

Author(s): Gerald Abrams, M.D., 2009

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Circulatory Derangements II

M1 – Cardiovascular/Respiratory
Sequence

Gerald Abrams, MD

Fall 2008



Circulatory Derangements

II

HEMORRHAGE

HEMORRHAGE

Escape of blood from the C-V system

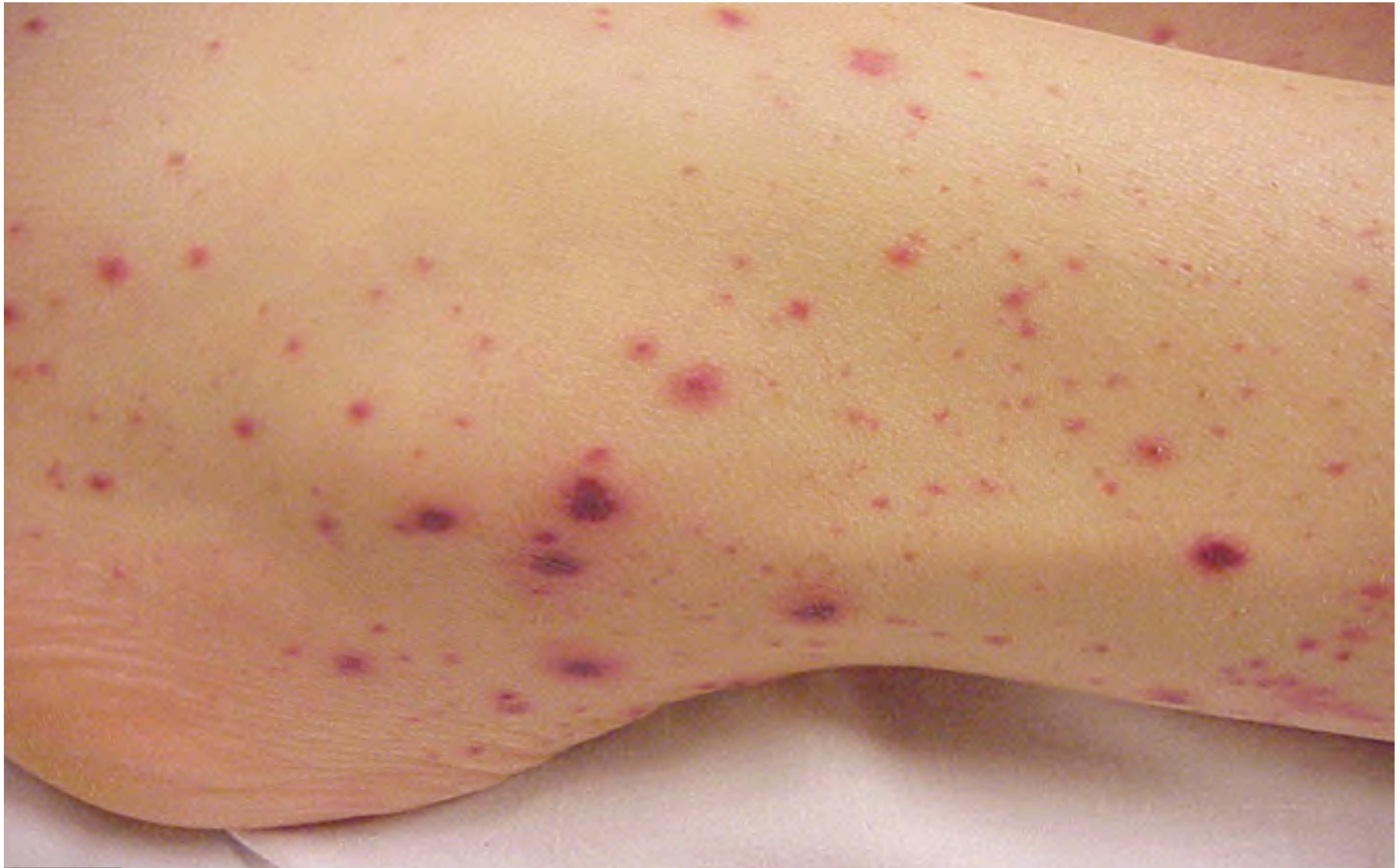
- onto the floor

- into the tissues / body cavities

Clinical Patterns of Hemorrhage

- Petechiae – 1-2 mm. hemorrhages
- Ecchymoses- blotches / bruises
- Hematoma – a mass or lump of blood
- Hemothorax – blood in the pleural cavity
- Hemarthrosis – blood in a joint
- Hemopericardium, hematosalpinx, etc.....
- Purpura – a condition of widespread
cutaneous and mucosal hemorrhages

Petechiae



Ecchymoses



Hematoma



Purpura

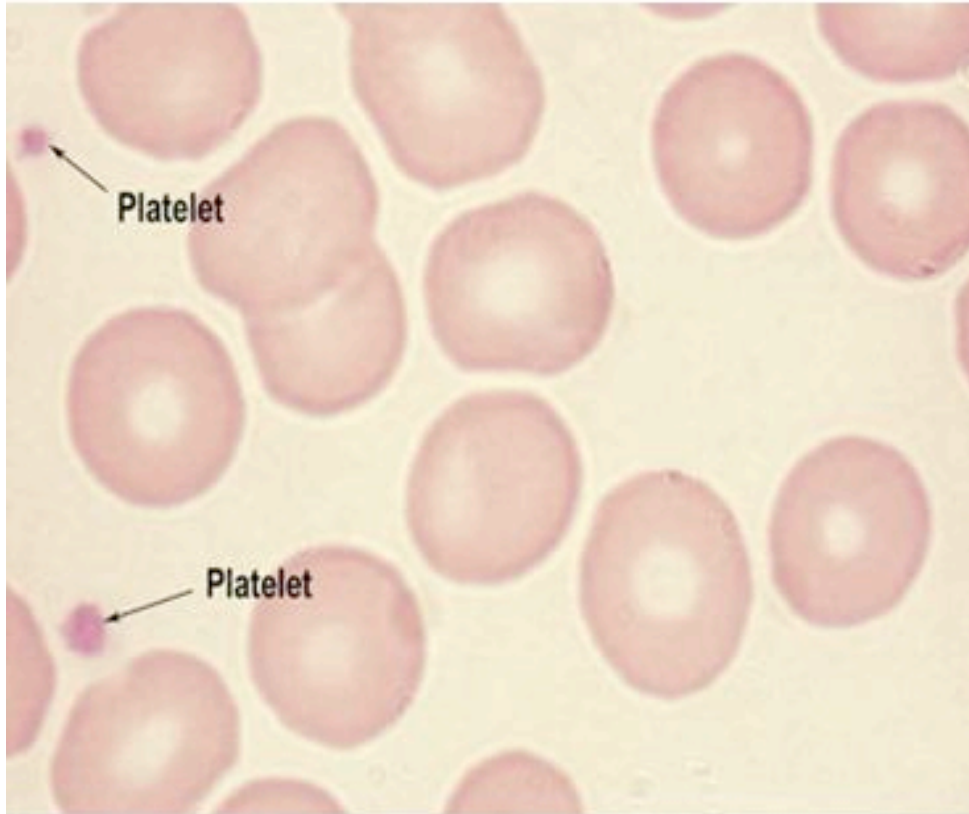


Hemostasis

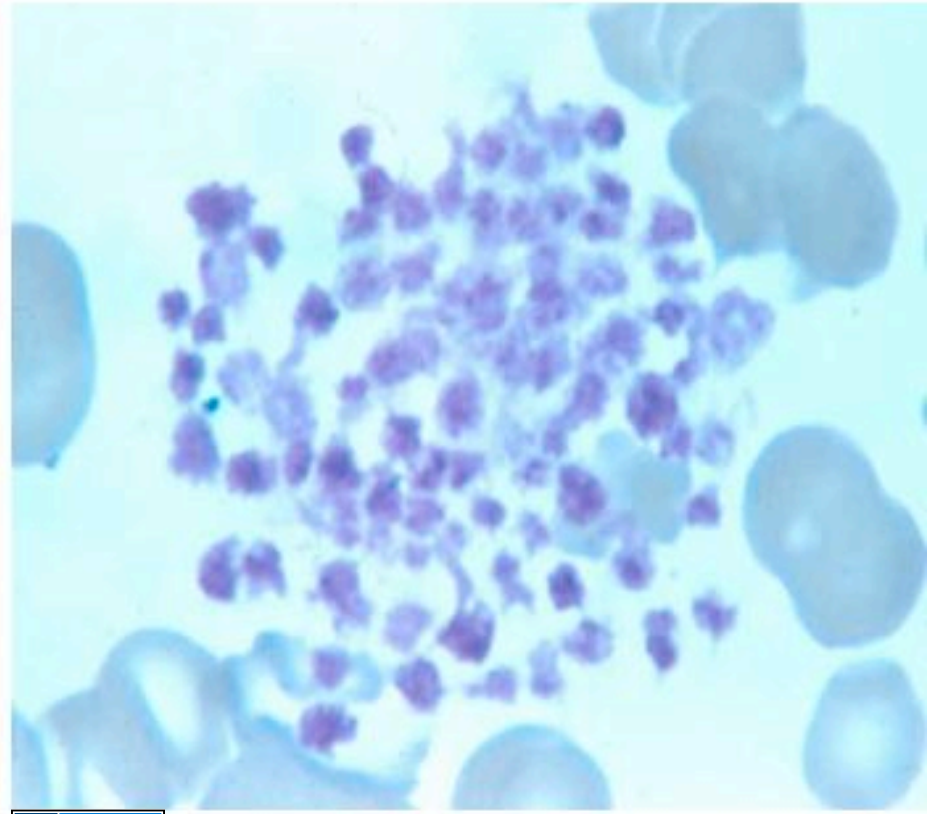
involves three components

- Blood vessels
- Platelets
- Coagulation system

Platelets



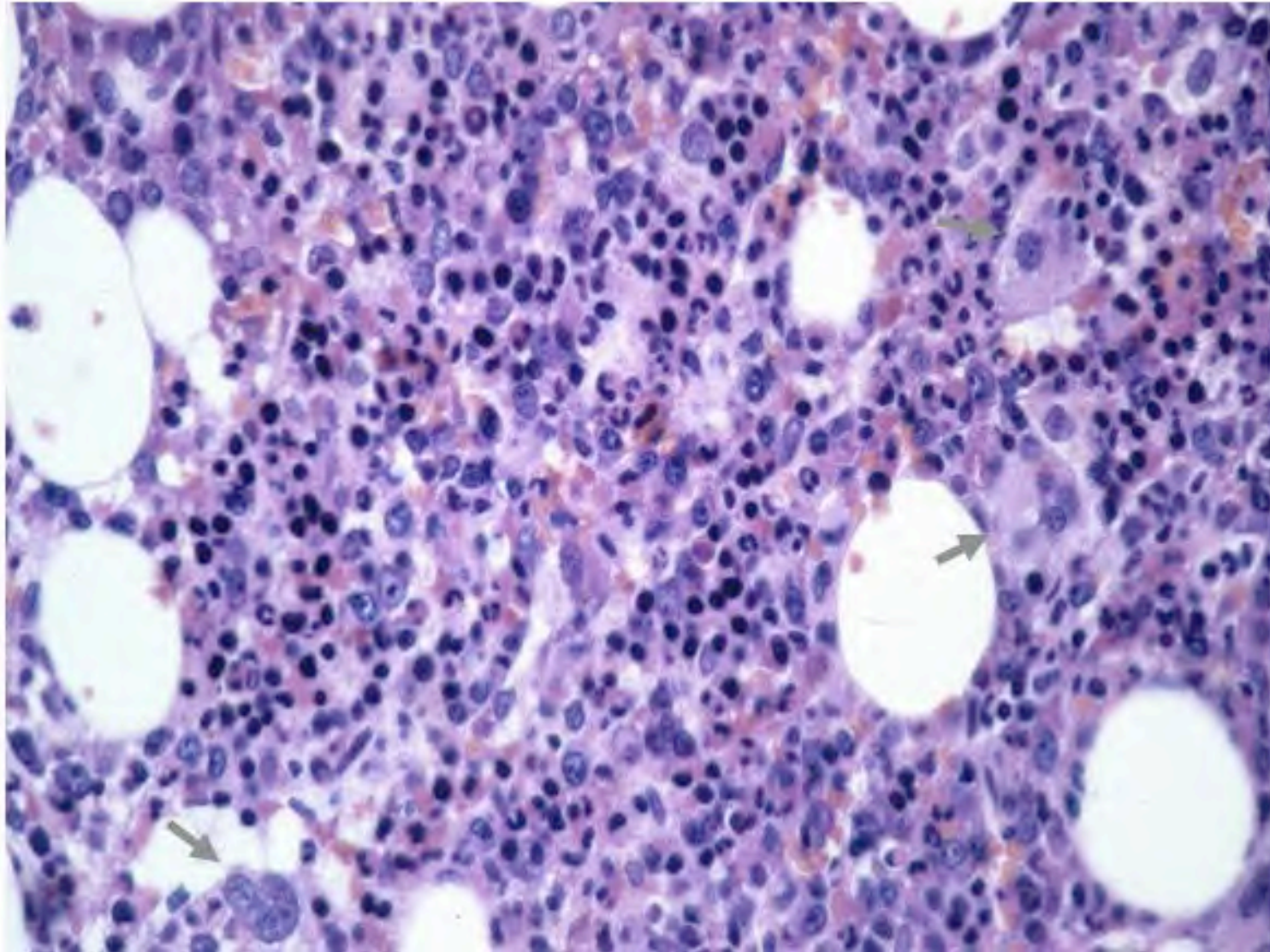
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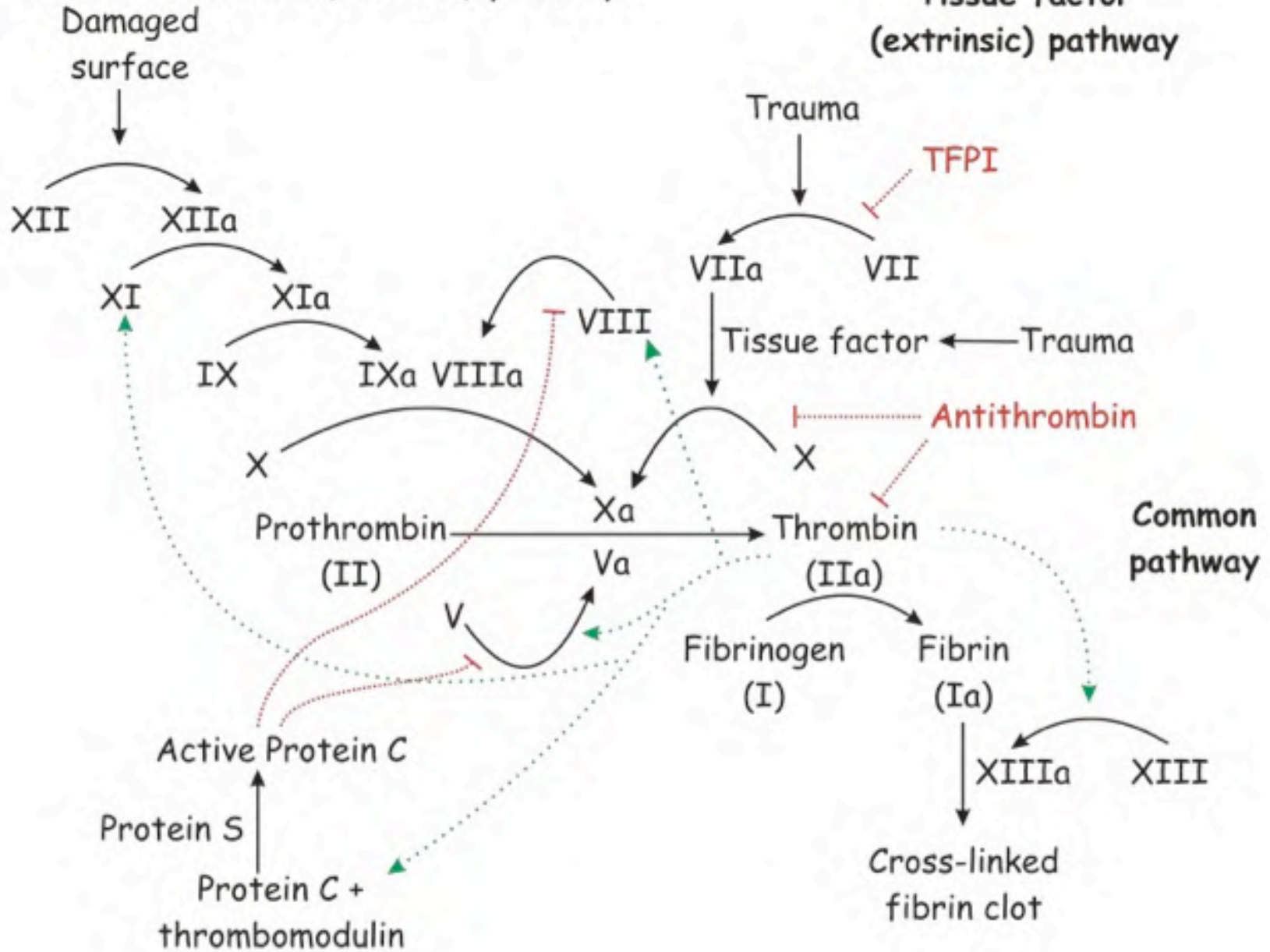
Bone Marrow

Megakaryocytes

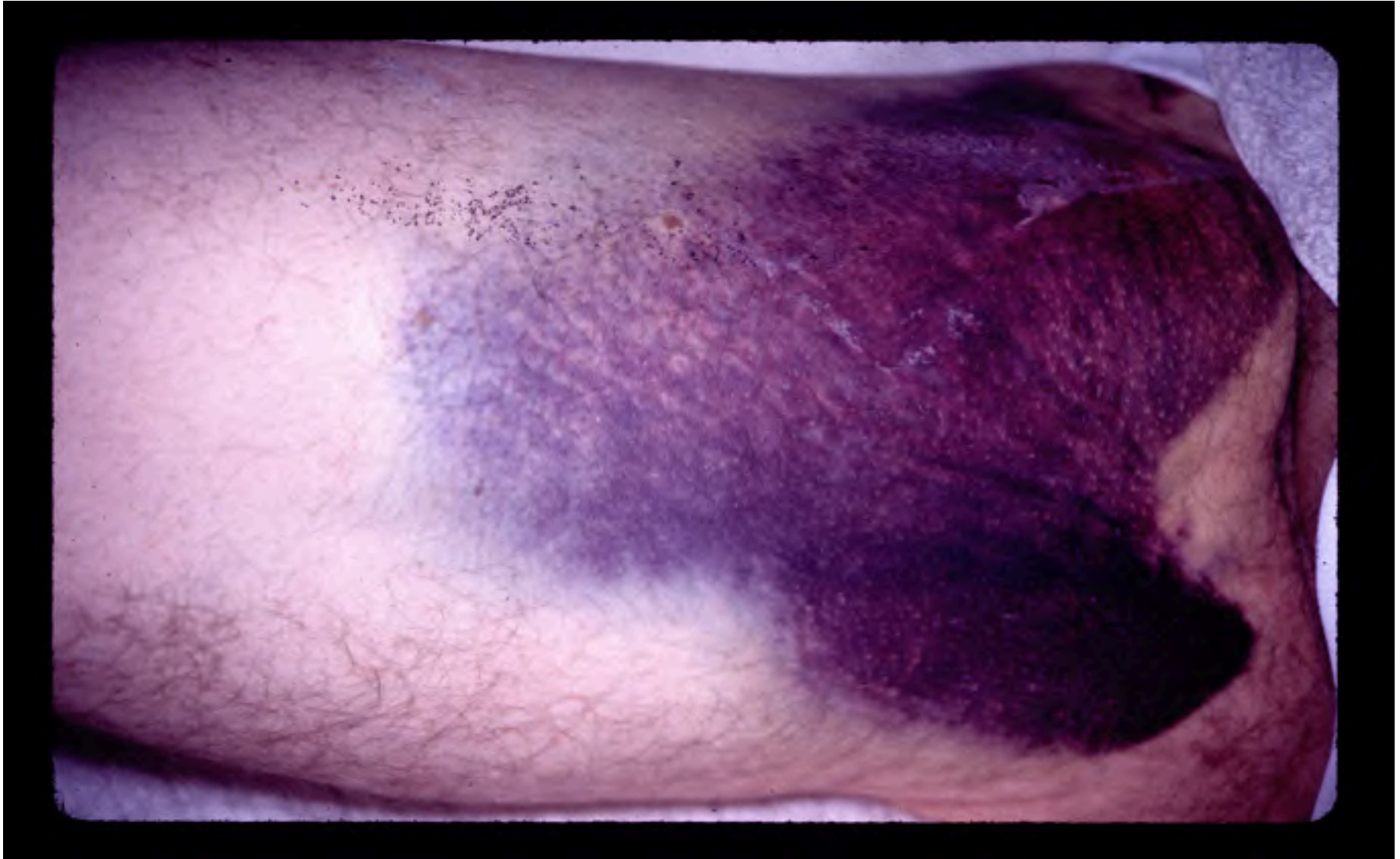


Contact activation (intrinsic) pathway

Tissue factor (extrinsic) pathway



Ecchymosis - Fresh



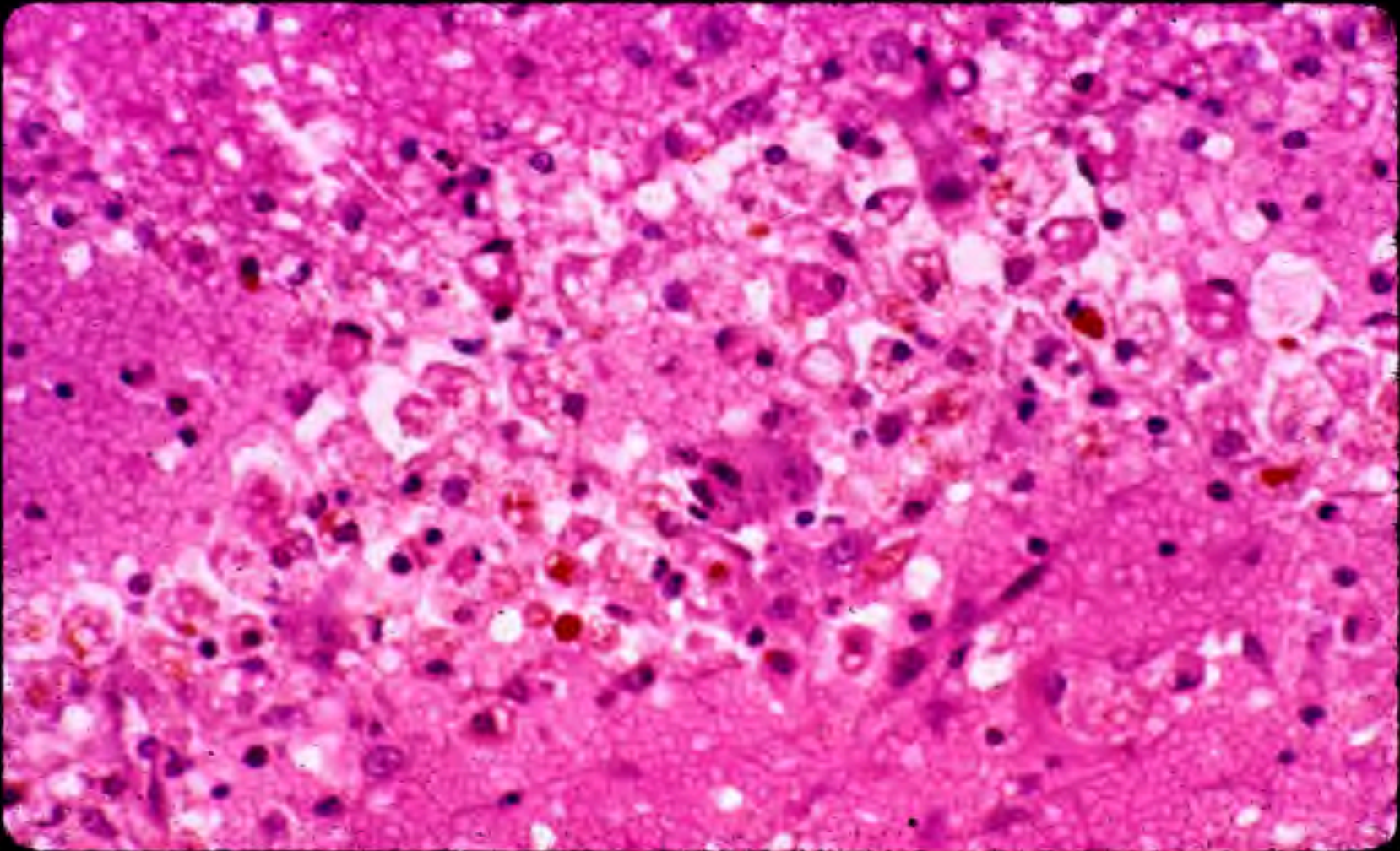
Ecchymosis - Resolving



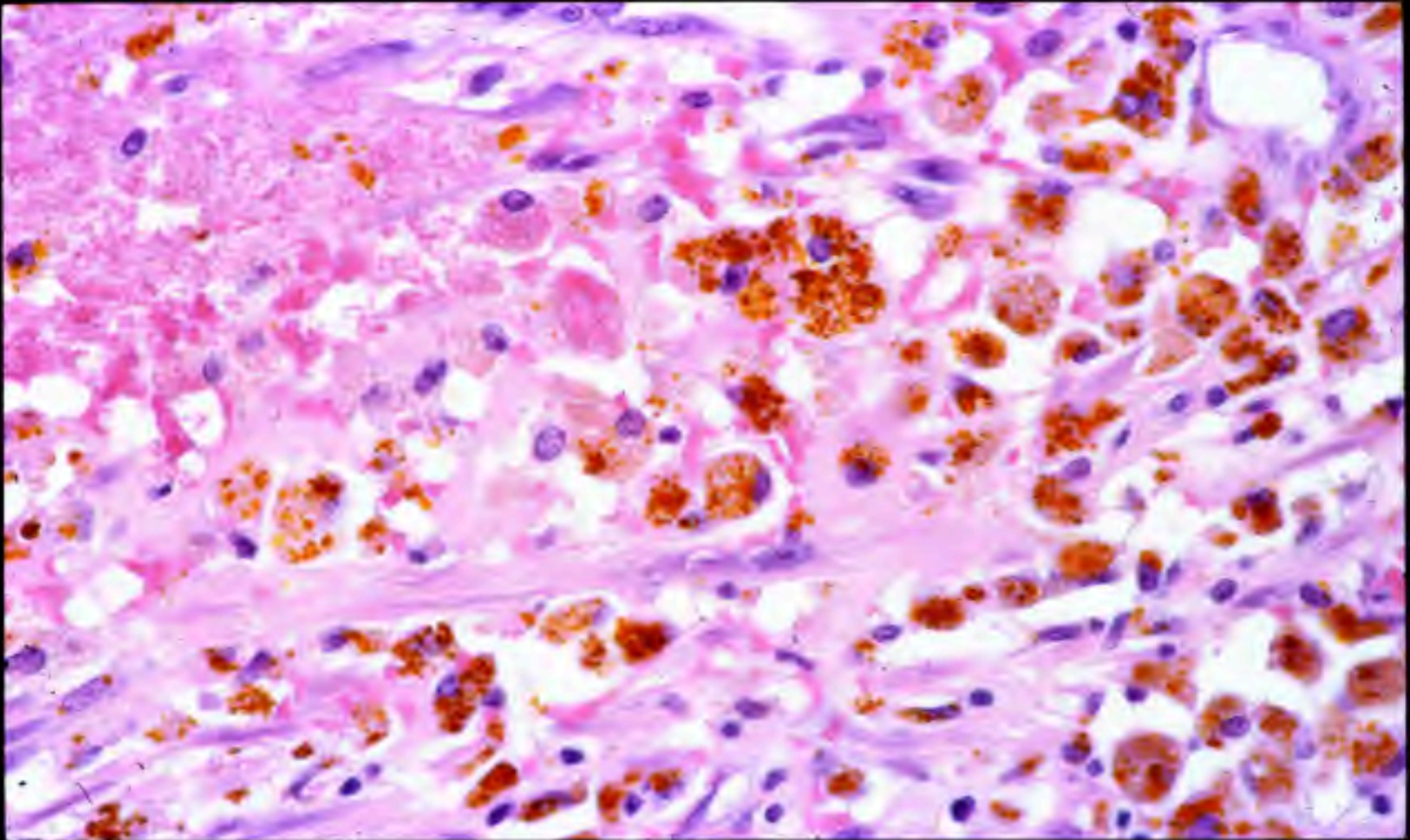
Ecchymosis - Resolving



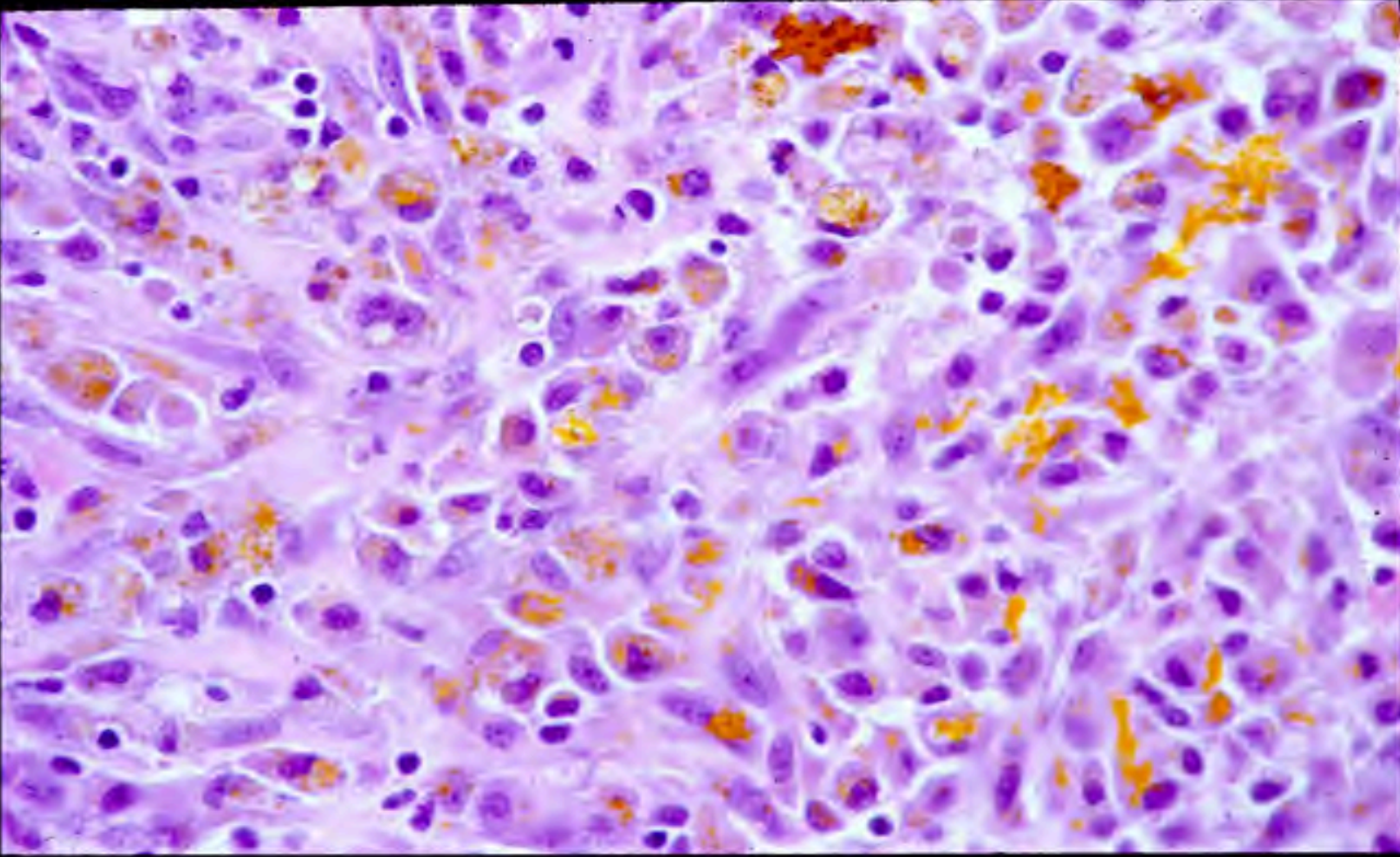
Erythrophagocytosis



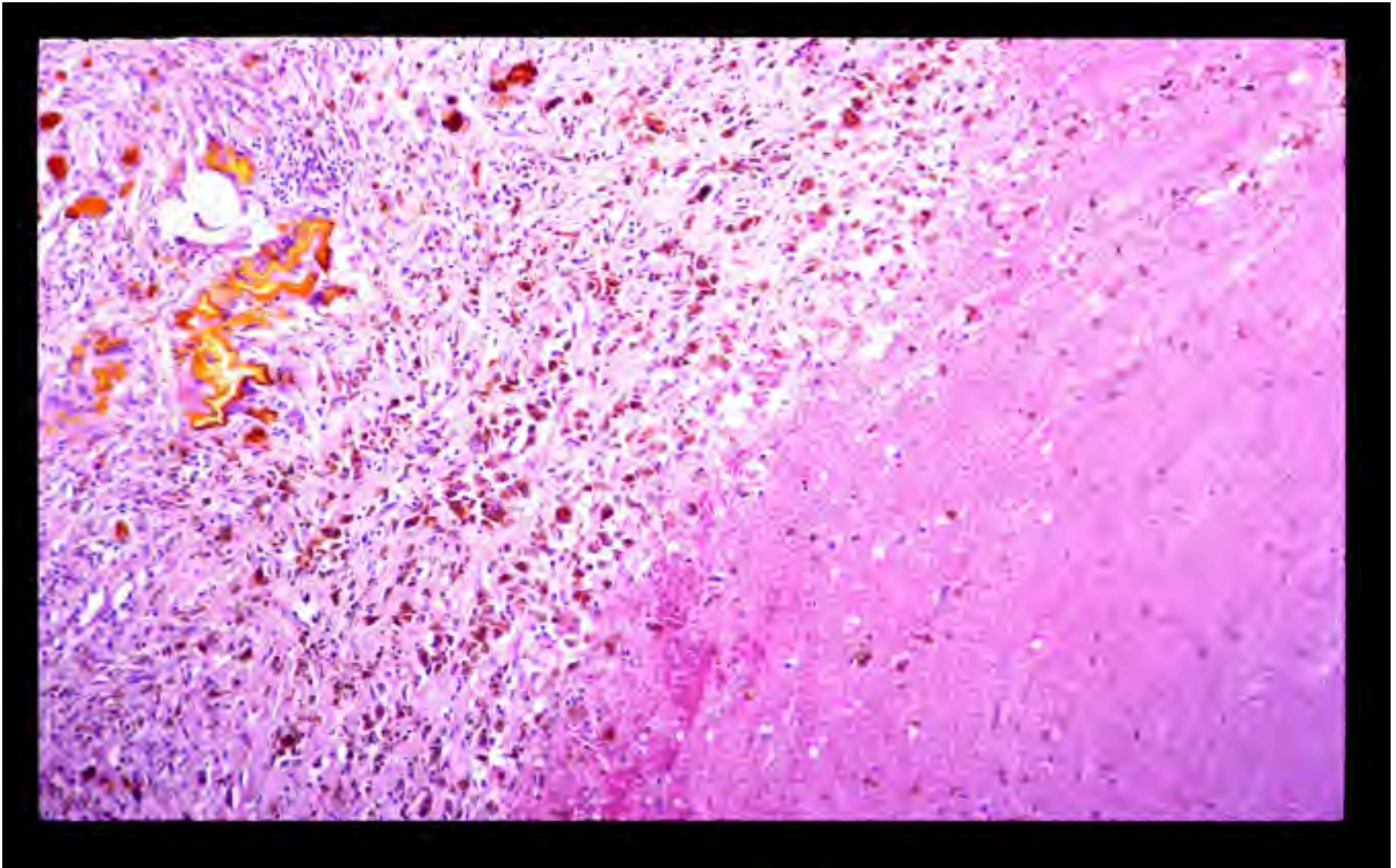
Hemosiderin



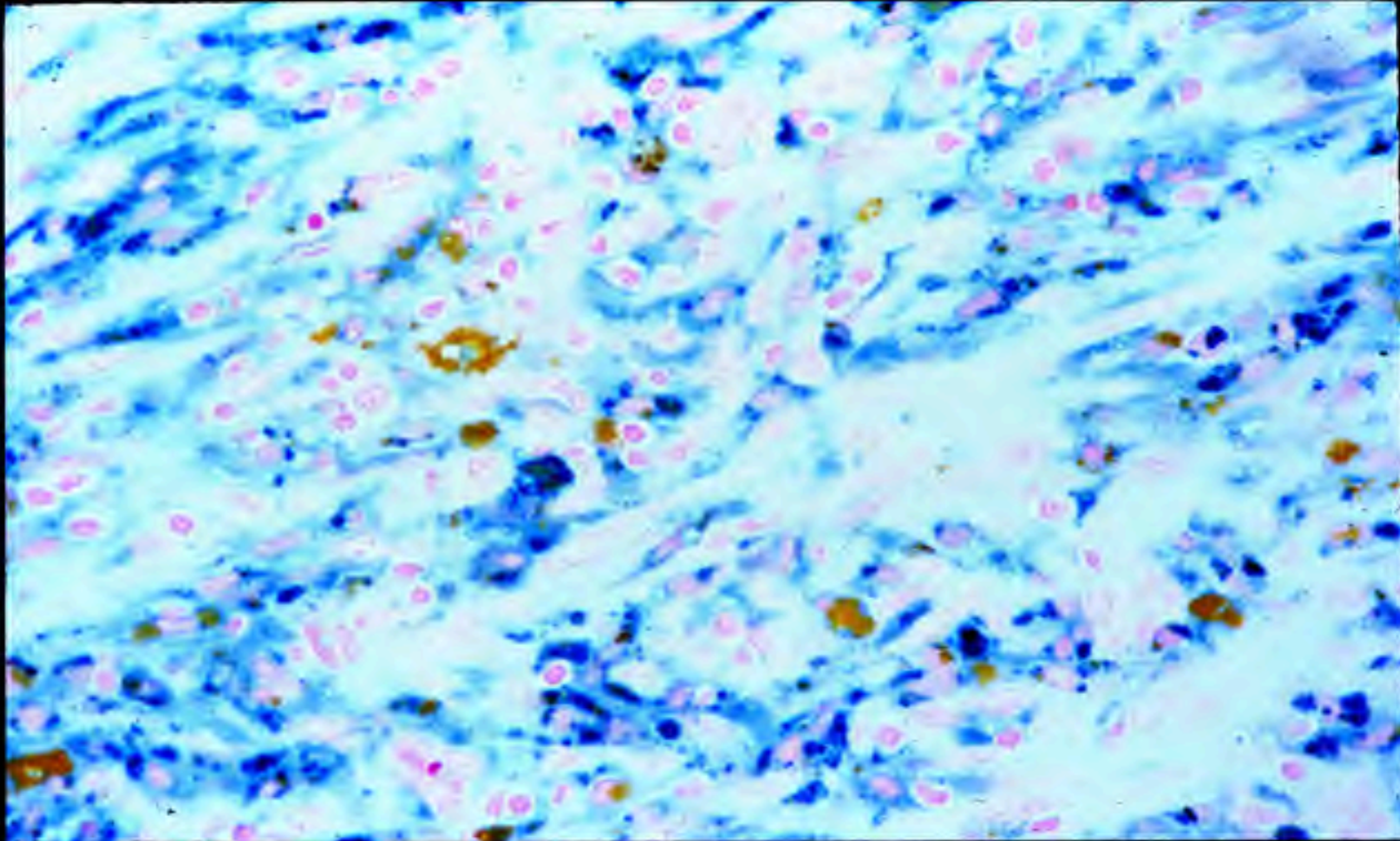
Hematoidin



Hemosiderin & Hematoidin



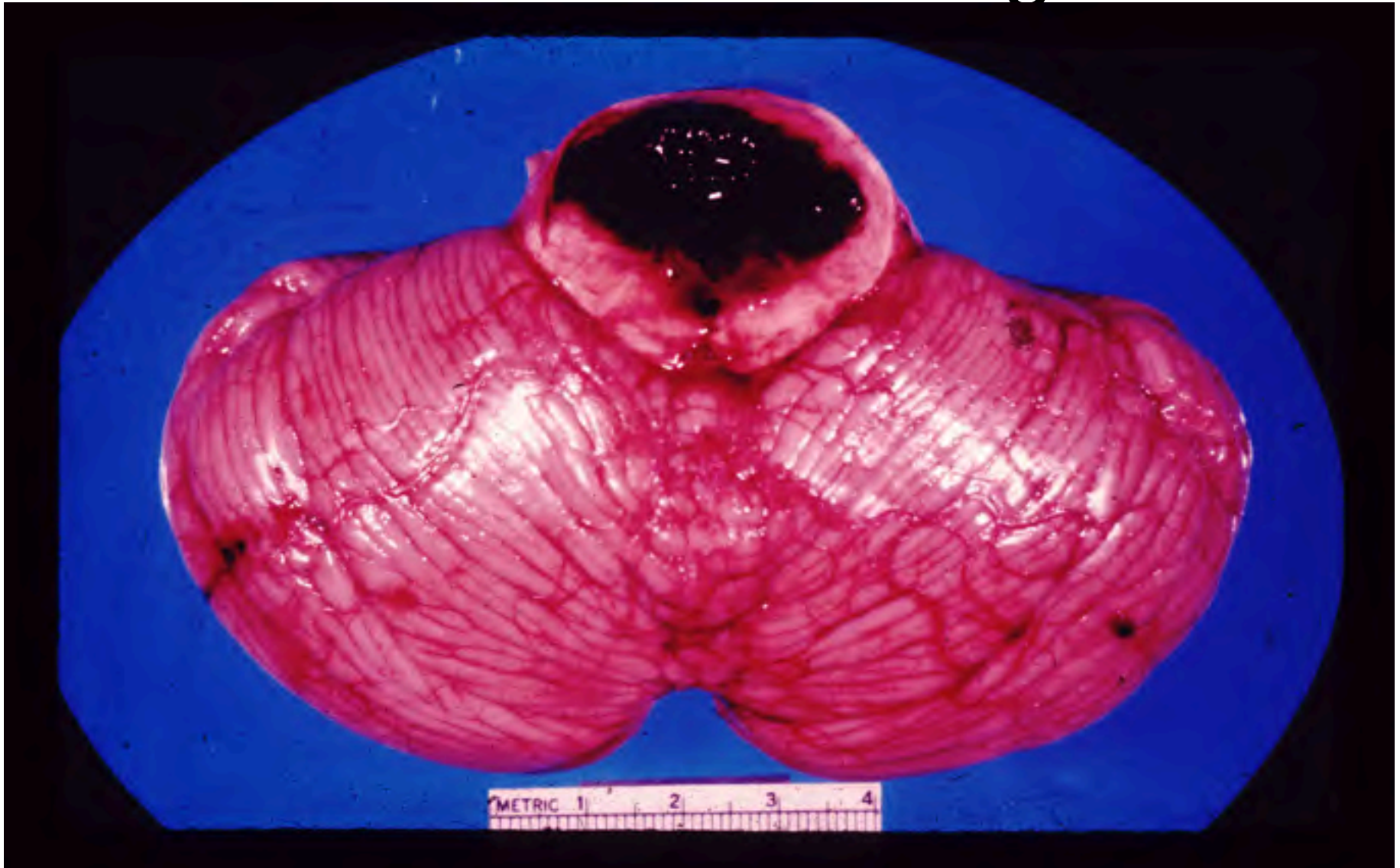
Hemosiderin & Hematoidin Iron Stain



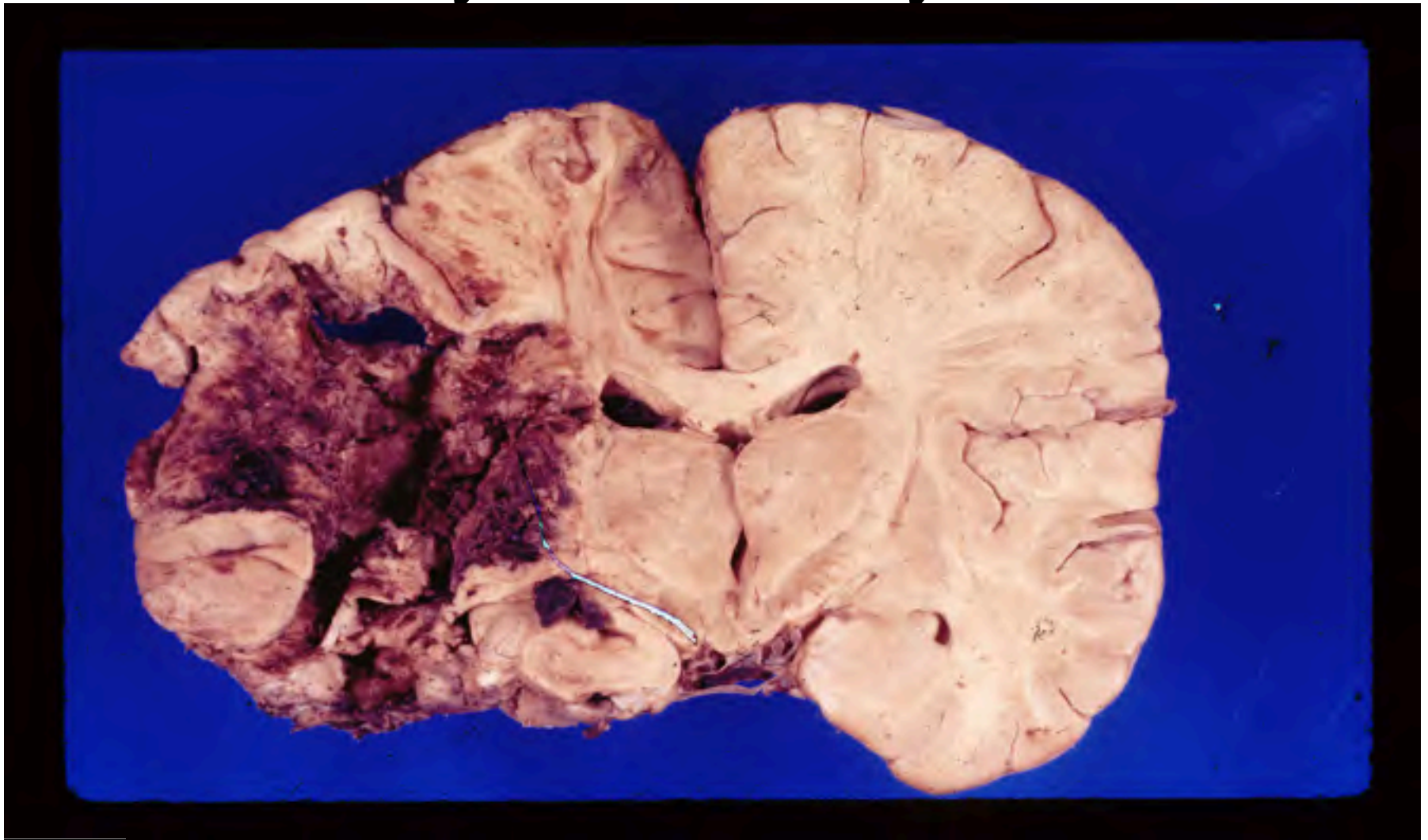
Aspirated Blood



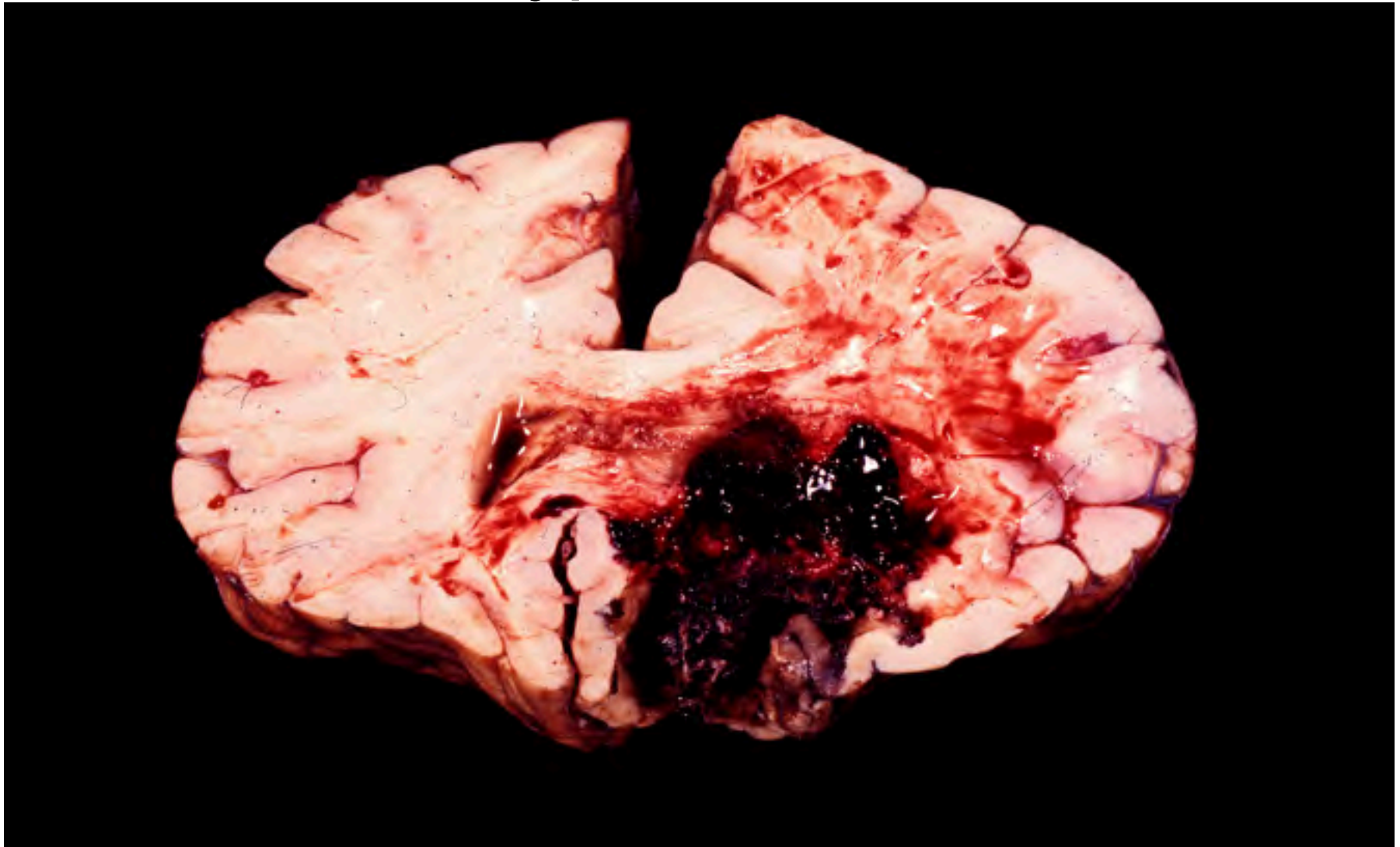
Pontine Hemorrhage



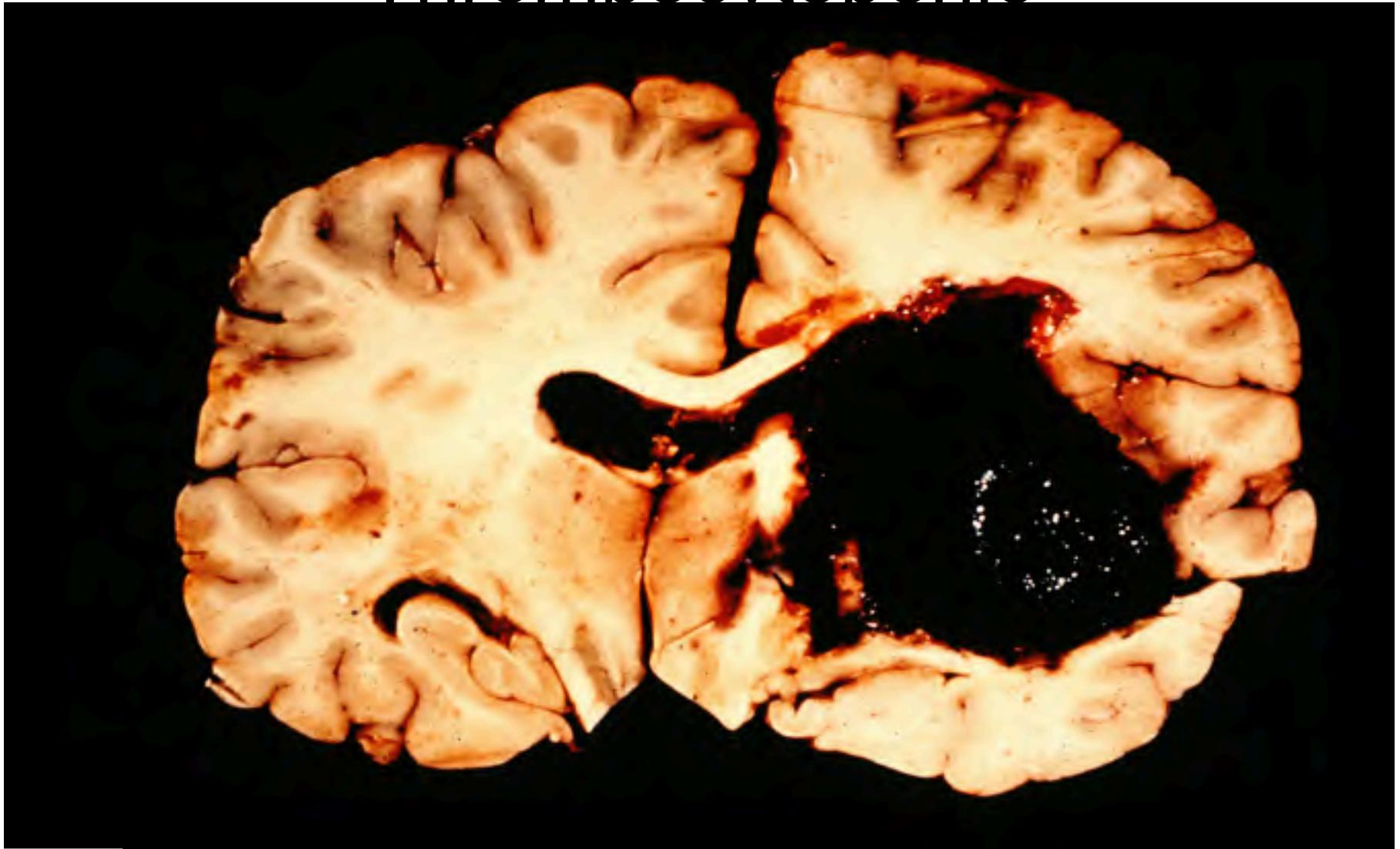
Cerebral Hemorrhage Mycotic Aneurysm



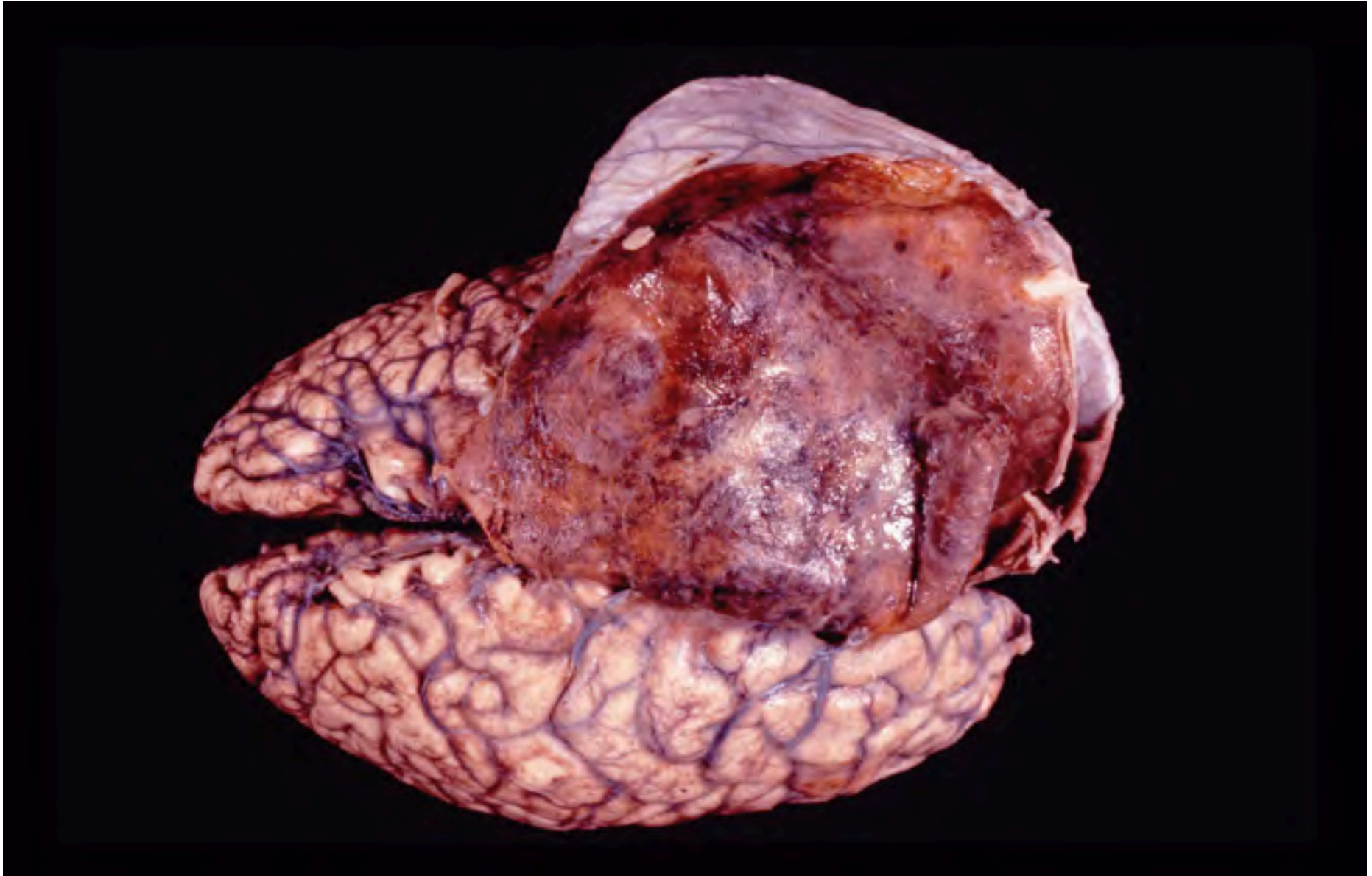
Cerebral Hemorrhage Hypertensive



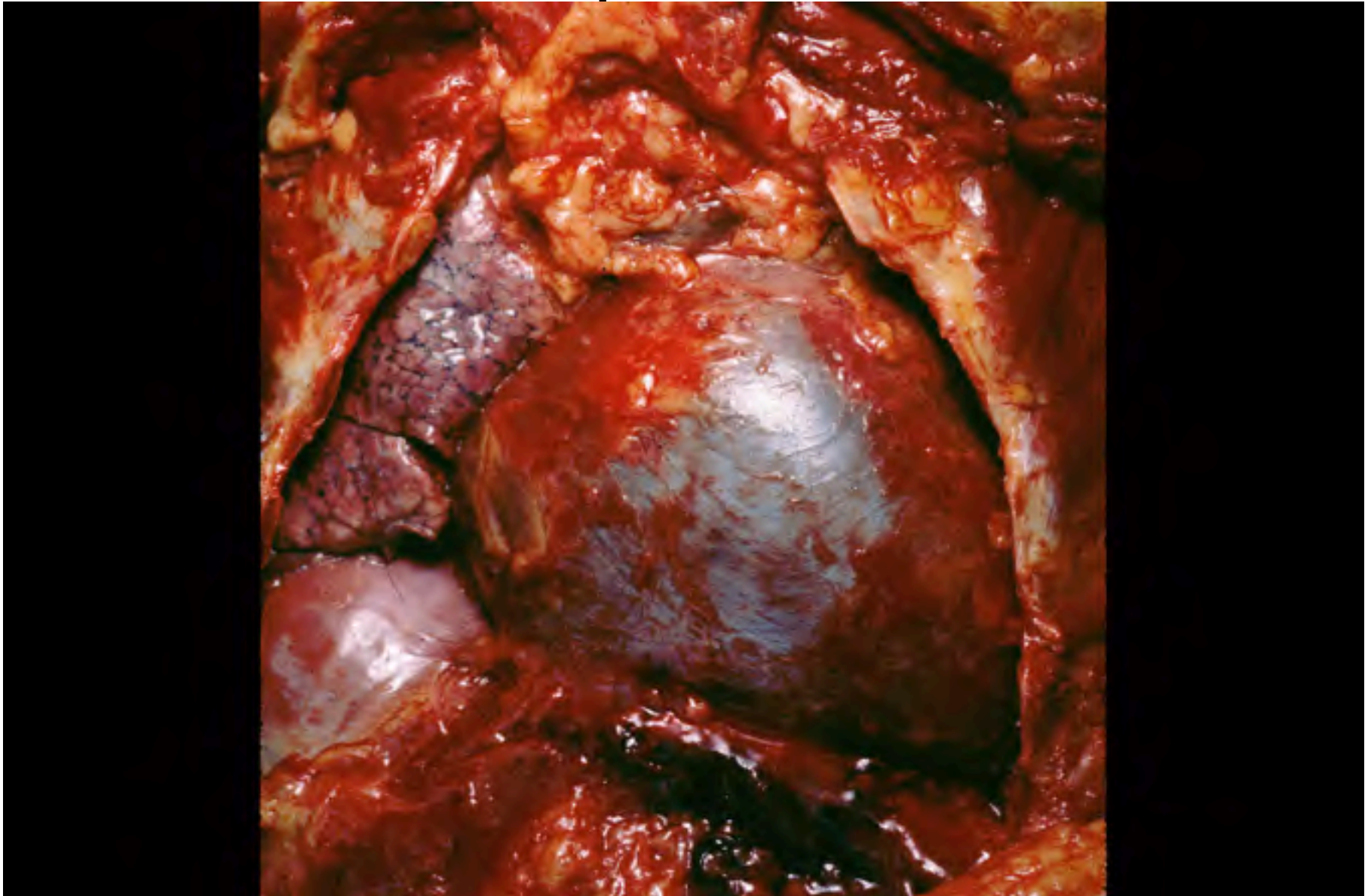
Cerebral Hemorrhage Thrombocytopenic



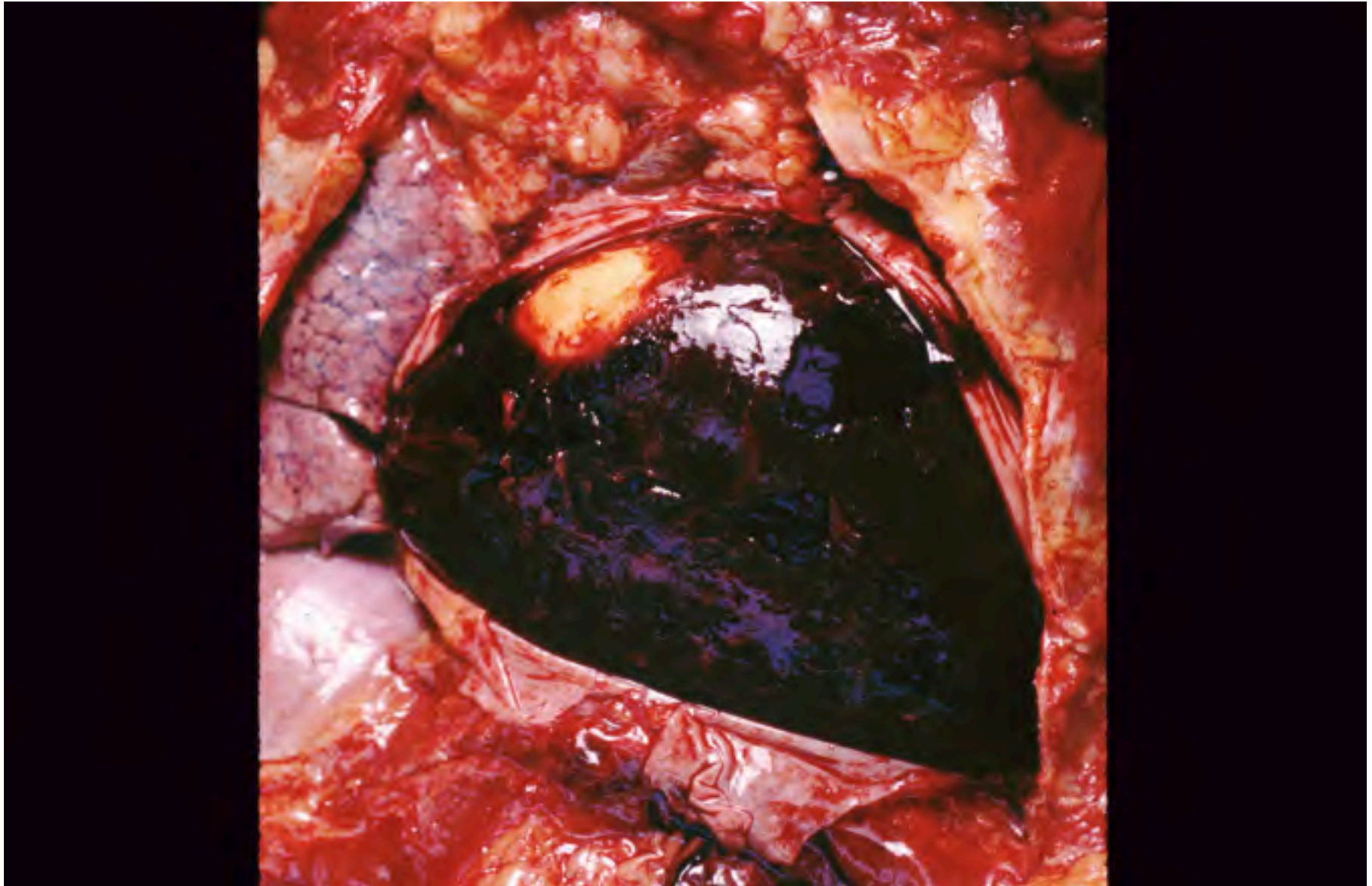
Subdural Hematoma



Hemopericardium



Hemopericardium



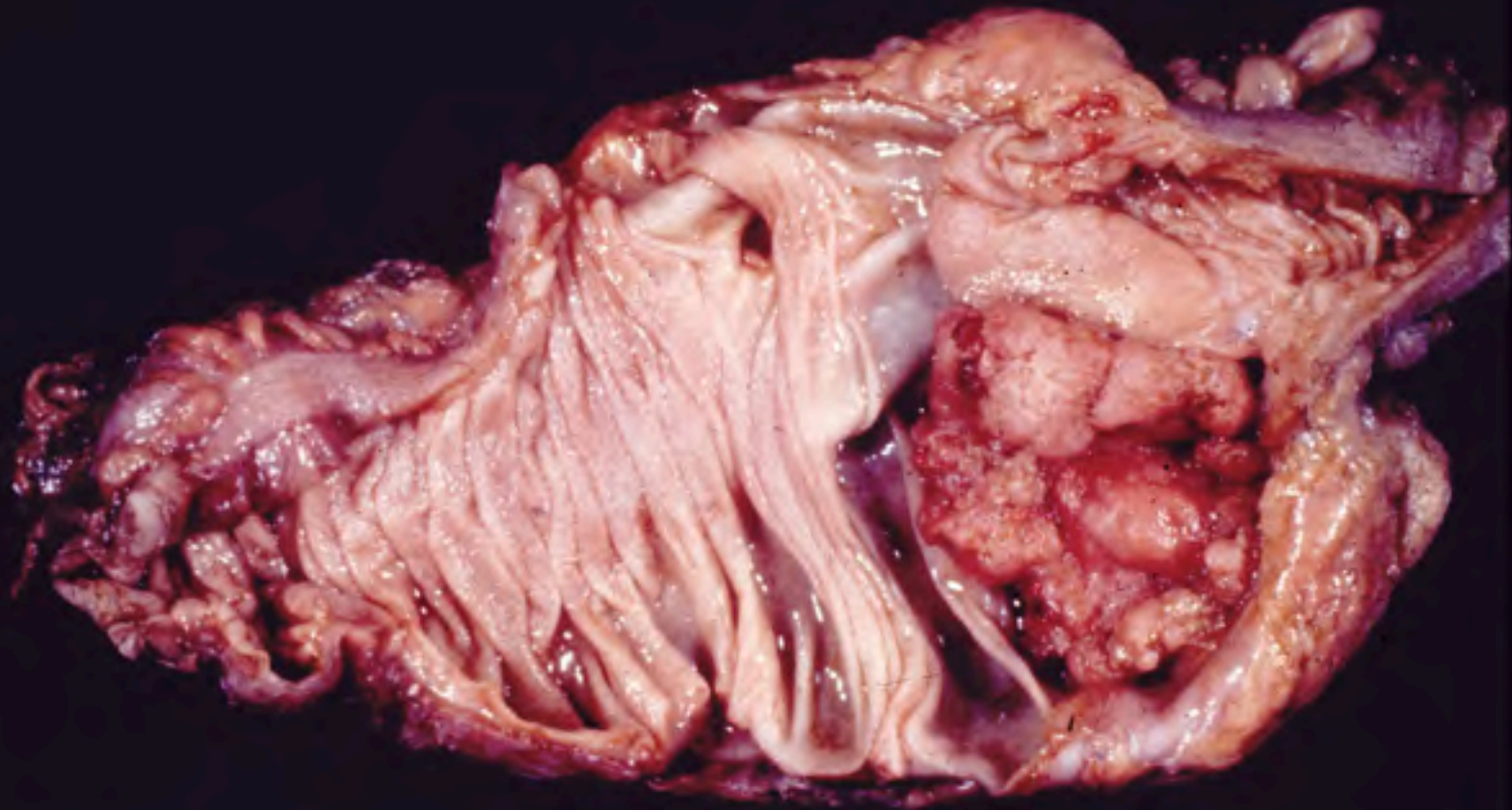
Systemic Effects of Hemorrhage

- Exsanguination
- Shock
- Anemia of Chronic Blood Loss

Liver - Lacerations



Cecal Carcinoma



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Slide 8: Medscape.com

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Slide 12: Department of Pathology, University of Michigan; Department of Pathology, University of Michigan

Slide 13: G.D. Abrams, University of Michigan Medical School

Slide 14: JoeD, wikimedia

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