

DB 15.10
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Thoras

DIAPHRAGM:

Introduction: outlet of thorax is broad

↳ Musculo-tendinous ~~organ~~ which forms a partition b/w thoracic cavity of Abdomen.

Boundaries:

Ant : Infra umbilical Angle b/w 2 costal Margin

Post : Inf surface of the body of the 12th vertebra

On each side : costal Margin formed by cartilage of 7 costal cartilages

Diaphragm at outlet of thorax.

ORIGIN: ~~Ant~~ - 3 parts.

Ant - xiphisternal processes

Post - 4th & 8th vertebra.

each side - lower 6 costal cartilage

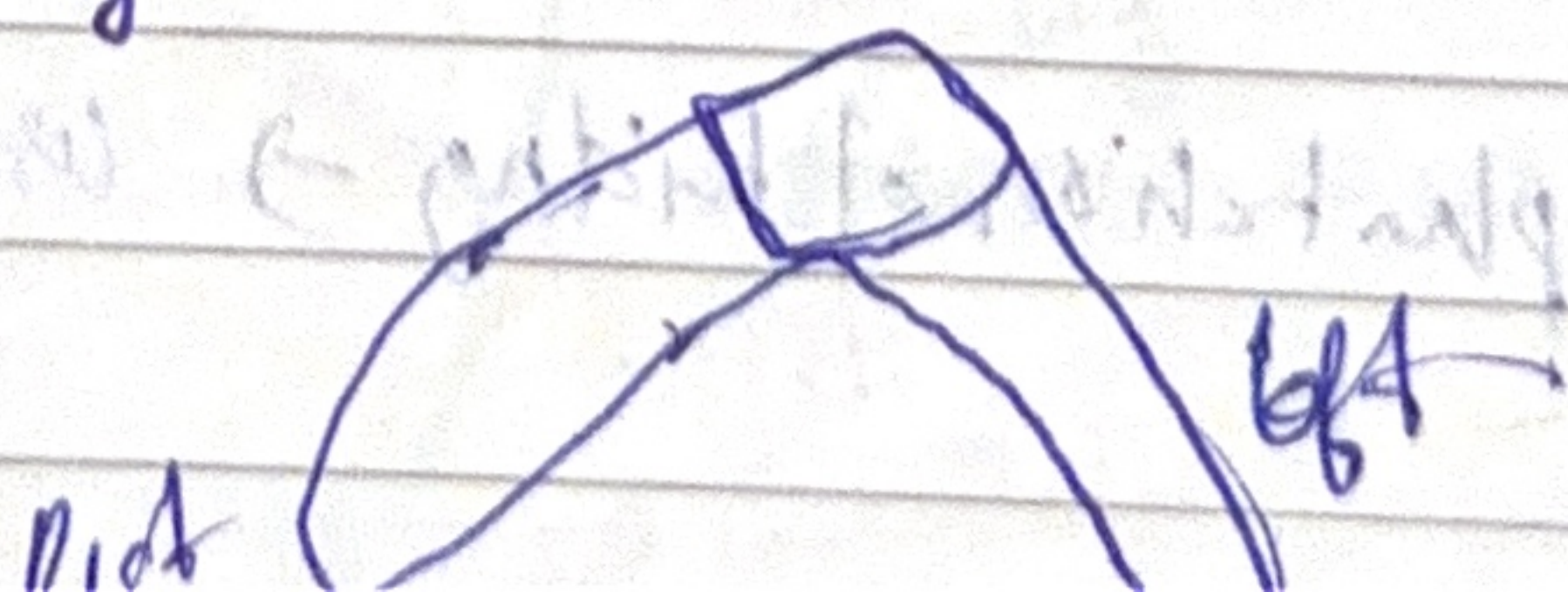
INSERTION: central tendon of diaphragm:

It is bifoliate shape having @ single Δ central leaflet

of (b & c) → tongue shape post leaflet.

Right → short & stout

Left → thin long



Curra

Right crus: Arise from Right side of upper 3 lumbar vertebrae
 Left crus: Arise from Left side of upper 2 lumbar vertebrae.

Arcuate Ligament:

- Median AL: stretching b/w the upper ends of 2 curra.
- Medial AL: extend from body of L2V to transverse process of L4.
thickened part of peritoneum.
- Lateral AL: extend from tip of transverse process of L1 to 12th Rib.
beneath quadratus lumborum.

OPENINGS:

→ Minor
 → Major - 3.

Major

- Vena cava opening @ T8
□ shape
• IVC
• Rt phrenic nerve
• lymphatics.
- Esophageal opening @ T10
O shape
• esophagus
• Right & left vagus trunk
• esophageal plexus of left gastric n. (L → R)
- Aortic opening @ T12
O shape
• Aorta
• Thoracic duct
• Azygos vein

Minor

- 1) sup epigastric vessel → pass through gap b/w 8th & 9th ribs from xiphoid process of 7th costal cartilage.
- 2) subcostal vessel & nerve → deep to lateral AC
- 3) breast & lumbar splanchnic nerve → pass by piercing crus of diaphragm.
- 4) Hemiazygous vein → pierces the left crus of diaphragm.
- 5) lymph chain → pass deep to Medial Arcuate Lig.

NERVE SUPPLY

Motor supply - Right & left phrenic nerve

Sensory supply →

(a) central part → R & L phrenic Nerve

(b) peripheral part → lower 6 to 10 intercostal nerves

ARTERIAL:

→ sup phrenic Artery

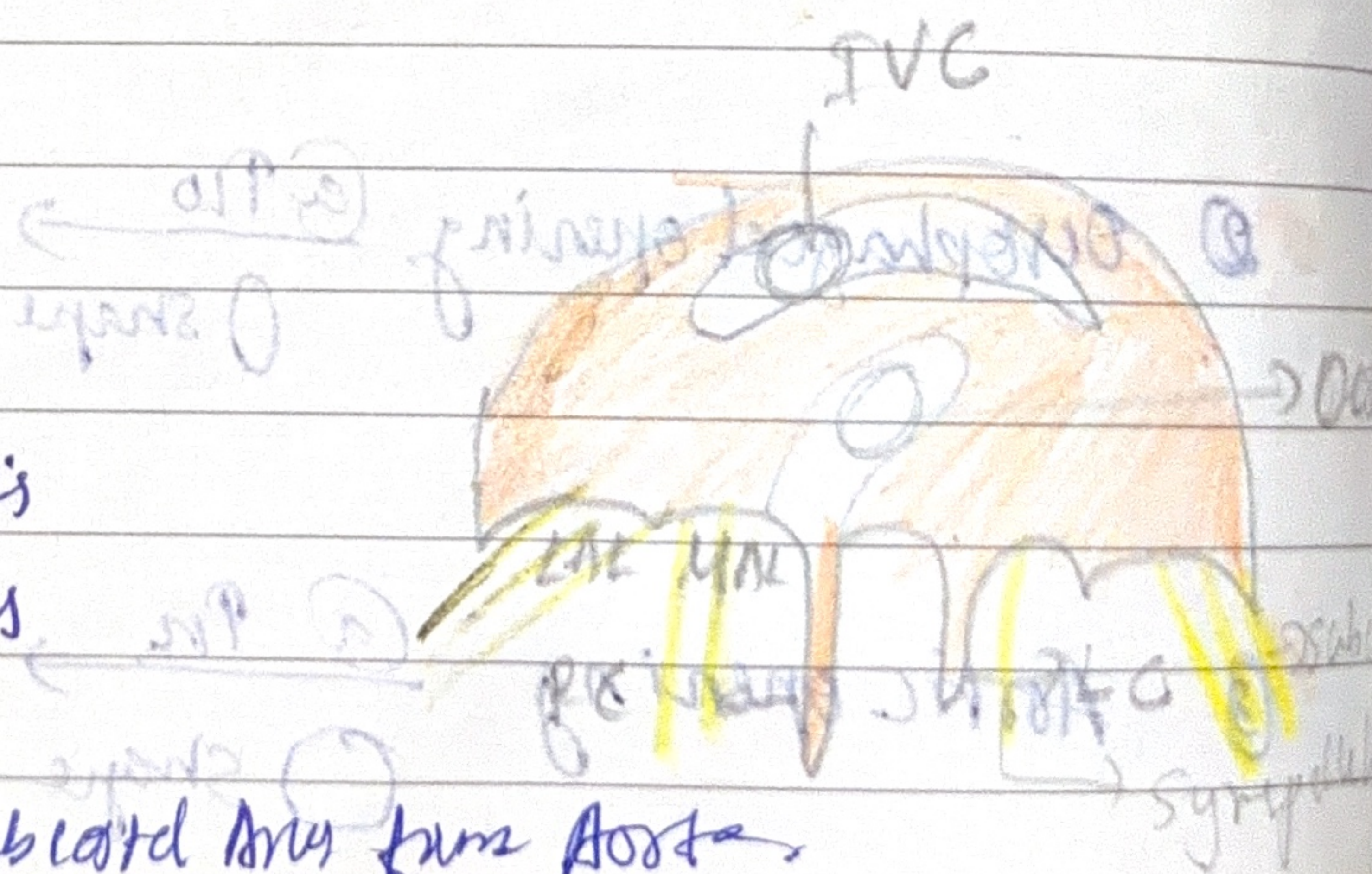
→ Inf phrenic Artery

→ Pericardiophrenic Artery

→ Musculophrenic Artery

→ sup epigastric Artery

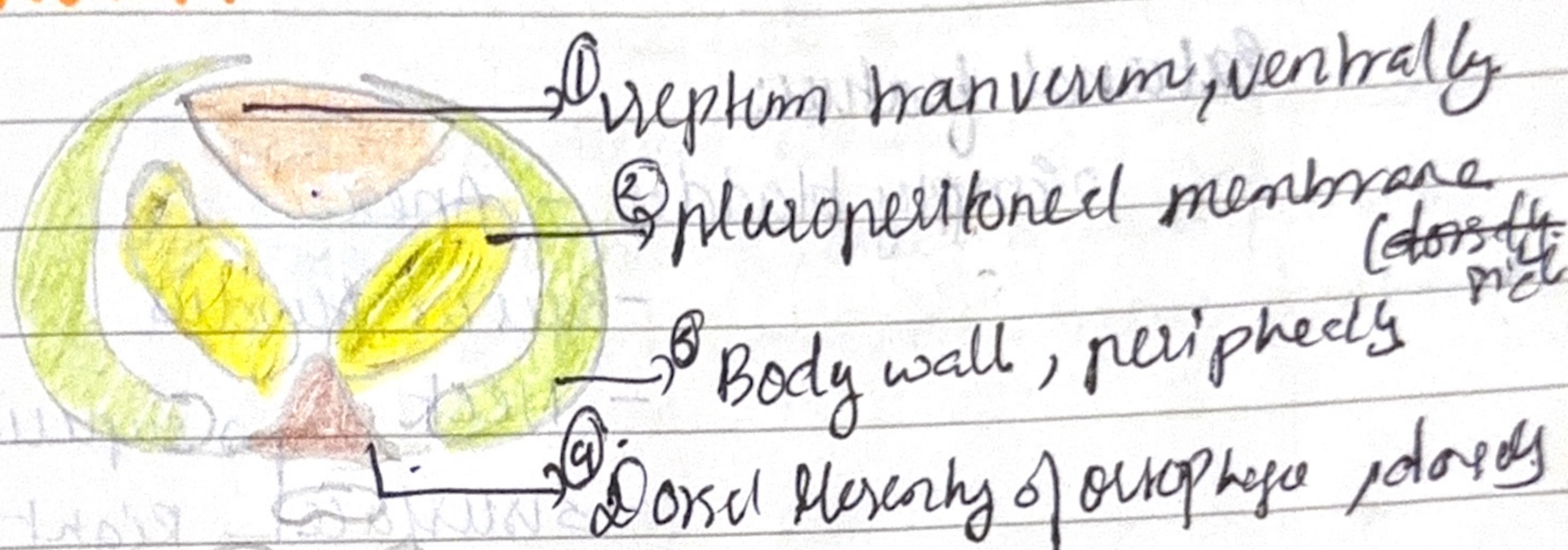
→ lower intercostal & subcostal Arteries from Aorta



ACTIONS:

- ⇒ Muscle of inspiration
- ⇒ Muscle of Abdominal straining - contract of AA, defecate
- ⇒ Muscle of weight lifting
- ⇒ Thoracomuscular pump.
- ⇒ sphincter of oesophagus.

DEVELOPMENT:



1. develops → central tendon
2. → Domes of diaphragm
3. → Part of Diaphragm around oesophagus.
4. → Peripheral part of diaphragm.

CLINICAL:

congenital

Postrolateral hernia. → seen through foramen of Bochdalek

Hiatal hernia → sliding of gastroesophageal junction of caudal end of stomach into thoracic cavity.

Common
the hernia
common
internal
hernia.