THORACIC DUCT

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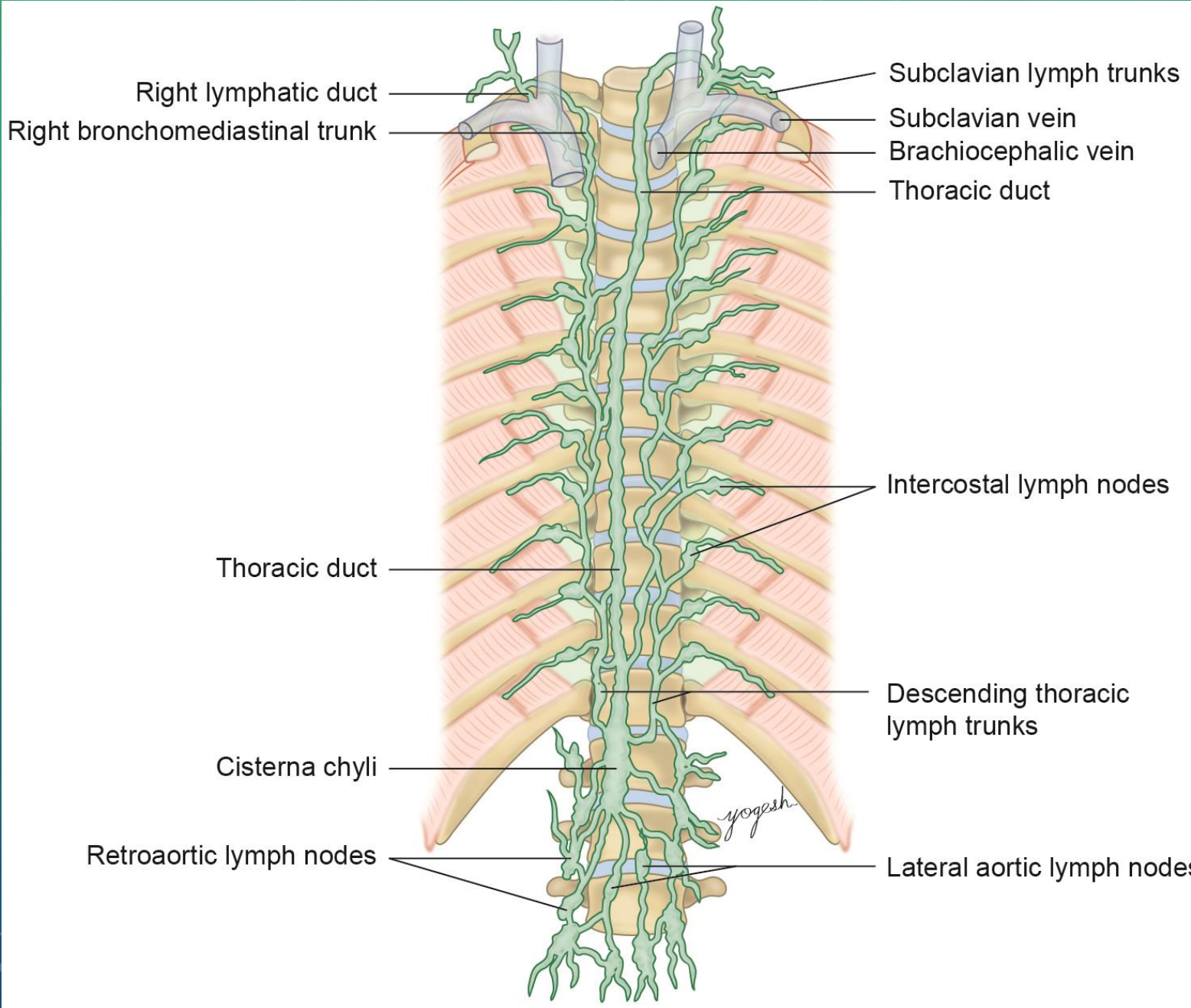
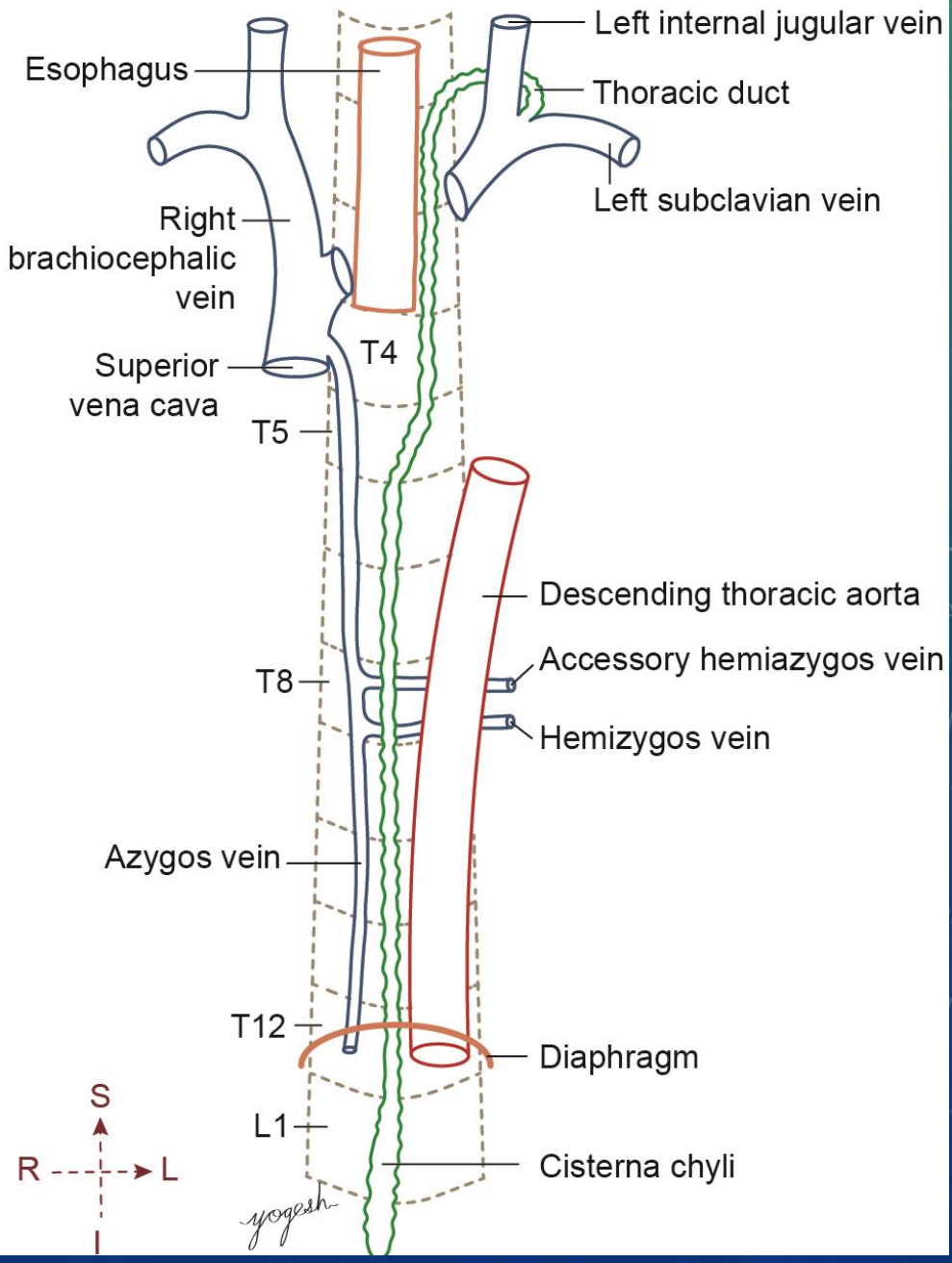
COMPETENCIES

- AN23.2
  - Describe and demonstrate extent, relation, tributaries of thoracic duct, and enumerate its applied anatomy
- AN23.7
  - Mention extent, relations, and applied anatomy of lymphatic duct

INTRODUCTION

- Largest lymphatic vessel in body
- Measurements
  - Length: about 45 cm
  - Width: 5 mm
- Extent
  - Extends from upper part of abdomen to lower part of neck
- Appearance
  - Has beaded appearance due to presence of numerous valves


Right lymphatic duct
Right bronchomediastinal trunk
Subclavian lymph trunks
Subclavian vein
Brachiocephalic vein
Thoracic duct
Intercostal lymph nodes
Thoracic duct
Descending thoracic lymph trunks
Cisterna chyli
Retroaortic lymph nodes
Lateral aortic lymph nodes
yogesh


Esophagus
Left internal jugular vein
Thoracic duct
Left subclavian vein
Right brachiocephalic vein
Superior vena cava
T4
T5
Descending thoracic aorta
Accessory hemiazygos vein
T8
Hemizygos vein
Azygos vein
T12
Diaphragm
L1
Cisterna chyli
S
R
L
I
yogesh

COURSE

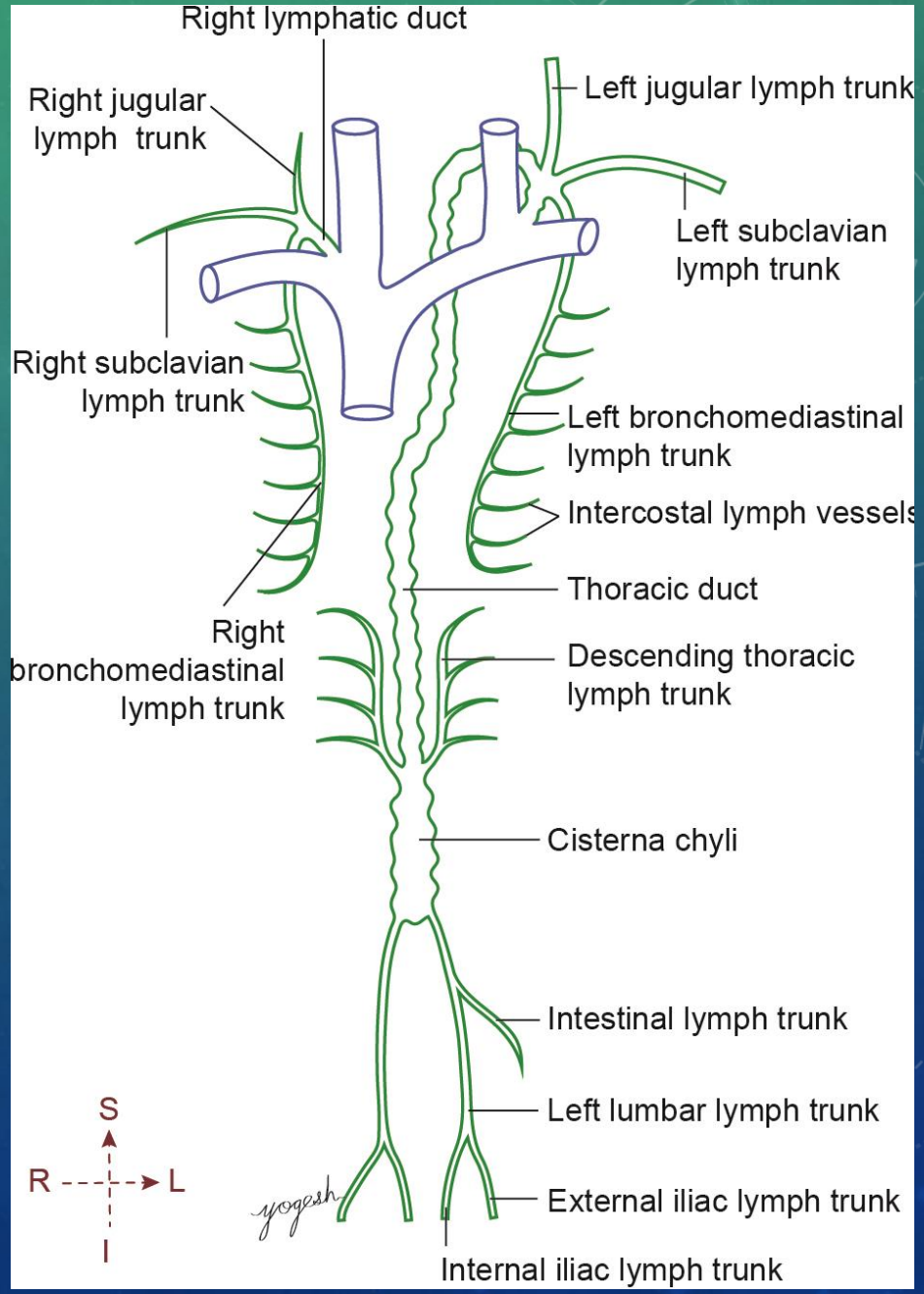
- Beginning
  - Begins as continuation of upper end of cistern chyli at lower border of 12th thoracic vertebra
- Course
  - Enters in thoracic cavity through aortic opening of diaphragm at level of 12th thoracic vertebra
  - Ascends upward in posterior mediastinum
  - Crosses from right to left, opposite to 5th thoracic vertebra
  - Ascends upward in superior mediastinum along left edge of oesophagus
  - In the neck
    - Arches laterally opposite transverse process of C7 vertebra (3–4 cm above left clavicle)
- Termination
  - In the neck
    - Opens at left jugulo-subclavian angle (junction of left internal jugular vein & left subclavian vein)

RELATIONS

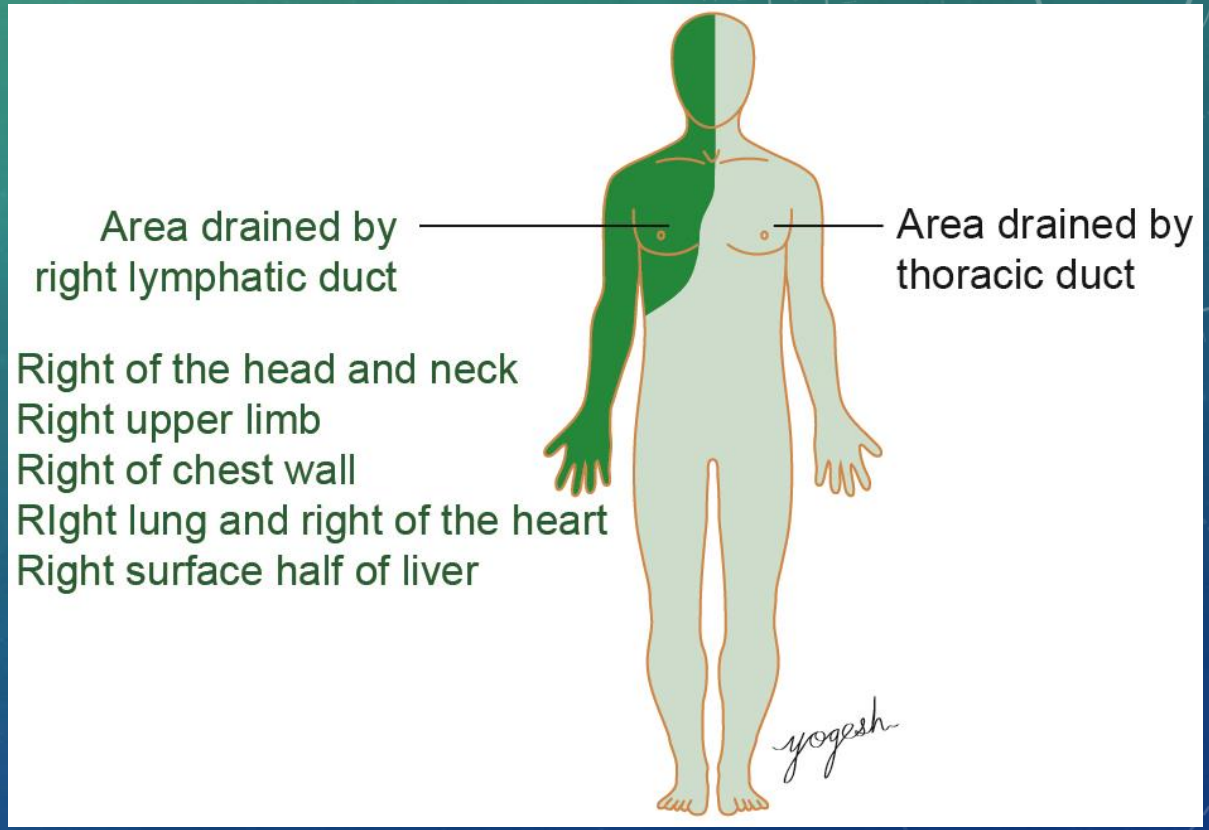
- At the Aortic Opening
  - Anterior: Diaphragm (median arcuate ligament of diaphragm)
  - Posterior: T12 vertebra
  - To right: Azygos vein
  - To left: Aorta
- In Posterior Mediastinum
  - Anterior: Diaphragm, Oesophagus
  - Posterior: Vertebral column, Right posterior intercostals arteries, Terminal parts of hemiazygos and accessory hemiazygos veins
  - To right: Azygos vein
  - To left: Descending thoracic aorta

TRIBUTARIES

- In Abdomen
  - Cisterna chyli (from where it begins)
    - It receives lymph from whole lower part of body
- In neck
  - Left jugular lymph trunk
    - Drains nodes from left half of head and neck
  - Left subclavian lymph trunk
    - Drains lymph from left upper limb
  - Left broncho-mediastinal lymph trunk
    - Drains left lung and left side of heart



- **Drains lymph from all parts of body**
- **EXCEPT**
  - Right of head and neck
  - Right upper limb
  - Right of chest wall
  - Right lung and right of heart
  - Right surface of liver
- **Which is drained via Right Lymphatic Duct**



APPLIED / CLINICAL ANATOMY

- Chylothorax
  - Accumulation of lymph (chyle) into pleural cavities
  - May occur due to rupture of thoracic duct
  - Causes – trauma, tuberculosis, malignancy
- Thoracic duct fistula
  - Leakage of lymphatic fluid from thoracic duct
  - Usually occurs as a complication following surgeries of root of neck
  - Should be treated surgically

APPLIED / CLINICAL ANATOMY

- Thoracic duct obstruction
- May be due to
  - Infection by microfilaria Wuchereria bancrofti parasite
    - Filariasis / Elephantiasis
  - External structures such as malignancies

Thank You