

HISTOLOGY PRACTICAL LECTURE - 9 -

VASCULAR TISSUE

EDITED BY



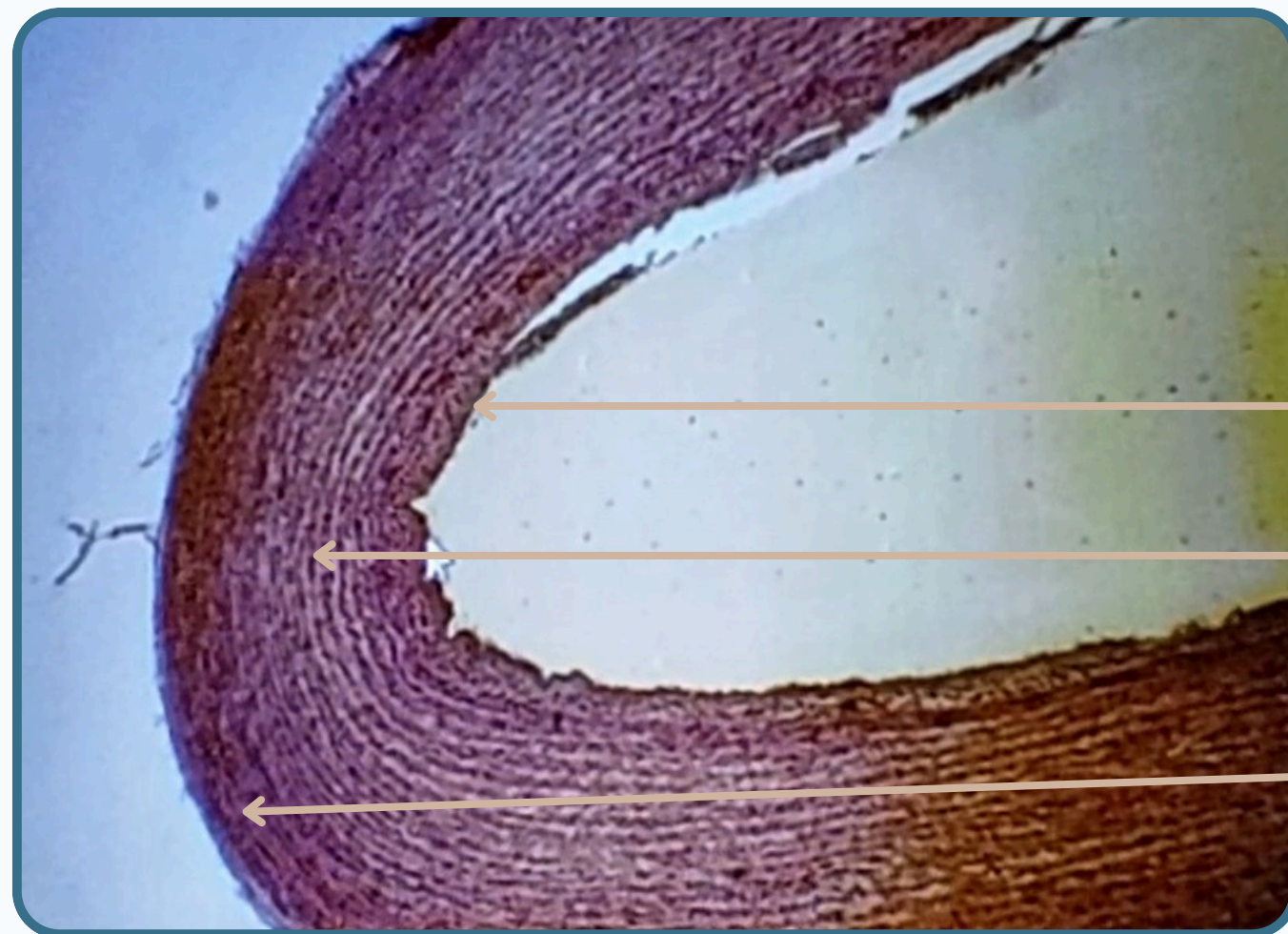
© ALL COPYRIGHT ARE RESERVED FOR
ARECH AND SATURN MEDIC

WWW.SATURNMEDIC.COM



Cross Section of Aorta

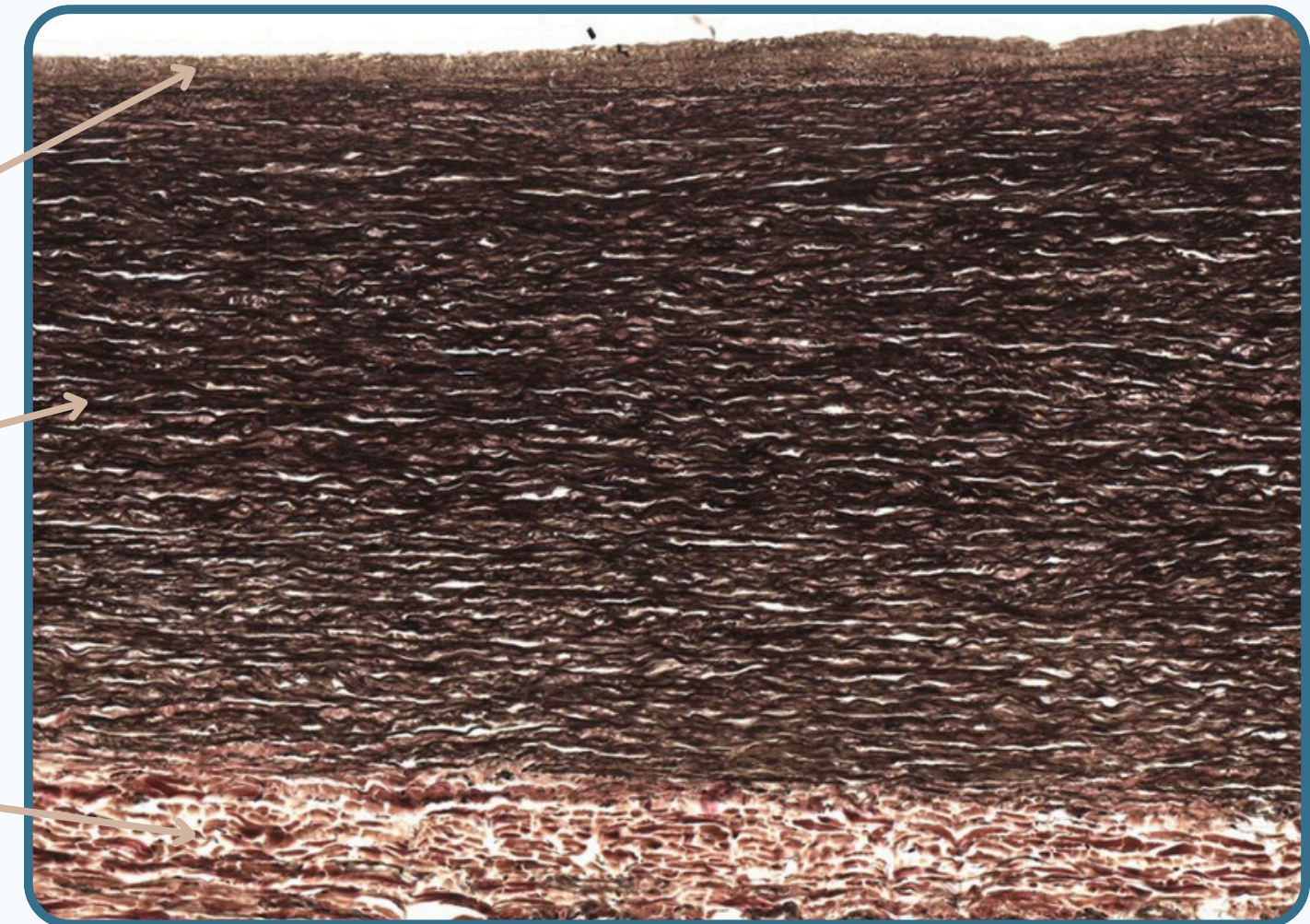
Aorta is an example of **Elastic Artery**
its wall is consist of **3** layers



Tunica Intima

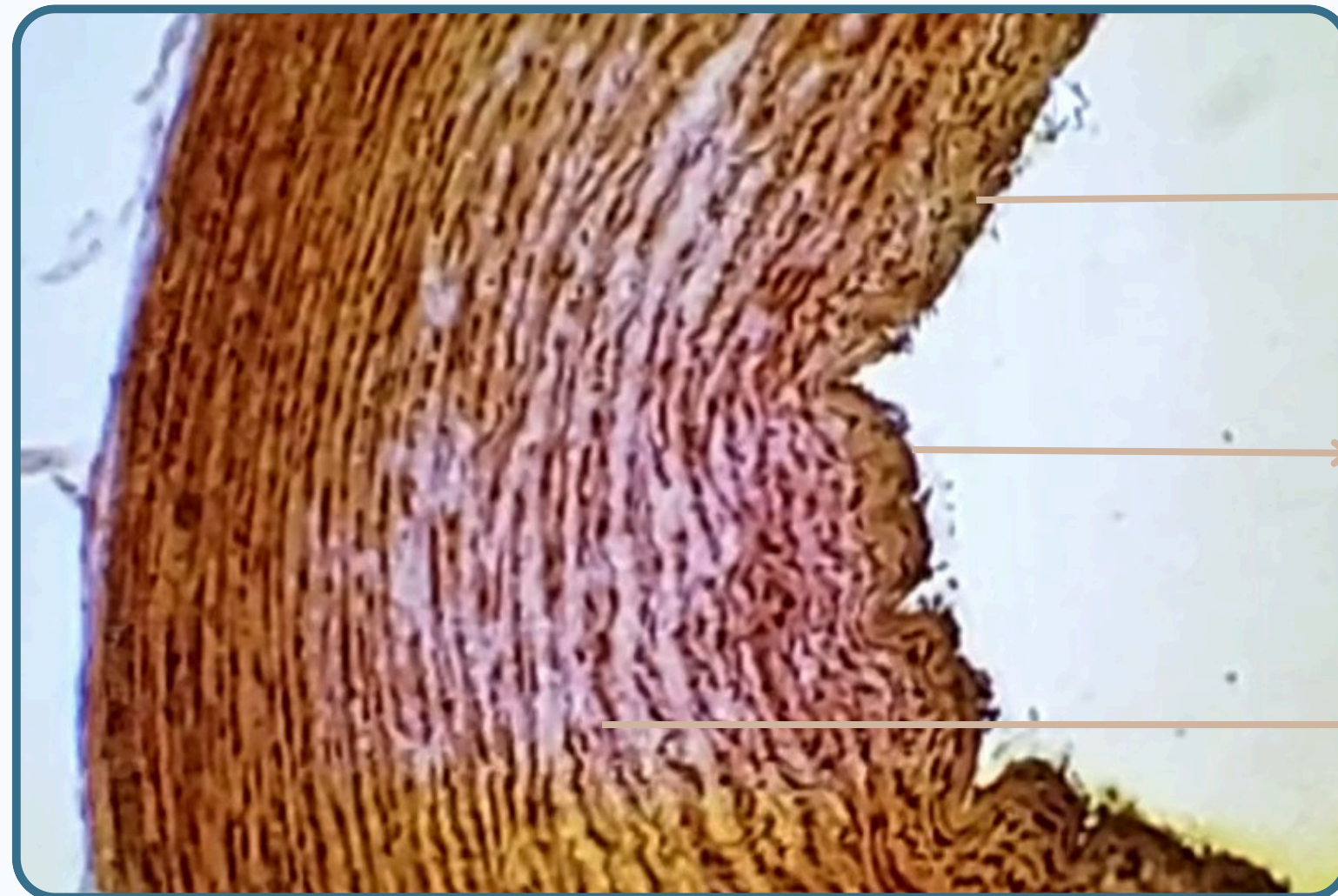
Tunica Media

Tunica Adventitia





Cross Section of Aorta



Subendothelial Layer of Loose CT located beneath the endothelium

Tunica Intima consist of endothelial cells with visible nucleus

Tunica Media is the thickest layer consist of smooth muscle fibers alternate with **Elastic laminae, Elastic fiber, Reticular fiber, Protoglycans.**

In Adult the **Tunica Media** consist of 50 **Elastic laminae**

*The Number is **increased** if the individual is **hypertensive.**



Cross Section of Aorta

Tunica Adventitia is a Connective Tissue (CT)

Layer within it we can see **Vasa vasorum** (Vessel of the Vessel) it can be either :

- Arteriole
- Venule
- Capillary

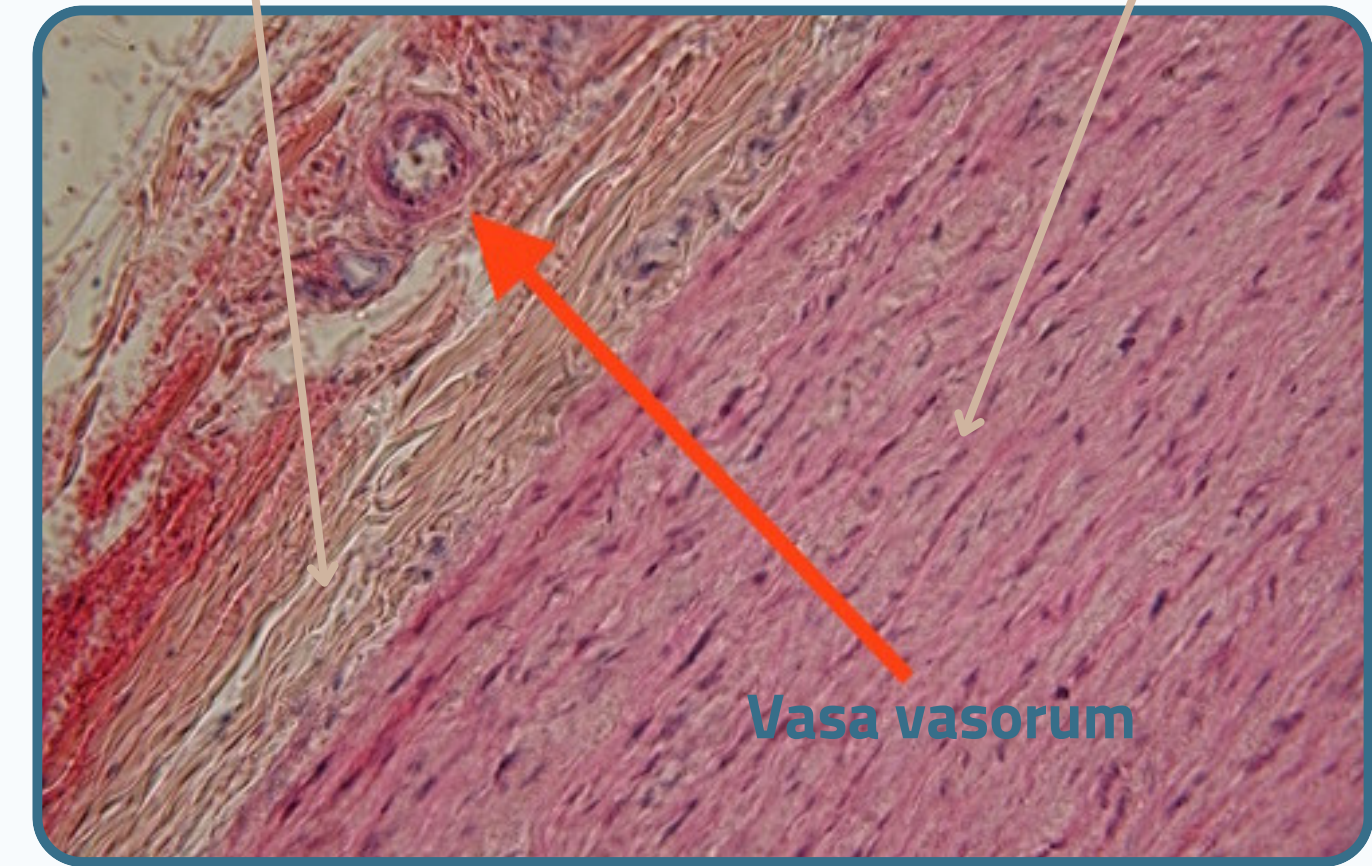


Vasa vasorum
this is Arteriole

verhoeffs hematoxylin Stain

Tunica Adventitia

Tunica Media



Vasa vasorum

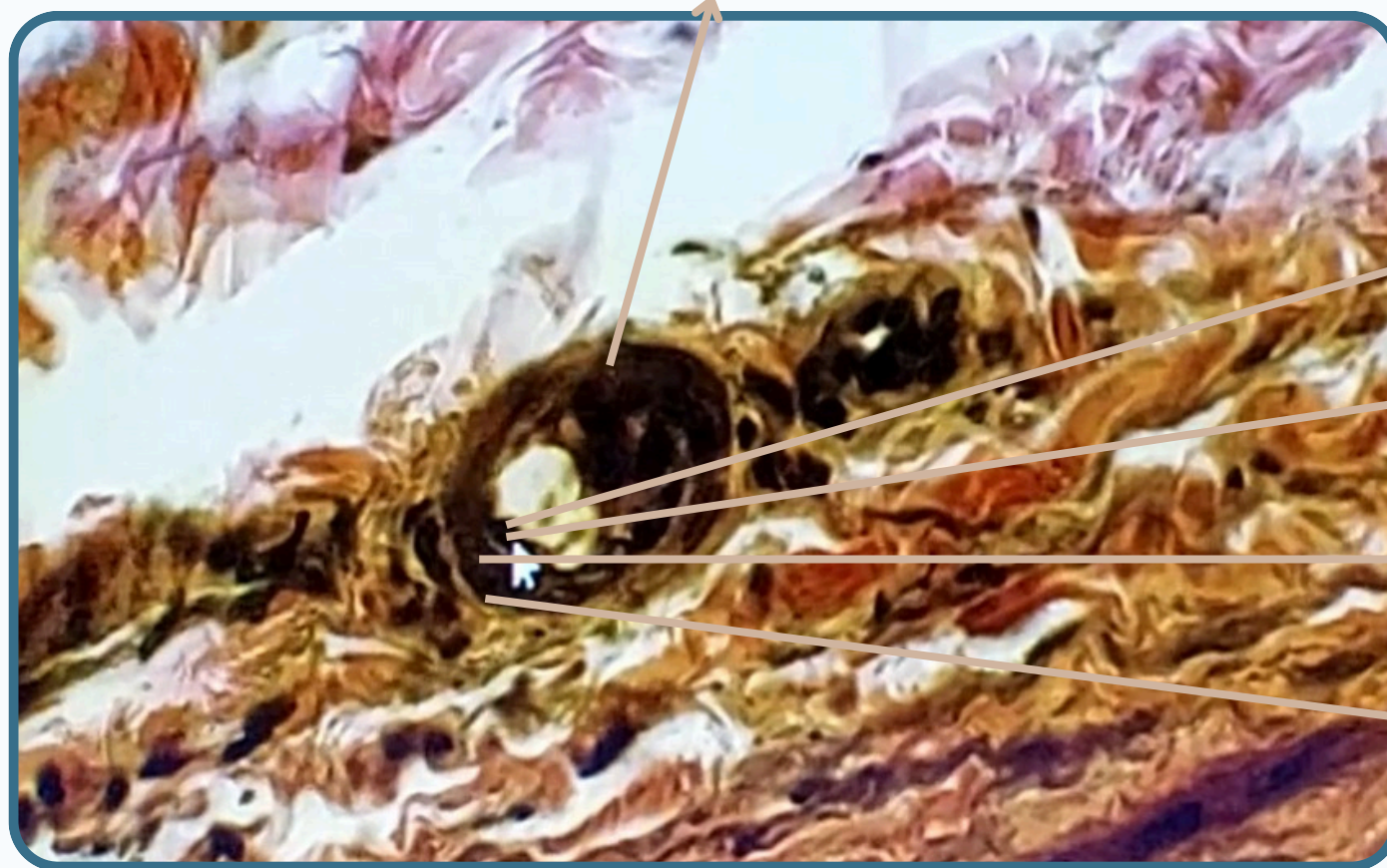


VASCULAR TISSUE



Vasa vasorum

Vasa vasorum(the whole structure), this is Arteriole



Endothelial cells

Tunica Intima

Tunica Media consist of 1 or 2
smooth muscle layers

Tunica Adventitia

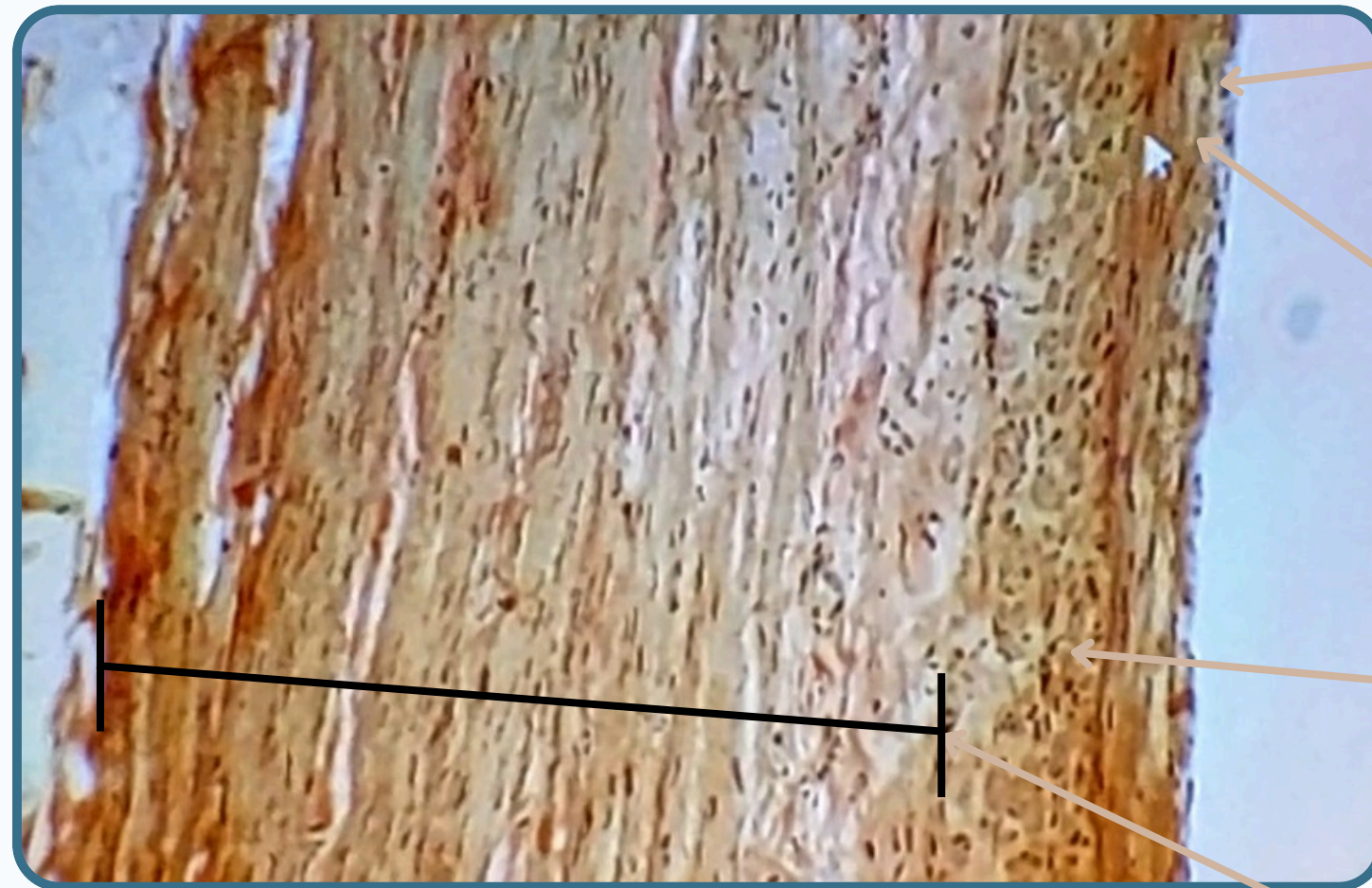




VASCULAR TISSUE



Cross Section of vena Cava



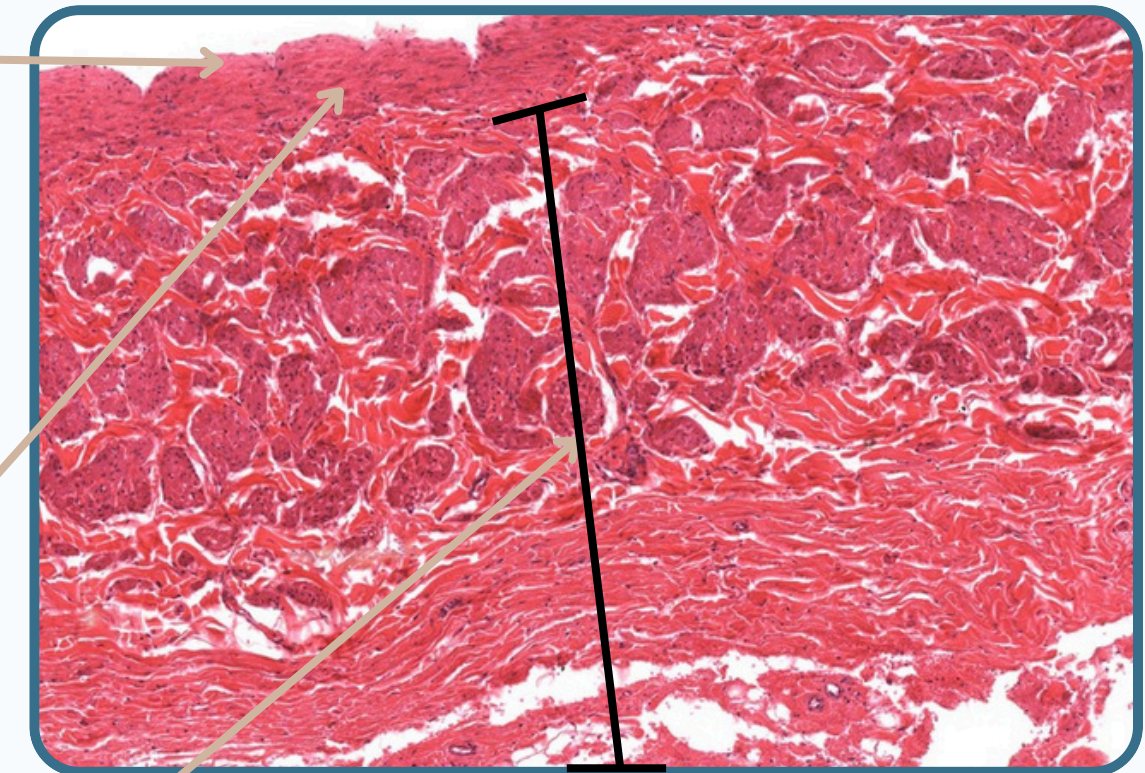
Tunica Intima

consist of

- **endothelial** and **sub endothelial** Layer
-

Tunica Media consist of smooth muscle fibers (thinner than artery)

Tunica Adventitia Connective Tissue (CT) Layer within it we can see Vasa vasorum



Tunica Adventitia in **Vena Cava** is the Thickest Layer

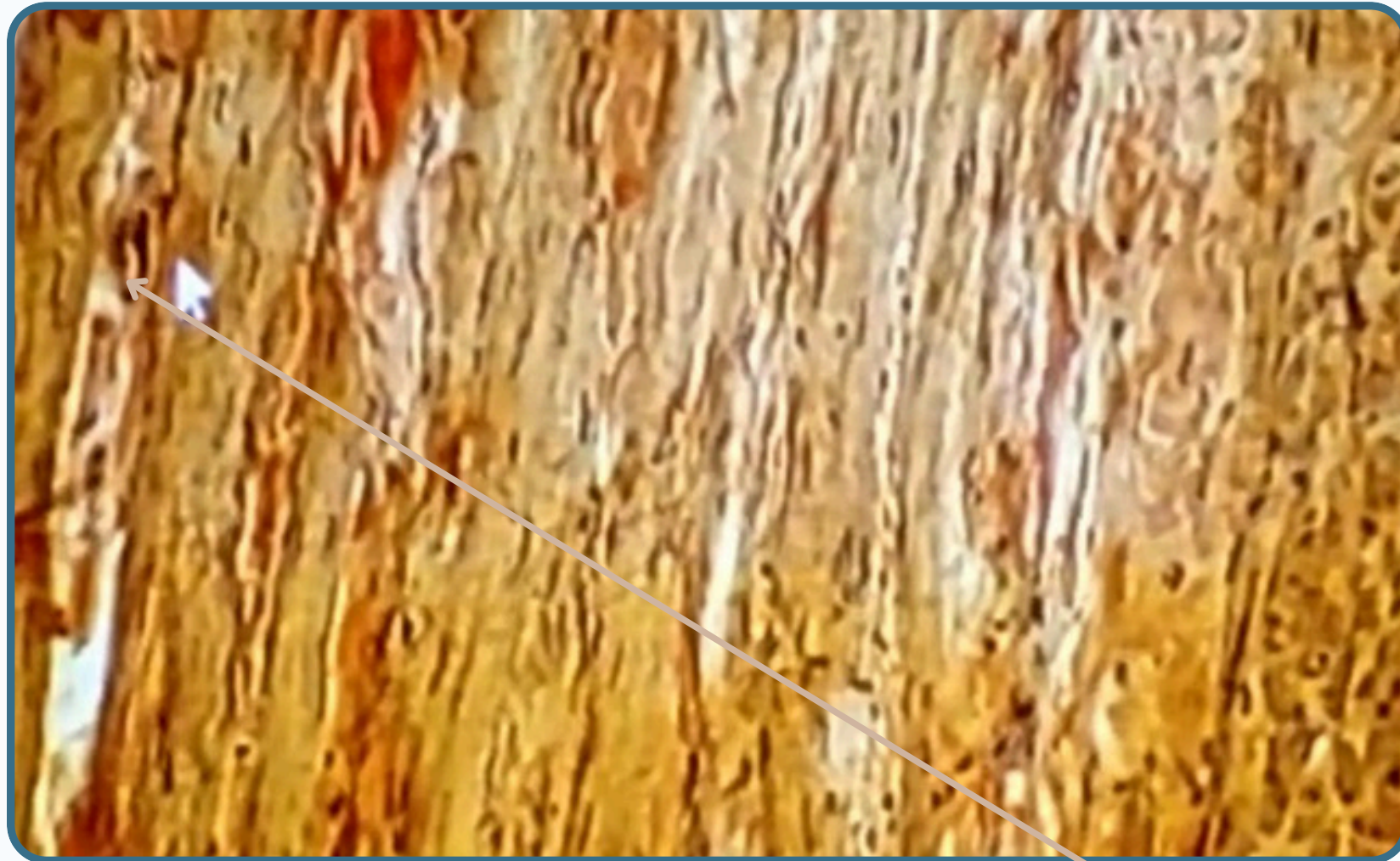
Tunica Media in the **Artery** is the Thickest Layer



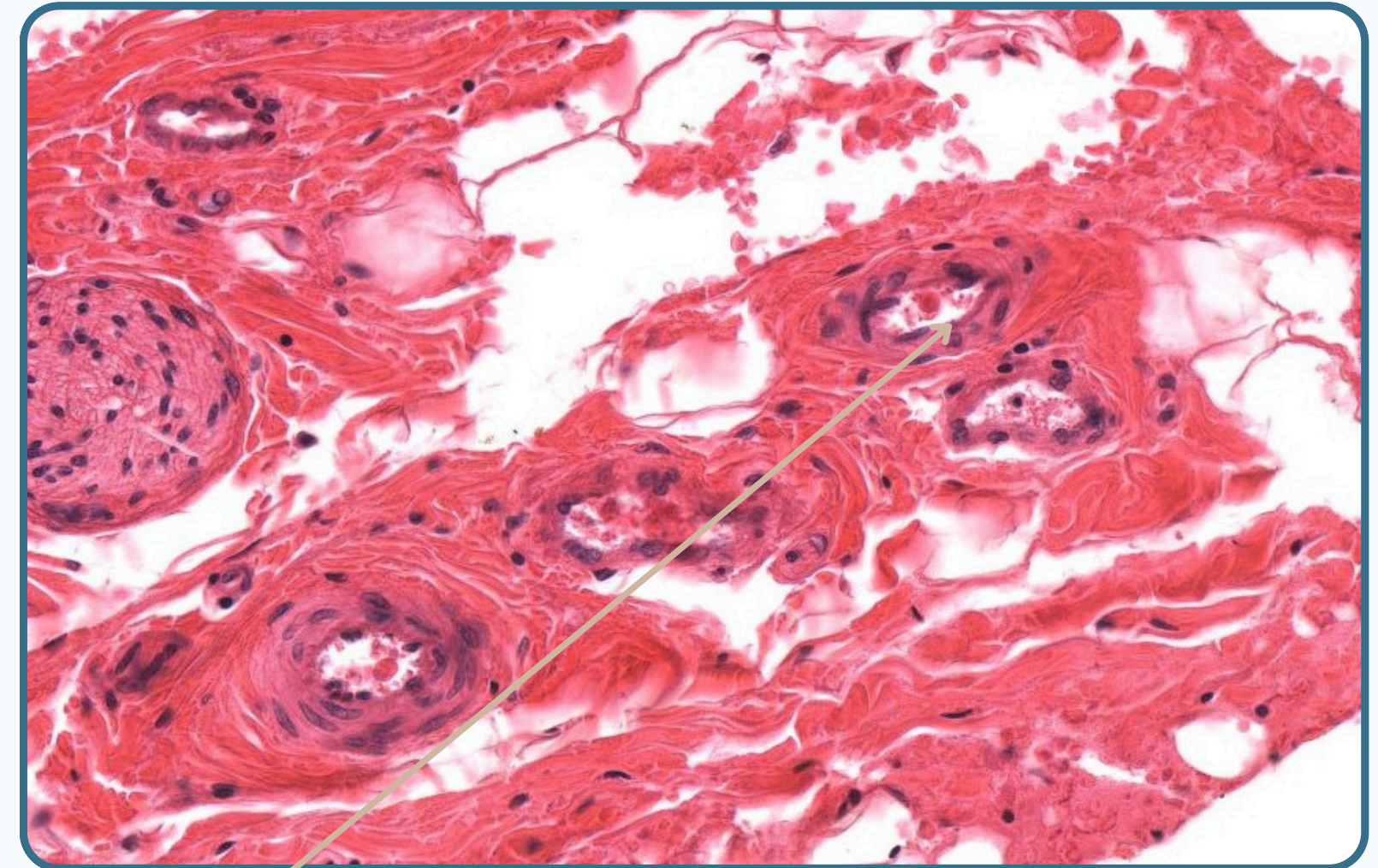
VASCULAR TISSUE



Cross Section of vena Cava



hematoxylin and Eosin Stain



Vasa vasorum found
in Tunica Adventitia



VASCULAR TISSUE



Cross Section of Neurovascular Bundle

hematoxylin and Eosin Stain



Tunica Intima

Tunica Media

Tunica Adventitia

Muscular Vein(Medium Sized Vein)

Muscular Artery (Medium Sized Artery)

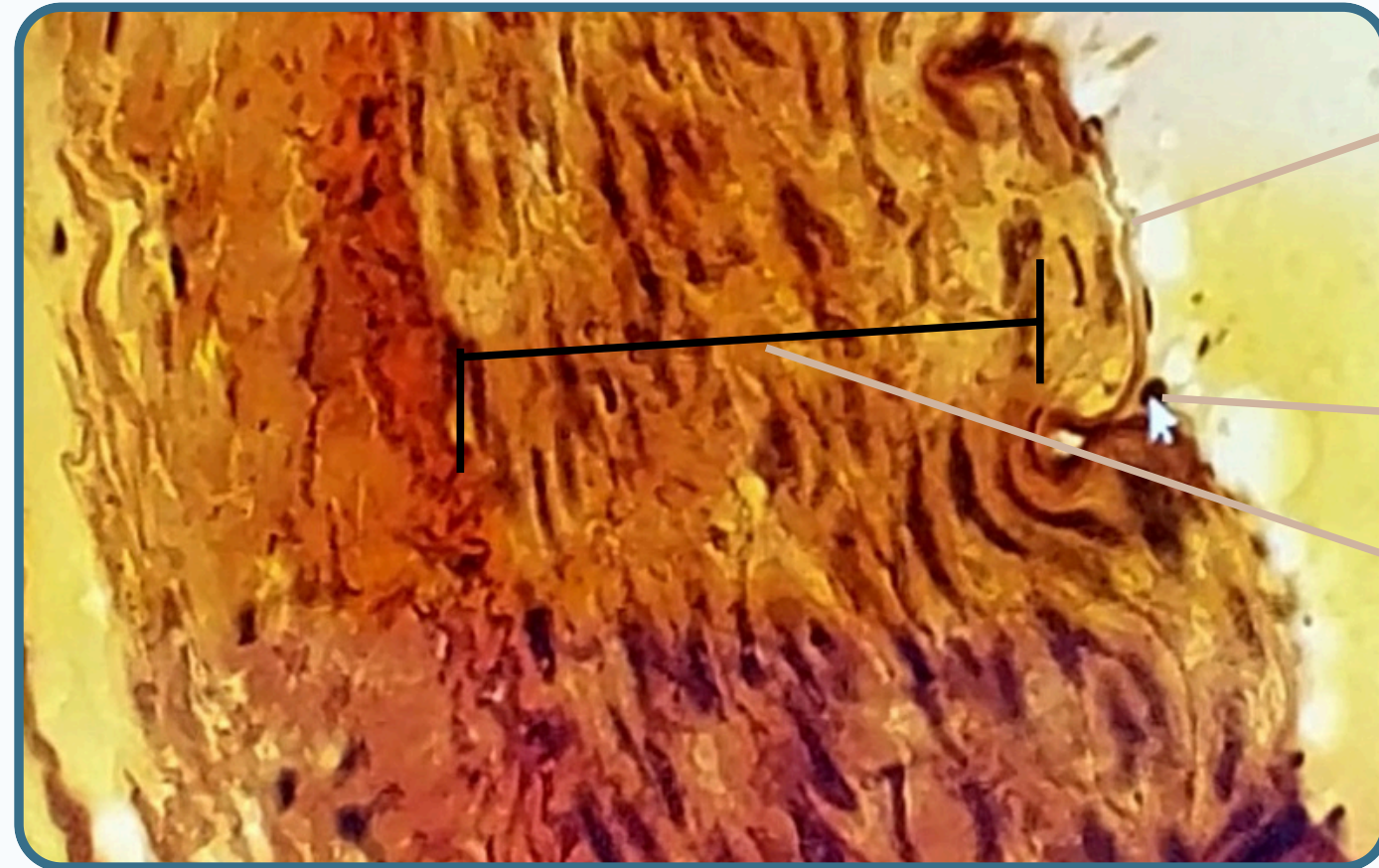
Nerve Bundle (Consist of Nerve Fibers)



VASCULAR TISSUE



Muscular Artery (Medium Sized Artery)



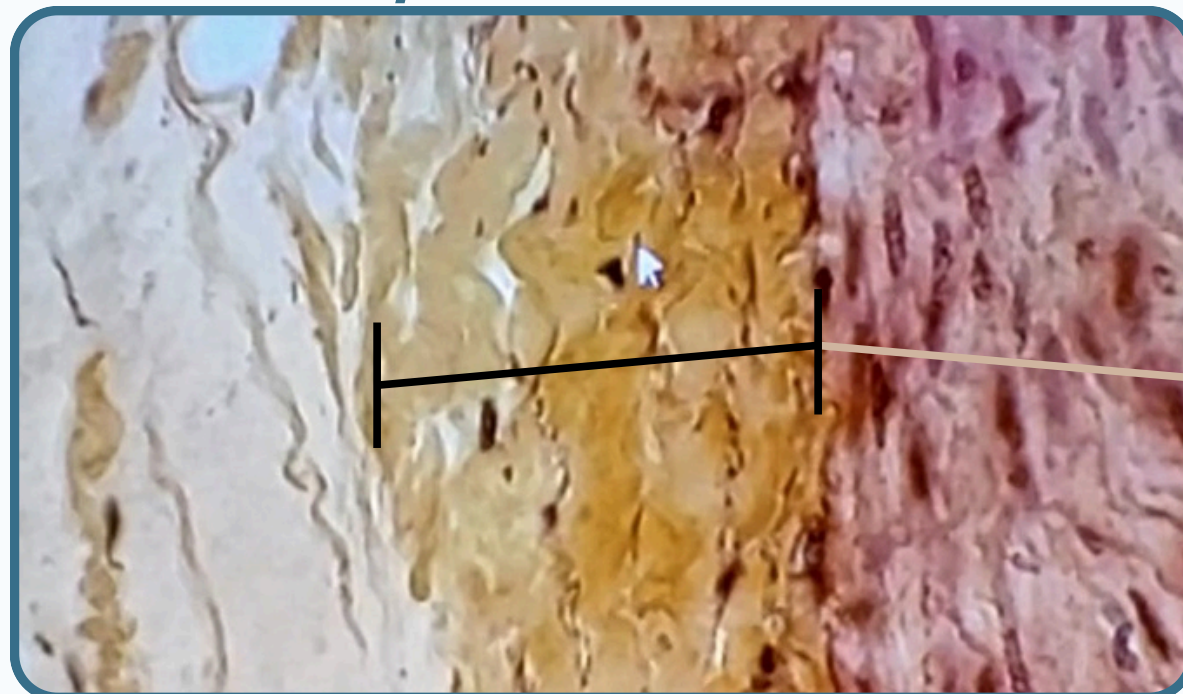
hematoxylin and Eosin Stain

Internal Elastic Lamina (The dark line): is a part of Tunica Intima separate the tunica intima from tunica media

Nucleus of Endothelial cells

Tunica Media consist of smooth muscle cells

Muscular Artery (Medium Sized Artery)



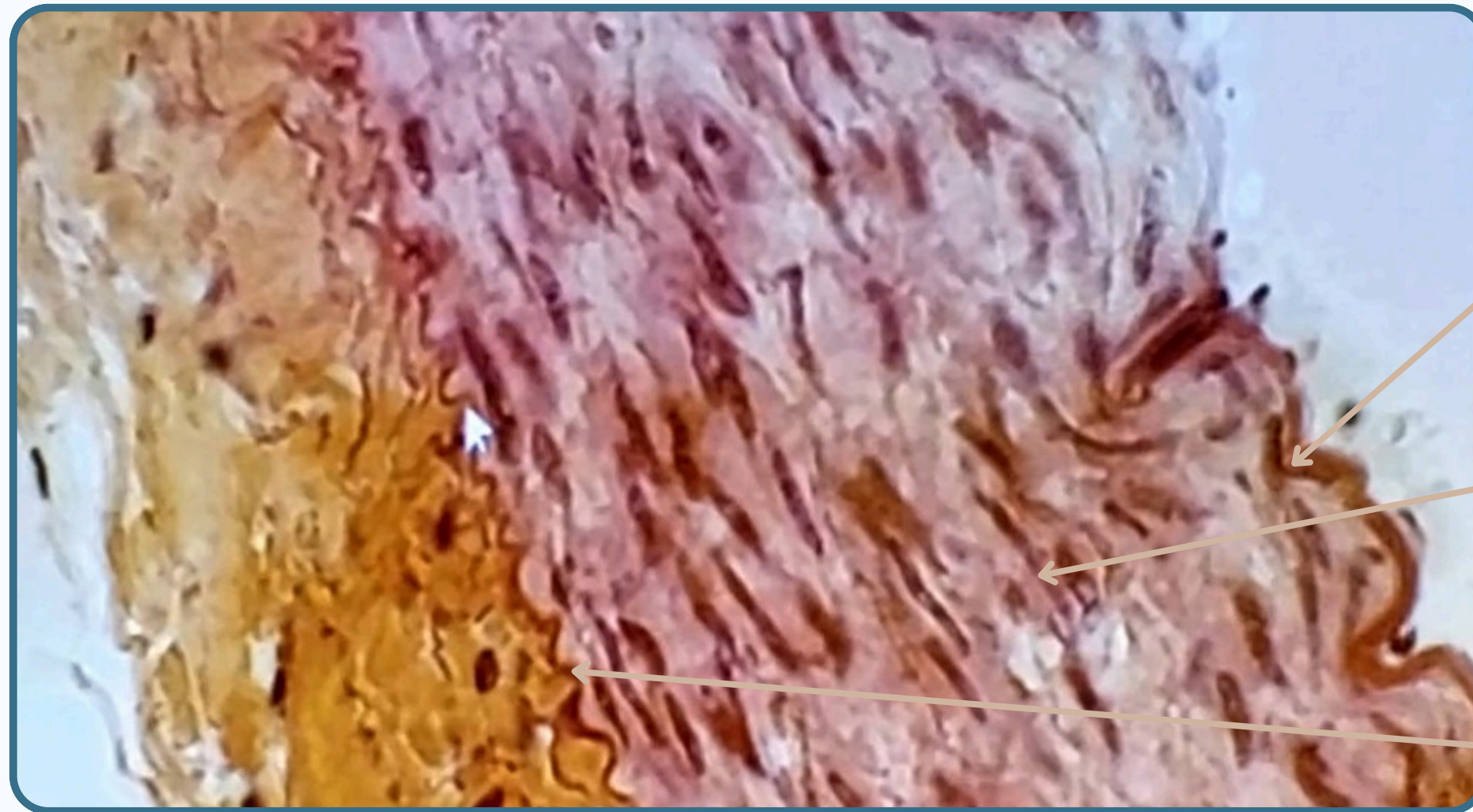
Tunica Adventitia



VASCULAR TISSUE



Muscular Artery (Medium Sized Artery)



Internal Elastic Lamina (the line) separate the tunica intima from tunica media

Tunica Media

External Elastic Lamina separate the tunica Adventitia from tunica media

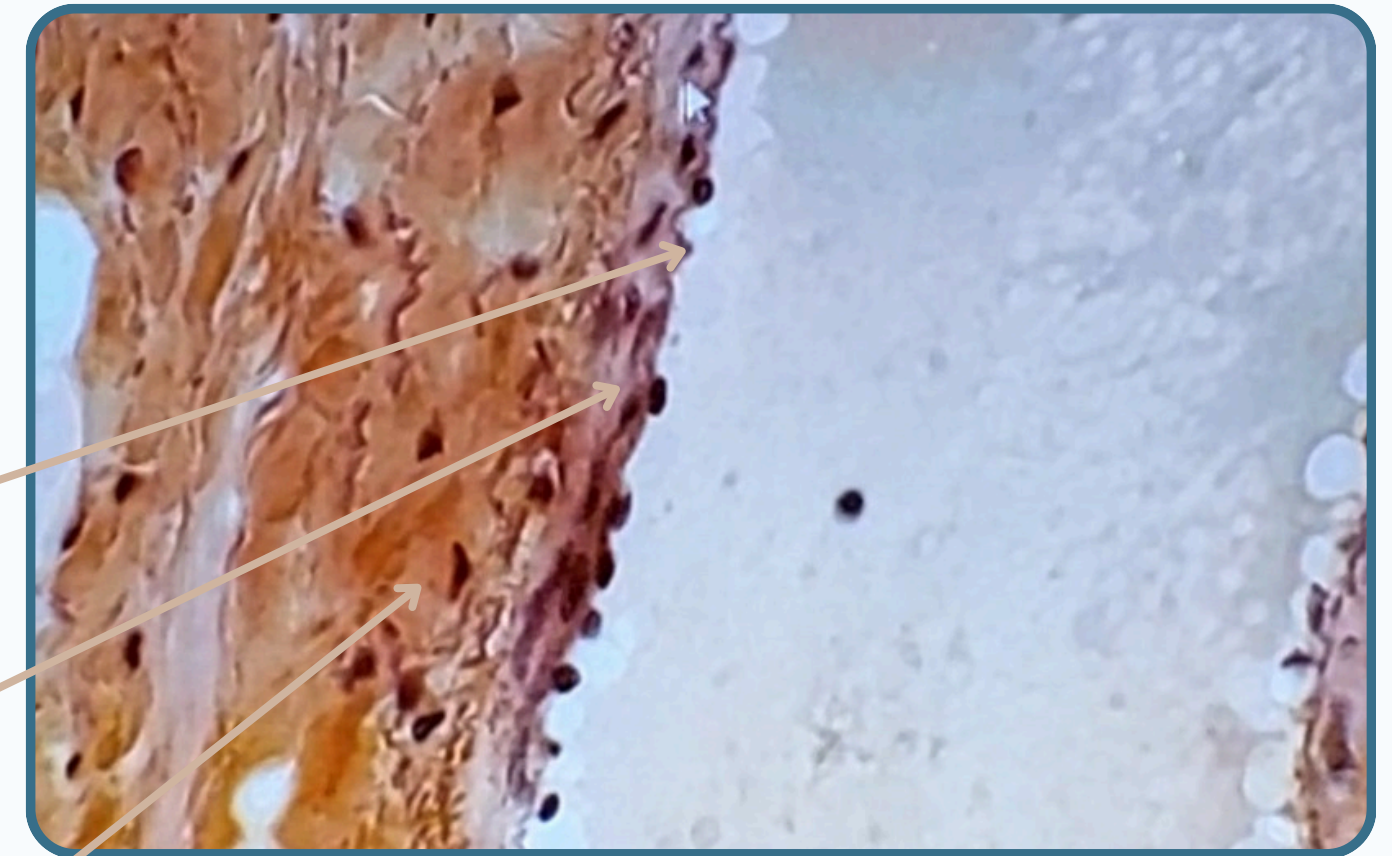
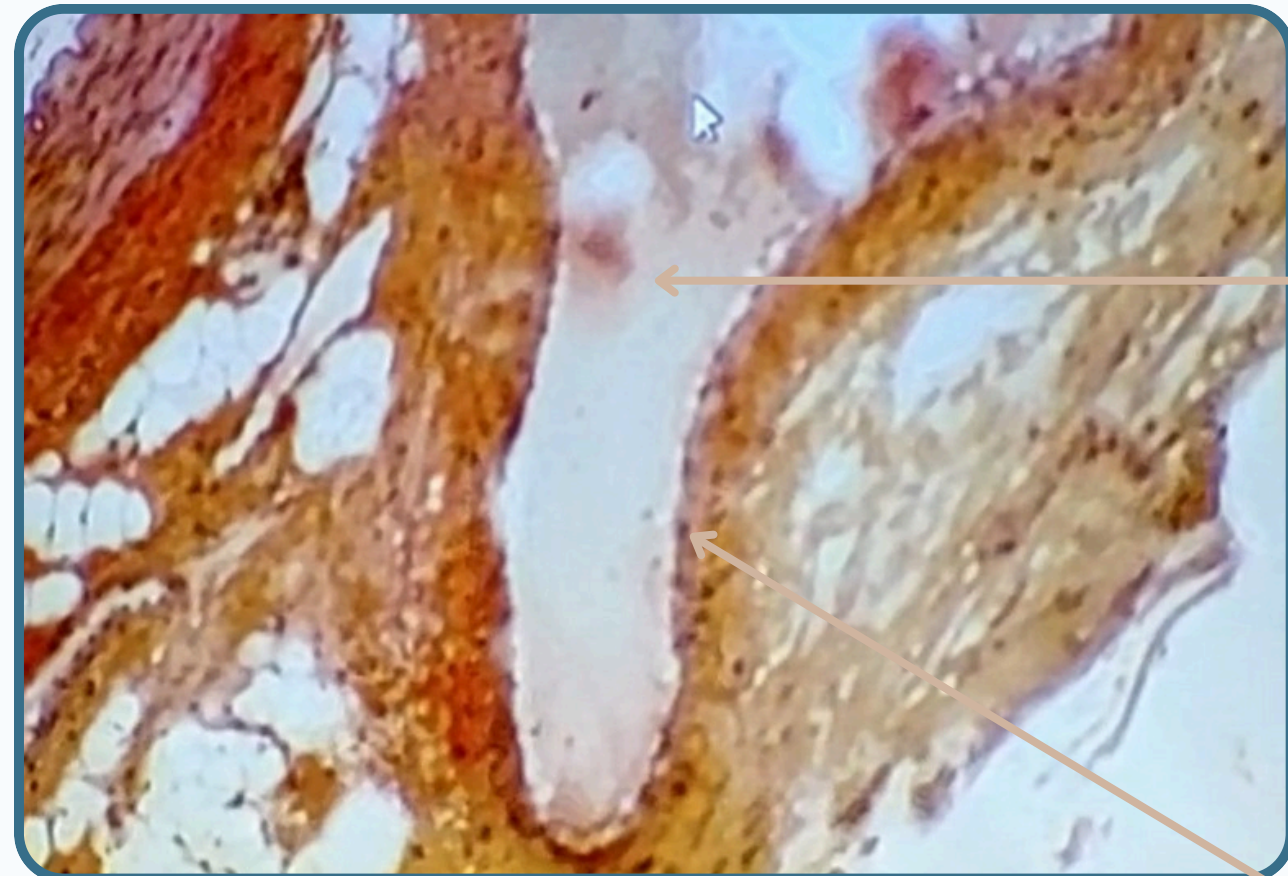
hematoxylin and Eosin Stain



VASCULAR TISSUE



Muscular Vein (Medium Sized Vein)



The lumen is collapsed
The wall is Composed of 3 Layers

- **Tunica Intima**
- **Tunica Media** is a thin layer (in vein) composed of smooth muscle fibers (**appear as a thin layer**)
- **Tunica Adventitia** is a connective tissue layer

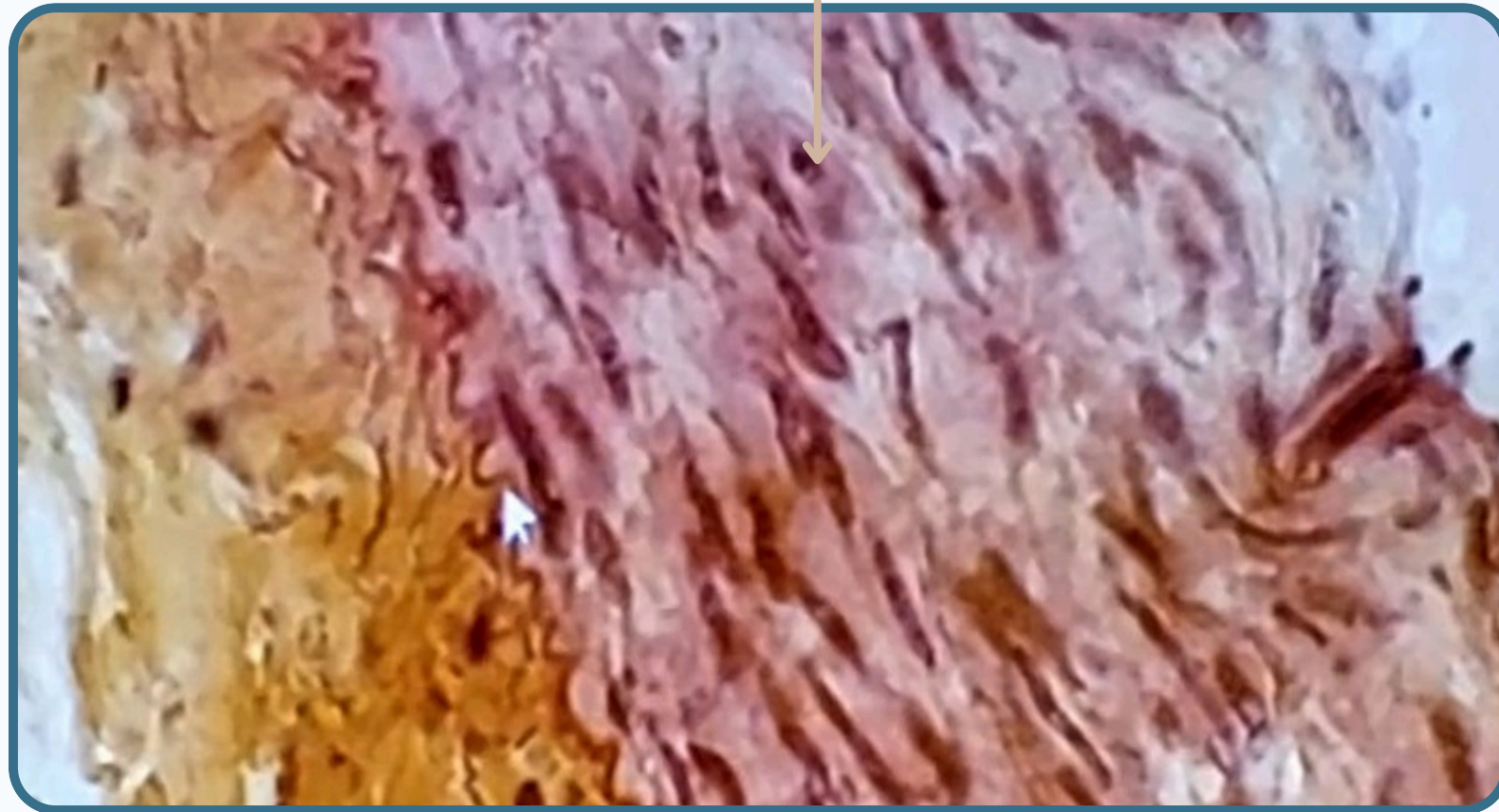
hematoxylin and Eosin Stain



VASCULAR TISSUE

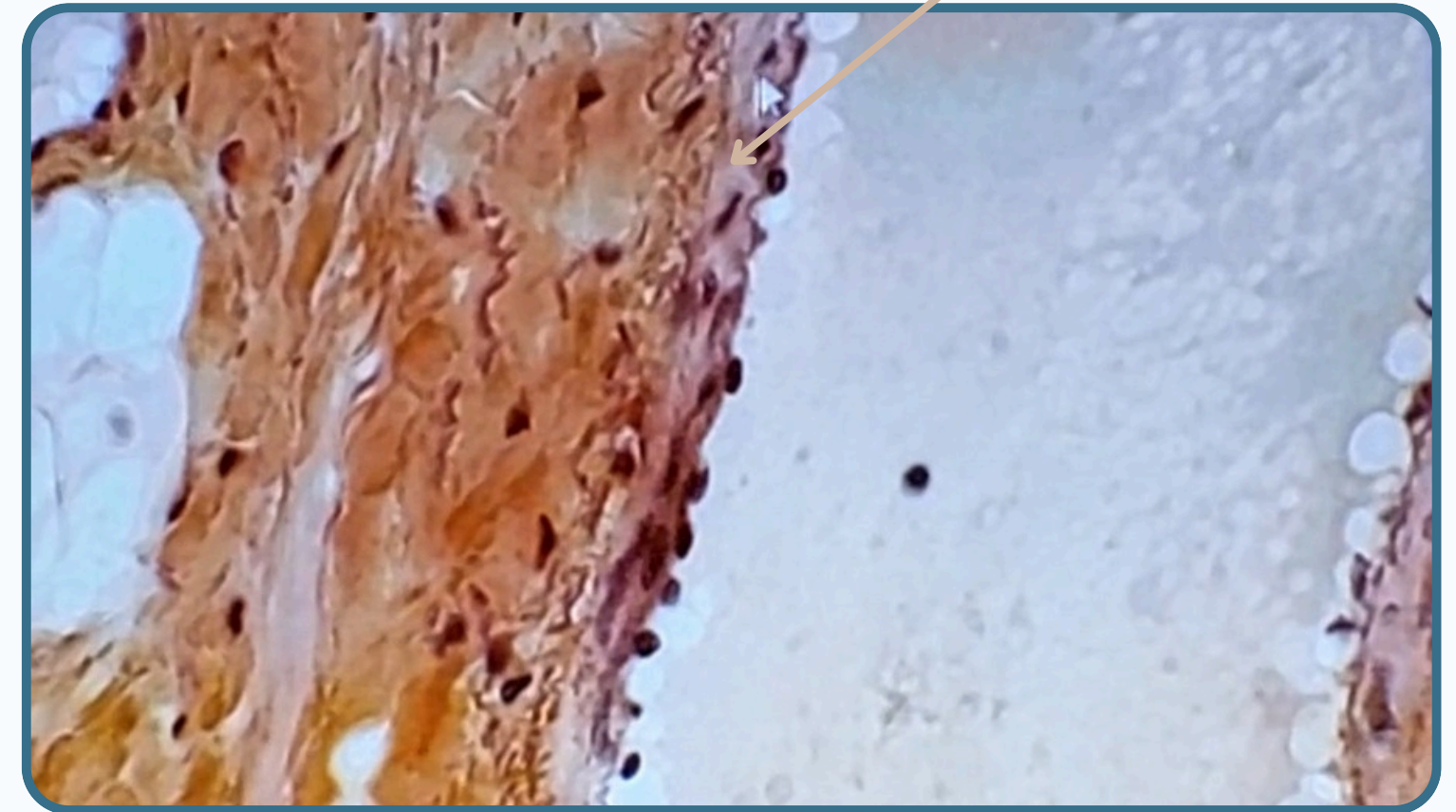


Tunica Media of the **artery** consist of smooth muscle cells, is thicker than that of the vein



Muscular Artery

Tunica Media of the **vein** is a thin layer composed of smooth muscle fibers (appear as a thin layer)



Muscular Vein

THANK YOU

EDITED BY



© ALL COPYRIGHT ARE RESERVED FOR
ARECH AND SATURN MEDIC

WWW.SATURNMEDIC.COM