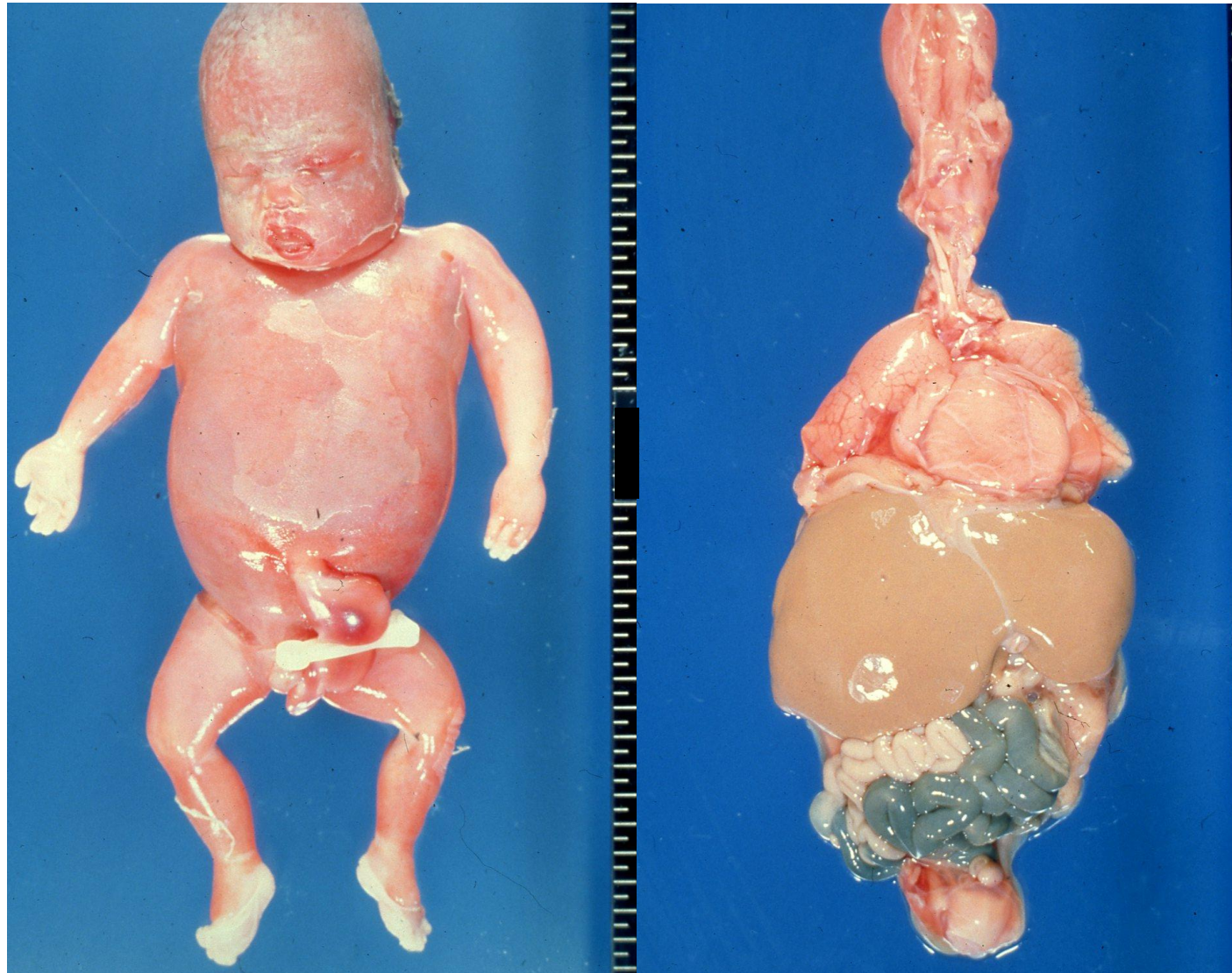


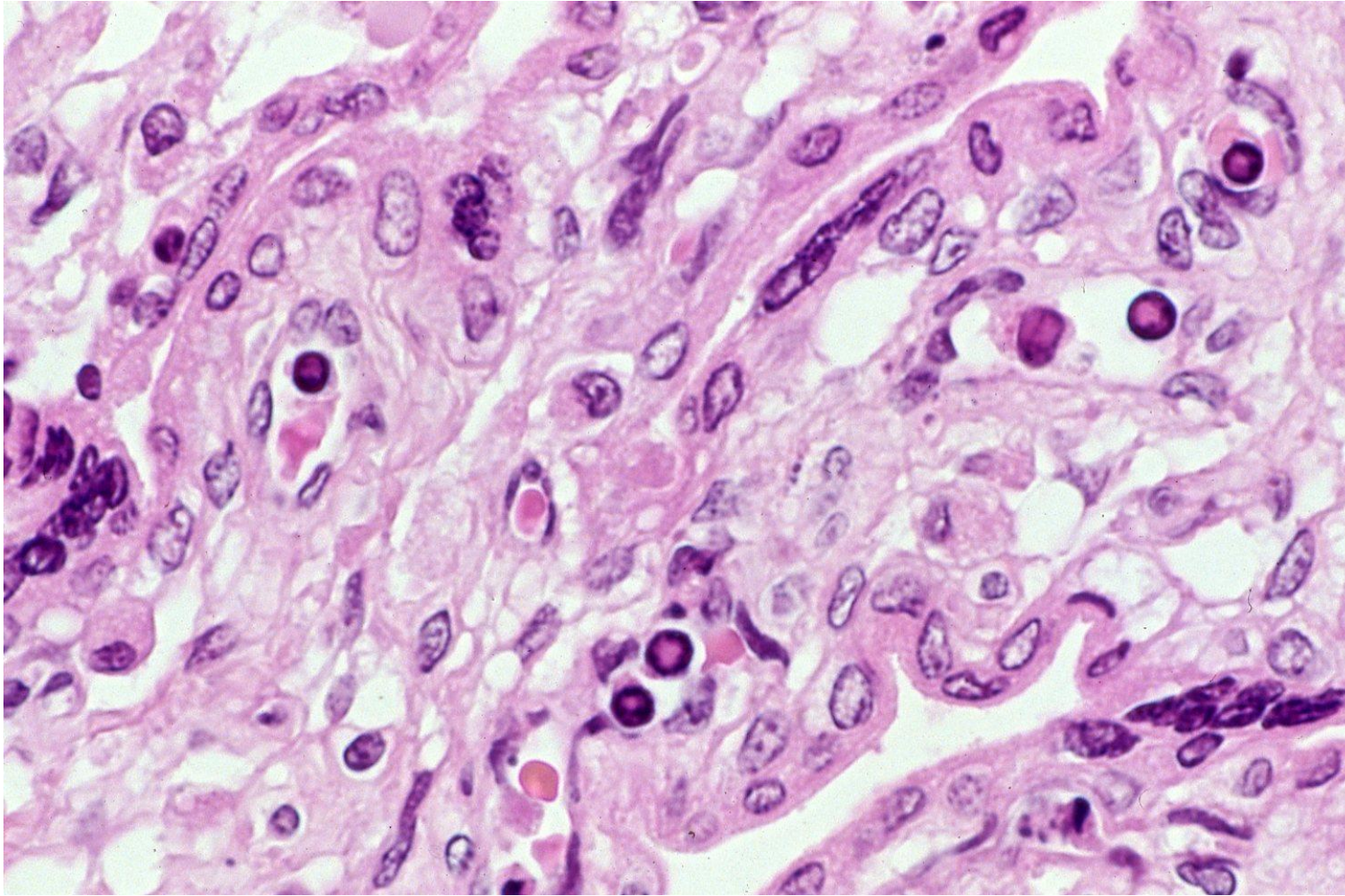
# Hydrops fetalis due to Parvovirus B19 infection: an autopsy case

Erythema infectiosum (fifth disease) is an acute viral infection of children, mediated by droplet infection of Parvovirus B19. The latent period is 10 days. Erythema on the cheek is characteristic. In Japan, it is nicknamed as “apple disease”. When the virus infects a mid-term pregnant woman in the 19<sup>th</sup> -29<sup>th</sup> week of gestation (the period of hepatic hematogenesis), the fetus is susceptible to hydrops fetalis. Parvovirus B19 infects erythroblasts to cause severe anemia, resulting in systemic edema in the fetus.

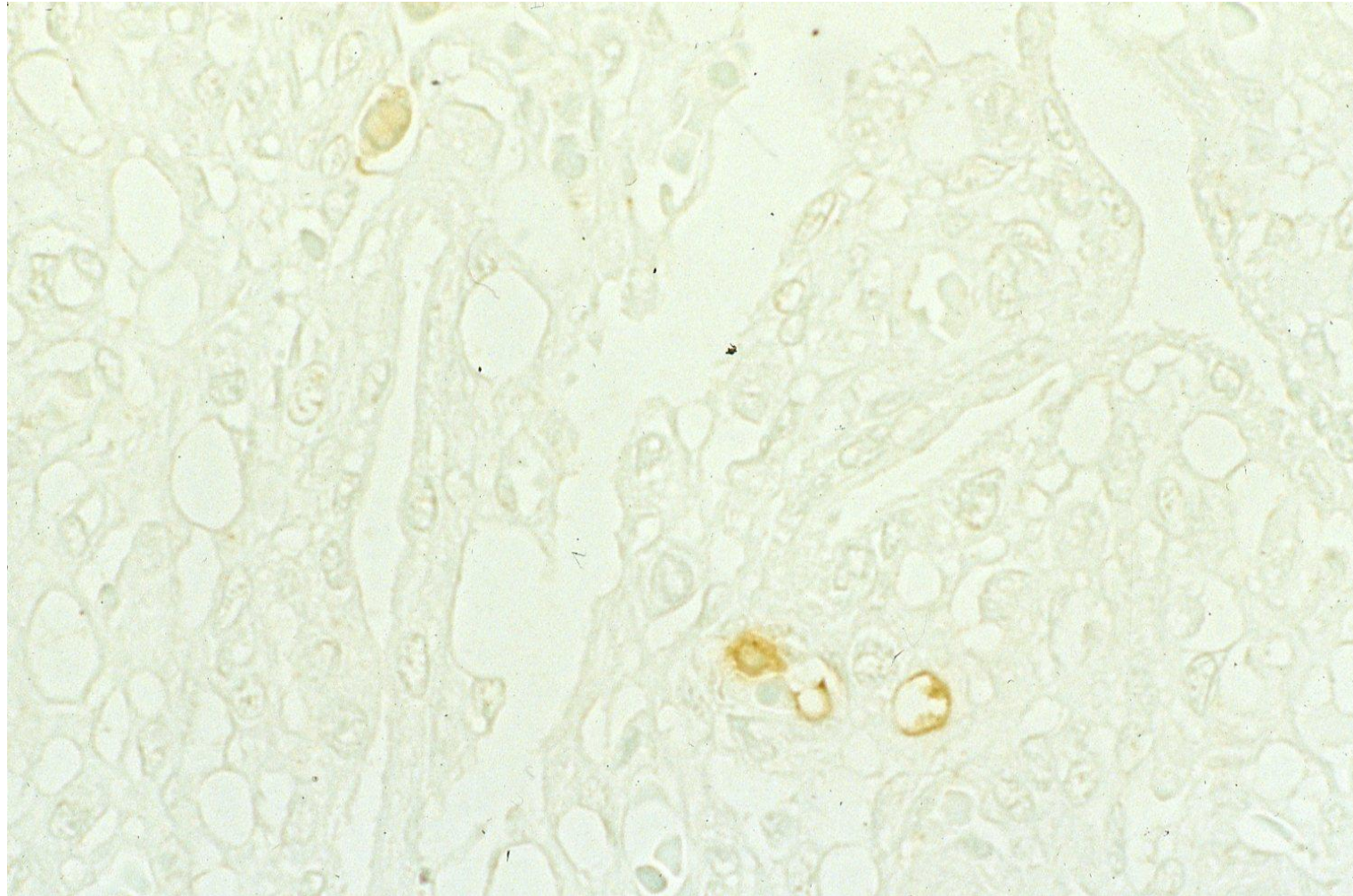
Hydrops fetalis in a dead fetus at the 25<sup>th</sup> gestation (body weight: 1,010 g) is presented. The mother suffered erythema infectiosum at the 10<sup>th</sup> week of gestation. Grossly, the liver is markedly anemic. Microscopically, intranuclear eosinophilic inclusion bodies are seen in erythroblasts.



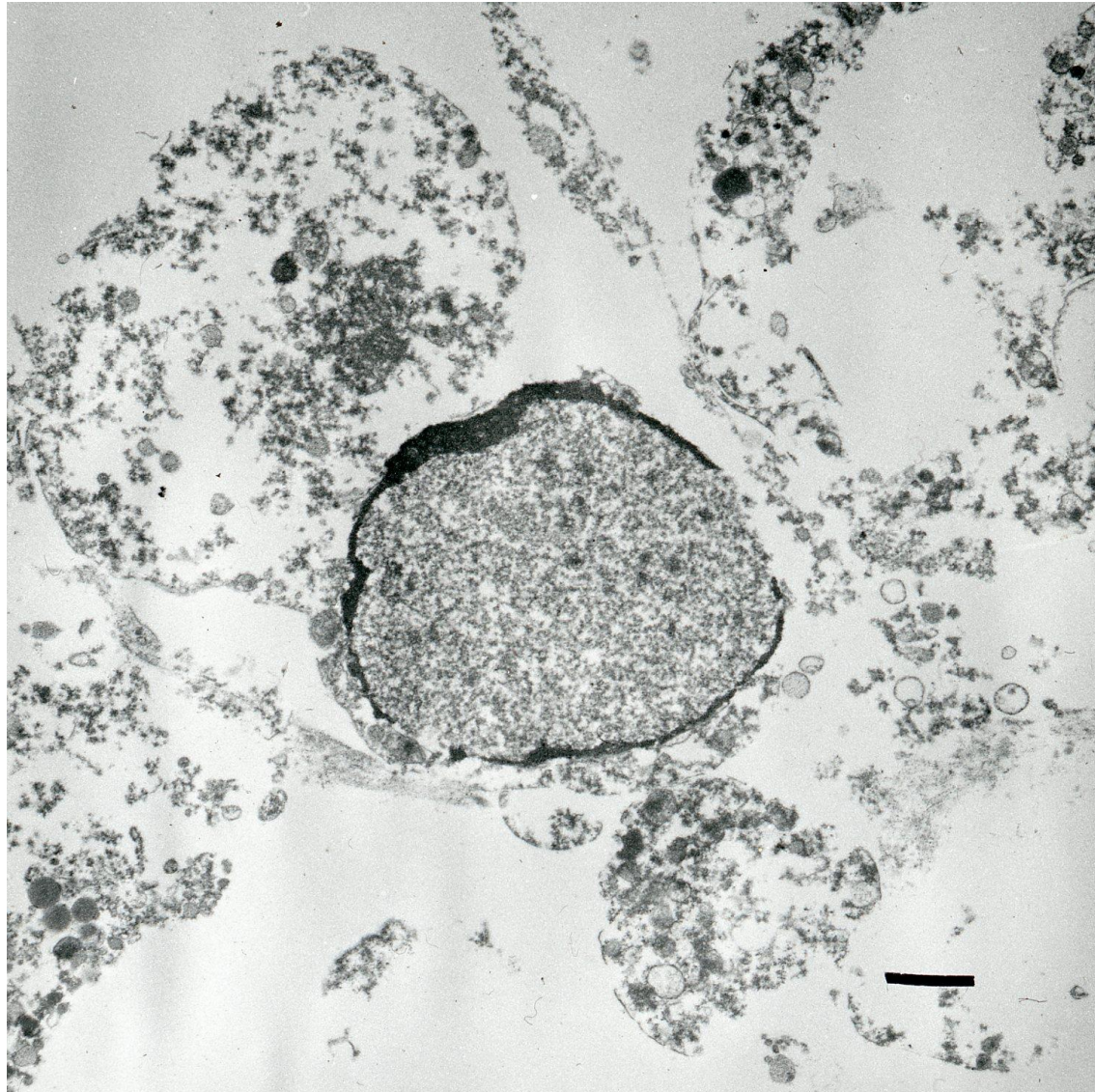
A mildly macerated fetus at the 25<sup>th</sup> gestation (weighing 1,010 g) reveals marked systemic edema with ascites 70 mL and pleural effusion 20 mL (left). The liver (30 g) is markedly anemic, lightly brown in color (right).



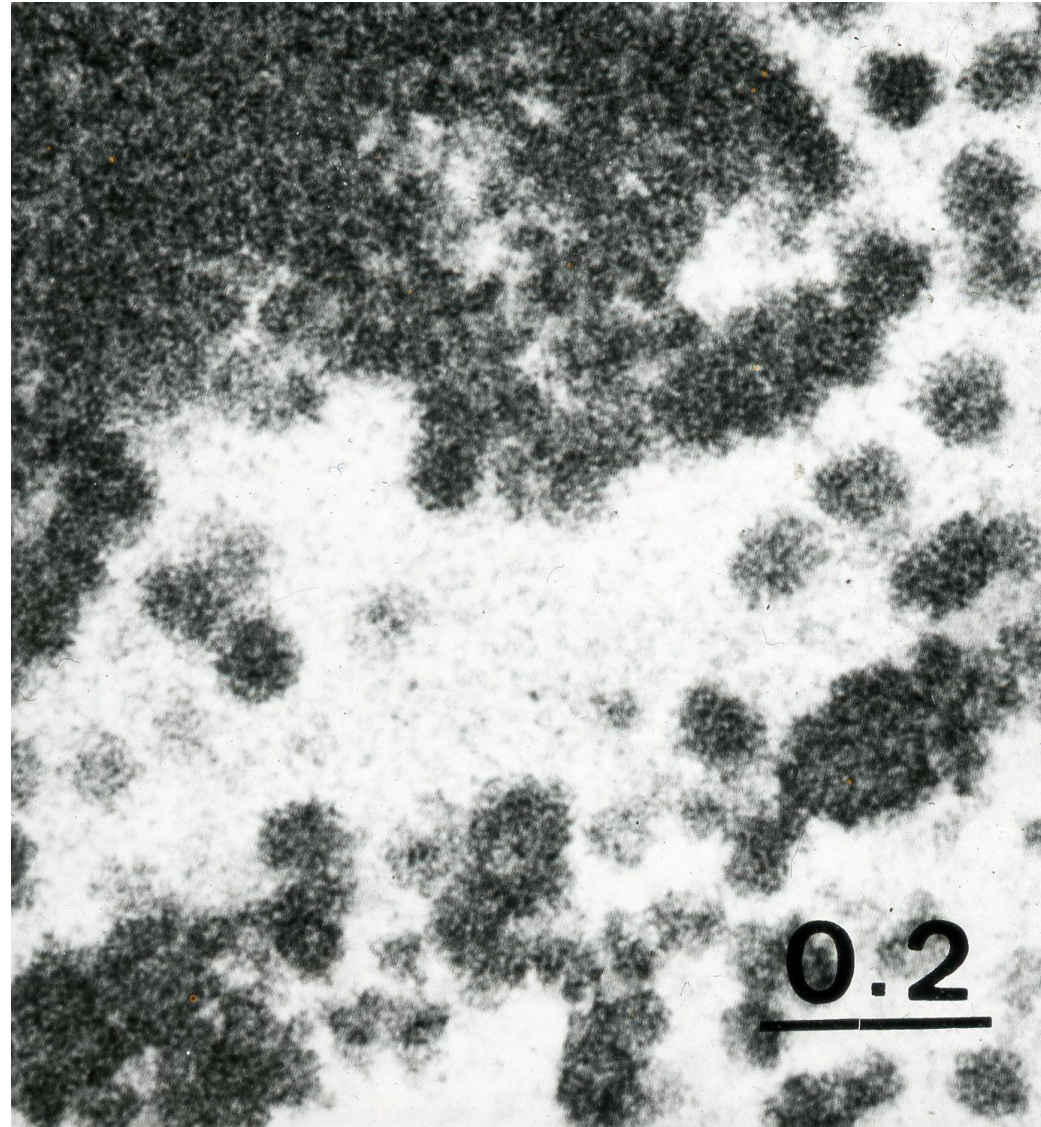
In the placenta, nucleated red cells (erythroblasts) in capillary vessels show eosinophilic intranuclear inclusion bodies. The nuclear margin is markedly thickened. H&E



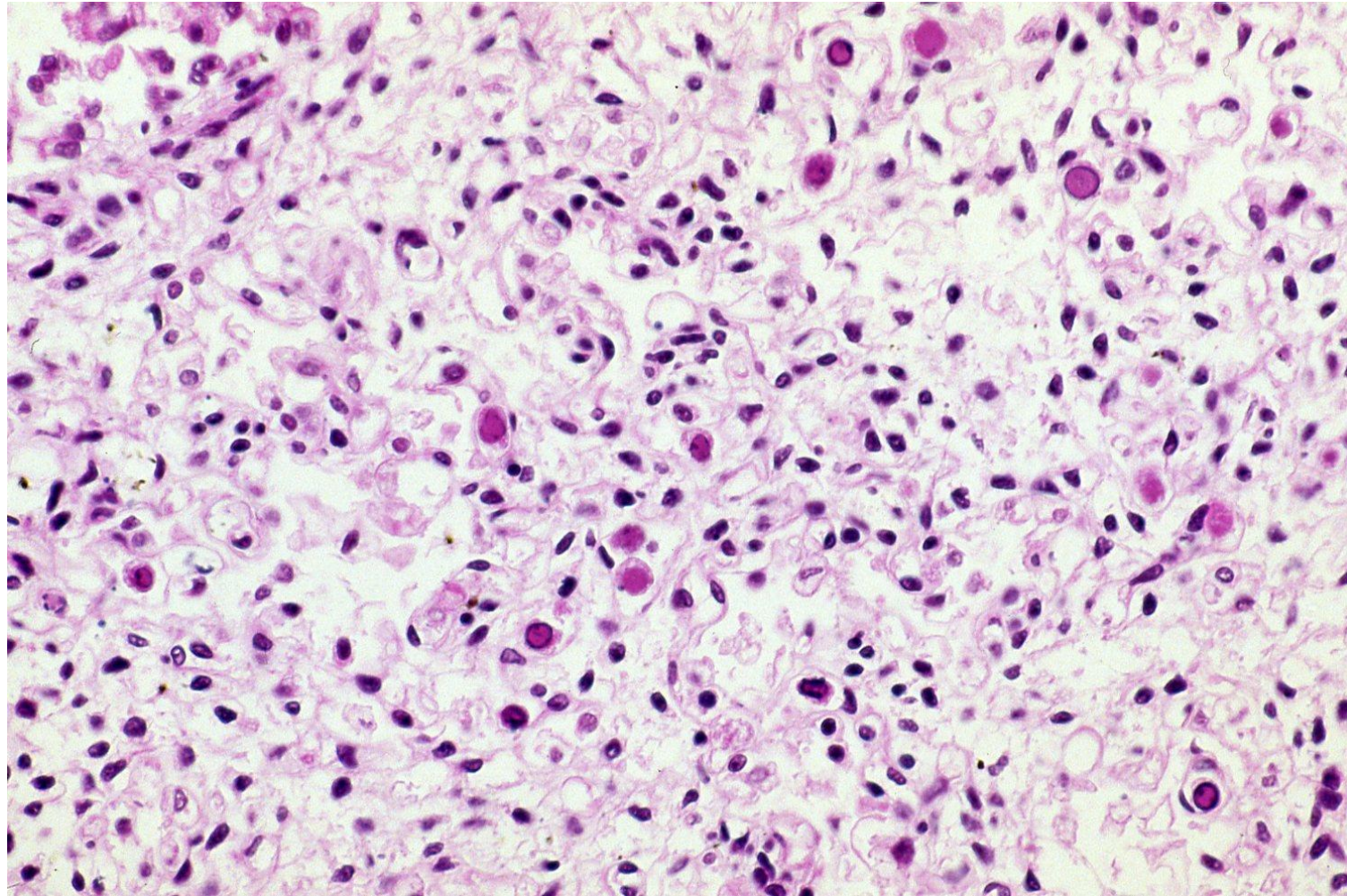
In the placenta, nucleated red cells (erythroblasts) in capillary vessels are immunostained with monoclonal antibody to Parvovirus B19. Immunostaining for Parvovirus B19



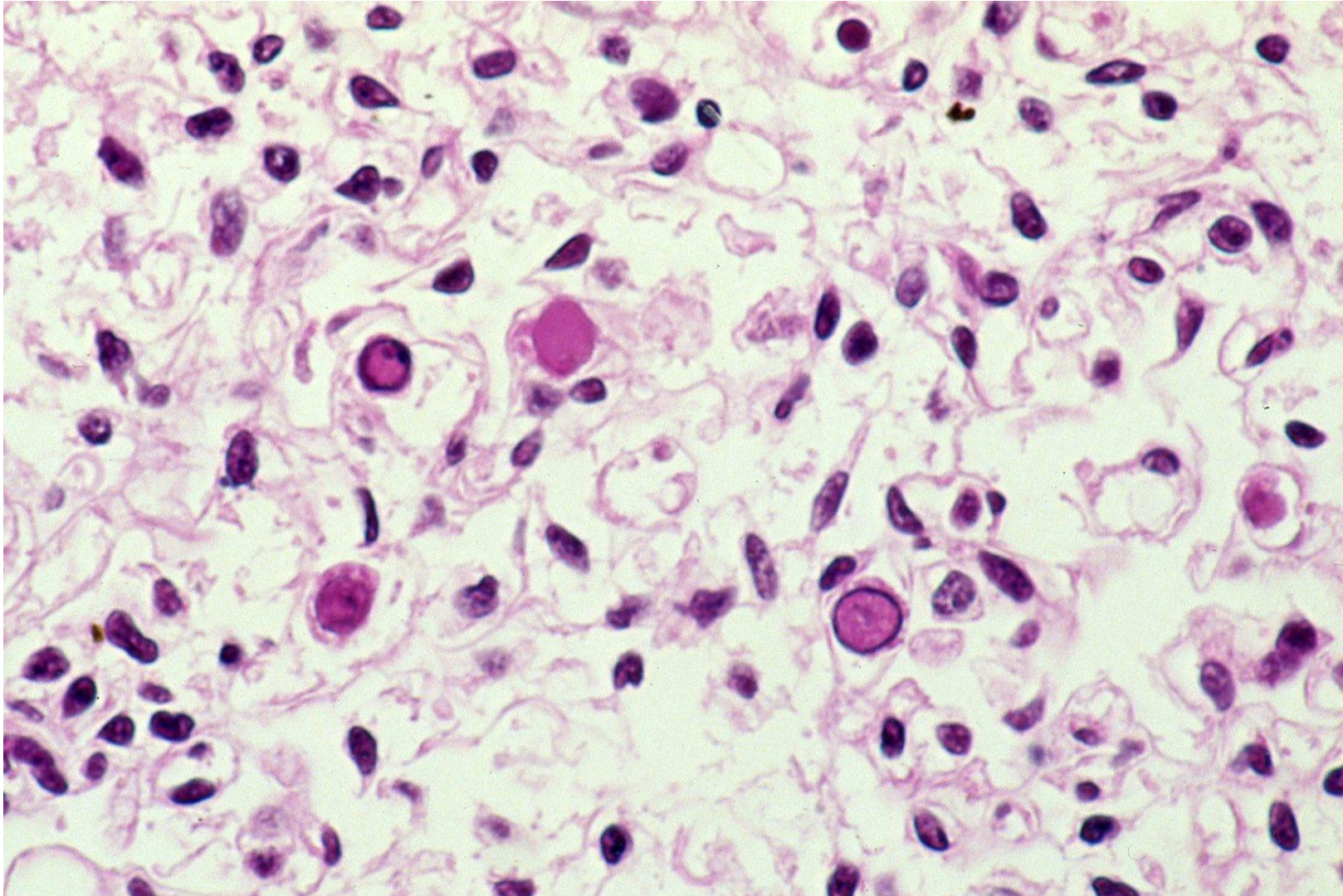
The nucleus of an erythroblast in the capillary vessel of the placenta is filled with viral particles. EM study-1



The nucleus of an erythroblast in the capillary vessel of the placenta is filled with small viral particles. The size of the viral particle is around 18 nm. Parvovirus belongs to a single-stranded DNA virus. EM study-2

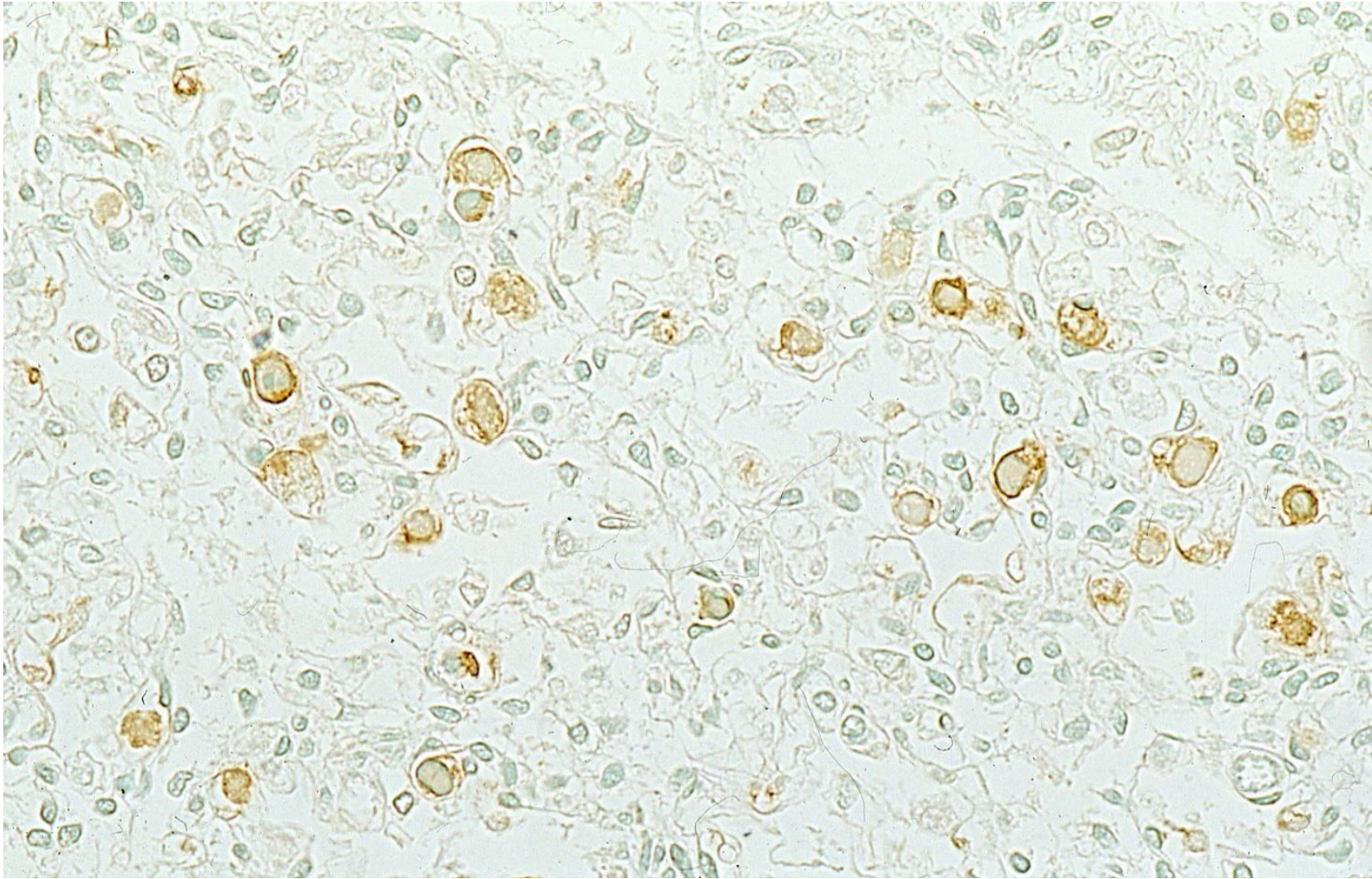


In the autolytic lung, nucleated red cells (erythroblasts) in capillary vessels show eosinophilic intranuclear inclusion bodies. The nuclear margin is markedly thickened. H&E-a



In the autolytic lung, nucleated red cells (erythroblasts) in capillary vessels show eosinophilic intranuclear inclusion bodies. The nuclear margin is markedly thickened. H&E-b





In the autolytic lung, nucleated red cells (erythroblasts) in capillary vessels are immunoreactive for Parvovirus B19 Ag. H&E