Anatomy I Lab. 3/part2

(UOMU013033)

1st term

"Thorax of the human body"

Al-Mustaqbal University College of Engineering

Department of prosthetics and orthotics engineering

Second Stage

By:

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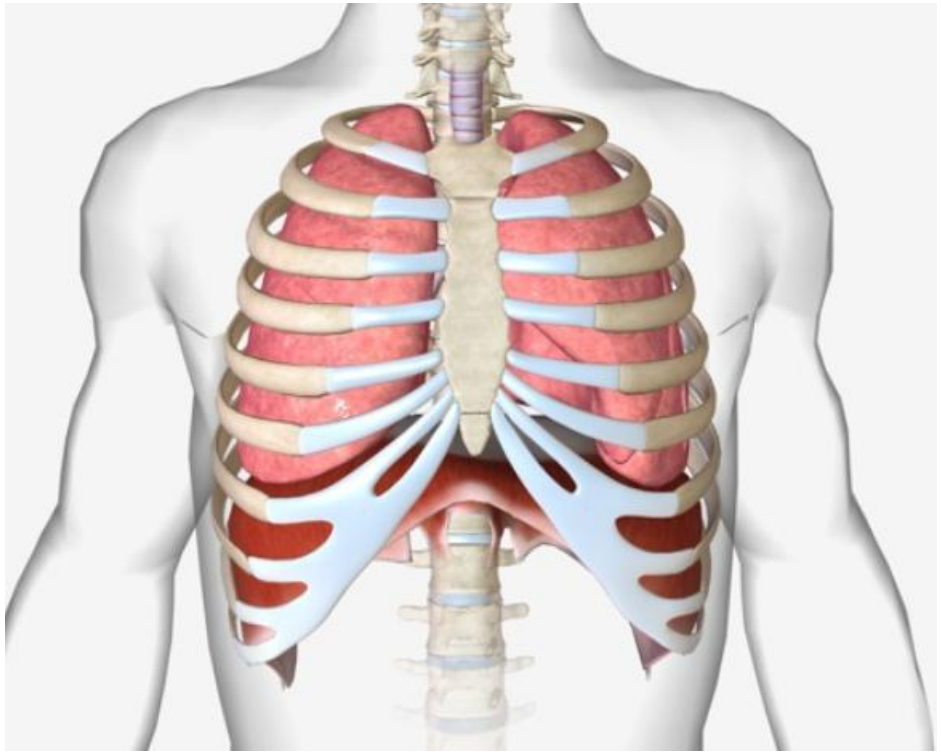
The thorax

The chest, properly called the thorax, is the superior part of the trunk located between the neck and abdomen. It consists of several components:

- Thoracic wall
- Several cavities
- Neurovasculature and lymphatics
- Internal organs
- Breasts



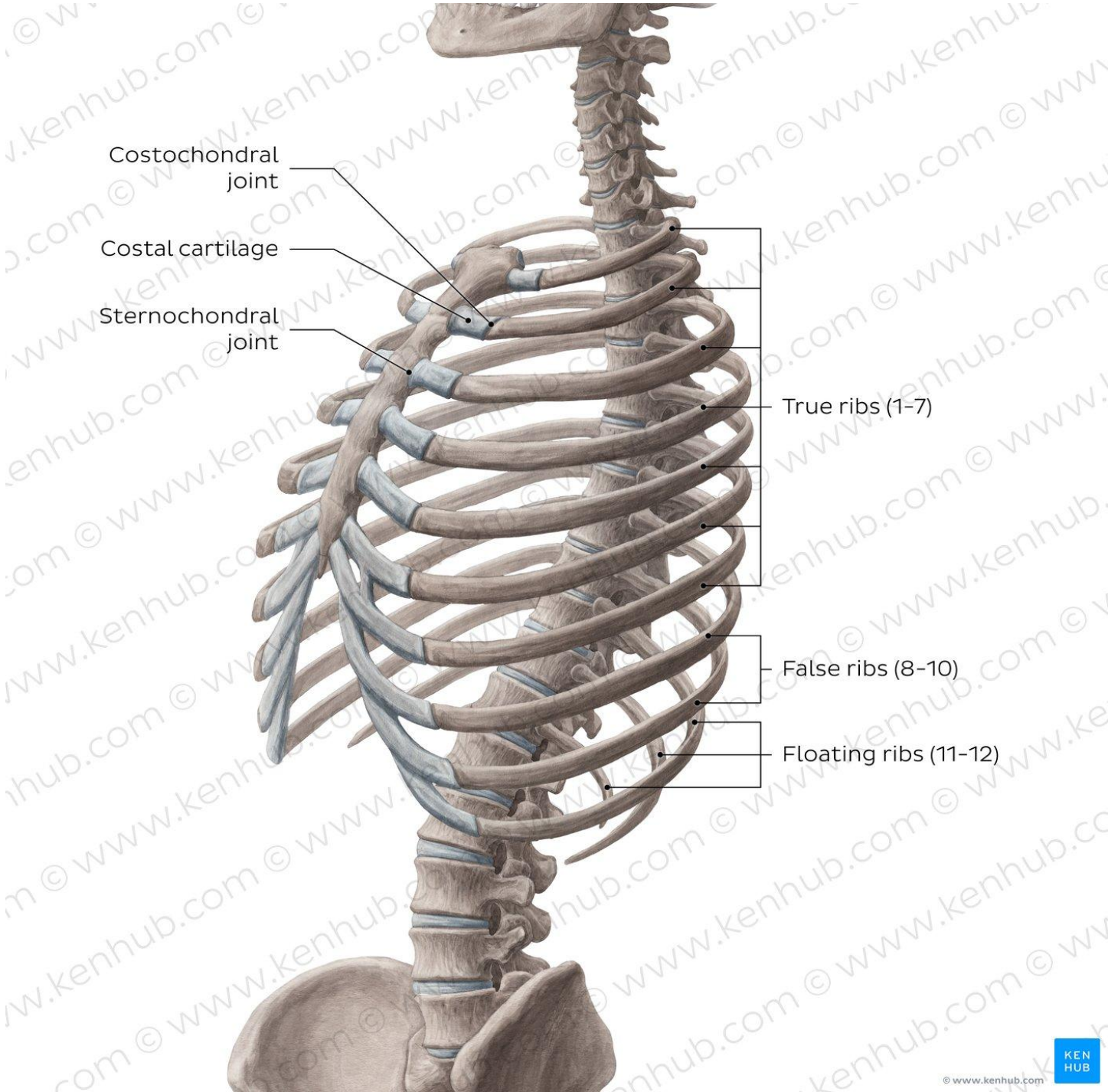
Thoracic wall

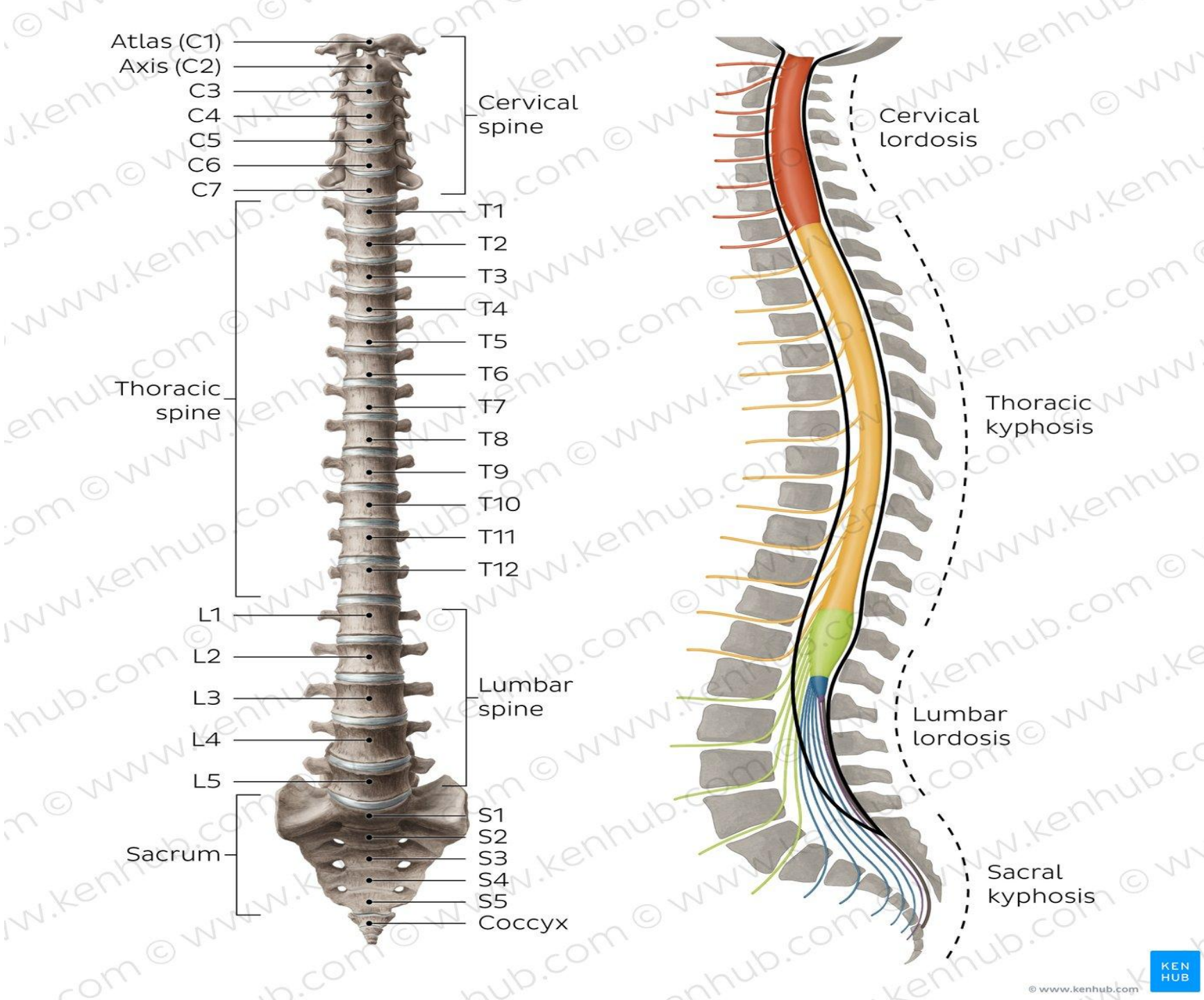
Skeleton:
sternum, twelve pairs of ribs, twelve thoracic vertebrae

Joints:
intervertebral discs, costovertebral, joint of head of rib, sternocostal, sternoclavicular, costochondral, interchondral joints

Intercostal spaces:
intercostal vein, artery, nerve

Muscles:
Intercostal muscles (external, internal, innermost), transversus thoracis, subcostals, levatores costarum, serratus posterior superior, and serratus posterior inferior muscles




Atlas (C1)
Axis (C2)
C3
C4
C5
C6
C7
Cervical spine
T1
T2
T3
T4
T5
T6
T7
T8
T9
T10
T11
T12
Thoracic spine
L1
L2
L3
L4
L5
Lumbar spine
S1
S2
S3
S4
S5
Sacrum
Coccyx
Cervical lordosis
Thoracic kyphosis
Lumbar lordosis
Sacral kyphosis
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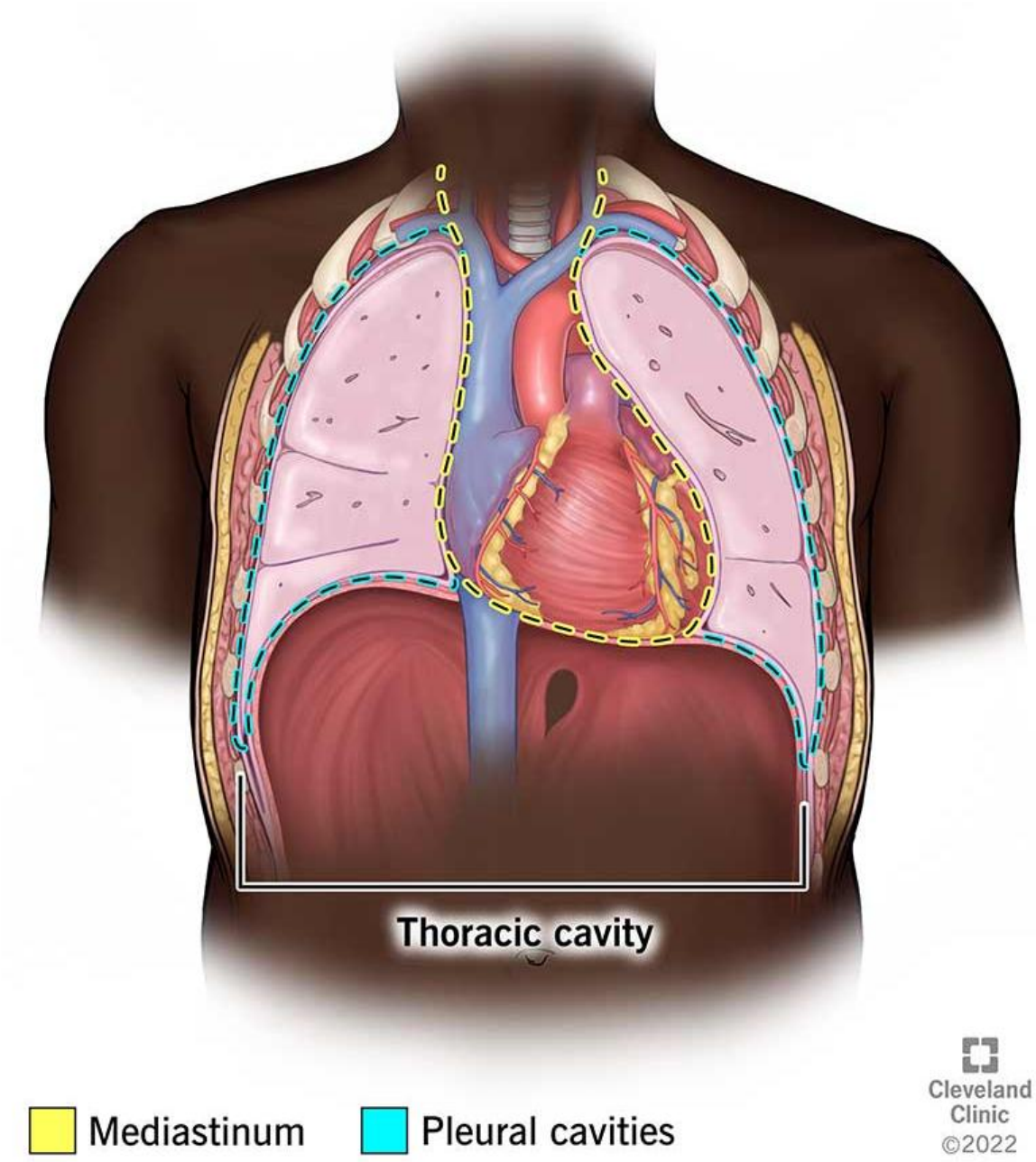
The thoracic cavity

The thoracic cavity is a space in your chest that contains organs, blood vessels, nerves, and other important body structures. It's divided into three main parts: the right pleural cavity, the left pleural cavity, and the mediastinum.
What organs are in the thoracic cavity?
Your thoracic cavity contains five organs:

Esophagus (food tube).
Heart.
Lungs.
Thymus.
Trachea (windpipe).

The mediastinum is located centrally and bordered by two pleural cavities laterally.

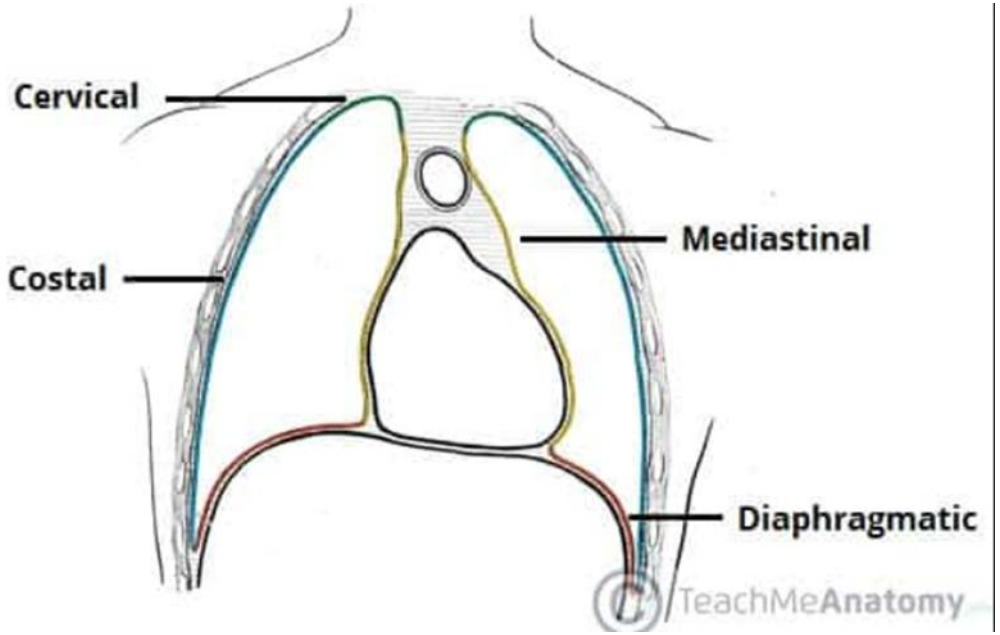


The pleura

can be divided into two parts:
Visceral pleura – covers the lungs.
Parietal pleura – covers the internal surface of the thoracic cavity.

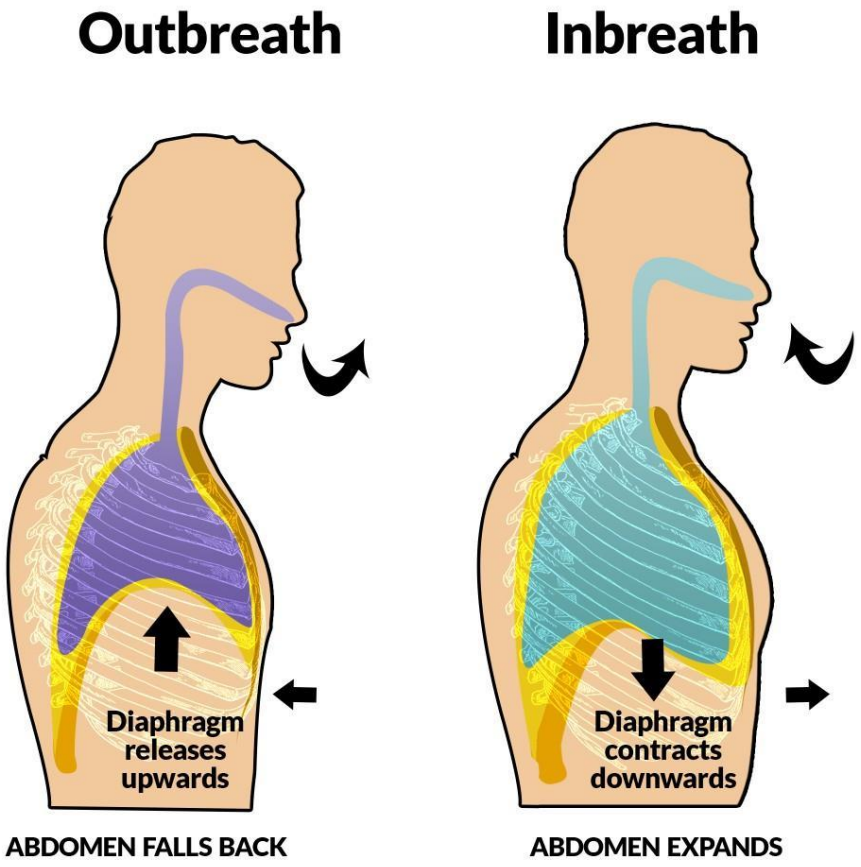
Parietal Pleura

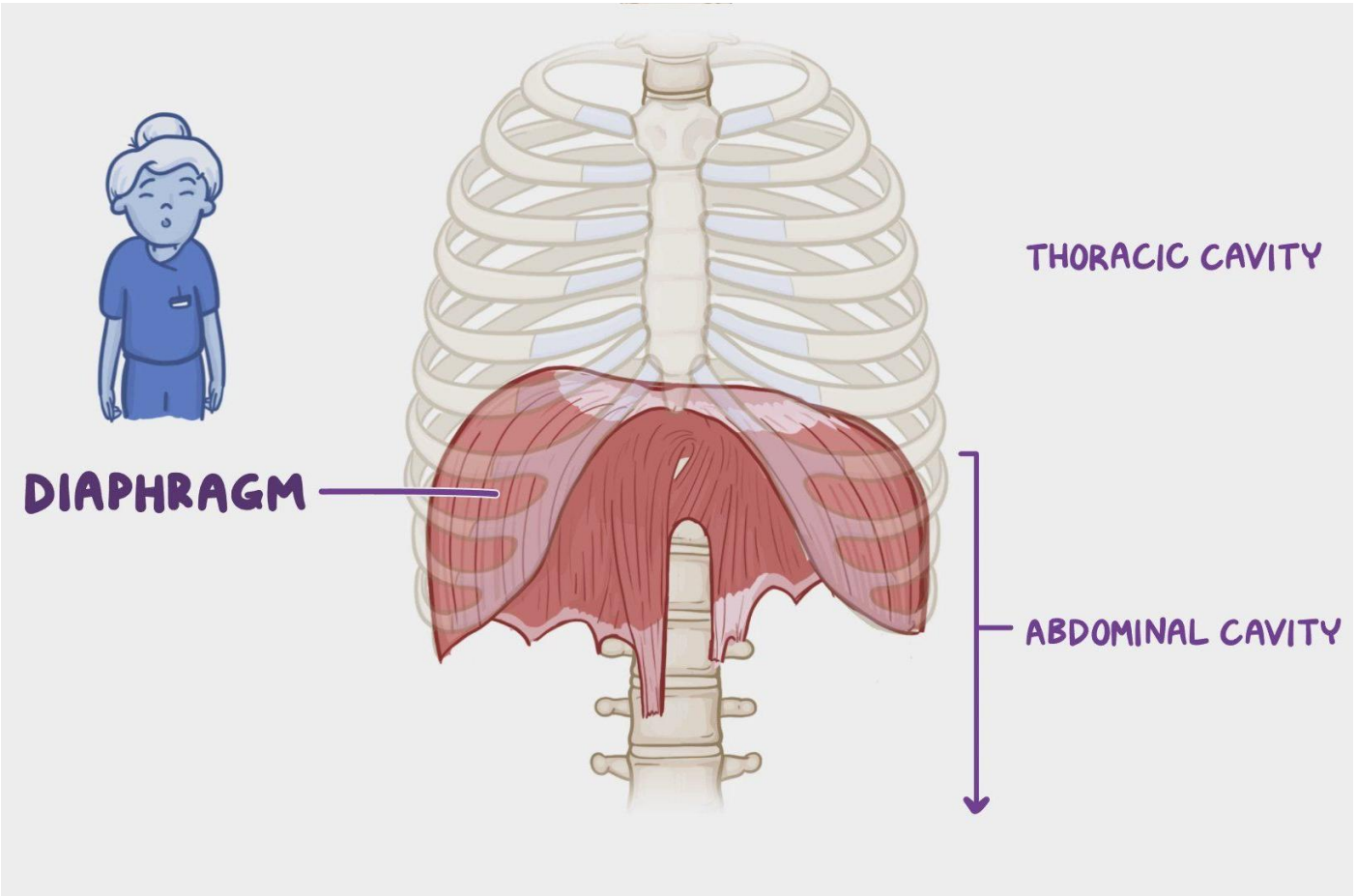
The parietal pleura covers the internal surface of the thoracic cavity. It is thicker than the visceral pleura and can be subdivided according to the part of the body that it contacts.



The **diaphragm**

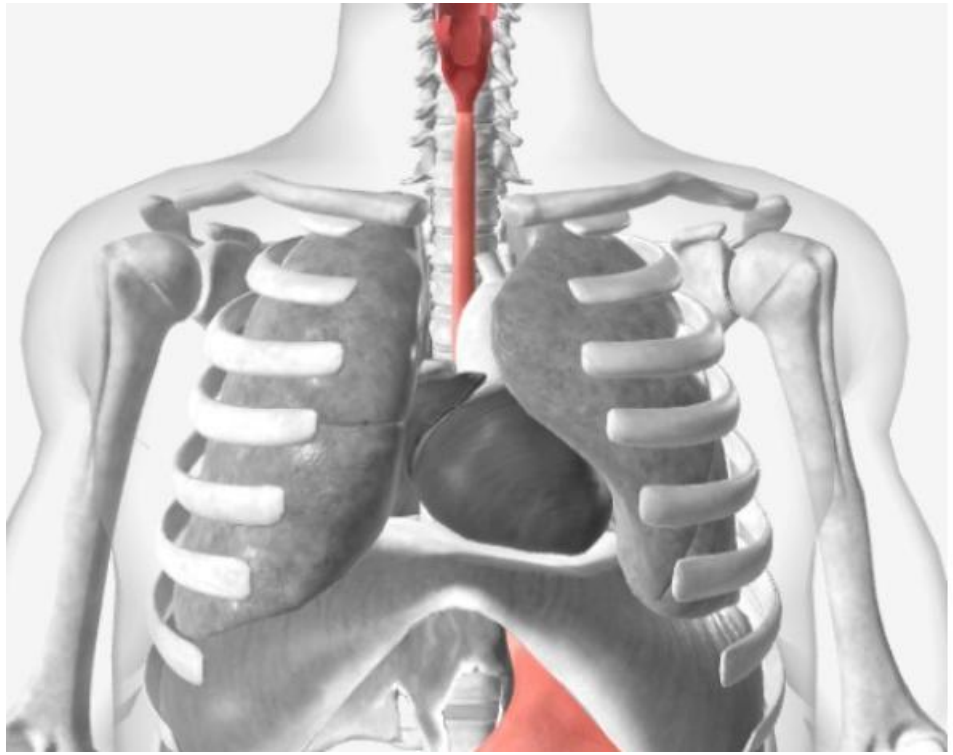
It is a **large, dome-shaped muscle** (convex upward toward the thorax) that plays a **major role in breathing**. It separates the **thoracic cavity (chest)** from the **abdominal cavity**.

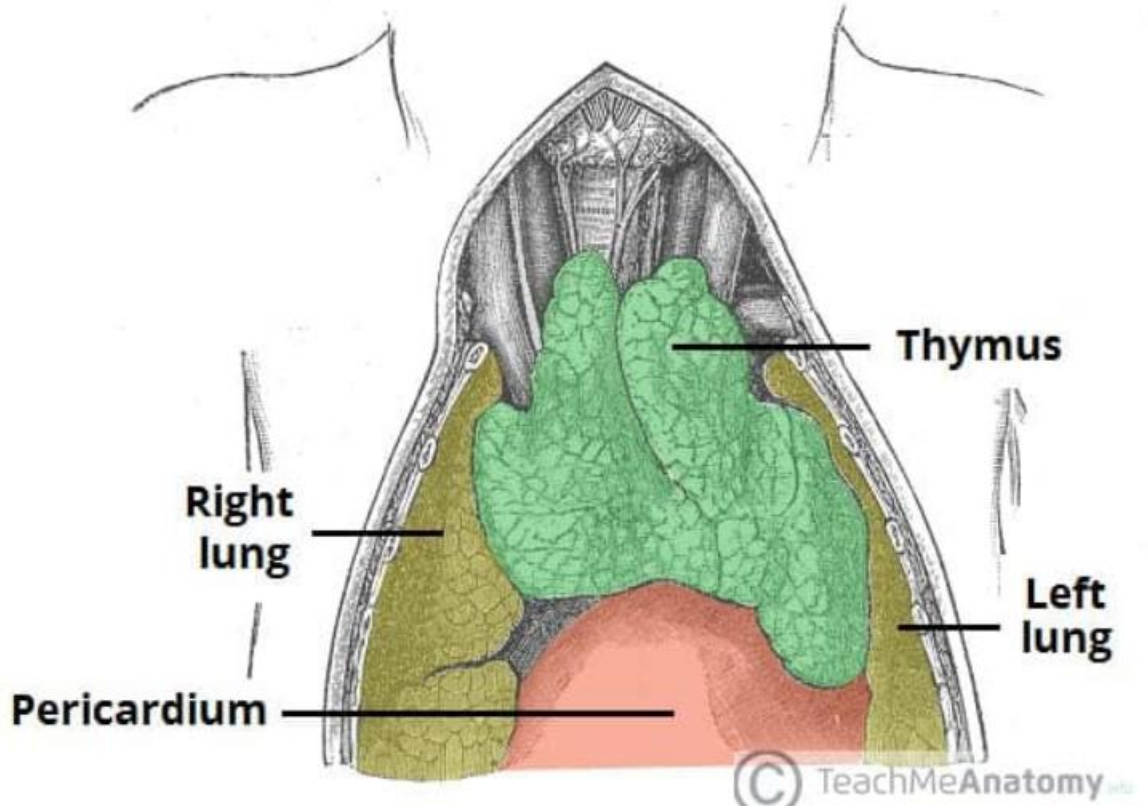




Organs

1. The Thymus Gland
2. Heart,
3. lungs,
4. trachea,
5. esophagus





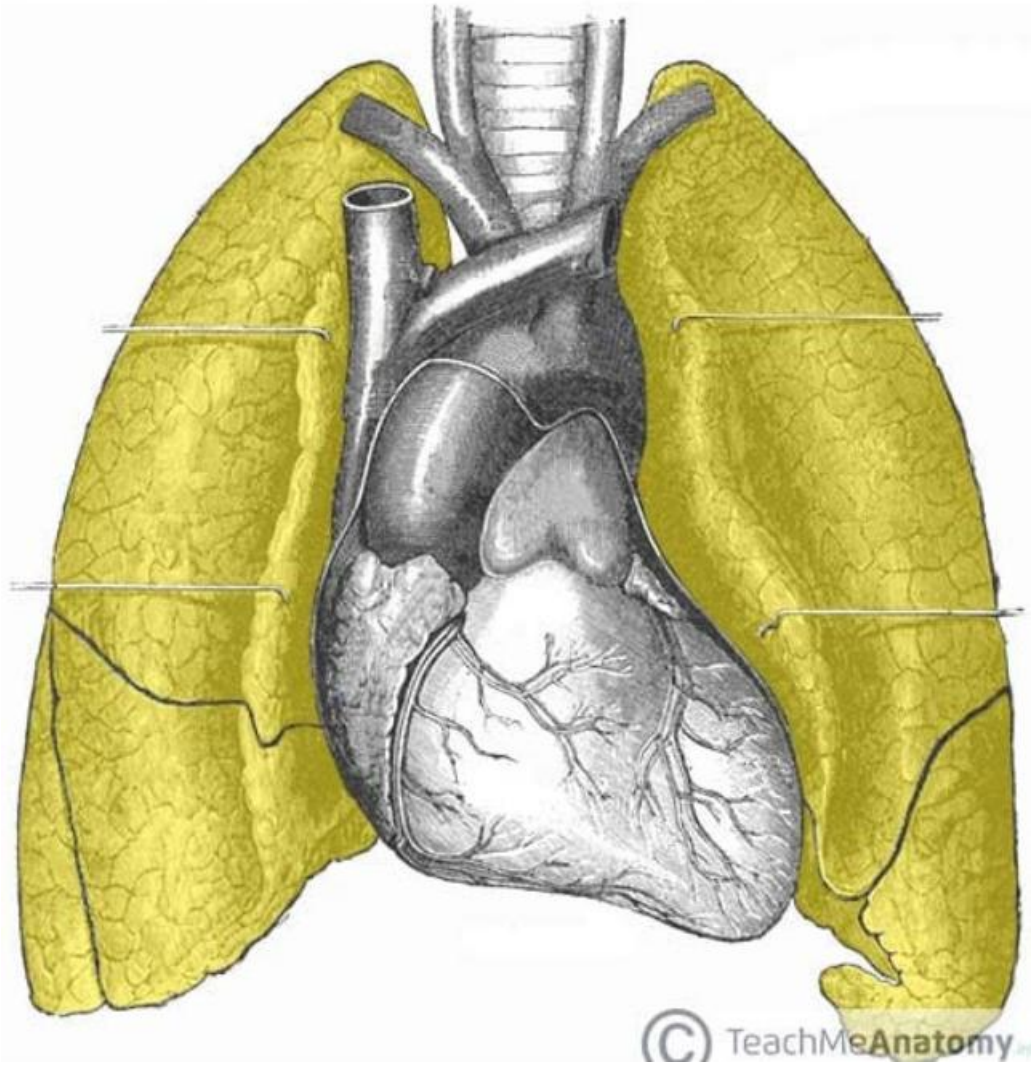
The **thymus gland** is a **primary lymphoid organ** located in the **upper anterior part of the thoracic cavity**, just behind the **sternum** and **in front of the heart**.

The **esophagus** is a **muscular tube** that connects the **pharynx (throat)** to the **stomach**

lungs

The lungs are a pair of spongy, air-filled organs located in the thoracic cavity on either side of the mediastinum.
They are the main organs of respiration, responsible for gas exchange — taking in oxygen (O_2) and expelling carbon dioxide (CO_2).

Right lung: larger, 3 lobes.
Left lung: smaller, 2 lobes (because of the heart's position)



trachea

The **trachea** is a **flexible tube** that connects the **larynx (voice box)** to the **bronchi** of the lungs. It allows air to pass in and out of the lungs during breathing.