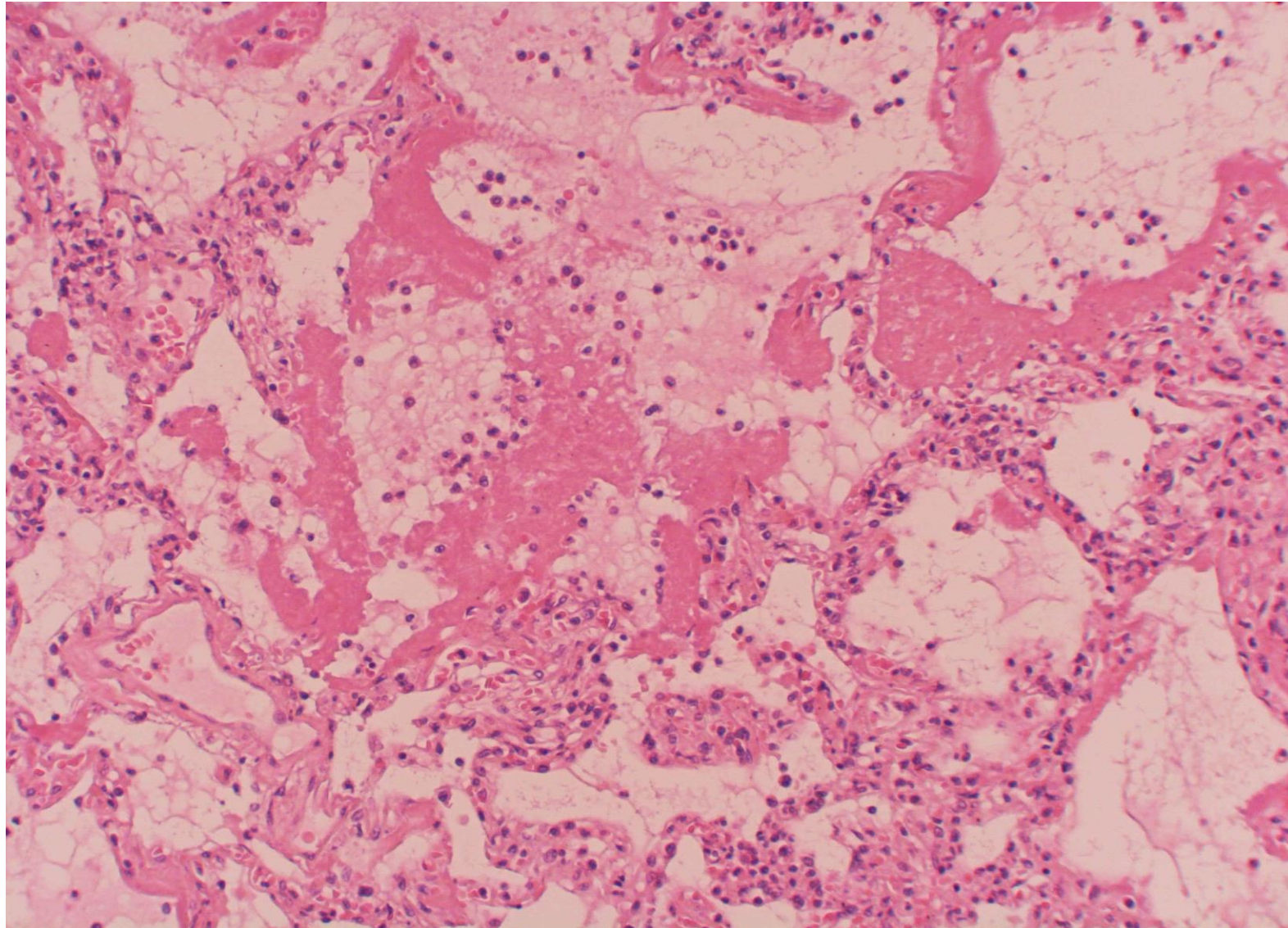


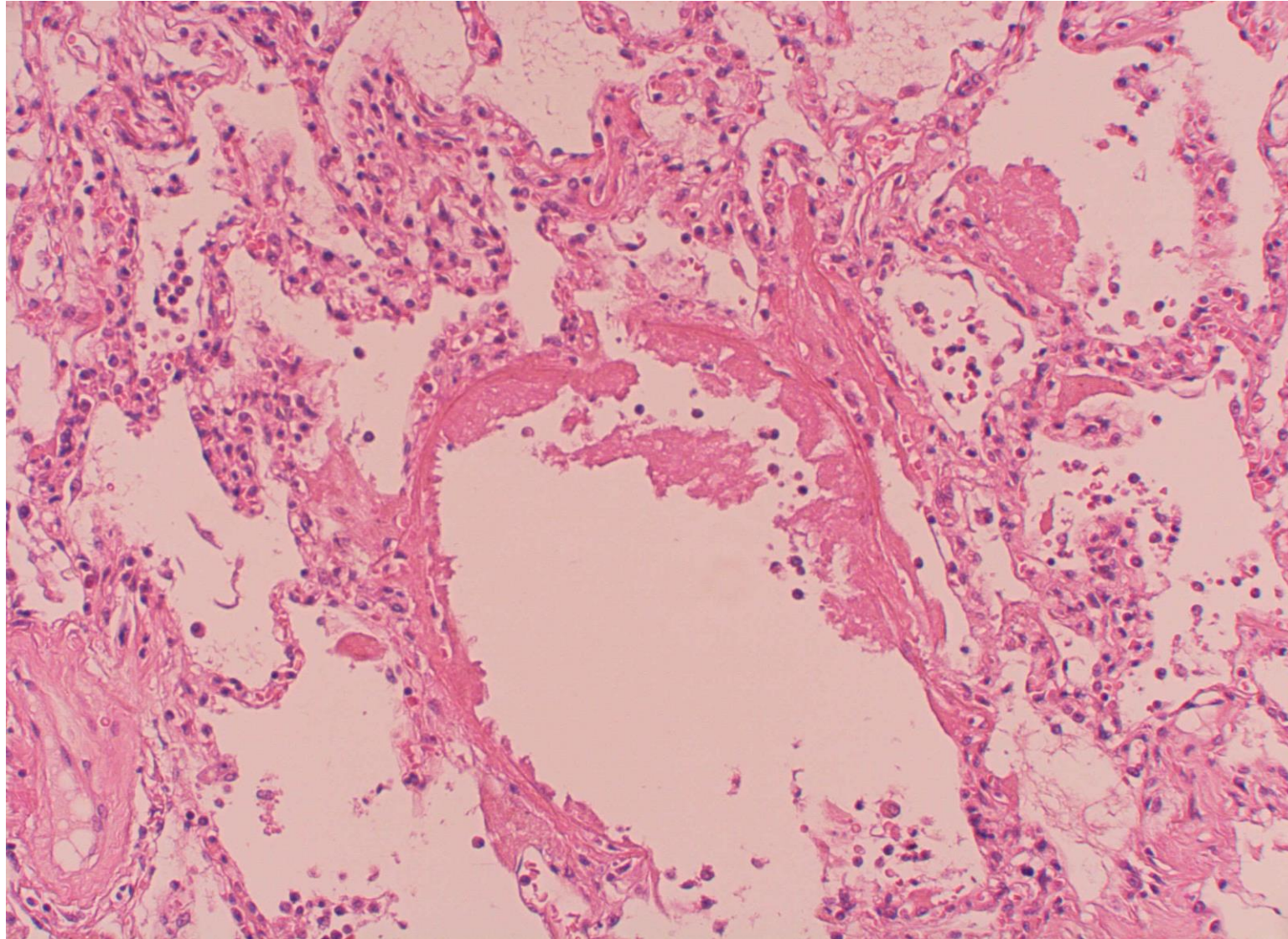
Paramyxovirus-induced acute interstitial pneumonia

A 59-year-old male patient complained of fever, general fatigue, right back pain and dyspnea. Massive right pleural effusion was pointed out. The diagnosis of severe pneumonia was made, and antibiotics treatment was ineffective. Soon, he died of pulmonary failure. The total clinical course was 8 days. At autopsy, bilateral acute interstitial pneumonia of Hamman-Rich type (with a diffuse alveolar damage pattern) showed intranuclear inclusion bodies in the type II alveolar pneumocytes. Ultrastructural study was performed. Paramyxovirus-like particles are clustered in the nuclei of type II pneumocytes. Human respiratory syncytial virus and human metapneumovirus are members of the family Paramyxoviridae.

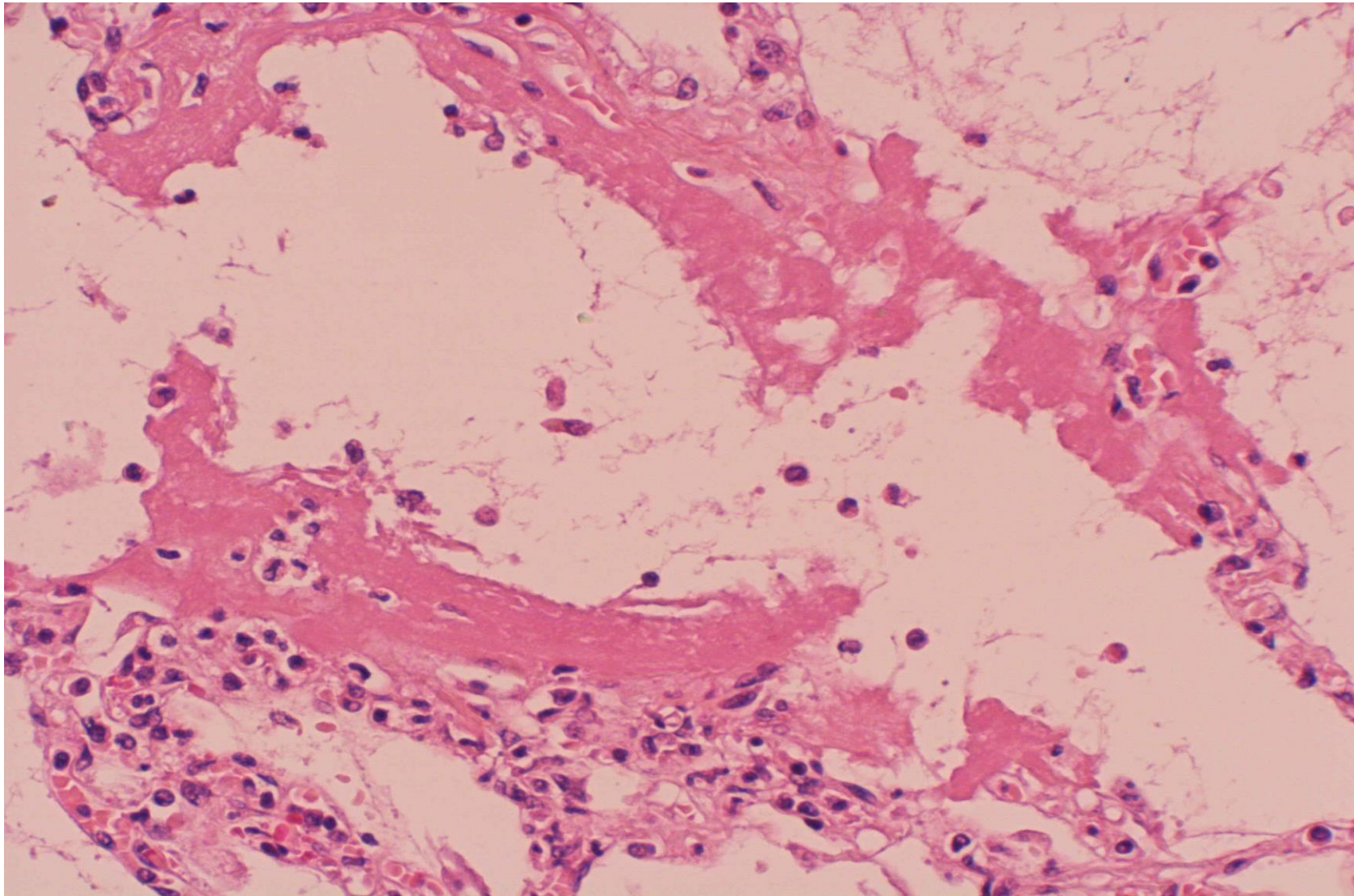
Ref.: Ishiguro T, et al. Viral pneumonia requiring differentiation from acute and progressive diffuse interstitial lung diseases. *Intern Med* 2019; 58(24): 3509-3519. doi: 10.2169/internalmedicine.2696-19



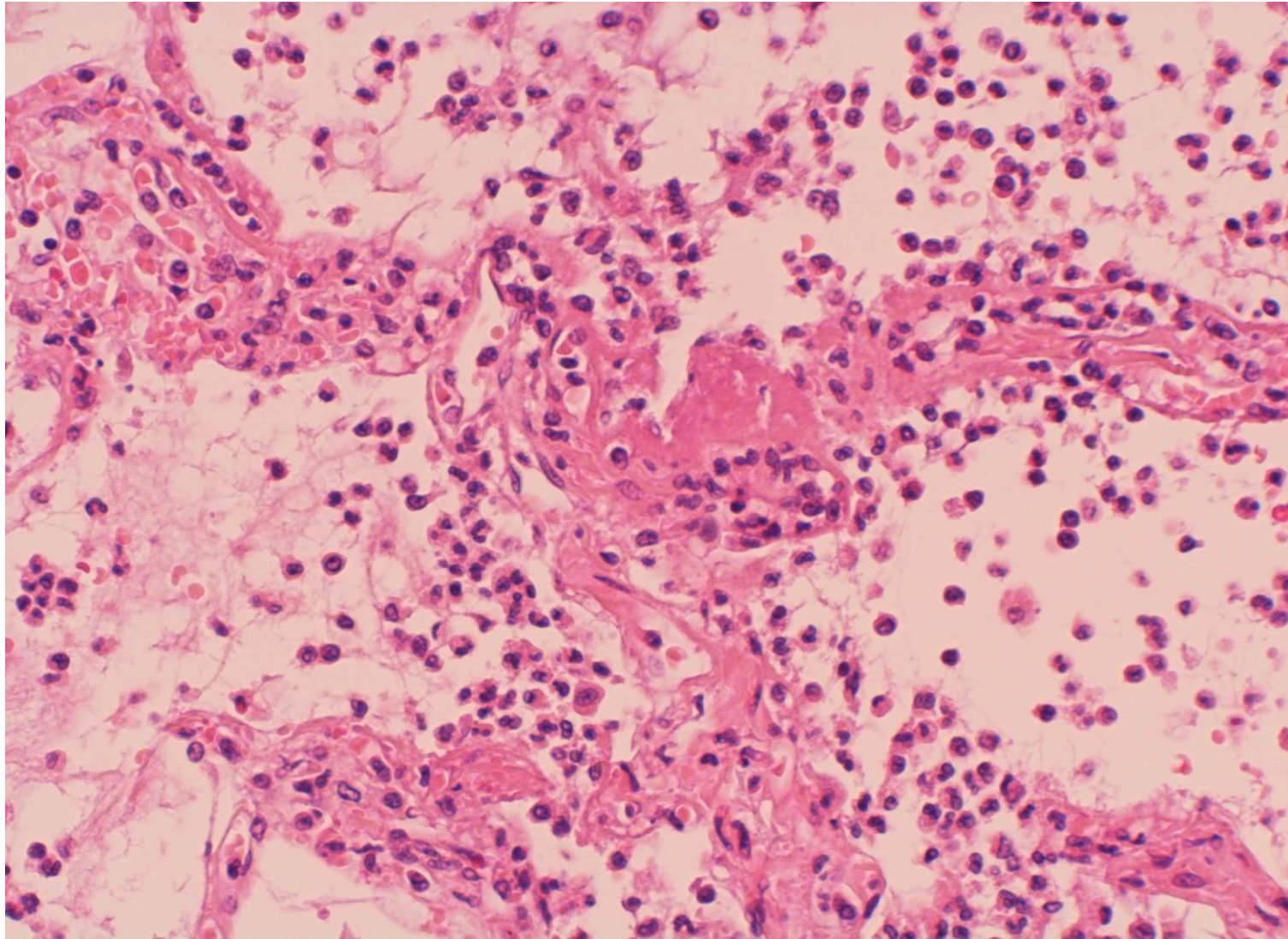
A 59-year-old male patient died of acute interstitial pneumonia of Hamman-Rich type. Hyaline membrane formation and interstitial edema are diffusely observed, resembling diffuse alveolar damage. H&E-1



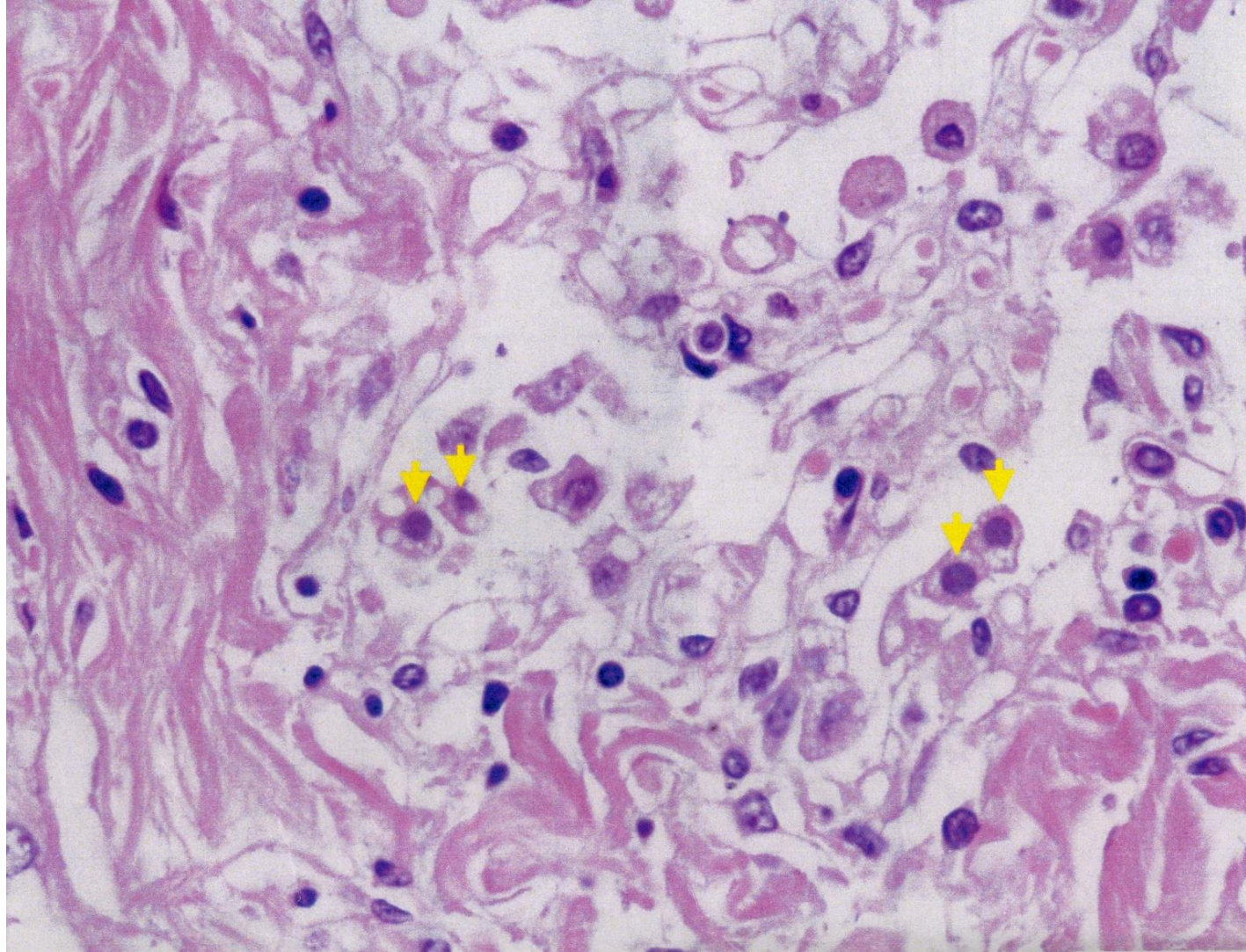
A 59-year-old male patient died of acute interstitial pneumonia of Hamman-Rich type. Hyaline membrane formation and interstitial edema are diffusely observed, resembling diffuse alveolar damage. H&E-2



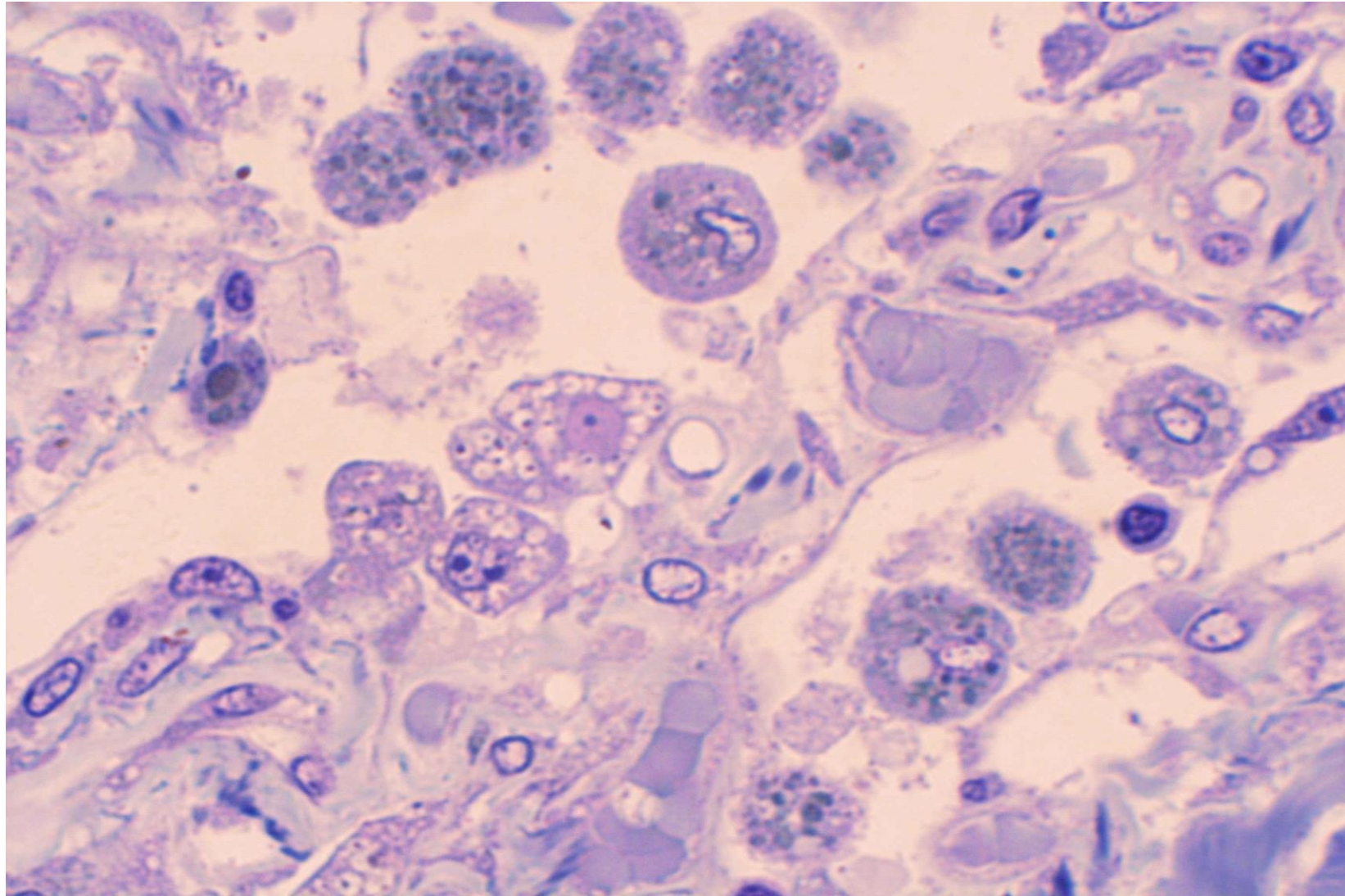
A 59-year-old male patient died of acute interstitial pneumonia of Hamman-Rich type. Hyaline membrane formation and interstitial edema are diffusely observed, resembling diffuse alveolar damage. H&E-3



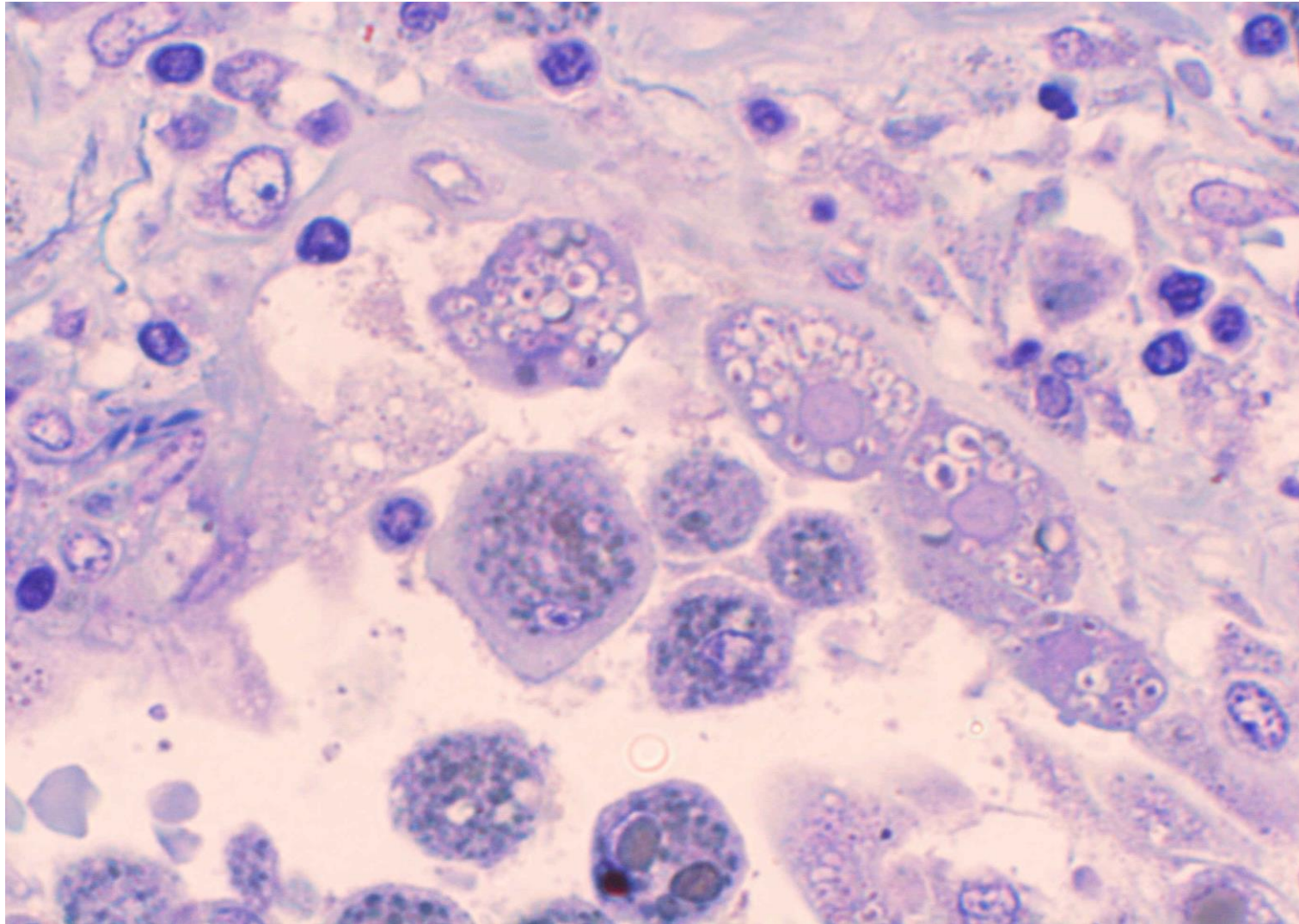
A 59-year-old male patient died of acute interstitial pneumonia of Hamman-Rich type. Interstitial edema, fibrin exudation and neutrophilic clustering along the alveolar septum are observed. H&E-4



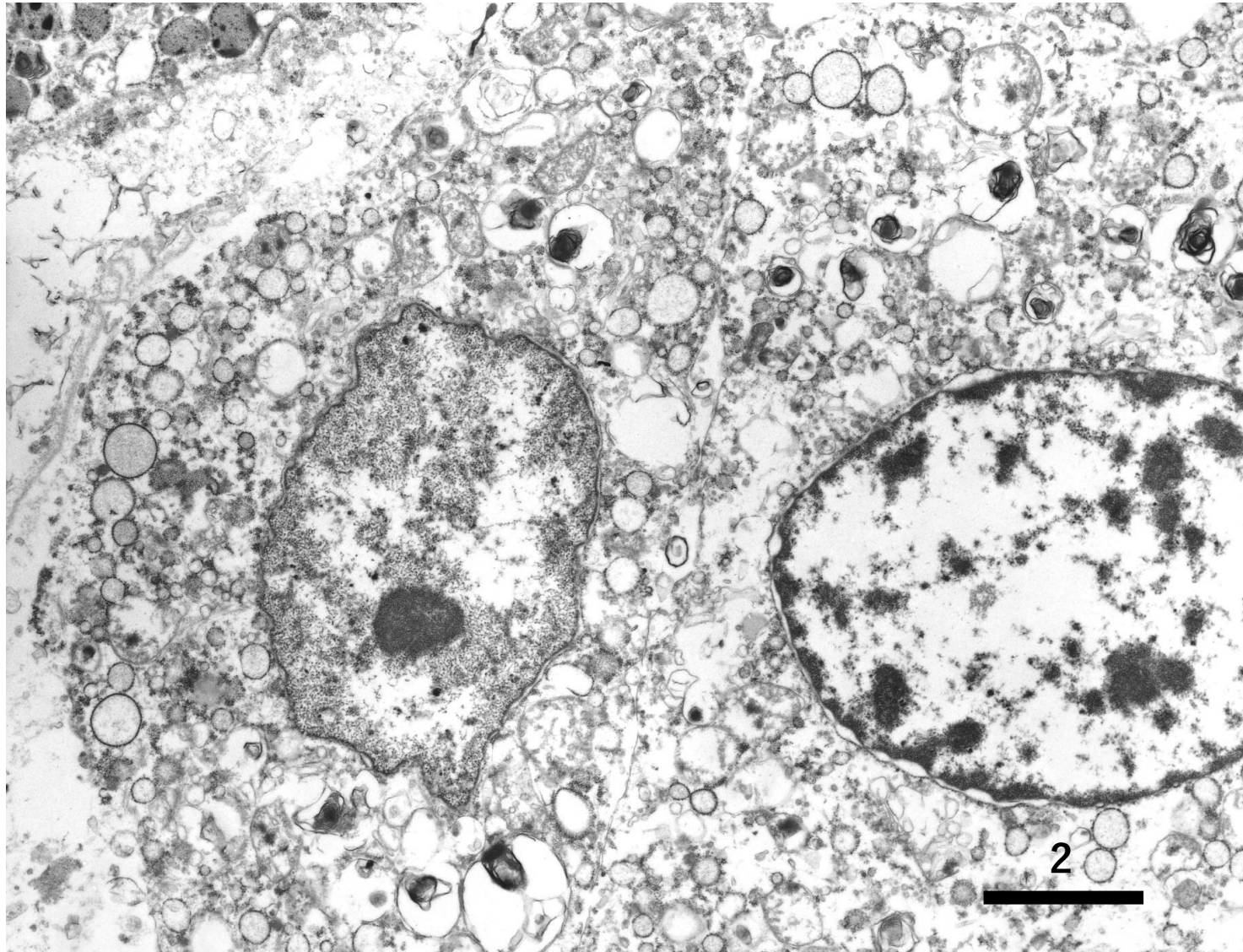
A 59-year-old male patient died of acute interstitial pneumonia of Hamman-Rich type. Close examination of reactive type II pneumocytes reveals intranuclear inclusion-like structures (arrows). H&E-5



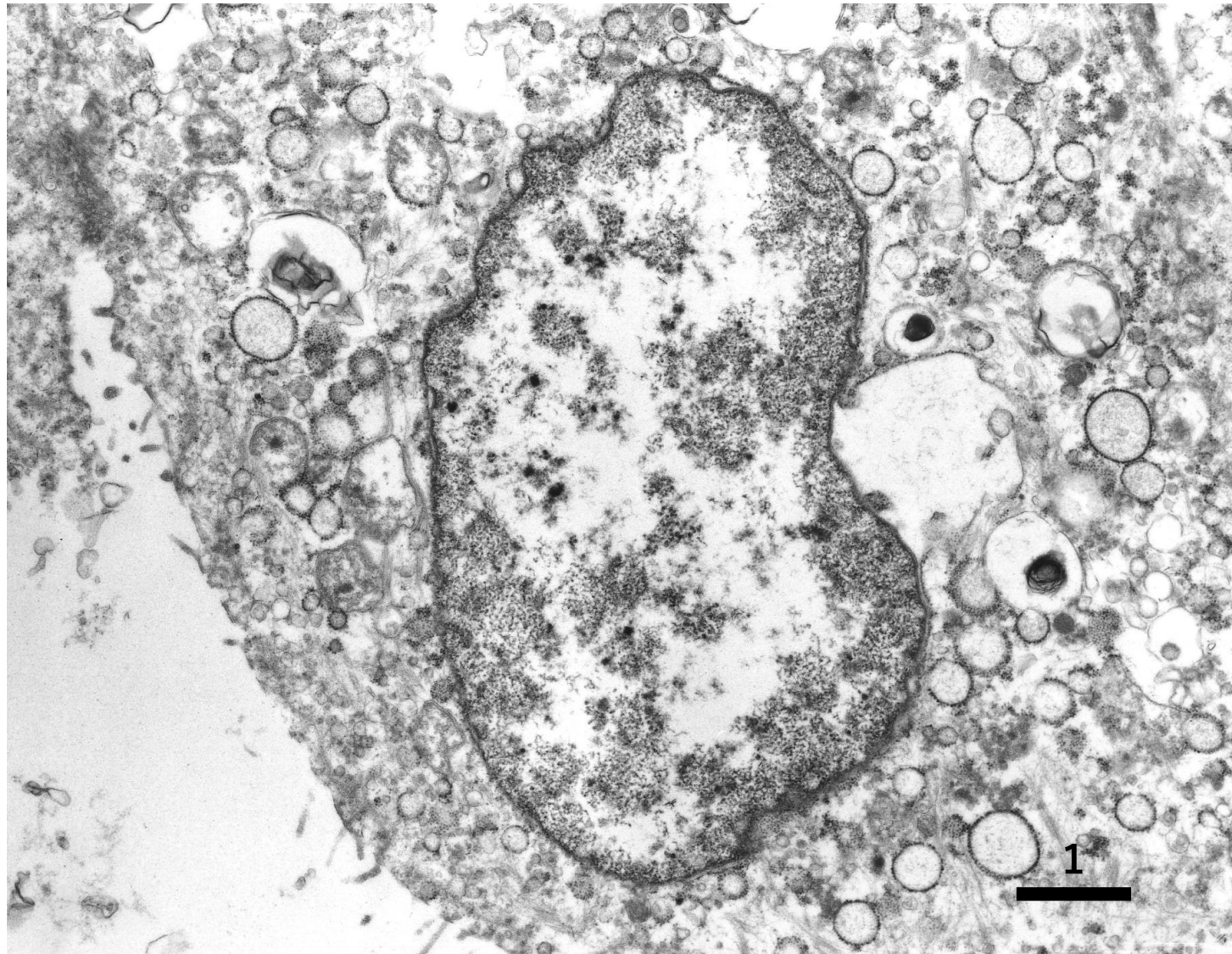
A 59-year-old male patient died of acute interstitial pneumonia of Hamman-Rich type. Toluidine blue-stained thick section for EM study discloses intranuclear inclusion-like structures in reactive type II pneumocytes. Toluidine blue in thick section-1



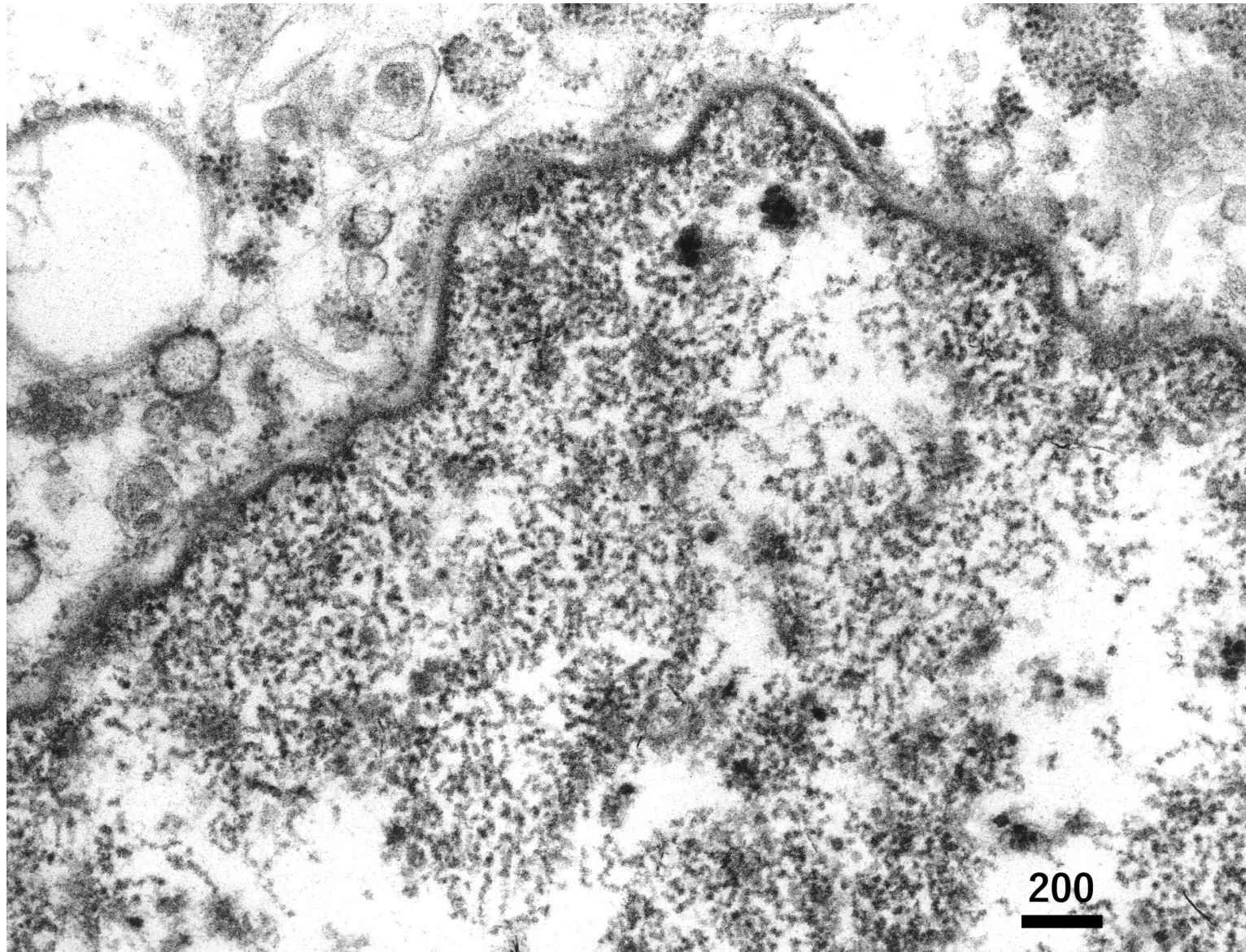
A 59-year-old male patient died of acute interstitial pneumonia of Hamman-Rich type. Toluidine blue-stained thick section for EM study discloses intranuclear inclusion-like structures in reactive type II pneumocytes. Toluidine blue in thick section-2



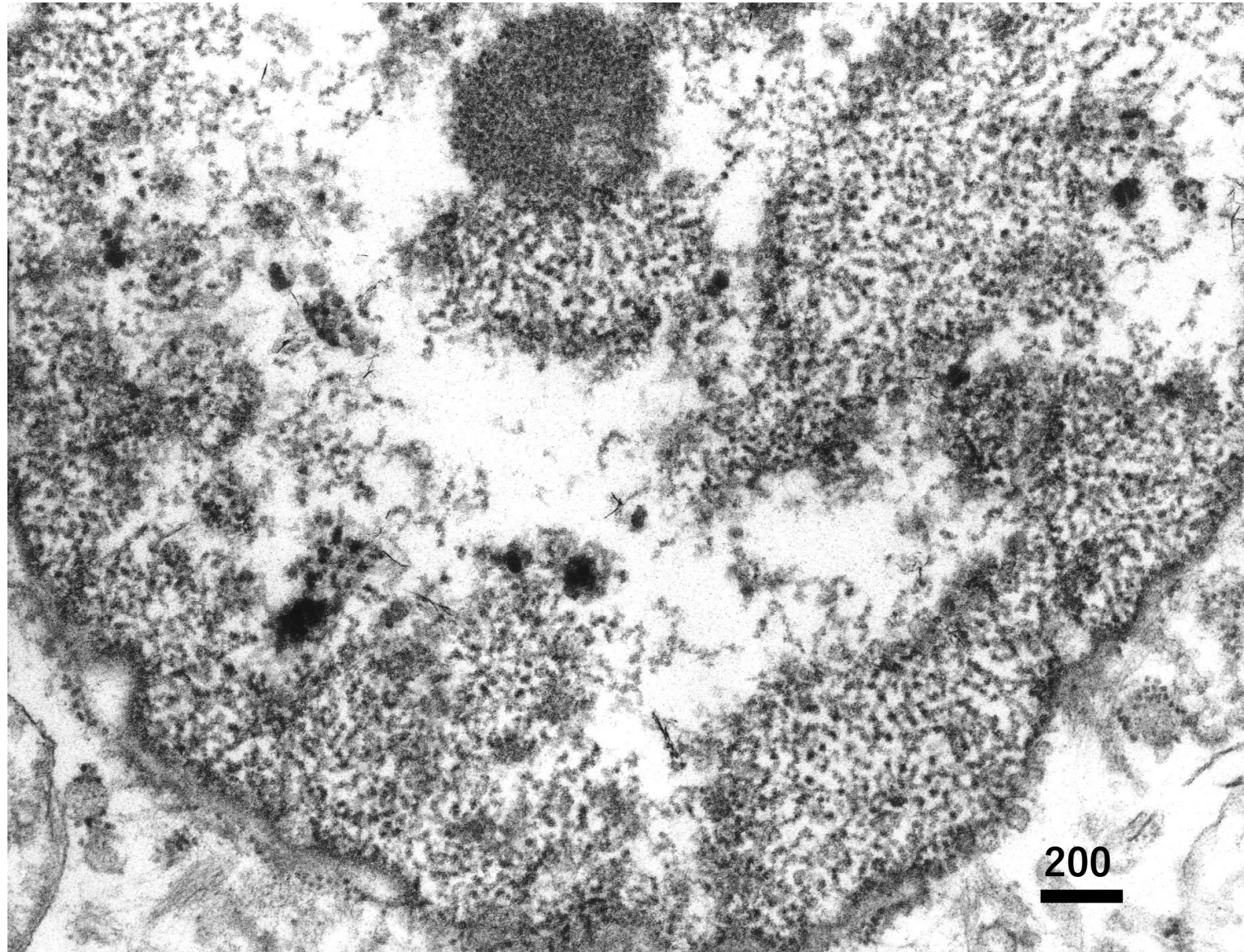
A 59-year-old male patient died of acute interstitial pneumonia of Hamman-Rich type. EM study discloses clusters of small virus-like particles in the nucleus of a reactive type II pneumocyte. Note lamellar bodies in the cytoplasm. EM-1



A 59-year-old male patient died of acute interstitial pneumonia of Hamman-Rich type. EM study discloses clusters of small virus-like particles in the nucleus of a reactive type II pneumocyte. Note lamellar bodies in the cytoplasm. EM-2



A 59-year-old male patient died of acute interstitial pneumonia of Hamman-Rich type. EM study discloses clusters of small rod-shaped virus-like particles in the nucleus of a reactive type II pneumocyte. EM-3



A 59-year-old male patient died of acute interstitial pneumonia of Hamman-Rich type. EM study discloses clusters of small rod-shaped virus-like particles in the nucleus of a reactive type II pneumocyte. EM-4