

# MODULE 6 L02

# Lymphatic Vessels

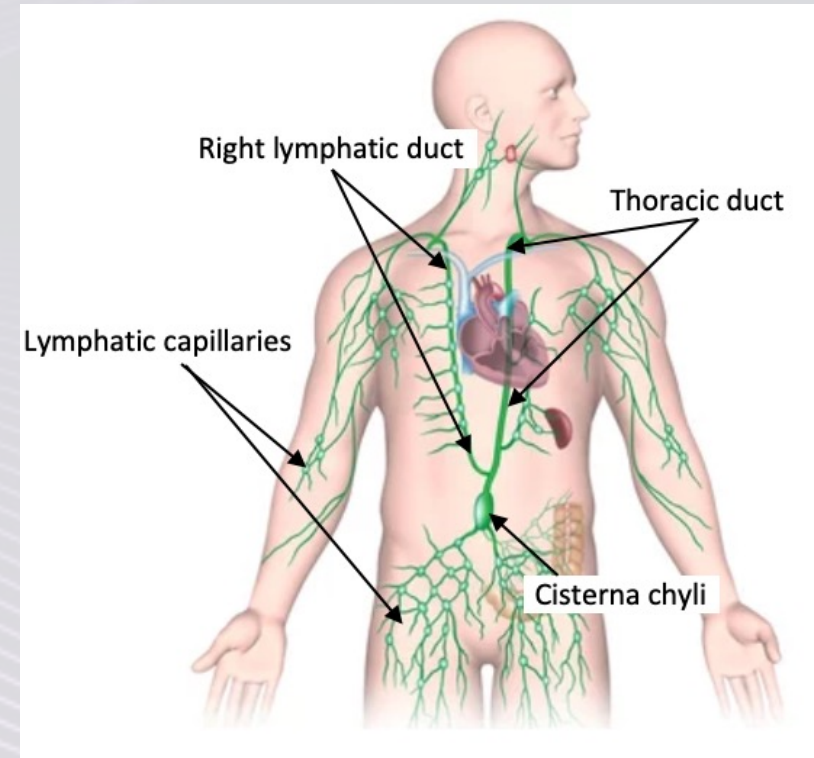
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# 2. Lymphatic Vessels

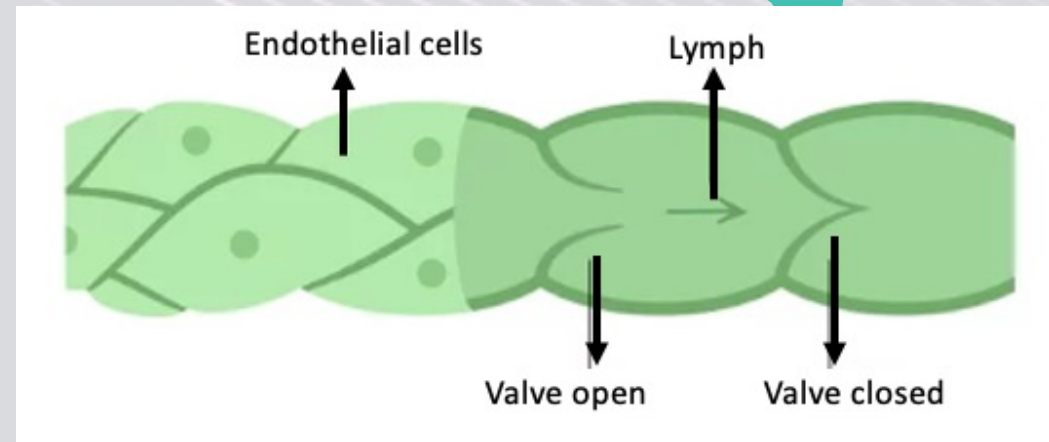
- Carry lymph
  - ❖ Peripheral tissues → venous system
- Size:
  - ❖ Lymphatic capillaries (small)
  - ❖ Lymphatic ducts (large)



# Lymphatic Capillaries

- Characteristics and differences when compared to vascular capillaries:
  - ❖ Lymphatic capillaries are larger
    - In diameter
    - In sectional view (larger lumen)
  - ❖ Thinner walls
    - Endothelial cells lack continuous basal lamina
  - ❖ Present flat or irregular outline
  - ❖ Contain collagenous anchoring filaments
    - Extend from the incomplete basal lamina → connective tissue
    - Help keep the passageways open when interstitial pressure increases
  - ❖ Have greater permeability
    - Endothelial cells overlap instead
- Location:
  - ❖ Connective tissue deep to skin
  - ❖ Mucous membranes
  - ❖ Mucosa
  - ❖ Submucosa

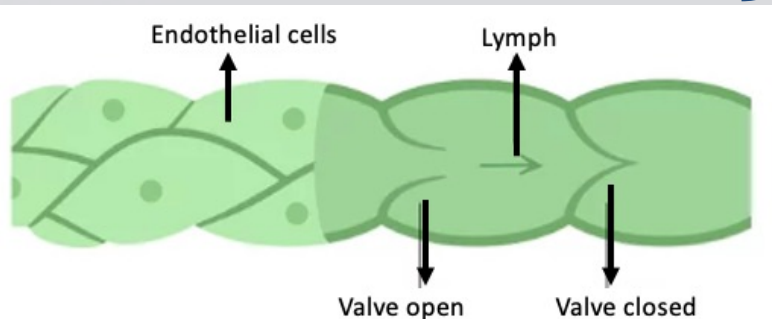
- Absent:
  - ❖ Central NS
  - ❖ Bone
  - ❖ Bone marrow
  - ❖ Cartilage
  - ❖ Epidermis
  - ❖ Eye orbit
  - ❖ Inner ear





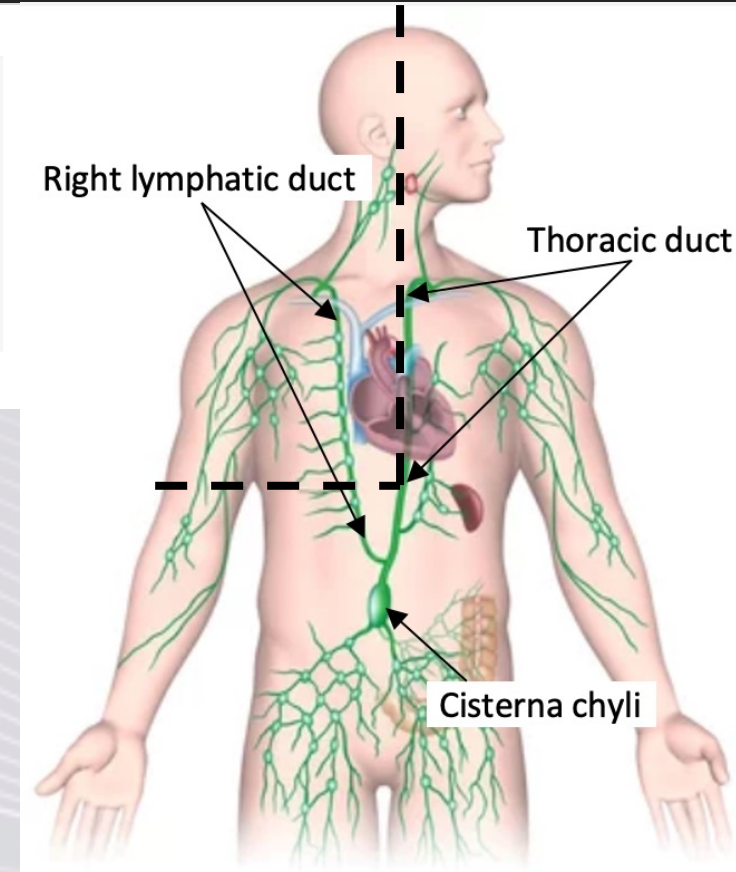
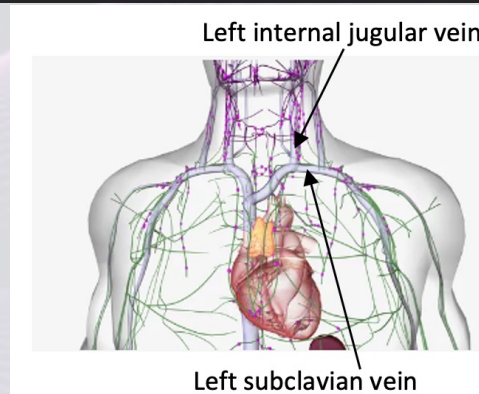
# Valves of Lymphatic Vessels

- Formed by endothelial cell overlap
    - ❖ Permit passage of interstitial fluid into lymphatic capillaries
    - ❖ Prevents escape of interstitial fluid
  - Gaps on endothelial cell lining
    - ❖ Large
    - ❖ Absorb:
      - Interstitial fluid
      - Dissolved solutes
      - Viruses
      - Cell debris
      - Bacteria
- } chemical and physical evidence about tissue health



# Major Lymph-Collecting Vessels

- Superficial lymphatics
  - ❖ More numerous than superficial veins
  - ❖ Anastomose freely
  - ❖ Travel with superficial veins
  - ❖ Locations:
    - Subcutaneous layer next to skin
    - Mucous membrane
      - Digestive, respiratory, urinary and reproductive tracts
    - Serous membrane
      - Pleural, pericardial, peritoneal cavities
- Deep lymphatics
  - ❖ Accompany deep arteries and veins
  - ❖ Location:
    - Skeletal muscles, neck, limbs, trunk
    - Visceral organs: thoracic and abdominopelvic cavities
- Lymphatic trunks
- Lymphatic ducts
  - ❖ Right lymphatic duct
  - ❖ Thoracic duct



# Lacteals

- Lymphatic capillary
  - ❖ Absorbs dietary fats in microvilli of small intestine

