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KING SAUD UNIVERSITY



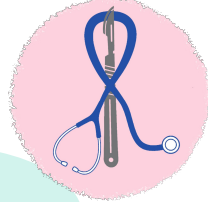
Histology team

Cardiovascular Block | Histology

OSPE (Female + Male)

- Color index :
- Main text
- Important
- Female slide
- Male slide
- DR.Notes
- extra

Revised & Reviewed
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Faye Wael Sendi





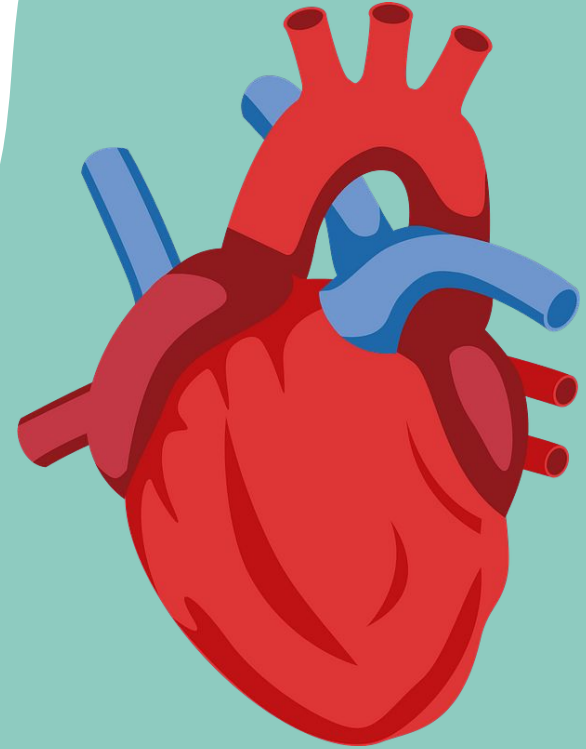
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Wall of The Heart & Cardiac Vaves



1

Wall of The Heart

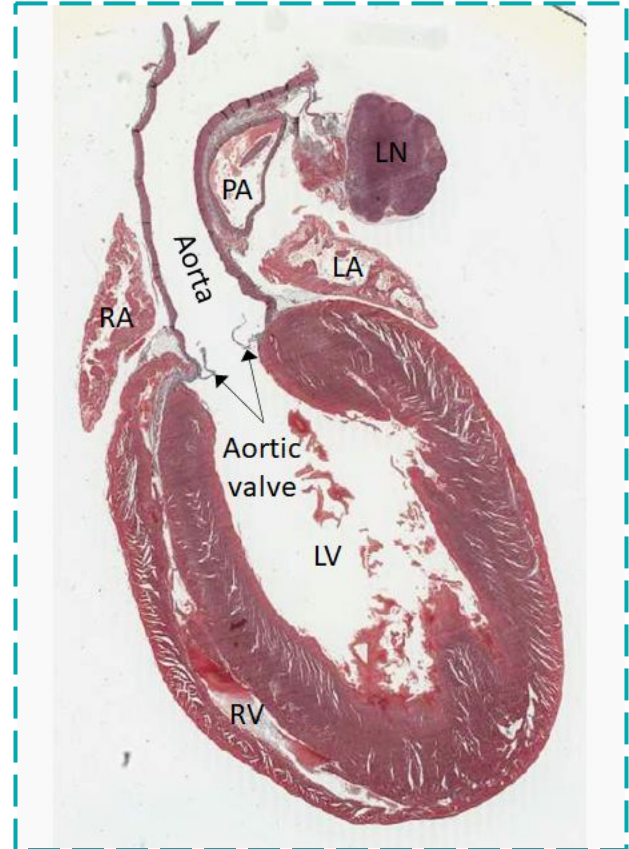
- **Identify the structure :**

Wall of the Heart (longitudinal section)

- **Identify the features :**

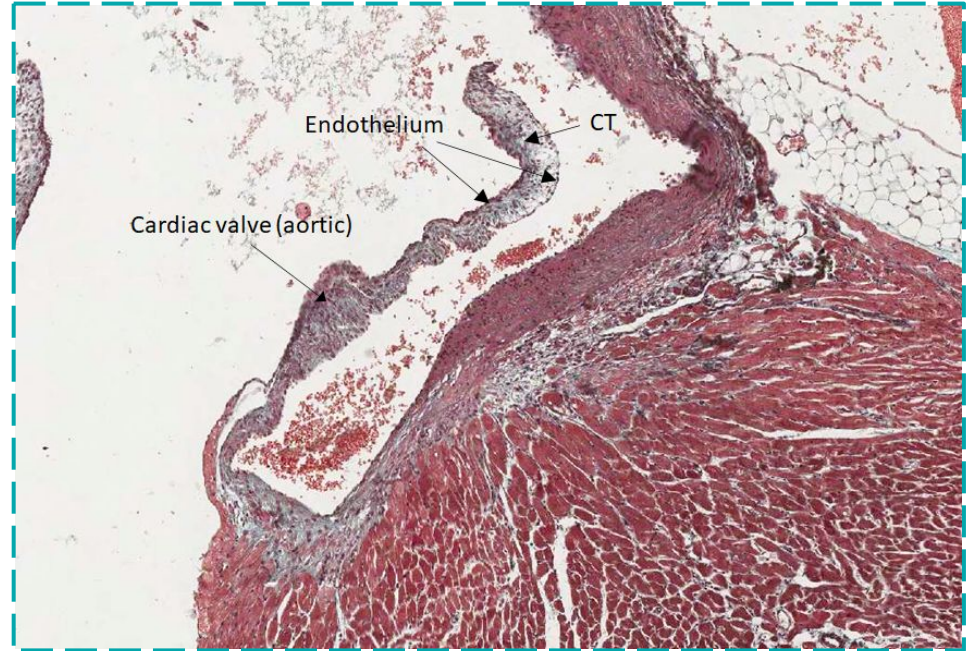
The wall of the heart is formed of three coats :

- **Innermost : Endocardium**
- **Outermost : Epicardium**
- **the main Thickness of the Wall : Myocardium (Cardiac Muscle) in between**



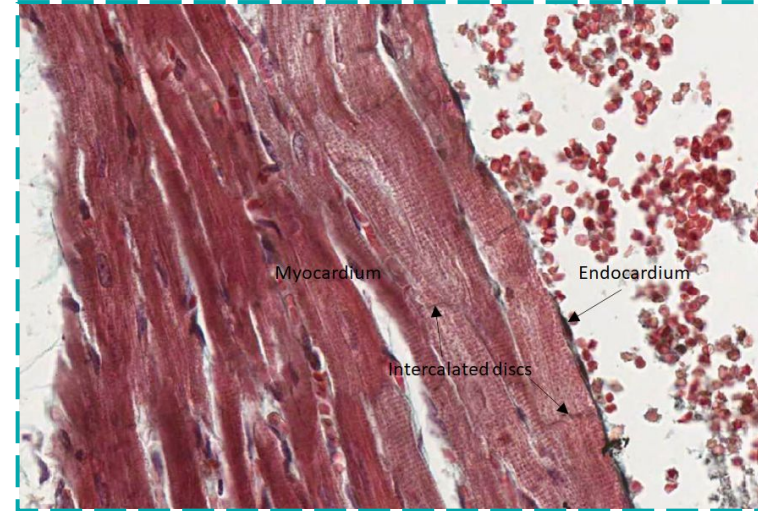
Cardiac Valve

- Identify the structure :
 - Cardiac Valve
- Identify the features :
 - Core of connective tissue (C.T)
 - Endothelium
 - Avascular



Endocardium and Myocardium

- Identify the structure :
 - Endocardium and Myocardium
- Identify the features :
 - **Endocardium:** simple squamous endothelium lying on C.T
 - **Myocardium:** Cardiac Muscle Fibers:
 - Transverse Striations are present but not clear
 - Branch and **Anastomosis**
 - **Central Nucleus**
 - **Intercalated Discs**



Moderator Band: Purkinje Fibers

- Identify the structure :

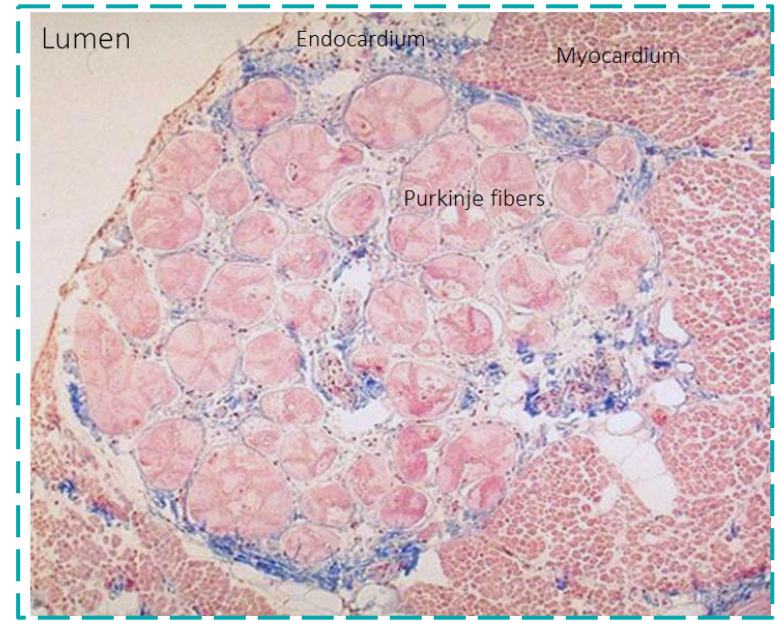
- Moderator Band

It's better not to Use Purkinje Fibers in the Structure's Name!

- Identify the features :

(In Comparison to Typical Cardiac Muscle Fibers)

- Larger in diameter
- Paler in staining (More Glycogen)
- Peripheral Nuclei
- Fewer Myofibrils (Mainly Peripheral)
- No Intercalated Discs
- Purkinje Fibers



- The section show : (you will not be asked about this)

- typical cardiac muscle fibers cut in TS
- Purkinje fibers lying in the subendocardial connective tissue
- Purkinje fibers are large modified cardiac muscle fibers specialized for faster conduction.



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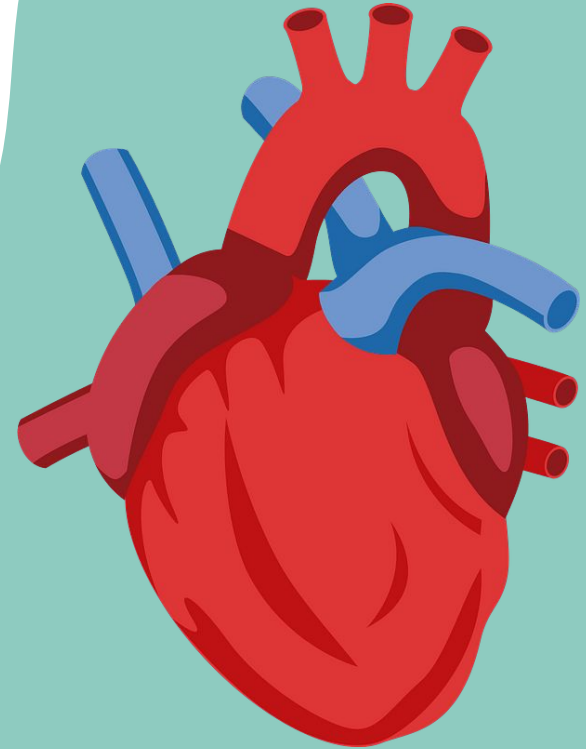
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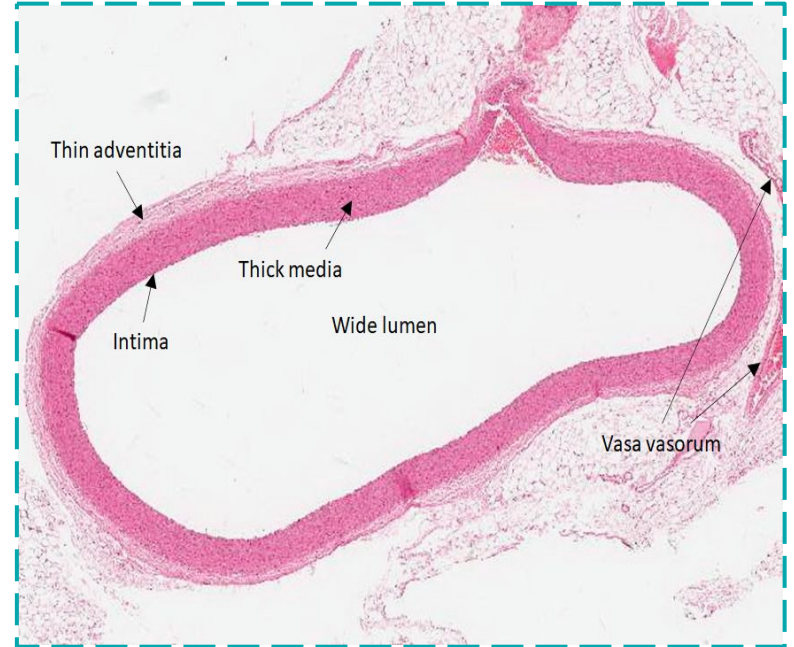
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Histology of The Blood Vessels



Elastic Artery: Aorta

- Identify the structure :
 - Elastic Artery : Aorta
- Identify the features :
 - Wide Lumen (Compared to the thickness of the wall)
 - Thick Media Forming the Main thickness of the Wall
 - Thin Adventitia with Vasa Vasorum

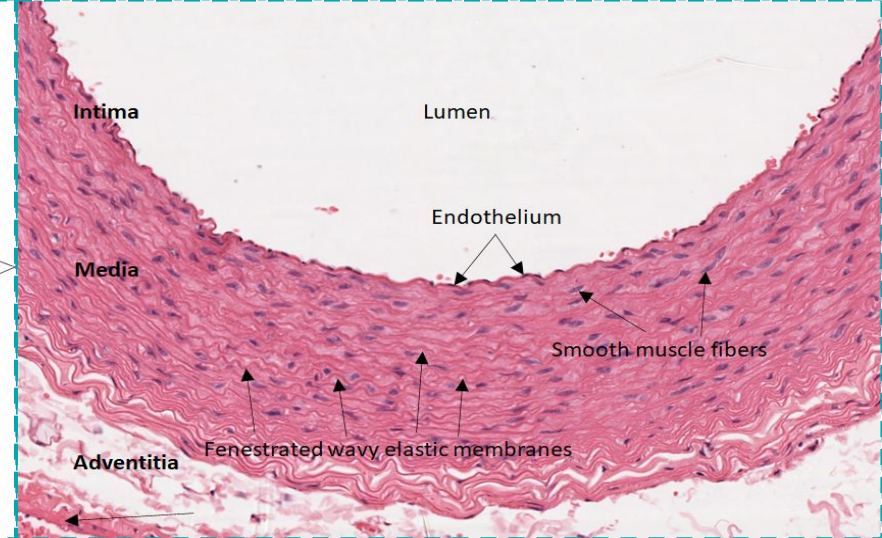
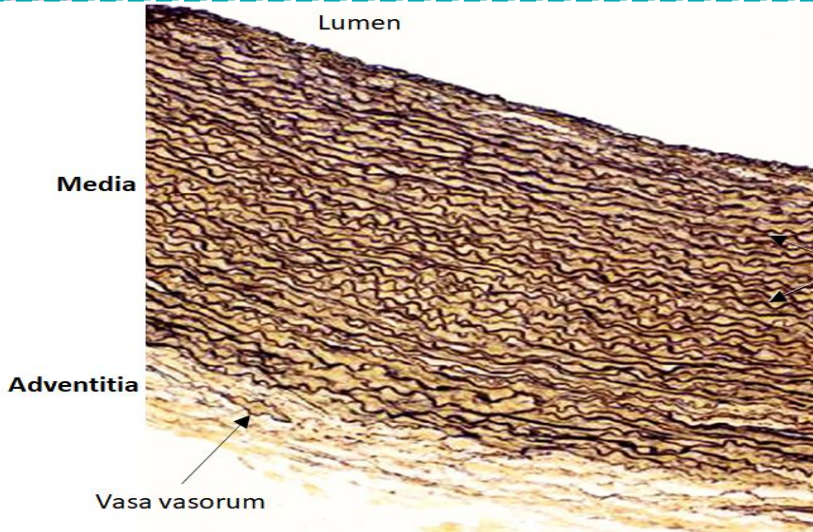


Aorta (Stained by Orcein)

<Identify the structure>

Aorta

Aorta Elastic Membranes Stained by Orcein

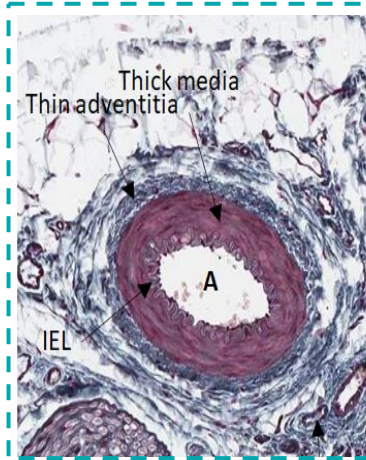


● Identify the features (Both has SAME Features)

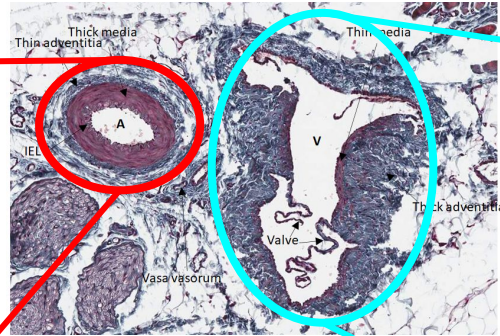
- Internal Elastic Lamina - **NOT Prominent**
- Tunica Intima seems to merge with the Media
- Tunica Media is **thick** (Forming the Main Thickness of the wall)
- Tunica Media is formed Mainly of Fenestrated wavy Elastic Membranes with Only Few smooth Muscle fibers in between
- Tunica Adventitia is **thin** with Vasa Vasorum

Medium-Sized Artery and Vein

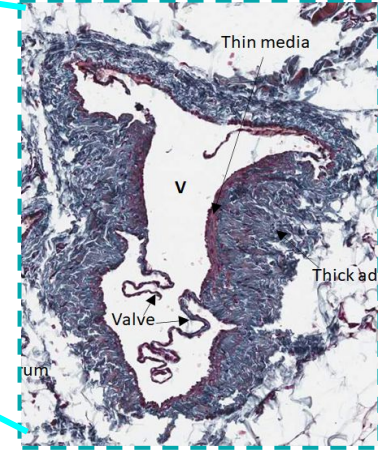
Medium-Sized Artery



<Identify the structure>



Medium-Sized Vein



<Identify the features>

- **Internal Elastic Lamina** (IEL) Well Developed (Appearing as a Bright Reddish wavy Line)
- **Media** is Thicker than **Adventitia** or Similar in Thickness
- Vasa Vorum (From Theoretical Slides)

- **NO Internal Elastic Lamina**
- **Adventitia** is Thicker than **Media**
- **May Have Valves**

The Creative Crew!

Cardiovascular Block | Histology Team (441)



Boys Captain

Alwaleed Alnasser



Girls Captain

Norah Alawlah



- Abdullah Alqarni
- Mohammed Almousa
- Abdulmajeed Alharbi
- Mansor Aldaijy

- Lobna Altimimy
- Fay Alluhaidan
- Iyah Alhasan
- Dania Alhudaithi

