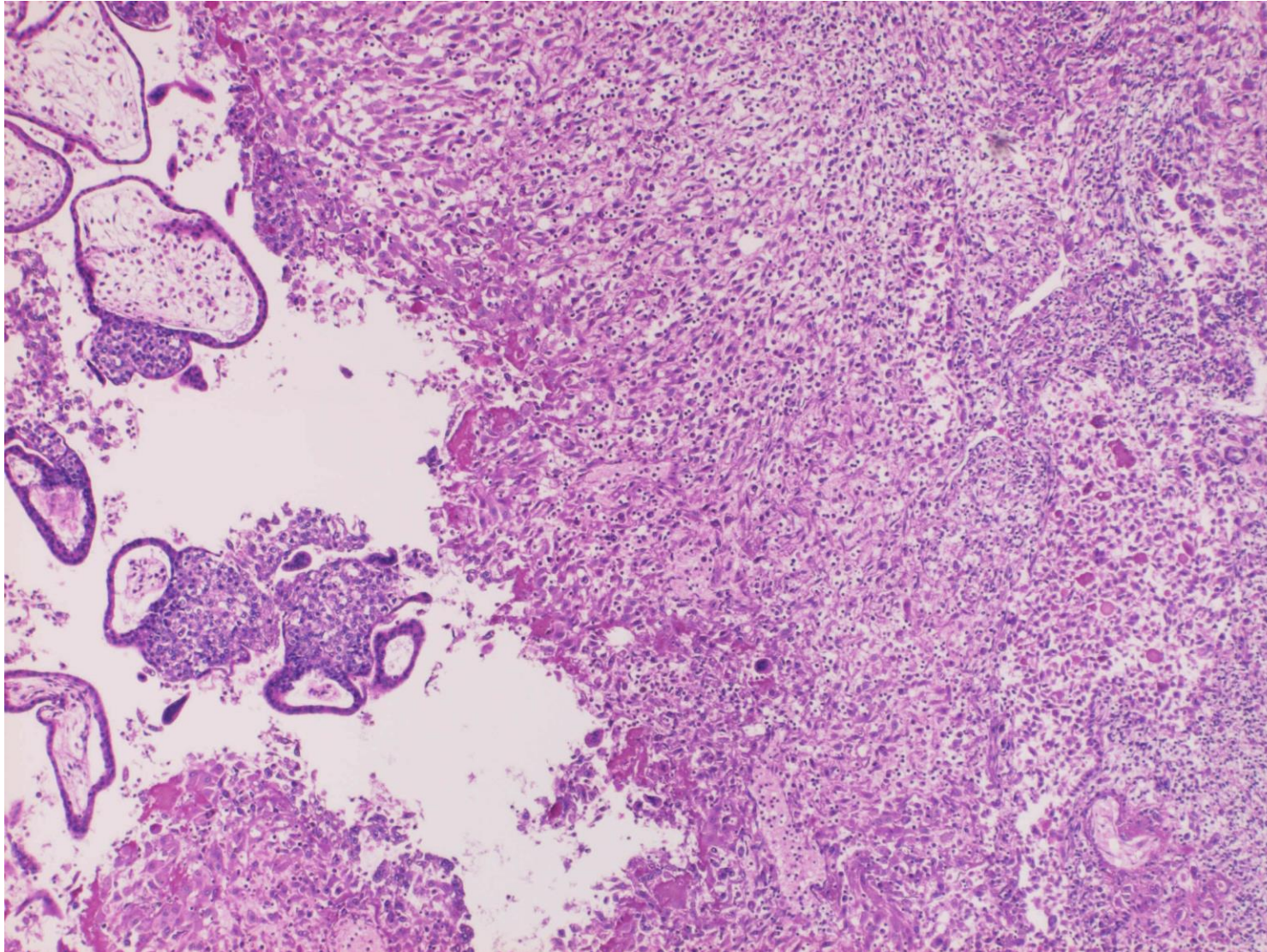


# Fulminant pneumococcal infection caused by placental infection

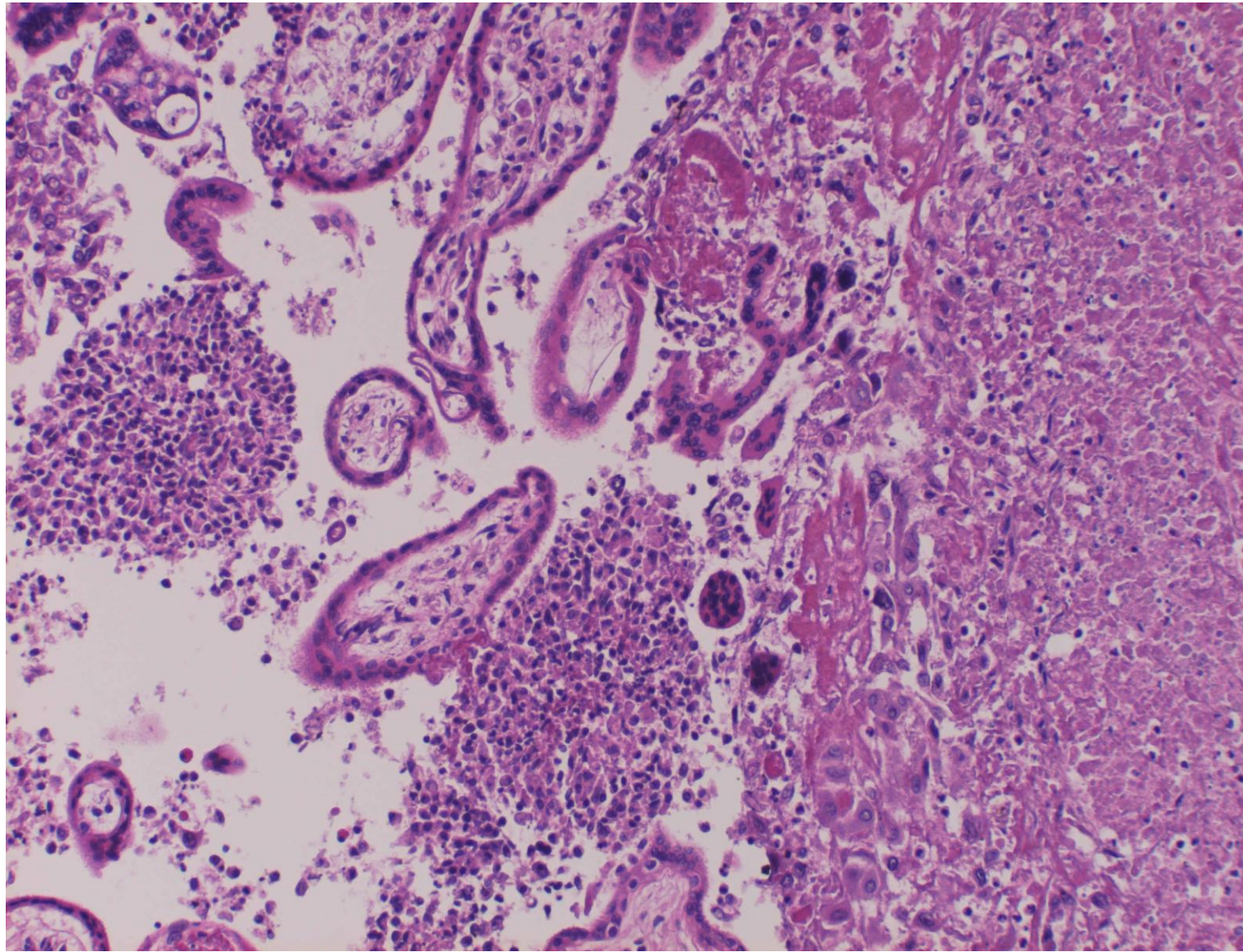
Fulminant pneumococcal infection is a life-threatening pneumococcal infection occurring in immunocompromised hosts such as those in a post-splenectomy state or on immunosuppressant therapy. Bilateral adrenal hemorrhage (Waterhouse-Friderichsen syndrome) may be associated. Autopsy is important to clarify the pathogenesis of the rapidly progressive disorder.

A 25-year-old female patient with a history of splenectomy by a traffic accident 10 years earlier manifested sudden high fever and skin rash at the 10<sup>th</sup> month (term) of pregnancy. The disease rapidly progressed to the shock state with petechial hemorrhage due to disseminated intravascular coagulopathy (DIC). Soon, she and her baby died (the total clinical course: 2 days). She did not receive pneumococcal vaccination. At autopsy, alpha-hemolytic streptococcus was cultured from the lung. The placenta contained small abscesses, and pneumococcal antigens and pneumolysin are immunoreactive in the lesion. Systemic spreading of *Streptococcus pneumoniae* was confirmed, together with the DIC status. The glomeruli of the kidney revealed pneumococcal thrombi, and hemophagocytosis was observed in the bone marrow. No pneumococcal pneumonia was associated.

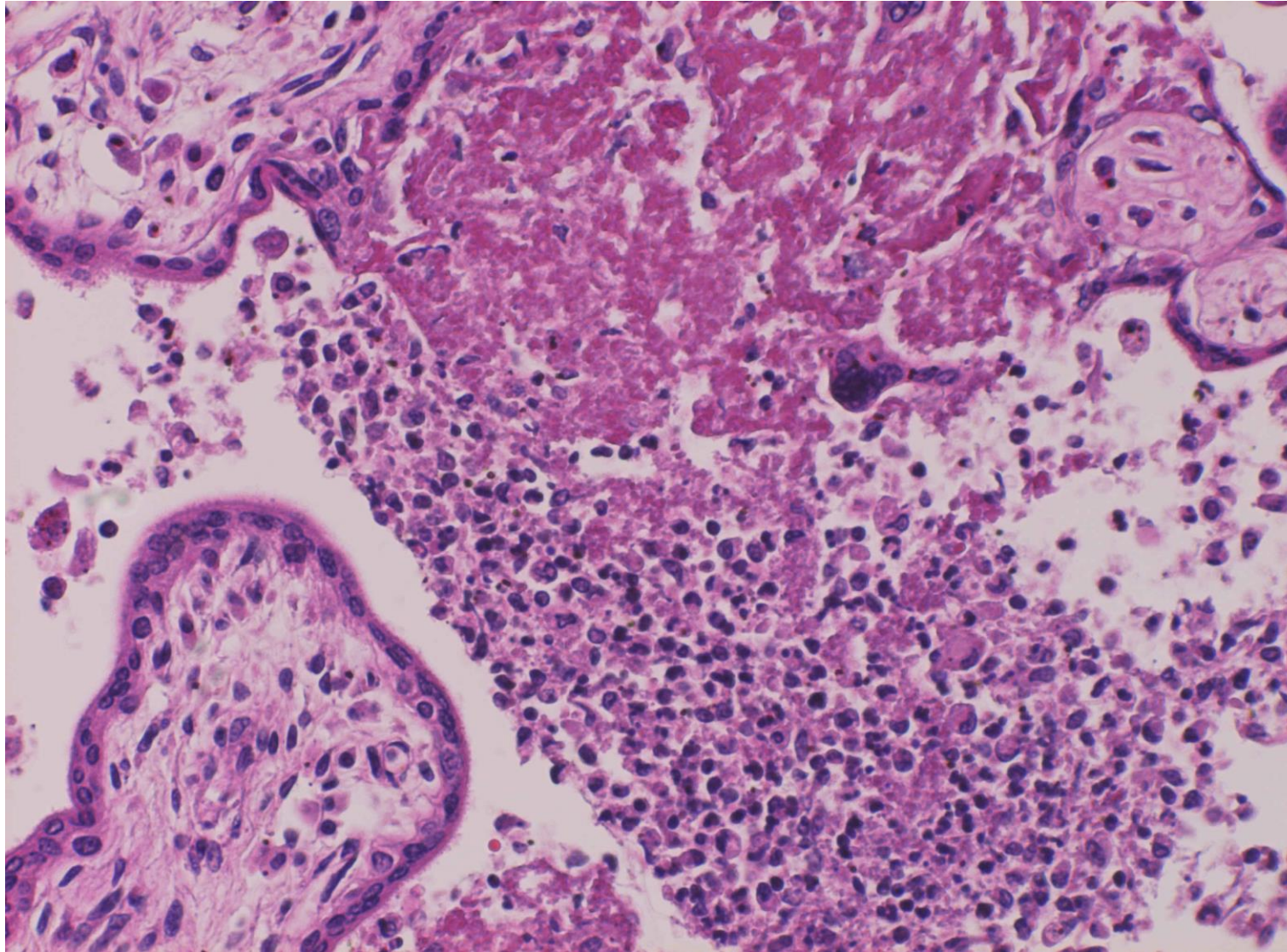
Ref.: Tajiri T, et al. Clinicopathological findings in fulminant-type pneumococcal infection: report of three autopsy cases. *Pathol Int* 2007; 57(9): 606-612. doi: 10.1111/j.1440-1827.2007.02146.x



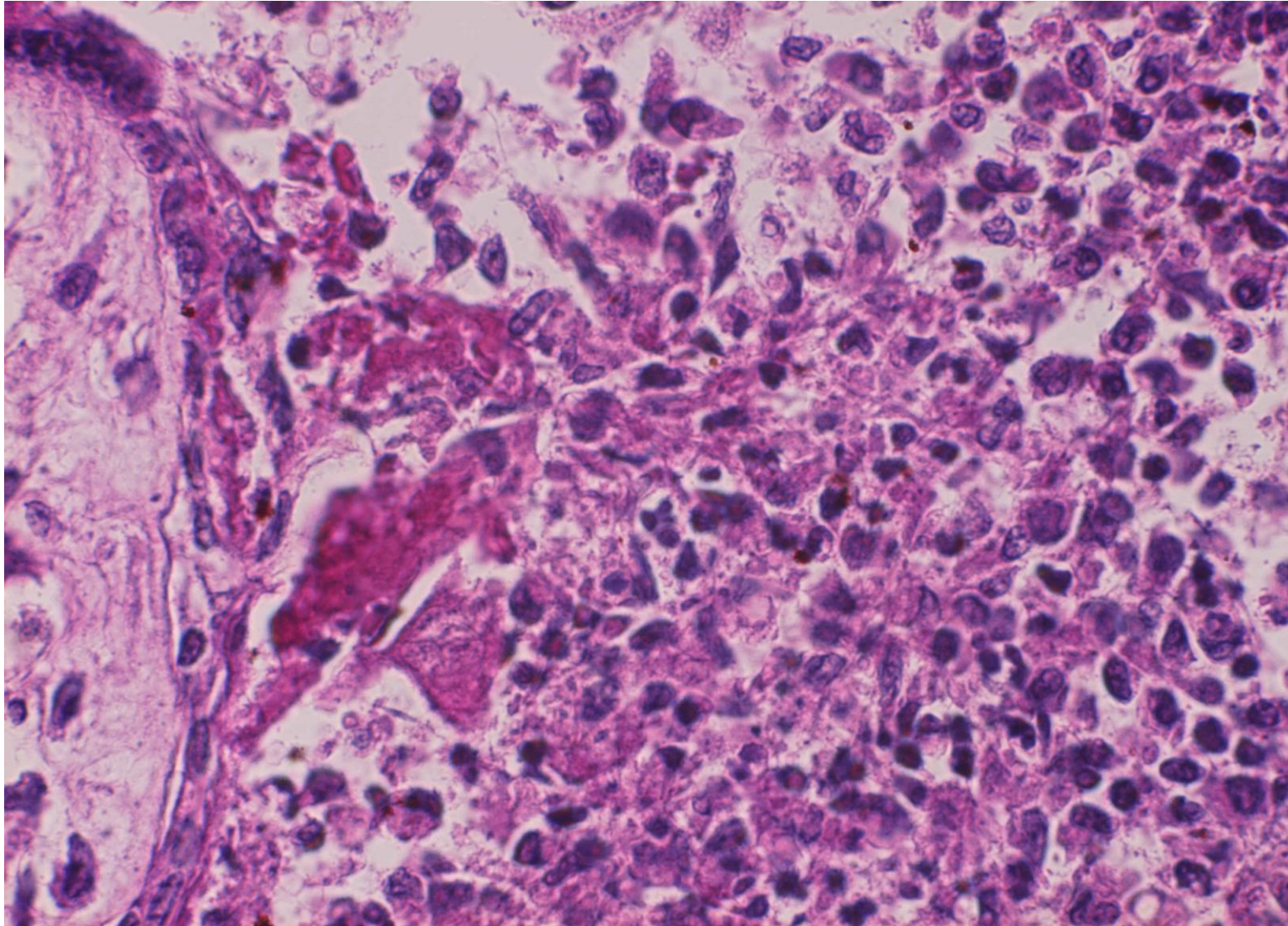
A 25-year-old splenectomized female patient in term pregnancy acutely manifested fulminant pneumococcal infection. At autopsy, the placenta shows multifocal abscesses among the villi. H&E-1



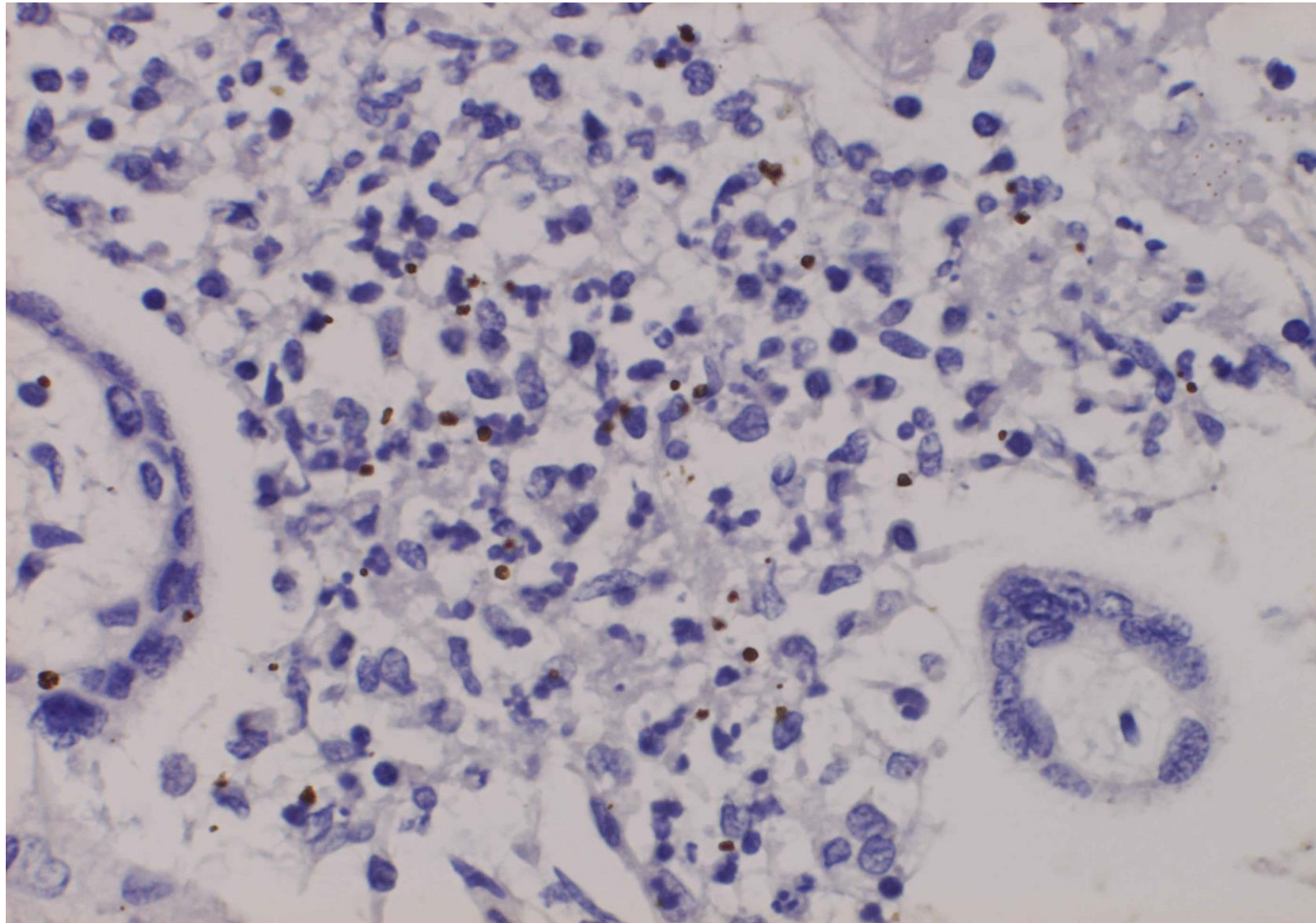
A 25-year-old splenectomized female patient in term pregnancy acutely manifested fulminant pneumococcal infection. At autopsy, the placenta shows multifocal abscesses among the villi. H&E-2



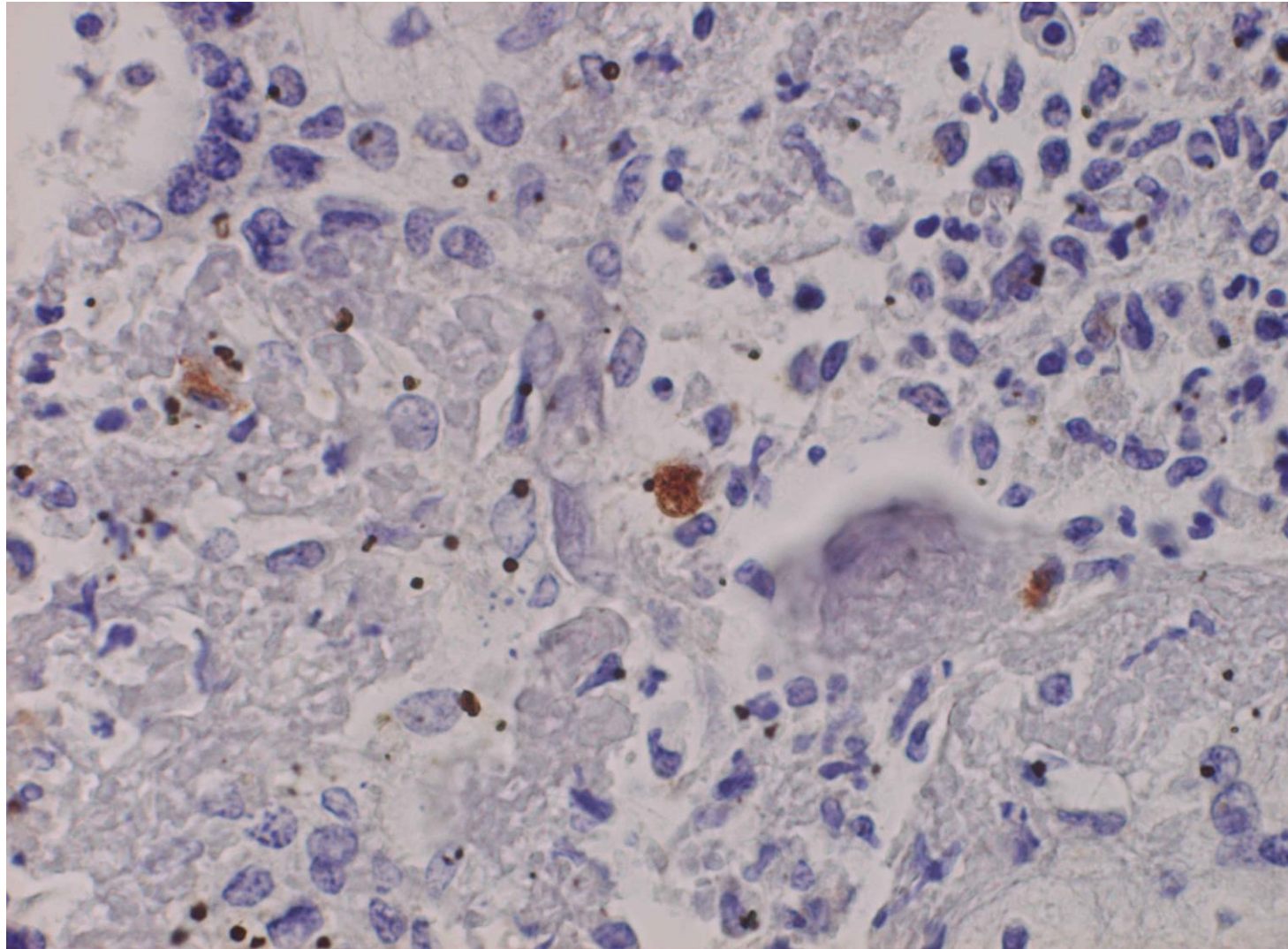
A 25-year-old splenectomized female patient in term pregnancy acutely manifested fulminant pneumococcal infection. At autopsy, the placenta shows multifocal abscesses among the villi. H&E-3



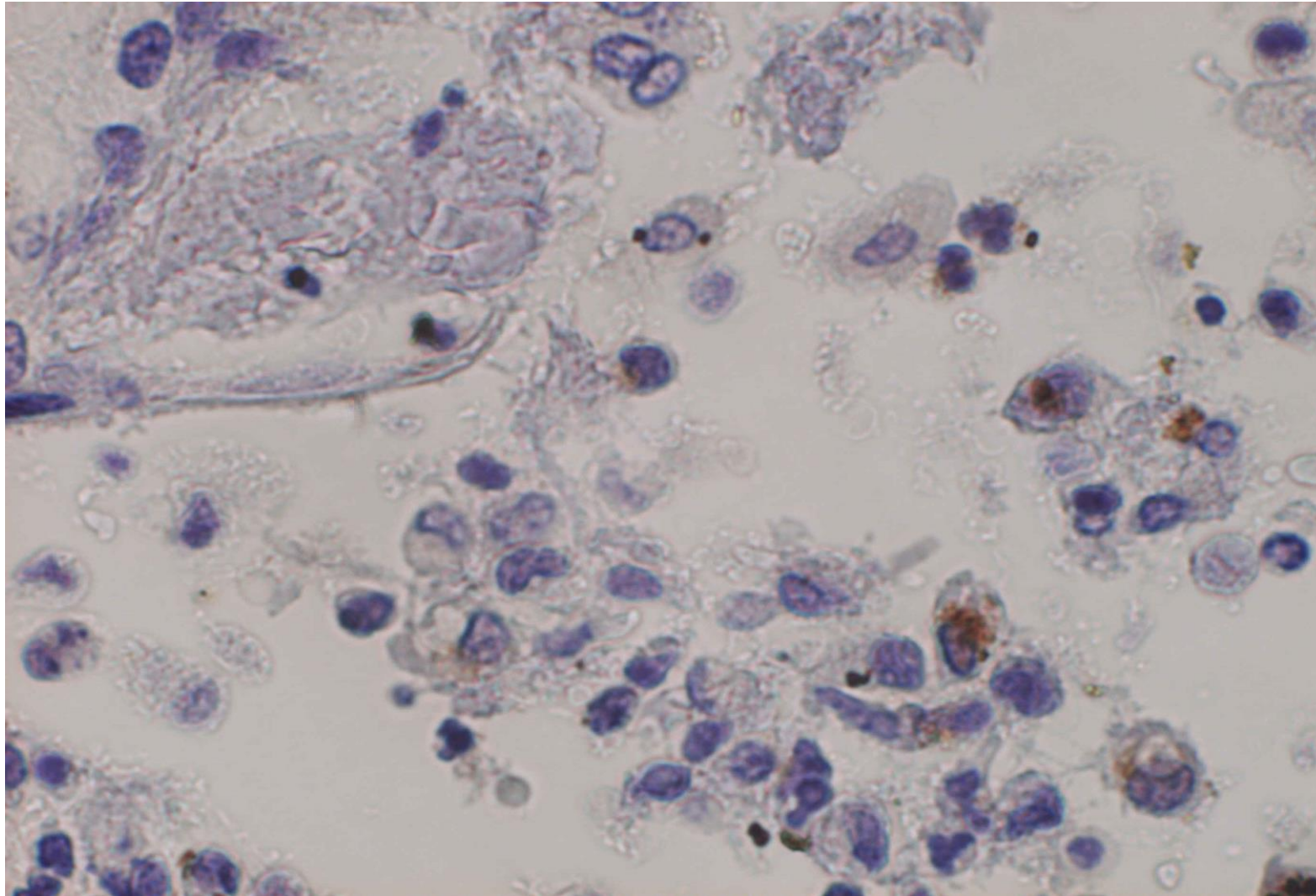
A 25-year-old splenectomized female patient in term pregnancy acutely manifested fulminant pneumococcal infection. At autopsy, the placenta shows multifocal abscesses among the villi. H&E-4



A 25-year-old splenectomized female patient in term pregnancy acutely manifested fulminant pneumococcal infection. Pneumococcal antigens are demonstrated in the placental abscess formed among the villi. Immunostaining for pneumococcal antigens-1

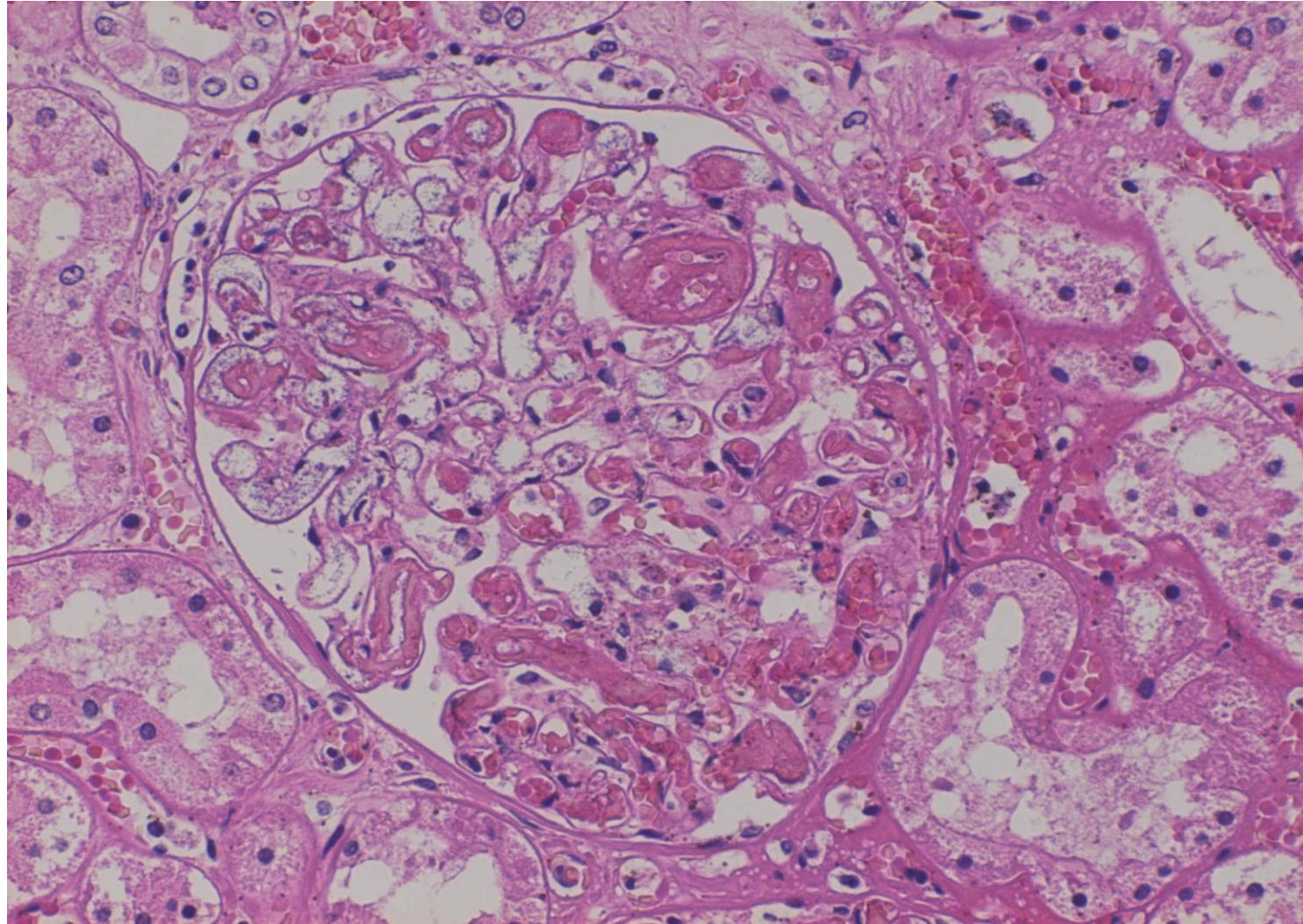


A 25-year-old splenectomized female patient in term pregnancy acutely manifested fulminant pneumococcal infection. Pneumococcal antigens are demonstrated in the placental abscess formed among the villi. Immunostaining for pneumococcal antigens-2

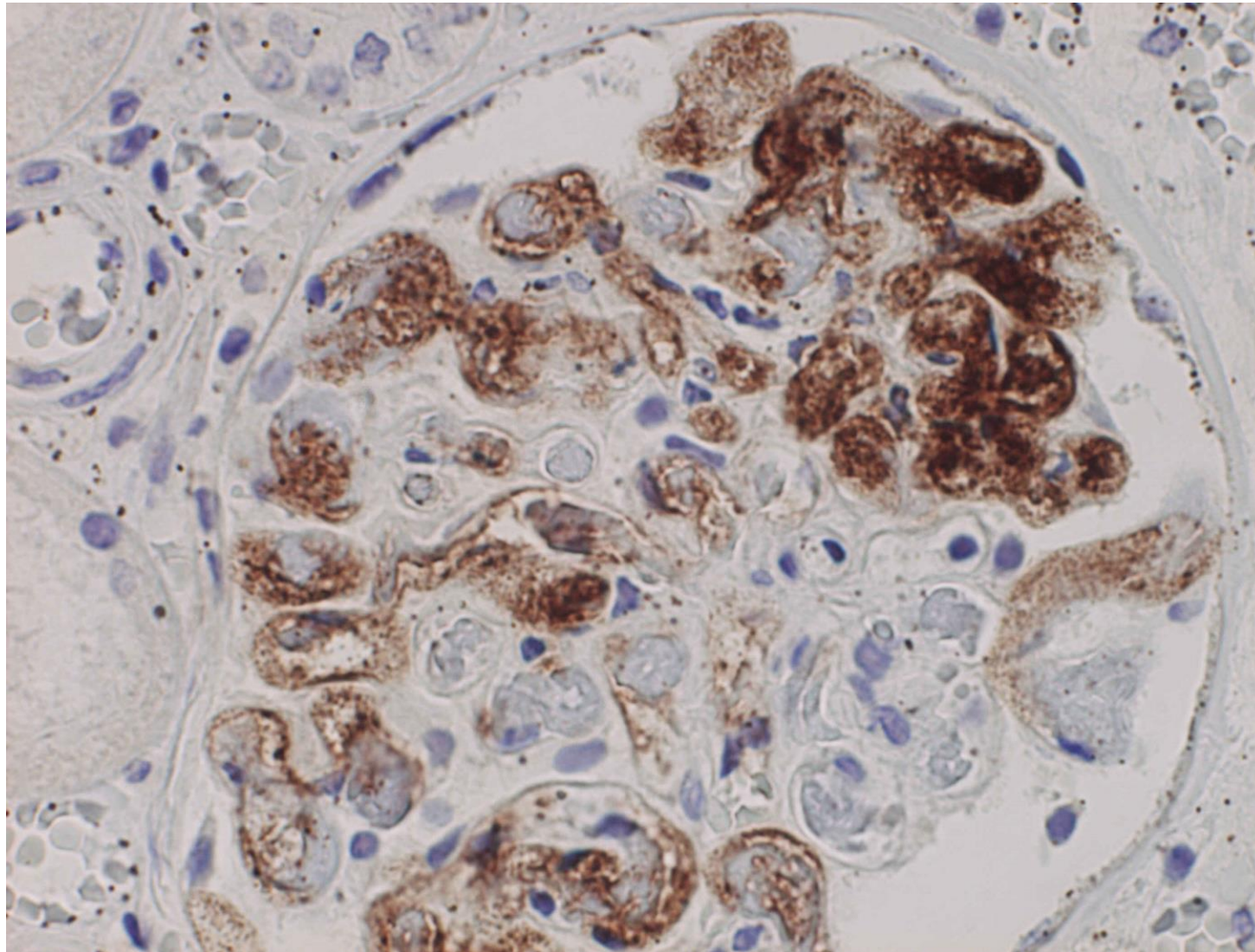


A 25-year-old splenectomized female patient in term pregnancy acutely manifested fulminant pneumococcal infection. Pneumococcal antigens are demonstrated in the placental abscess formed among the villi. Immunostaining for pneumococcal antigens-3





A 25-year-old splenectomized female patient in term pregnancy acutely manifested fulminant pneumococcal infection. The renal glomeruli contain multiple fibrin microthrombi. H&E



A 25-year-old splenectomized female patient in term pregnancy acutely manifested fulminant pneumococcal infection. The renal glomeruli contain pneumolysin-immunoreactive cocci. Immunostaining for pneumolysin