

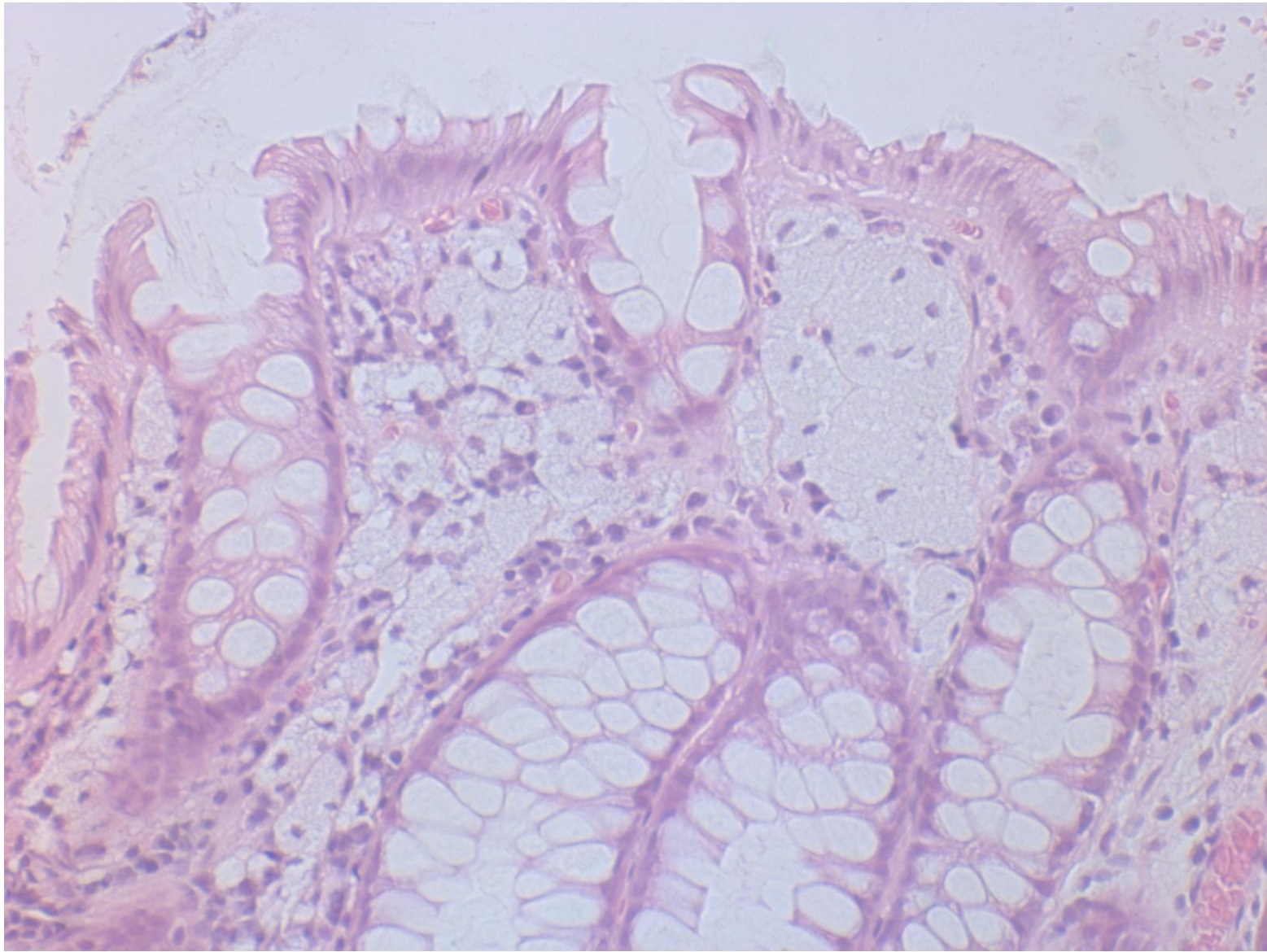
Muciphages in the colonic mucosa and melanosis coli, electron microscopic features

Muciphages (mucin-containing macrophages) are a common feature of biopsy specimens of the large intestinal mucosa, even in the absence of other abnormalities such as active inflammation or evidence of chronic inflammatory bowel disease. The presence of muciphages reflects previous occult and clinically unimportant mucosal damages. They thus have no diagnostic significance: they should be distinguished from metastatic signet ring cell carcinoma.

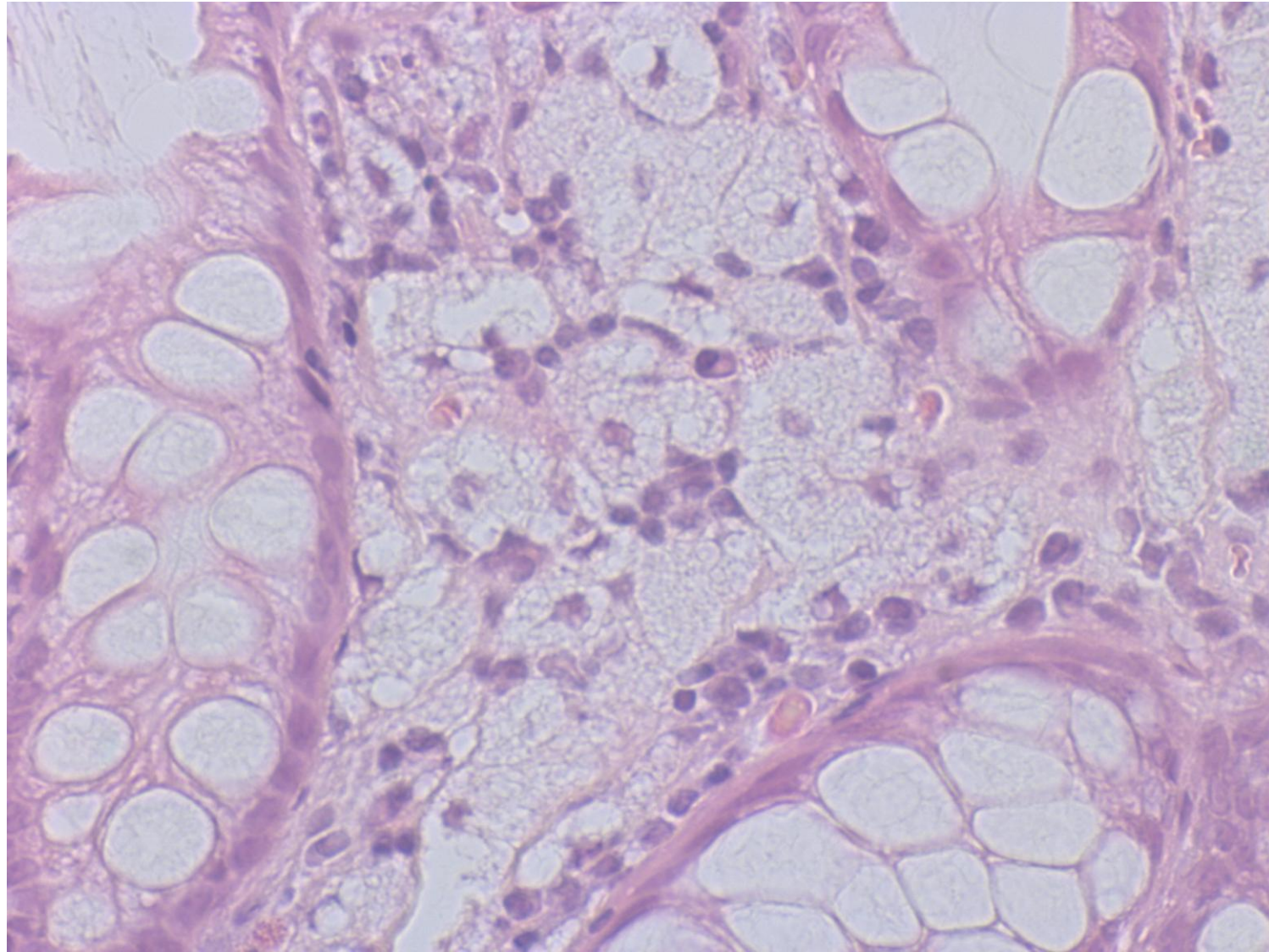
Melanosis coli is characterized by abnormal brown or black pigmentation deposits of ceroid in macrophages of the colonic mucosa. The mucosa is grossly black in color. It is usually caused by prolonged use of anthraquinone laxatives.

Ref.-1: Shepherd NA. What is the significance of muciphages in colorectal biopsies? Muciphages and other mucosal accumulations in the colorectal mucosa. *Histopathology* 2000; 36(6): 559-562. doi: 10.1046/j.1365-2559.2000.0954b.x

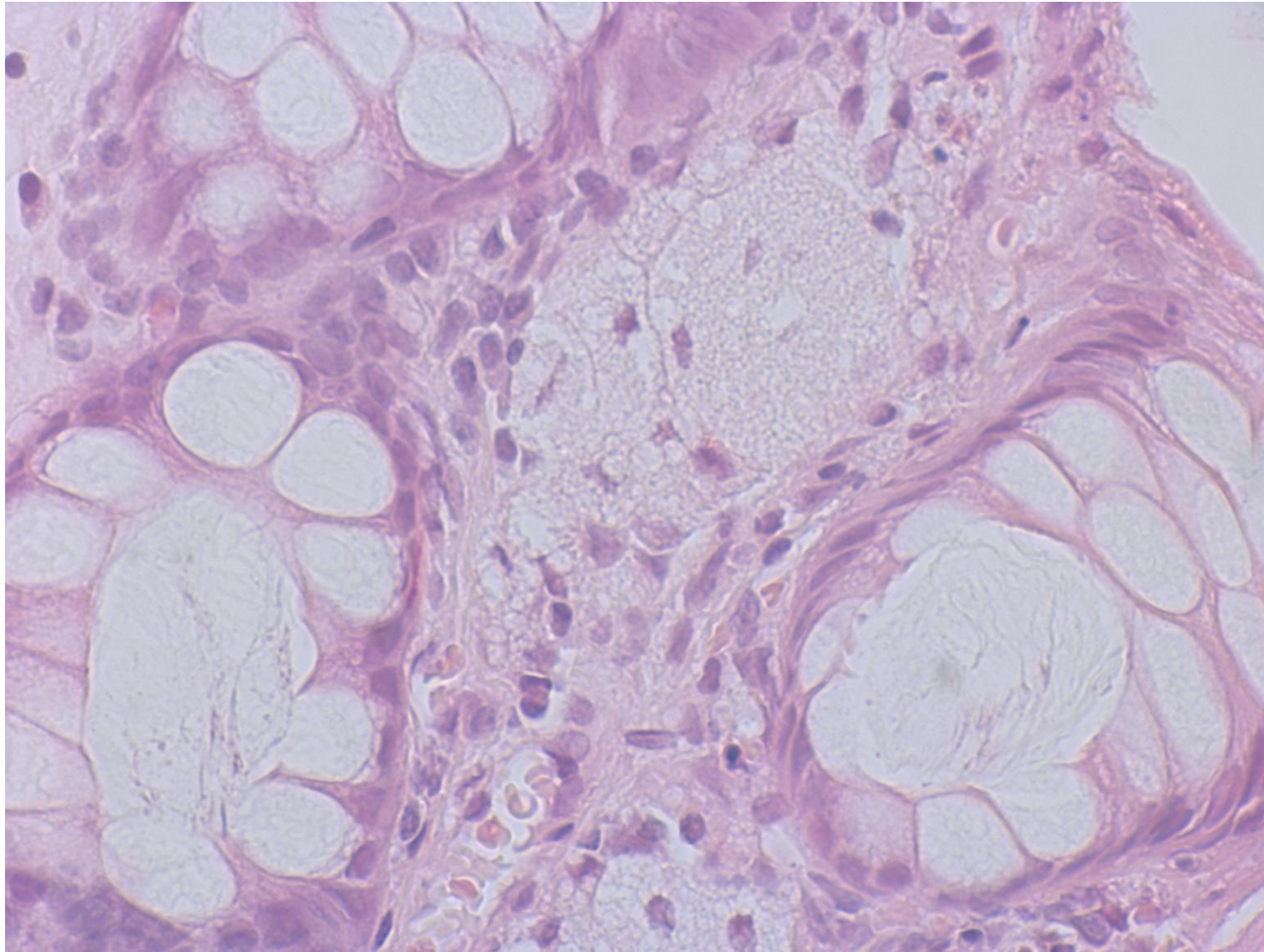
Ref.-2: Li XA, et al. Histopathology of melanosis coli and determination of its associated genes by comparative analysis of expression microarrays. *Mol Med Rep* 2015; 12(4): 5807-5815. doi: 10.3892/mmr.2015.4126



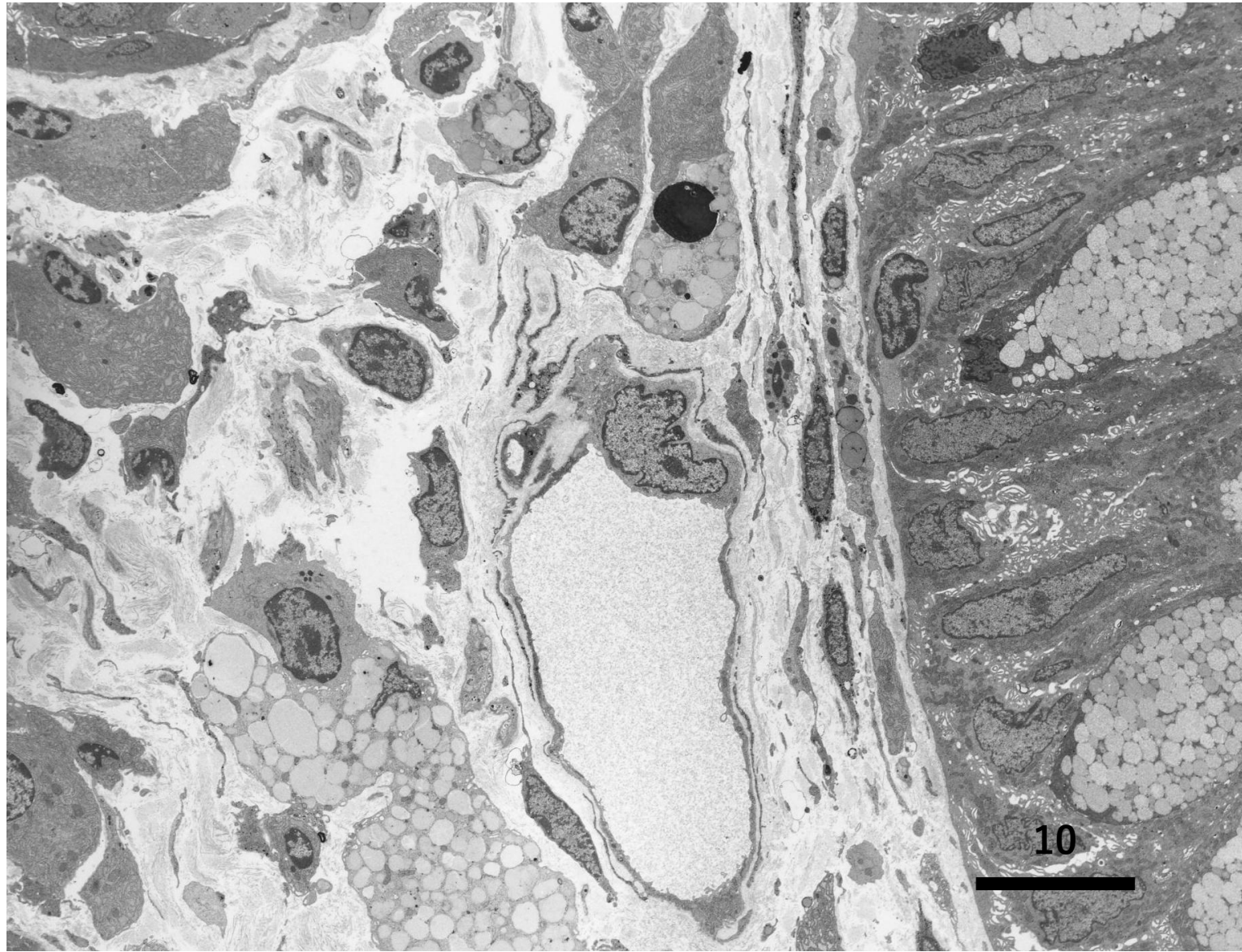
Muciphages in the biopsied sigmoid colon mucosa of a 43 y-o male patient. Accumulations of mucin-containing macrophages are seen in the lamina propria mucosae (H&E-1).



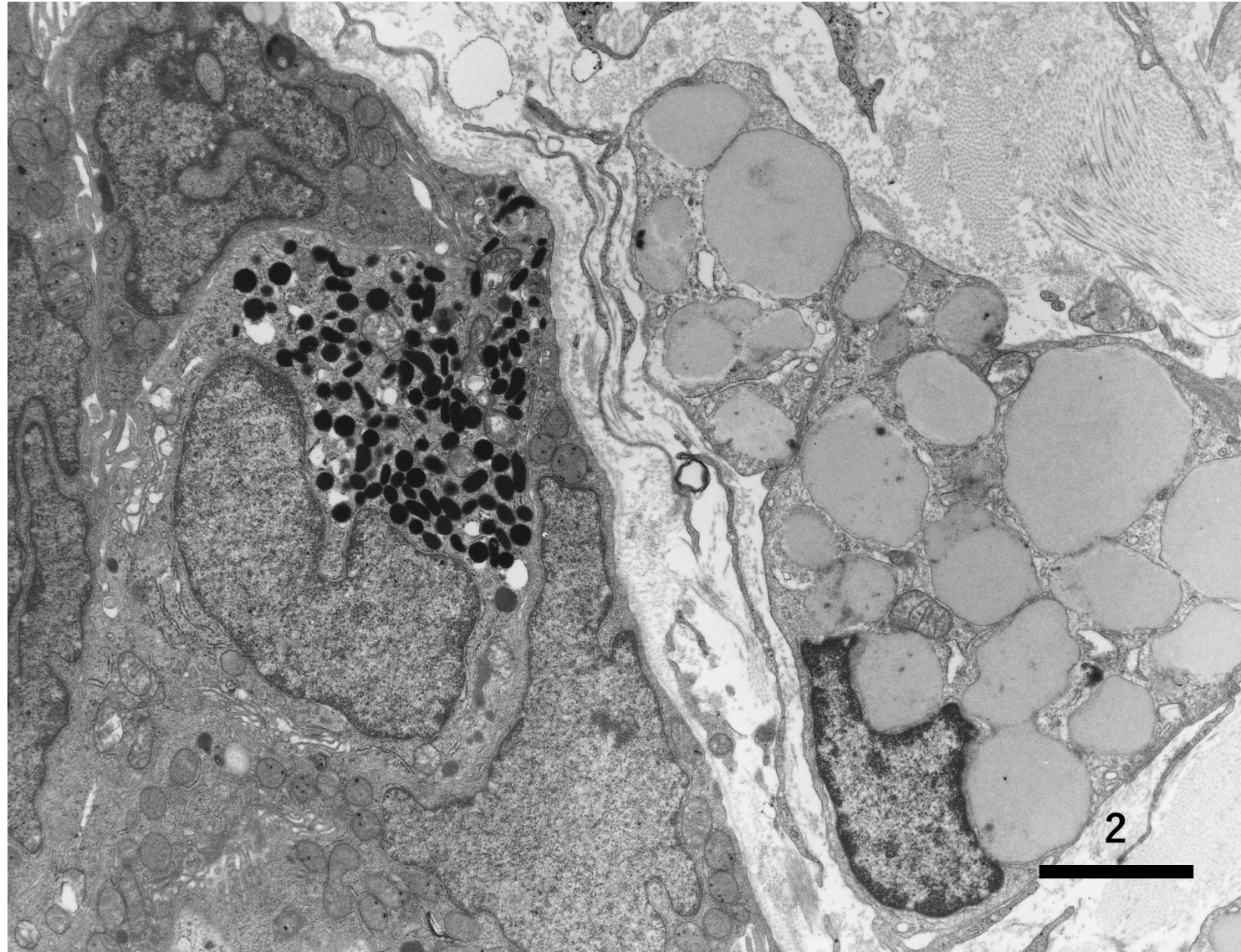
Muciphages in the biopsied sigmoid colon mucosa of a 43 y-o male patient. Accumulations of mucin-containing macrophages are seen in the lamina propria mucosae (H&E-2).



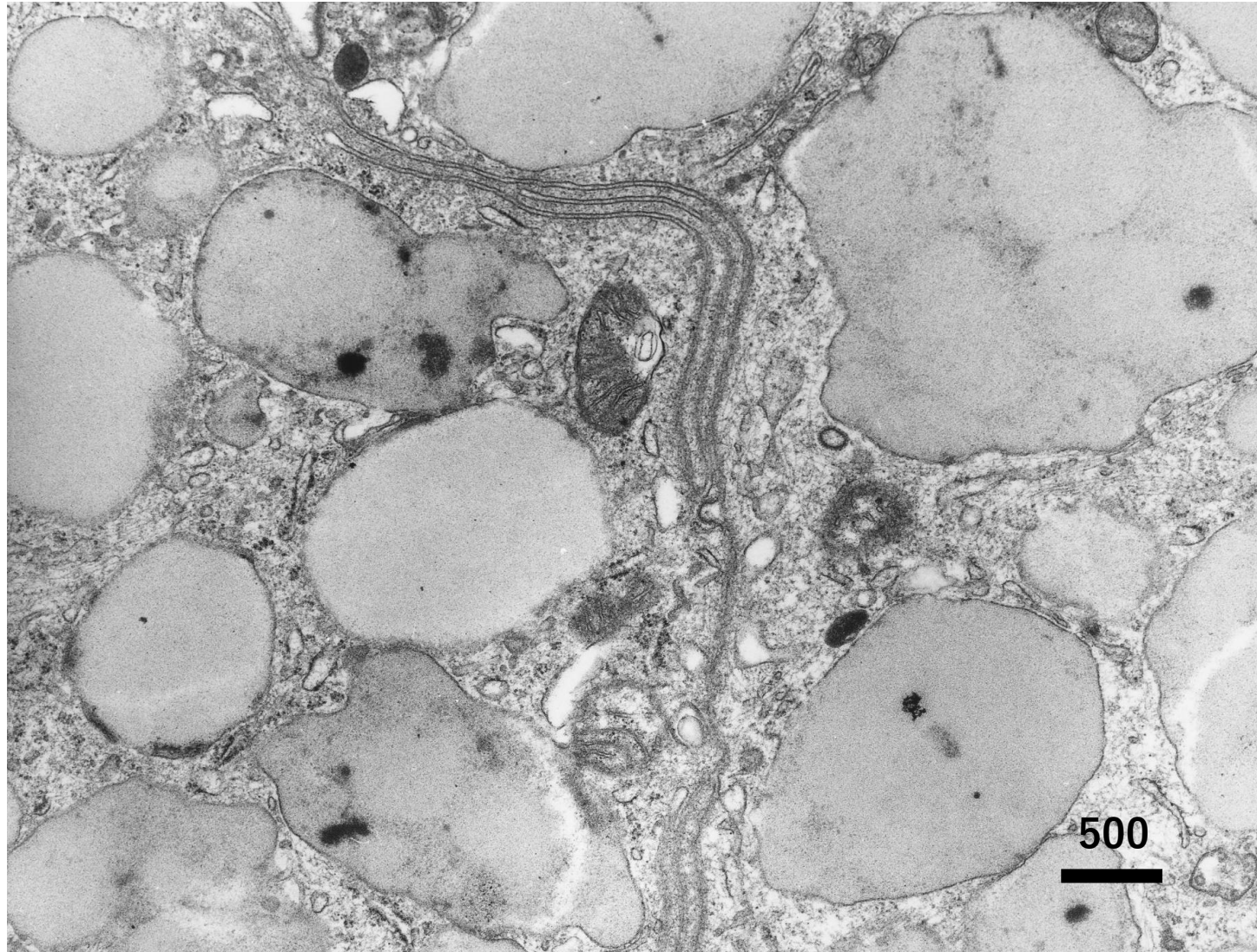
Muciphages in the biopsied sigmoid colon mucosa of a 43 y-o male patient. Accumulations of mucin-containing macrophages are seen in the lamina propria mucosae (H&E-3).



Ultrastructure of muciphages in the biopsied sigmoid colon mucosa of a 43 y-o male patient. Macrophages phagocytizing electron-lucent mucin droplets are observed in the lamina propria mucosae (EM-1).



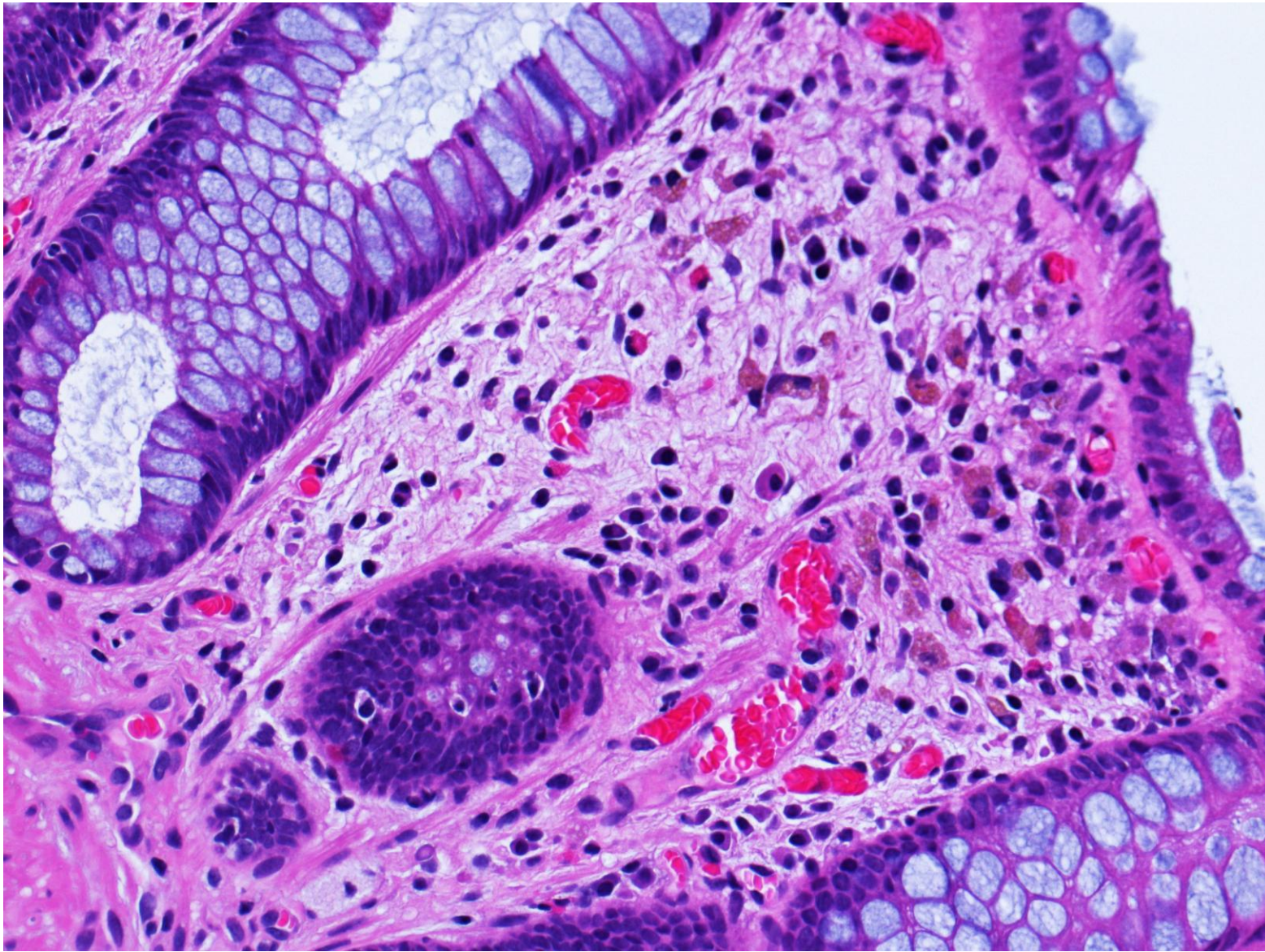
Ultrastructure of the muciphage in the biopsied sigmoid colon mucosa of a 43 y-o male patient. A macrophage phagocytizing electron-lucent mucin droplets is observed in the lamina propria mucosae just beneath the colonic epithelial cells, including a neuroendocrine cell (EM-2).



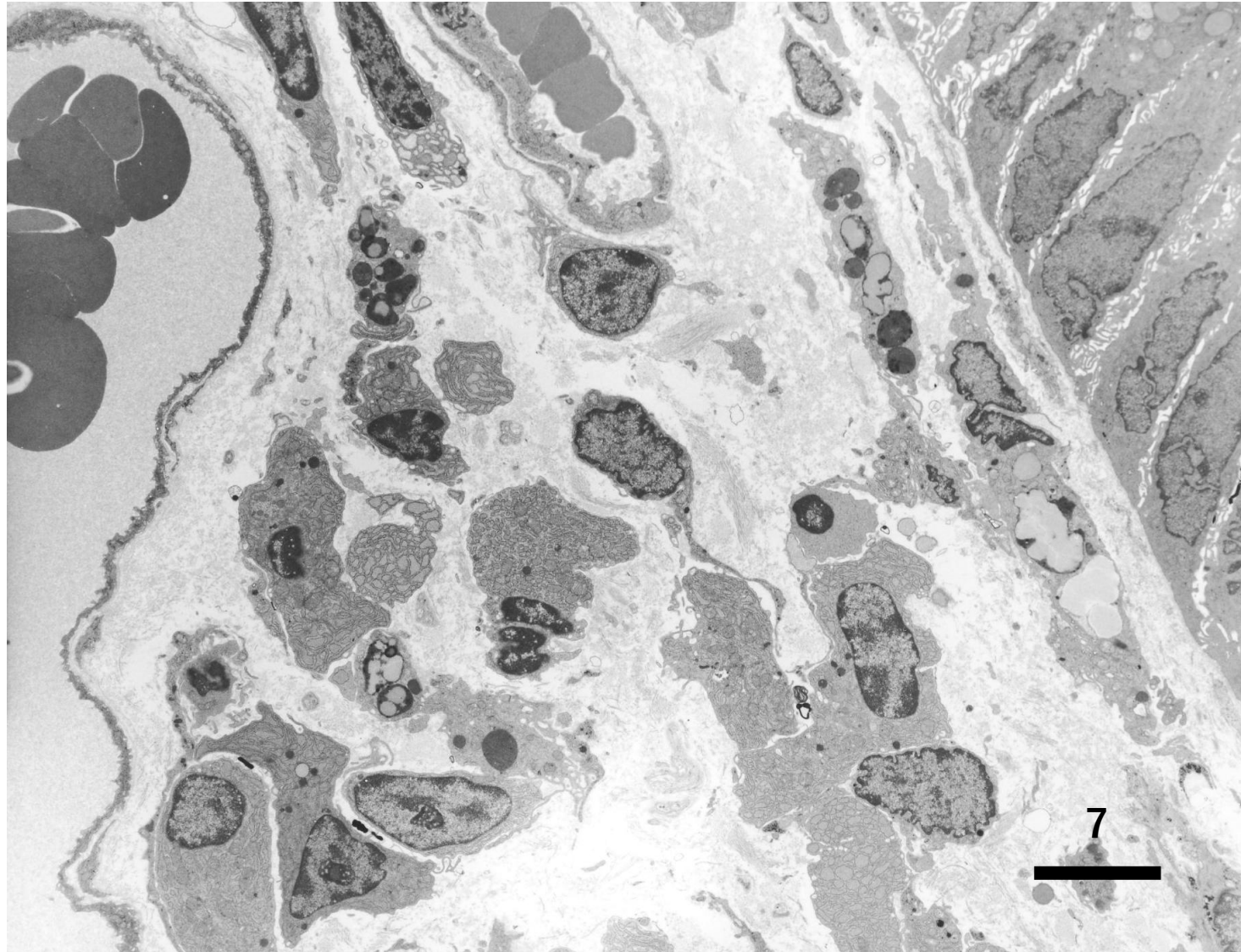
Ultrastructure of the muciphage in the biopsied sigmoid colon mucosa of a 43 y-o male patient. High-powered view of electron-lucent mucin droplets phagocytized by a lamina propria macrophage mucosae is shown (EM-3).



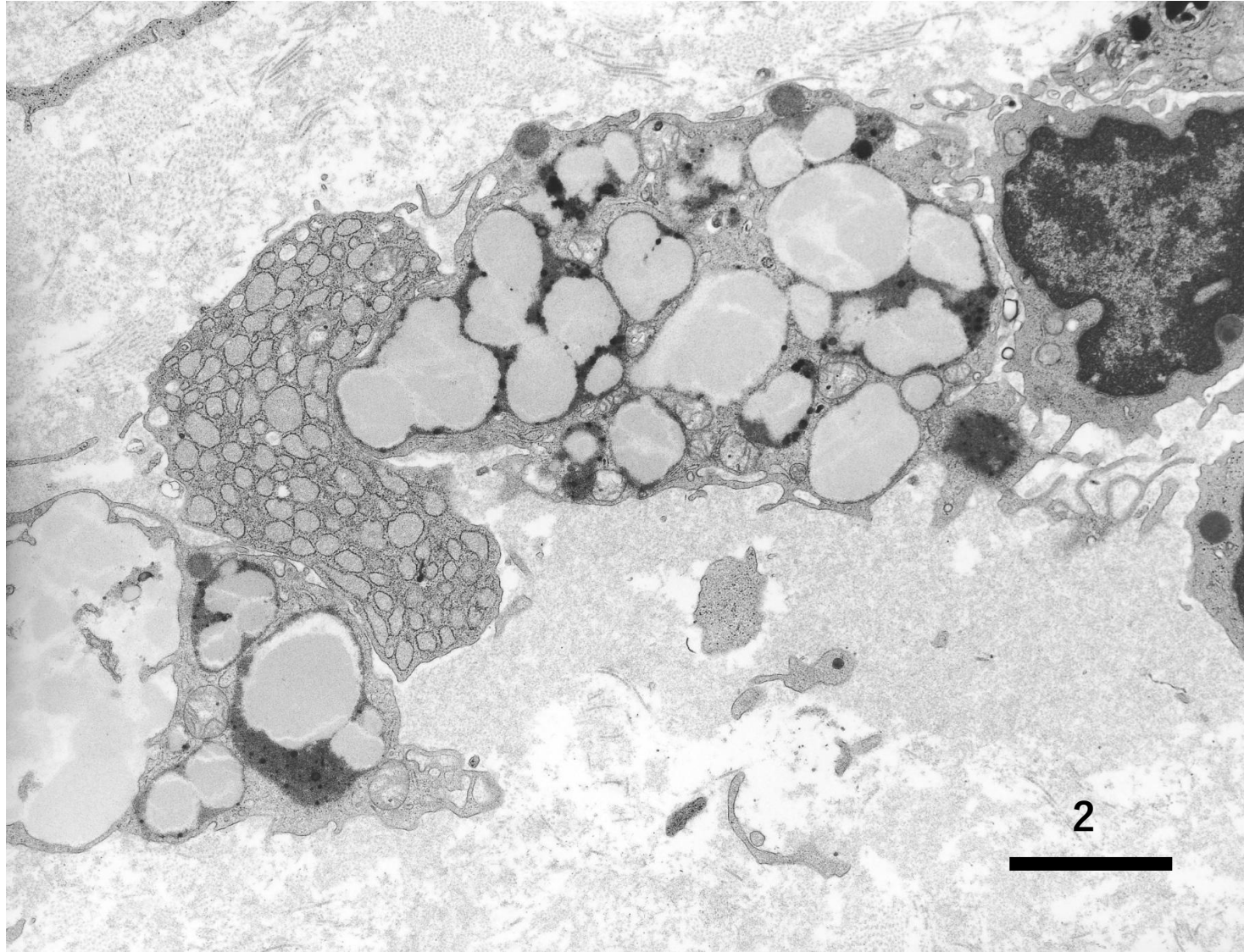
Typical microscopic features of melanosis coli. In the lamina propria mucosa, there are clusters of macrophages containing brown-colored coarse ceroid granules (H&E-1).



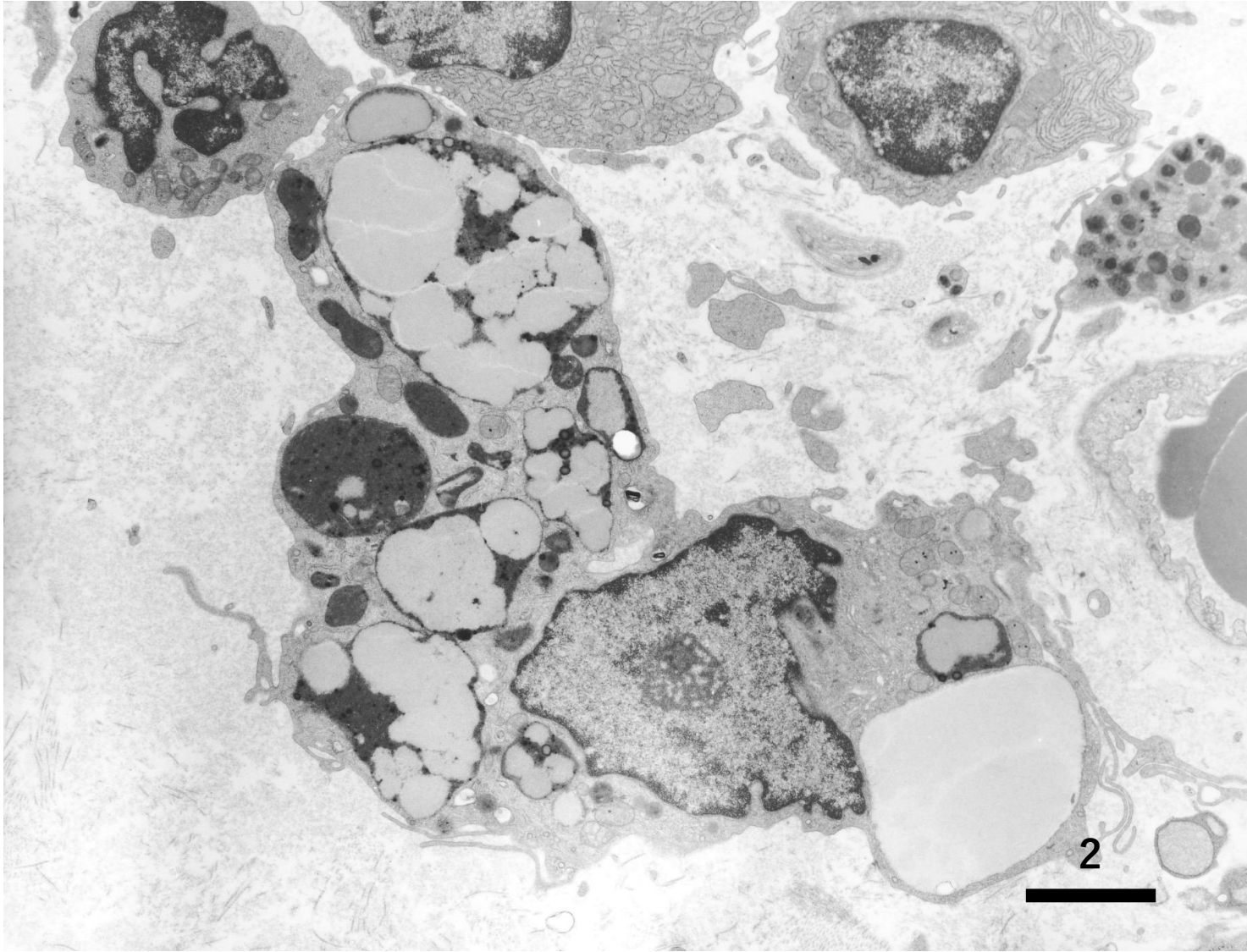
Melanosis coli. Biopsy from the black-colored colonic mucosa of a 32 y-o male patient. Macrophages containing brown-colored ceroid pigment are scattered in the upper part of the lamina propria mucosae (H&E-2).



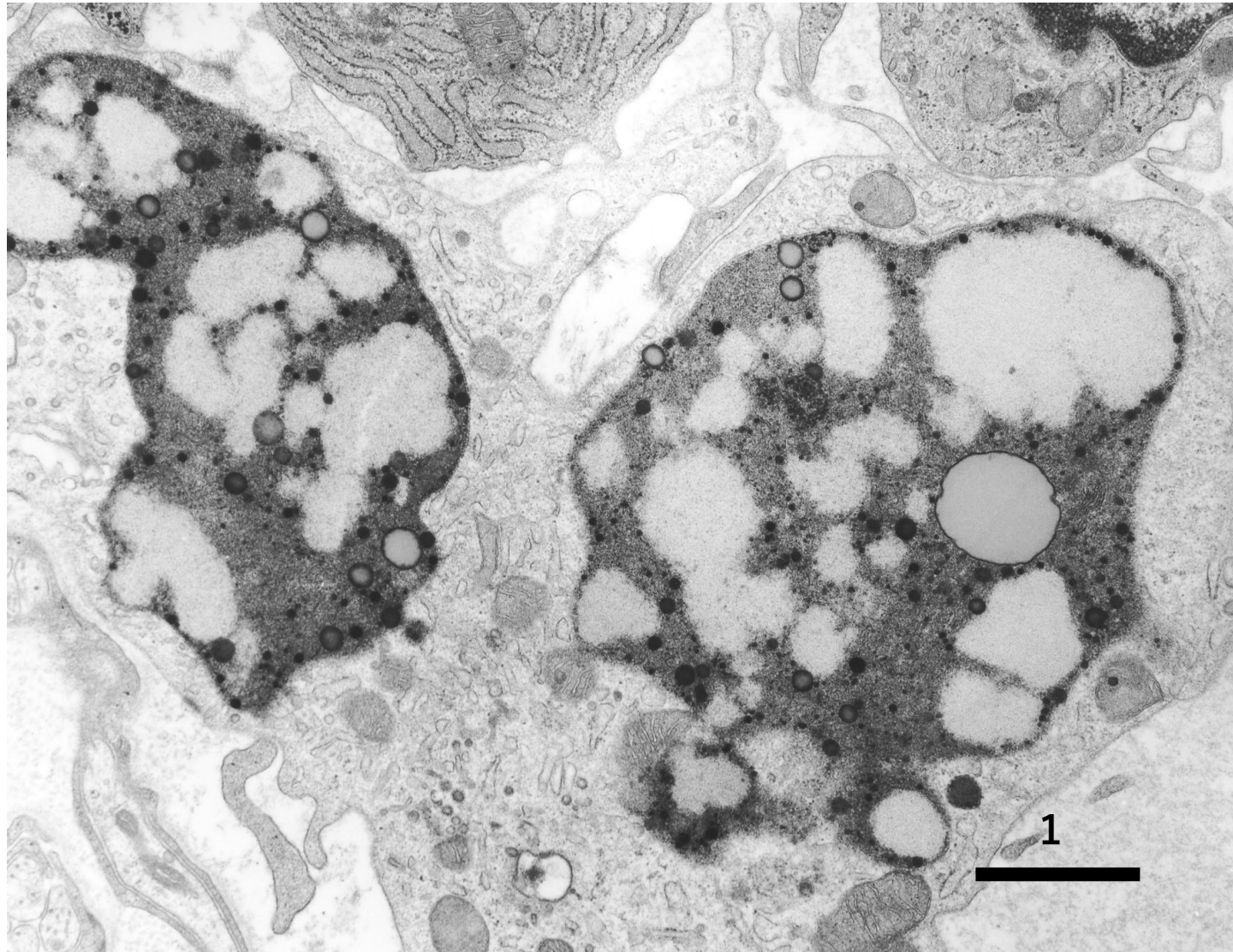
Ultrastructure of melanosis coli. Biopsy from the black-colored colonic mucosa of a 32 y-o male patient. Macrophages in the lamina propria mucosae contain lipoid granules with the background of high electron density (EM-1).



Ultrastructure of melanosis coli. Biopsy from the black-colored colonic mucosa of a 32 y-o male patient. Macrophages in the lamina propria mucosae contain lipid granules surrounded by the substances with high electron density, representing ceroid pigment (EM-2).



Ultrastructure of melanosis coli. Biopsy from the black-colored colonic mucosa of a 32 y-o male patient. A macrophage in the lamina propria mucosae contains lipoid granules surrounded by the substances with high electron density, representing ceroid pigment. Some granules mostly show high electron-density (EM-3).



Ultrastructure of melanosis coli. Biopsy from the black-colored colonic mucosa of a 32 y-o male patient. The macrophage in the lamina propria mucosae contains coarse lipoid granules with background substances with high electron density, representing ceroid pigment (EM-4).