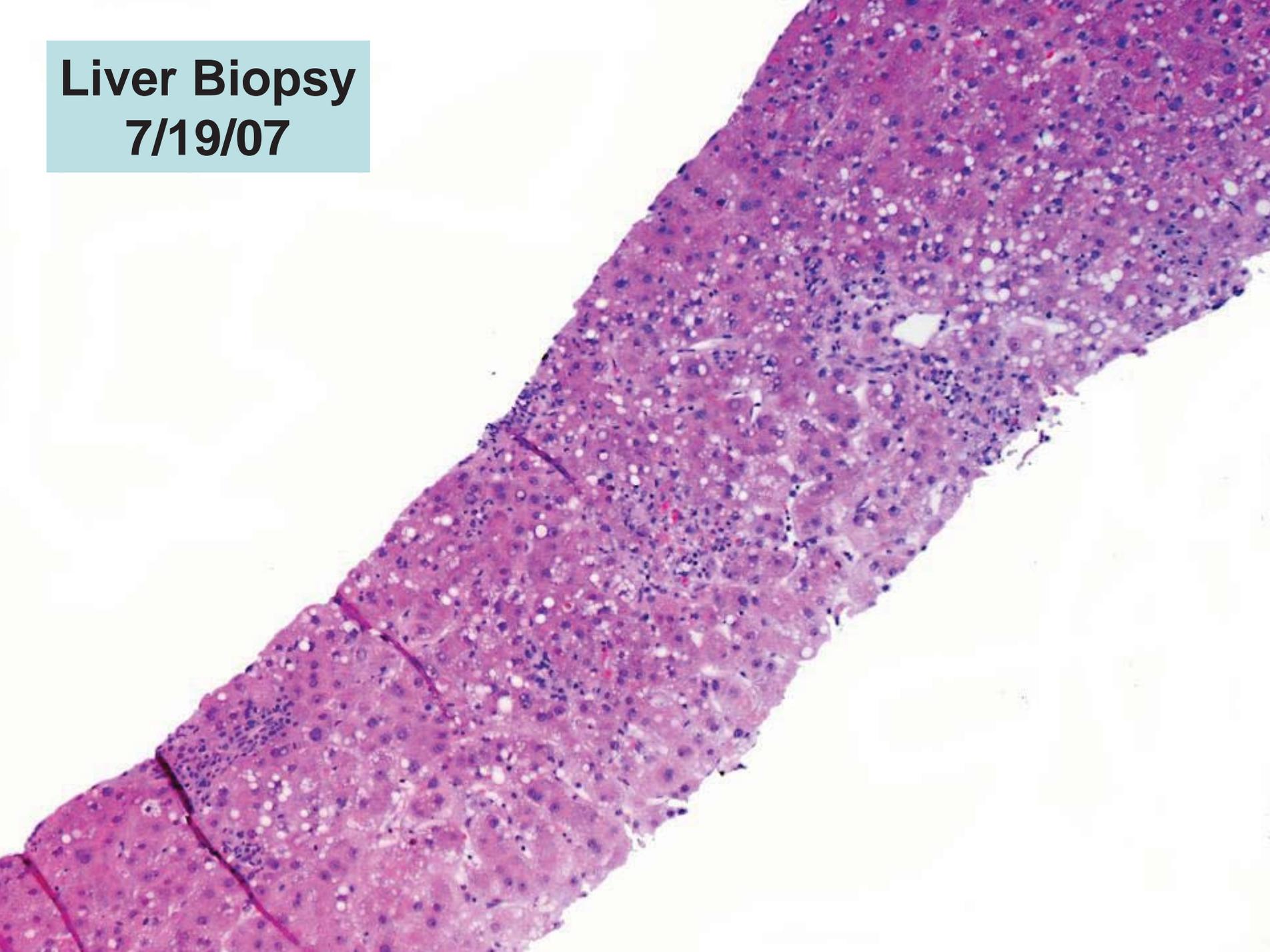
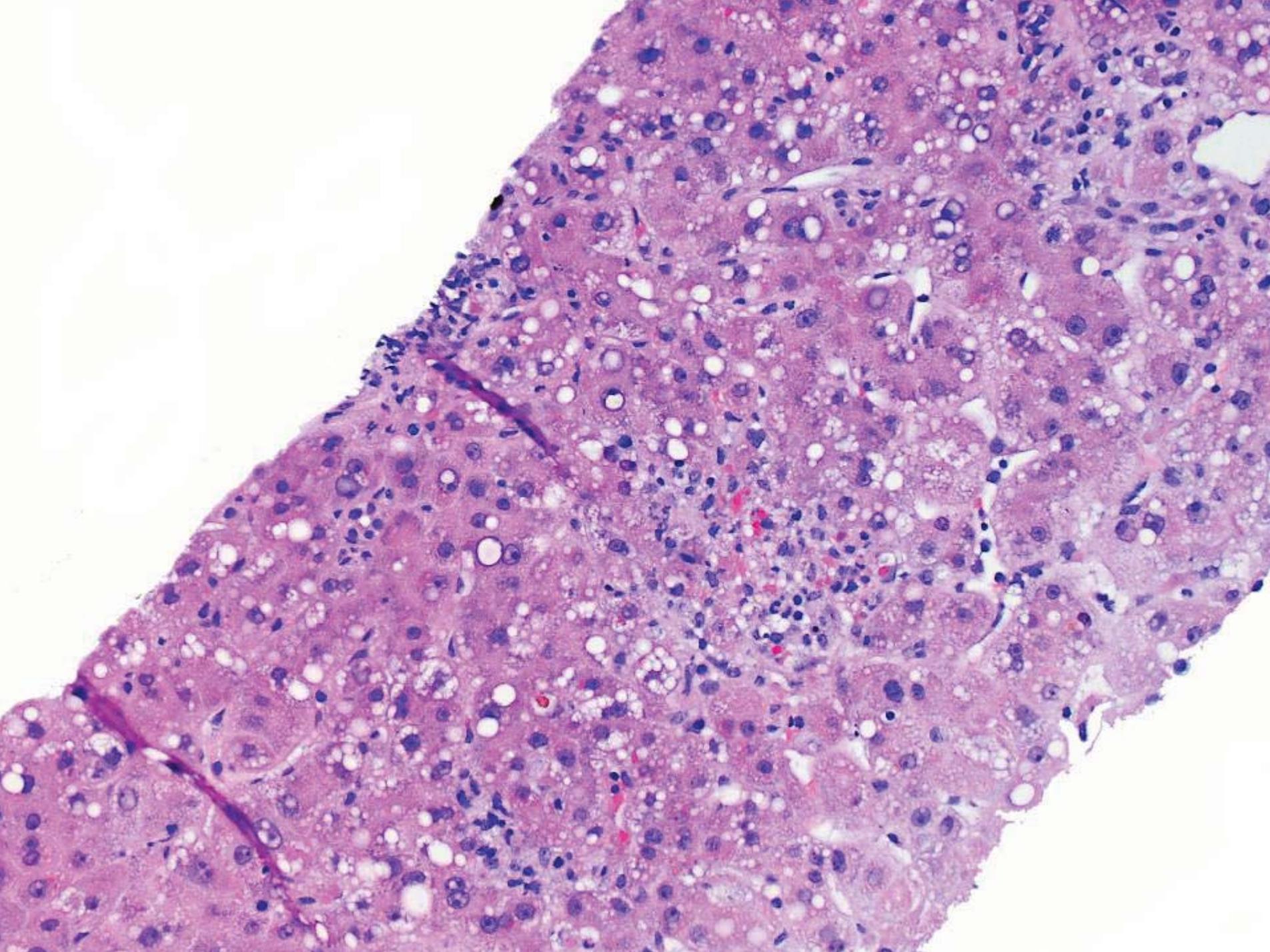


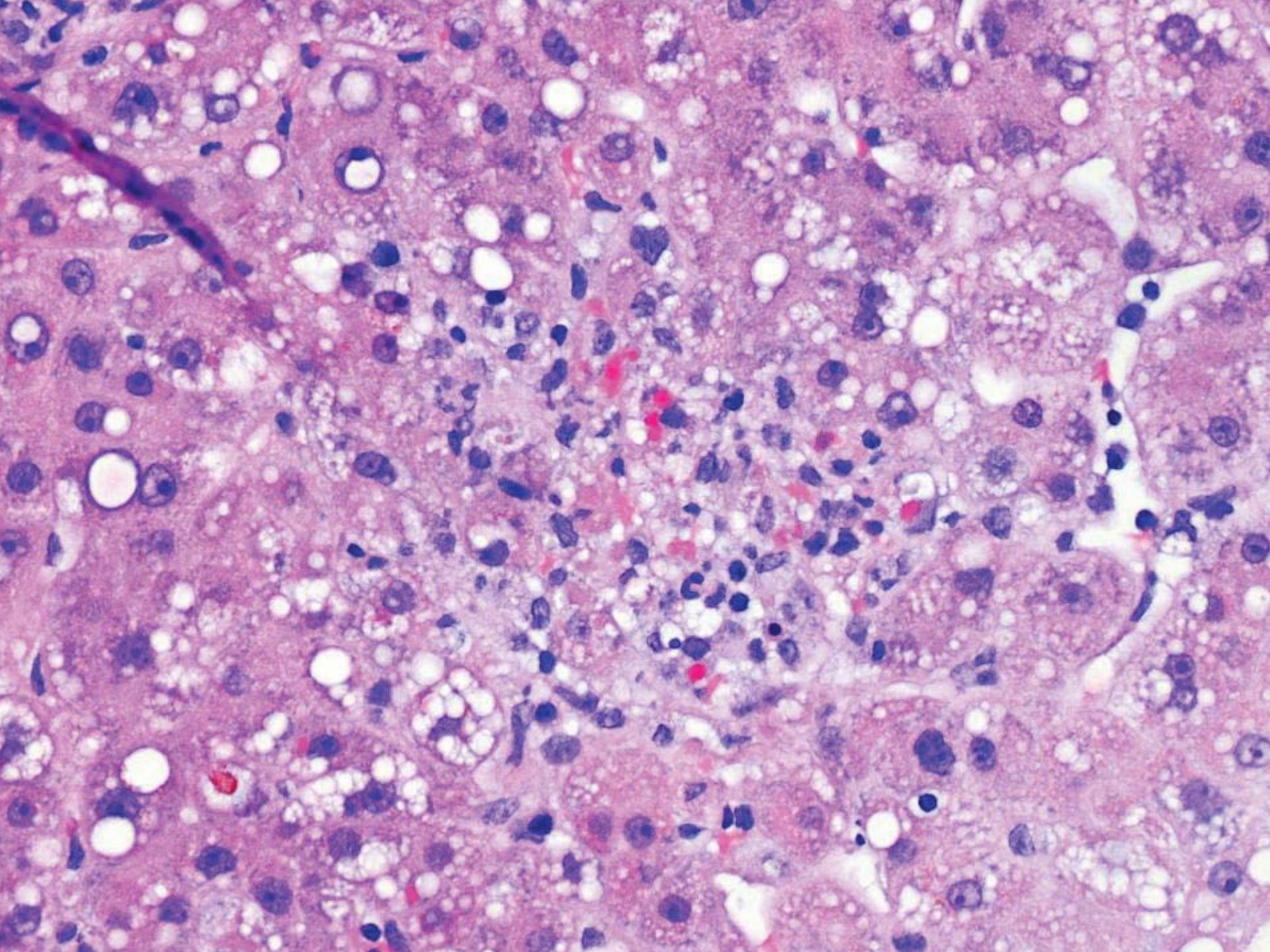
Pathology Findings

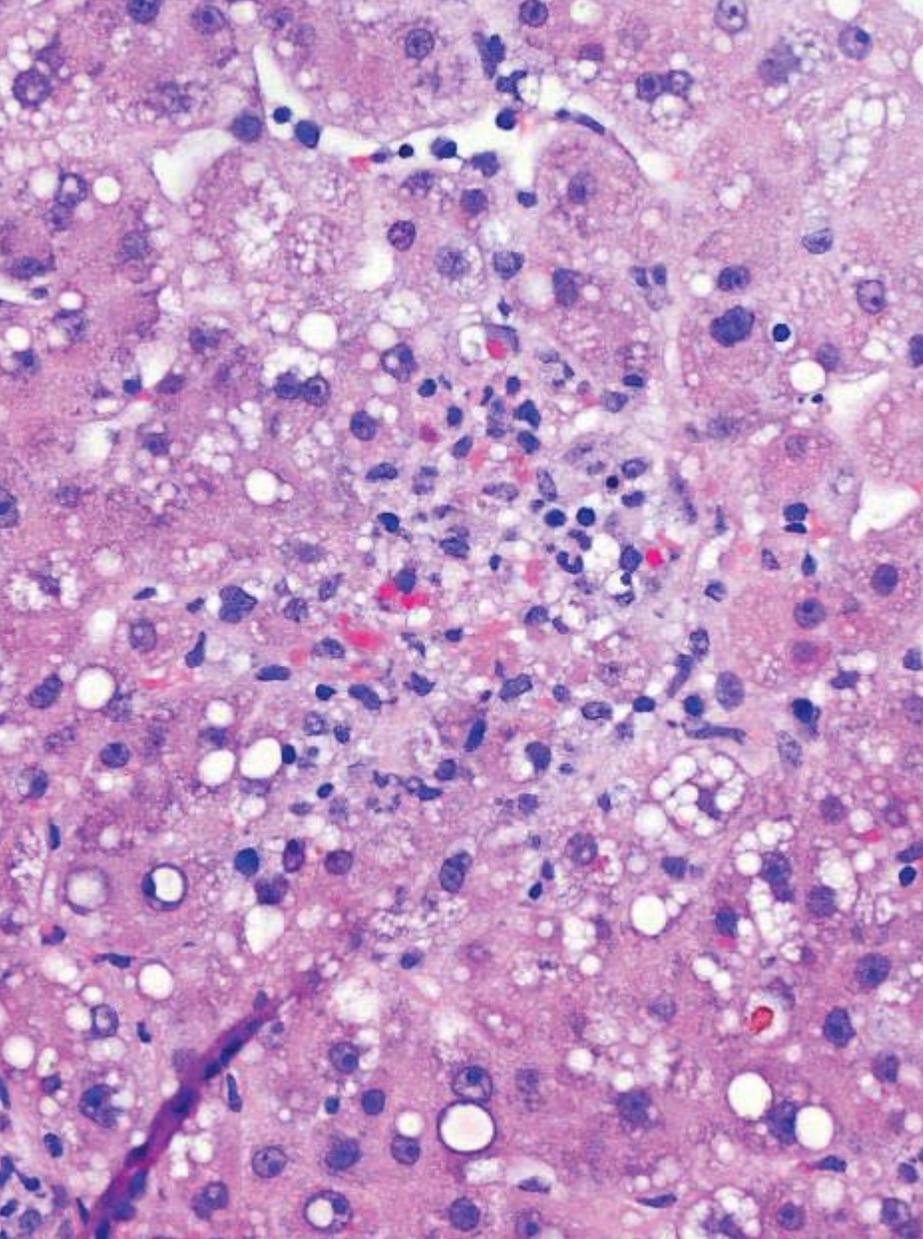
- Ante-mortem liver biopsy
- Autopsy results:
 - Liver findings
 - Disseminated Histoplasmosis
 - Retroperitoneal hemorrhage
 - Rheumatoid arthritis
 - Additional findings:
 - Lymph nodes and bone marrow
 - Lungs
 - HSV infection

Liver Biopsy
7/19/07

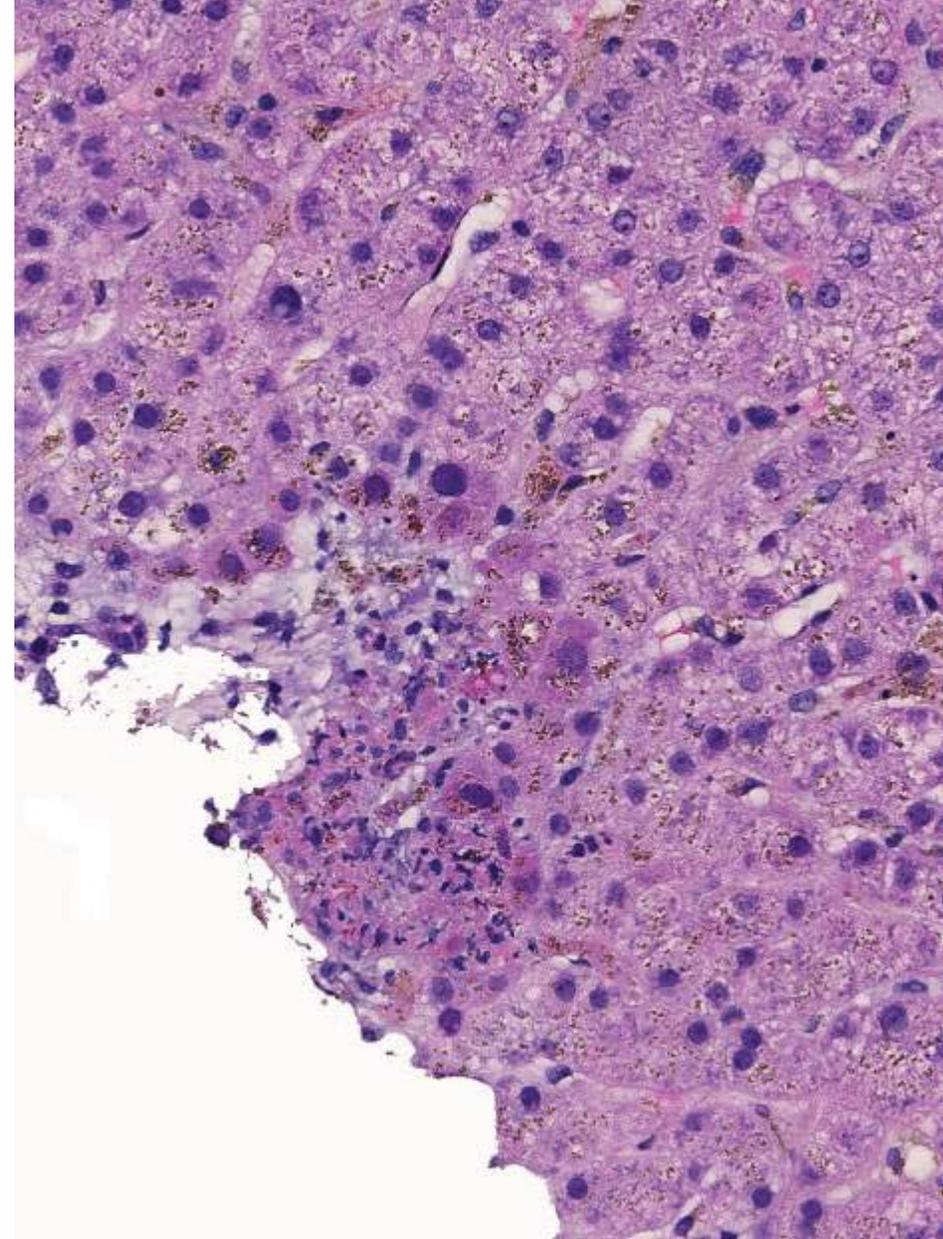




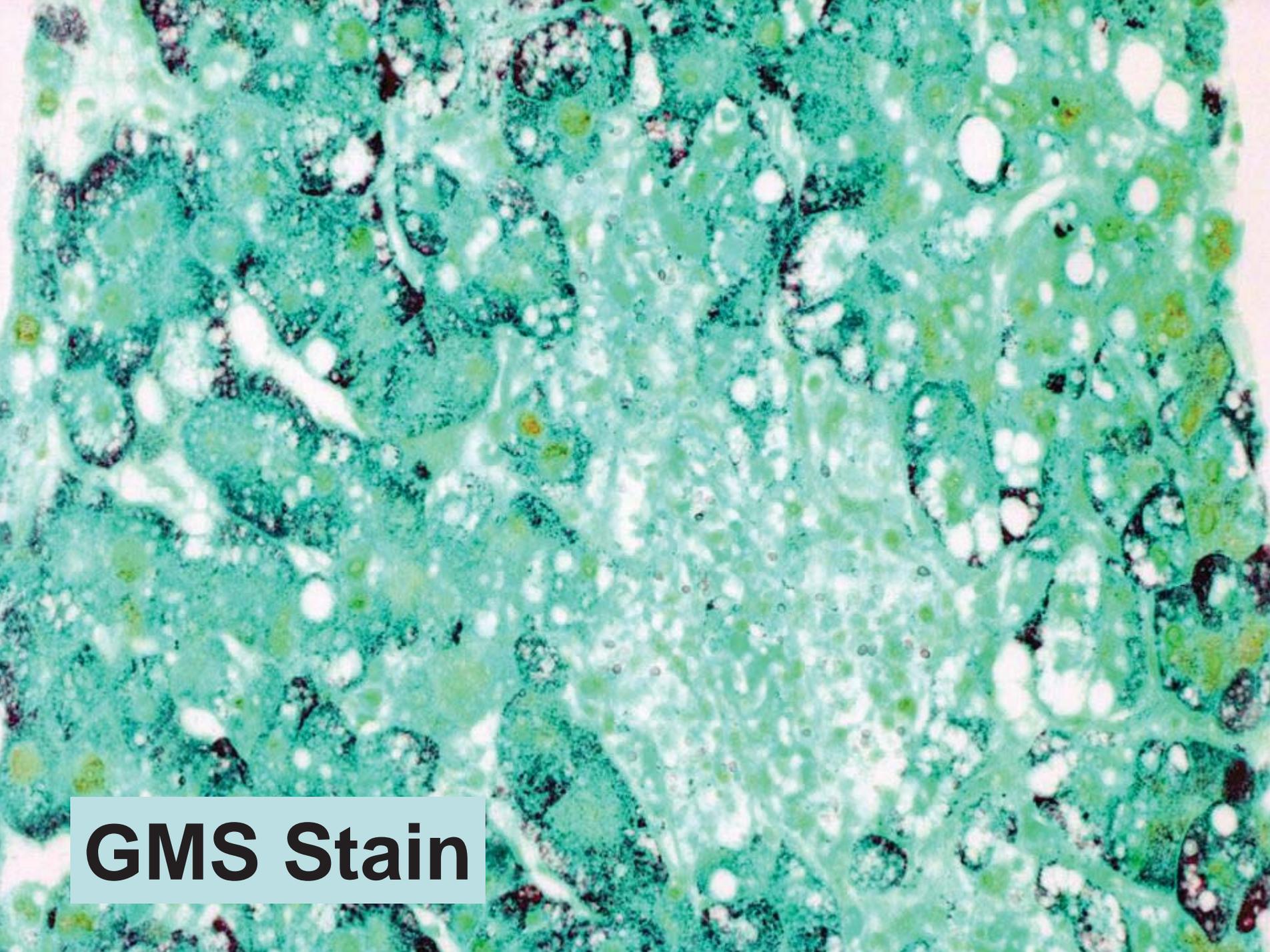




Patient



**32 y.o. s/p BMT with
Adenovirus hepatitis**



GMS Stain

Ante-Mortem Liver Biopsy

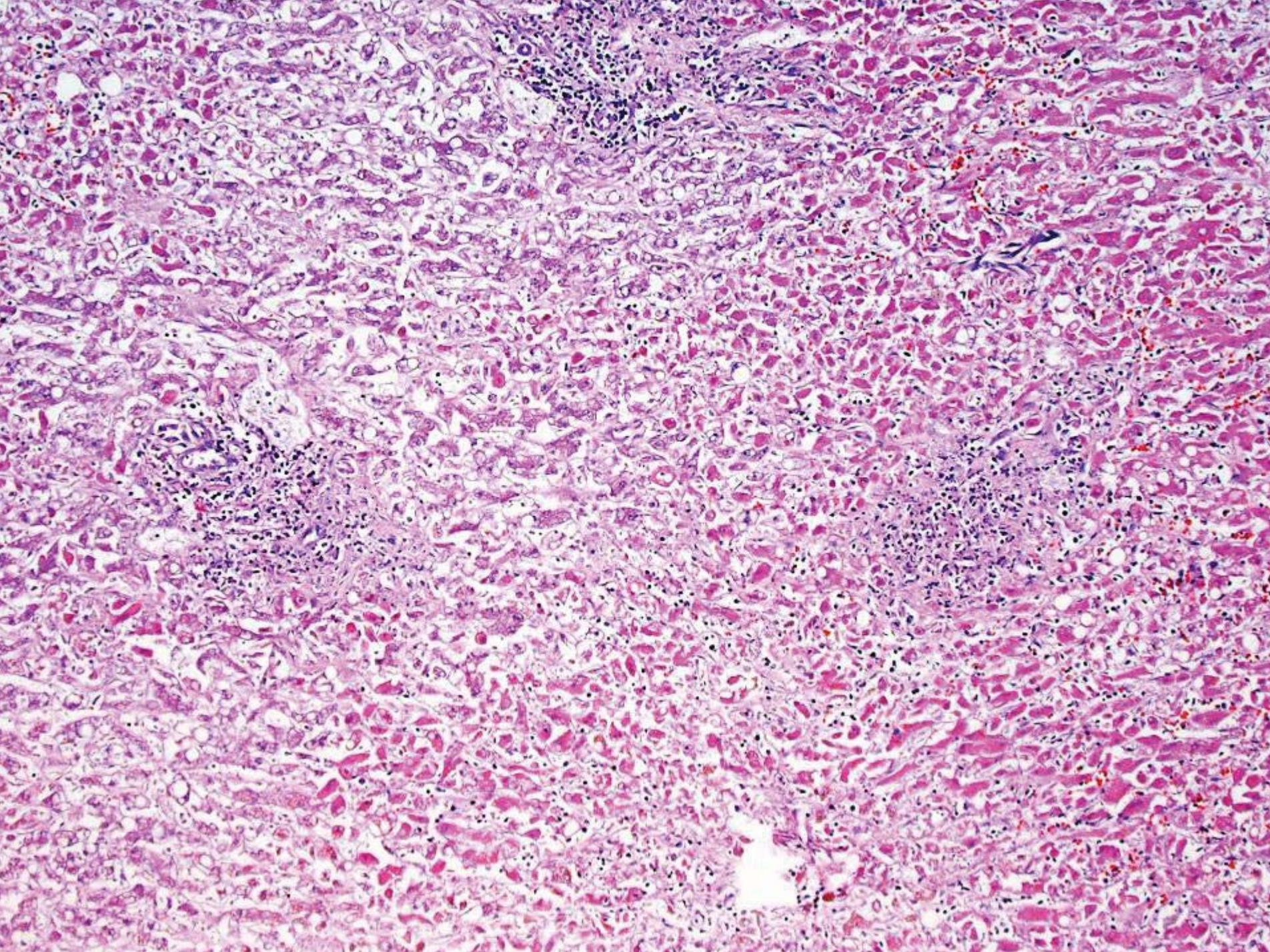
- Immunostains:
 - HSV – negative
 - Adenovirus – negative
- GMS stain – Histoplasma
- Electron microscopy:
 - No viral particles identified
 - Histoplasma present

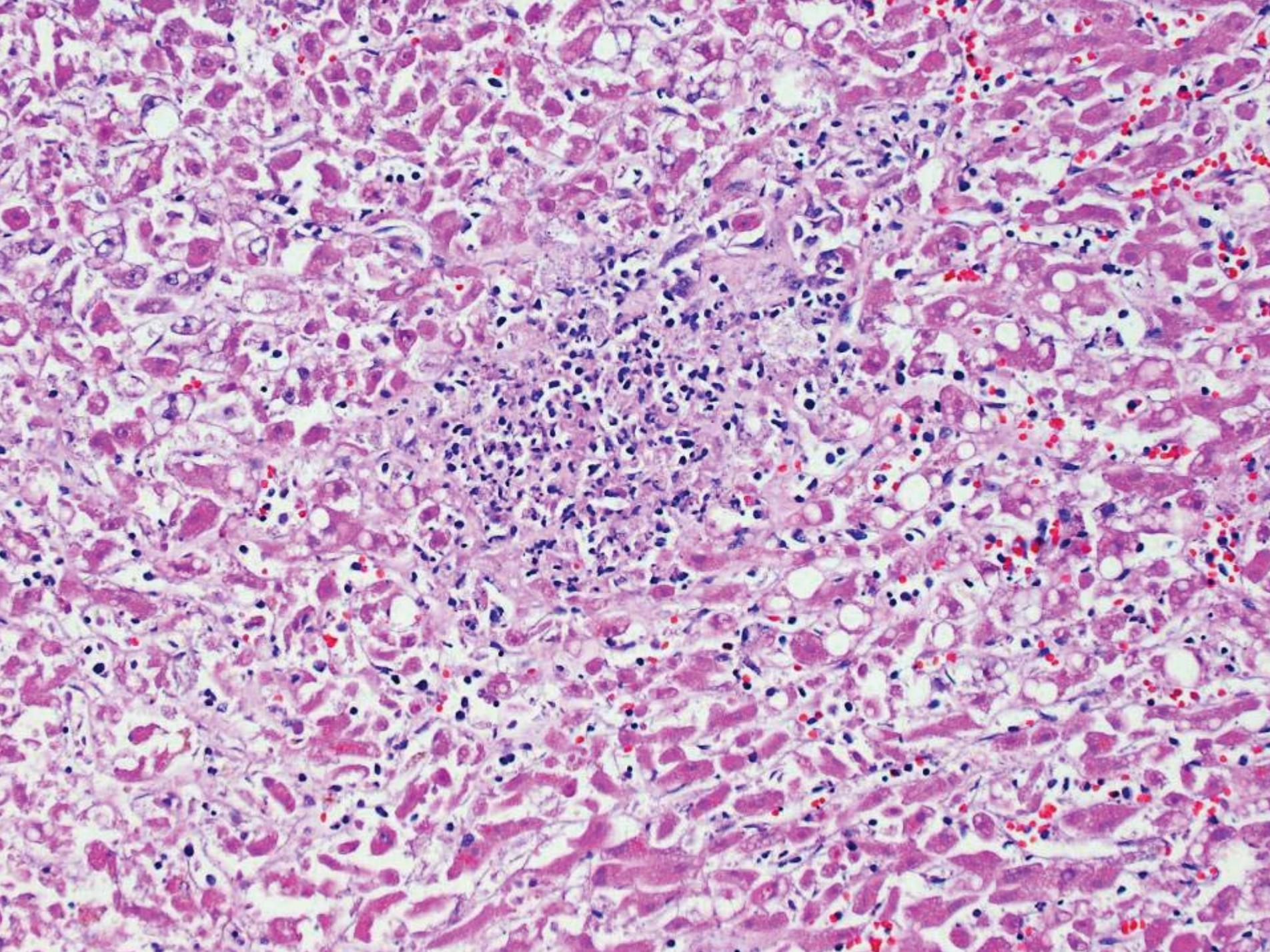
Pathology Findings

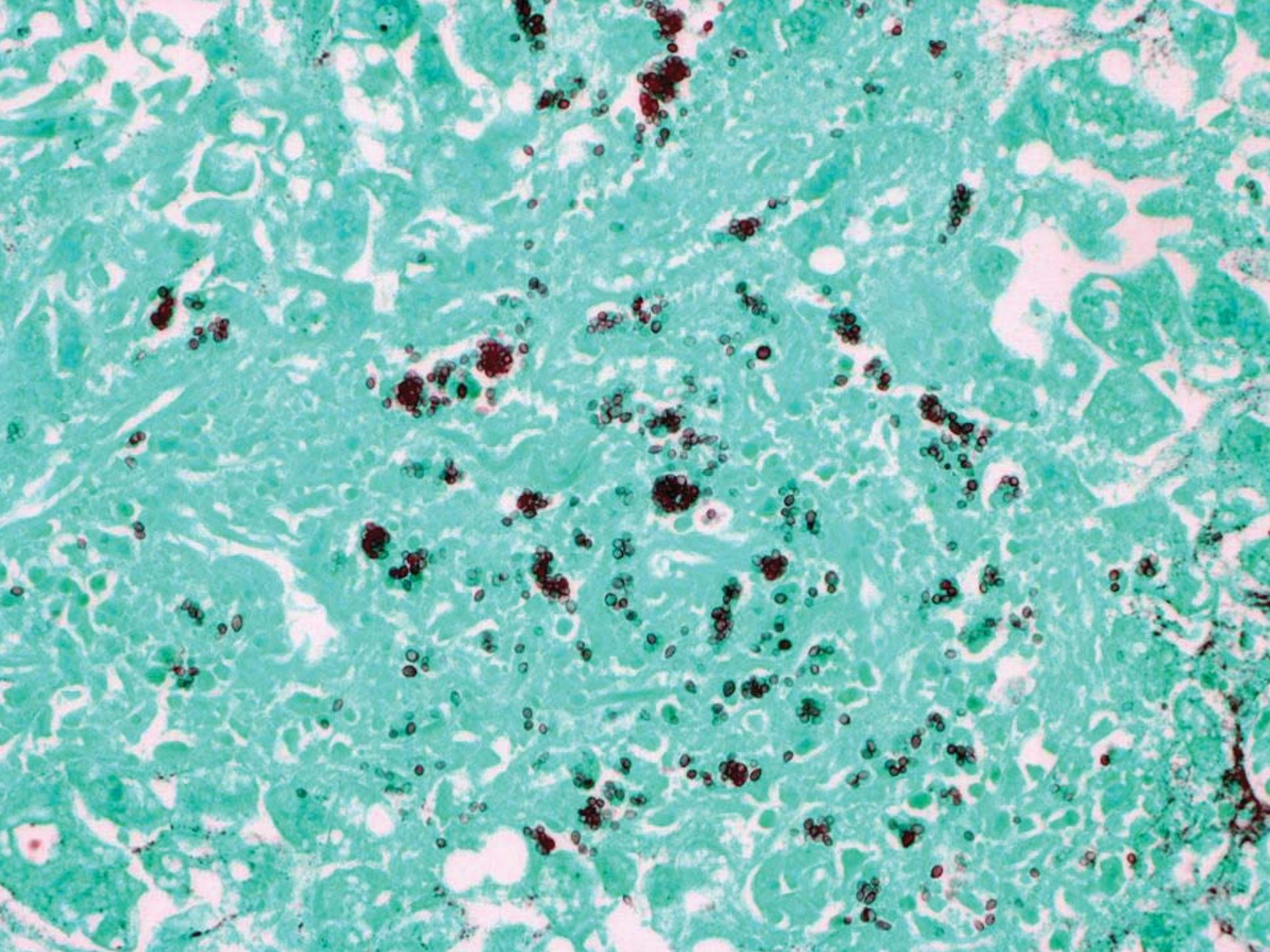
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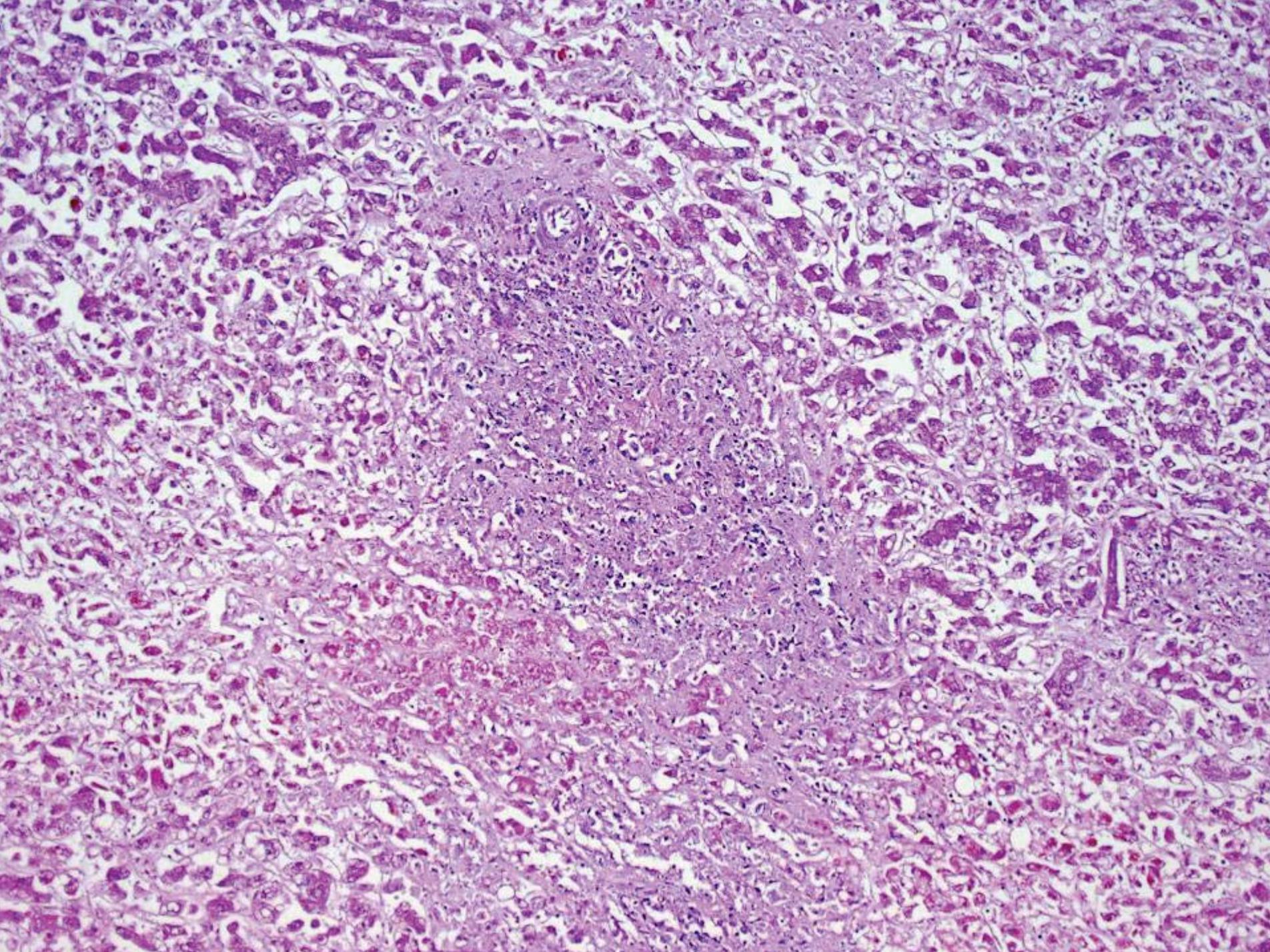
Liver

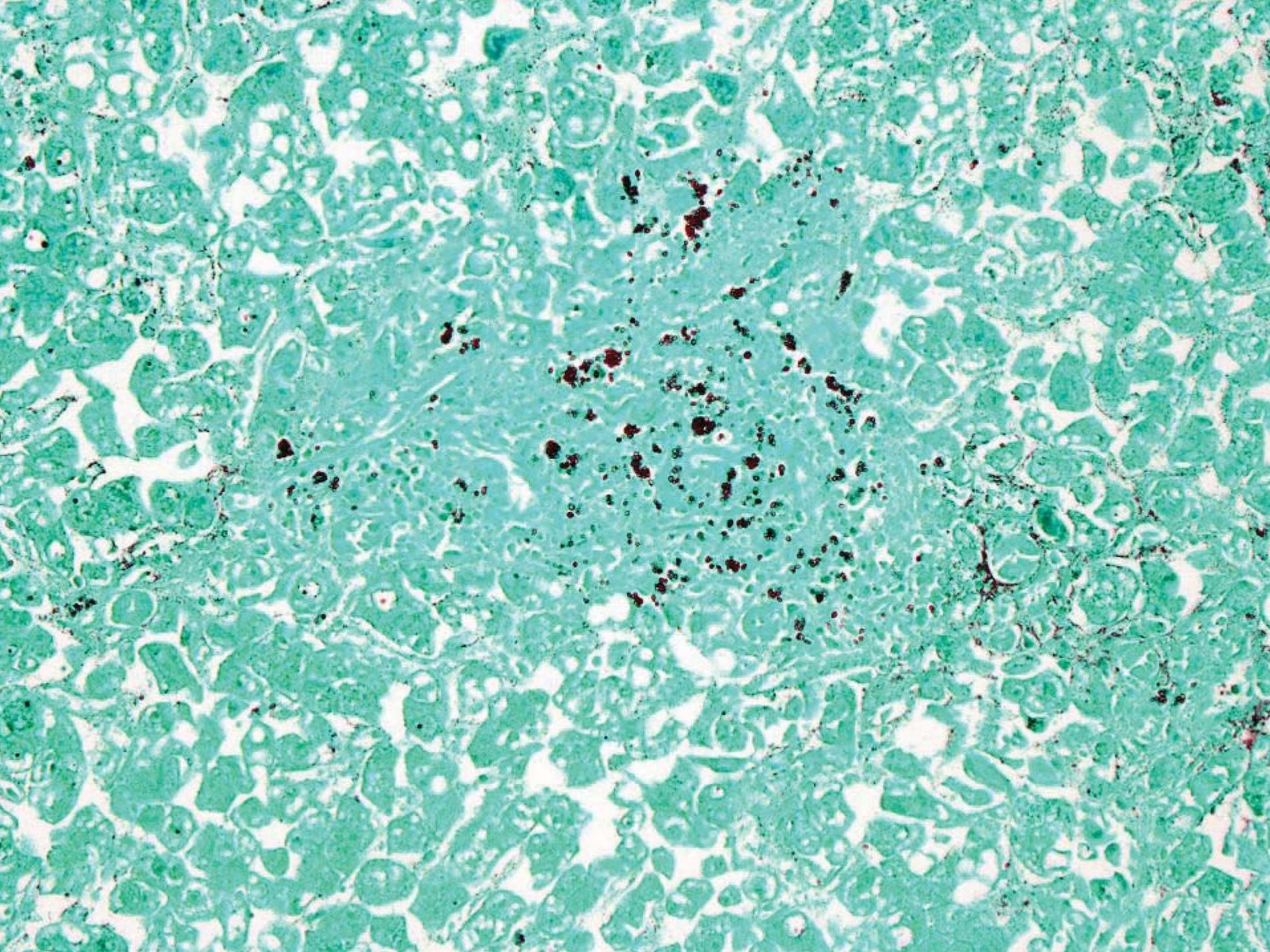
- Weight = 1698 g
- Mild macrovesicular steatosis
- Random foci of hepatocyte necrosis
- GMS stain confirms the presence of Histoplasma yeast forms in necrotic foci
- No evidence of underlying chronic liver disease

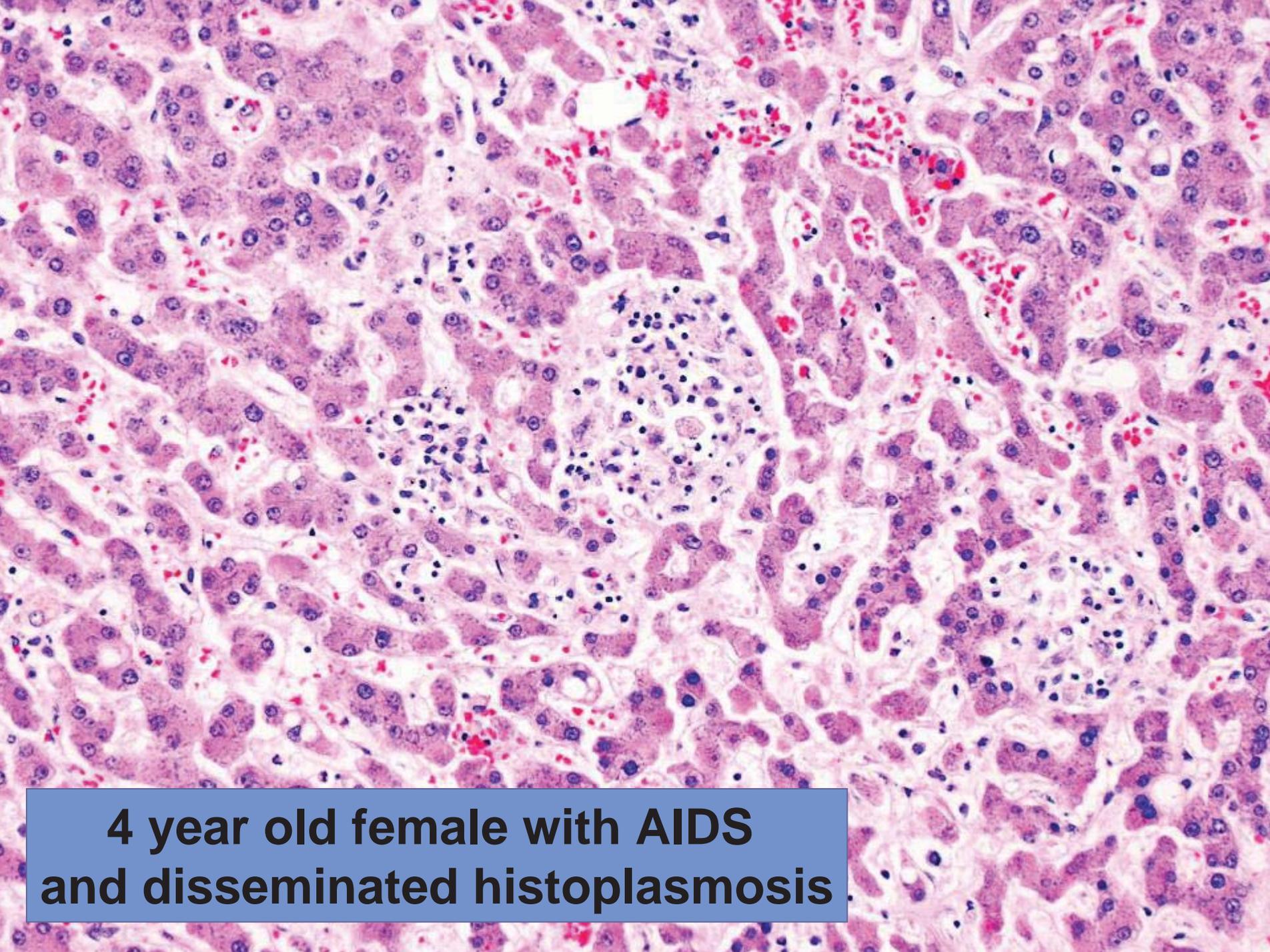




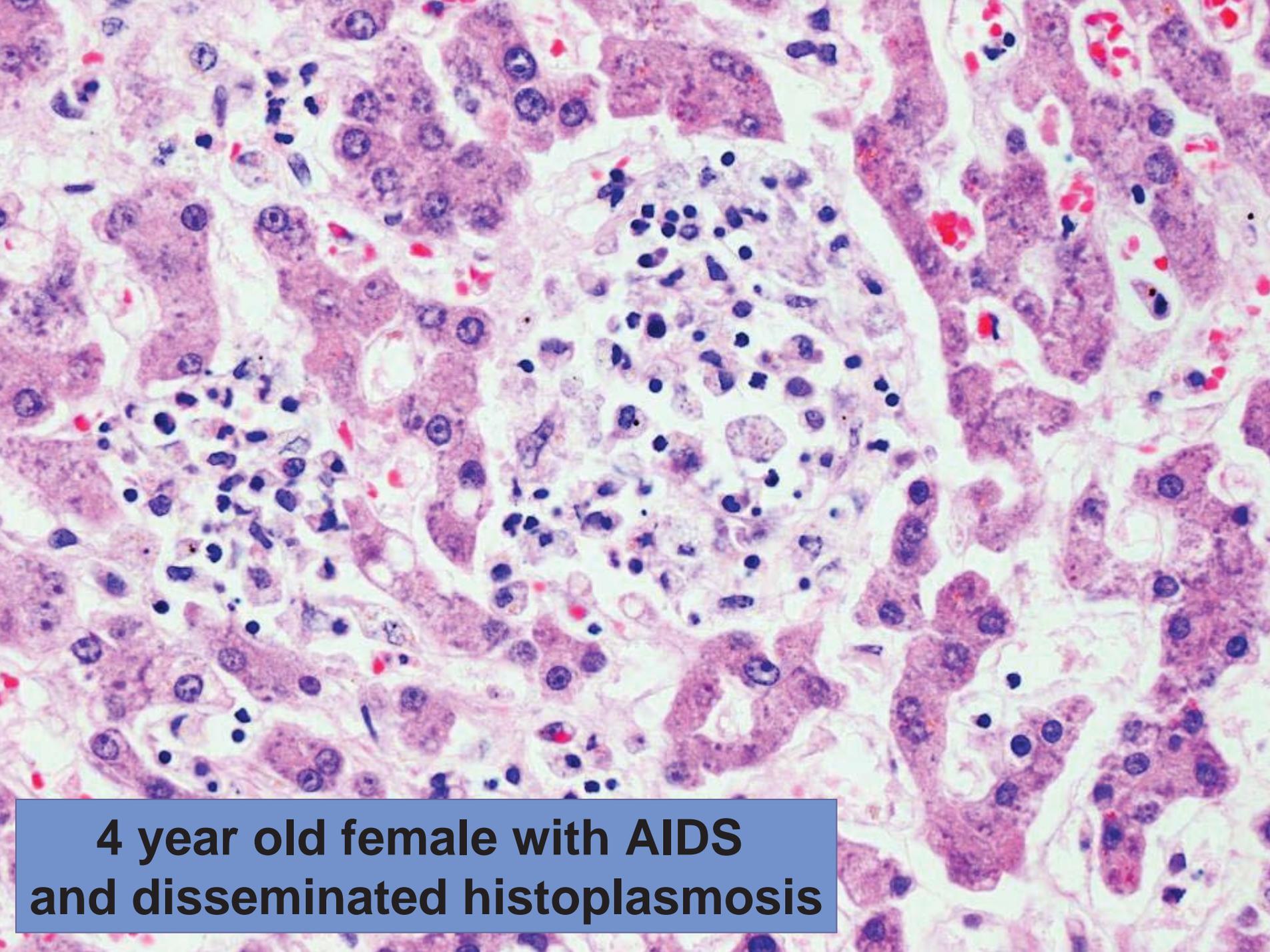








**4 year old female with AIDS
and disseminated histoplasmosis**

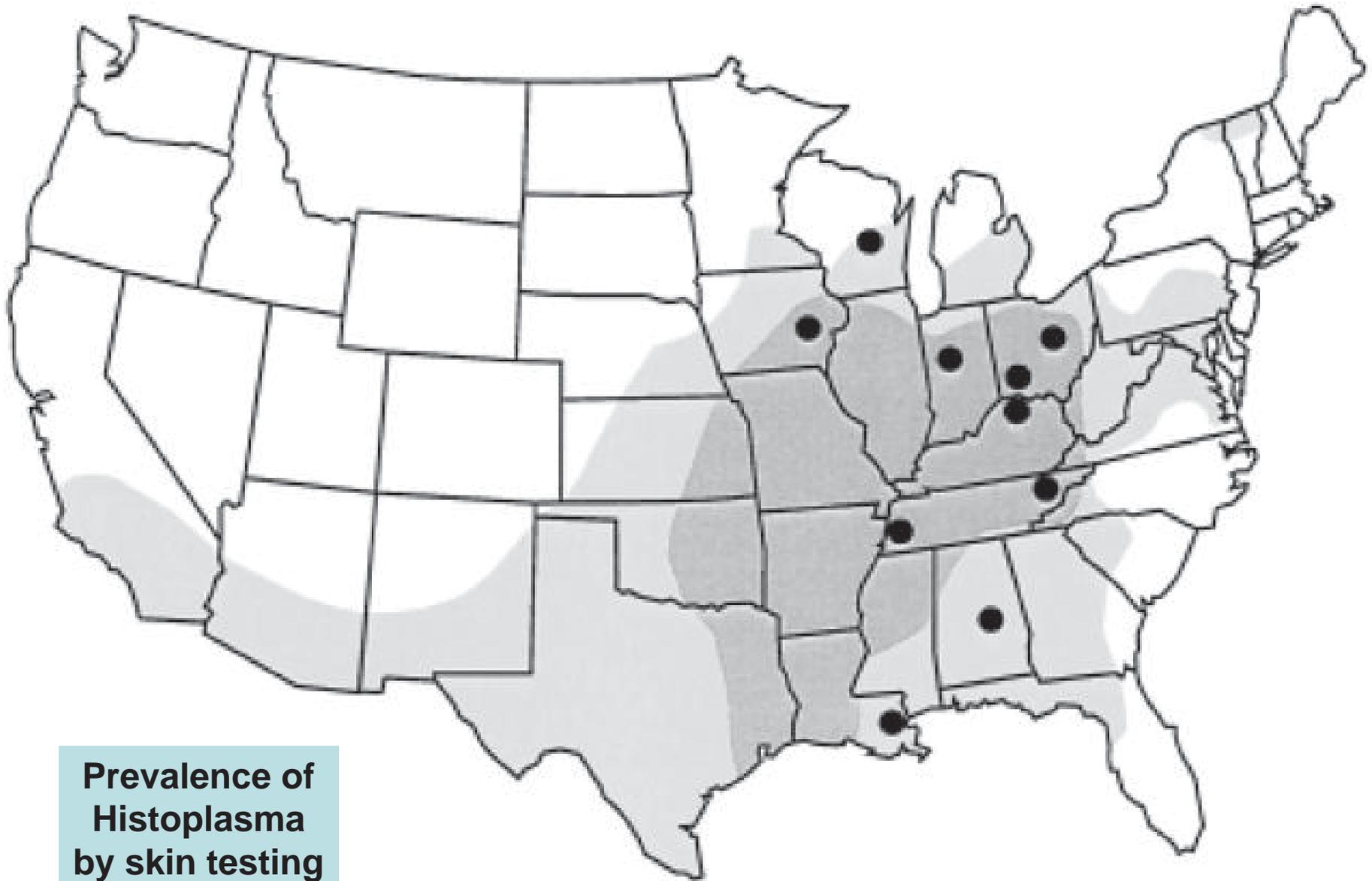


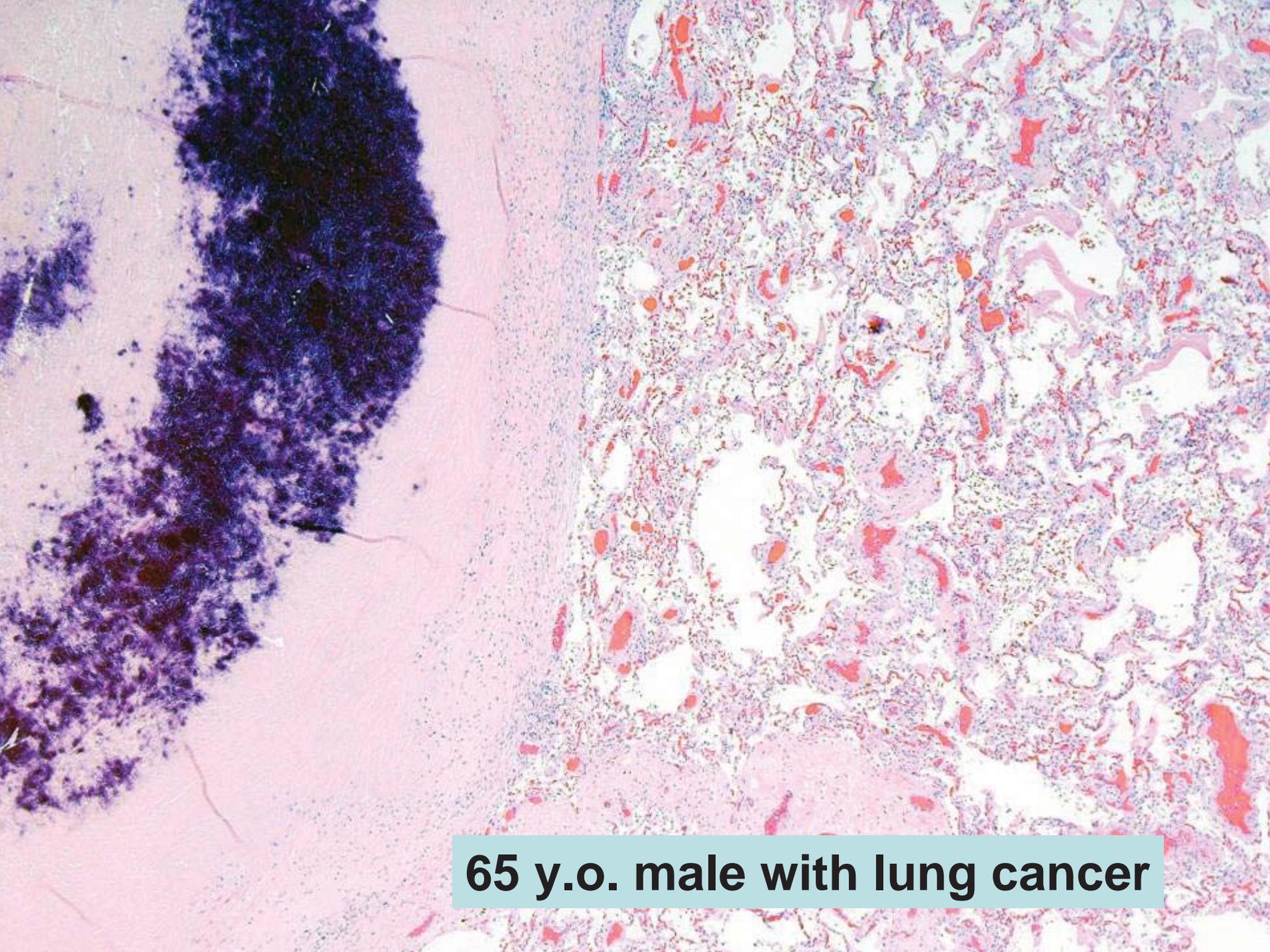
**4 year old female with AIDS
and disseminated histoplasmosis**

Disseminated Histoplasmosis

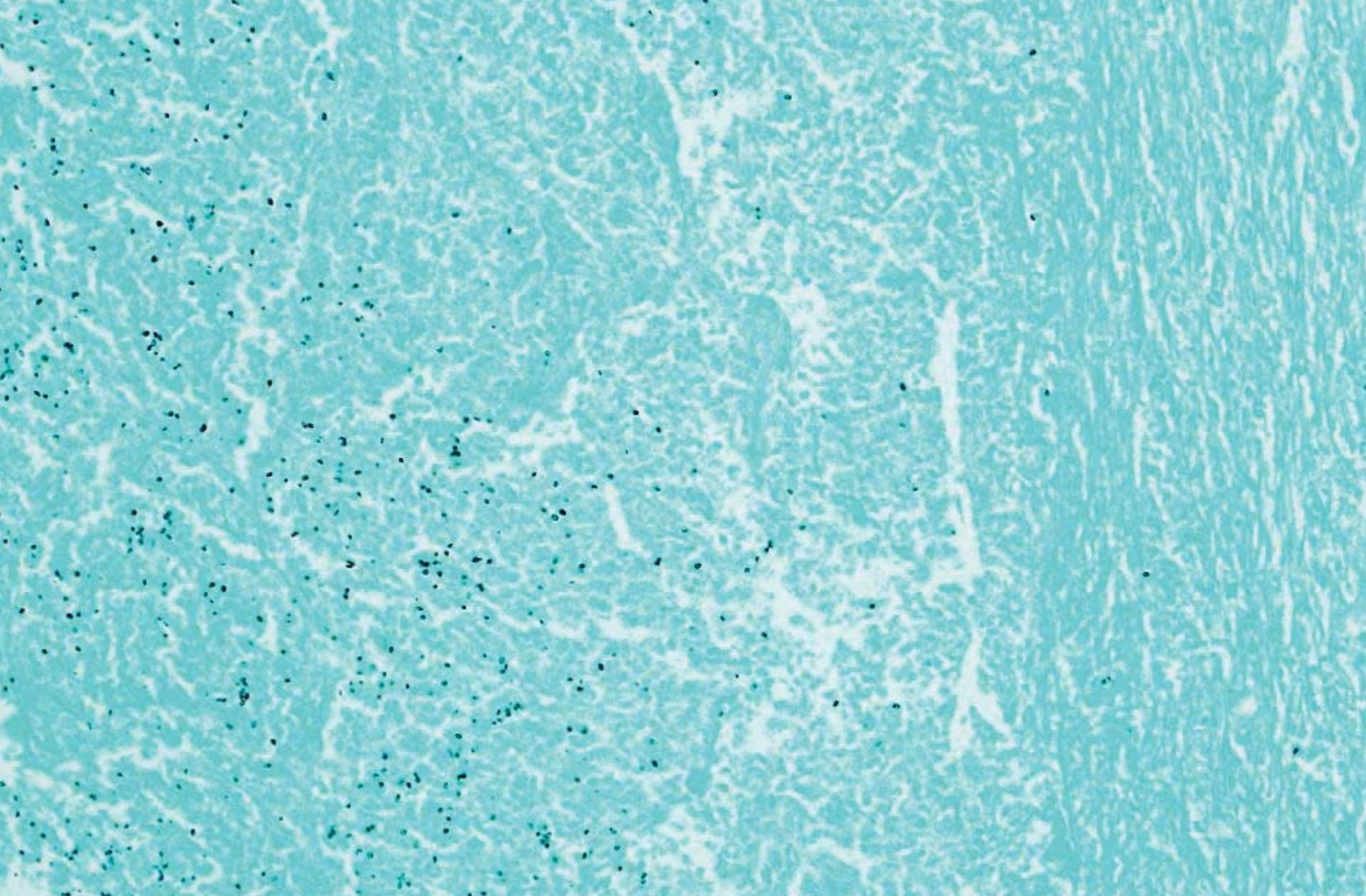
- Liver
- Lungs
- Bone marrow and spleen
- Lymph nodes and thymus
- Kidney
- Brain

Hamilton CD. Curr Opin Rheumatol 2004;16:393-8.

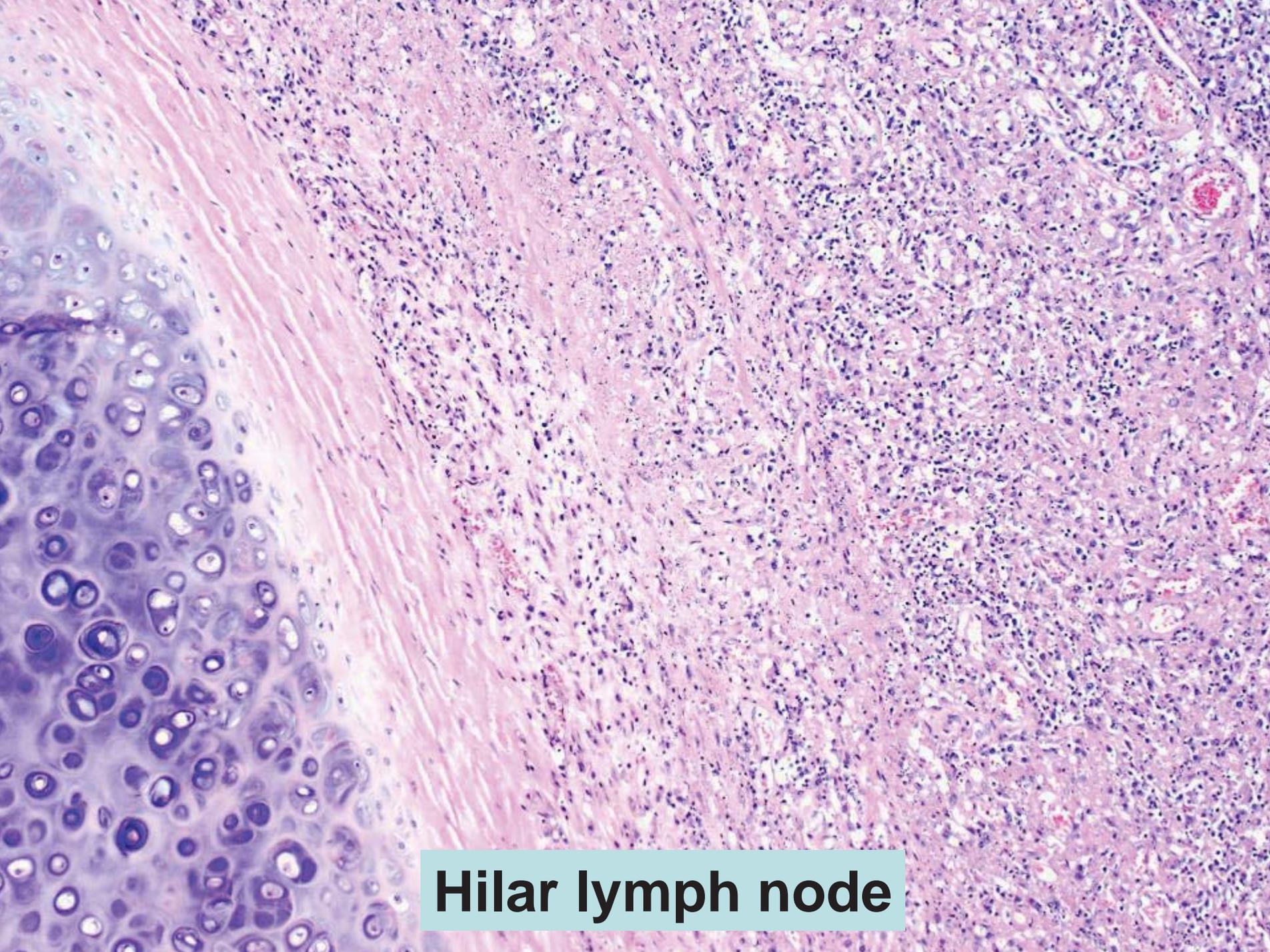




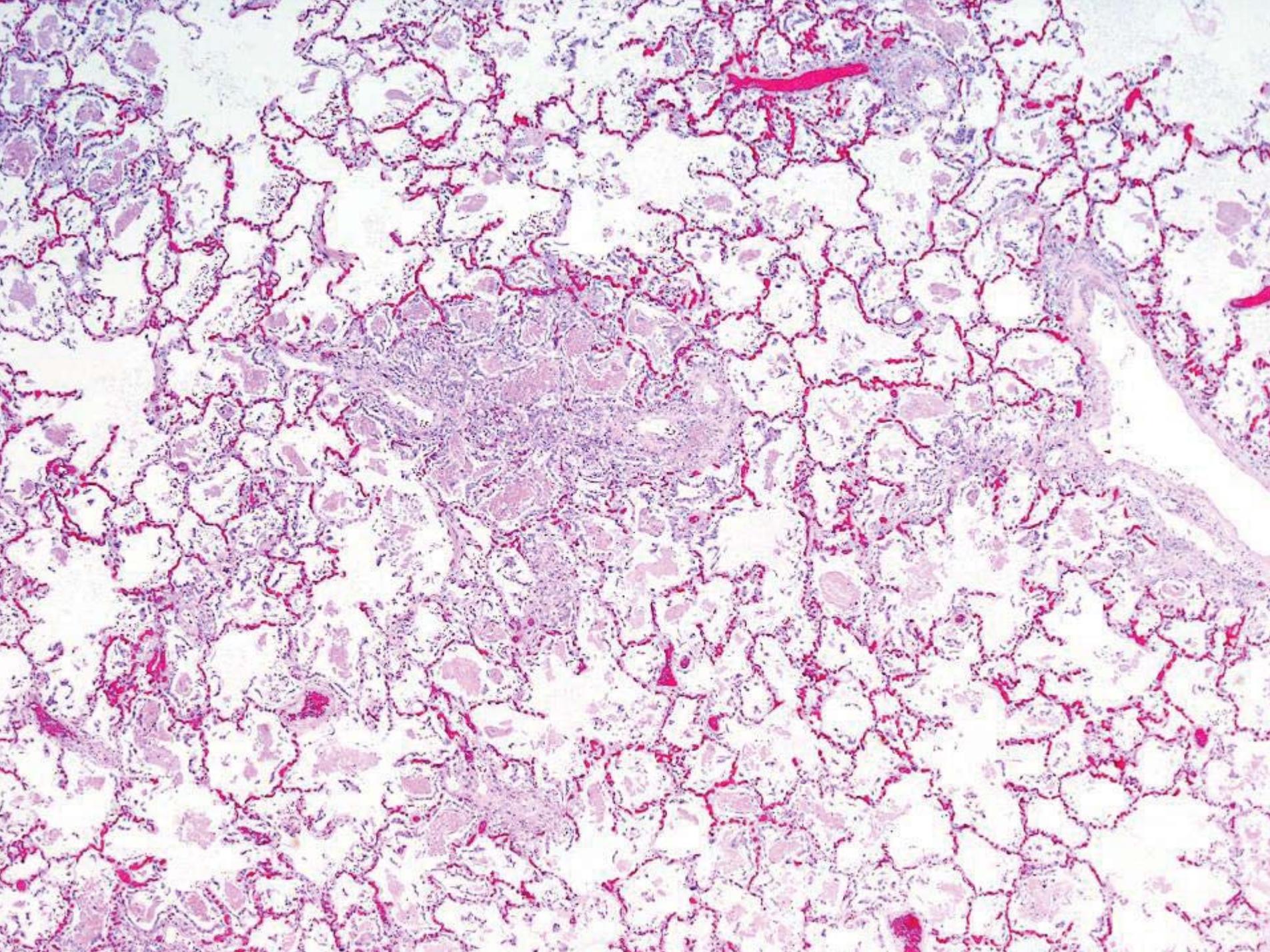
65 y.o. male with lung cancer

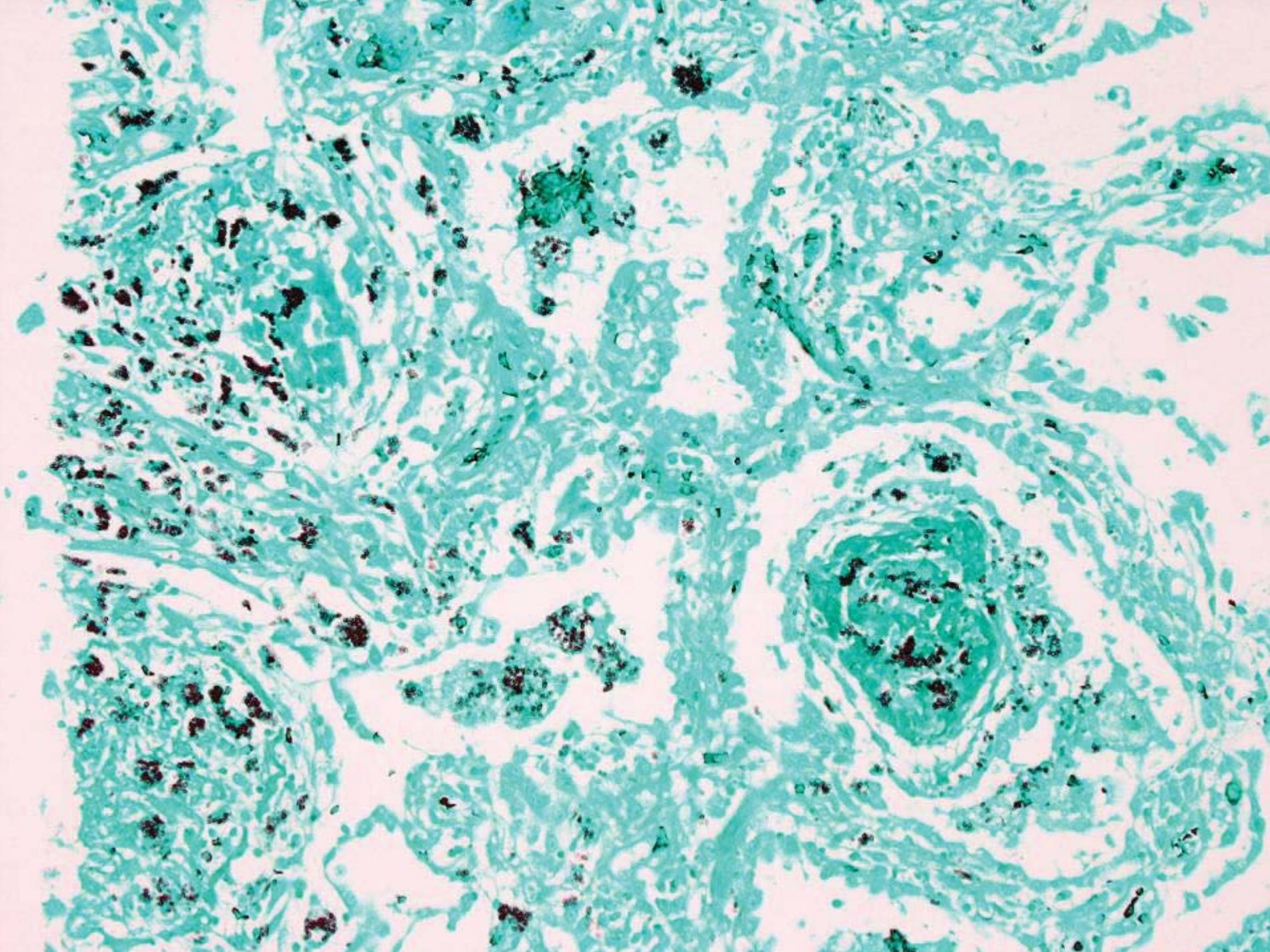


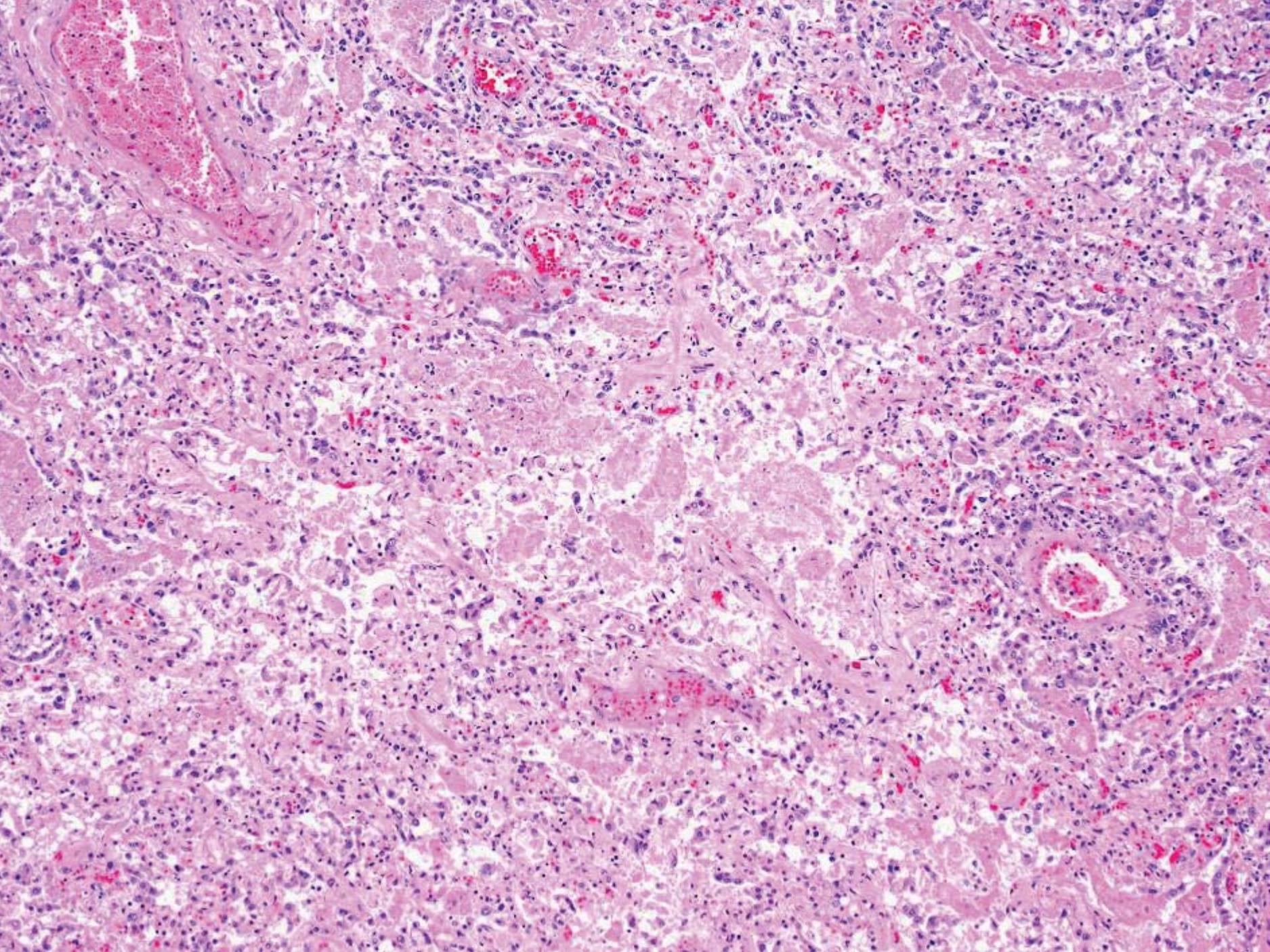
65 y.o. male with lung cancer

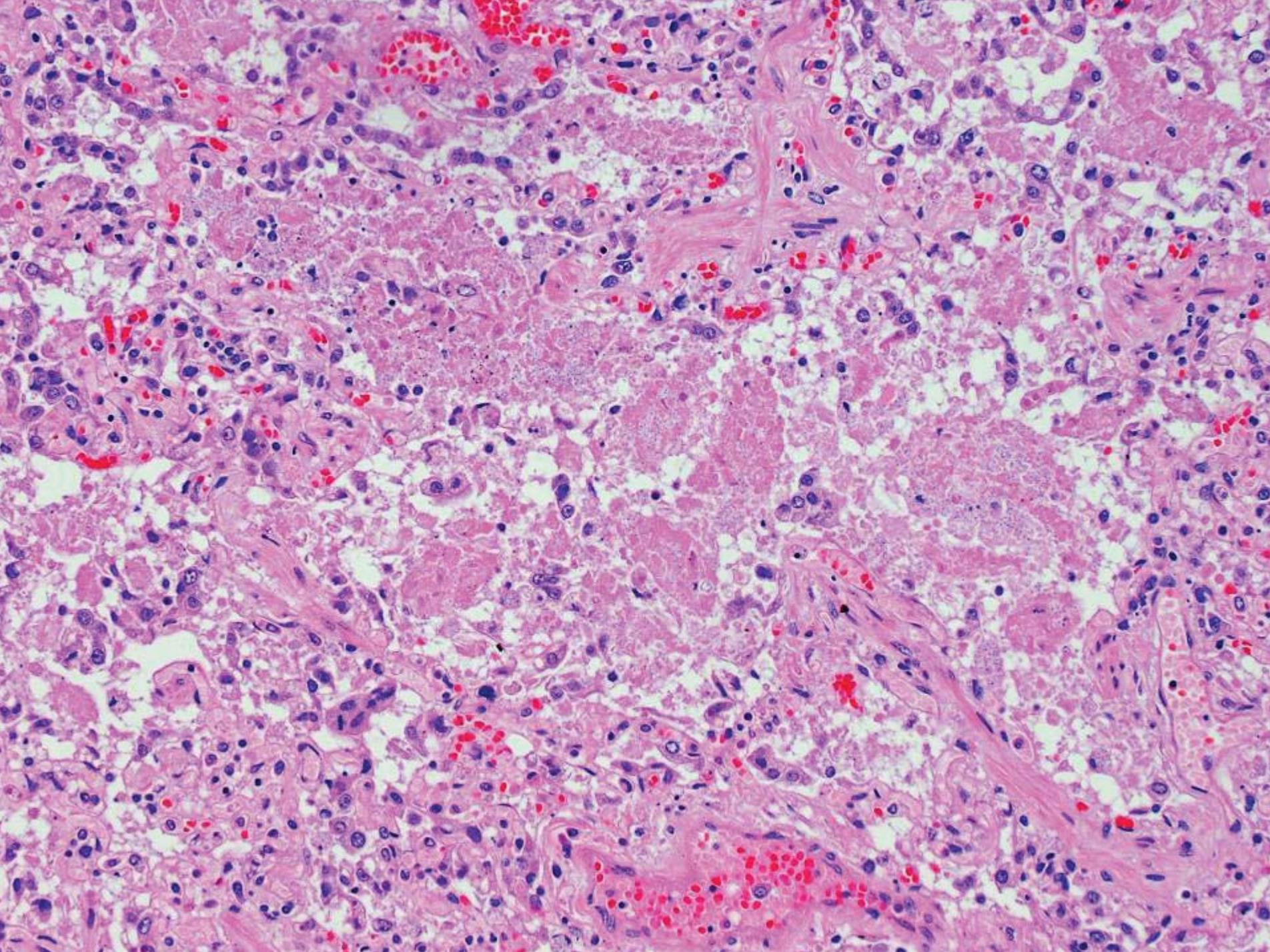


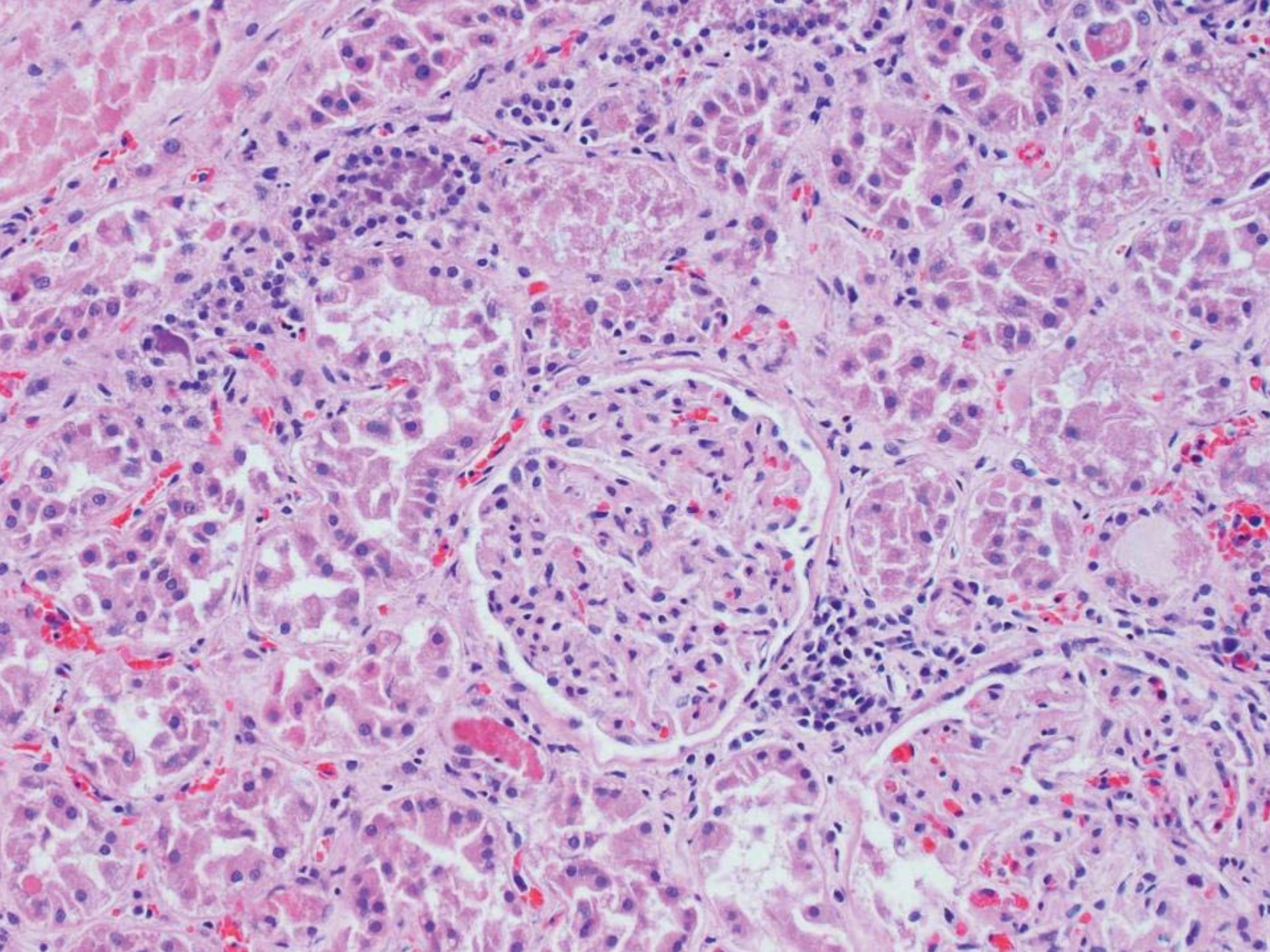
Hilar lymph node

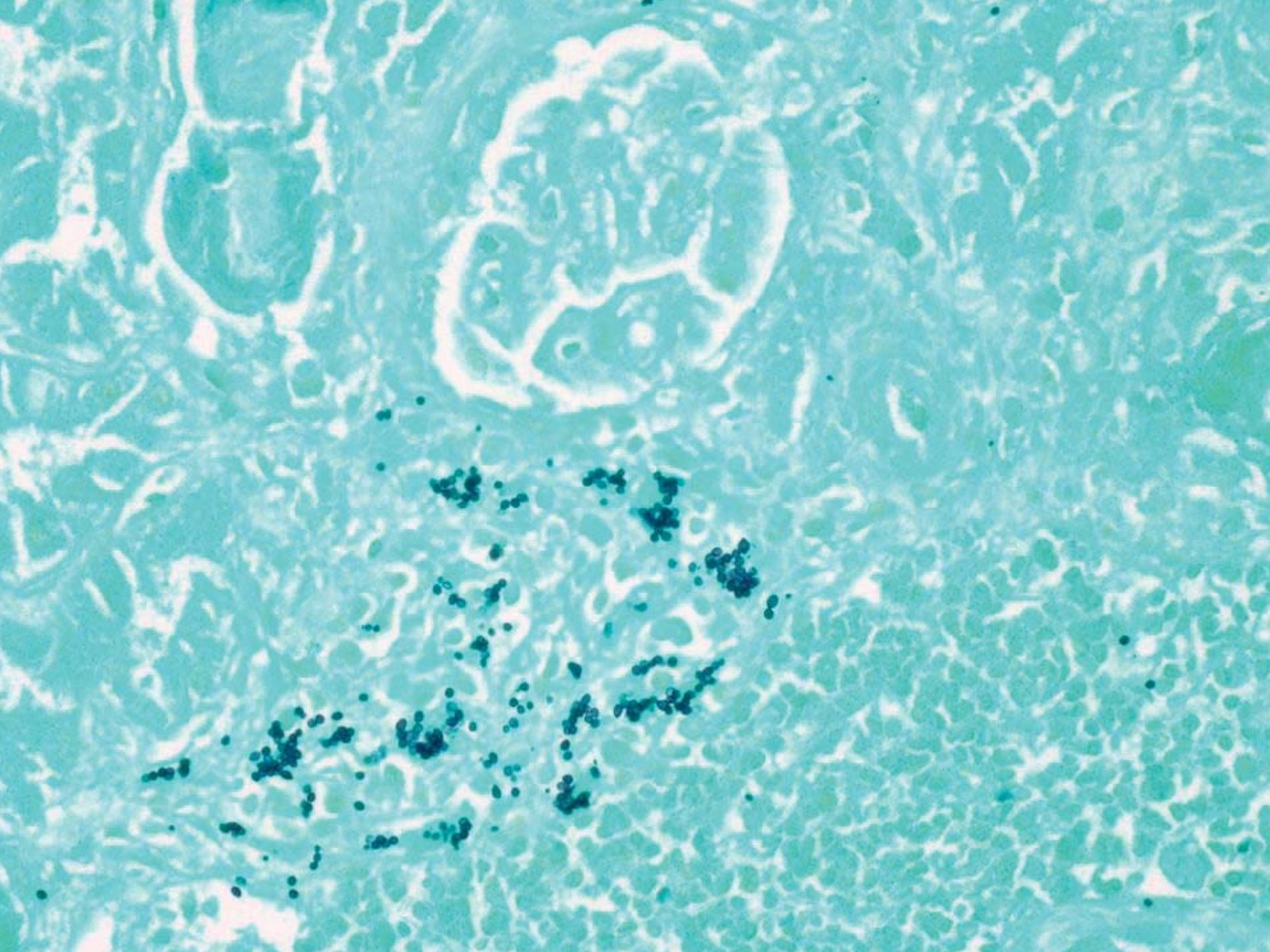








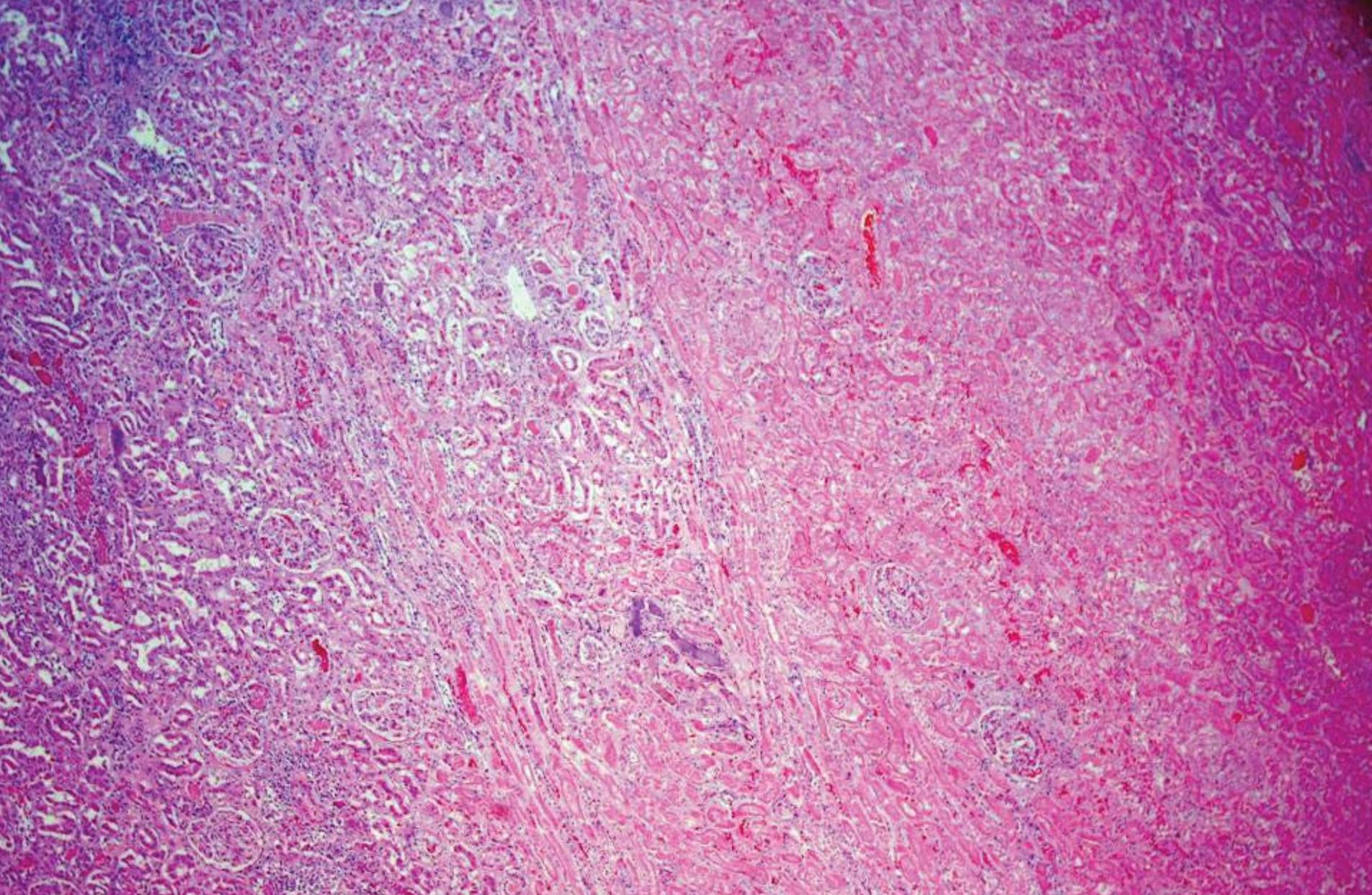






Retroperitoneal Hemorrhage

- Weight of at least 3.5 kg
- Displaced abdominal contents to the right and the diaphragm upward; enveloped left kidney.
- No anatomic source identified grossly or microscopically
- Resulted in:
 - Focal infarction of left kidney
 - Compression of lungs, compromising ventilatory efforts
- Of note:
 - No significant hemorrhage elsewhere
 - G.I. tract, skin, lungs, bladder etc not affected

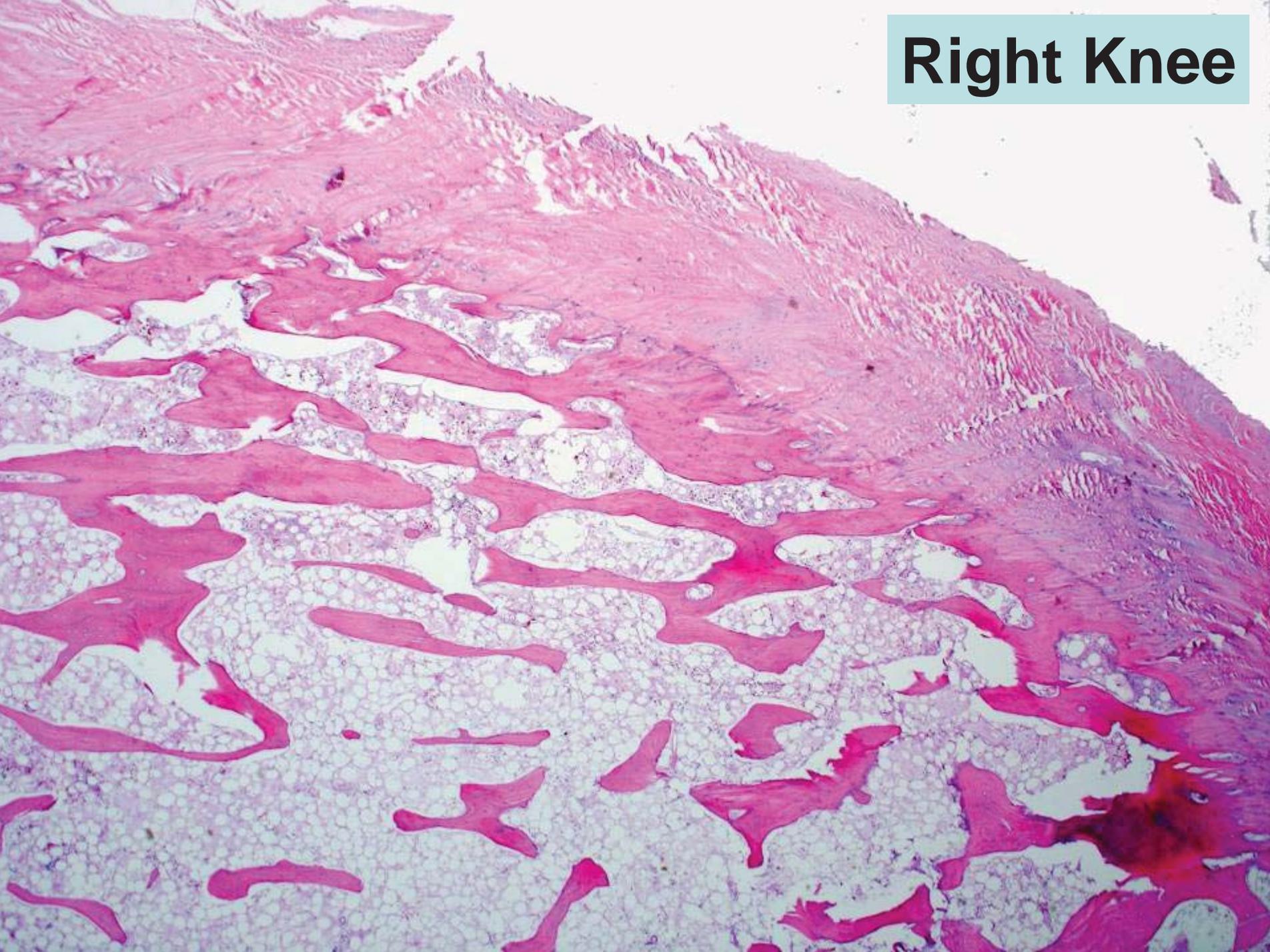


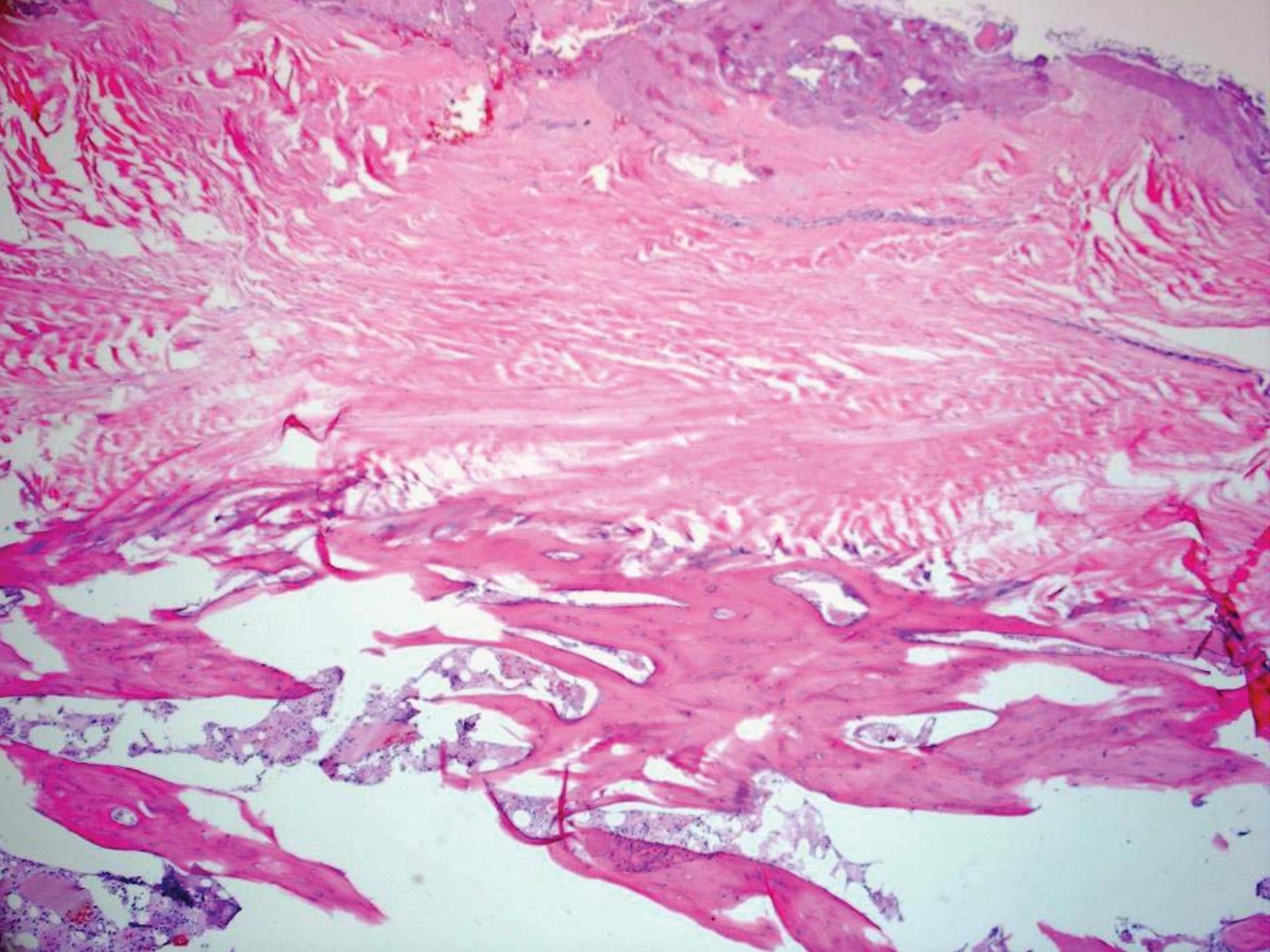
Left Kidney Infarction

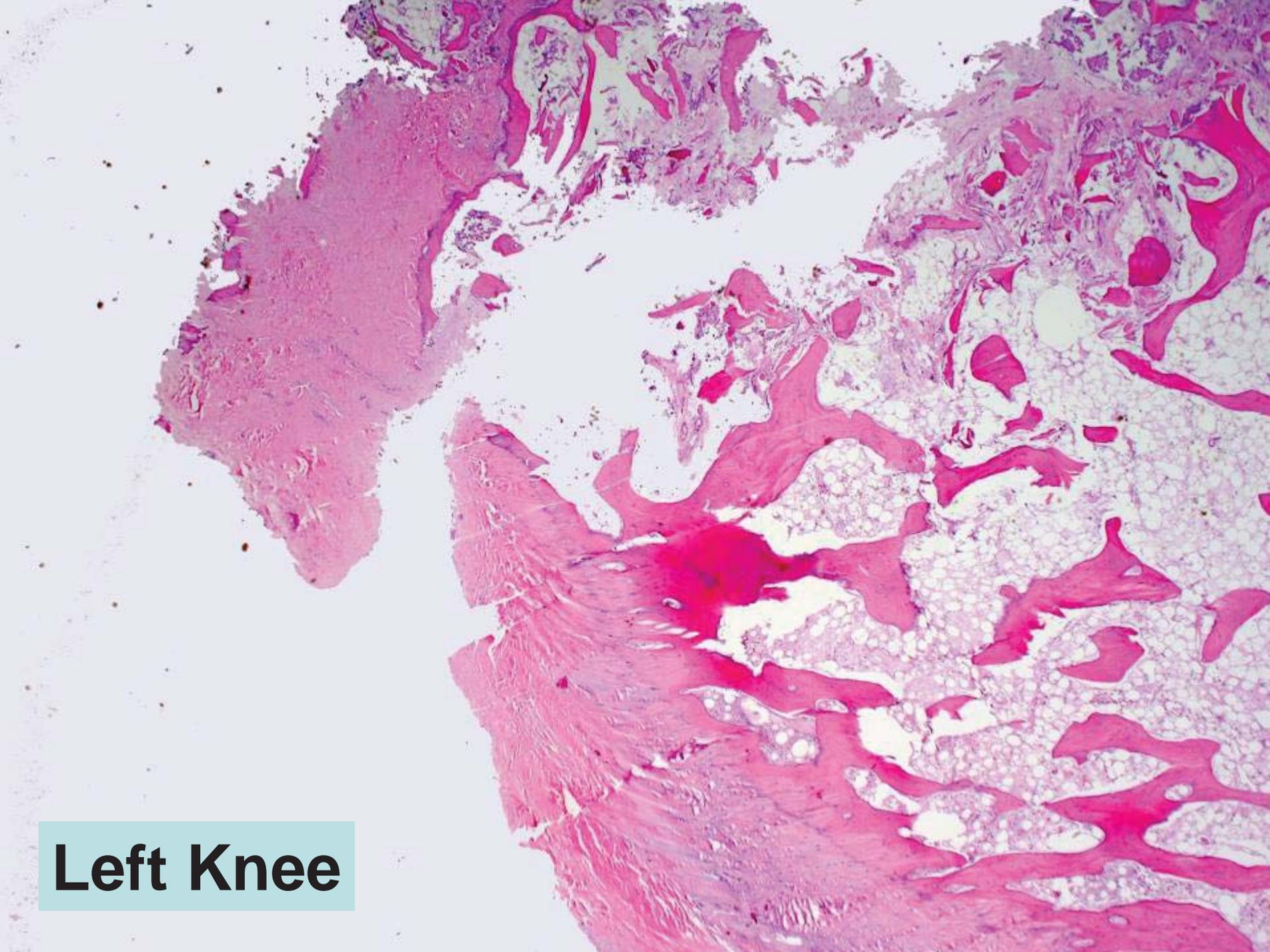
Rheumatoid Arthritis

- s/p surgical correction of toe deformities
- Minimal swelling of knees bilaterally
- Histology of distal femoral condyles:
 - Articular and subchondral changes c/w rheumatoid arthritis
 - No evidence of active disease
 - Histoplasma in bone marrow

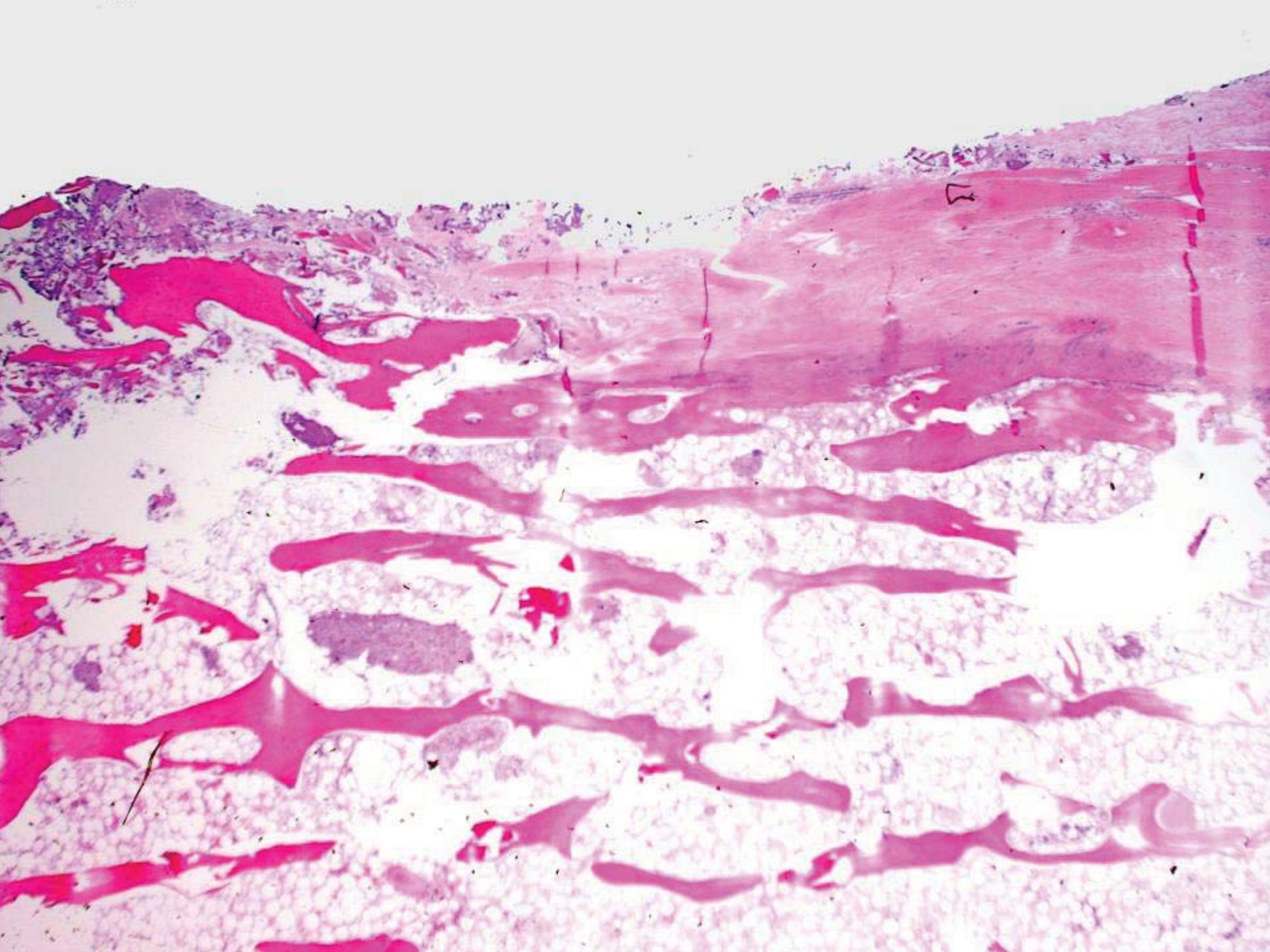
Right Knee





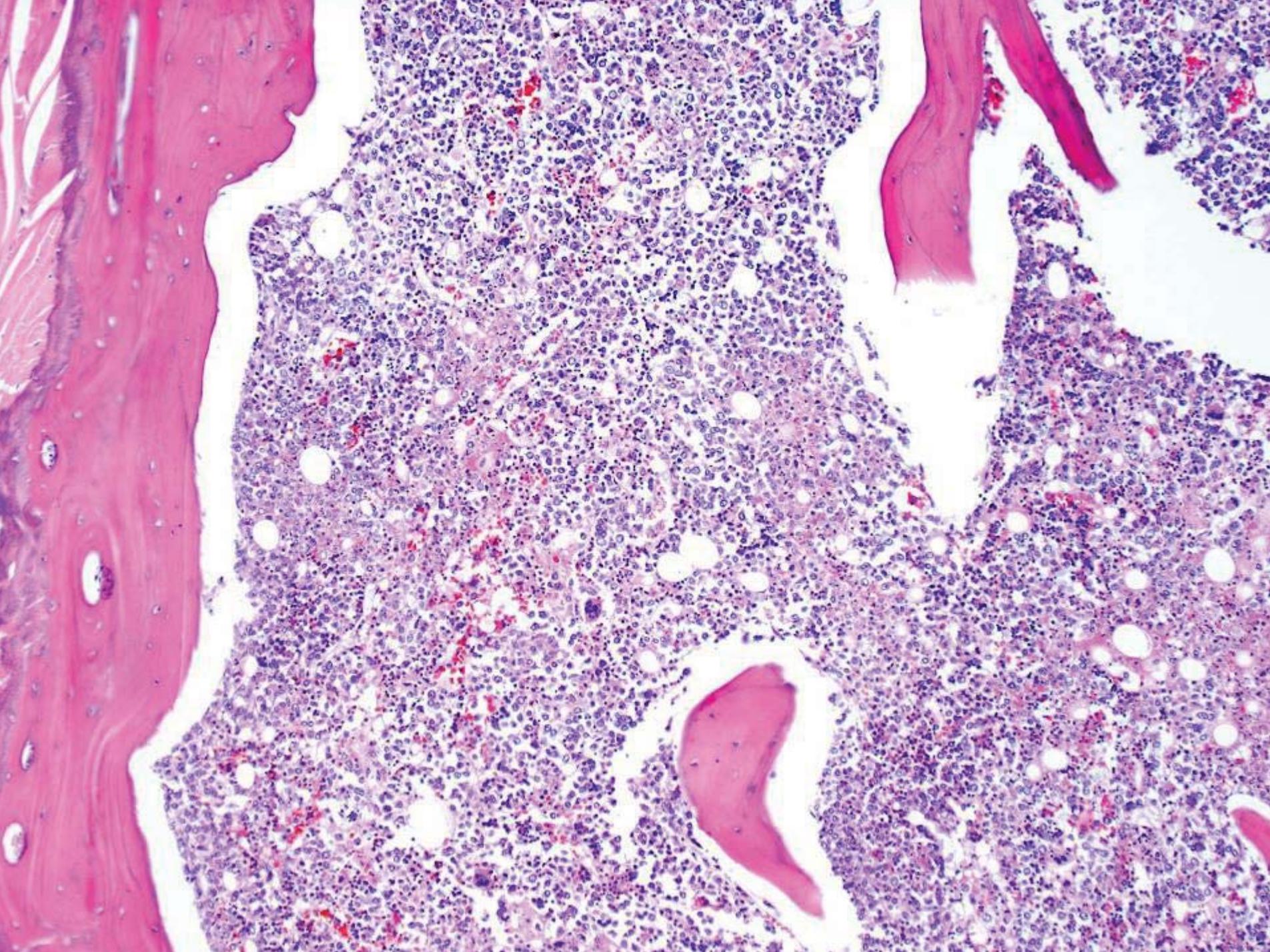


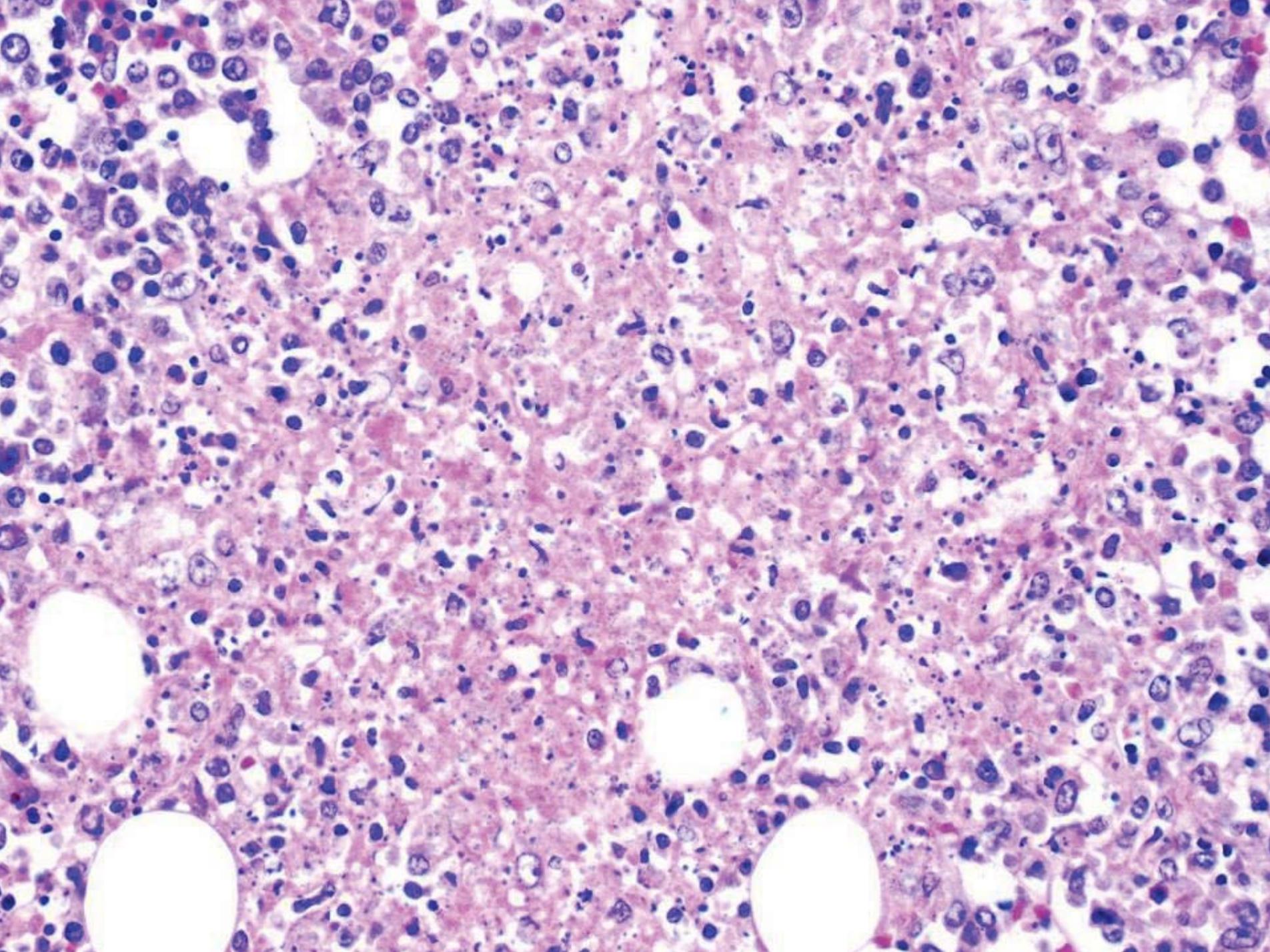
Left Knee

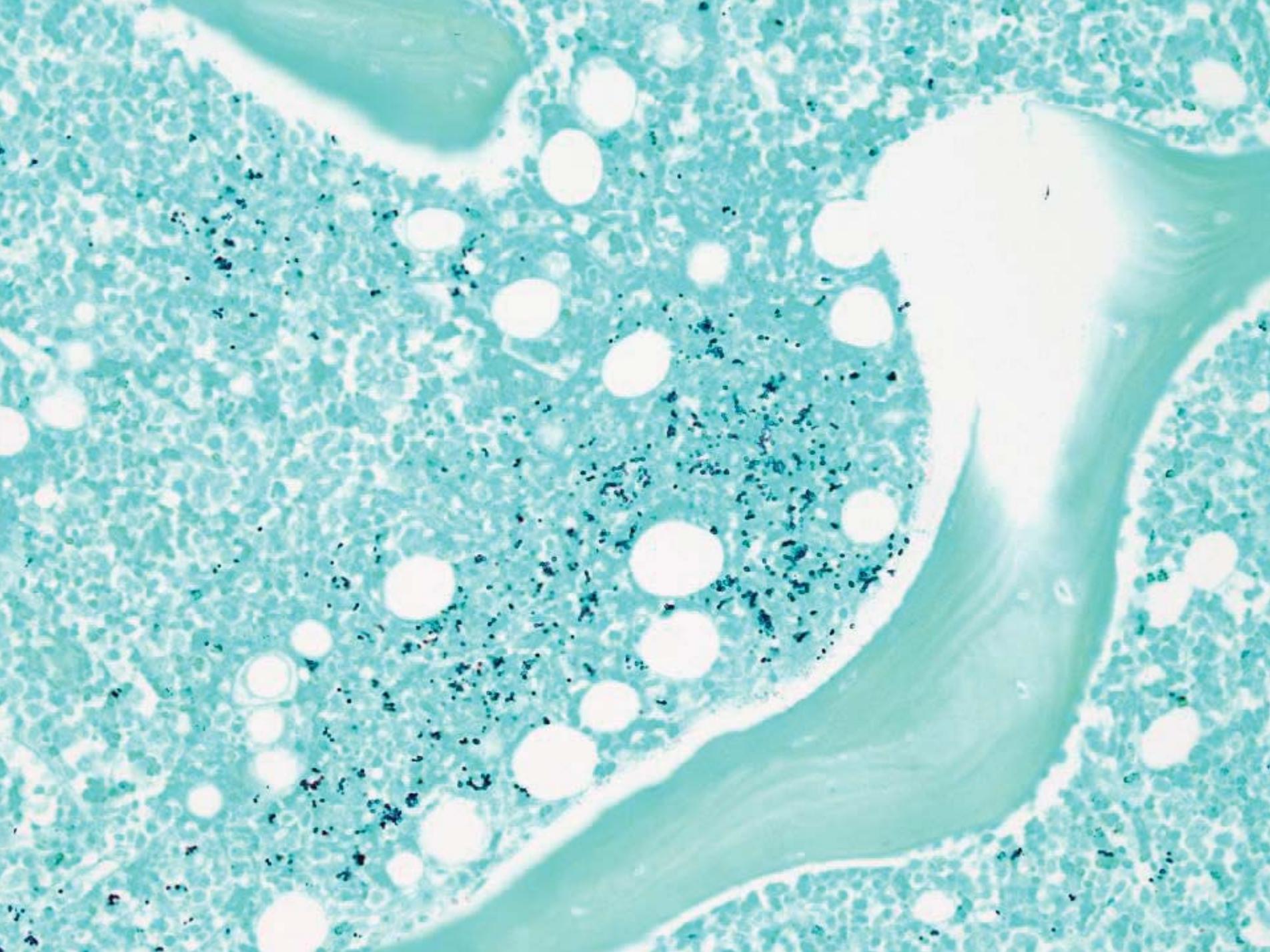


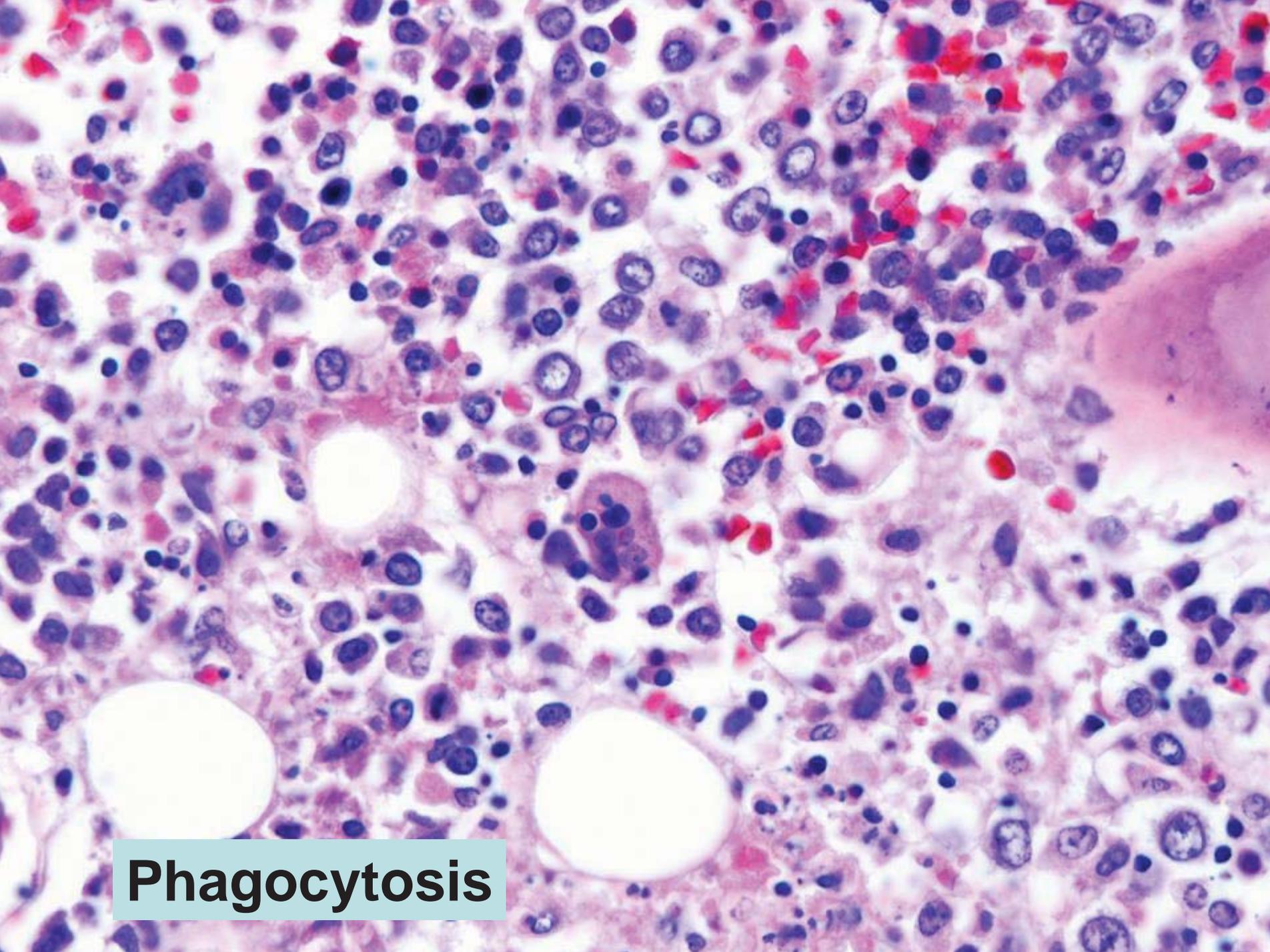
Hematopoietic organs

- Histoplasma producing foci of necrosis in bone marrow, lymph nodes, and thymus.
- Extensive necrosis of the spleen (446 g)
- Bone marrow:
 - Left shift of granulocytic lineage
 - Focal erythrophagocytosis
 - No expansion of erythroid precursors
 - Megakaryocytes present in normal numbers

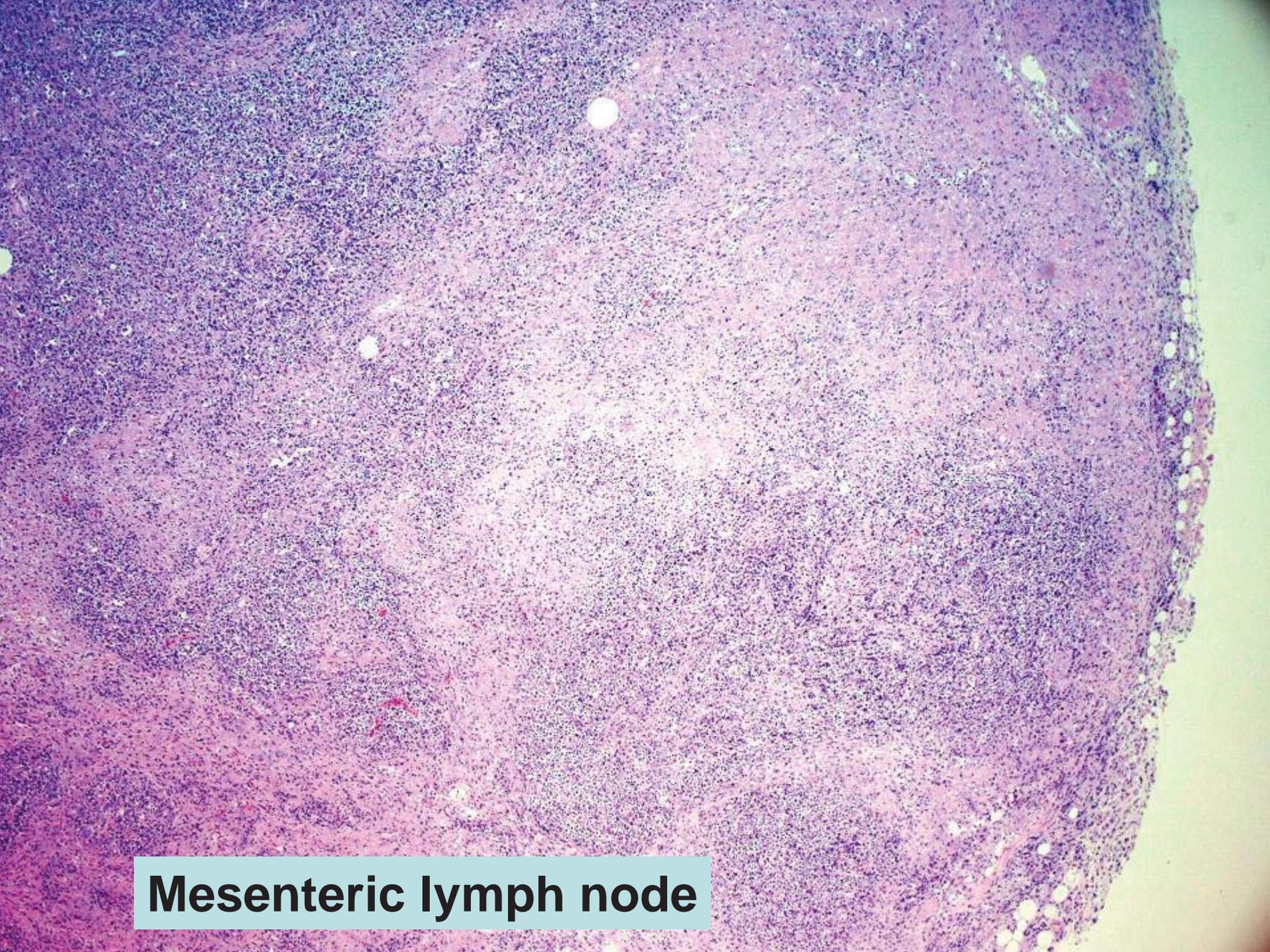




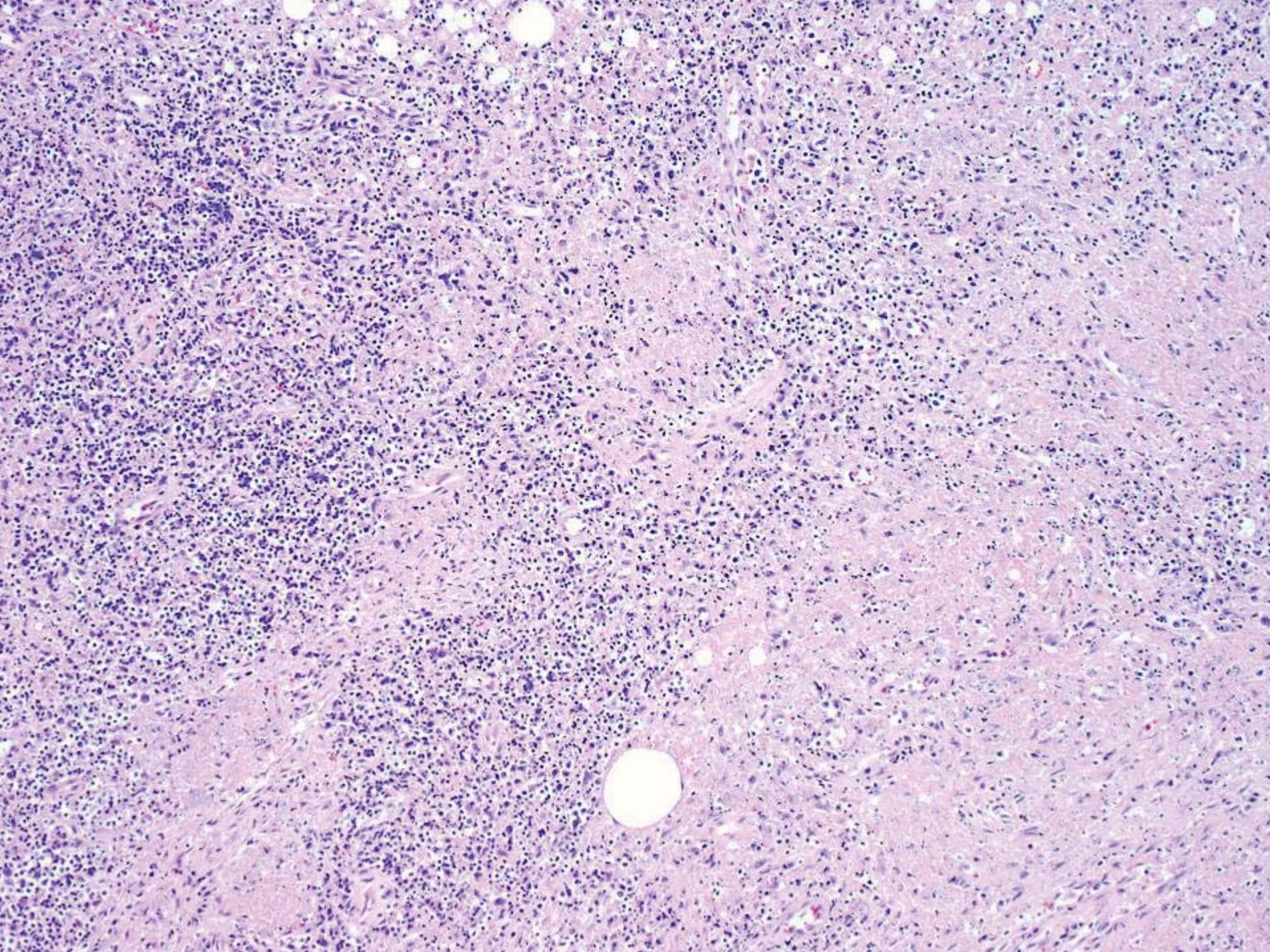




Phagocytosis

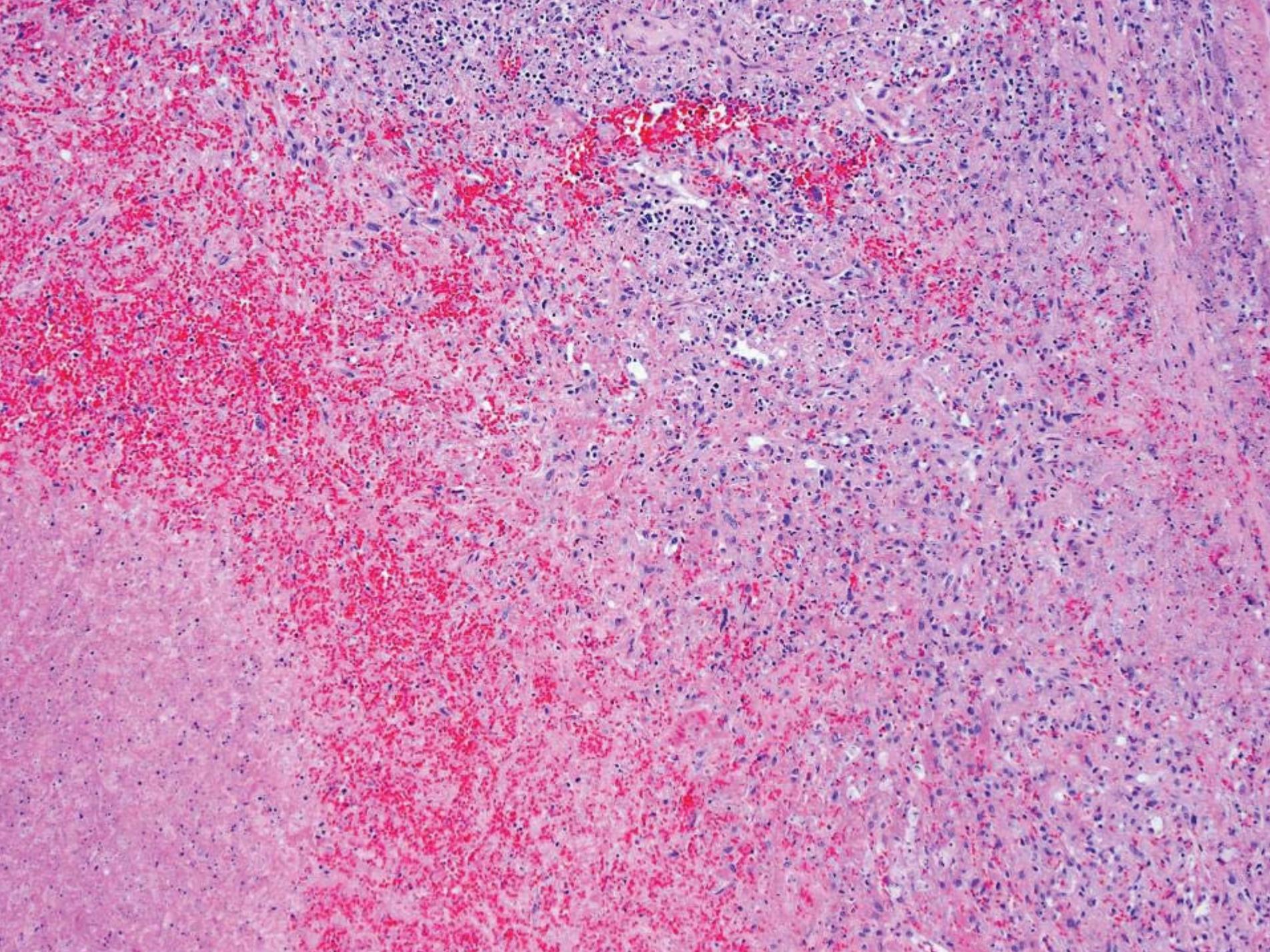


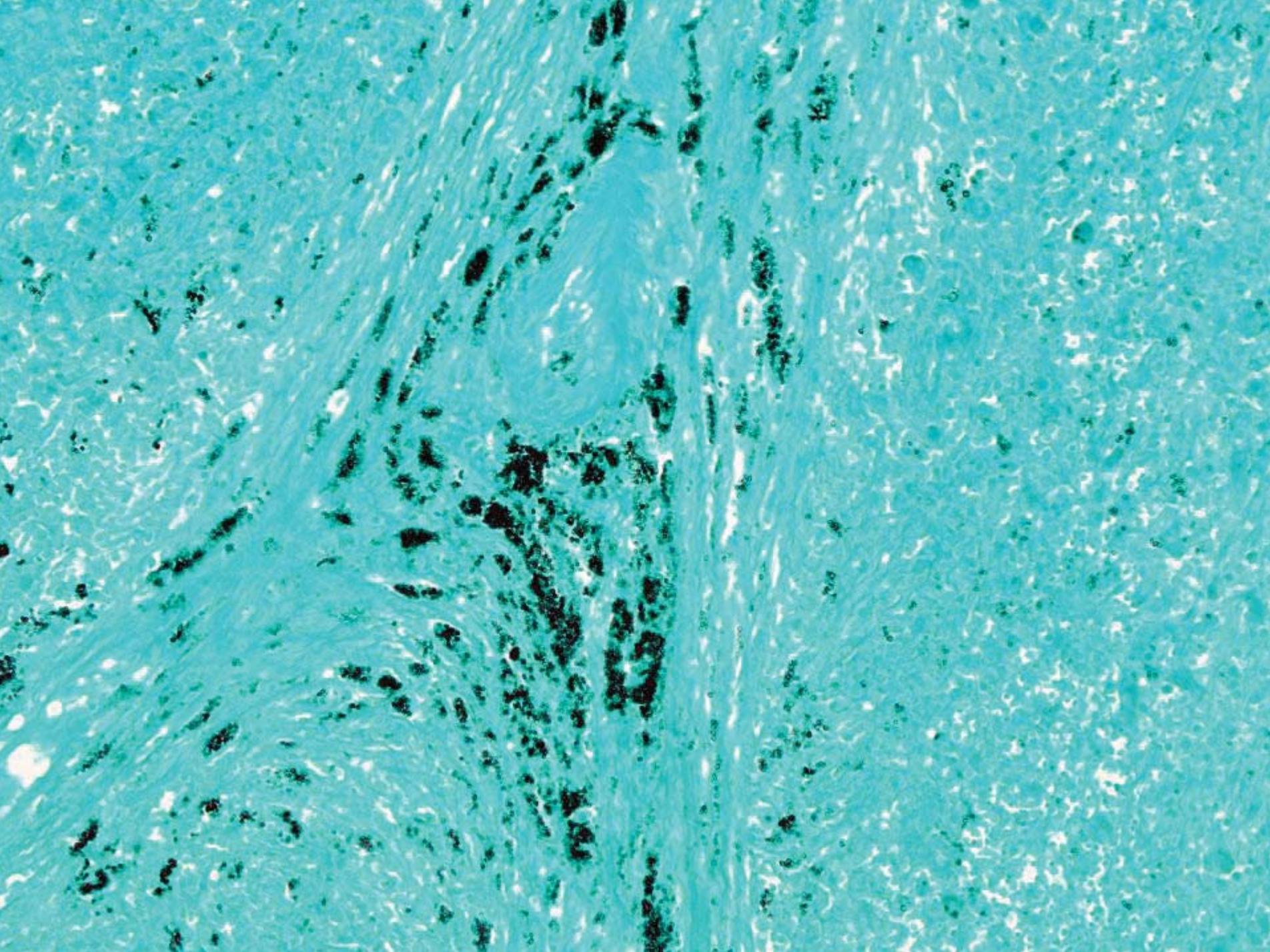
Mesenteric lymph node



The image displays a high-magnification microscopic view of spleen tissue. The field is dominated by a dense population of cells, stained with hematoxylin and eosin (H&E). The overall appearance is a mottled, granular texture with varying shades of red and purple. There are several small, dark, circular or oval structures scattered throughout, which likely represent nuclei of various cell types, including lymphocytes and macrophages. The background is a complex, interconnected network of cells and extracellular matrix, typical of the splenic architecture.

Spleen





Additional Histologic Findings

- AFB stains performed on lung, liver and pulmonary hilar lymph nodes are negative for mycobacteria
- Lungs exhibit patchy pulmonary edema, but little evidence of diffuse alveolar damage
- No significant gastrointestinal findings

Herpes simplex virus infection

- Viral cultures positive for HSV 1 on autopsy samples obtained from trachea, right and left knee, and brain
- No histologic evidence of viral cytopathic effect in these tissues, or at any other site
- Immunohistologic stains for HSV (1&2) performed on trachea, knee tissues, brain, and small bowel are all negative
- PCR analysis performed on paraffin embedded samples of brain and liver tissue are negative for HSV (1&2)