

Thrombosis. Embolism.

Thrombosis

- **Thrombus** – a blood clot.
- **Thrombosis** – a pathological process whereby there is formation of a blood clot in uninjured vasculature or after relatively minor injury.

Classification of Thrombi



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graph TD; A[Classification of Thrombi] --> B[Anatomical]; A --> C[Morphological]; B --> B1[Cardiac]; B --> B2[Arterial]; B --> B3[Venous]; B --> B4[Capillary]; C --> C1[White (Pale (platelet thrombus))]; C --> C2[Red (RBC thrombus)]; C --> C3[Mixed (intermittent layers)];
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- **Anatomical**

- Cardiac
- Arterial
- Venous
- Capillary

- **Morphological**

- White (Pale (platelet thrombus))
- Red (RBC thrombus)
- Mixed (intermittent layers)

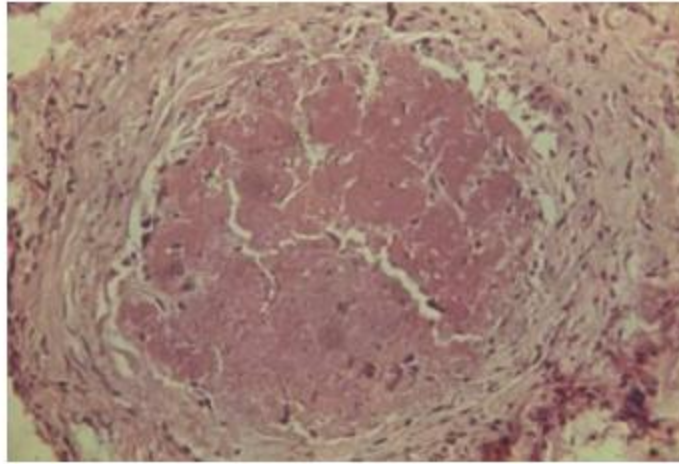
THROMBUS MORPHOLOGY

1. **white thrombus** (fibrin + PI + Le) is formed slowly with rapid blood flow (usually in the arteries);
2. **red thrombus** (fibrin + PI + Er) formed rapidly at slow blood flow (usually in the veins);
3. **mixed thrombus**: combination of white and red (layered thrombus) – consists of attached to the vessel wall **head** (white thrombus), **body** (mixed thrombus) and **tail** (red thrombus) – usually in veins and aneurysms.

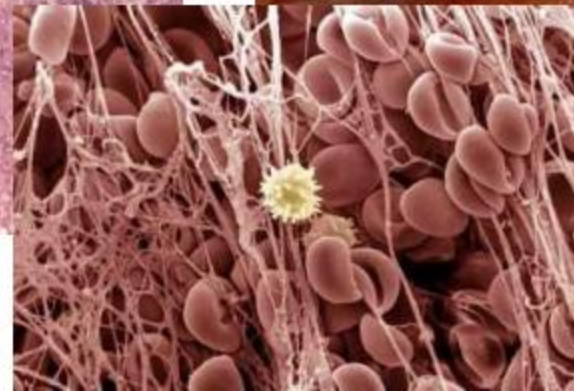
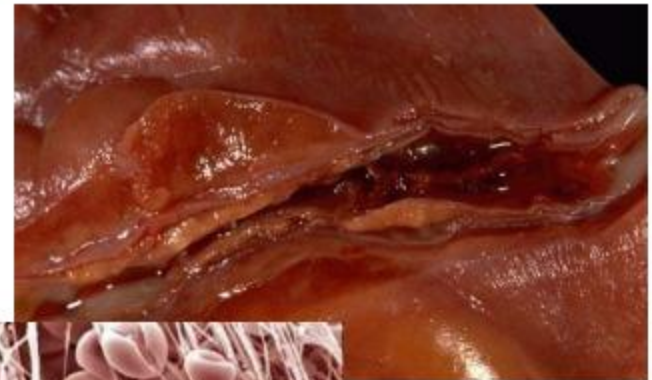
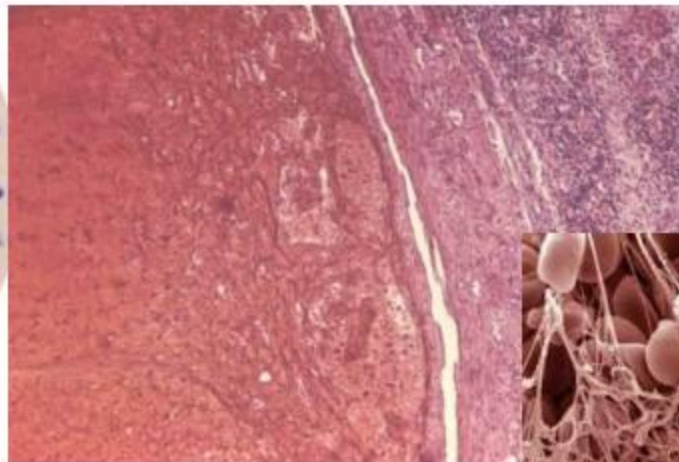
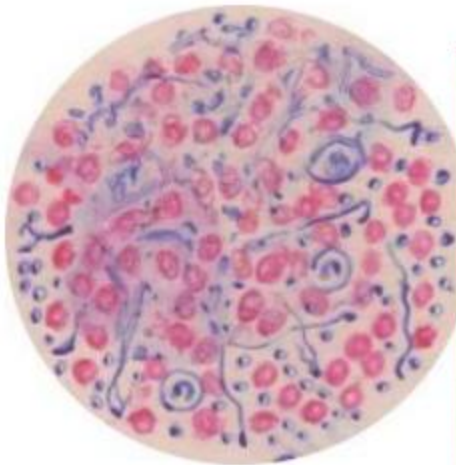
Types of thrombus



White thrombus

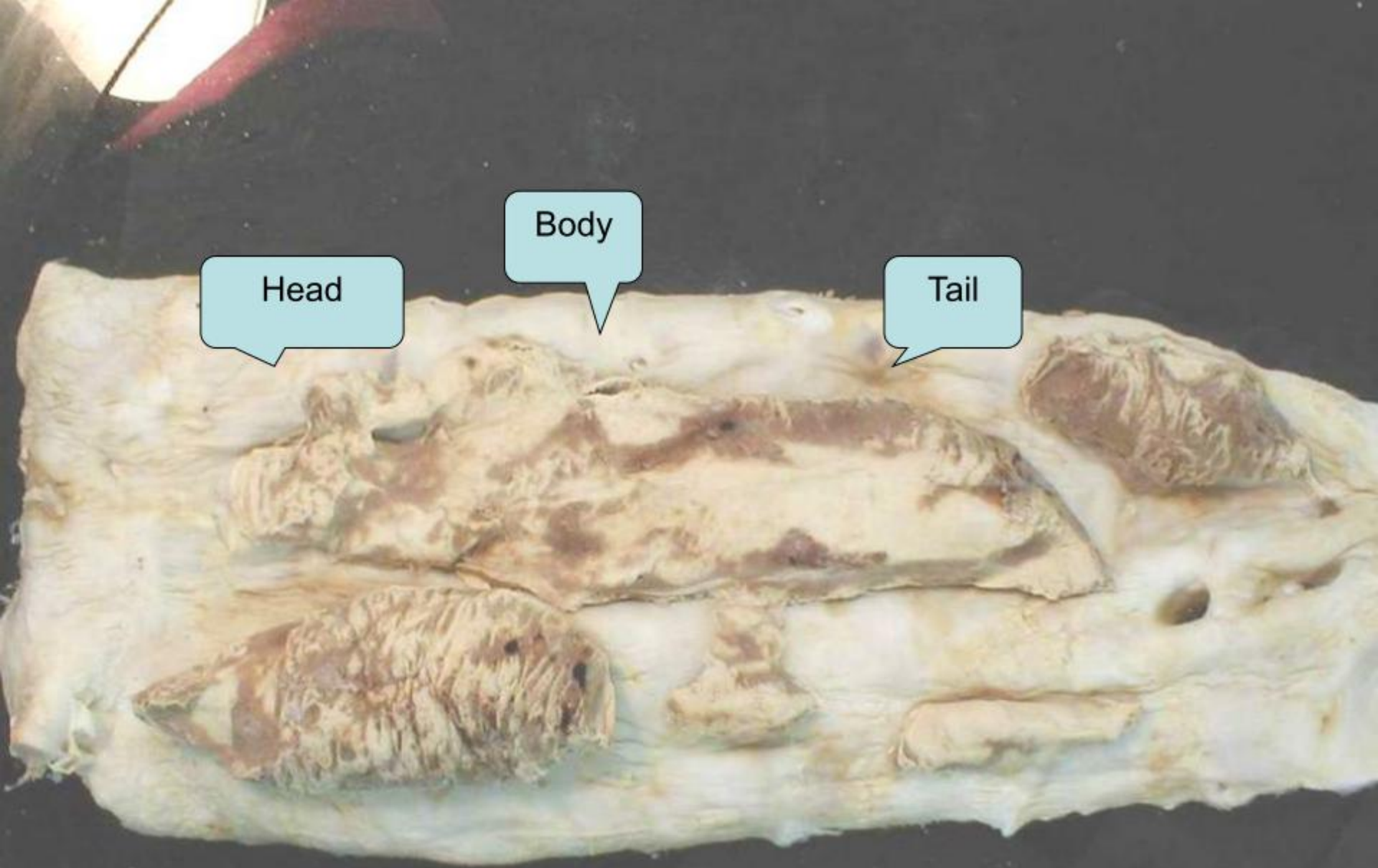


Red thrombus





RED THROMBUS



Parietal mixed thrombi in aorta

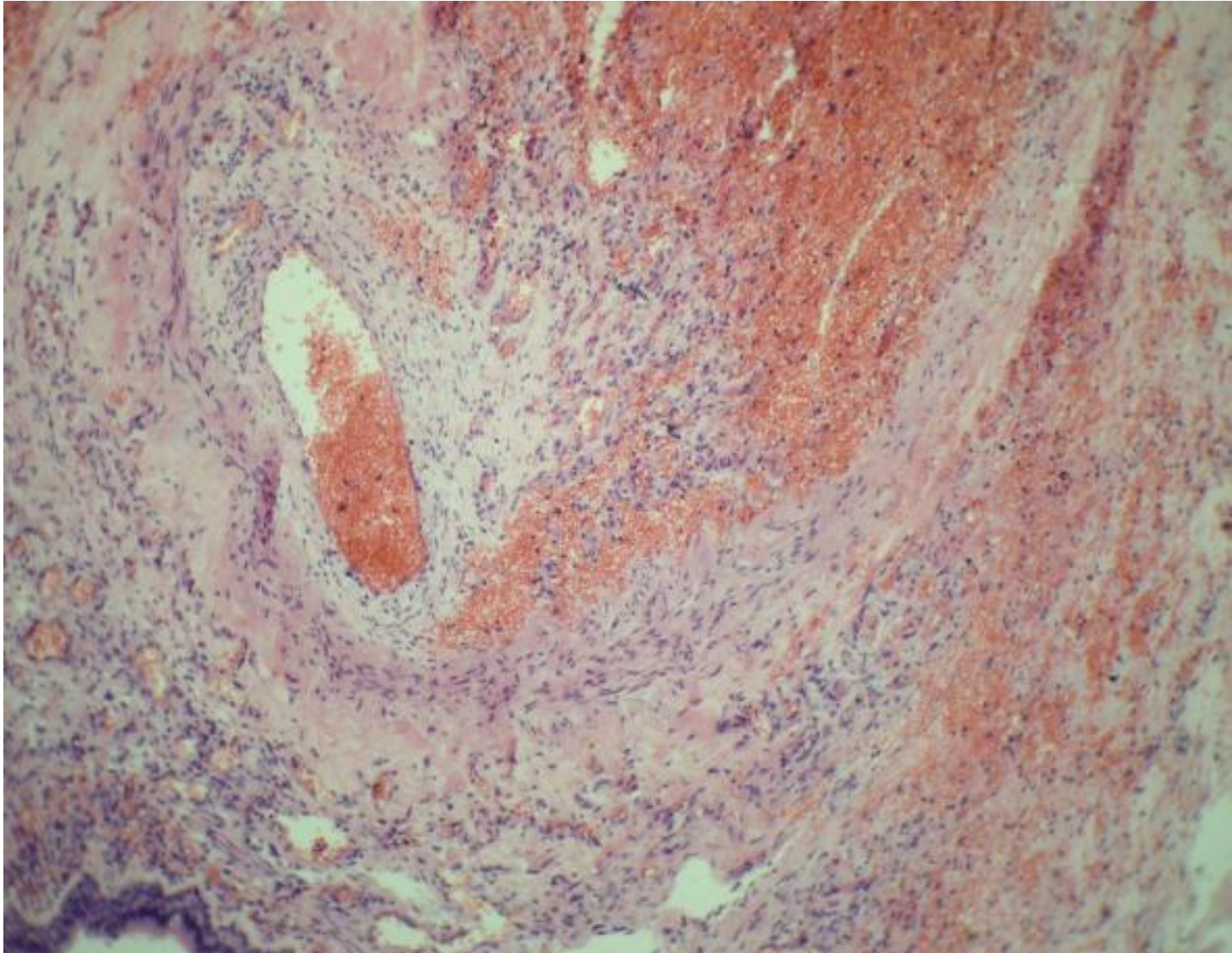


- Parietal thrombus in aorta.

- Obstructive thrombus.



Thrombosis



THROMBOSIS OUTCOMES

- **Favourable:**
 1. aseptic autolysis,
 2. organization with sewage and vascularization,
 3. petrification (phlebolit/veinstone)
- **Unfavorable:**
 1. septic autolysis
 2. thrombobacterial embolism (sepsis),
 3. thromboembolism.
 4. propagation

Embolism

- Embolism is a pathological process that is characterized by circulation in the blood or lymph of substrates (emboli) that do not occur normally and which can cause acute occlusion of the vessel with an impaired blood supply to the organ or tissue.

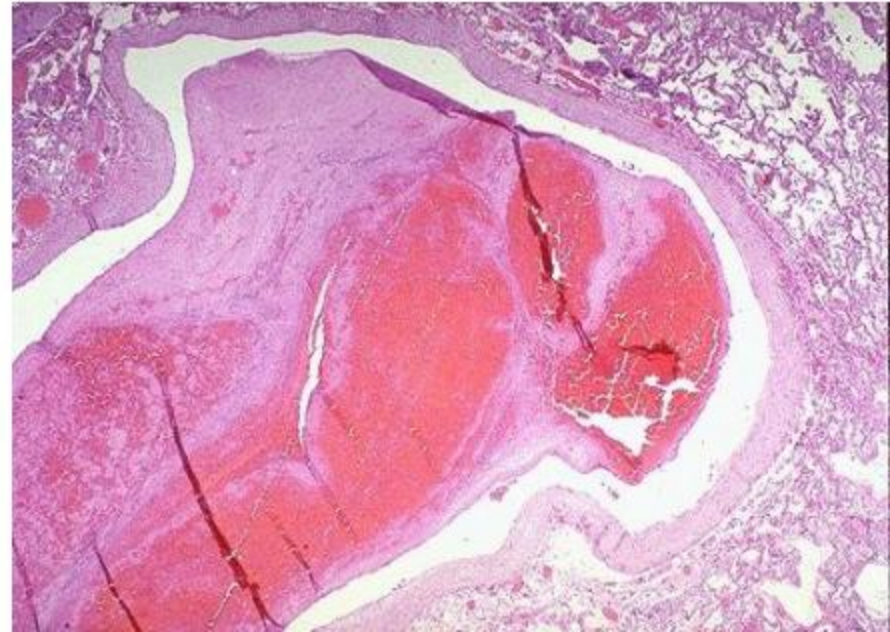
Directions of embolus movement:

1. Direct or orthopedic embolism;
2. Paradoxical embolism;
3. Retrograde embolism.

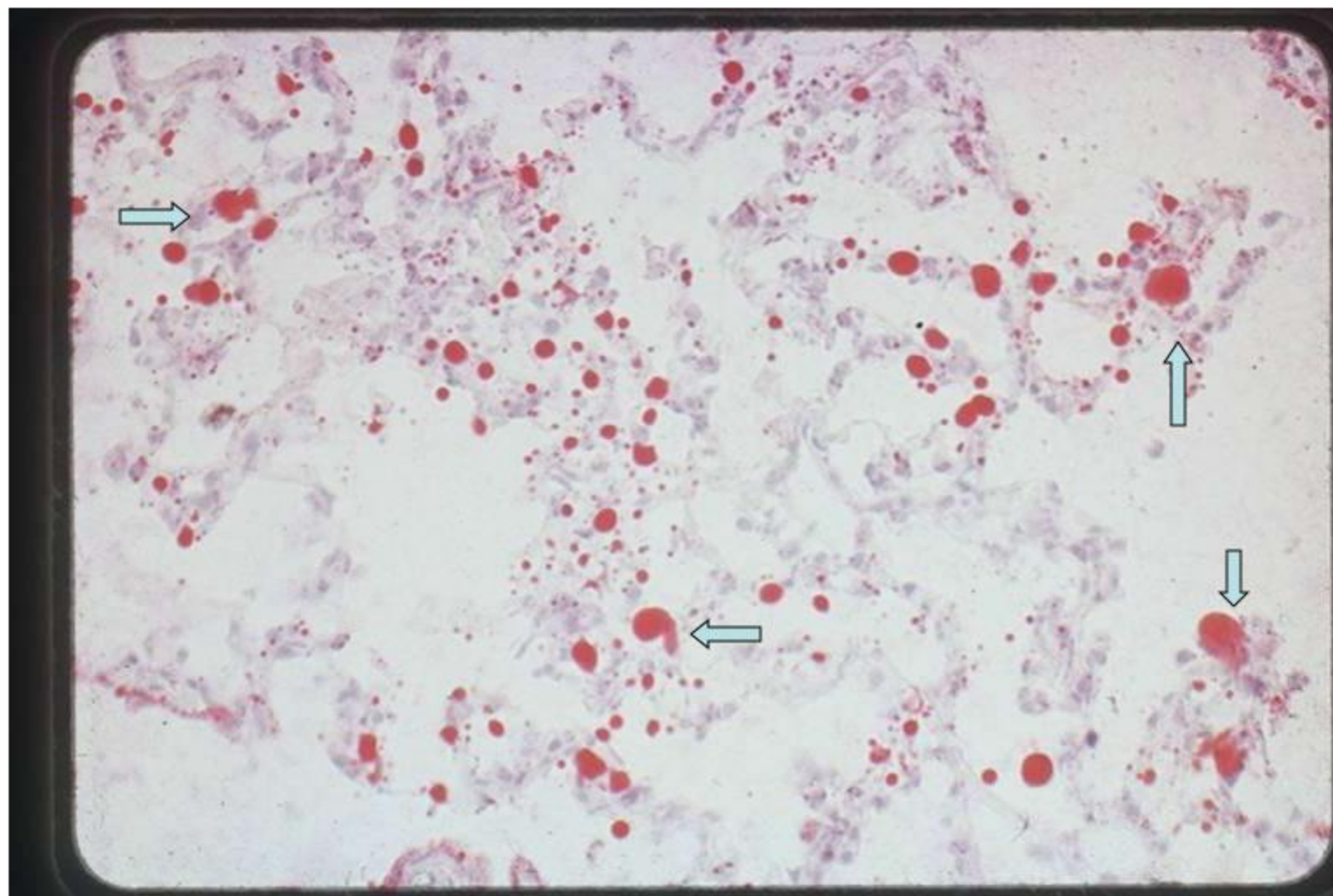
Types of embolism

- Pulmonary
- Air
- Fat
- Amniotic fluid
- Septic
- Tumour
- Others

Pulmonary Thromboembolism



Fat emboli stained red



Air-embolism

