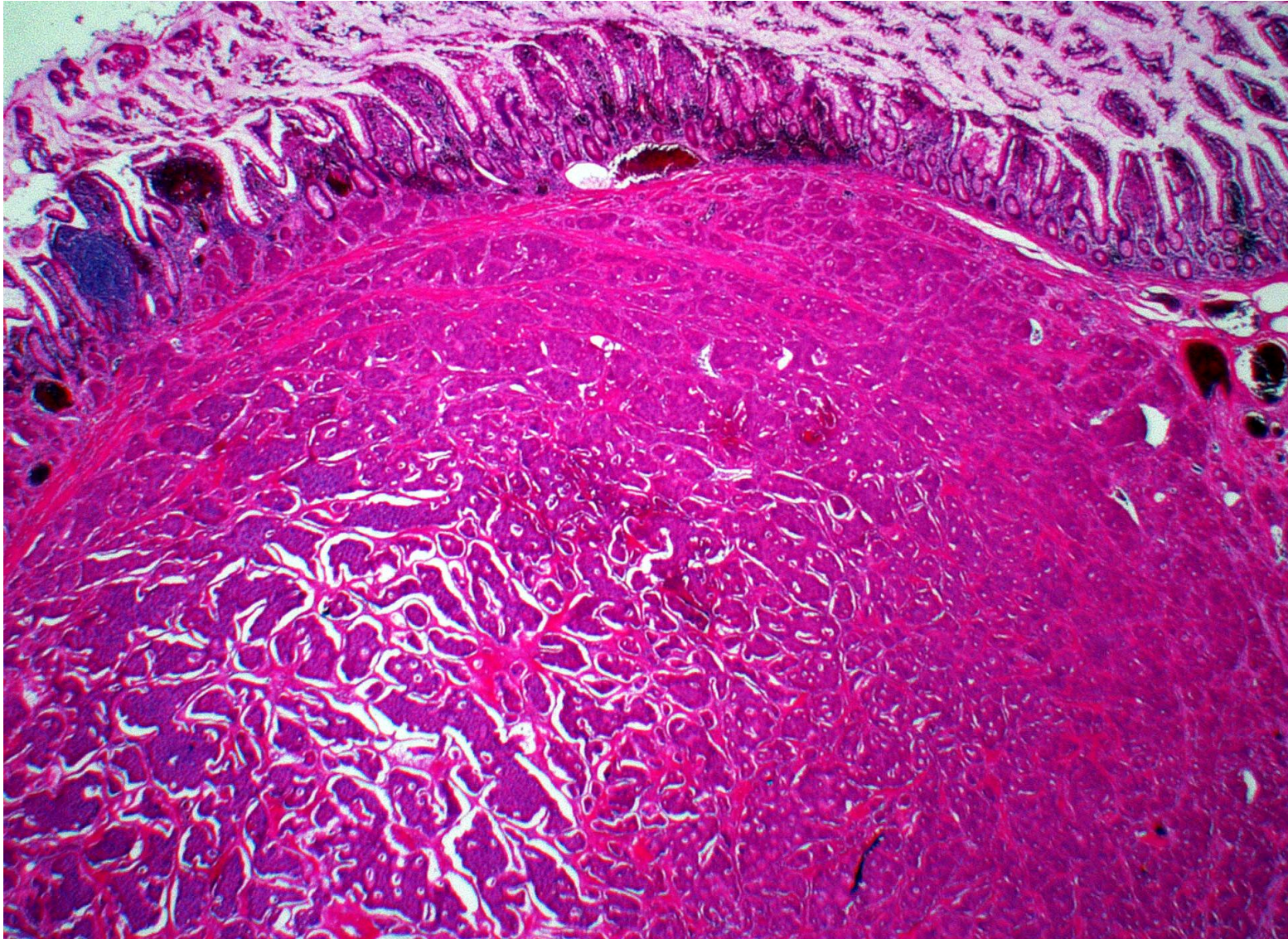


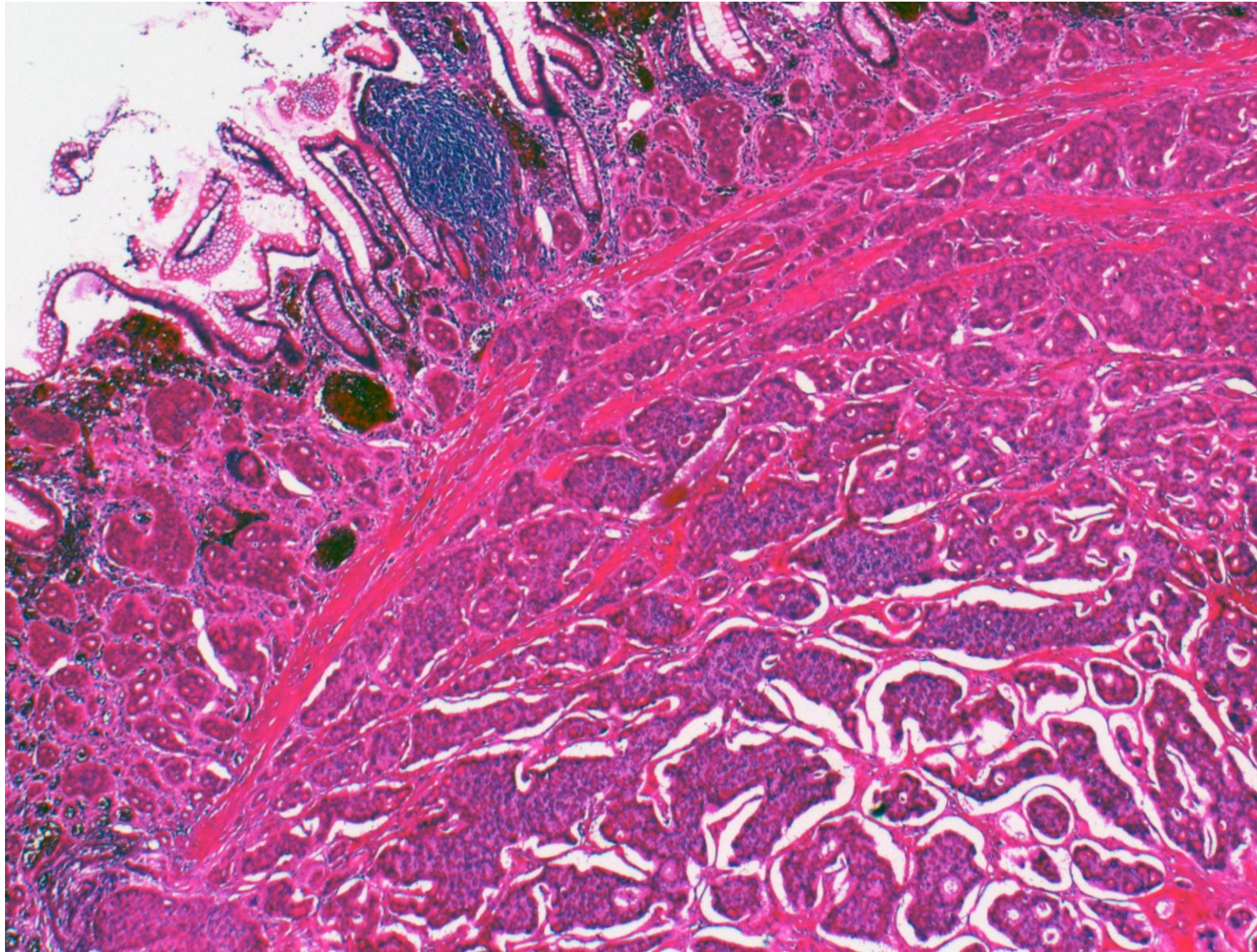
Carcinoid tumor arising in Meckel's diverticulum

Meckel's diverticulum, a common anomaly of the GI tract, serves as the site for tumor development. The most frequent tumor affecting the diverticulum is carcinoid tumor (neuroendocrine tumor: NET). NETs in Meckel's diverticula are often associated with nodal and liver metastases, even when the tumors are small.

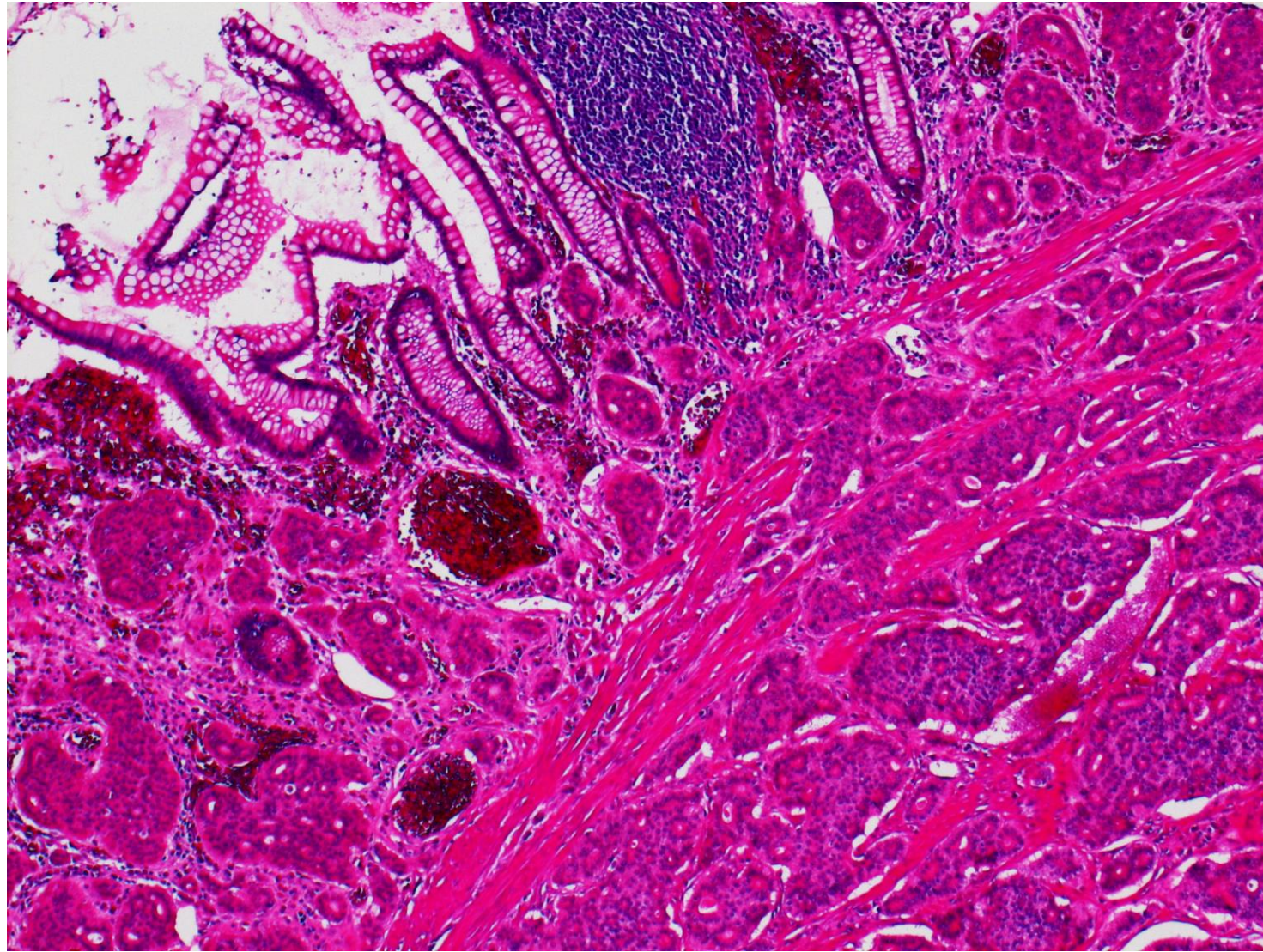
Ref.: Lorenzen AW, et al. Neuroendocrine tumors arising in Meckel's diverticula: frequency of advanced disease warrants aggressive management. J Gastrointest Surg 2013; 17(6): 1084-1091. doi: 10.1007/s11605-013-2191-8



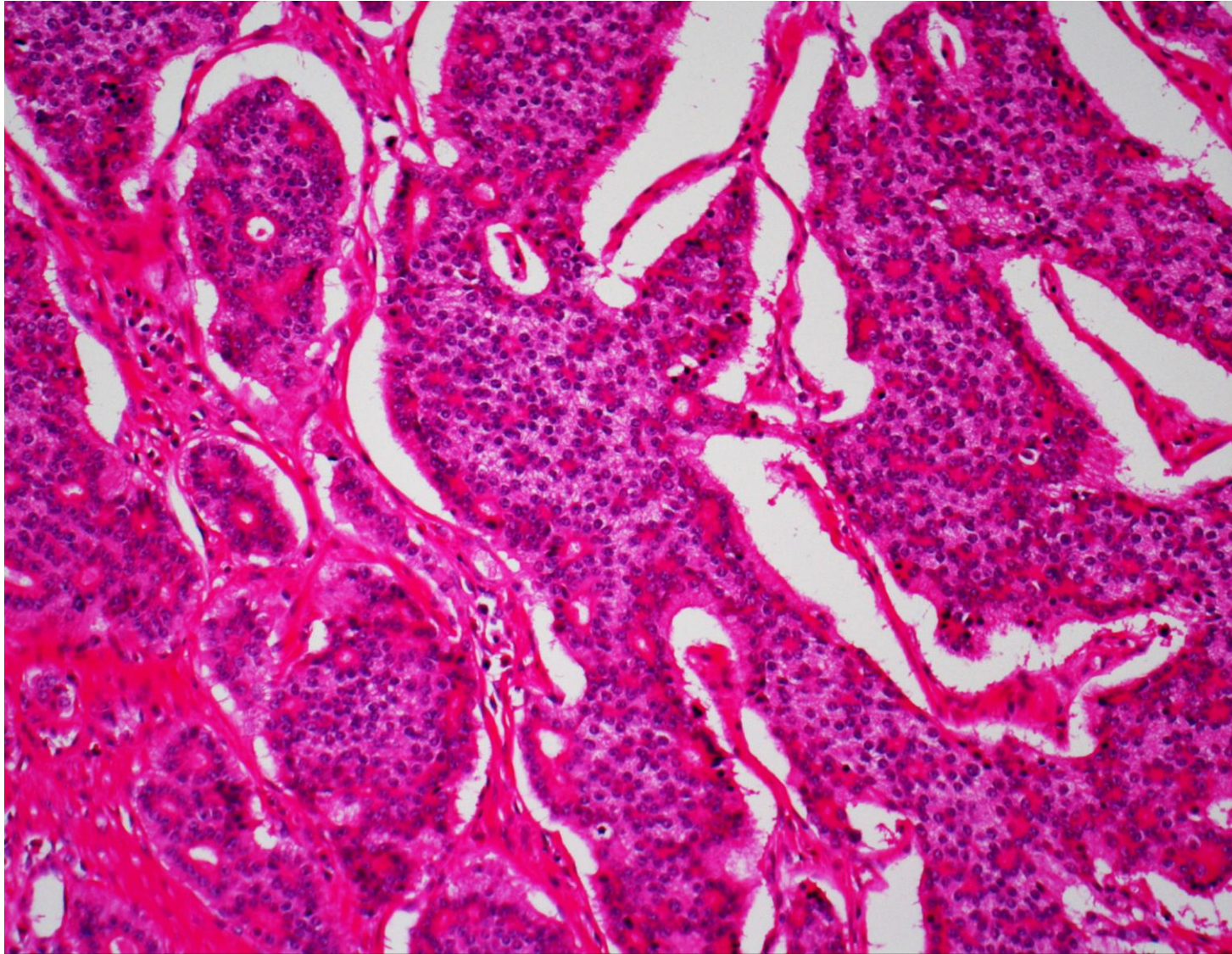
Carcinoid tumor (NET-G1) in Meckel's diverticulum seen in a 73 y-o male patient. A 9 mm-sized polypoid submucosal nodule is seen in non-metaplastic ileal mucosa in Meckel's diverticulum. Trabecular, ribbon-like or pseudoglandular arrangements are discerned in the submucosal tumor (H&E-1).



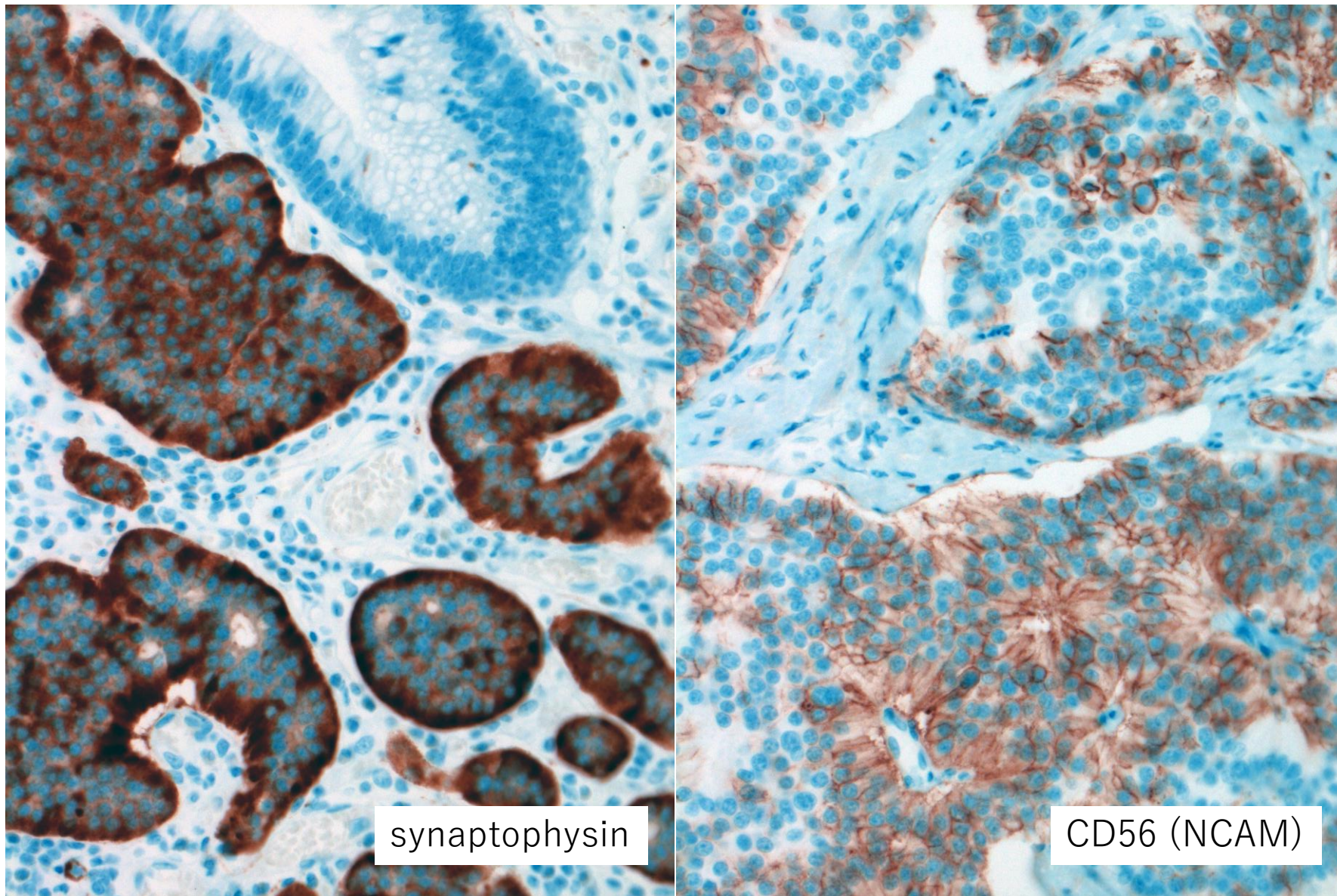
Carcinoid tumor (NET-G1) in Meckel's diverticulum seen in a 73 y-o male patient. The 9 mm-sized polypoid submucosal nodule consists of monomorphous tumor cells with trabecular, ribbon-like or pseudoglandular arrangements. The basal part of the ileal mucosa is involved by the tumor cells (H&E-2).



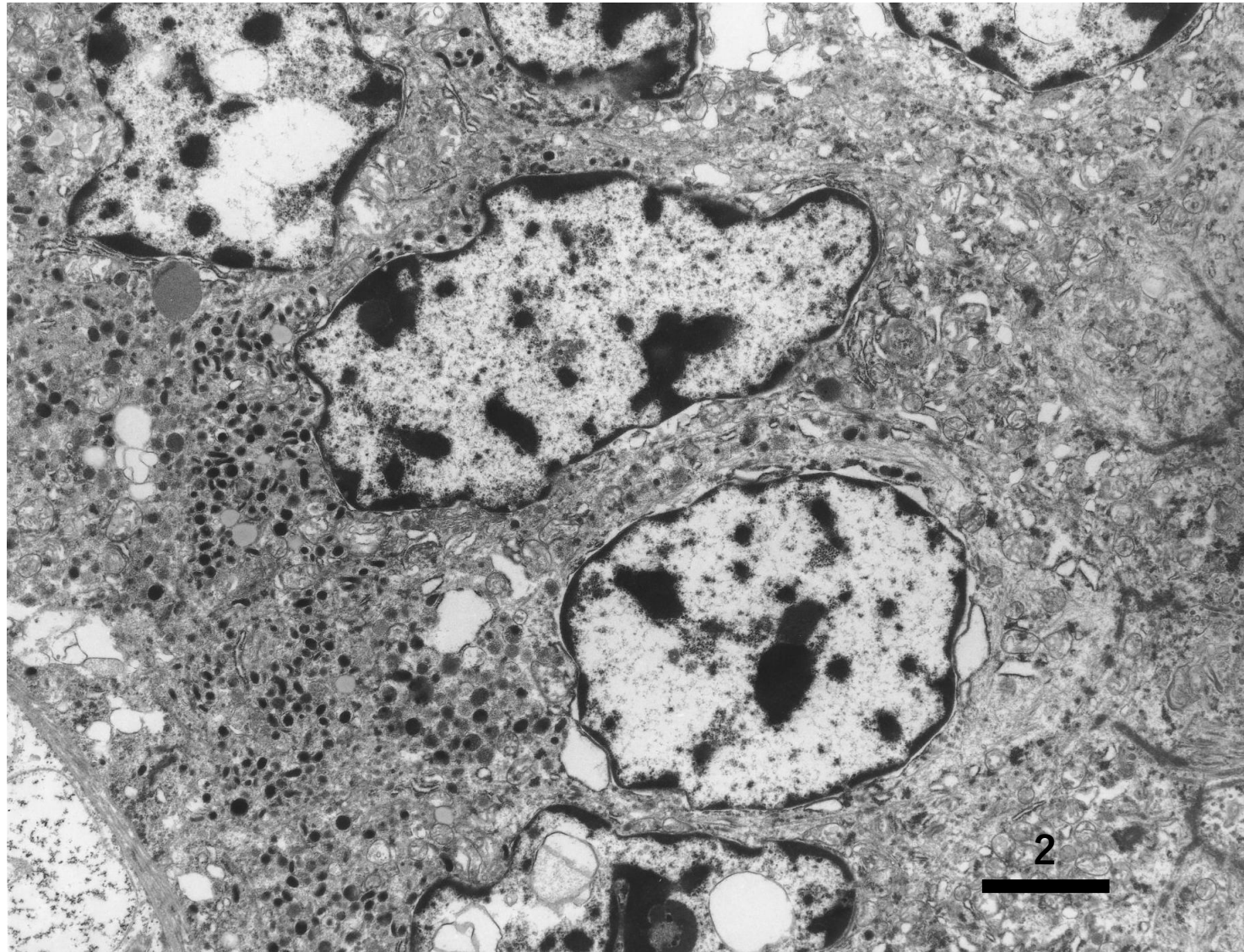
Carcinoid tumor (NET-G1) in Meckel's diverticulum seen in a 73 y-o male patient. The 9 mm-sized polypoid submucosal nodule consists of monomorphous tumor cells with trabecular, ribbon-like or pseudoglandular arrangements. The basal part of the ileal mucosa is involved by the tumor cells (H&E-3).



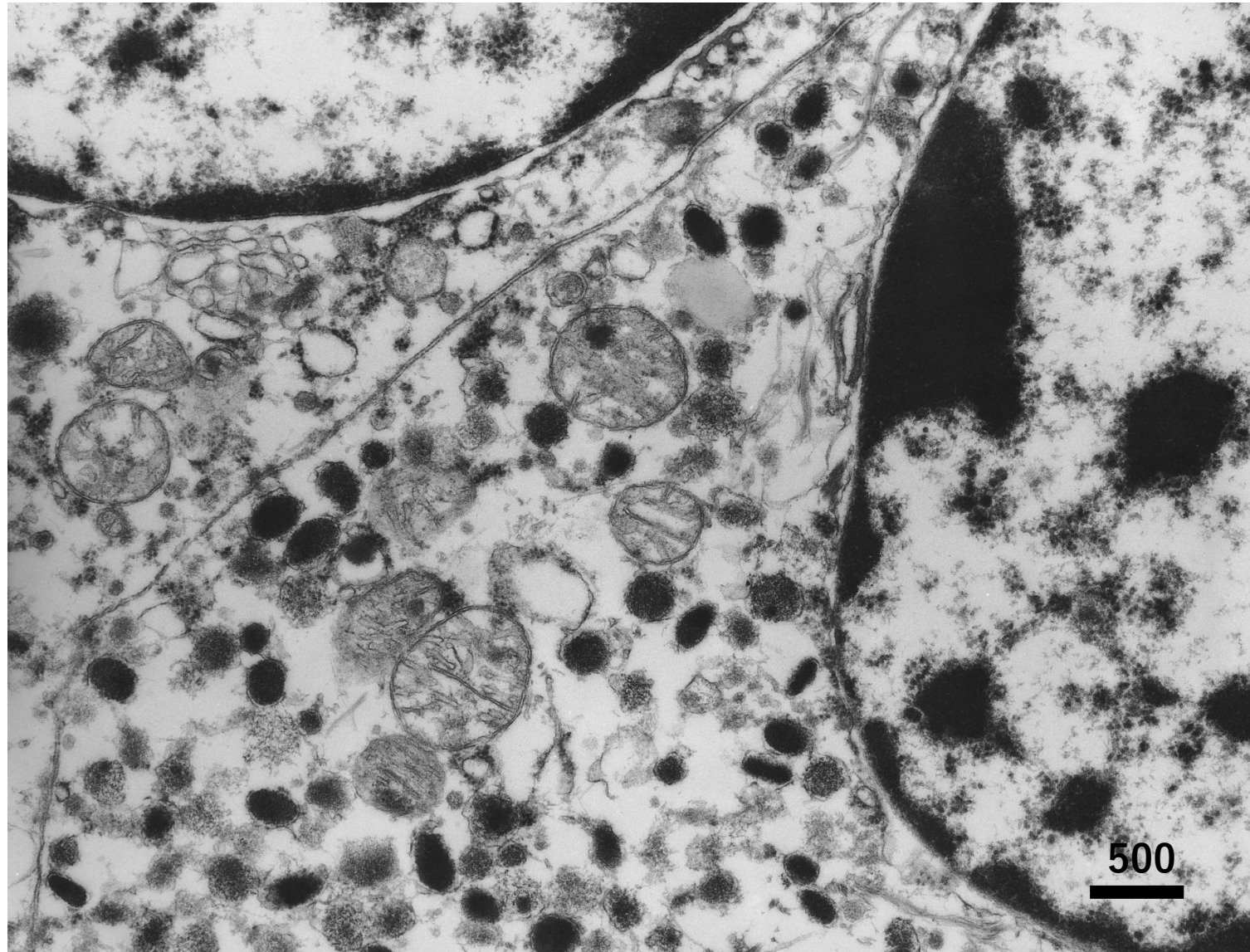
Carcinoid tumor (NET-G1) in Meckel's diverticulum seen in a 73 y-o male patient. The 9 mm-sized polypoid submucosal nodule consists of monomorphous tumor cells with trabecular, ribbon-like or pseudoglandular arrangements (H&E-2).



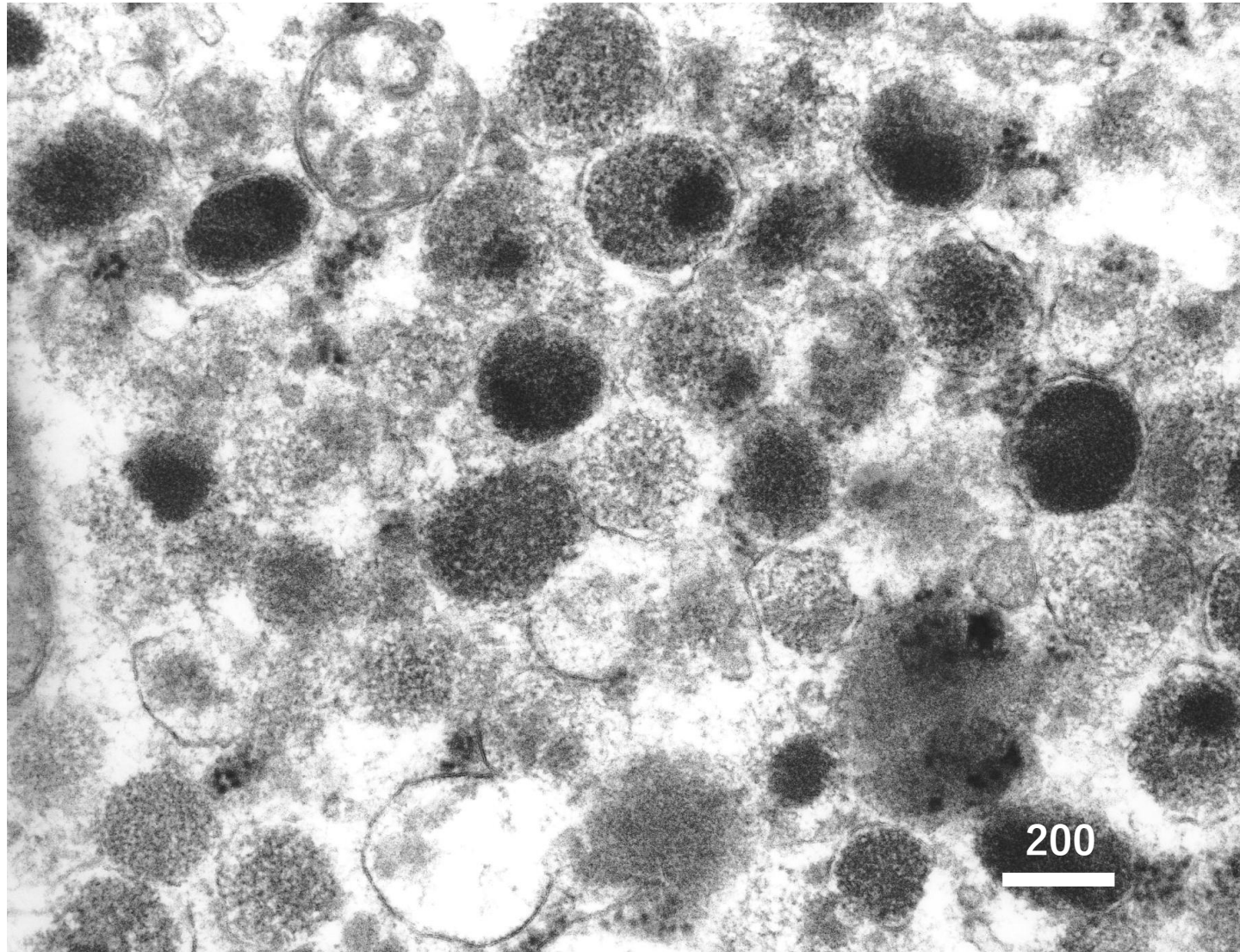
Carcinoid tumor (NET-G1) in Meckel's diverticulum seen in a 73 y-o male patient. The invasive tumor cells are diffusely immunoreactive for synaptophysin (left) and CD56 (NCAM) (right) (immunostaining for neuroendocrine markers).



Ultrastructure of carcinoid tumor (NET-G1) in Meckel's diverticulum seen in a 73 y-o male patient. Neuroendocrine granules are clustered in the subnuclear cytoplasm. The basal lamia is formed around the tumor cells (TEM-1).



Ultrastructure of carcinoid tumor (NET-G1) in Meckel's diverticulum seen in a 73 y-o male patient. Electron-dense cored neuroendocrine granules are clustered. Elongated shapes are noted (TEM-2).



Ultrastructure of carcinoid tumor (NET-G1) in Meckel's diverticulum seen in a 73 y-o male patient. Electron-dense neuroendocrine granules are cored, and measure 130-500 nm with the mean size of 250 nm. Some granules are less electron-dense with microvesicular matrix (TEM-3).