OSPE file (CVS block)

Red: questions.

Dark red: very important.

Black: complete answers.

Gray: notes|extra.

Editing file

➢ You should know before the exam:

- The diagrams in these slides are going to be the **same** in the exam however, it may not be coloured.
- You have to **mention the full name** always and **don't use shortcuts** you could lose marks because of that.
- The **Arrows** in the diagrams are **very important .**
- So please study them well.

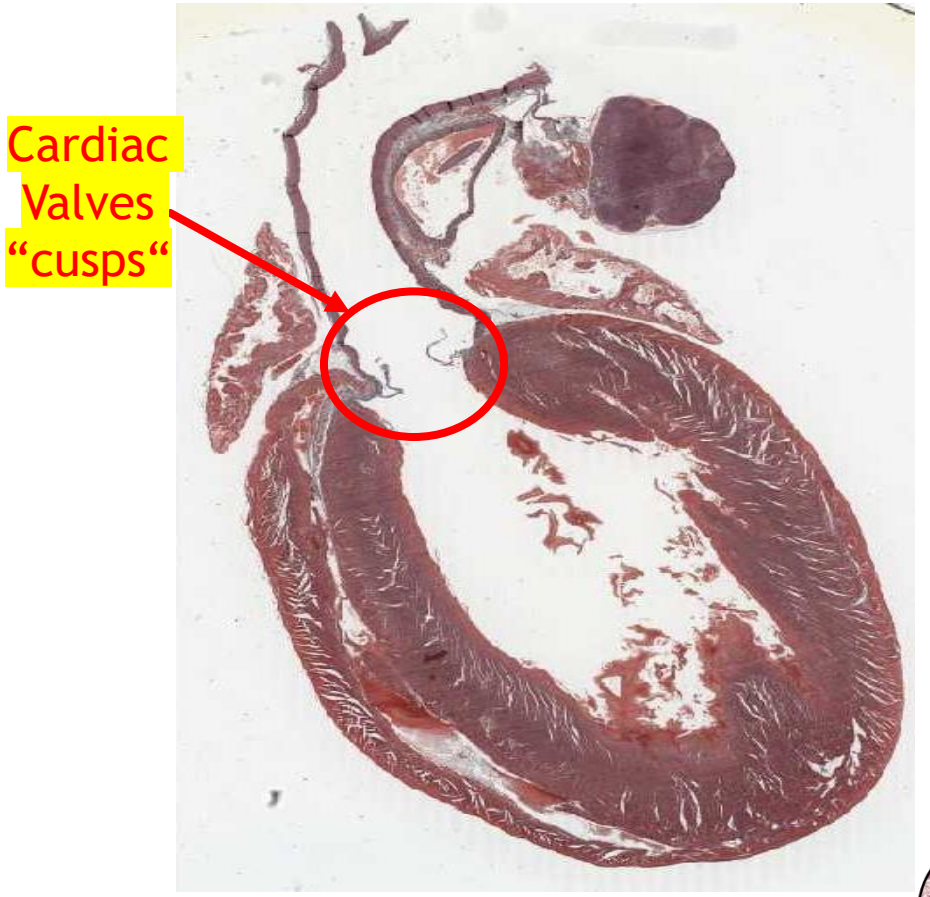
Wall of the heart

Q1: Identify the structure?

Wall of the Heart

The wall of heart composed of:

- Endocardium (most inner layer)
- Myocardium
- Epicardium (most outer layer)



Q2: What is the Type of epithelium found in the endocardium?

Endothelium which is simple squamous epithelium

Q3: What is the Type of epithelium found in the epicardium?

Mesothelium which is simple squamous epithelium

Cardiac valve

Q1: Identify the structure?

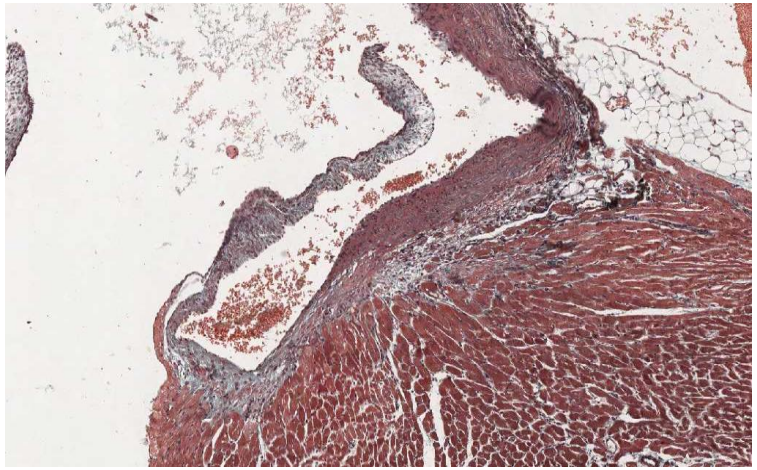
Cardiac Valve

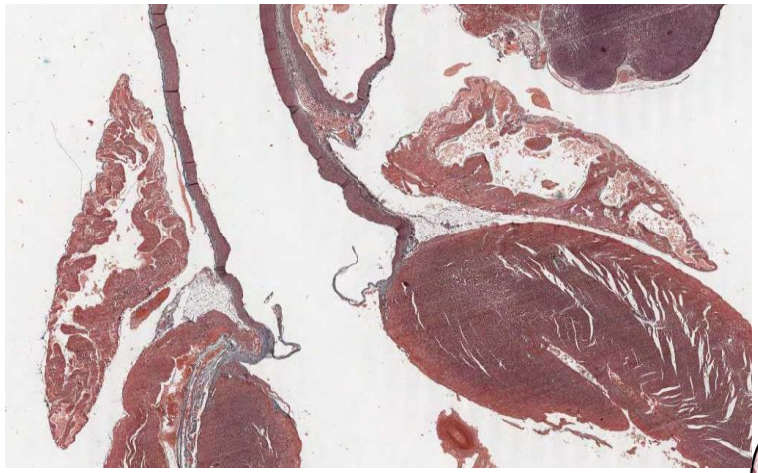
Q2: The heart valve is formed of:

A core of Dense irregular C.T. , this core is cover by endothelium

Q3: What is the features of the structure?

- Avascular
- Blood capillaries can be found only in the base “root” of the cusp



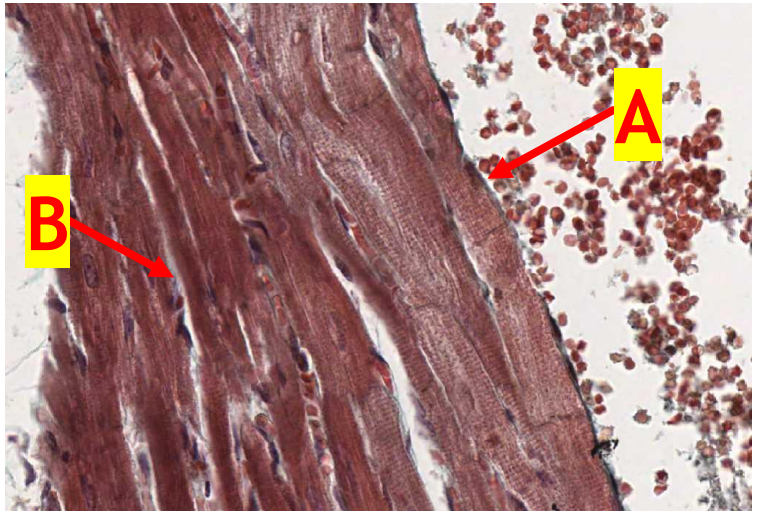


Endocardium & Myocardium

Q1: Identify the structure?

A- Endocardium

B- Myocardium



Q2: What is the features of the endocardium?

- Endothelium.
- Subendothelial C.T.
- Dense C.T. layer.
- Subendocardial layer.

HISTOLOGY TEAM 437

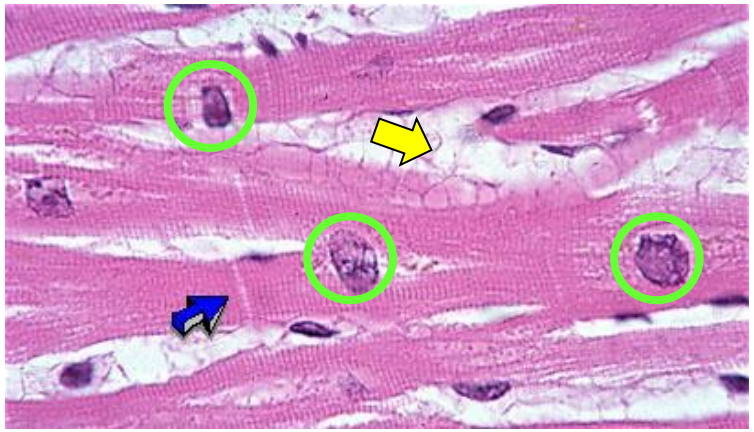
Myocardium

Q1: Identify the structure?

Myocardium

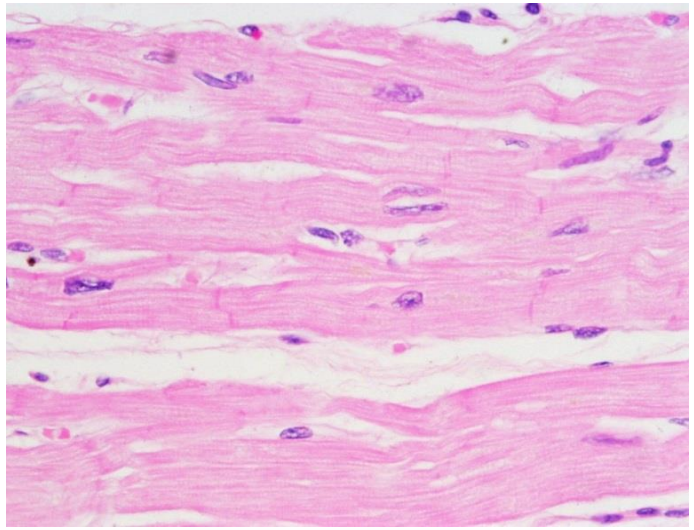
Q2: What is the features of the structure?

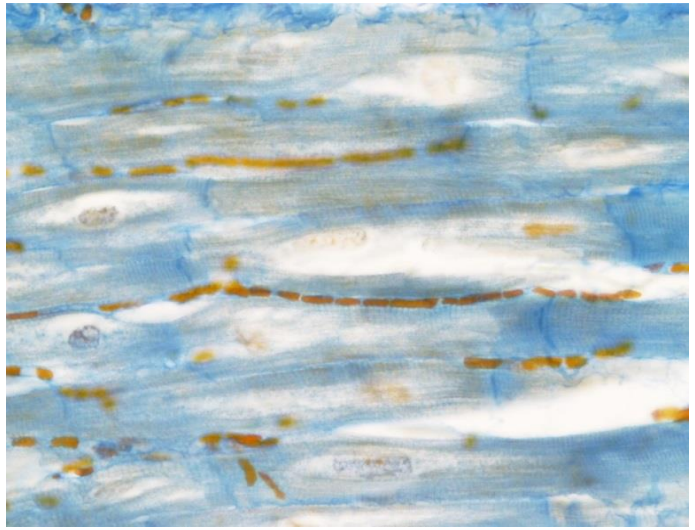
- Intercalated discs **(blue arrow)**
- Endomysium which is a loose C.T. **(Yellow arrow)**
- Nuclei of myocardial cells:
  Central and round nuclei **(green Circles)**

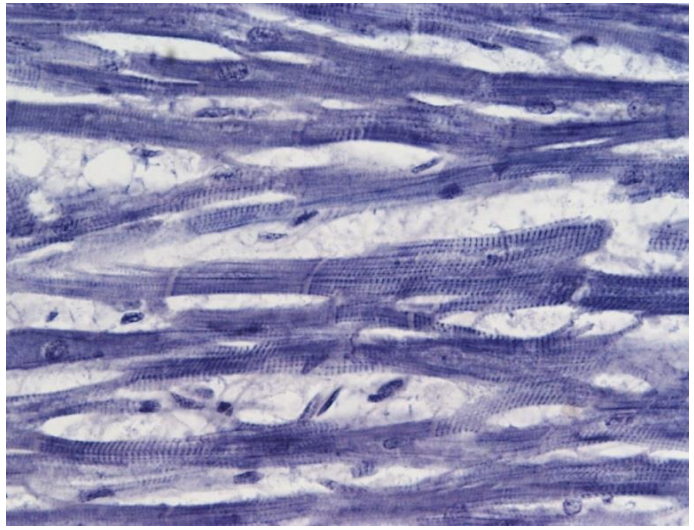


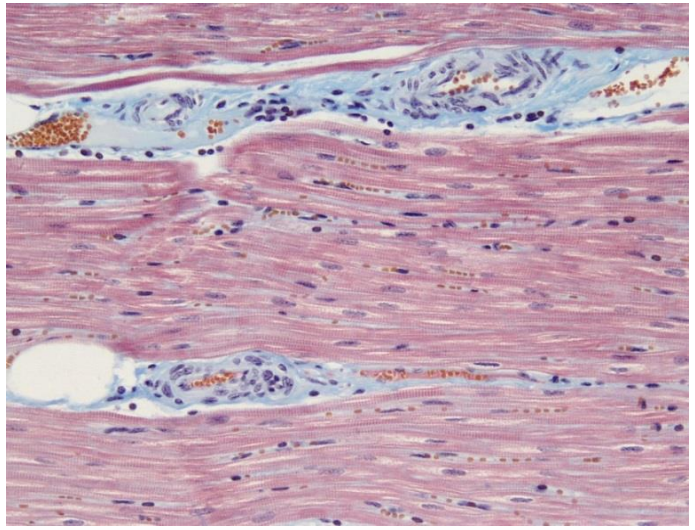
HISTOLOGY TEAM 437

Myocardium









HISTOLOGY TEAM 437

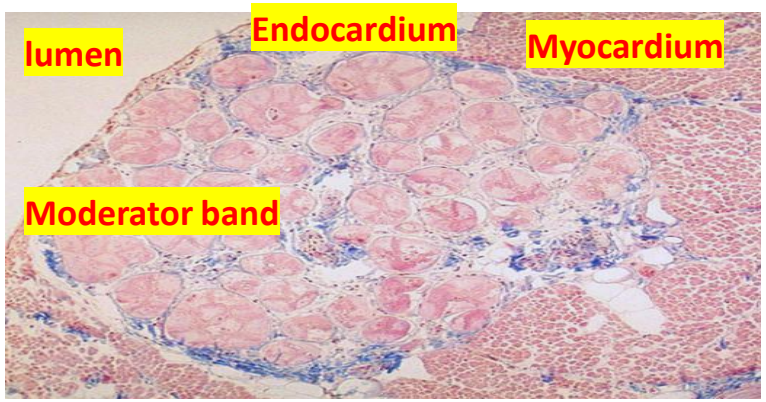
Moderator Band

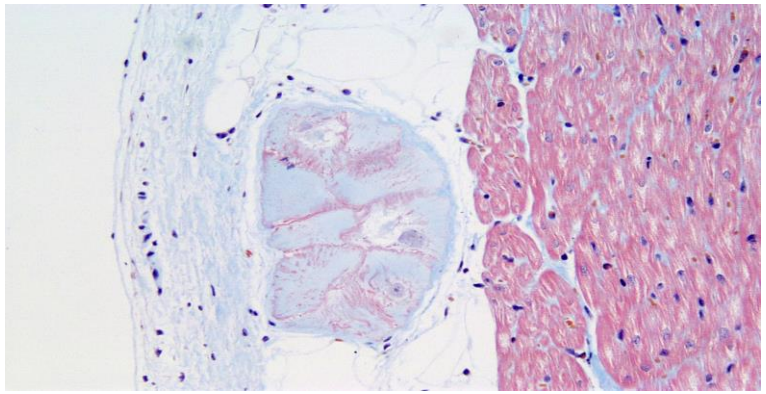
Q1: Identify the structure?

Moderator Band

Q2: What is the features of the structure?

- No intercalated discs.
- Peripheral nuclei.
- found in Subendocardial layer of the endocardium





HISTOLOGY TEAM 437

Elastic Artery

Q1: Identify the structure?

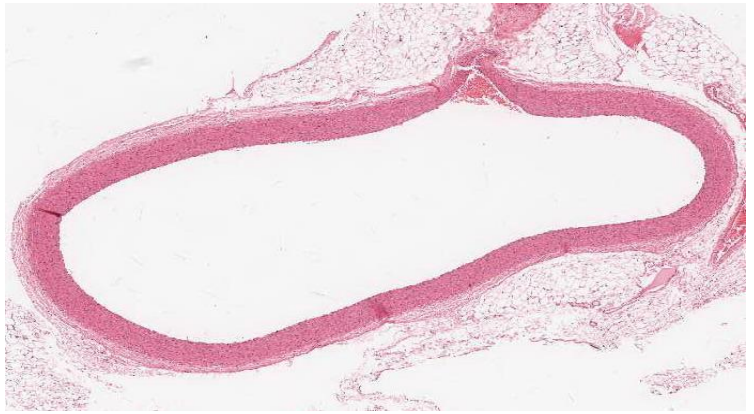
Elastic Artery (Aorta)

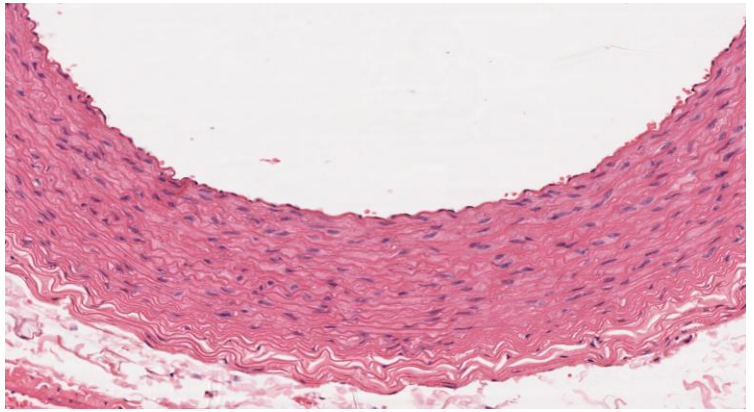
Q2: What is the features of the structure?

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

Examples (Elastic artery):-

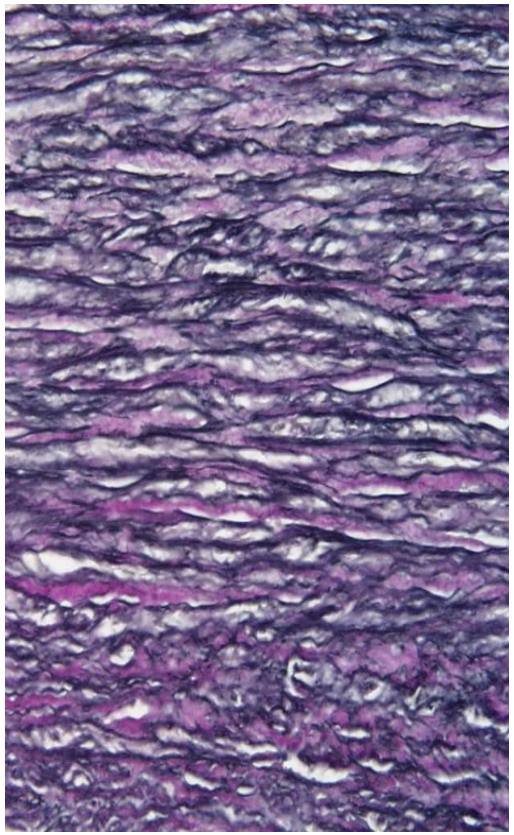
Aorta and Pulmonary Trunk

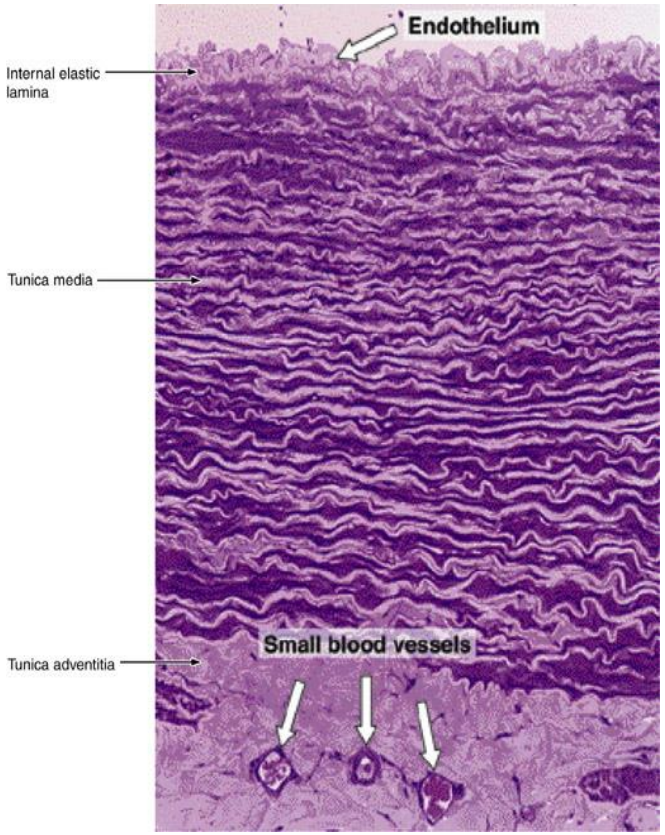


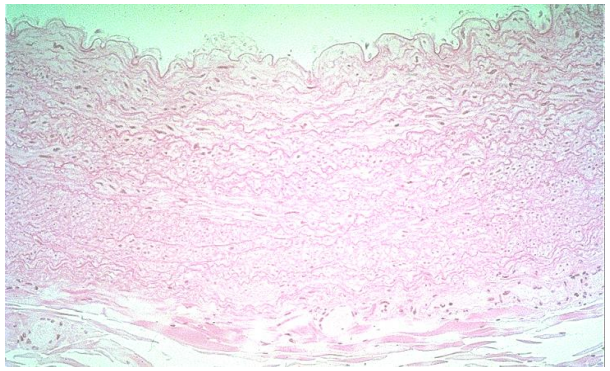


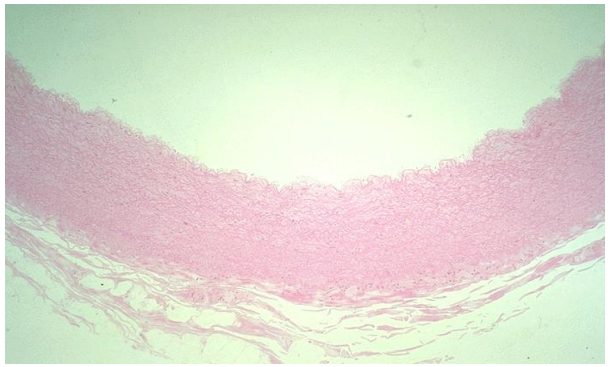
HISTOLOGY TEAM 437

Elastic Artery (Aorta)









HISTOLOGY TEAM 437

Muscular Arteries (Medium-sized Artery)

Q1: Identify the structure?

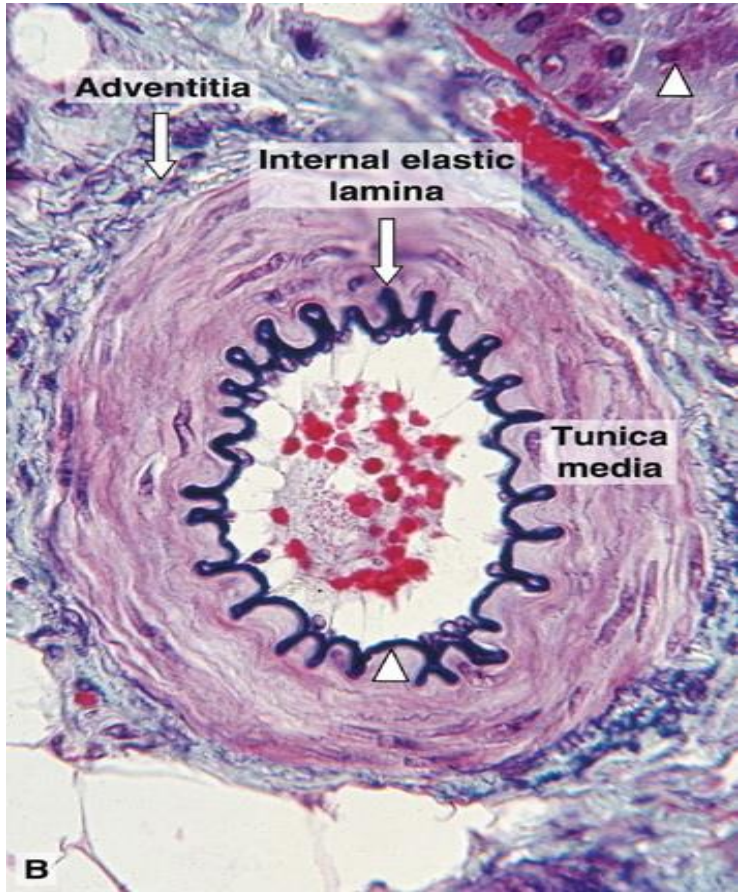
Muscular Arteries or Medium-sized Artery

Q2: What is the features of the structure?

- Prominent internal elastic lamina.
- T. Media is rich in smooth muscle cells.
- T. Media is Thicker than T.Adventitia.
- External elastic lamina may be identifiable

Examples (Medium-sized artery):-

Brachial, Ulnar and Renal Artery



HISTOLOGY TEAM 437

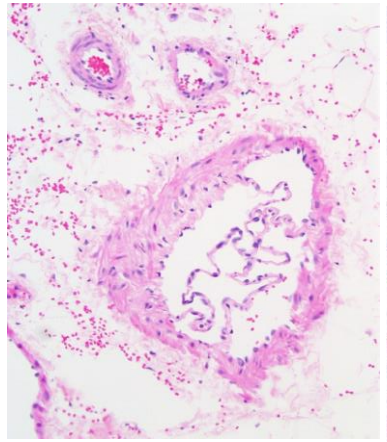
Medium-sized Vein

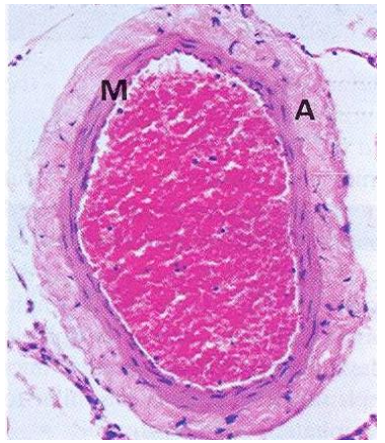
Q1: Identify the structure?

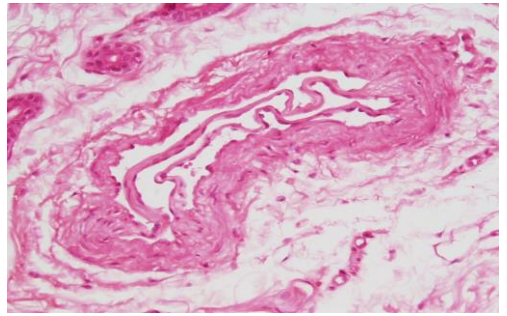
Medium-sized Vein

Q2: What is the features of the structure?

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

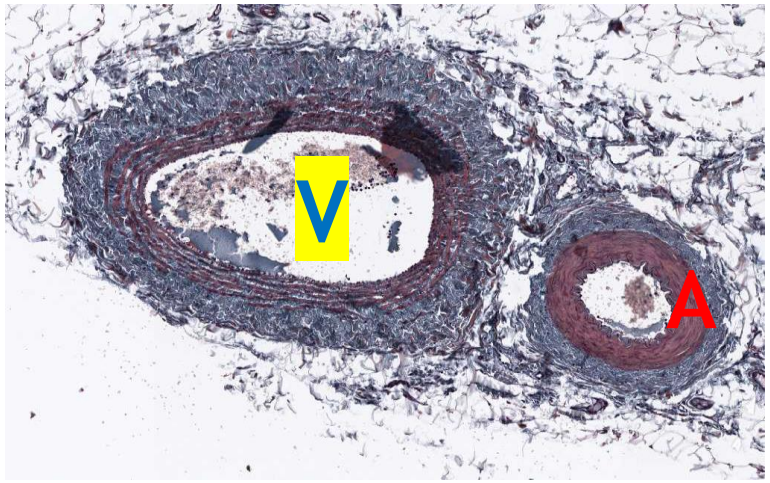




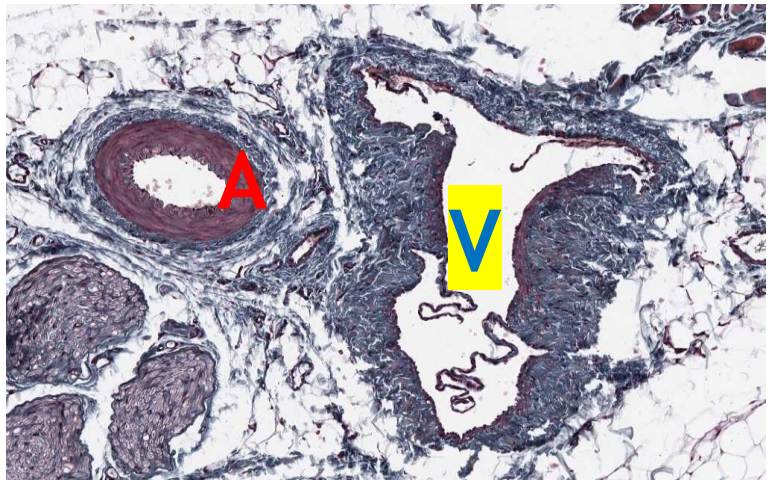


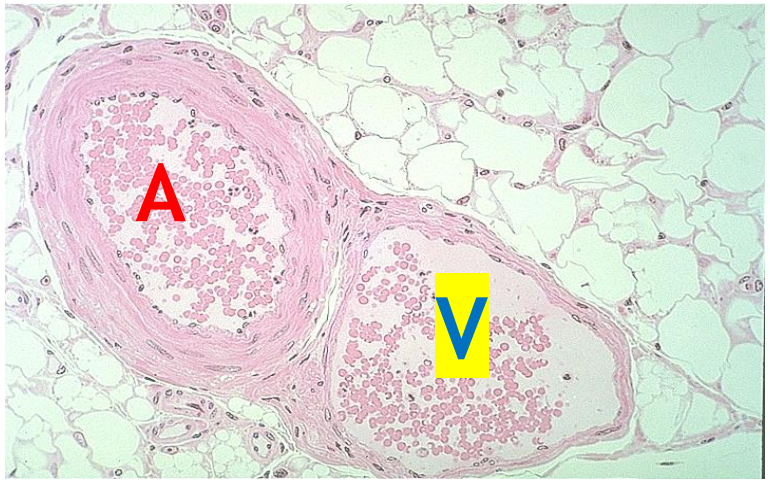
HISTOLOGY TEAM 437

Comparison between medium-Sized "Artery and Vein"



A = Artery
V : Vein





HISTOLOGY TEAM 437

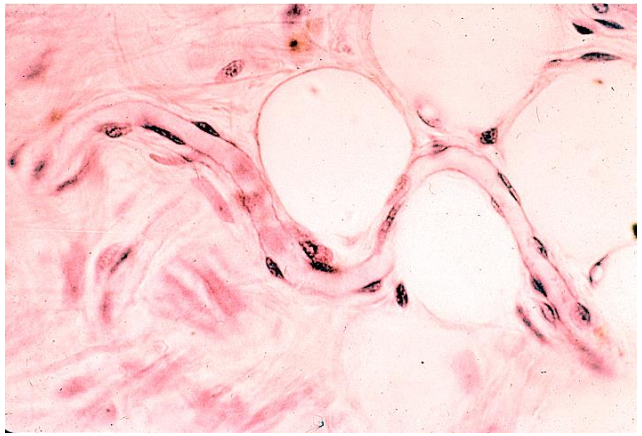
Blood capillaries

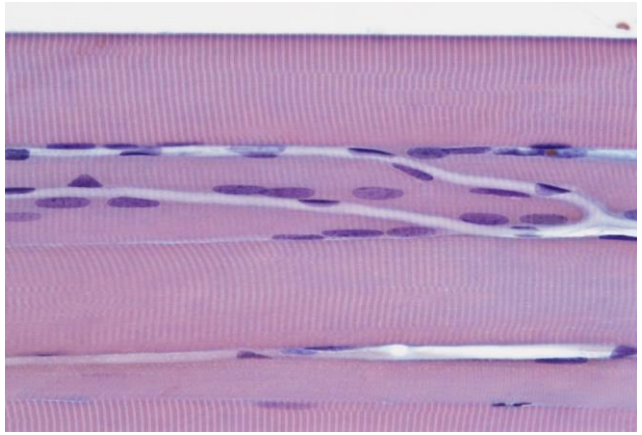
Q1: Identify the structure?

Blood capillaries

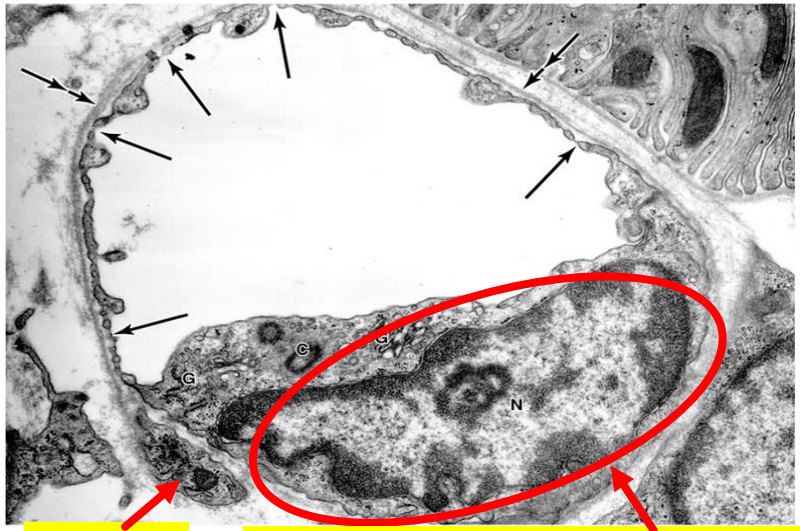
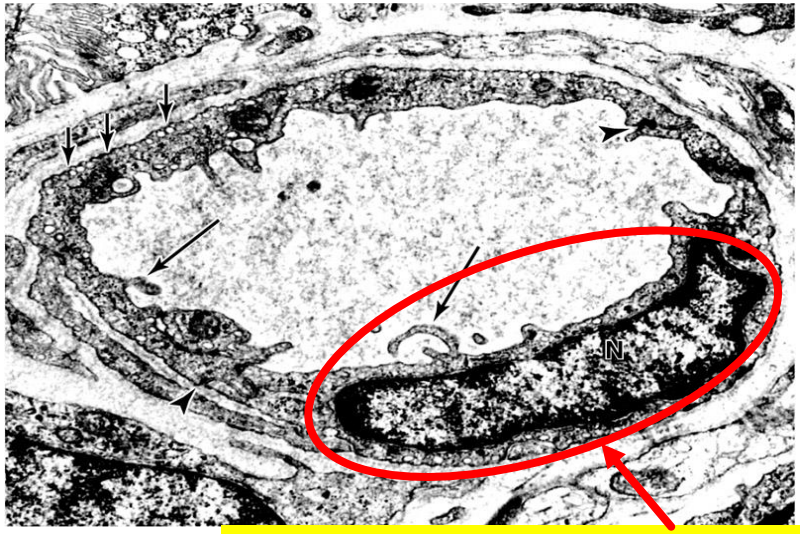
Q2: What is the features of the structure?

- **Single layer** of squamous endothelial cells
- **Basal lamina**
- **Pericytes**





HISTOLOGY TEAM 437

	Fenestrated Blood Capillary	Continuous Blood Capillary
Picture	 Pericyte Nucleus of the endothelial cell	 Nucleus of the endothelial cell
Features & Distribution	Fenestrated Blood capillary with diaphragm	Continuous Blood Capillary no pores "fenestrae"
	• Intestine • Pancreas • Endocrine glands The fenestrated blood capillaries without diaphragm are found only in the kidney	• Muscle. • Nervous Tissue

HISTOLOGY TEAM 437

" سنين الجهد إن طالت ستطوى .. لها أمدٌ وللأمد إنقضاء
لنا بالله آمال وسلوى .. وعند الله ما خاب الرجاء"

Team leaders :
Rawan Mohammad Alharbi
Khalid Fayez Alshehri

Twitter.com/Histology437
HistologyTeam437@gmail.com