VESSEL HISTOLOGY

KEY

TI, Tunica Interna
TM, Tunica Media
TE, Tunica Externa
END, Endothelium
SMF, Smooth Elastic Muscle Fibers
ELC, Elastic Connective Tissue

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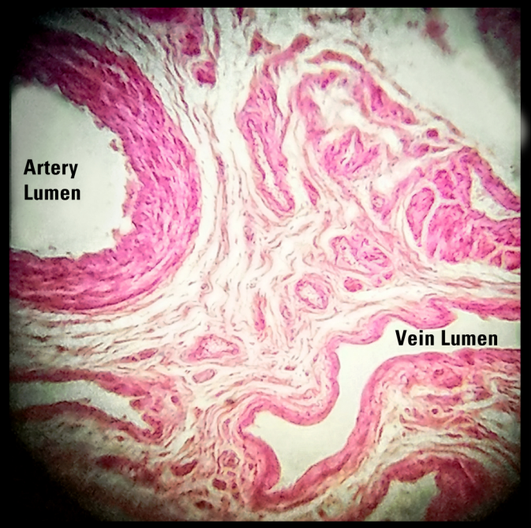

Artery & Vein
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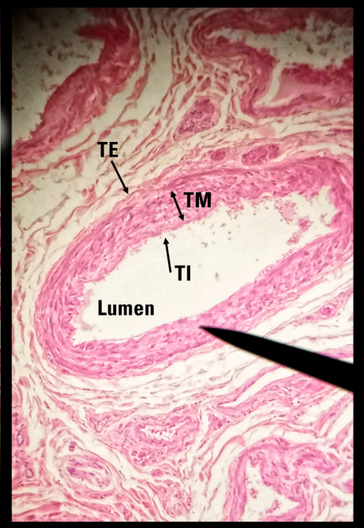

Artery
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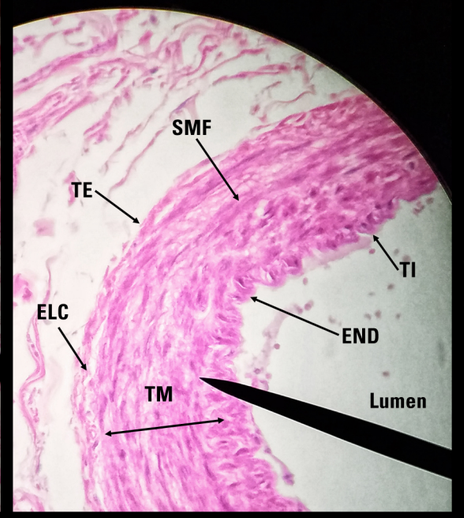

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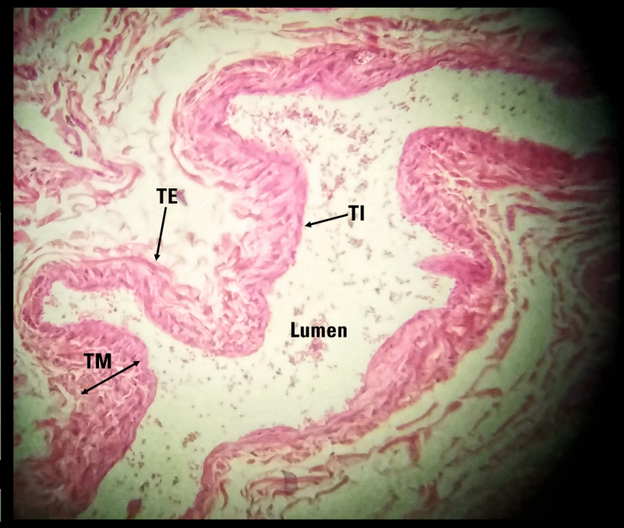

Vein
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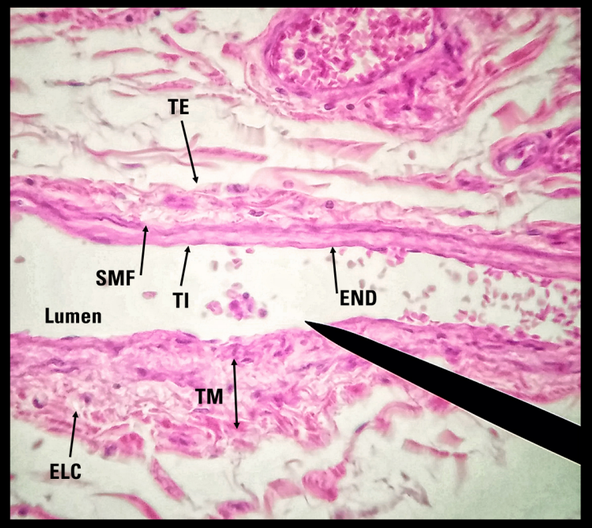

Vein
400x FOV=0.45mm

ARTERIES	VEINS	TUNICA INTERNA (TI)	TUNICA MEDIA (TM)	TUNICA EXTERNA (TE) / ADVENTITIA	COMMON PATHOLOGIES
Maintain regular/round shape. Greater vasa vasorum than veins. ***Elastic aka Conducting.*** Largest diameter. Thickness = 1/10th vessel diameter. Thick TM, mostly elastic fibers acting as pressure reservoir. TE walls relatively thinner. ***Muscular aka Distributing.*** Medium-sized. More vascular smooth muscle vs. elastic fibers. Vascular smooth muscle = 3/4 of total mass. TE walls relatively thicker. Vasodilation, vasoconstriction. Variable sizes.	Thinner walls. TI and TM are thinner than arteries. Walls not as strong as arteries as veins handle lower pressure. Many contain valves in TI preventing backflow and to maintain pressure for venous return. Do not maintain shape (collapsible lumen). No elastic lamina. Larger lumen than arteries.	Smooth 1-cell thick layer endothelium inner lining of luminal surface. Basement membrane anchors it. Fenestrated nternal elastic lamina provides exchange of materials between TI-TE.	Relatively thick. Mainly elastic fibers and vascular smooth muscle for stretching, recoiling, vasoconstriction, vasodilation, vascular spasm. Innervated by sympathetic axons of autonomic nervous system. Most variable composition per vessel type. External elastic lamina borders TE.	Elastic and collogen fibers. Contains nerves and capillaries that supply to vessel wall.	**Blockage** (preceded by narrowing). Atherosclerosis (due to atheroma formation). Arteriosclerosis. Phlebosclerosis. Thrombus. Embolisms. Damaged endothelium. **Rupture** (preceded by weakening). Aneurysm. Dissection. Vasculitis/vasculidities. Arteriovenous fistula/malformation.

REFERENCES
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