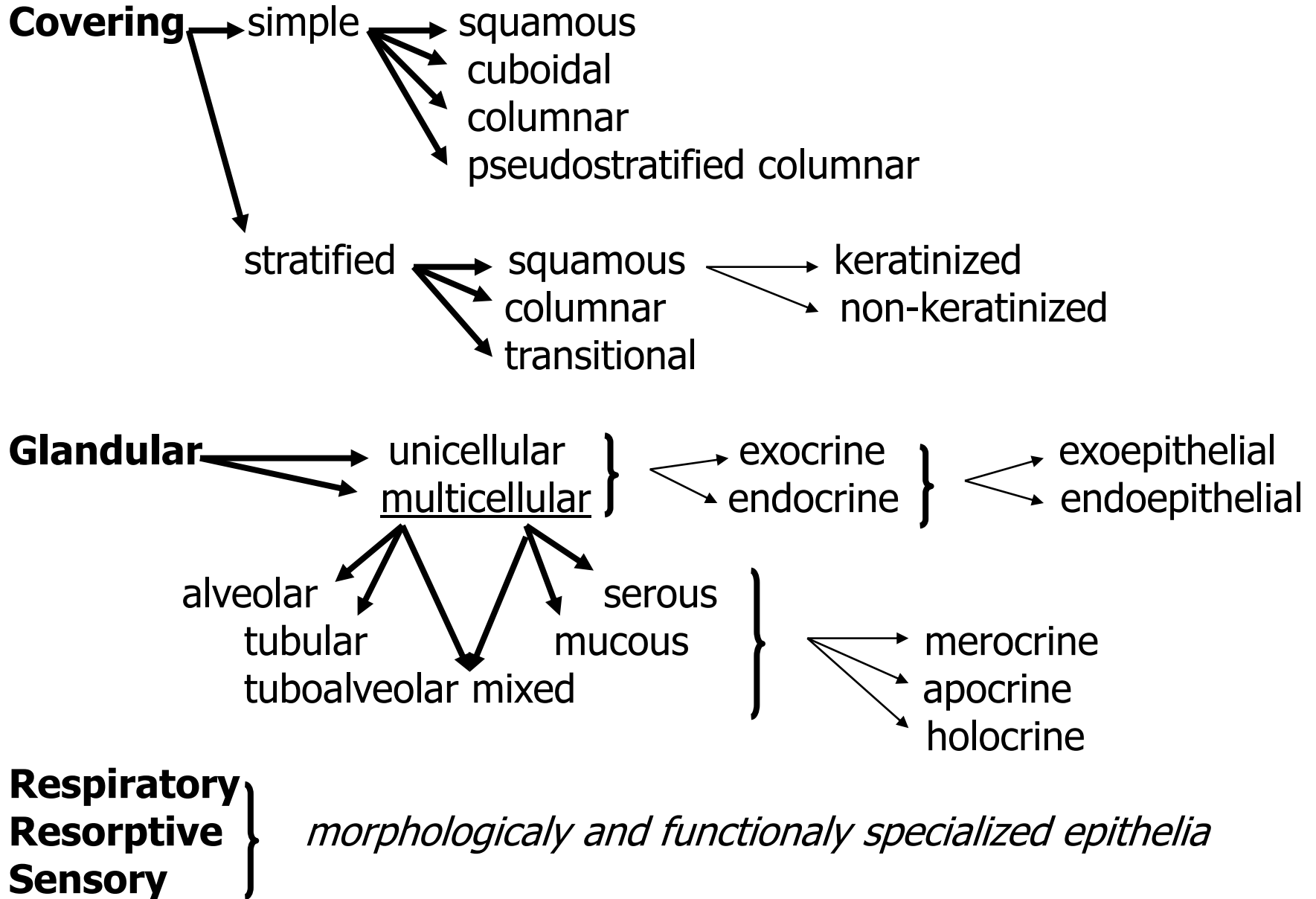
Nervous tissue

Blood

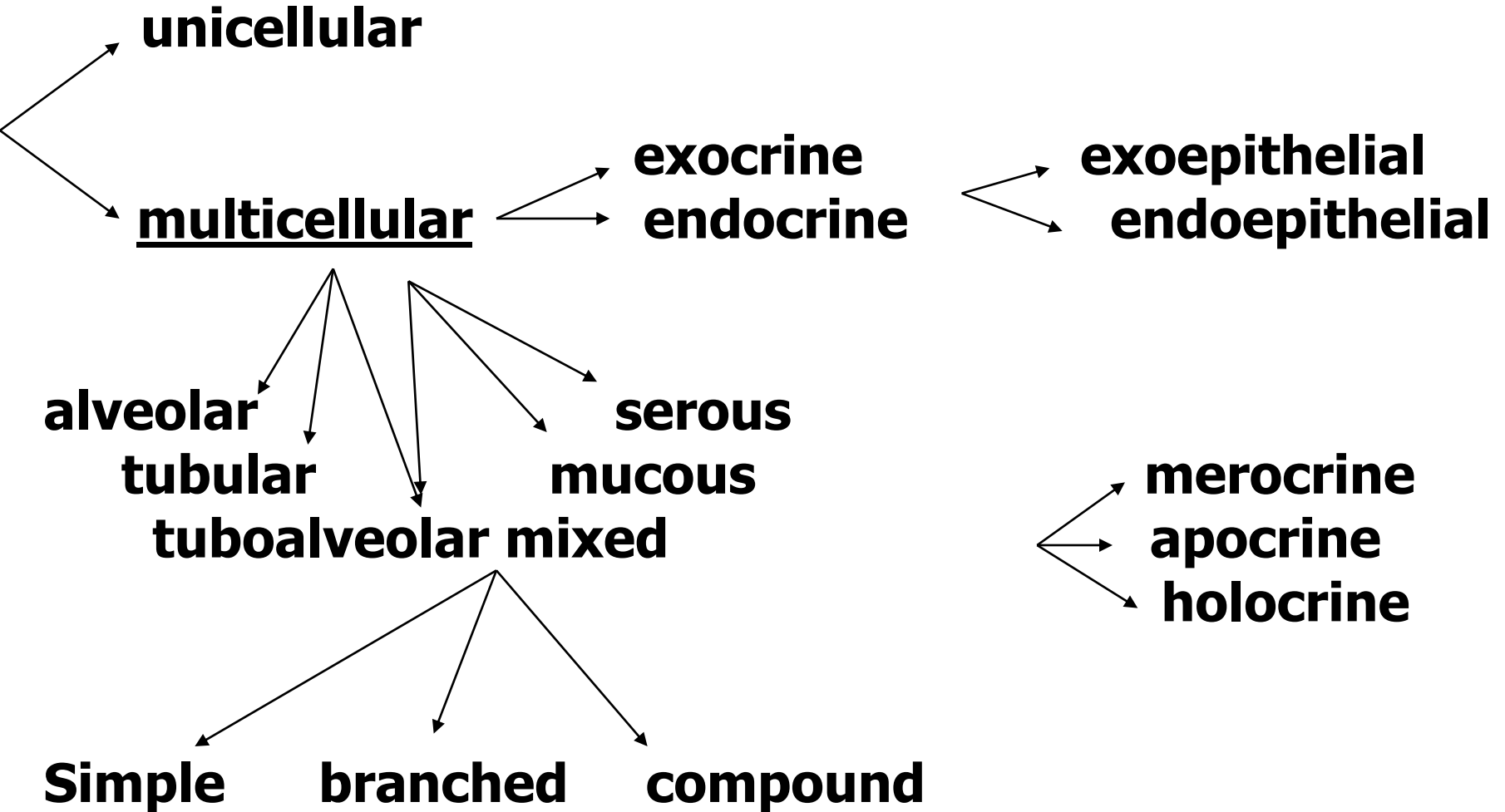
Define, describe, explain

- Basal lamina, basement membrane
- Basal labyrinth – occurrence and importance
- Brush or striated border – its importance
- Types of intercellular junctions in epithelium
- Cytoskeleton of epith. cells, cytokeratin
- Free surface modifications of epith. cells
- Transitional ep. *versus* ep. of transitional zones
- Classification of epithelium
- Origin of epithelium

Classification of epithelial tissue:



Classification of glands (glandular epithelial tissue):



Define, describe, explain

- Ingestion – diffusion, selective resorption, pinocytosis
- Secretions synthesis – proteosynthetic organelles
- Types of secretion – merocrine, apocrine, holocrine
- Unicellular glands - Goblet cell, gastro-entero-pancreatic endocrine cells, Paneth cell
- Serous acinus
- Mucous tubule
- Serous demilune
- Myoepithelial cells

Define, describe, explain

- Classification of connective tissue proper
- Origin of connective tissue
- Fibers – types and characteristic
- Ground substance – composition
- Cells – fixed and mobile, characteristic, function

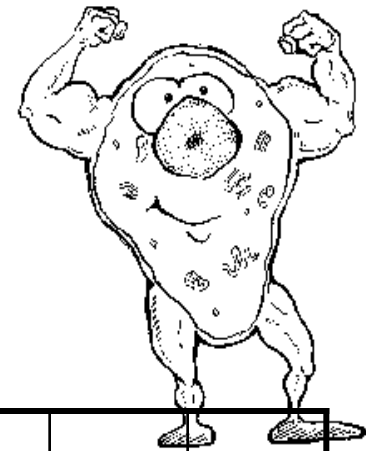
Define, describe, explain

- Types of cartilage, examples of an occurrence
- Perichondrium
- Chondroblasts, chondrocytes – lacunae
- Isogenic group – territorial matrix
- Interterritorium
- Fibers – types
- Ground amorphous substance – composition
- Apositional growth of cartilage
- Interstitial growth of cartilage

Define, describe, explain

- Types of bone tissue
- Periosteum, endosteum
- Sharpey's fibers
- Bone cells – localization in bone, function
- Fibers – types
- Ground amorphous substance – composition
- Bone lamellae – Haversian systems, interstitial and circumferential (outer and inner) lamellae
- Canaliculi ossium
- Haversian and Volkmann's canal
- Ossification - types
- Ossification zones, osteoid, ossein

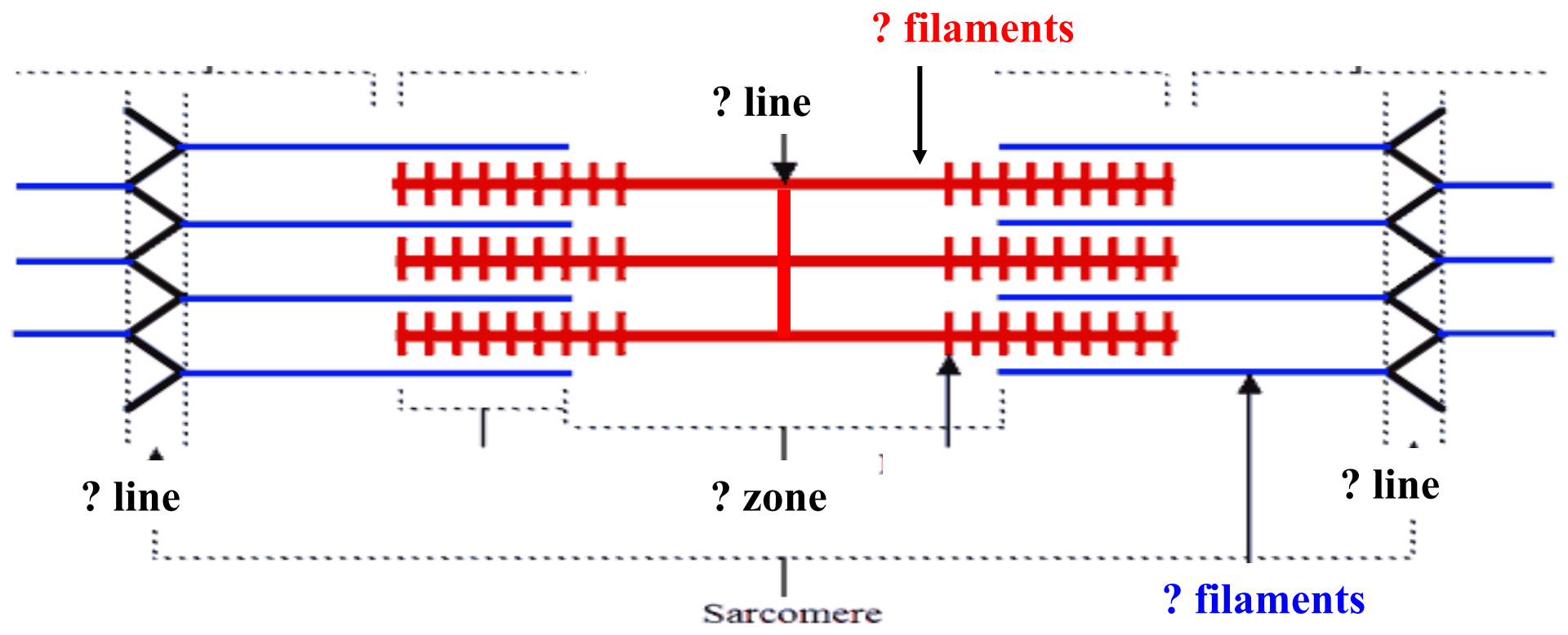
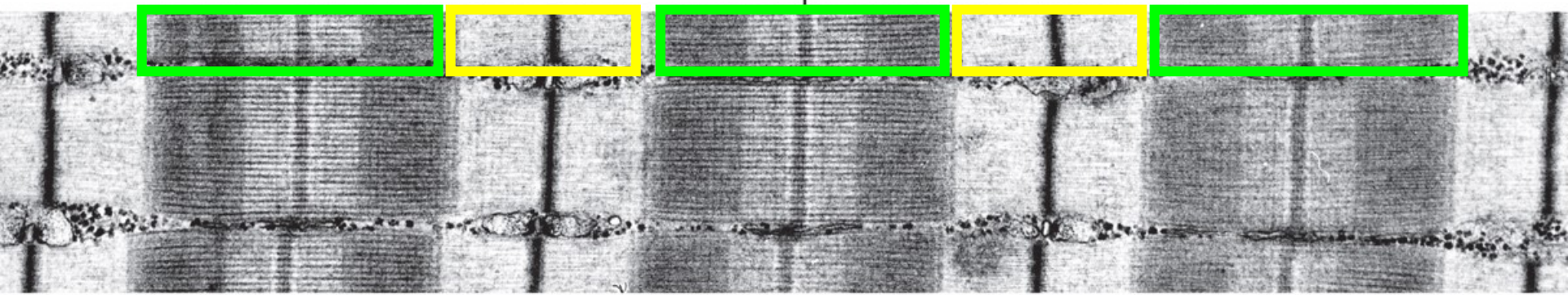
Muscle tissue



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Describe myofibril and sarcomere:

? band ?

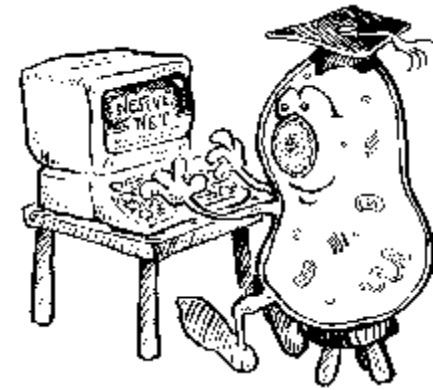


Define, describe, explain

- Rhabdomyocyte
- Sarcolemma
- T-tubule, terminal cisternae, triad, diad
- Sarcoplasmic reticulum
- Myofibril
- Sarcomere
- Myofilament
- Actin
- Troponin, tropomyosin
- Myosin

Define, describe, explain

- A-band, I-band
- Z-line, M-line, H-zone
- **Cardiomyocyte**
- Intercalated disc
- **Leiomyocyte**
- Motor-end-plate
- Endomysium
- Perimysium
- Epimysium



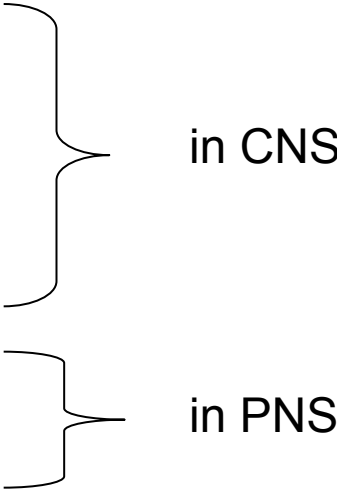
Nervous tissue

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Define, describe, explain

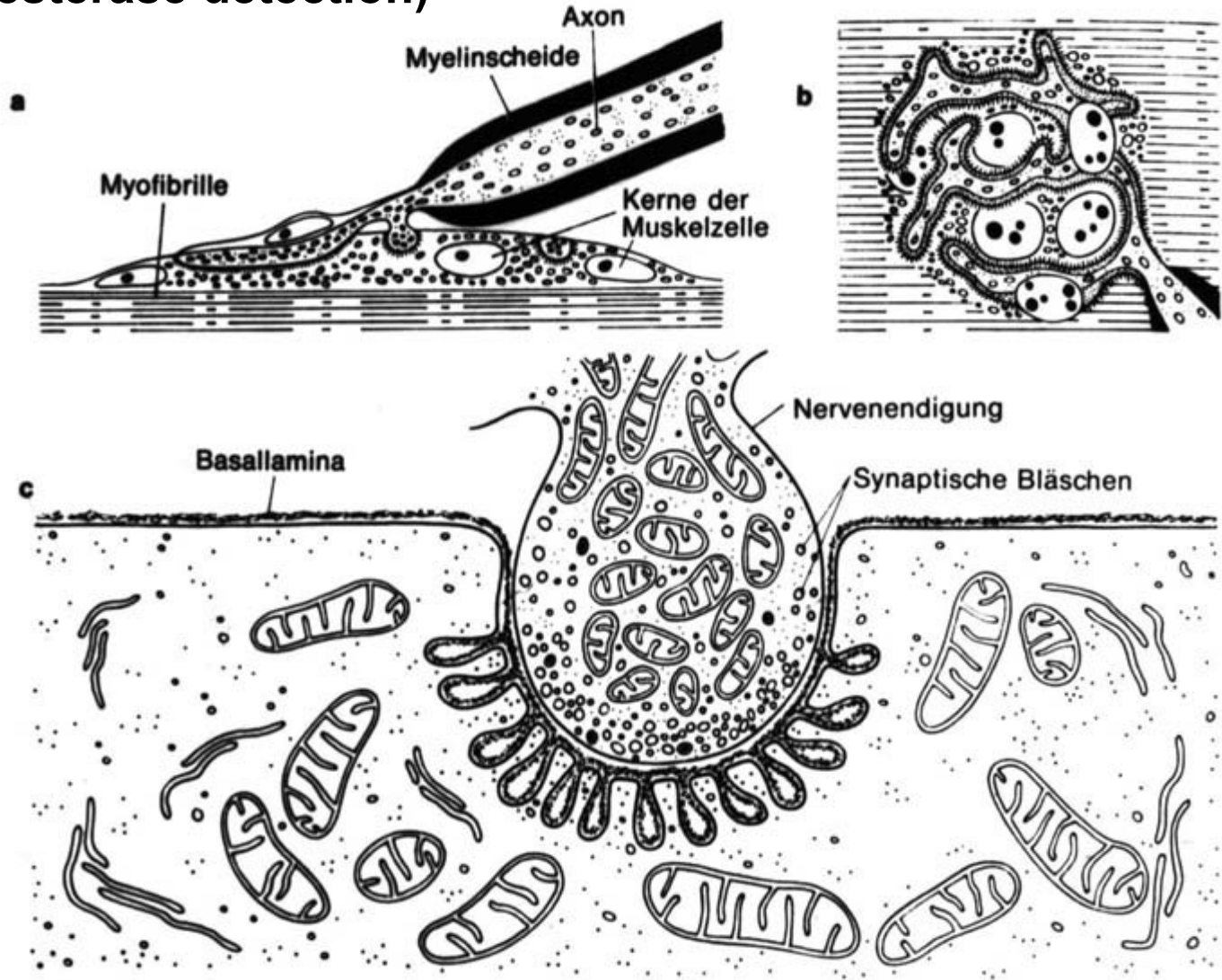
- **Neuron** – perikaryon – neurite – dendrite
- Nissl substance
- Axon hillock
- Myeline sheath
- Schwann sheath
- Mesaxon
- Internodium
- Node of Ranvier
- Neuron – classification
- Synapse (presynaptic knobe, synaptic cleft, postsynaptic membrane)
- Neurotransmitter

Define, describe, explain

- Neuroglia - classification
 - Oligodendroglia
 - Astrocytes
 - Microglia (of Horteg)
 - Ependyma - tanocytes
 - Schwann cells
 - Satelite cells
- 
- The diagram consists of two vertical curly braces on the right side of the list. The top brace groups the first five items (Oligodendroglia, Astrocytes, Microglia, Ependyma, and tanocytes) and is labeled 'in CNS'. The bottom brace groups the last two items (Schwann cells and Satelite cells) and is labeled 'in PNS'.
- in CNS
- in PNS

Motor-end-plate

(acetylcholinesterase detection)



- Labium oris – epithelium (covering + glands, connective t., muscle t.
- Apex linguae – muscle t., glands
- Gl.submandibularis – secretory units, duct epithelium
- Oesophagus – epithelium, connective t., muscle t.
- Intestines – epithelium, connective t., muscle t.
- Vesica fellea – epithelium, connective t., muscle t.
- Epiglottis – epithelium, connective t., cartilage
- Trachea – epithelium, connective t., cartilage
- Ren – epithelia
- Calyx renalis – epithelium

- Female urethra – epithelium
- Male urethra – epithelium
- Ureter – epithelium
- Ovary – epithelium
- Tuba uterina – epithelium
- Uterus – epithelium
- Vagina – epithelium, connective t.
- Artery and vein
- Lien – impregn. - epithelium
- Skin with hair – epithelium, connective t.
- Skin from the finger tip – epithelium, connective t.

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- Palpebra – epithelium, connective t., muscle t.
- Posterior segment of eye – connective t.
- Auricle – epithelium, connective t., cartilage
- Umbilical cord – connective t.
- Cortex cerebri – neurons
- Cerebellum – neurons
- Medulla spinalis – neurons
- Ganglion spinale – neurons, satelite cells
- Peripheral nerve – neurits, Schwann cells, myelin
- Bone
- Ossification

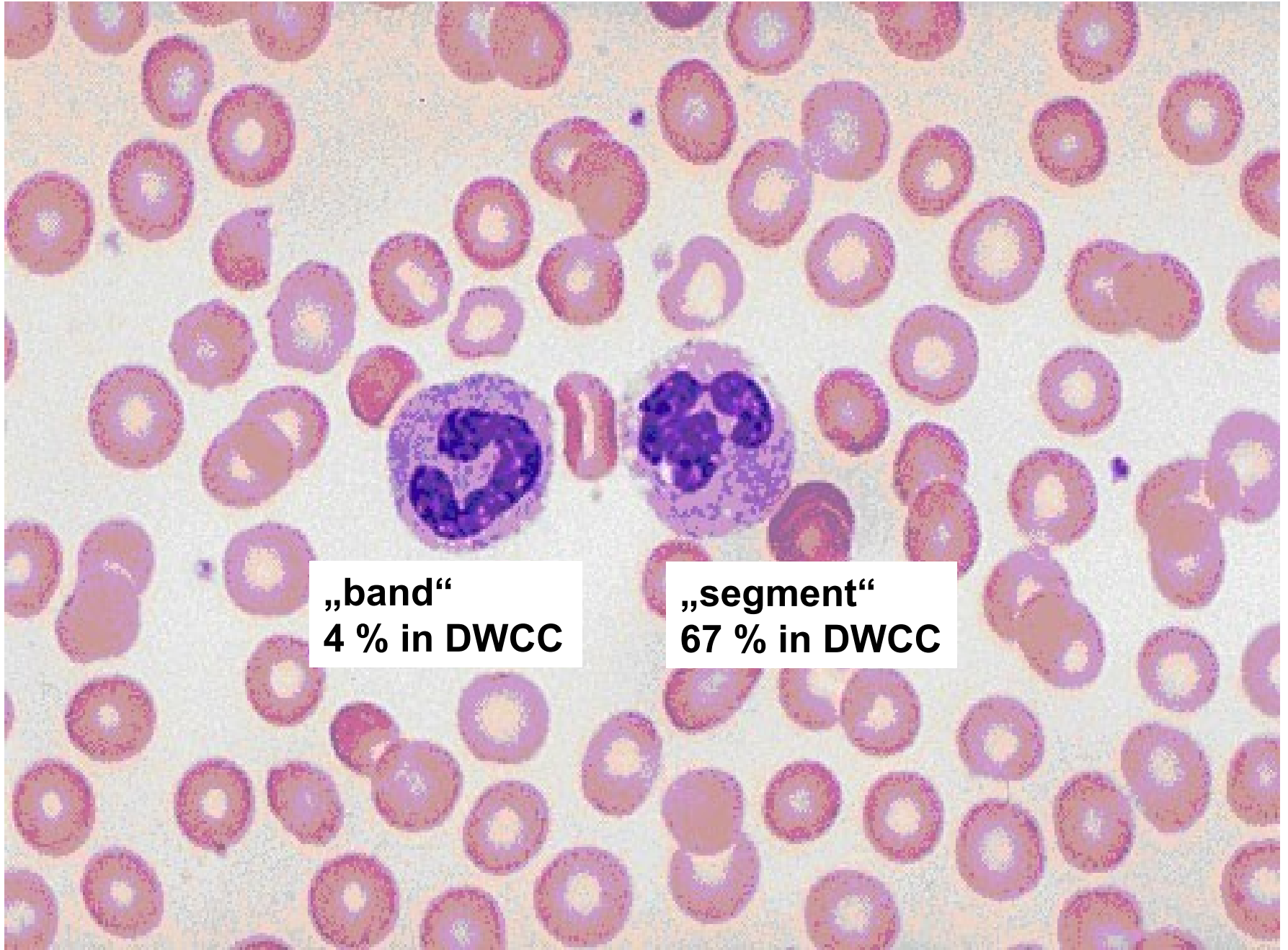
Repetition of blood

- Composition of the blood
- Hematocrit
- Hemoglobin
- Erythrocytes – shape, size, density per 1 μl
- Reticulocytes
- Anisocytosis
- Poikilocytosis
- Polycythemia (= polyglobulia)

- Granulocytes
- Agranulocytes
- Number of leukocytes per $1\mu\text{l}$ or l
- Anemia
- Leukocytopenia
- Thrombocyte
- Number of thrombocytes per $1\mu\text{l}$
- Hyalomere, granulomere

- Bone marrow structure
 - Erythropoiesis
 - Granulocytopoiesis
 - Megakaryocyte
 - Endomitosis
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- Differential white cell count (DWCC)
 - Anomalies of DWCC
 - Shift to the left or to the right

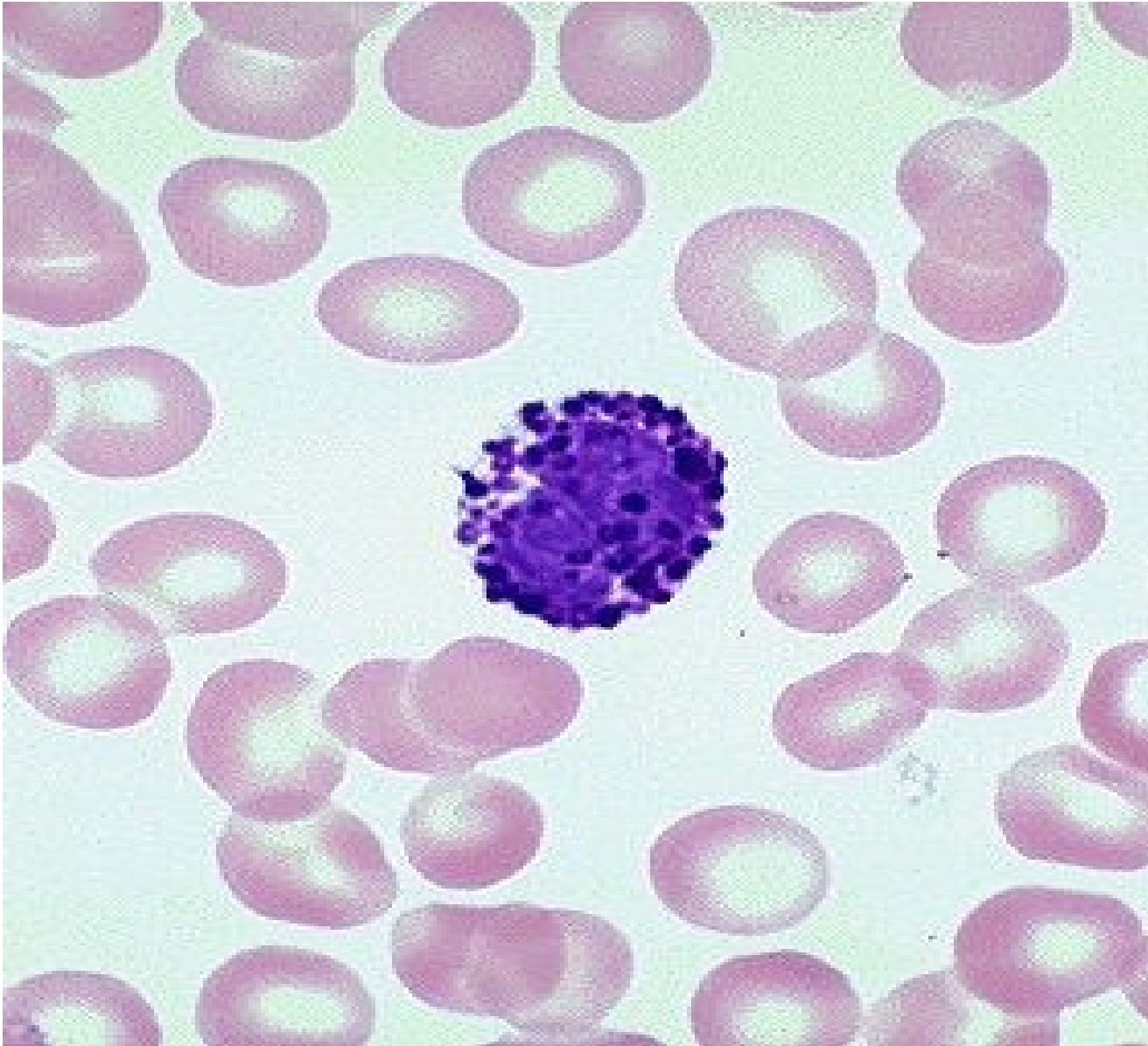
Neutrophilic granulocytes: 10-12 μm in \varnothing



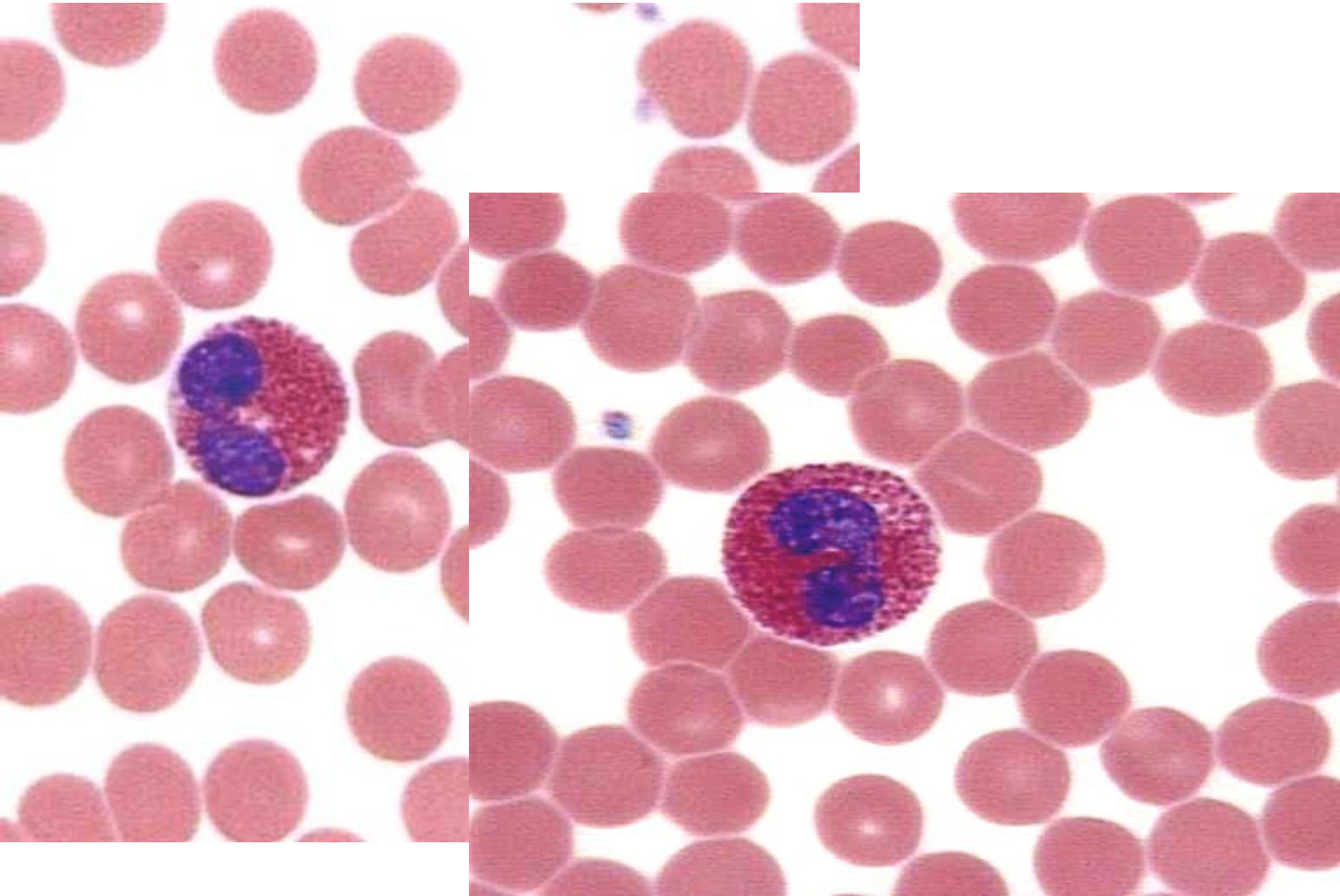
**„band“
4 % in DWCC**

**„segment“
67 % in DWCC**

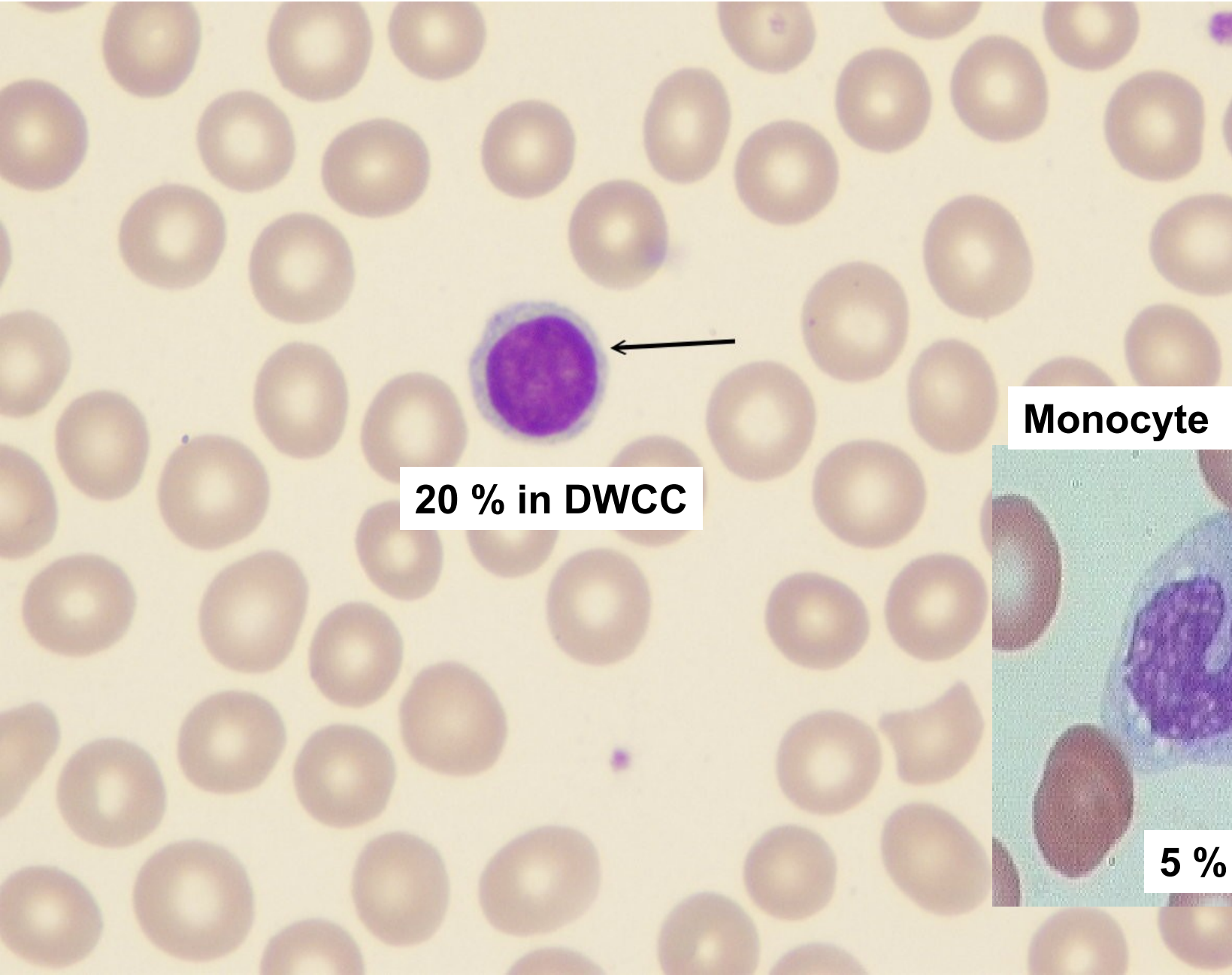
Basophilic granulocyte: 8 μm in \varnothing , only 1 % in DWCC



Eosinophilic granulocyte: up to 14 μm in \varnothing , 3 % in DWCC

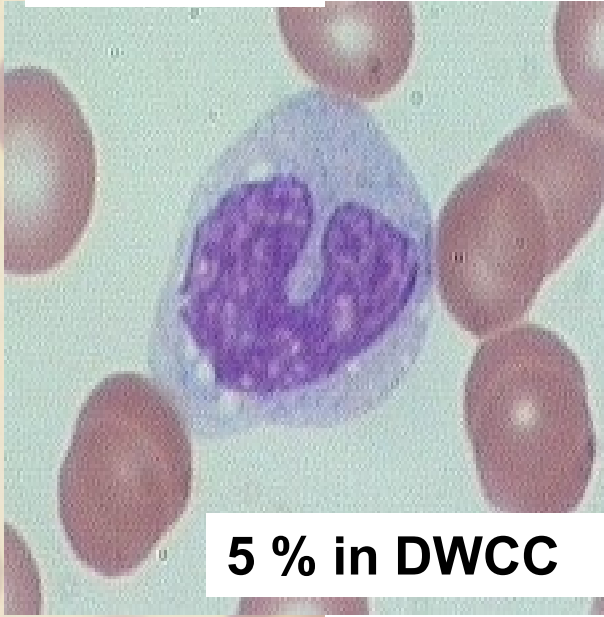


Lymphocyte



20 % in DWCC

Monocyte



5 % in DWCC

Thank for your attention