

## Rattrapage 2017 (Question N°: 04)

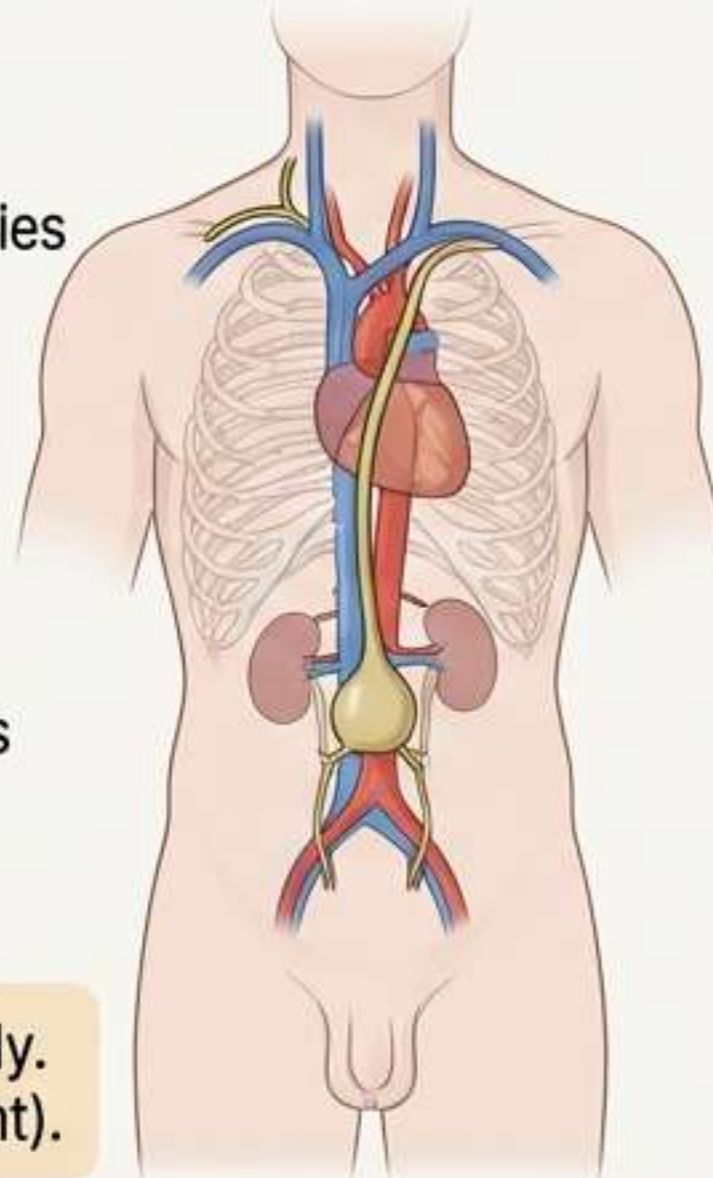
Regarding the lymphatic system:

- A. Formed by the thoracic duct and the right lymphatic duct
- B. The right hemithorax is drained into the thoracic duct
- C. The thoracic duct originates in the thorax
- D. Lymph empties into the jugular veins
- E. The cisterna chyli (Pecquet) is at the origin of the thoracic duct

**Verdict:** Correct Answer: B, D

**Explanation:** The lymphatic system relies on two main trunks. The Thoracic Duct is the primary vessel; however, it does **not** start in the thorax. It originates in the abdomen from the Cisterna Chyli (Cisterna of Pecquet). It drains the majority of the body, while the Right Lymphatic Duct drains only the upper right quadrant (right hemithorax, right arm, right head).

**Thoracic** = Three-quarters of the body.  
(Drains everything *except* the top right).



## Rattrapage 2017 (Question N°: 08)

These propositions concern the arteries:

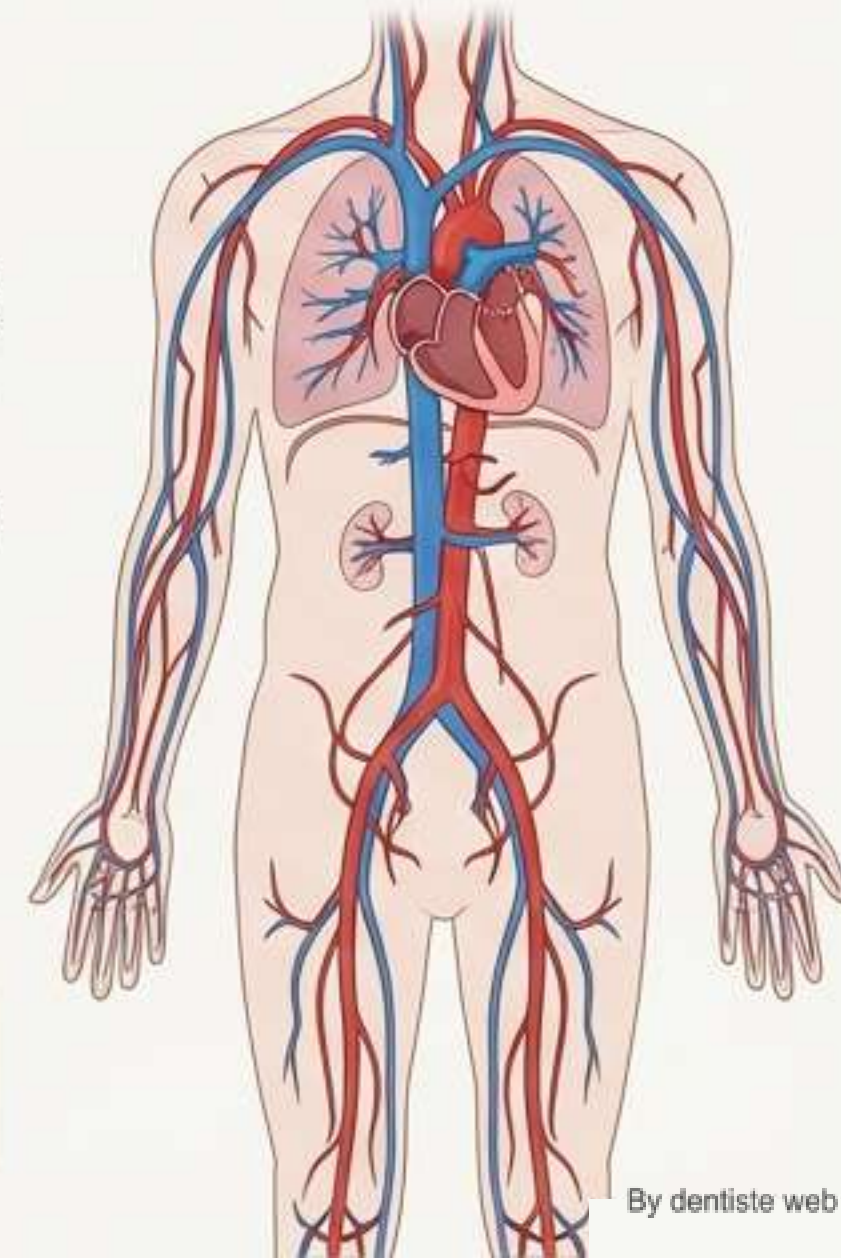
- A. Are extensible conduits
- B. The pulmonary artery connects the heart to the lungs
- C. The aorta originates from the right ventricle
- D. They are responsible for carrying oxygenated blood
- E. They carry intestinal fluid

**Verdict:** Correct Answer: B, D

**Explanation:**

By definition, arteries carry blood **away** from the heart. While most carry oxygenated blood (Systemic), the Pulmonary Artery carries **venous** (deoxygenated) blood from the Right Ventricle to the lungs. The Aorta arises from the Left Ventricle, which pumps to the systemic circuit.

**Arteries** = Away from the heart.  
**Aorta** = Left (**ALL** the body).





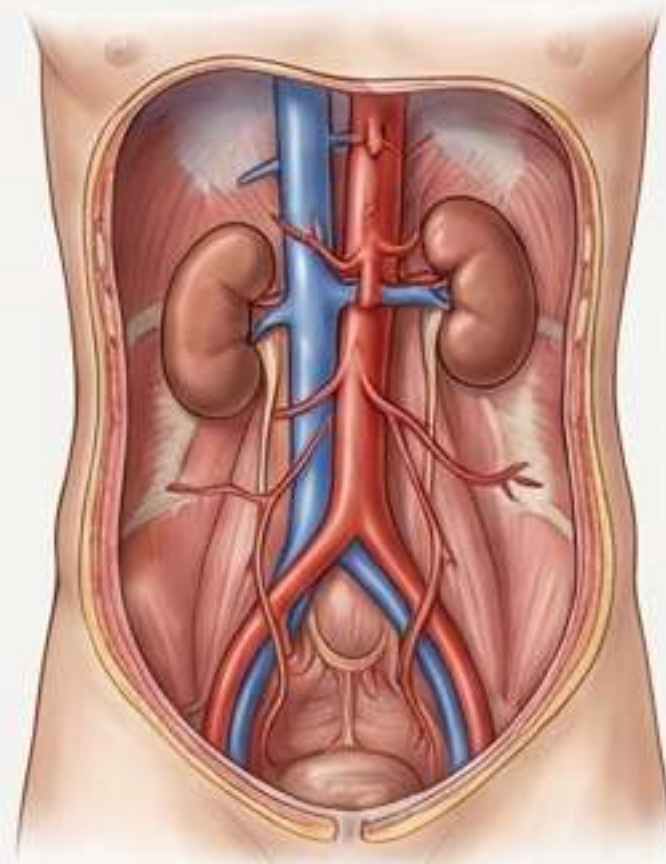
## EMD 1 2016 (Question N°: 14)

Regarding the abdominal aorta:

- A. It follows the thoracic aorta at the level of the 10th thoracic vertebra
- B. The celiac trunk is its first visceral collateral
- C. It terminates into three branches
- D. It gives rise to the gonadal arteries
- E. It runs to the right of the inferior vena cava

**Verdict:** Correct Answer: **B, D**

**Explanation:** The abdominal aorta begins at the **aortic hiatus at T12**, not T10. It descends to the **left** of the midline (and the IVC). Its branches include the **Celiac Trunk** (odd/visceral) and paired visceral branches like the **Gonadal arteries**. It terminates at L4 into two Common Iliac arteries.



**Mnemonic: Abdominal Aorta:** Starts at **T12** (Twelve = Tummy). **Left** is Law (Aorta is on the Left).

## EMD 1 2016 (Question N°: 17)

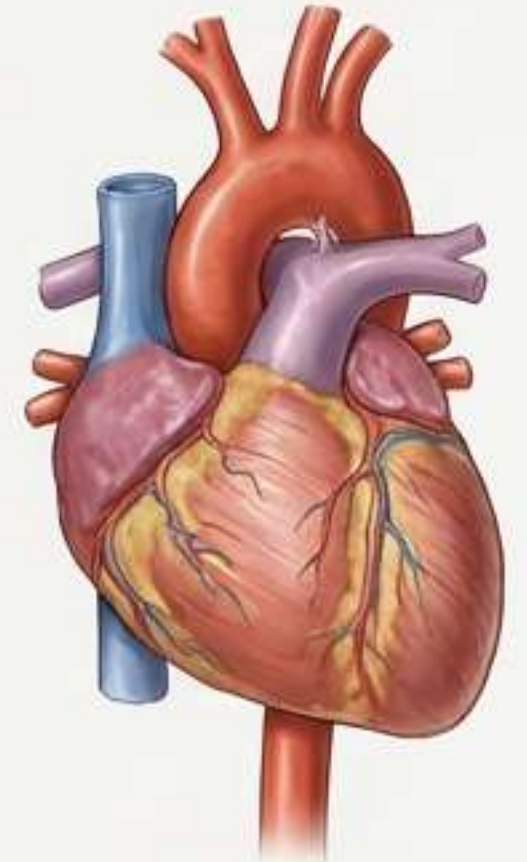
Regarding the thoracic aorta:

- A. Extends from the heart to the diaphragm
- B. Brachiocephalic arteries arise from its horizontal segment
- C. Continues as the abdominal aorta at level Th12
- D. Its descending segment runs in the posterior mediastinum
- E. Its ascending segment goes up and right to the 3rd costal cartilage

**Verdict:** Correct Answer: **C, D**

**Explanation:**

The thoracic aorta has three segments: Ascending, Arch, and Descending. The **Descending Thoracic Aorta** travels vertically in the **posterior mediastinum**. It pierces the diaphragm at T12 to become the abdominal aorta.



**Mnemonic: Descending Aorta = Deep in the back** (Posterior Mediastinum). Ends at **12** (Noon/Midnight).



## EMD 2 2016 (Question N°: 05)

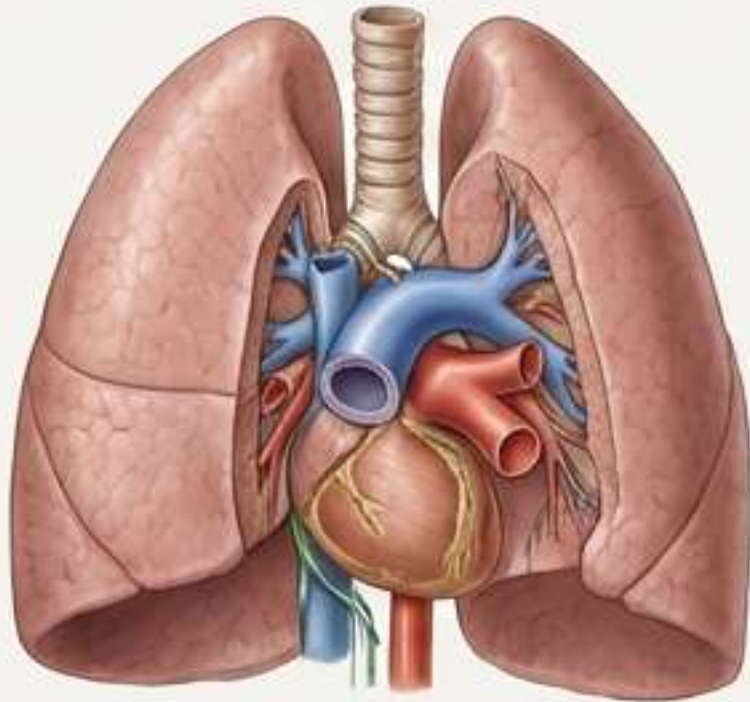
Regarding the functional pulmonary pedicle:

- A. Consists solely of the pulmonary vein and artery
- B. Consists solely of the main bronchus
- C. Enters the lung via the inferior surface
- D. Consists of the main bronchus, the artery, and the pulmonary vein
- E. The main bronchus occupies the lower part of the pedicle

**Verdict:** Correct Answer: D

### Explanation

The 'functional' pedicle contains the structures strictly necessary for gas exchange: The Main Bronchus (Air), the Pulmonary Artery (Deoxygenated blood in), and the Pulmonary Veins (Oxygenated blood out). This triad enters the lung at the hilum.



**Mnemonic:** BAV = Bronchus, Artery, Vein (The Functional Trio).

## Rattrapage 2017 (Question N°: 02)

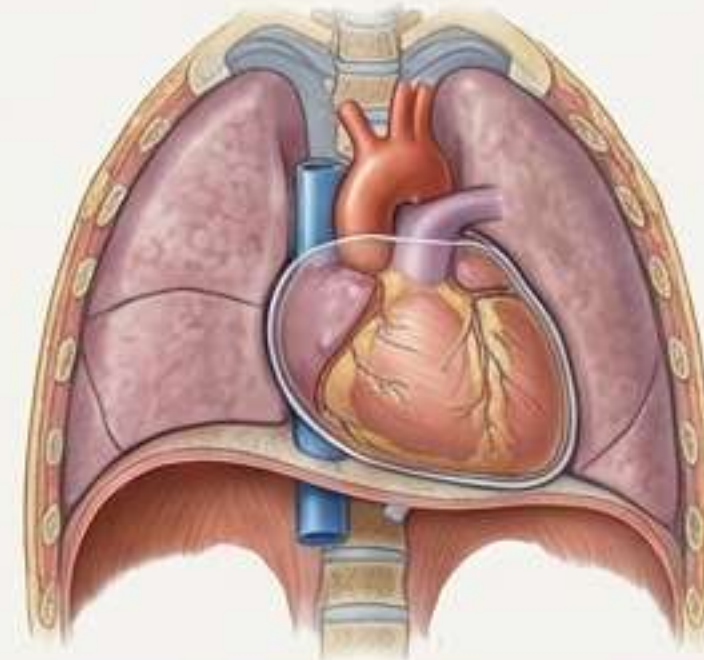
Regarding the heart:

- A. Occupies the posterior mediastinum between the 2 lungs
- B. Central organ of the circulatory system
- C. Endocardium is the middle layer of the heart wall
- D. Consists of four cavities
- E. Its inferior surface rests on the diaphragm

**Verdict:** Correct Answer: B, D, E

### Explanation

The heart is the central organ located in the Anterior Mediastinum (between the lungs, front of the spine). It has 4 cavities (2 Atria, 2 Ventricles). Its inferior face is the Diaphragmatic surface. Note: The middle layer is the Myocardium; Endocardium is the inner lining.



**Mnemonic:** Heart Layers: Epi (Outer), Myo (Muscle/Middle), Endo (Inner). Inferior = Sit (Sits on diaphragm).



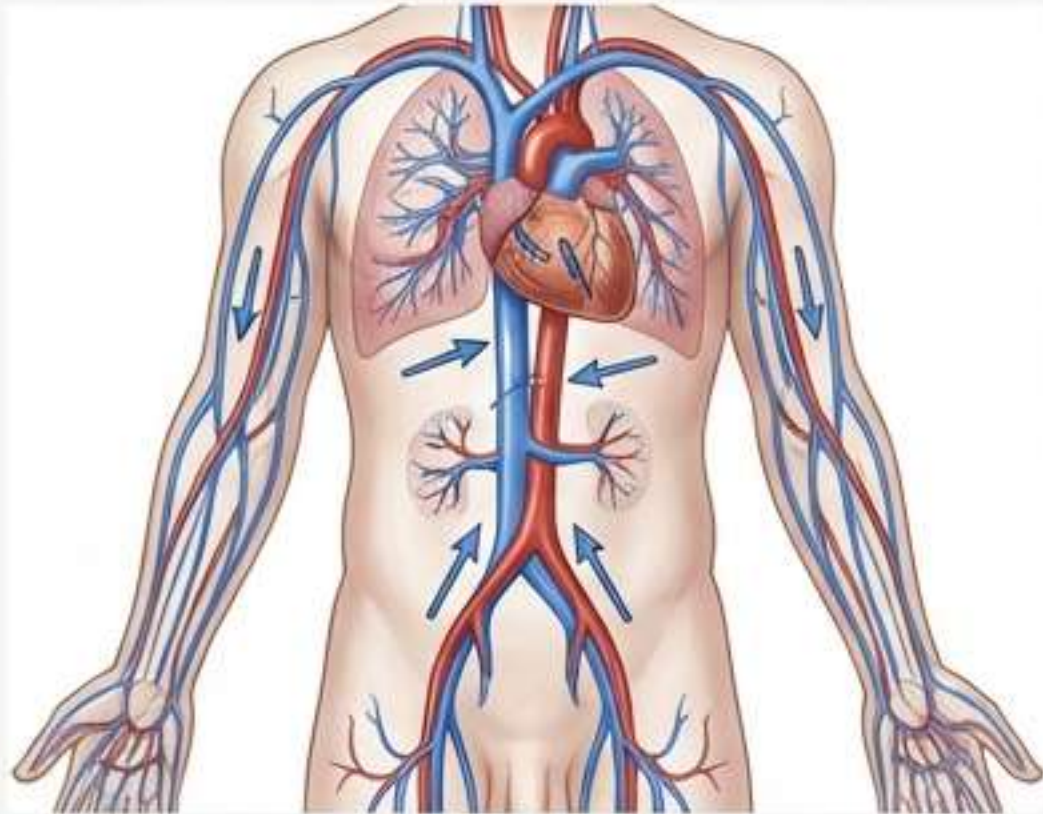
## Rattrapage 2017 (Question N°: 03)

Regarding the venous system:

- A. There are always 2 veins per artery
- B. Responsible for bringing blood from the periphery toward the heart
- C. All veins bear the same name as the arteries they relate to
- D. [Duplicate/Error]
- E. They carry interstitial fluid

**Verdict:** Correct Answer: B

**Explanation:** The physiological definition of a vein is a vessel that returns blood **toward the heart** ("Return"), regardless of oxygen content. While deep arteries often have paired veins (*venae comitantes*), this is not a universal rule (e.g., Vena Cavae are single trunks).



**Vein = Visit the Heart (Returns). Artery = Away.**

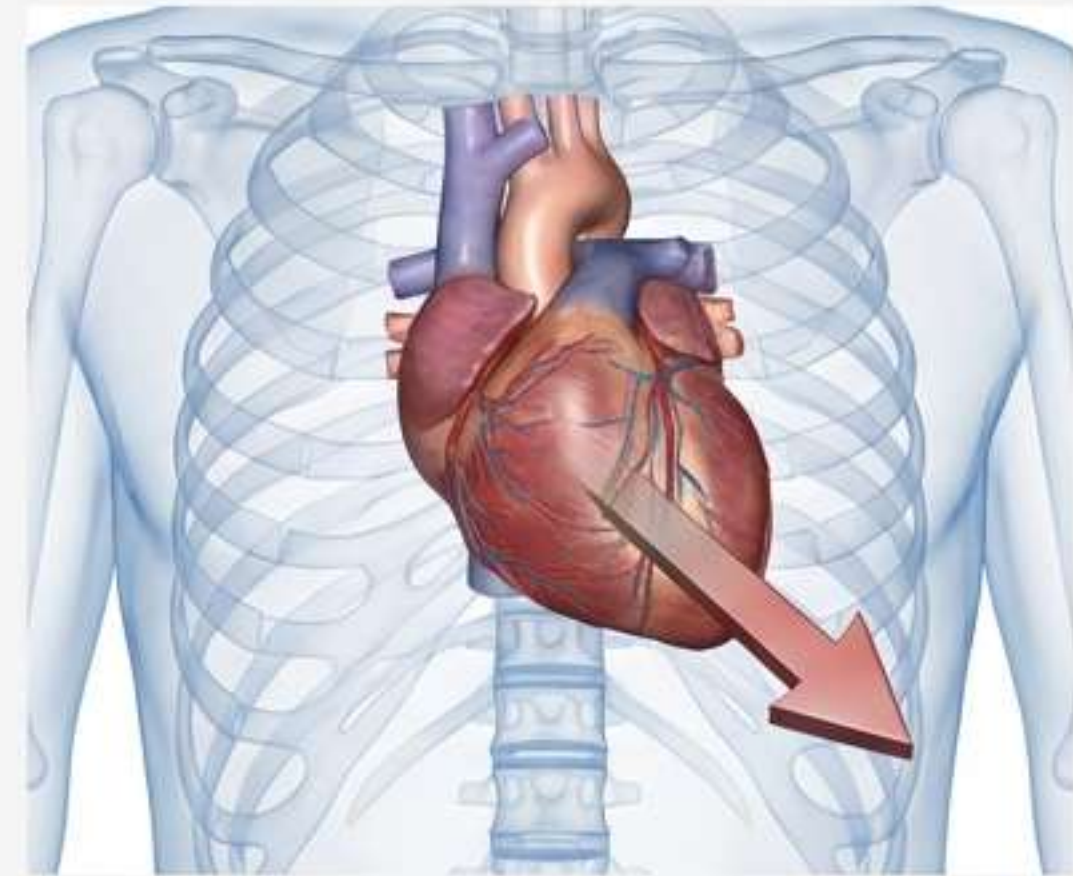
## EMD 1 2016 (Question N°: 03)

The heart is oriented in the thorax according to the following axis:

- A. Forward, upward, and to the left
- B. Backward, upward, and to the left
- C. Backward, downward, and to the right
- D. Forward, downward, and to the left
- E. Forward, downward, and to the right

**Verdict:** Correct Answer: D

**Explanation:** The heart is not vertical; it lies obliquely. The **Apex** (the point) is directed **Downward, Forward, and to the Left**. This orientation places the apex beat in the 5th intercostal space on the left side.



**DFL = Down, Forward, Left. (Think: The heart leans Left).**



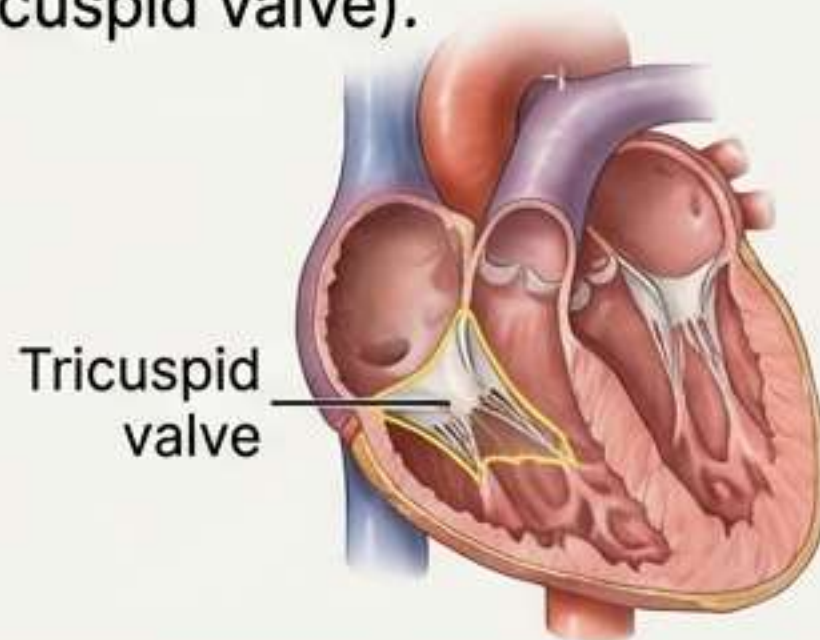
## EMD 1 2016 (Question N°: 04)

The **tricuspid** orifice communicates:

- A. Right atrium and pulmonary trunk
- B. Right atrium and right ventricle
- C. Left atrium and left ventricle
- D. Right atrium and left ventricle
- E. Left atrium and aortic artery

**Verdict: Correct Answer: B**

The **Tricuspid valve** (atriæ coit) Explanation.  
The **Tricuspid** valve (three cusps) guards the communication between the **Right Atrium** and the **Right Ventricle**. (The Left side uses the Mitral/Bicuspid valve).



**TRI**-cuspid = **R**ight side. (Mitral is on the Left).

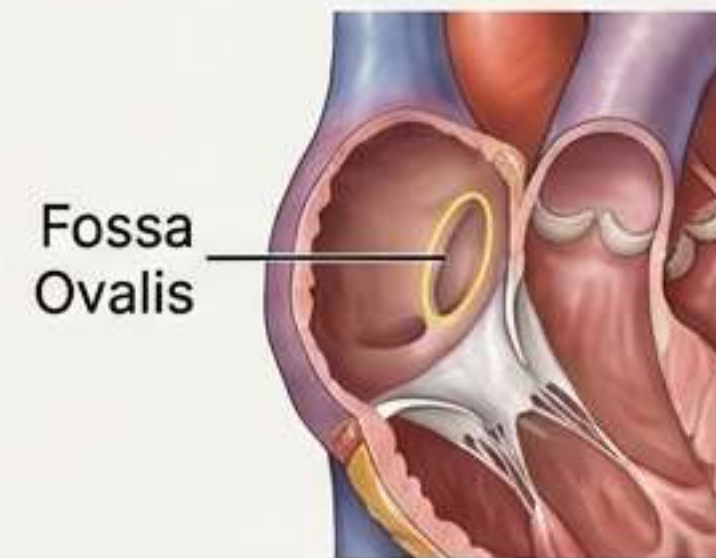
## EMD 1 2016 (Question N°: 05)

The **fossa ovalis** (vestige of the foramen ovale) is located:

- A. On the superior wall of the right atrium
- B. On the **medial wall** of the right atrium
- C. On the inferior wall of the right atrium
- D. On the lateral wall of the right atrium
- E. On the posterior wall of the right atrium

**Verdict: Correct Answer: B**

The **Fossa Ovalis** is the depression marking the fetal Foramen Ovale. It is located on the **Interatrial Septum**, which anatomically forms the **medial wall** of the Right Atrium, separating it from the Left Atrium.



**Septum** = **S**eparation = **M**edial (Middle wall).



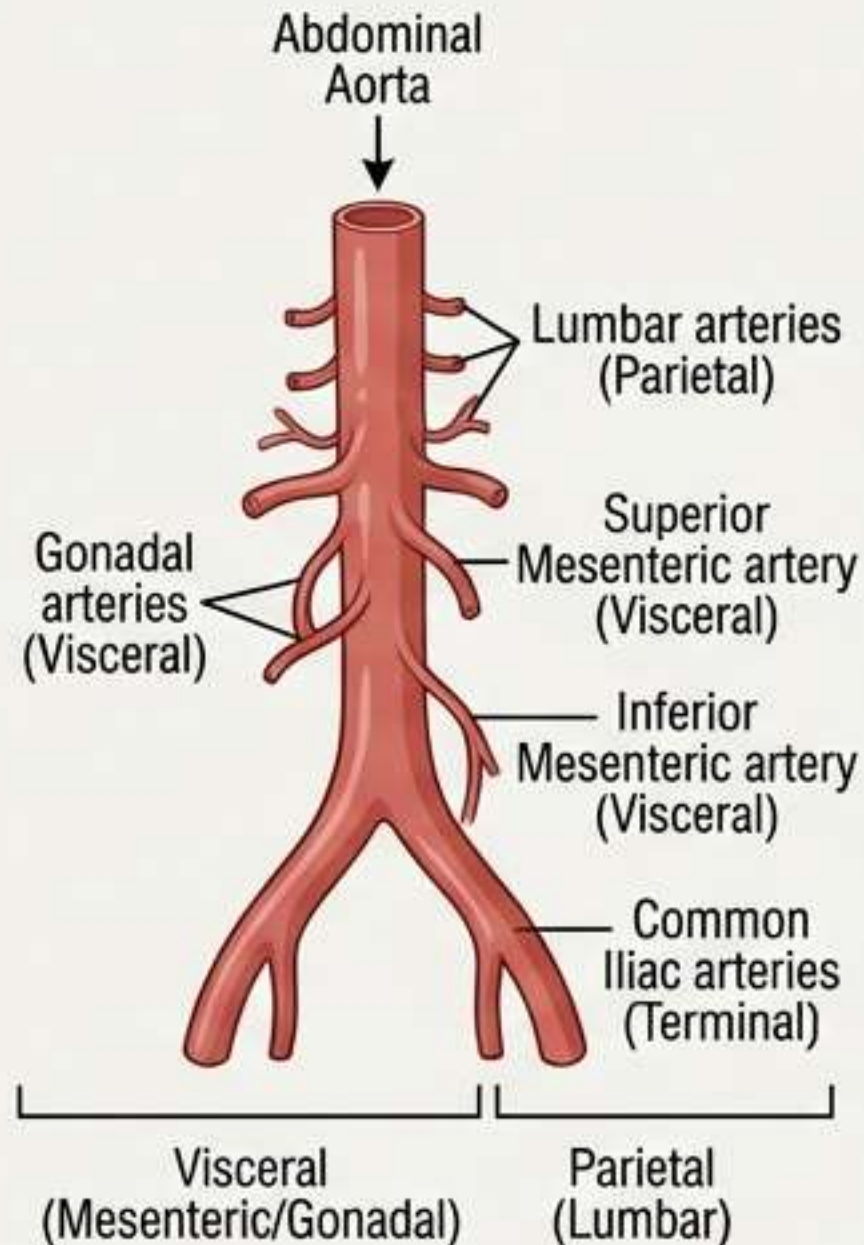
## EMD 1 2016 (Question N°: 06)

Which of the following are collateral branches of the abdominal aorta?

- A. Short esophageal arteries
- B. Lumbar arteries
- C. Gonadal arteries
- D. Primitive iliac arteries
- E. Mesenteric arteries

Verdict: **Correct Answer: B, C, E**

Explanation: The Abdominal Aorta gives off Parietal branches (like the 5 **Lumbar arteries**) and Visceral branches (like **Gonadal** and **Superior/Inferior Mesenteric**). The Iliac arteries are *terminal* branches (the end of the road), not collateral.



**Mnemonic:**  
**Go Love Mesentery**  
(Gonadal, Lumbar, Mesenteric)

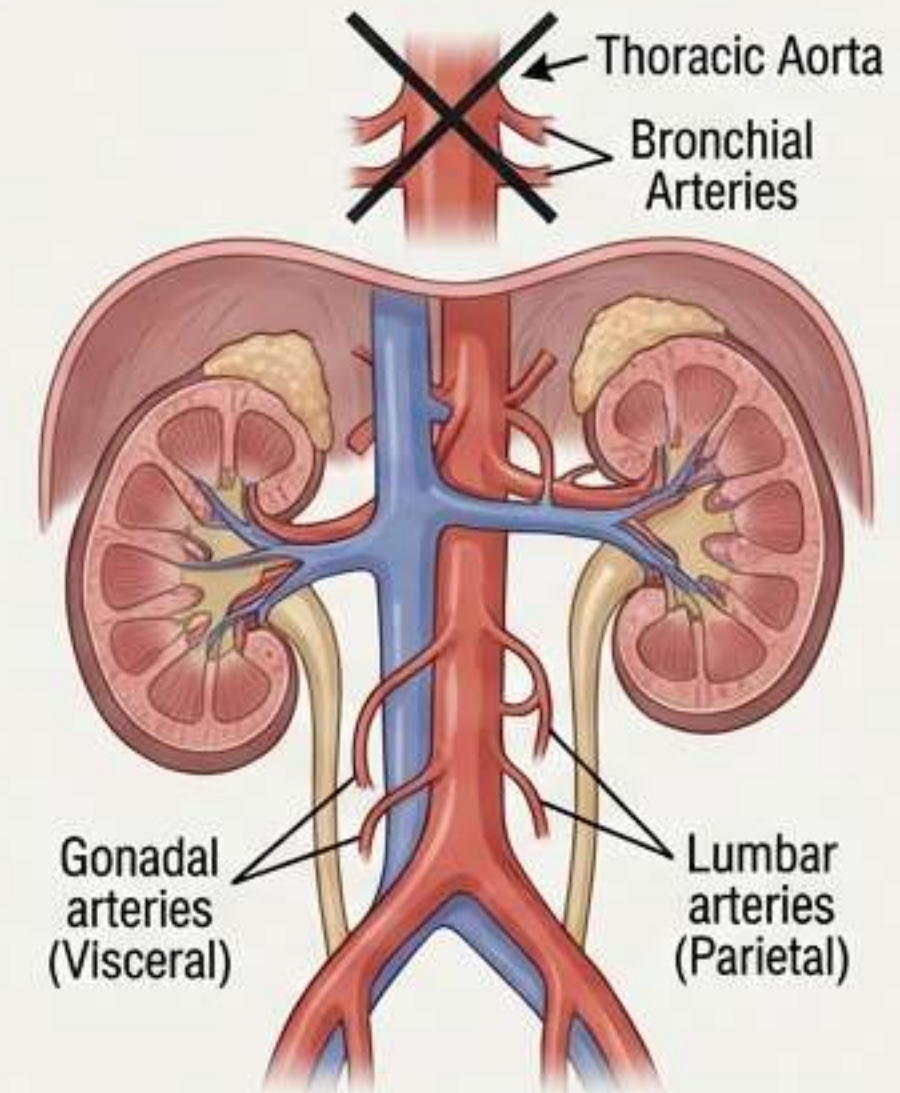
## EMD 1 2017 (Question N°: 05)

Which of the following are collateral branches of the abdominal aorta?

- A. Common iliac arteries
- B. Renal arteries
- C. Bronchial arteries
- D. Lumbar arteries
- E. Gonadal arteries

Verdict: **Correct Answer: B, D, E**

Explanation: **Renal arteries** are large, paired visceral branches supplying the kidneys. **Gonadal** are also paired visceral. **Lumbar** are parietal. Bronchial arteries typically arise from the *thoracic* aorta. Common Iliacs are terminal.



**Mnemonic:**  
**Kidneys** need flow!  
**Renal** = Abdominal Branch



## EMD 1 2017 (Question N°: 09)

Regarding the axis of the heart:

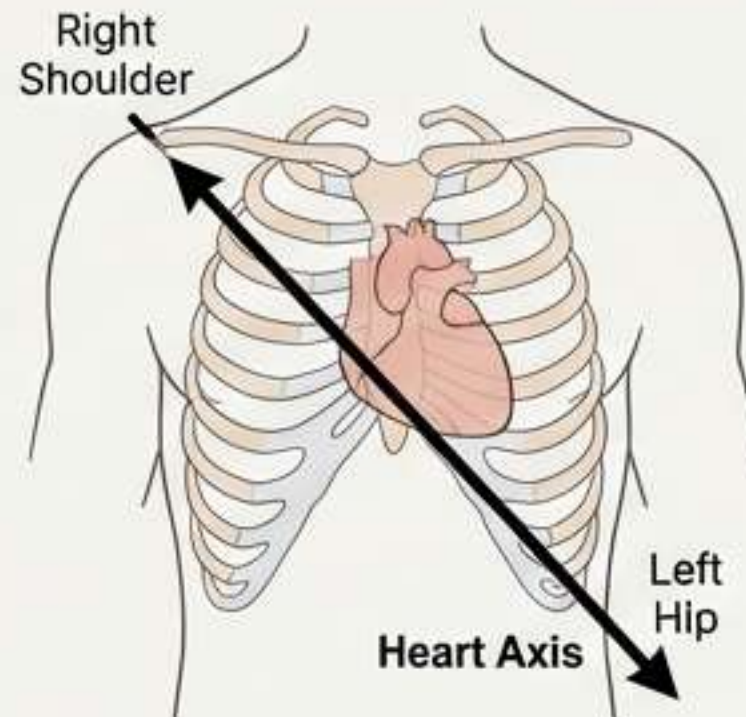
- A. Oblique top to bottom, outside to inside
- B. Oblique top to bottom, right to left
- C. Horizontal top to bottom, right to left
- D. Vertical top to bottom, left to right
- E. Oblique top to bottom, left to right

**Verdict:**

**Correct Answer: B**

**Explanation:**

The heart's axis runs from the Base (Right/Top/Posterior) to the Apex (Left/Bottom/Anterior). Therefore, the vector is **Top to Bottom** and **Right to Left**.



**Mnemonic:**

**Right shoulder to Left hip.** (The sash direction).

## EMD 1 2017 (Question N°: 11)

Regarding the lymphatic system:

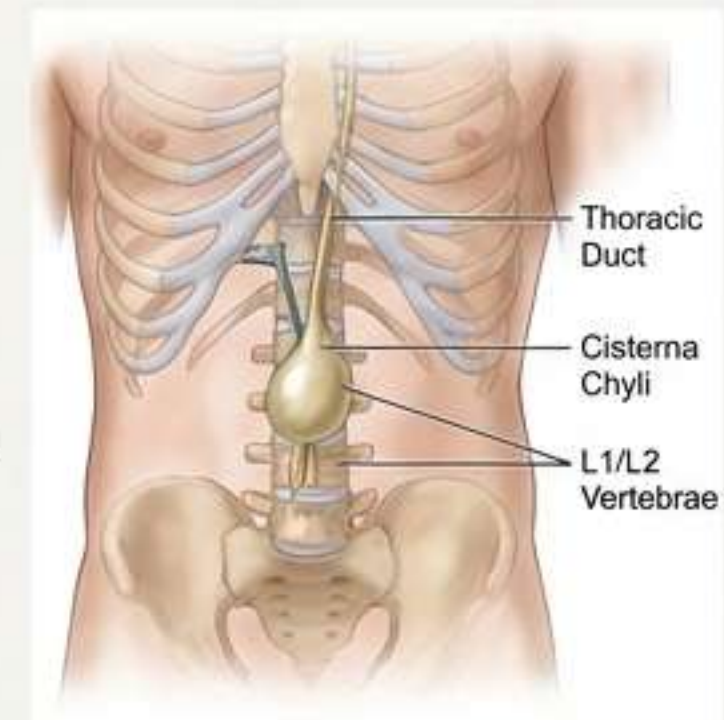
- A. Formed by the thoracic duct and the right lymphatic duct
- B. The right hemithorax is drained into the thoracic duct
- C. The thoracic duct originates in the thorax
- D. Lymph empties into the jugular veins
- E. The cisterna chyli (Pecquet) is at the origin of the thoracic duct

**Verdict:**

**Correct Answer: A, E**

**Explanation:**

The system consists of **two main trunks** (Thoracic duct + Right lymphatic duct). The **Thoracic duct** starts at the **Cisterna Chyli** (Pciquet's cistern) in the abdomen. Note: Answer B is wrong because the Right Hemithorax drains to the *Right Lymphatic Duct*, not the thoracic.



**Mnemonic:**

**Cisterna = Cistern** (Water tank at the bottom/start).



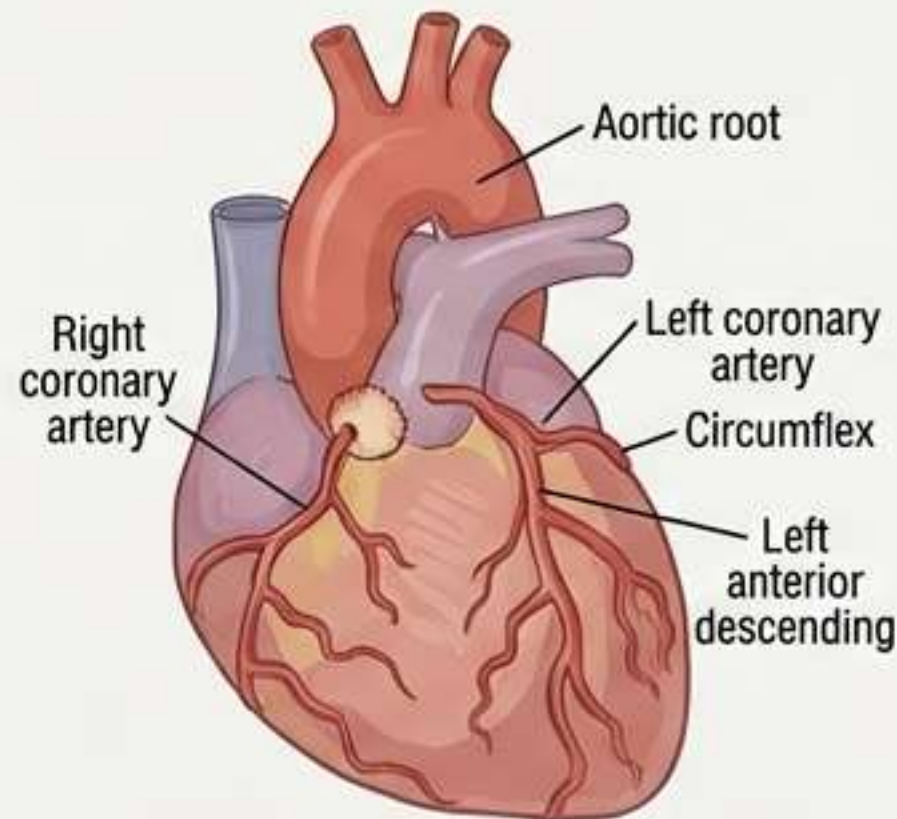
## EMD 1 2017 (Question N°: 16)

Regarding the aortic artery:

- A. Originates from the right ventricle
- B. Crosses the diaphragm at T12
- C. Terminates at L3
- D. Thoracic aorta has two segments
- E. Its first collaterals are the coronary arteries

Verdict: **Correct Answer: B, E**

Explanation: The Aorta leaves the *Left Ventricle*. Its very first branches, emerging immediately at the sinuses of Valsalva, are the **Coronary Arteries** to feed the heart. It passes the diaphragm at **T12**. (It terminates at L4, not L3).



**Mnemonic:**  
**Heart eats first!** (Coronaries are the *\*first\** branches).

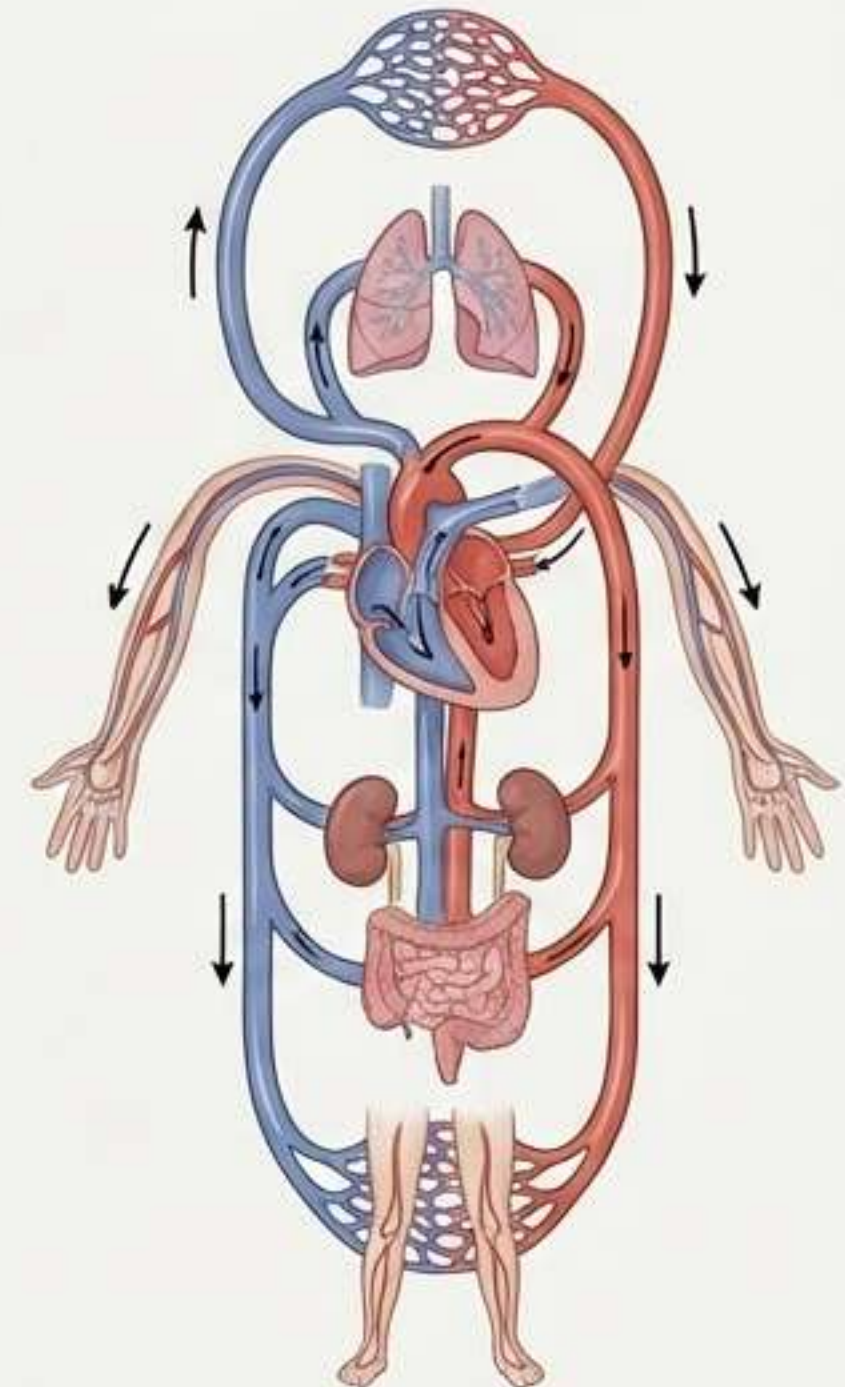
## EMD 1 2017 (Question N°: 17)

Regarding the arteries:

- A. Are extensible vessels
- B. The aortic artery handles systemic circulation (general circulation)

Verdict: **Correct Answer: B**

Explanation: The **Aorta** is the main trunk of the **Systemic Circulation**. It distributes oxygenated blood to the entire body. Extensibility is a property, but the key functional role here is systemic delivery.



**Mnemonic:**  
**Systemic = System-wide**  
(Whole body via Aorta).



## EMD 1 2018 (Question N°: 08)

Regarding the axis of the heart:

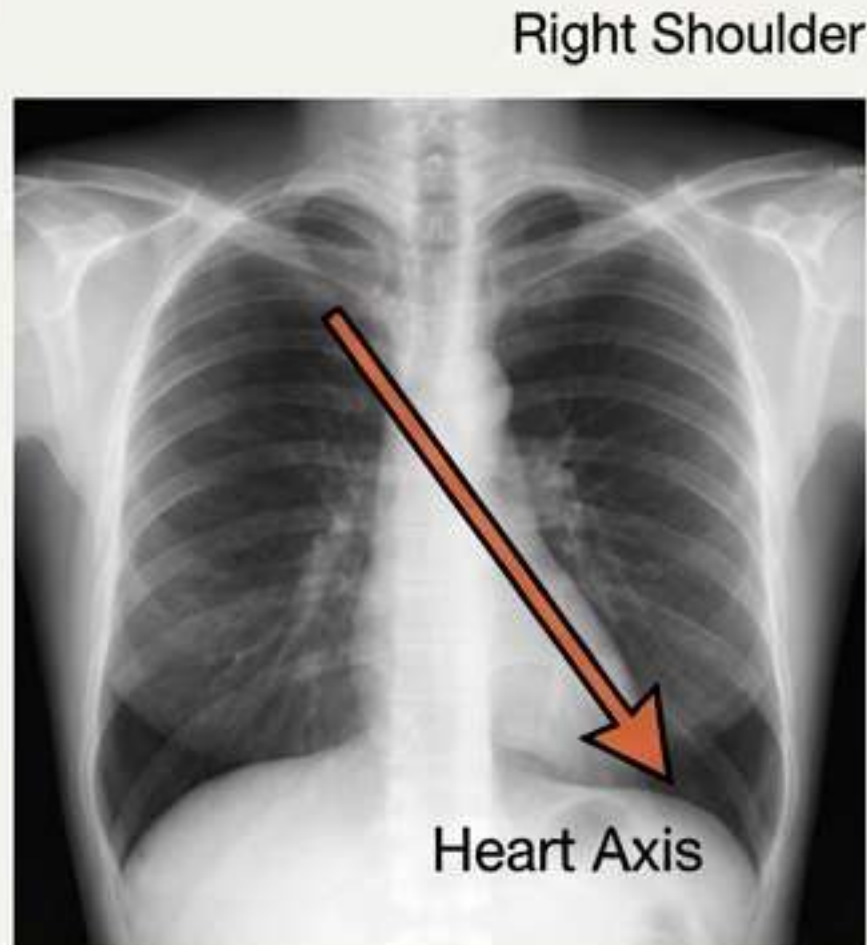
- A. Oblique top to bottom, outside to inside
- B. Oblique top to bottom, right to left
- C. Horizontal top to bottom, right to left
- D. Vertical top to bottom, left to right
- E. Oblique top to bottom, left to right

**Correct Answer: B**

### Explanation

The major axis of the heart is directed **downward, forward, and to the left**. It is never vertical or horizontal in a healthy thorax.

**Right → Left**



Left Hip

## EMD 1 2018 (Question N°: 09)

Regarding the lymphatic system:

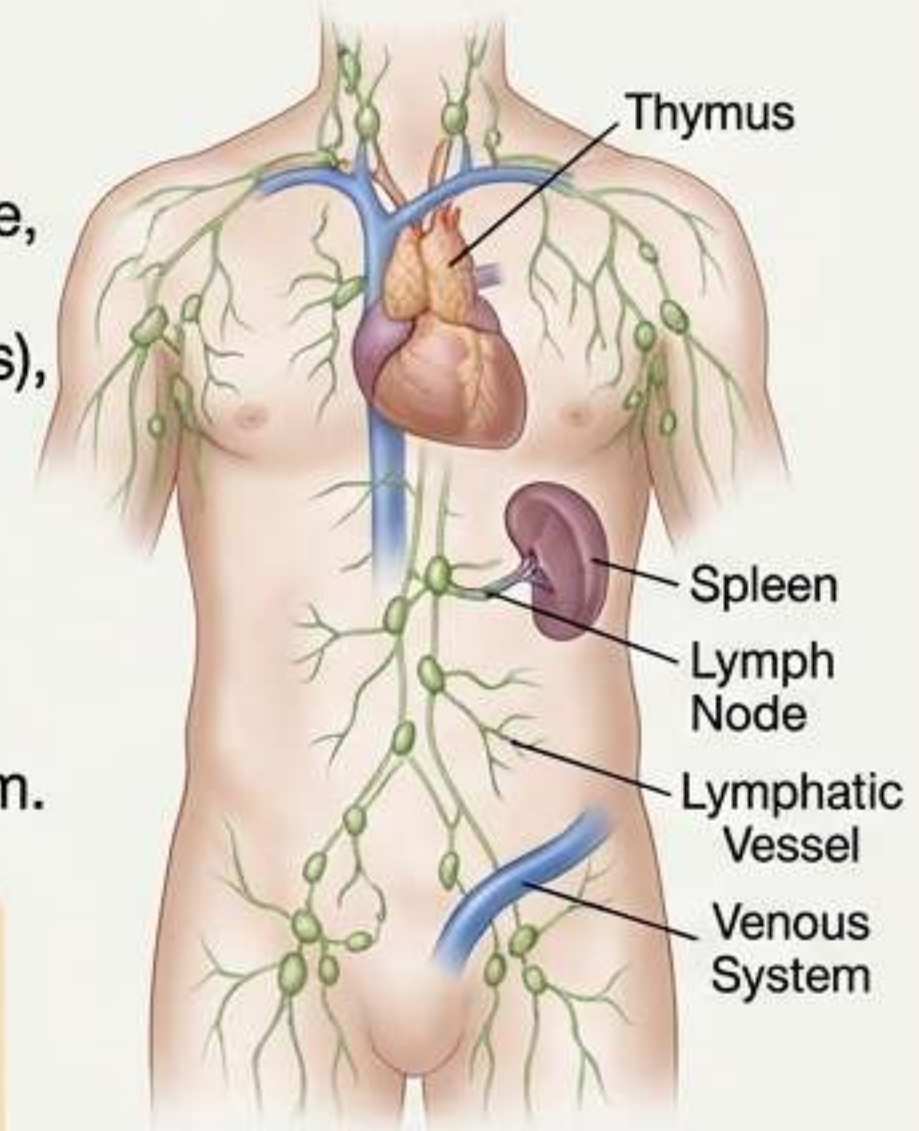
- A. It is made of vessels and nodes
- B. Anastomotic system between arteries and veins
- C. Lymph is drained into the venous system
- D. Its role is exclusively defense of the organism
- E. It is formed by organs, including the spleen

**Correct Answer: A, E**

### Explanation

The system is comprehensive, comprising **lymphatic vessels, lymph nodes** (filters), and **lymphoid organs** (Spleen, Thymus, Tonsils). It is not *exclusively* defense (also fluid balance and fat transport), and it eventually drains into the venous system.

**Lymph = Filter & Fight.**  
(Nodes filter, Organs like Spleen fight).





## EMD 1 2018 (Question N°: 16)

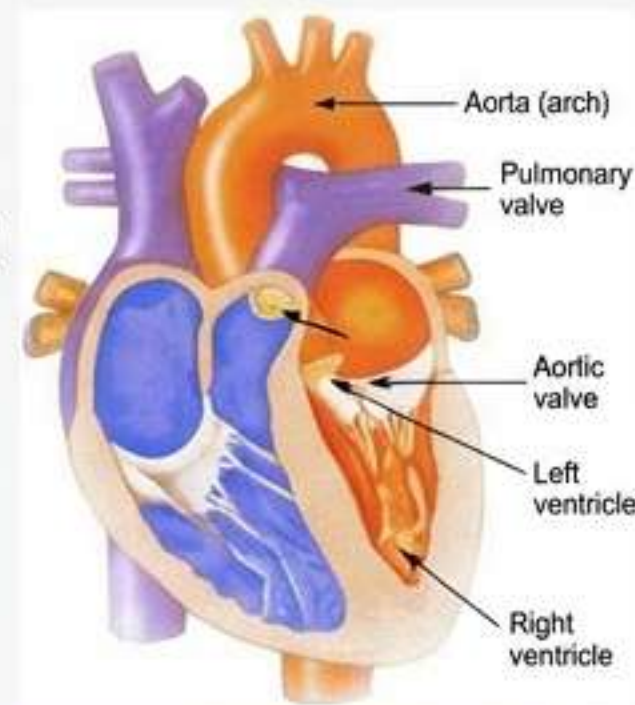
Regarding the arteries:

- A. Carry oxygenated blood from heart to lungs
- B. The aortic artery is the main blood conduit
- C. Are conduits equipped with valves
- D. Coronary arteries are the 1st collateral branches of the aorta
- E. They always run parallel to veins

**Correct Answer: B, C, D**

Aorta is the main trunk (**B**).

**Coronaries** are the first branches (**D**). The 'valves' in C refers to the **Sigmoid (Semilunar) valves** found **only** at the origin of the great arteries (Aortic/Pulmonary valves). Unlike veins, arteries do not have valves along their length.



**Valves at the Start.** (Arteries have valves only at the exit door of the heart).

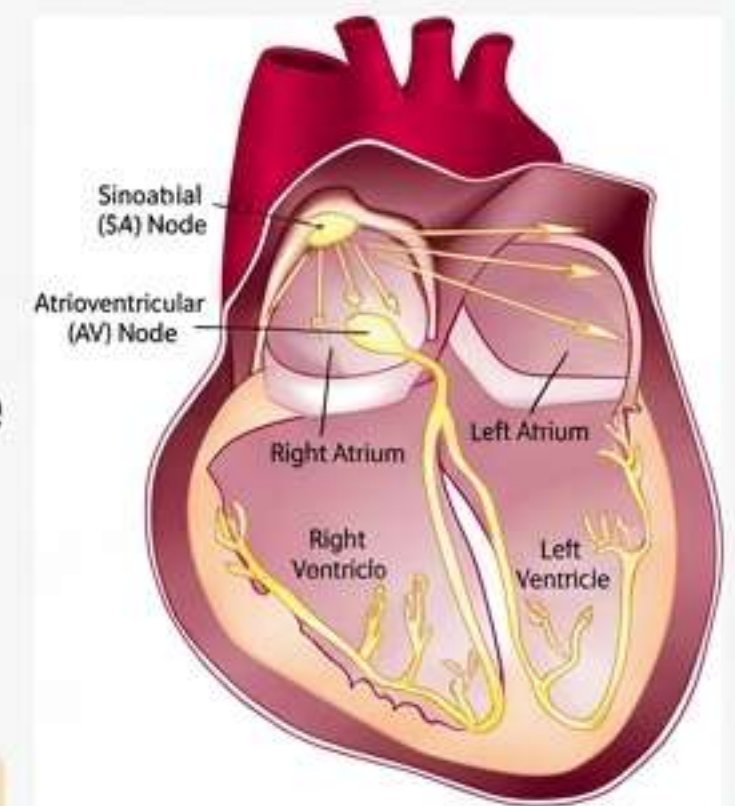
## EMD 1 2017 (Question N°: 02)

Regarding the heart:

- A. Organ of the anterior mediastinum
- B. It is a hollow and smooth muscle
- C. The heart muscle is called myocardium
- D. Consists of two cavities
- E. Endowed with automatic contraction

**Correct Answer: A, C, E**

The heart sits in the **Anterior Mediastinum**. The muscle layer is the **Myocardium** (Striated muscle, not smooth). It possesses **Automaticity** due to the intrinsic nodal tissue (SA/AV nodes).



**Auto-matic = Auto-beat.** (It beats on its own).



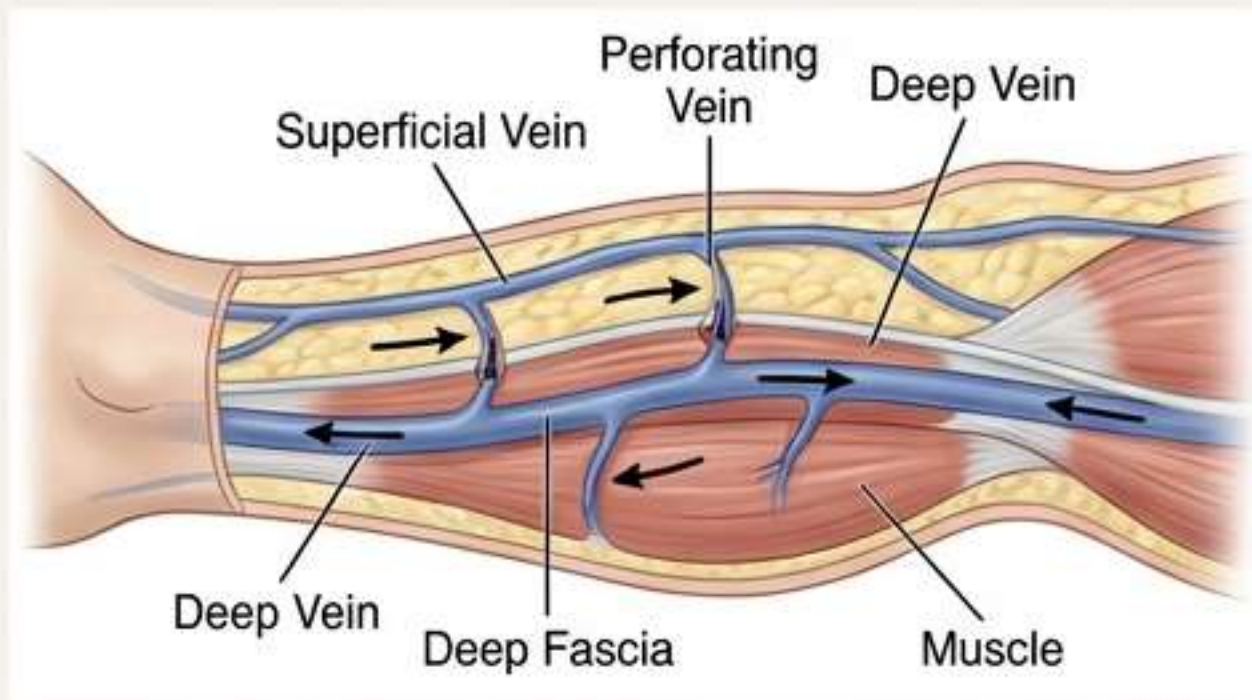
## EMD 1 2017 (Question N°: 03)

Regarding the veins:

- A. Are inextensible conduits
- B. Return blood from periphery to heart
- C. All veins bear the same name as related arteries
- D. Perforating veins connect superficial to deep veins

**Correct Answer: B, D**

Veins return blood to the heart (B). In the limbs, **perforating veins** are crucial; they pierce the fascia to connect the superficial venous network to the deep venous network, ensuring blood flows deep to be pumped by muscles.



**Perforators** = Pierce the deep fascia

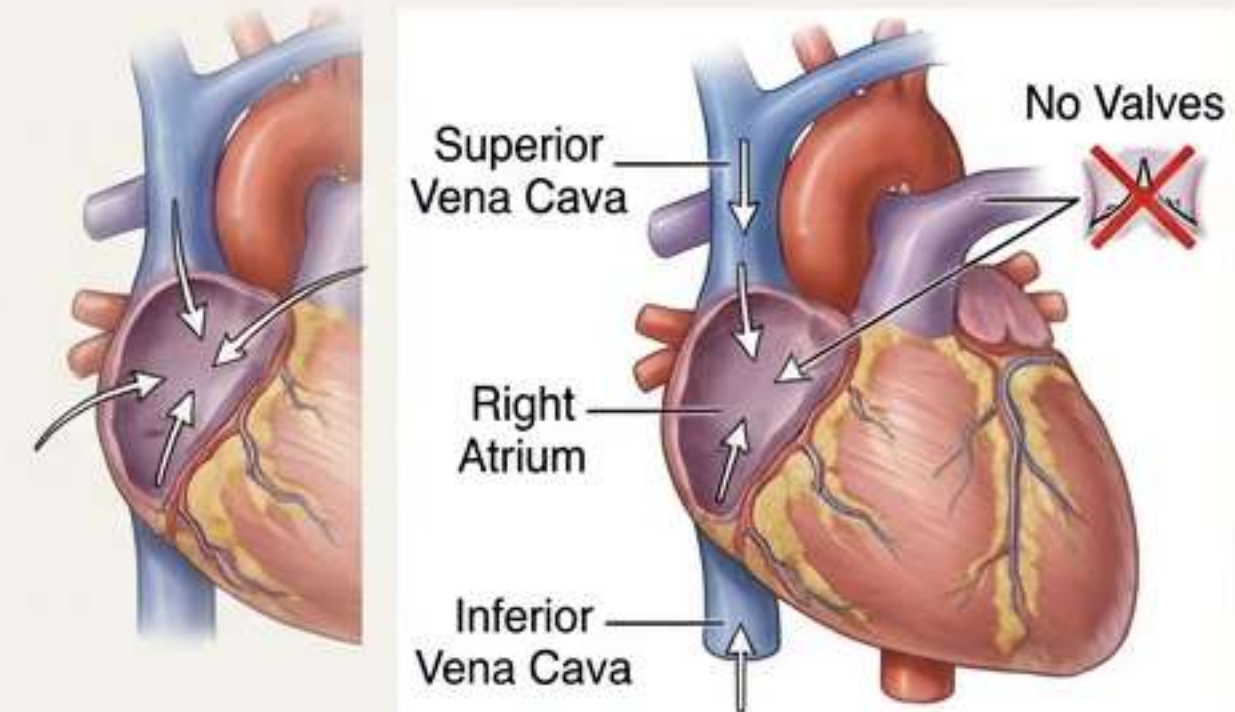
## EMD 1 2019 (Question N°: 03)

Regarding the venous system:

- A. Venous drainage is ensured by two main vessels called Venae Cavae
- B. Carries blood from tissues toward the heart
- C. For each artery, there are two satellite veins
- D. All venous blood ends in the left atrium
- E. All veins are equipped with valves

**Correct Answer: A, B**

Systemic venous blood collects into the **Superior** and **Inferior Vena Cava** (A). They carry blood **toward the heart** (B). They empty into the **Right Atrium**. Note: Vena Cavae do not have valves.



**VC** = **V**ery **C**entral. (The two big drains)



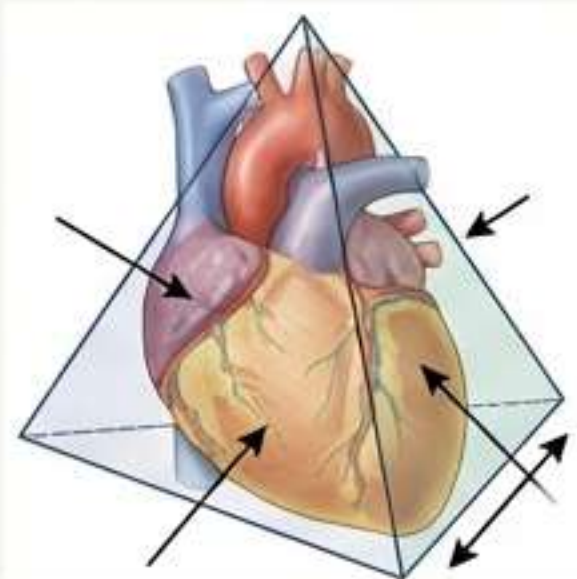
## EMD 1 2019 (Question N°: 07)

About the heart:

- A. Smooth and hollow muscle
- B. Divided into right heart and left heart functionally
- C. Right cavities communicate with left cavities
- D. Occupies the anterior mediastinum of the thorax
- E. Has the form of a pyramid with 3 faces and 3 borders

**Correct Answer: B, E**

Functionally, we distinguish a **Right Heart** (Pulmonary) and **Left Heart** (Systemic). Morphologically, the heart is a **Pyramid** with 3 faces (Anterior/Sternocostal, Inferior/Diaphragmatic, Left/Pulmonary), a base, and an apex. The septum prevents communication between Right and Left.



**Pyramid of Life.** (3 Faces, 3 Borders).

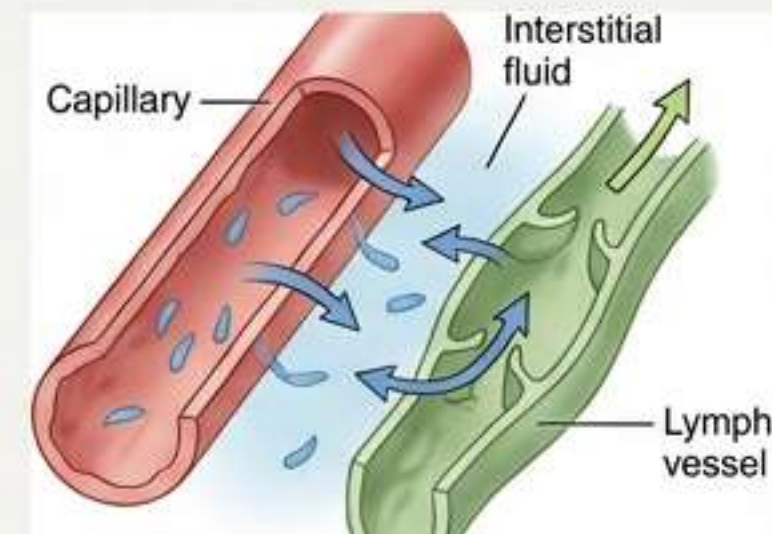
## EMD 1 2019 (Question N°: 09)

Regarding the lymphatic system:

- A. Made of vessels and nodes
- B. Anastomotic system between arteries and veins
- C. Lymph is drained into the venous system
- D. Role is exclusively defense of the organism
- E. Drains interstitial fluid

**Correct Answer: A, C, E**

The key functions of the lymphatic system are: **Drain interstitial fluid** (prevents edema), transport fats, and immune defense. It consists of **vessels and nodes** and eventually dumps lymph back into the venous system (Jugulo-subclavian angle).



**Lymph = The Janitor.** (Cleans up spilled fluid and dumps it back in the drain).



## EMD 1 2018 (Question N°: 04)

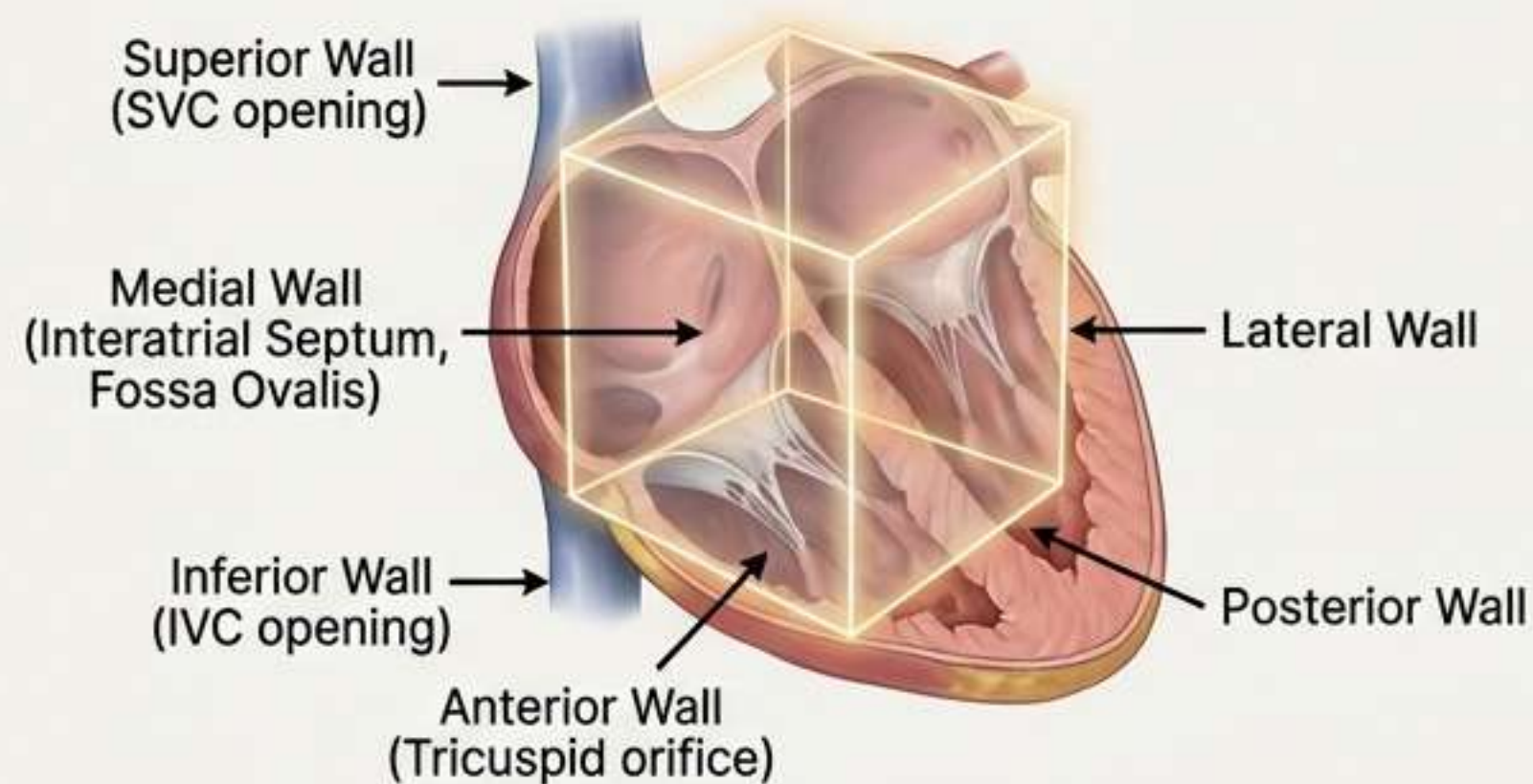
Regarding the right atrium:

- A. Inferior Vena Cava opens at its inferior wall
- B. Its lateral wall presents the remnant of the Foramen Ovale
- C. Cuboid shape
- D. Has a smooth medial wall or interatrial septum
- E. Communicates with the right ventricle via its anterior wall

**Correct Answer: C, D, E**

The Right Atrium is roughly **cuboid** (6 walls). The **Medial wall** is the septum (smooth, except for fossa ovalis). The connection to the ventricle (**Tricuspid orifice**) is on the **anterior** wall.

Note: Fossa ovalis is on the *medial* wall.



**RA = Room** (Cube shape).

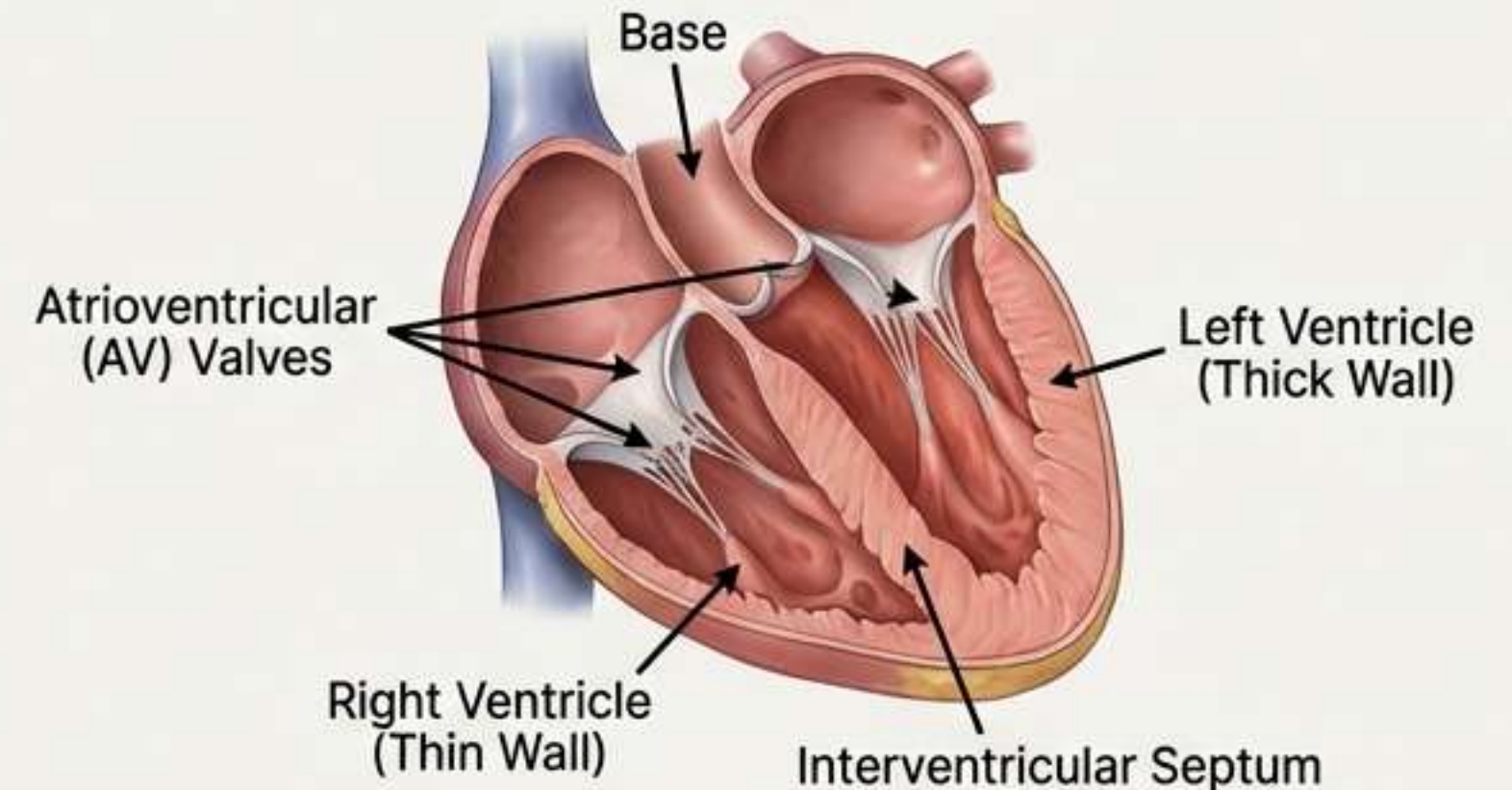
## EMD 1 2018 (Question N°: 05)

Regarding the heart ventricles:

- A. Right ventricle is thicker than the left
- B. They communicate at their base with the atria
- C. Separated by a septum 10 mm thick
- D. Right atrioventricular orifice is equipped with the mitral valve
- E. Papillary muscles and chordae are specific to the left ventricle

**Correct Answer: B**

Ventricles connect to Atria at the **Base** (via AV valves). The **Left Ventricle** is thicker (pumps to body). The Right valve is Tricuspid. **Chordae tendineae** exist in *both* ventricles to prevent valve prolapse.



**Base is Basic.** (Connection is at the base).



## EMD 1 2019 / EMD1 2020 (Question N°: 02)

Arteries are characterized by:

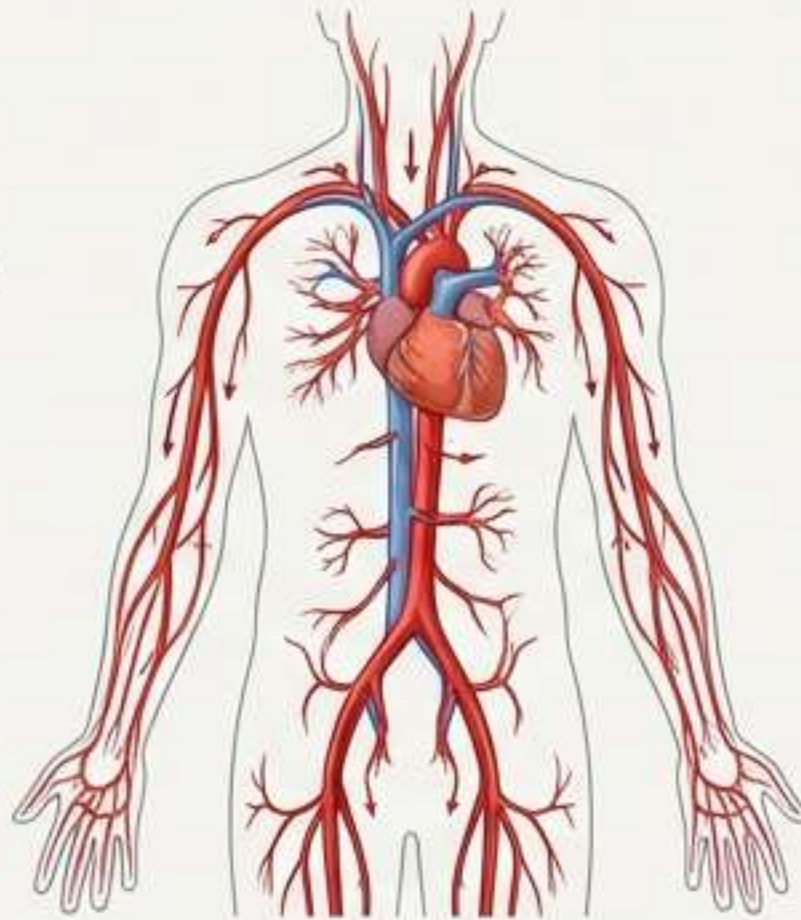
- A. Conveying oxygenated blood from heart to tissues
- B. Are inextensible vessels
- C. The **aortic artery** is the **main blood conduit**
- D. Arranged in superficial and deep planes
- E. For each artery there are two satellite veins

**Verdict:** Correct Answer: **A, C**

**Explanation:** As a general rule for the systemic circuit, arteries carry **oxygenated blood** to tissues (A). The **Aorta** is the main trunk. Arteries are elastic and muscular (extensible), allowing them to absorb the pulse pressure.

**Mnemonic:**

**Arteries = Active**  
(Oxygen delivery)



## EMD 1 2020 (Question N°: 03)

Regarding the venous system:

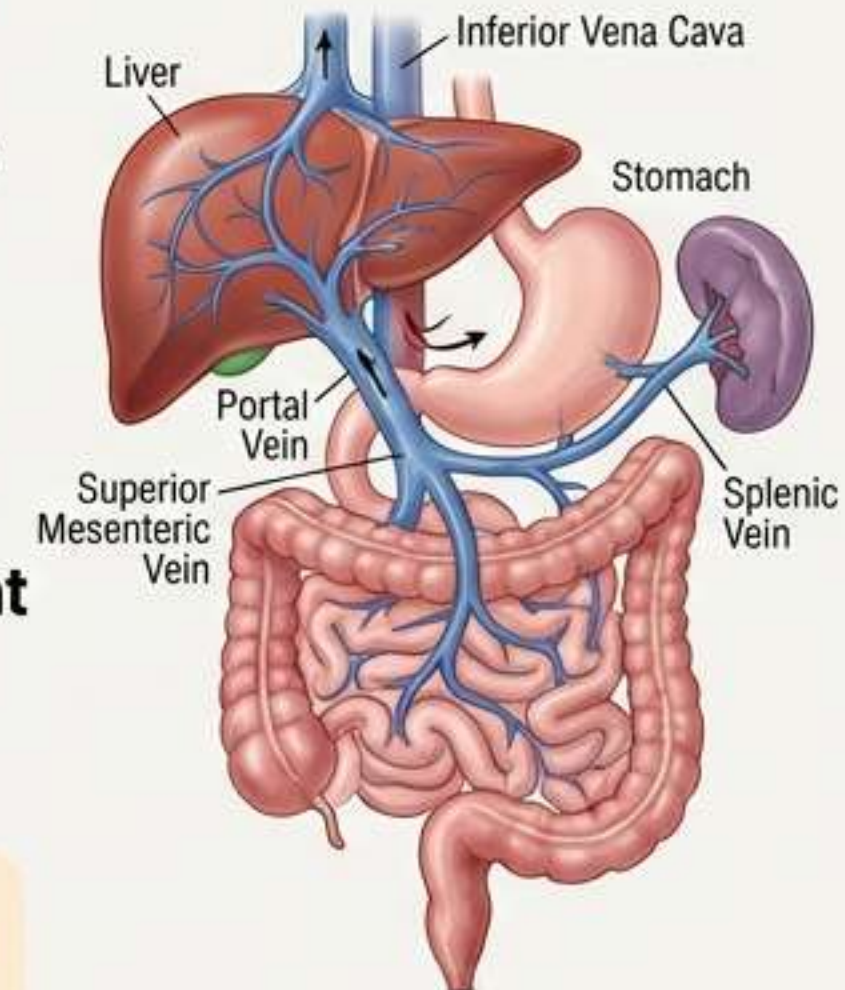
- A. Drainage ensured mainly by two vessels: **Venae Cavae**
- B. Vehicle interstitial fluid
- C. The Portal vein is a typical example
- D. All **venous blood ends** in the left atrium
- E. All veins are equipped with valves

**Verdict:** Correct Answer: **A, C**

**Explanation:** Major drainage is via the **Venae Cavae** (A). The **Portal Vein** is a specialized system that carries nutrient-rich venous blood from the gut to the liver for processing. Venous blood goes to the **Right atrium**.

**Mnemonic:**

**Portal = Port** of entry to the  
Liver





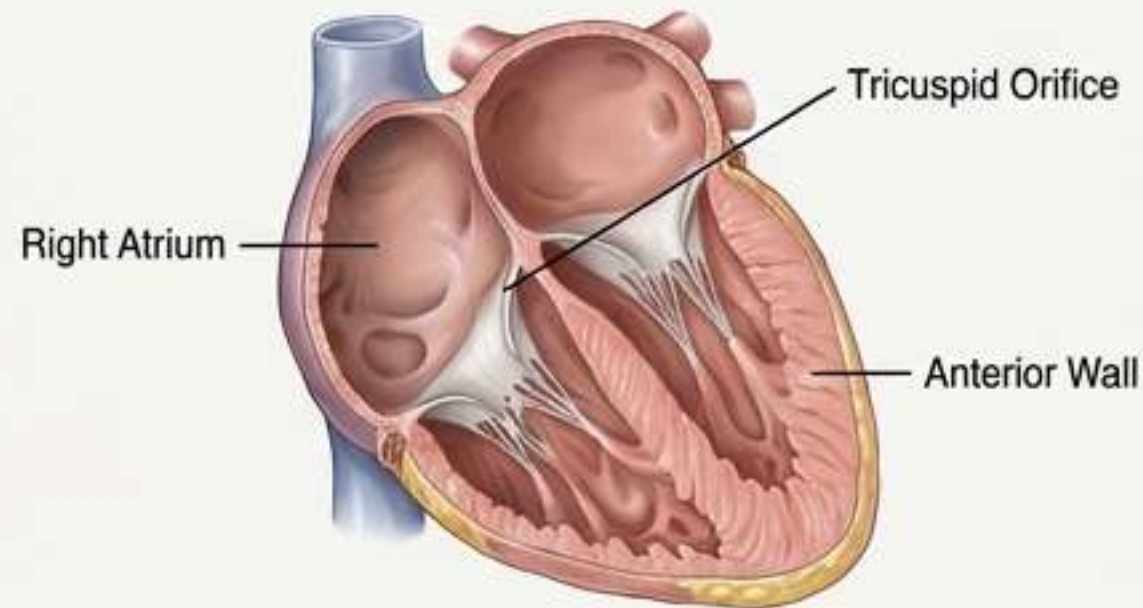
## EMD 2 2021 (Question N°: 16)

The heart presents the following characteristics:

- A. Oriented oblique top-bottom, out-in
- B. Atrioventricular orifice opens at the anterior wall of the right atrium
- C. Is a smooth hollow muscle with automaticity
- D. Left coronary artery irrigates only the left heart
- E. Ventricles separated by a permeable septum

### Correct Answer: B

The communication between the Right Atrium and Ventricle (Tricuspid orifice) is located on the **Anterior** aspect of the atrial wall. The septum is *impermeable* (no mixing). The muscle is *striated*.



**Exit Front.** (Door to ventricle is anterior).

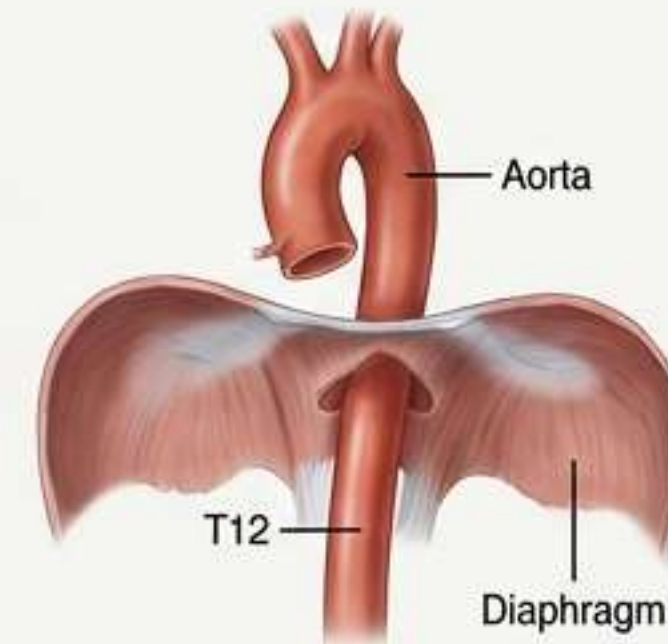
## EMD 2 2021 (Question N°: 17)

Regarding the aortic artery:

- A. Originates at the right ventricle
- B. Crosses the diaphragm at Th12
- C. Terminates at L3
- D. Thoracic aorta presents three segments
- E. First collaterals are the coronary arteries

### Correct Answer: B, E

**Aorta:** Leaves LV -> **Coronaries** branch immediately -> Crosses Diaphragm at **T12** -> Ends at L4. The Thoracic aorta has three segments (Ascending, Arch, Descending), but D is usually marked false in these specific keys if not perfectly phrased, however B and E are undeniable facts.



**T12 = Thorax Ends.**