

## + Motivational Corner:

Winners are not  
people who never  
fail, but people who  
never quit.



HISTOLOGY  
— 435 —



# Practical exam revision

# + Wall of the heart

Has 3 layers :

1-endocardium :endothelium (most inner)

2-myocardium :(middle layer)

3-epicardium :mesothelium (most outer)

*N.B*

Endothelium & Mesothelium:  
are simple squamous epithelium

Cardiac Valves "cusps"



# + Cardiac valves

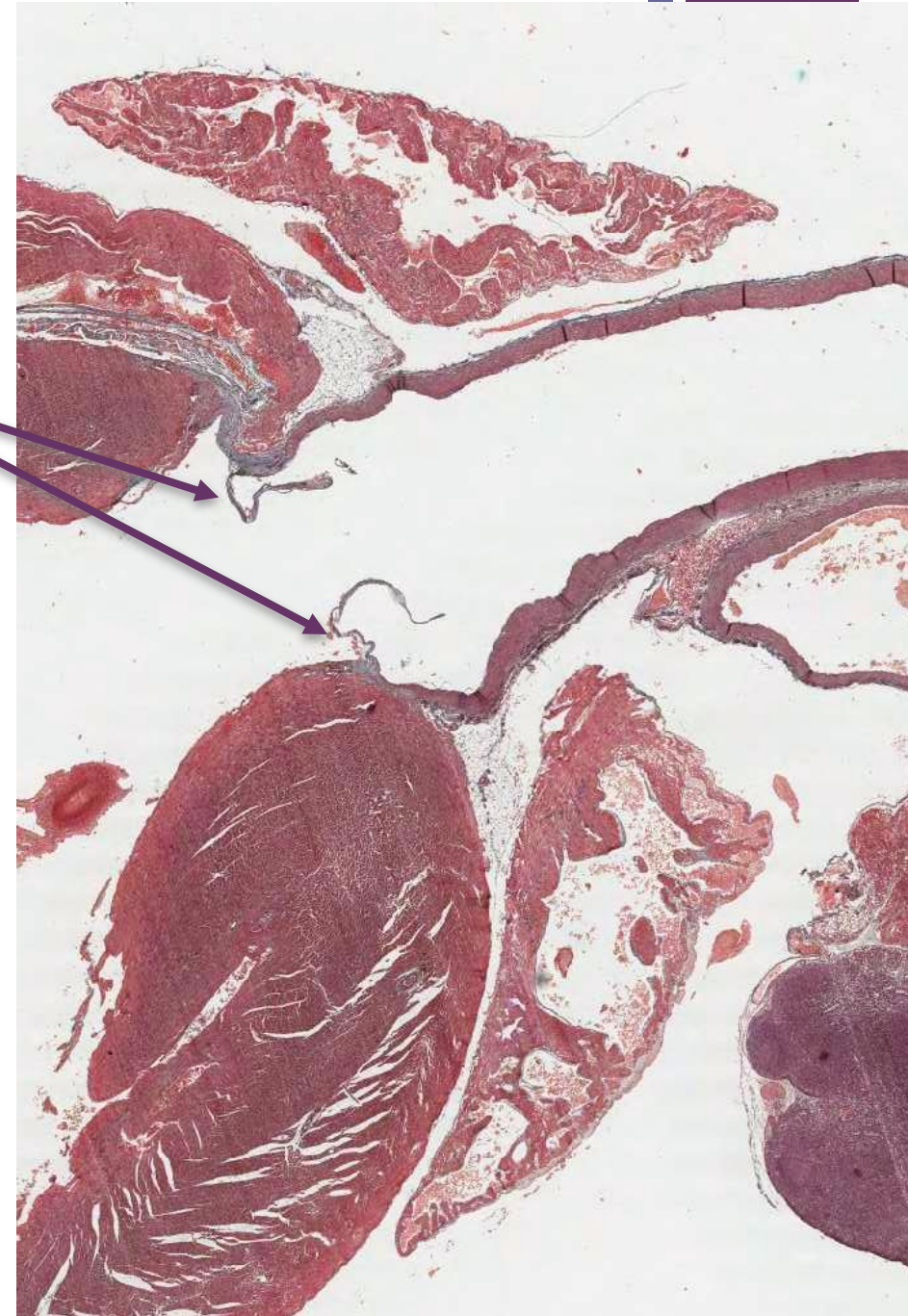
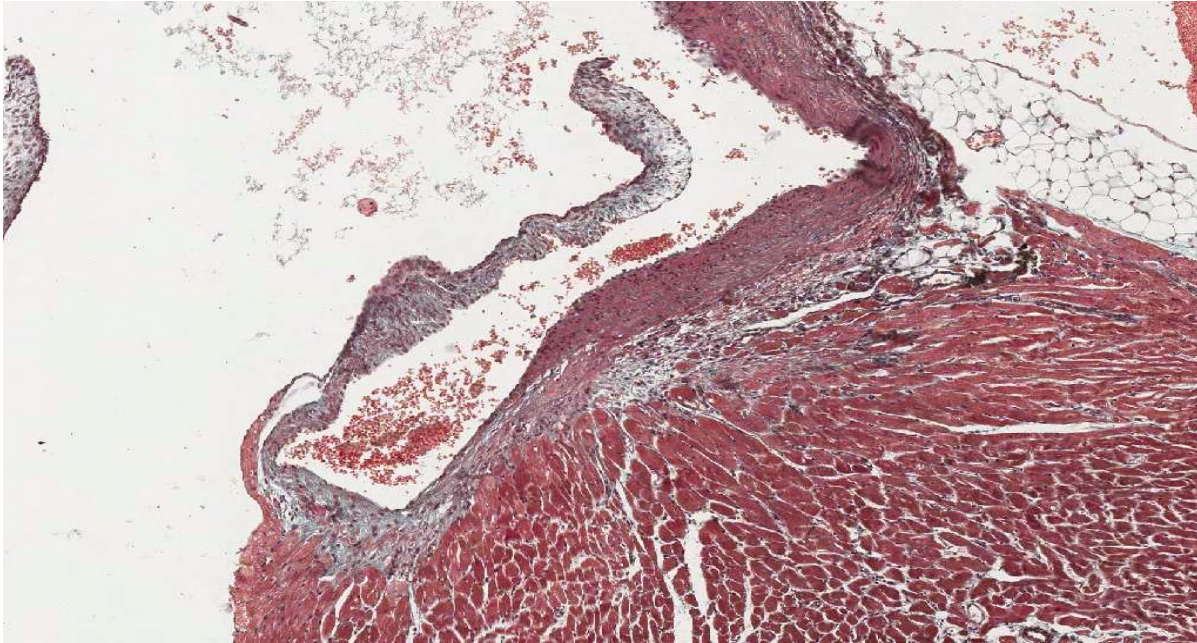
❖ Each cusp of heart valve is formed of:

Core of Dense irregular C.T, this core is covered by Endothelium.

❖ Features:

➤ Avascular

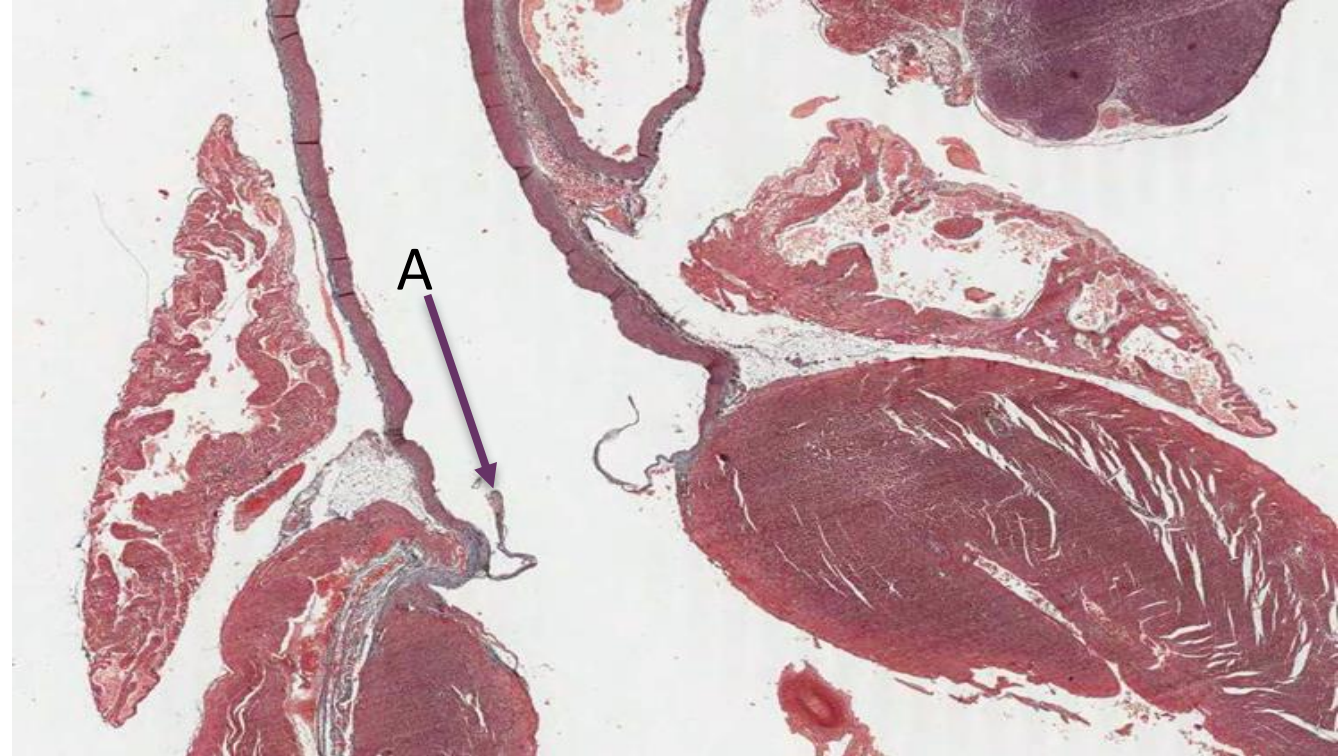
➤ Blood capillaries can be found only in the base "root" of the cusp.



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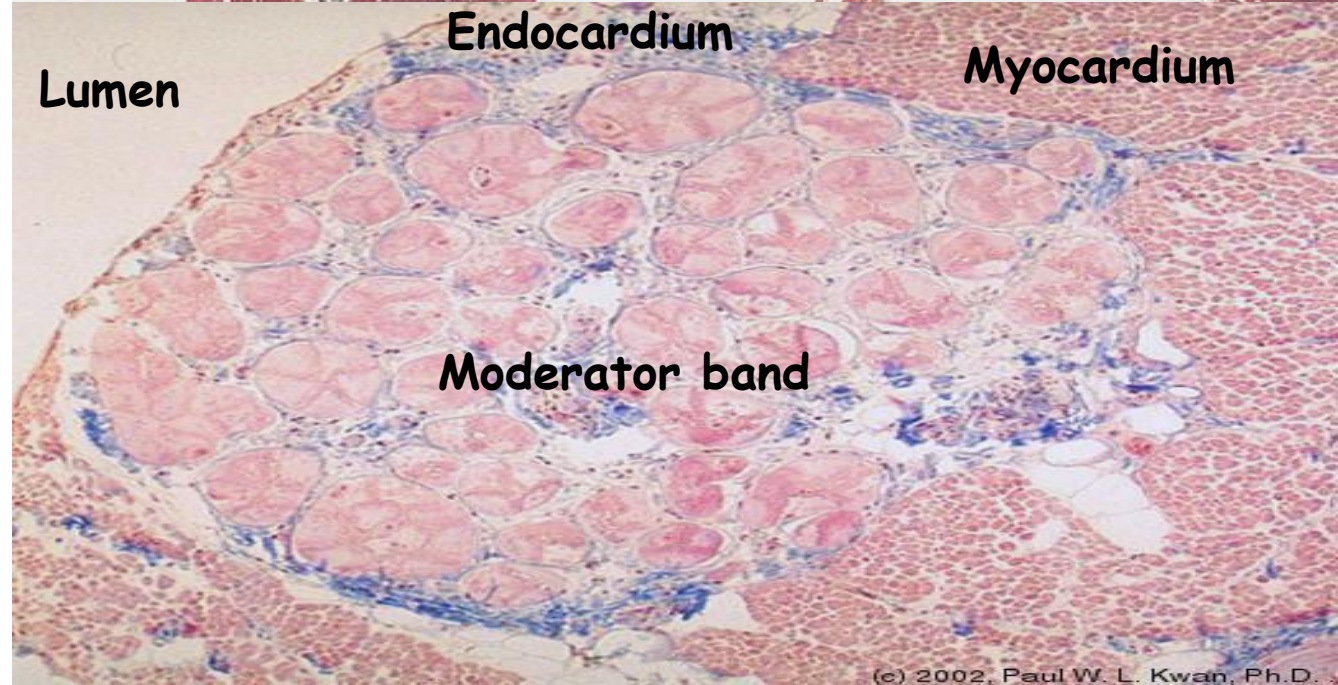
# Cardiac Valve

- ❖ Identify : Cardiac Valve
- ❖ Identify A : **Aortic valve**



# Moderator Band

- ❖ Features:
  - Present in the right ventricle.
  - **Purkinje fibers.**



# + Endocardium and Myocardium

❖ Identify the structure:

Endocardium and Myocardium.

❖ Identify A and B:

A: Endocardium

B: Myocardium.

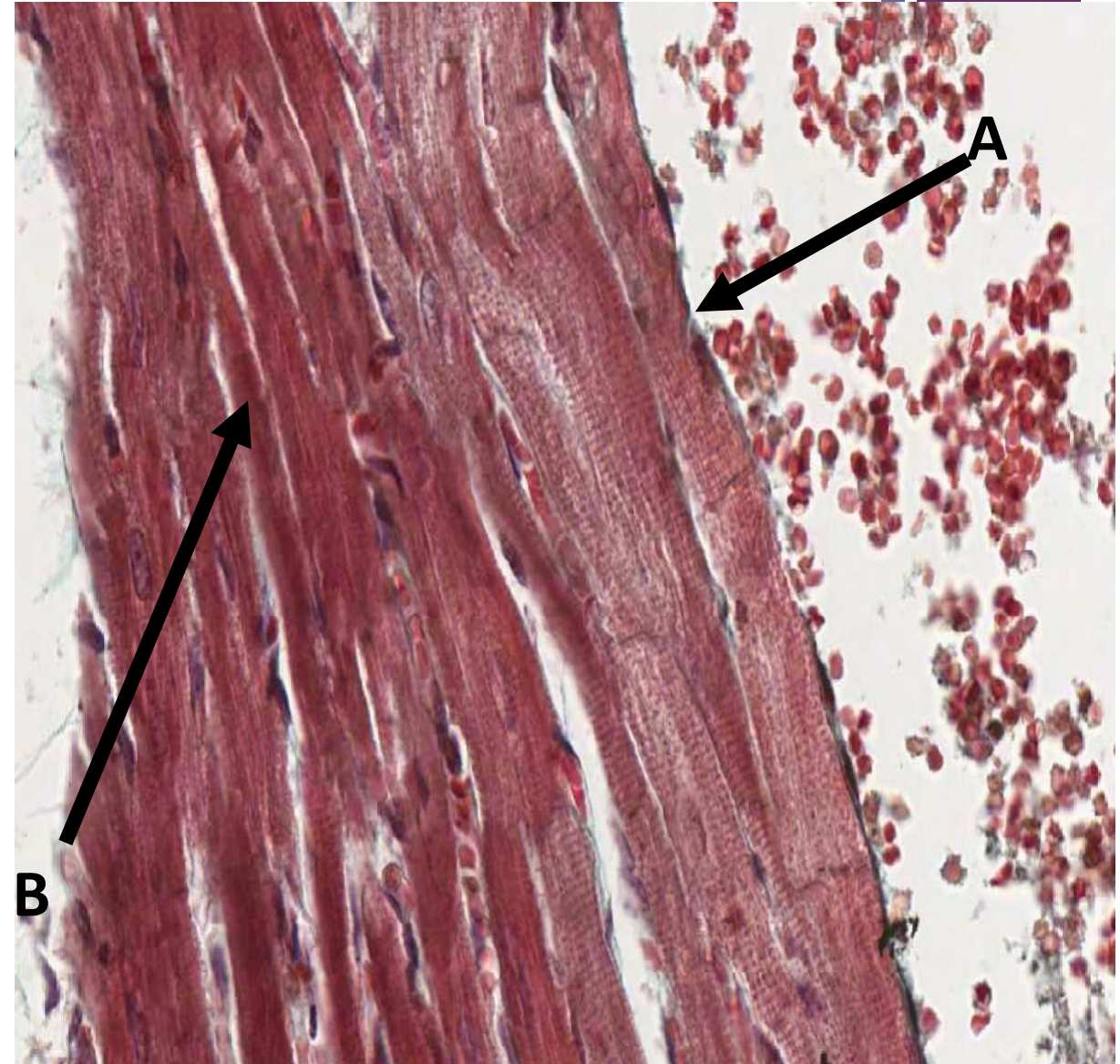
❖ Features:

➤ Endothelium.

➤ Subendothelial C.T.

➤ Dense C.T. layer.

➤ Subendocardial layer

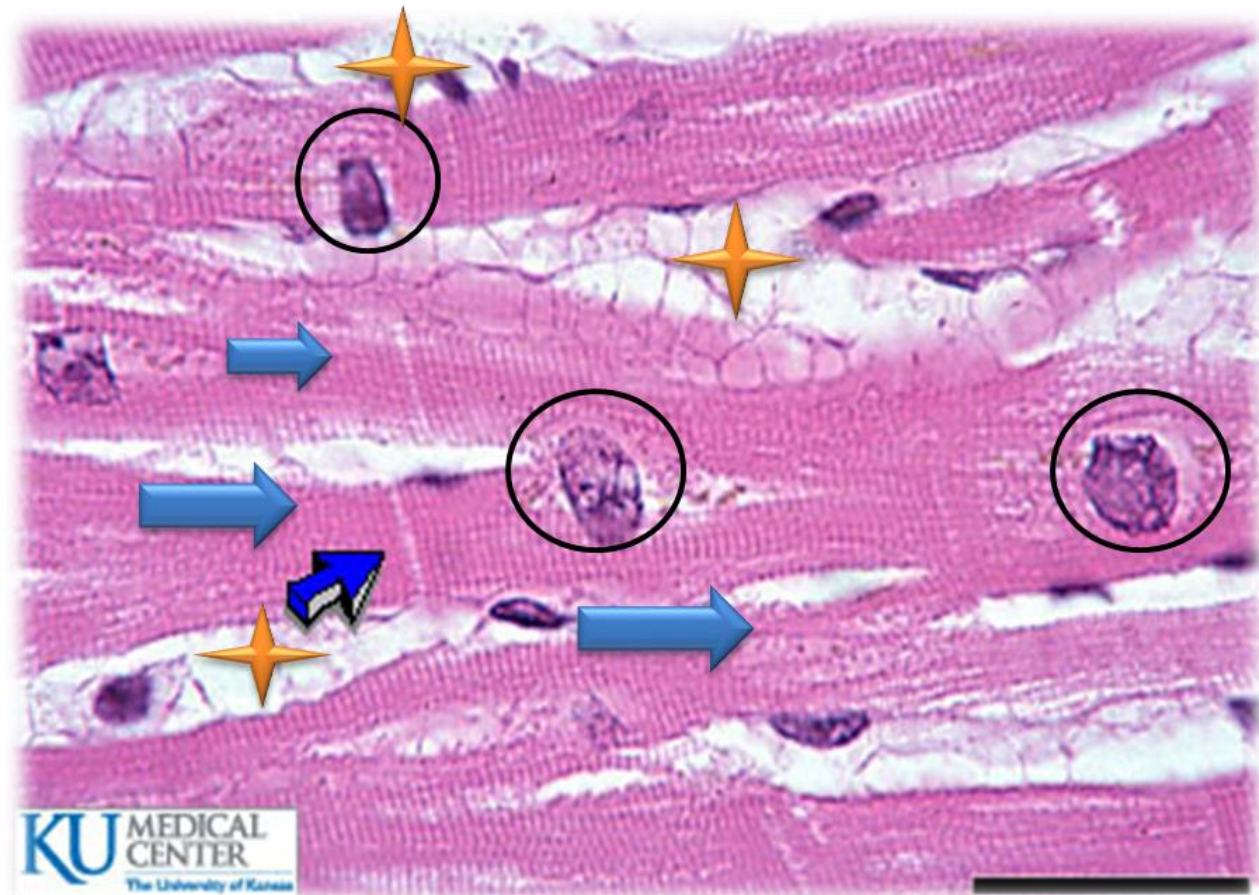


# + Myocardium



## ❖ Features:

- Intercalated discs (blue arrows).
- Endomysium: loose C.T. (Orange stars)
- Nuclei of myocardial cells: Central and round nuclei. (Black Circles)

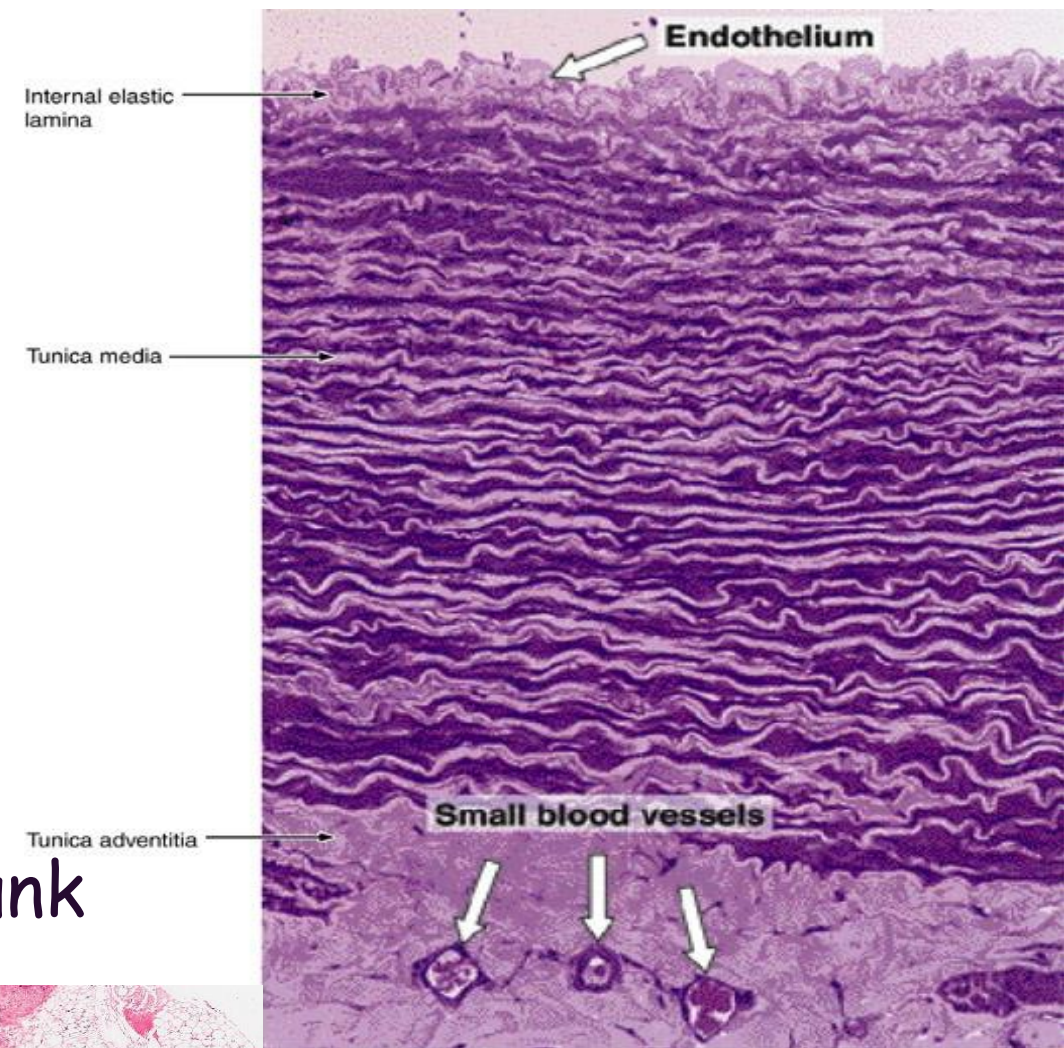
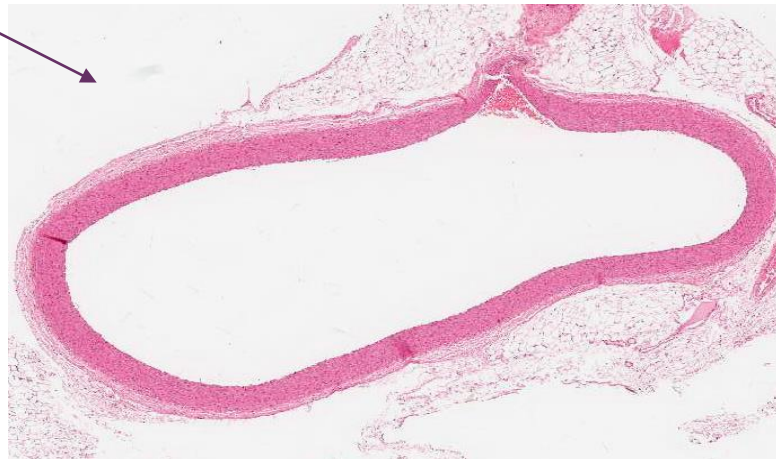
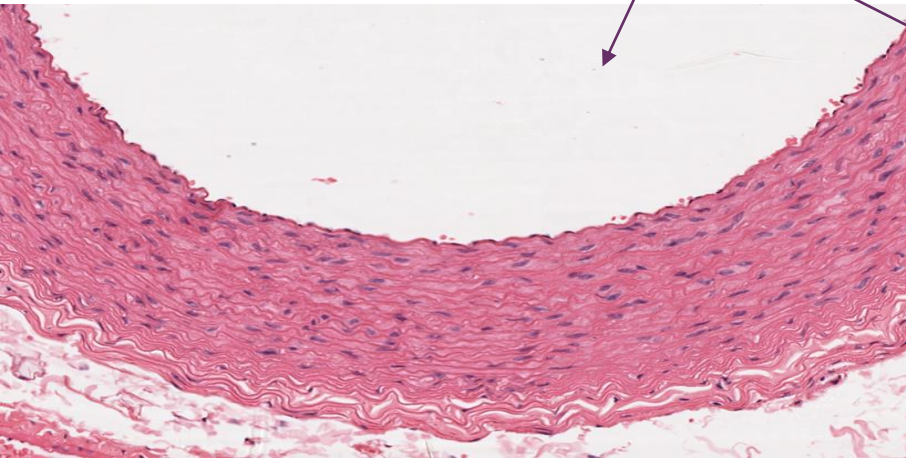


# + Elastic Artery

## ❖ Features:

- Endothelium.
- Fenestrated elastic lamellae (membrane) in the media.
- Vasa vasorum in adventitia and outer part of media (for blood supply).

Examples: Aorta and Pulmonary Trunk

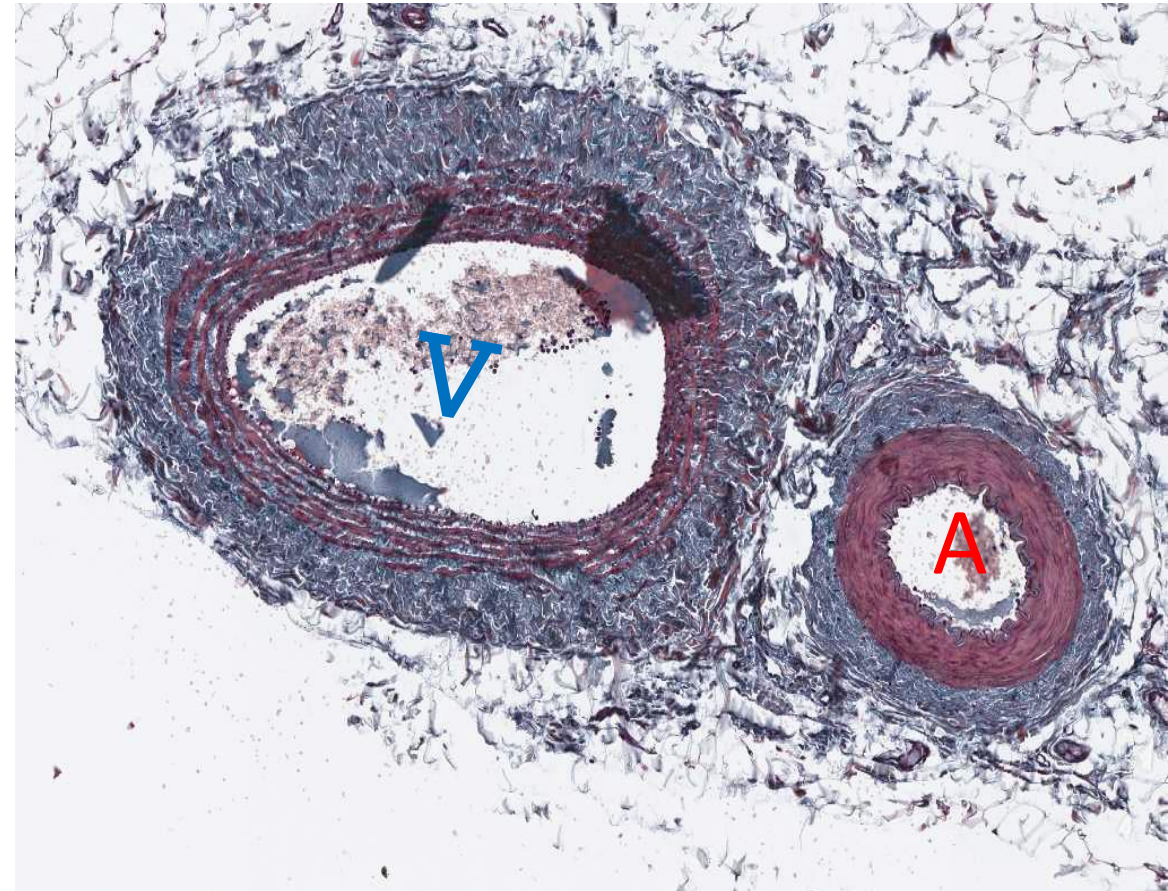
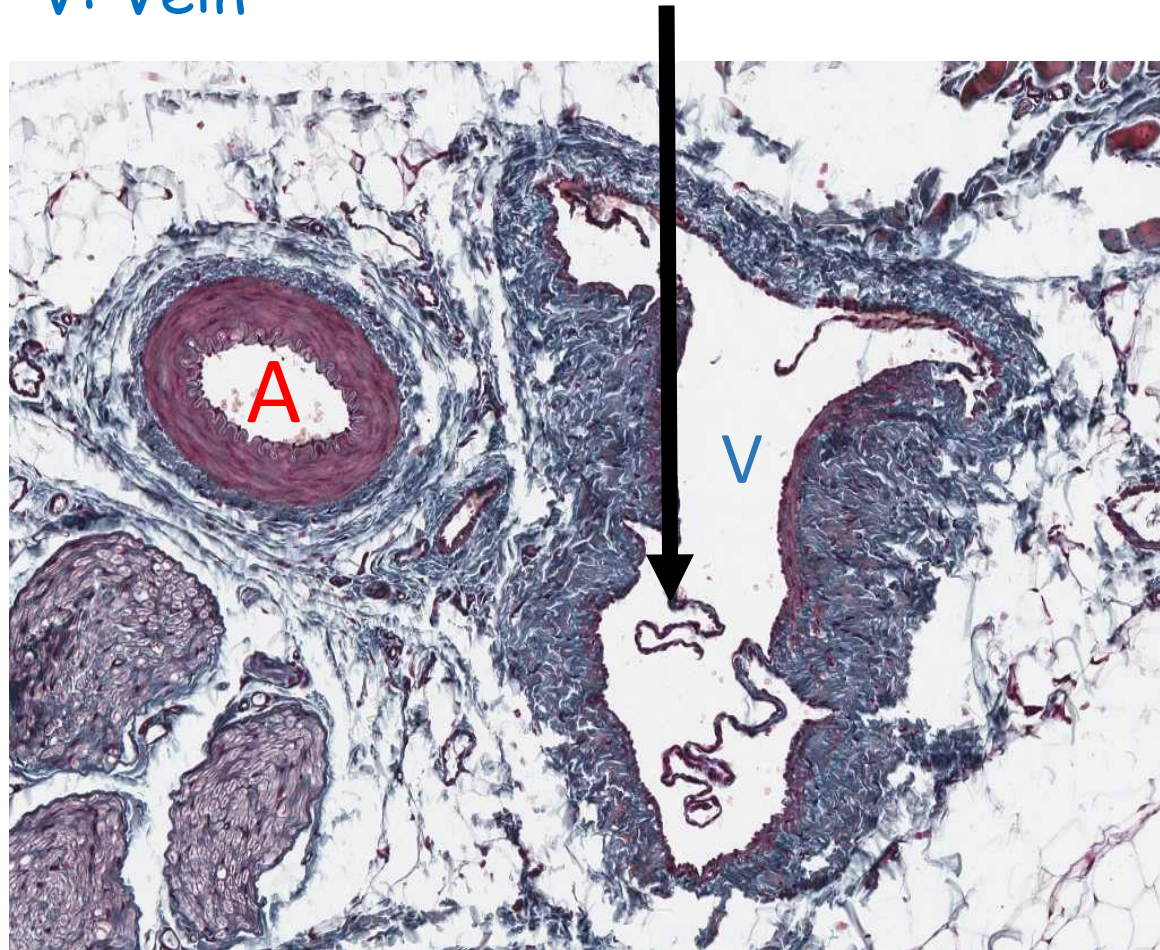


# + Medium-Sized Artery and Vein



A: Artery  
V: Vein

valve





# +Medium-Sized Artery

❖ Identify: medium-sized artery

❖ Features:

➤ Prominent internal elastic lamina

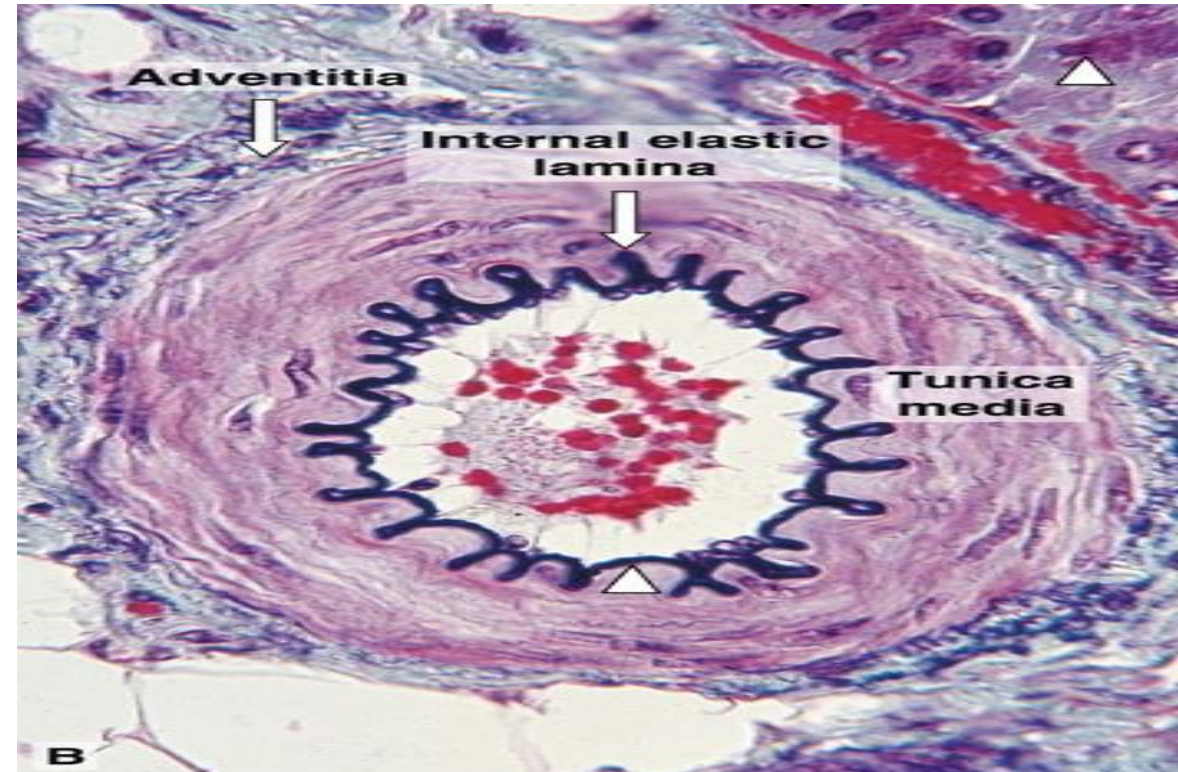
➤ Tunica media

➤ Tunica Adventitia

❖ Example:

Brachial, Ulnar and Renal Artery

Largest layer: T.Media



# + Medium-Sized Vein

❖ Identify : Medium-Sized Vein

❖ Features:

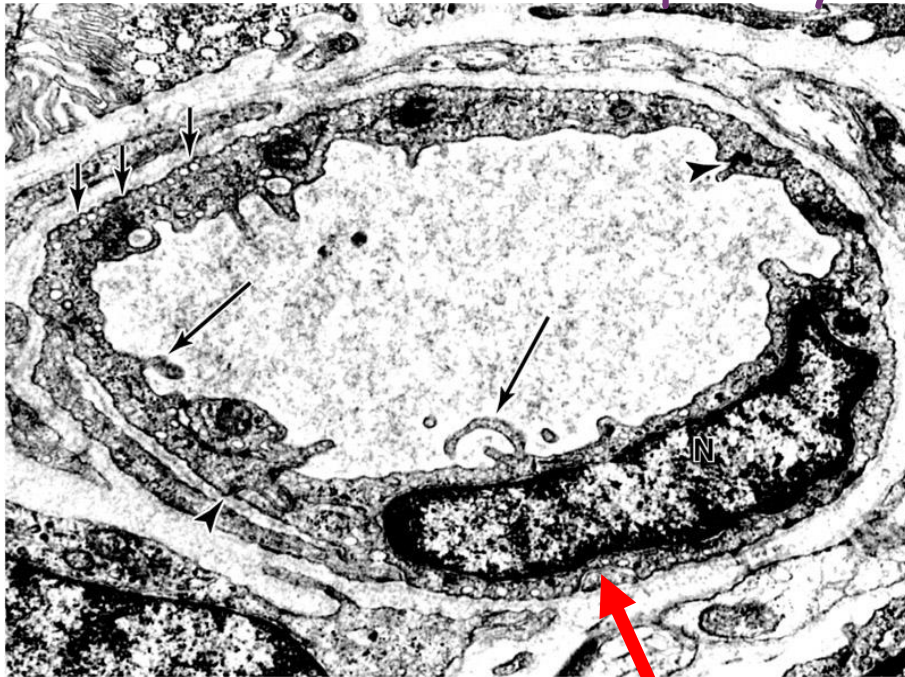
- NO internal elastic lamina.
- Type I & III Collagen fibers in T. Media.
- T. Media is Smaller than T. Adventitia.



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# Blood Capillaries

## Continuous Blood Capillary



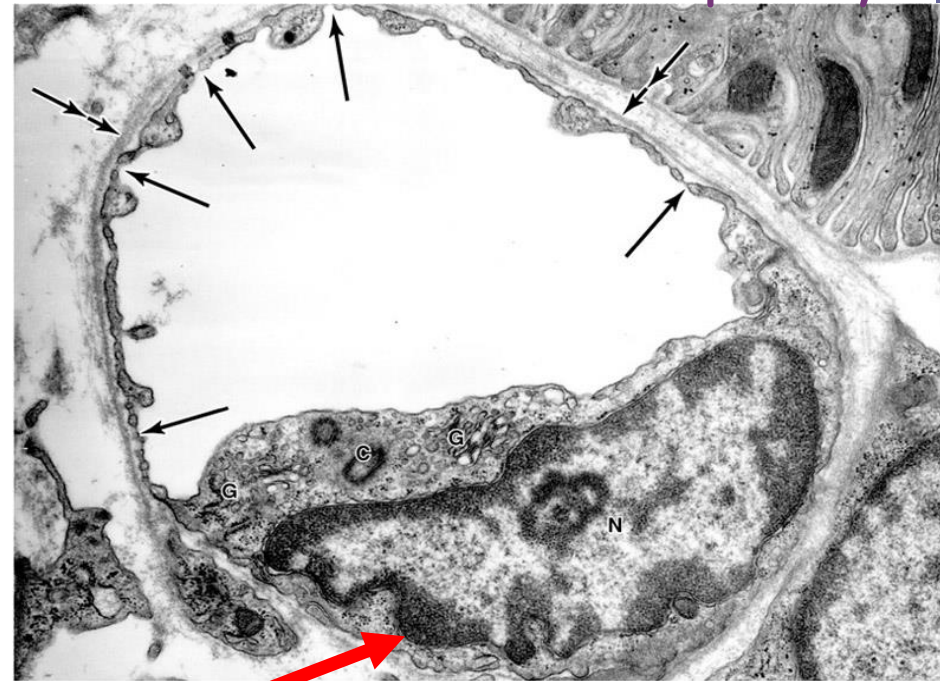
### ❖ Features:

Continuous Blood Capillary **no pores**  
"fenestrae".  
Molecules are transferred via  
**Pinocytosis** (fluid engulf)

### ❖ Distribution:

- Muscle
- Nervous Tissue.

## Fenestrated Blood Capillary



### ❖ Features:

Fenestrated Blood capillary **with**  
**diaphragm**.

### ❖ Distribution:

- Intestine
- Pancreas
- Endocrine glands.

Nucleus of the endothelial cell

# + Credit

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Thanks for checking our work,  
Good luck.

-Team histology.

-Big thanks to  
Histology 434



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