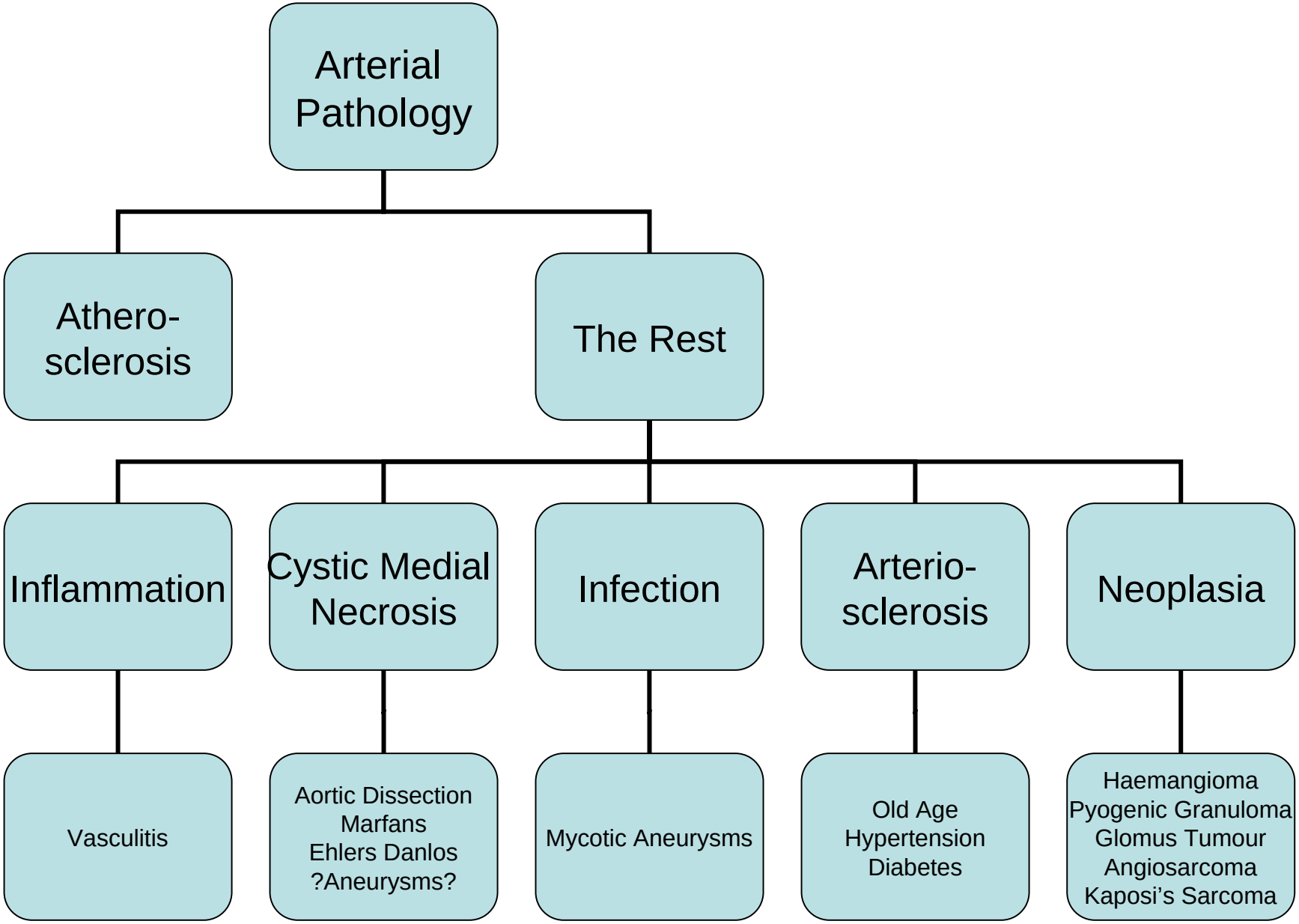
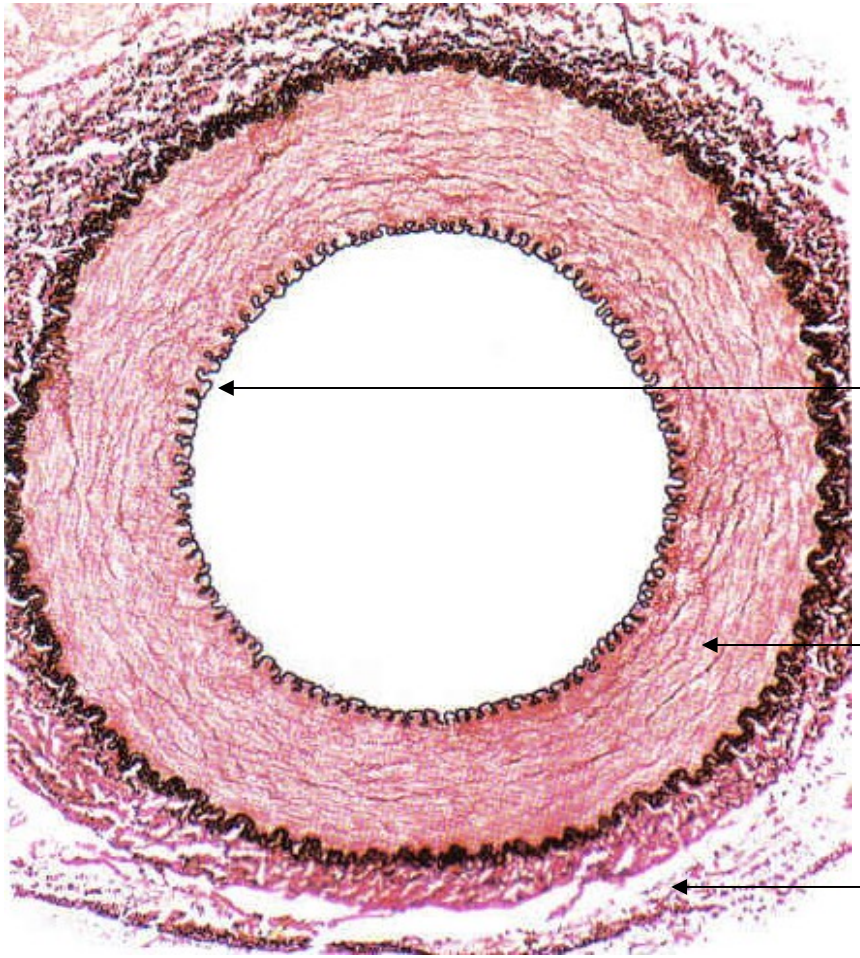
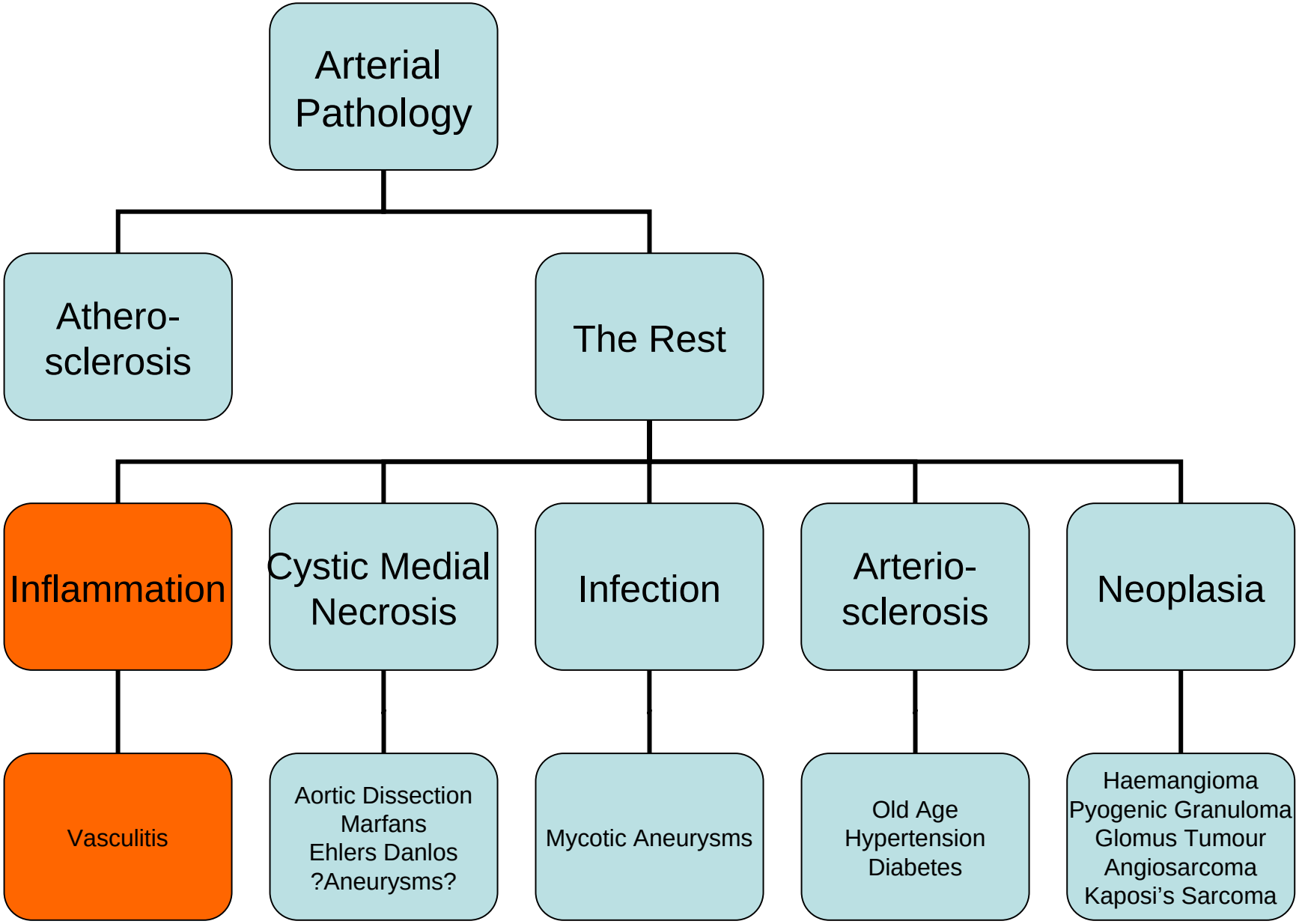
Disorders of Blood Vessels

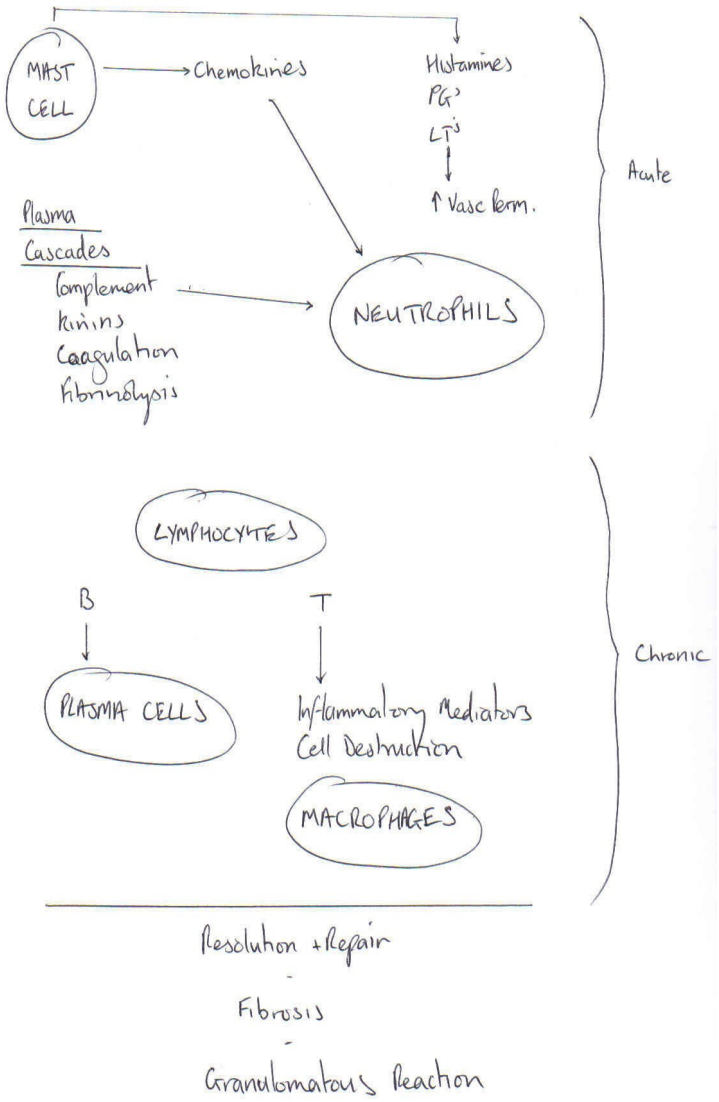
Steven M Jones


Arterial Pathology
Athero-sclerosis
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Vasculitis
Aortic Dissection
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?Aneurysms?
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Normal Artery




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Inflammation

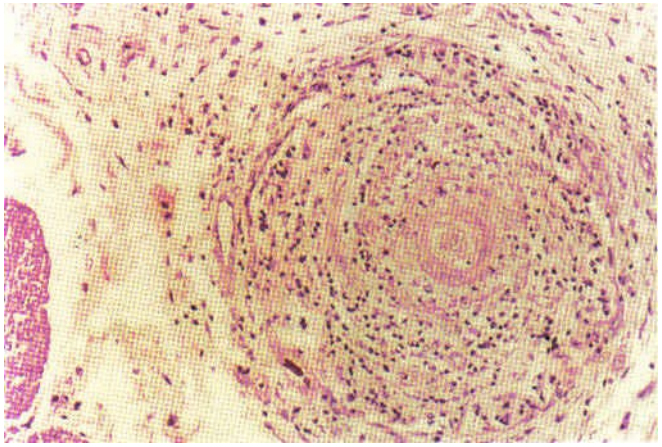
- Dolor
- Rubor
- Calor
- Tumor

Celsus 30 BC – AD 38

- Loss of Function

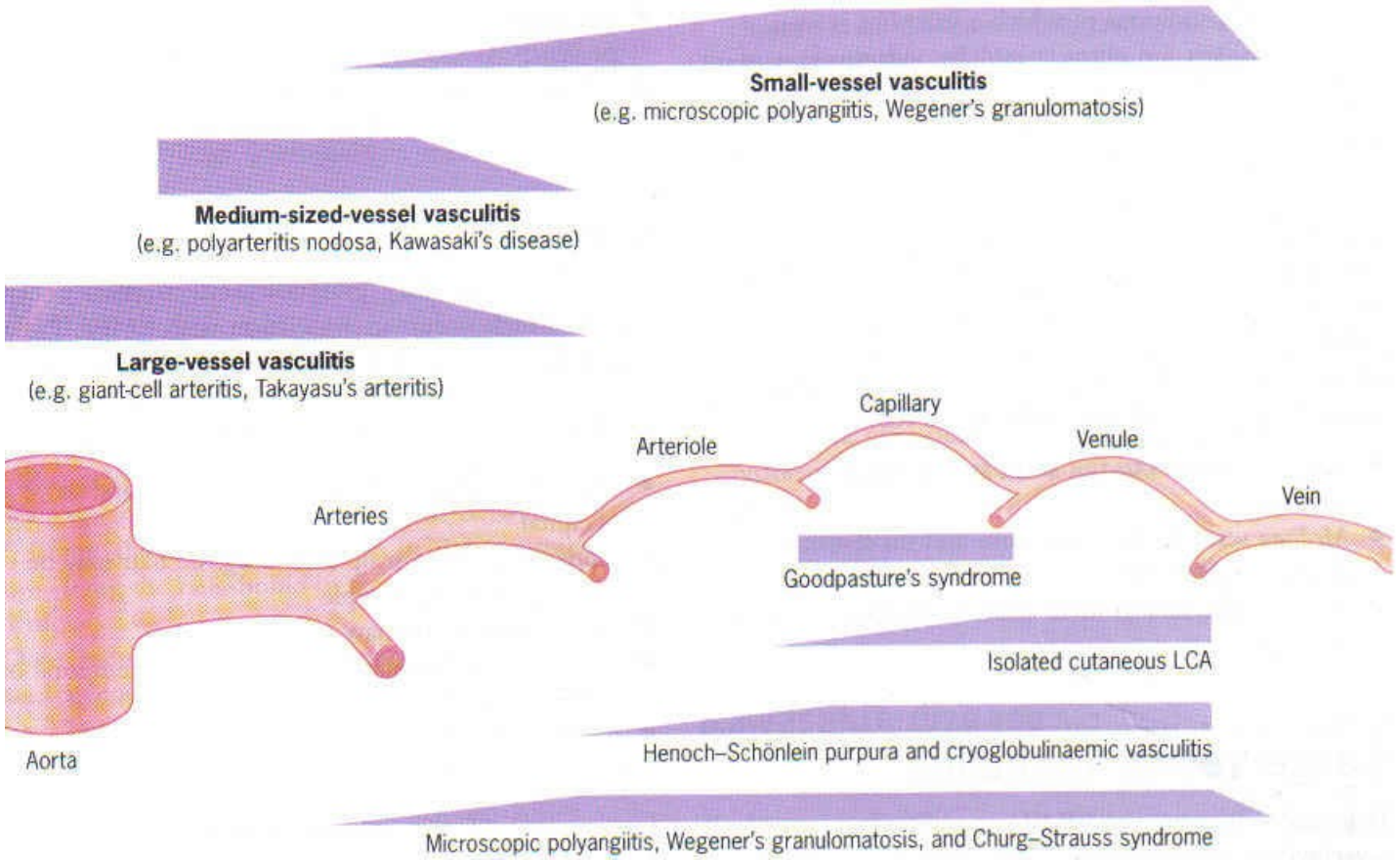
Virchow 1821-1902

Vasculitis



- Inflammatory disease of blood vessels
- Characterised by Antigen/Antibody complex or Giant cell depostion in artery wall
- Viral, autoimmune or unknown trigger

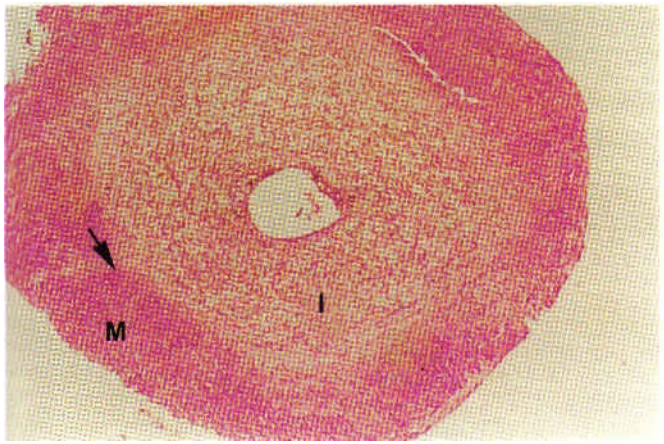
Classification of Vaculitis

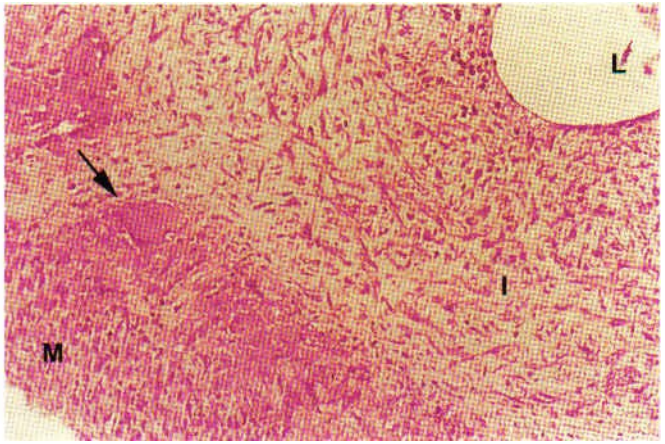


Temporal Arteritis

- Giant Cell/Cranial Arteritis
- Women over 50yrs
- ?autoimmune trigger
- First described in 1890 by Sir Jonathan Hutchinson

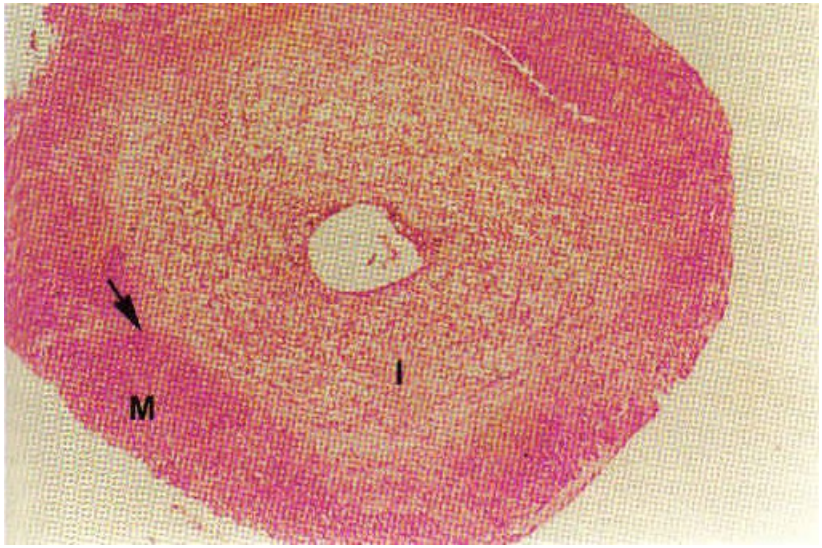
Microscopic Pathology





- ‘Panarteritis’
- Narrow lumen 2° to concentric intimal thickening
- Fragmentation of IEL with Giant Cell infiltration
- Inflammatory infiltration of Media

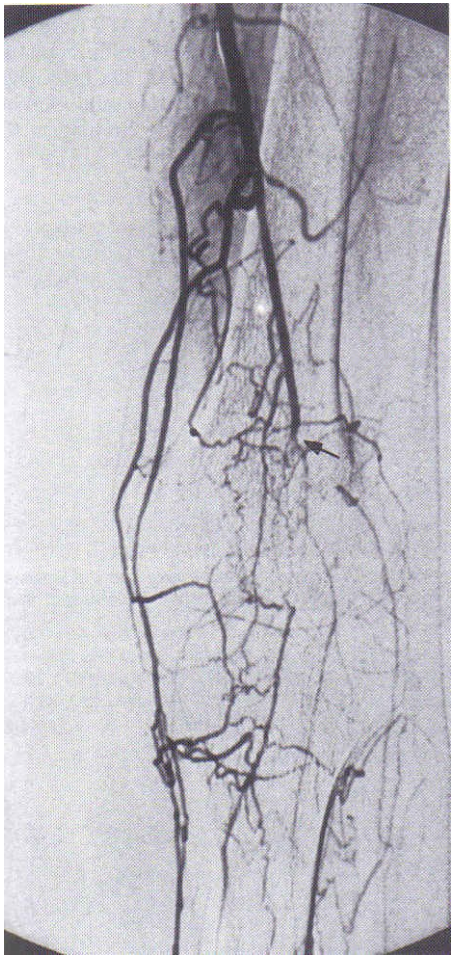
Temporal Arteritis vs Normal Artery



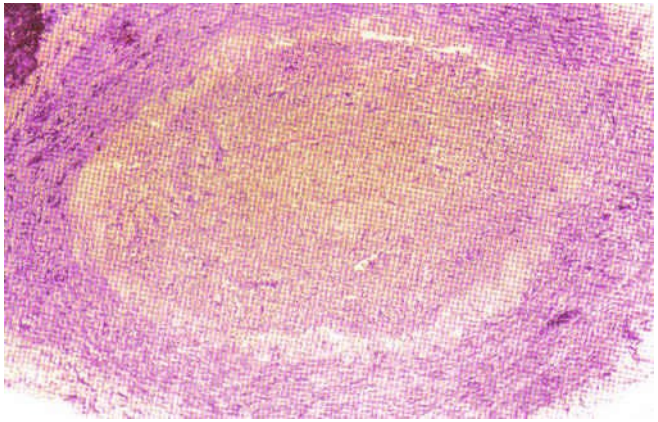


Buerger's Disease

- Thromboangiitis obliterans
- Young, Jewish ♂ smokers
- Post tib artery commonly affected
- Peripheral gangrene

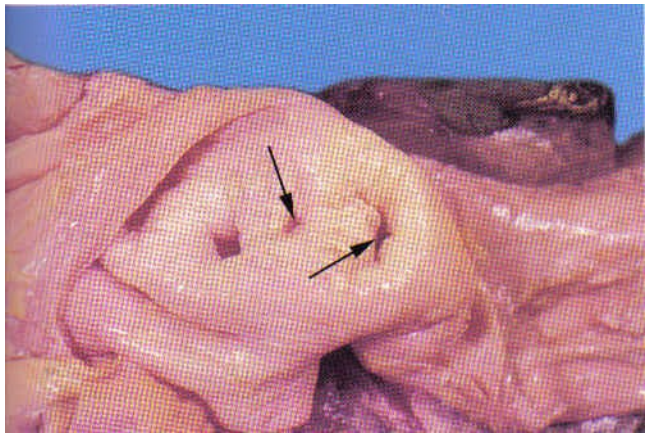


Microscopic Pathology



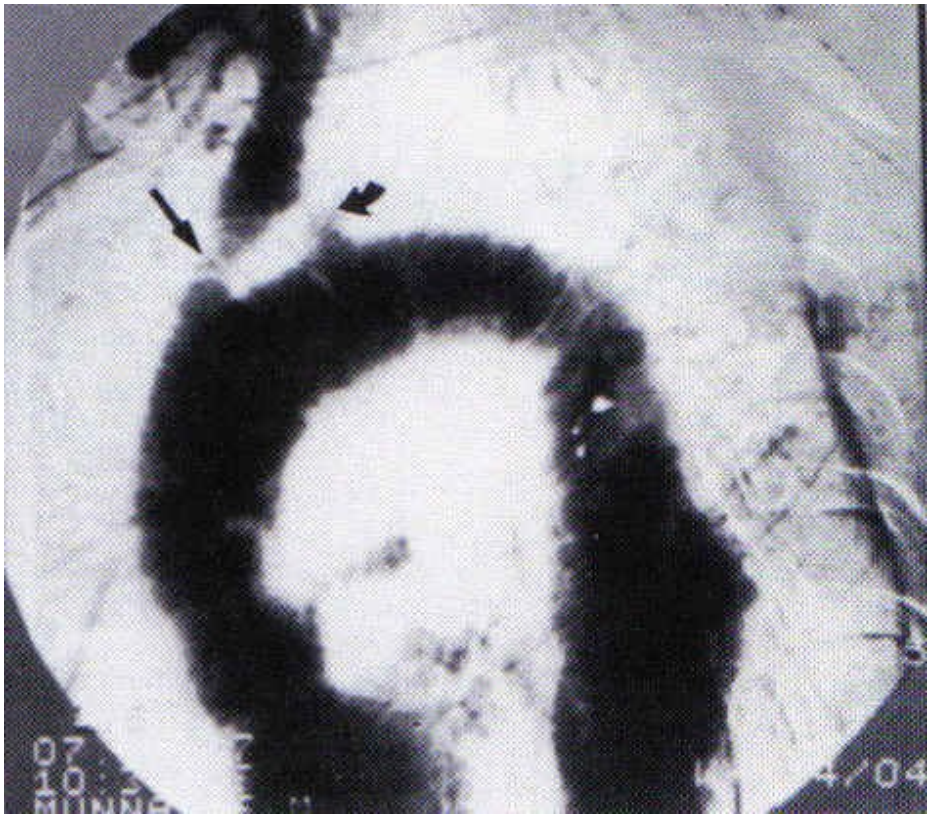
- Acute and chronic inflammation of vessel wall
- Occlusive thrombosis +/- recanalisation

Takayasu's Arteritis

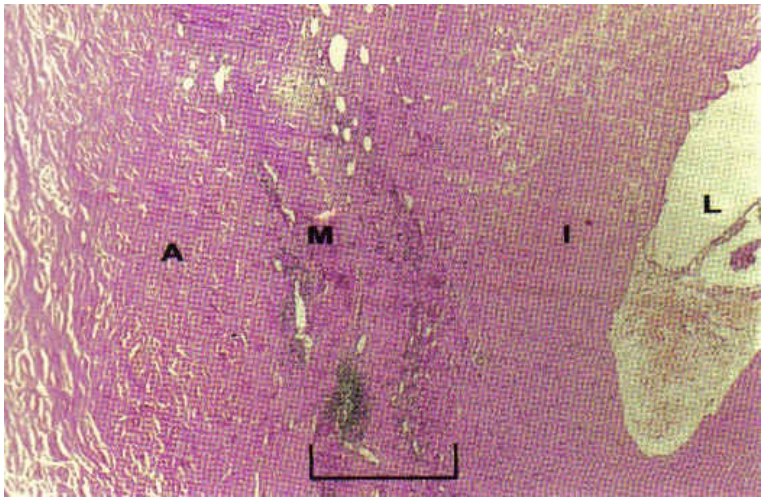


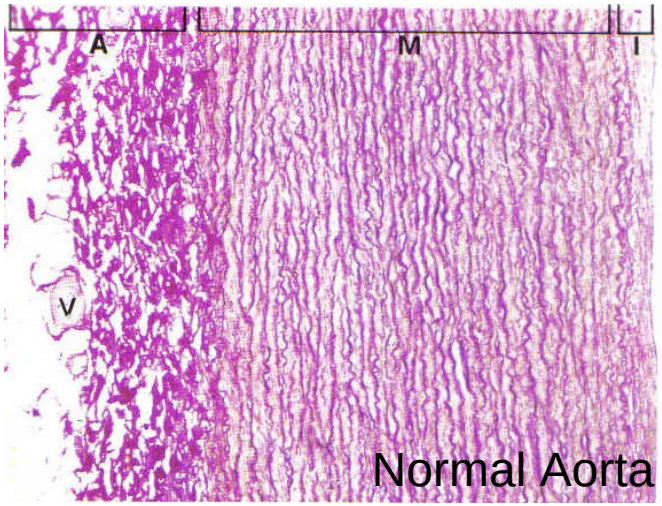
- Non specific Aortoarteritis
- Large to medium vessels
- Young to middle aged women
- TB, Chlamydia, Viral, Genetic trigger?

Aortic Arch Angiogram

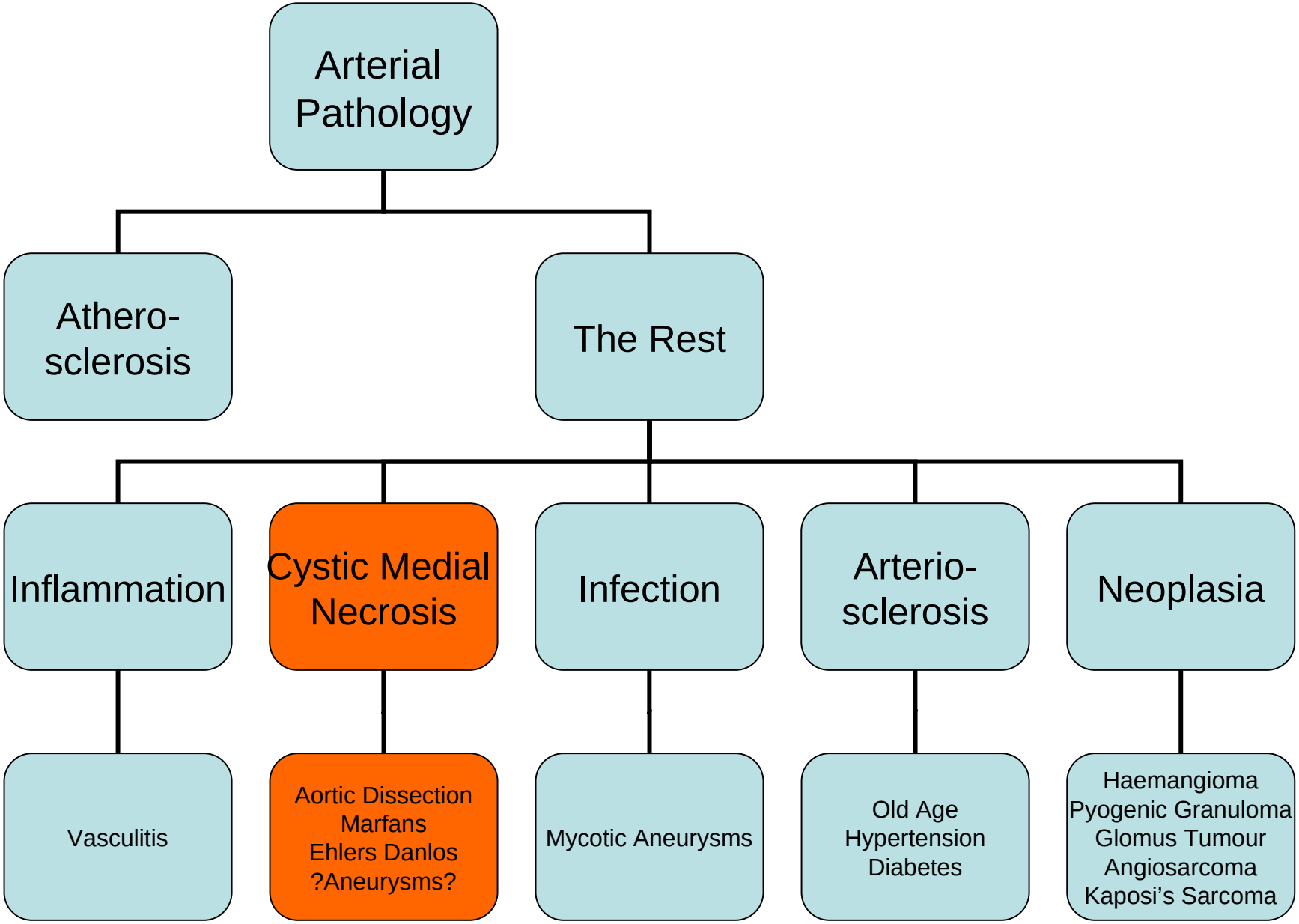


Microscopic Pathology





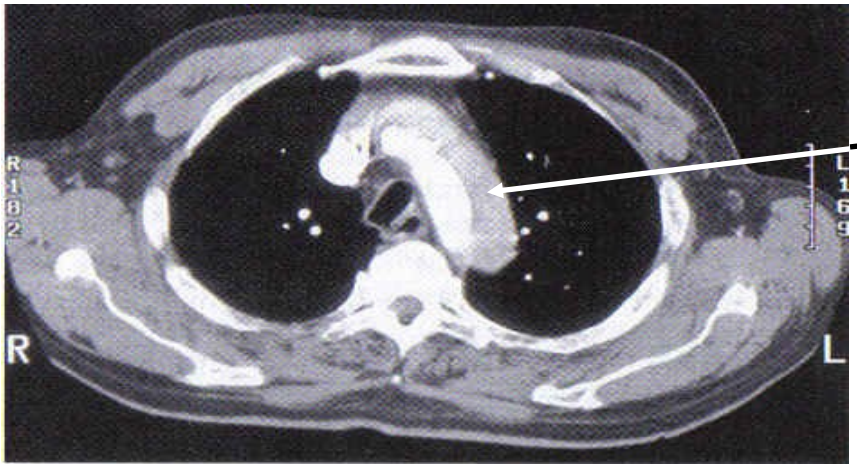
- Lumen narrowed
- Intima thickened
- Media thinned, elastic tissue replaced with fibrosis
- Adventitia thickened with fibro-collagenous tissue


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Cystic Medial Necrosis

- Degeneration of collagen and elastin tissue in Media
- Seen in hypertension
- Exaggerated in genetic disorders of collagen formation
- Predisposes to arterial dissection and aneurysm formation

Aortic Dissection

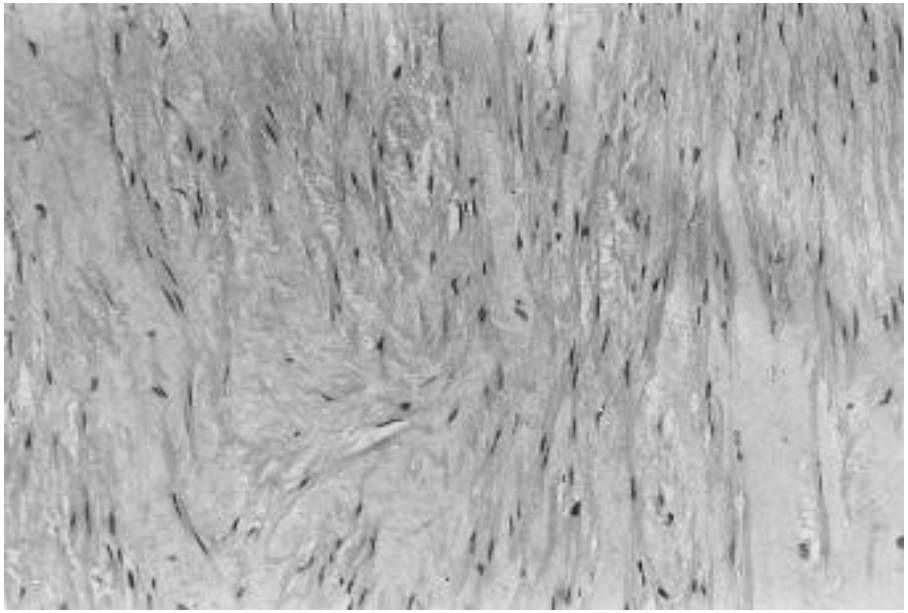


CT scan showing false lumen



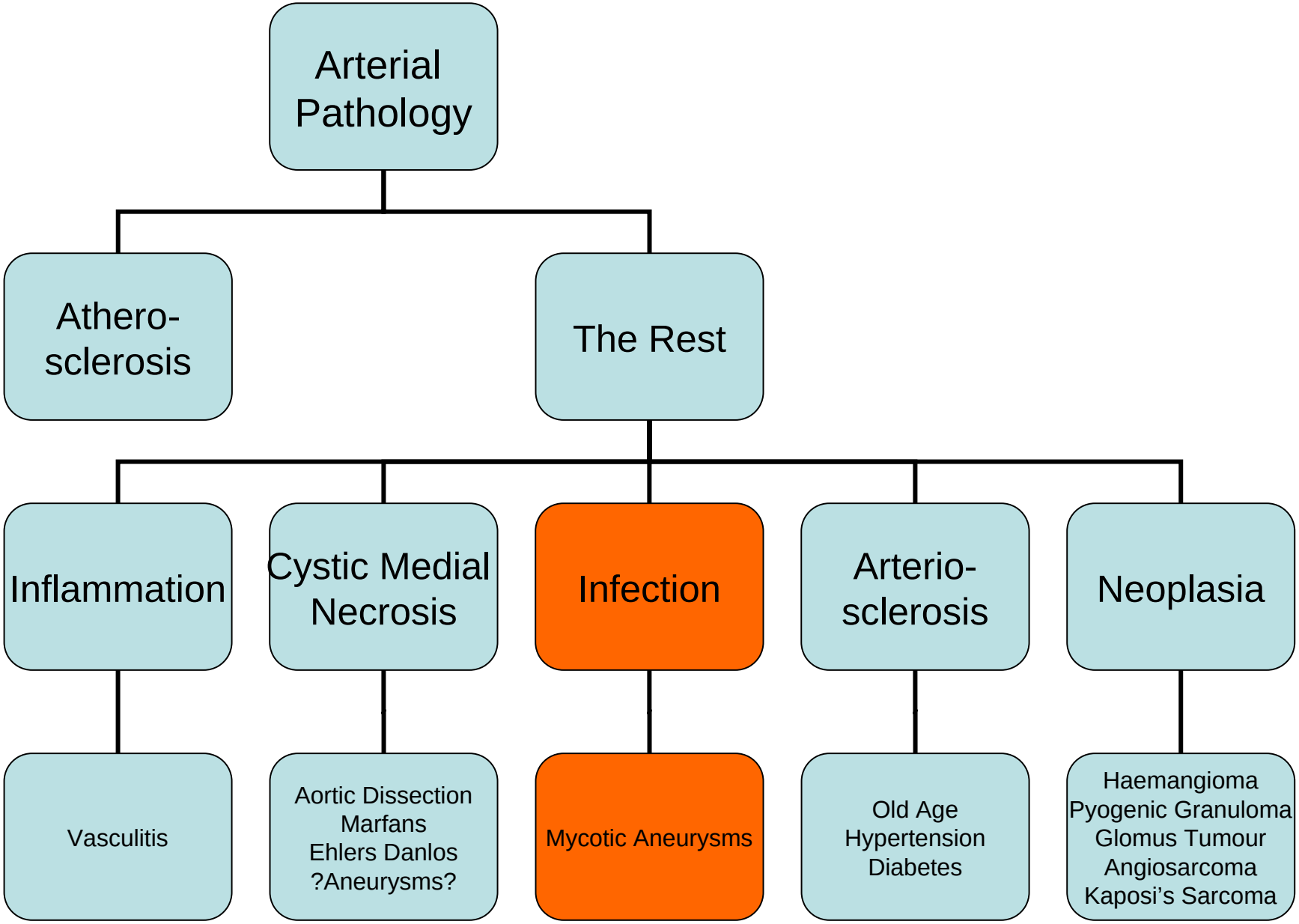
Gross specimen showing position of false lumen

Microscopic Pathology



Aortic media x100

- Cystic Medial Necrosis
- Fragmentation of elastic fibres


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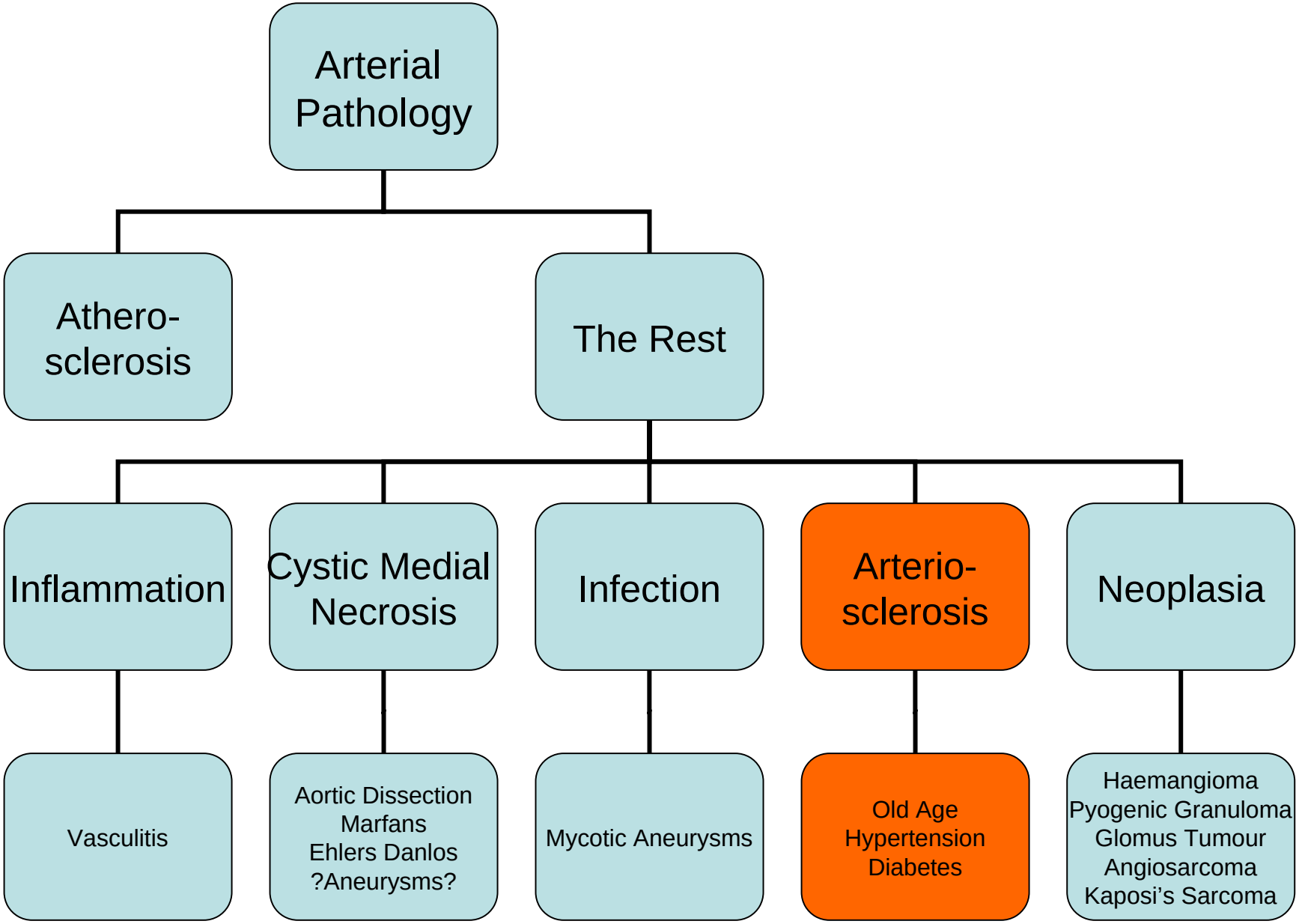
Infection

- Organism enters media via vaso vasorum
- Weakened vessel undergoes aneurysmal dilatation

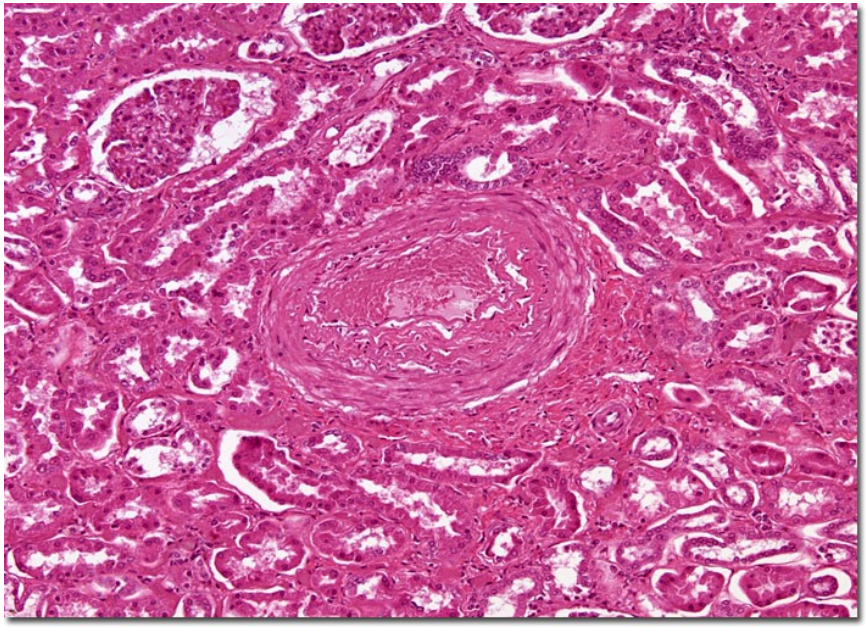
- Mycotic Aneurysms
  - Syphylis
  - Complication of bacterial endocarditis
  - Fungal sepsis

Ruptured Mycotic Aneurysm




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Arteriosclerosis



- Progressive fibrous thickening of intima
- Fibrosis of media
- Fragmentation of elastic lamina
- Accumulation of mucopolysaccharide in vessel wall

Cause and Effect

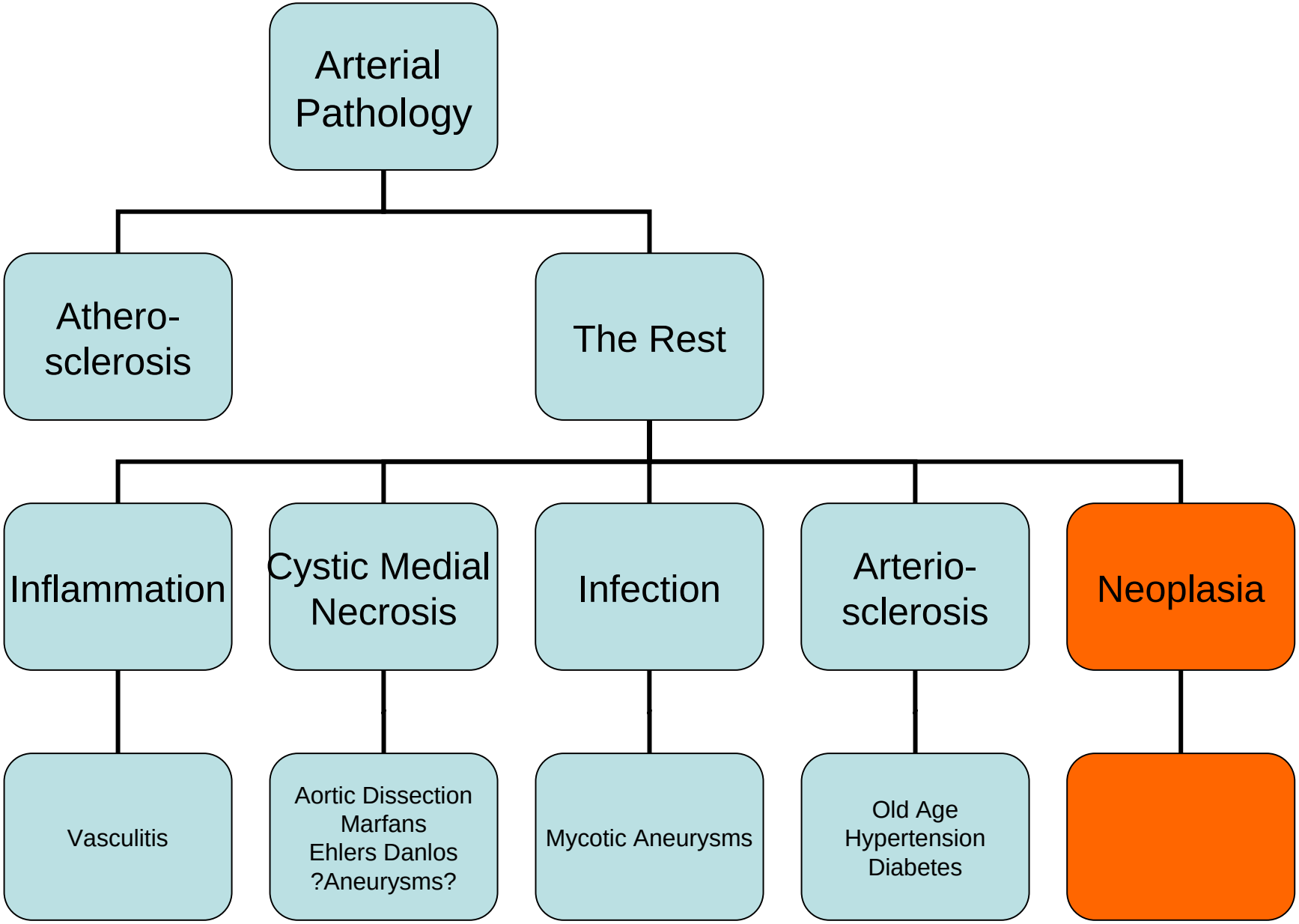
- ↑ Permeability of endothelium to proteins

Diabetes

- Proteinuria/Retinal exudates
- Renal Faliure
- Peripheral neuropathy
- Retinal microaneurysms

Hypertension

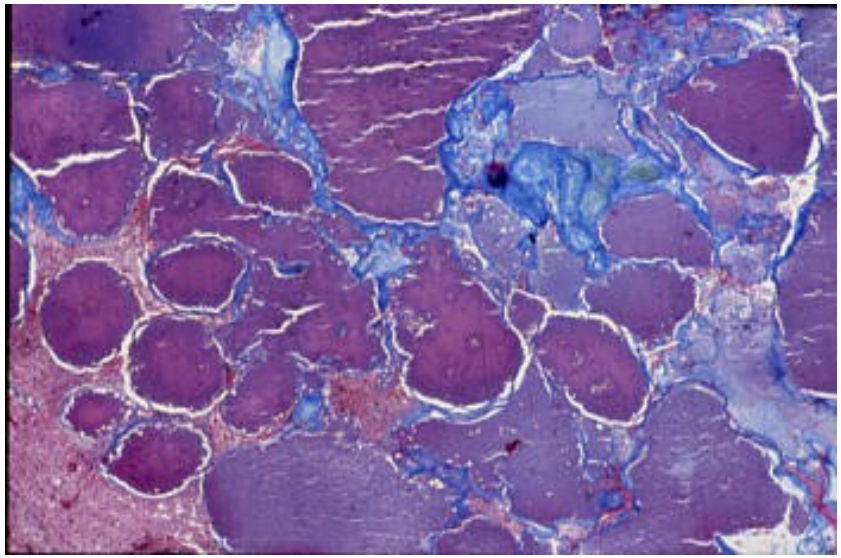
- Proteinuria
- Renal Failure
- Retinal Haemorrhage/ Oedema


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Name That Tumour



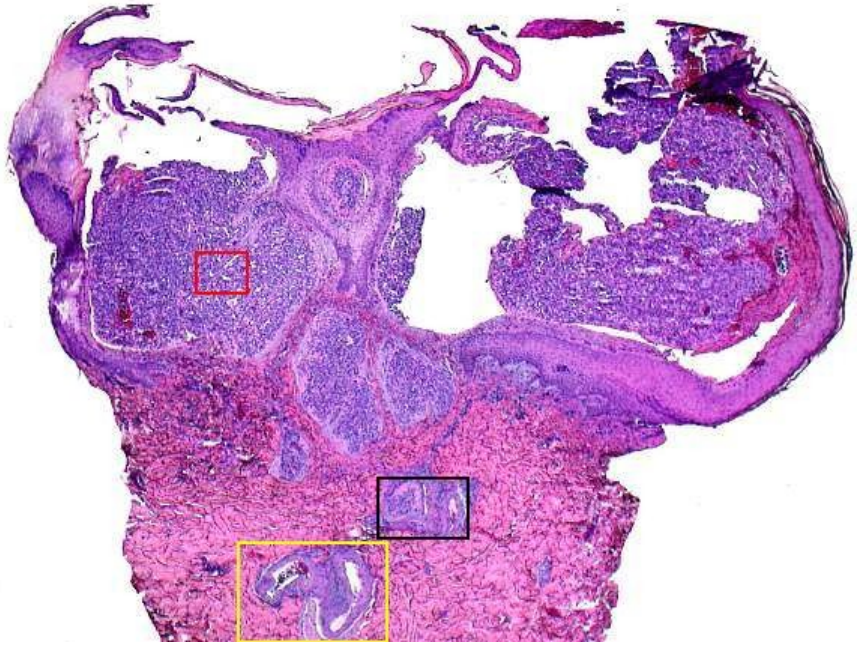
Haemangioma



- Commonest cutaneous vascular abnormality
- Rapidly proliferating vascular endothelium
- ♀>♂ 90% regress by 9yrs



Pyogenic Granuloma

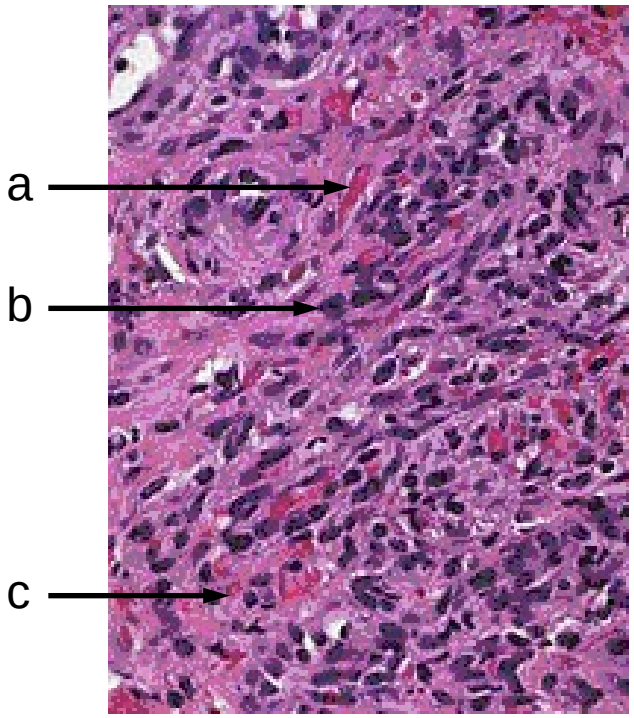


- Not pyogenic, no granulomata
- Sudden proliferation of capillaries in the dermis
- Inflammatory cells seen once it ruptures



Kaposi's Sarcoma

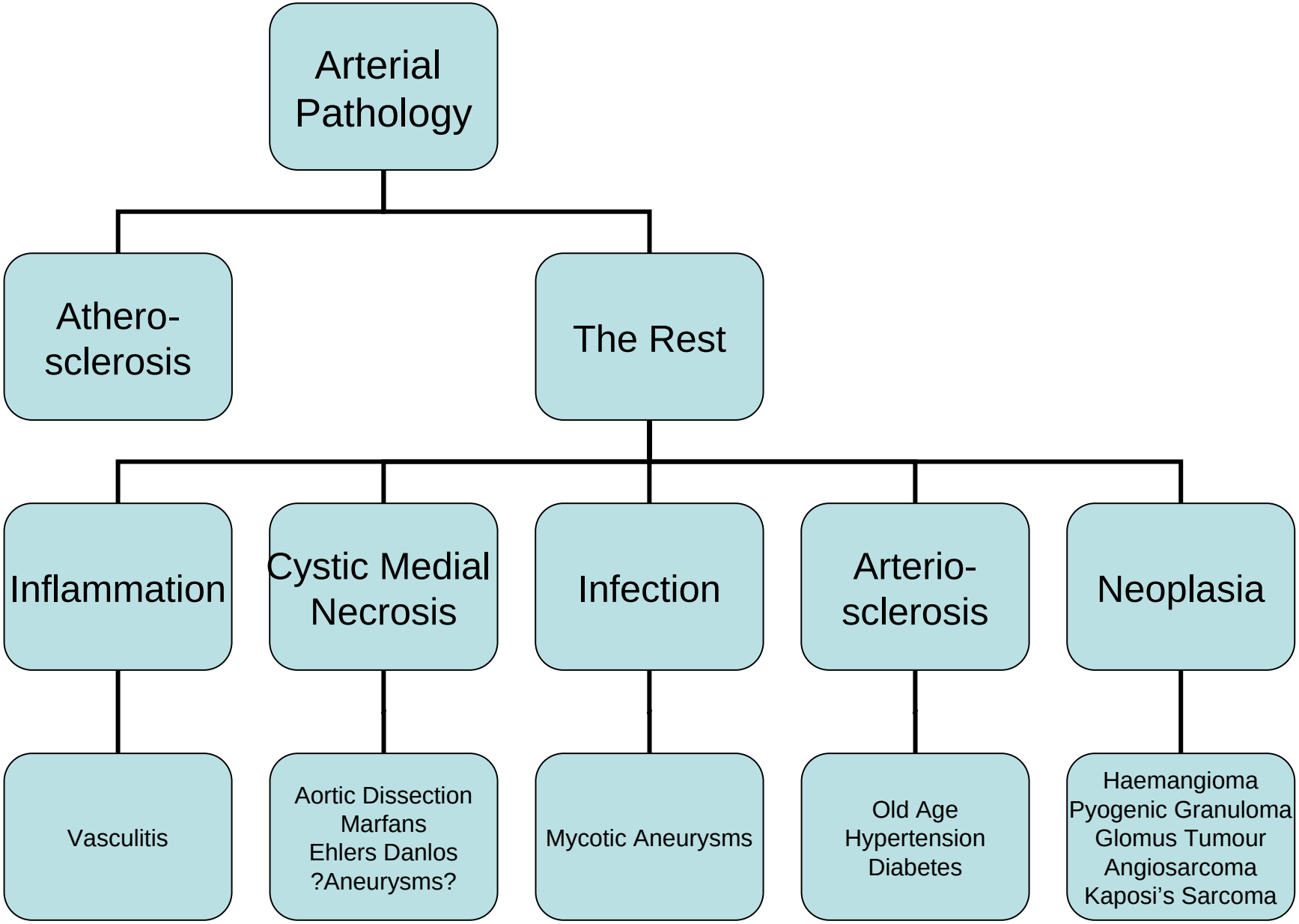
- HIV associated proliferation of vascular components
- Also associated with KSHV



a) Vascular spaces
b) Tumour cells
c) Extravasated erythrocytes


http://dermis.net




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Questions?