

# MODULE 2 L05

# Agranulocytes

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# Agranular Leukocytes

- Granules not visible with light microscope

## a. Monocytes

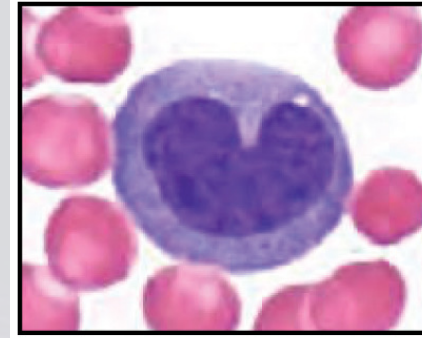


## b. Lymphocytes



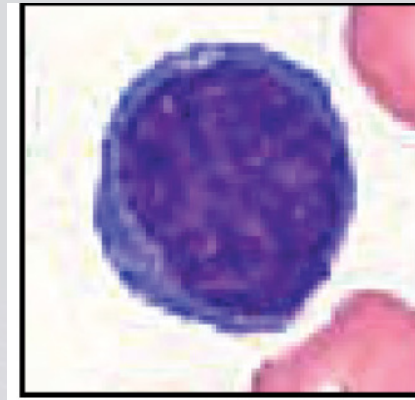
# a. Monocytes

- Quantity
  - ❖ 2-8% of circulating WBCs
- Size
  - ❖ Largest WBC; 2-3X larger than RBCs
- Nucleus
  - ❖ Oval or kidney bean-shaped
- Other characteristics:
  - ❖ Short lifespan in blood – 1-3 days
    - Enter peripheral tissue
      - Free macrophages
        - Highly mobile, phagocytic cells
        - Migrate to sites of injury right after neutrophils
        - Release chemicals:
          - ✓ Attract and stimulate other monocytes and phagocytic cells
          - ✓ Attract fibroblasts
            - Collagen fibers → scar tissue



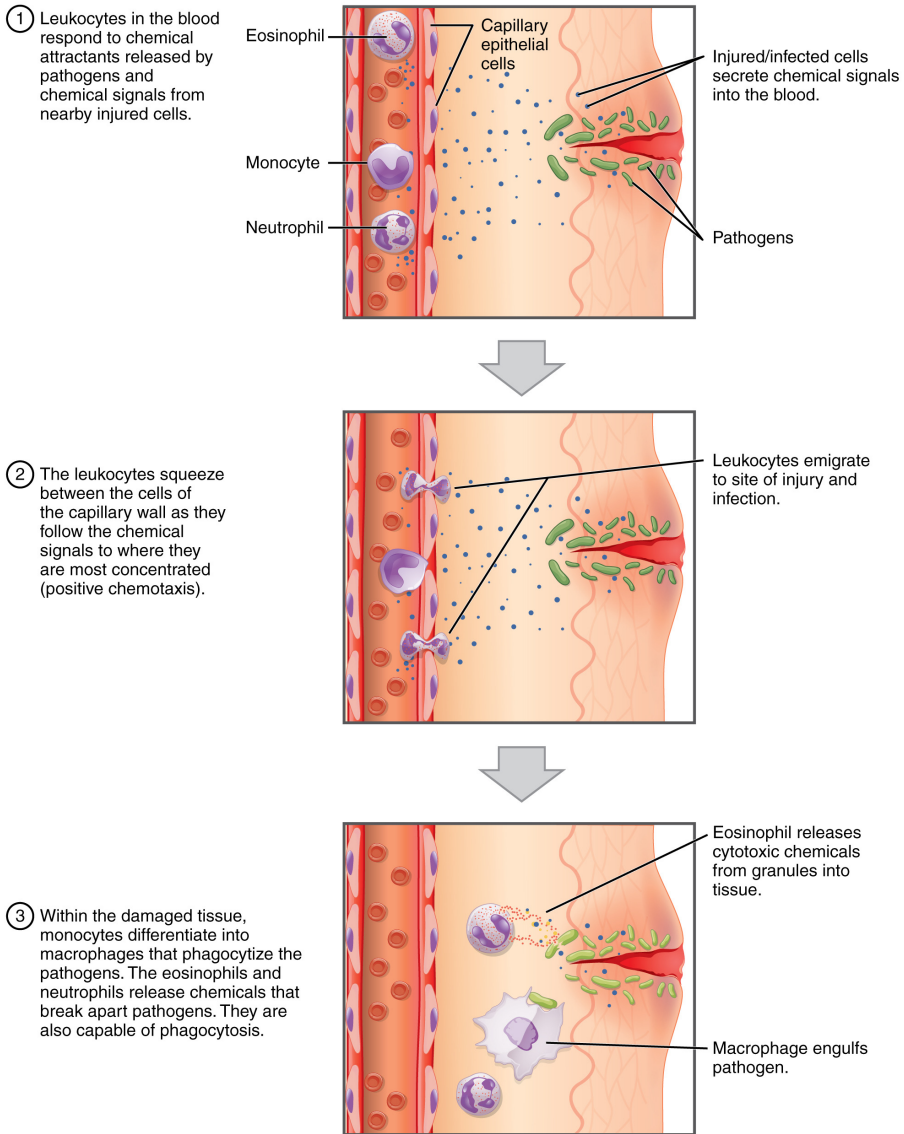
# b. Lymphocytes

- Quantity
  - ❖ 20-30% of circulating WBCs
- Root of the word
  - ❖ Lymph = clear water
- Size
  - ❖ Slightly larger than RBCs
- Nucleus
  - ❖ Large, round, purple-staining nucleus
  - ❖ Very little cytoplasm
- Other characteristics:
  - ❖ Primary cells of lymphatic system
  - ❖ Responsible for specific immunity
    1. T cells – attack foreign cells directly
    2. B cells → differentiate into plasmocytes – secrete antibodies
    3. NK cells
      - responsible for immune surveillance
      - destruction of abnormal tissue cells
      - Important in preventing cancer





# Diapedesis



- Also known as emigration
- Process of leukocytes exiting the blood vessels
- Leukocytes are attracted to site of injury

## ❖ Chemical signs of:

- Inflammation
- Infection

Chemotaxis