

Hormone expression in rectal carcinoid tumors

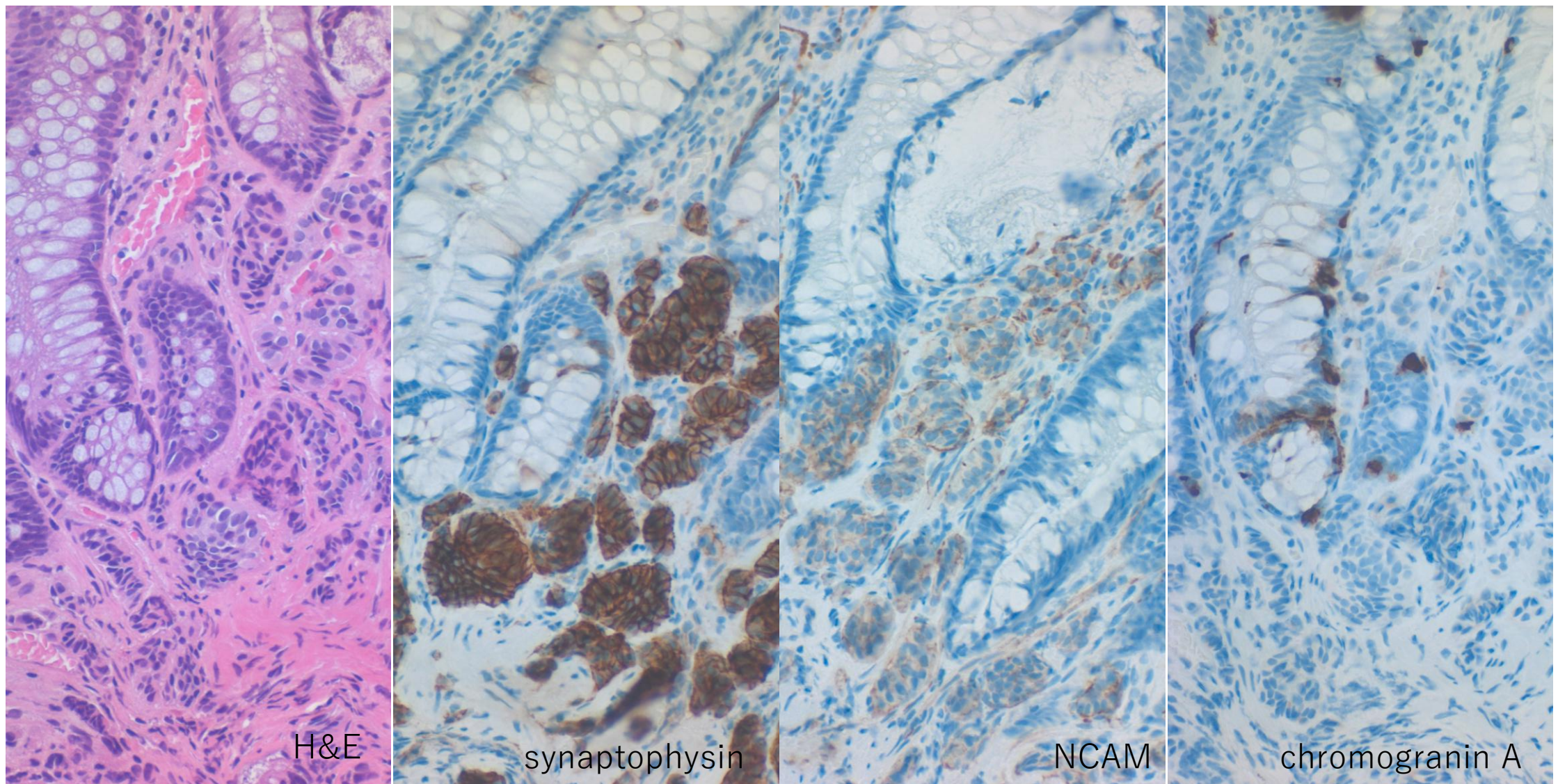
Rectal carcinoid tumor is now called as neuroendocrine tumor (NET). It often presents as a yellowish-colored small polypoid lesion in the rectal mucosa. In Japan, rectal carcinoid of hind-gut origin is the most frequent NETs in the body, while carcinoid of the vermiform appendix and terminal ileum of mid-gut origin, usually producing serotonin, is infrequent. The following histochemical features are recognized in the rectal carcinoid tumor. The tumor cells are diffusely immunoreactive for synaptophysin and NCAM (CD56), while chromogranin A and Grimelius' silver argyrophilic staining are negative in most lesions. Immunohistochemically, multiple eutopic hormone production is proven, including glicentin, GLP-1, PYY, BPP, somatostatin and/or serotonin. Most of the tumors are benign (NET, G1), but liver metastasis is infrequently encountered.

Ref.: Fiocca R, et al. Glucagon, glicentin, proglucagon, PYY, PP and proPP-icosapeptide immunoreactivities of rectal carcinoid tumors and related non-tumor cells. Regul Pept 1987; 17(1): 9-29. doi: 10.1016/0167-0115(87)90029-2

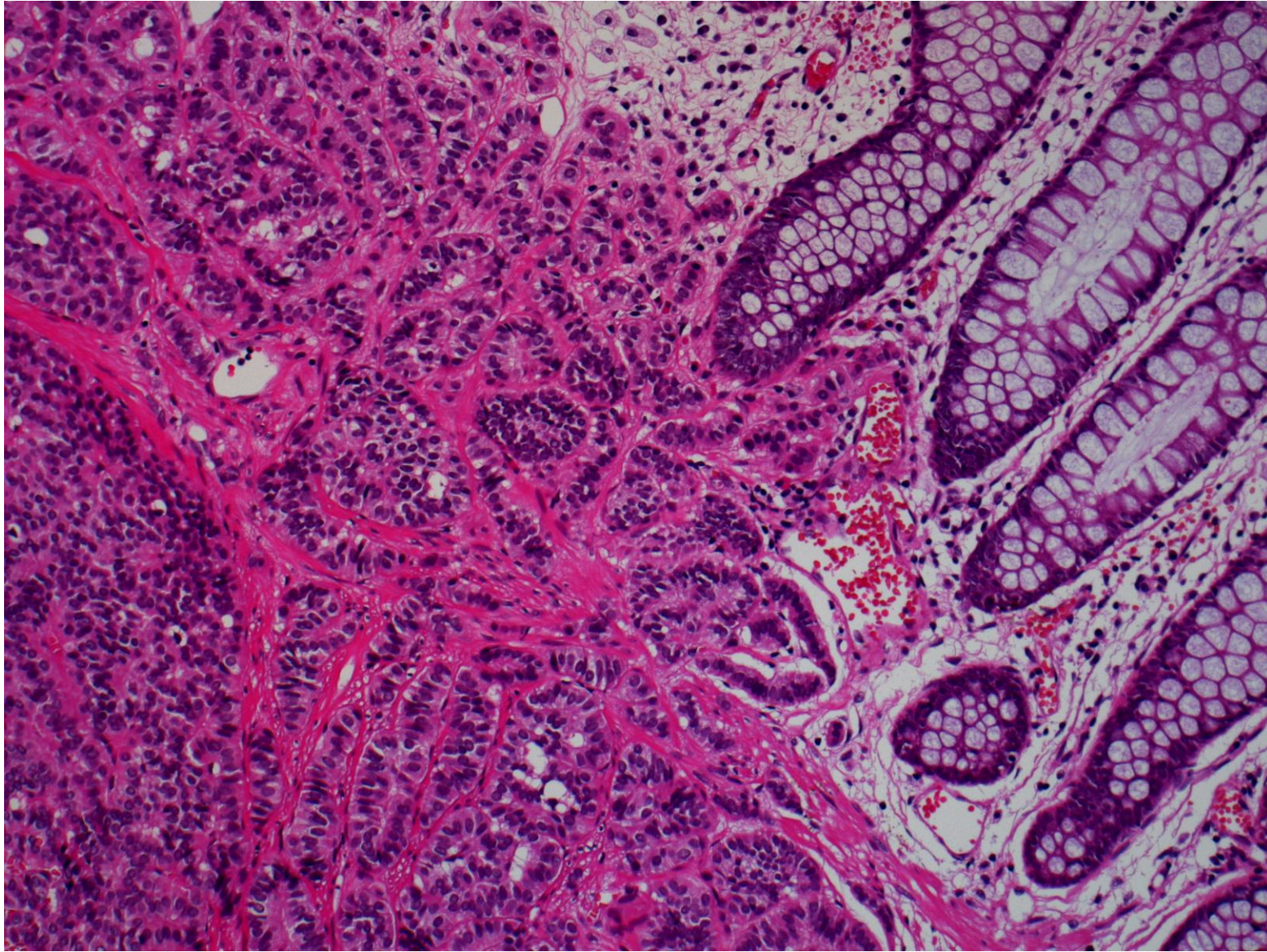
Analysis of 24 lesions of rectal carcinoid

Dominant eutopic hormones detected

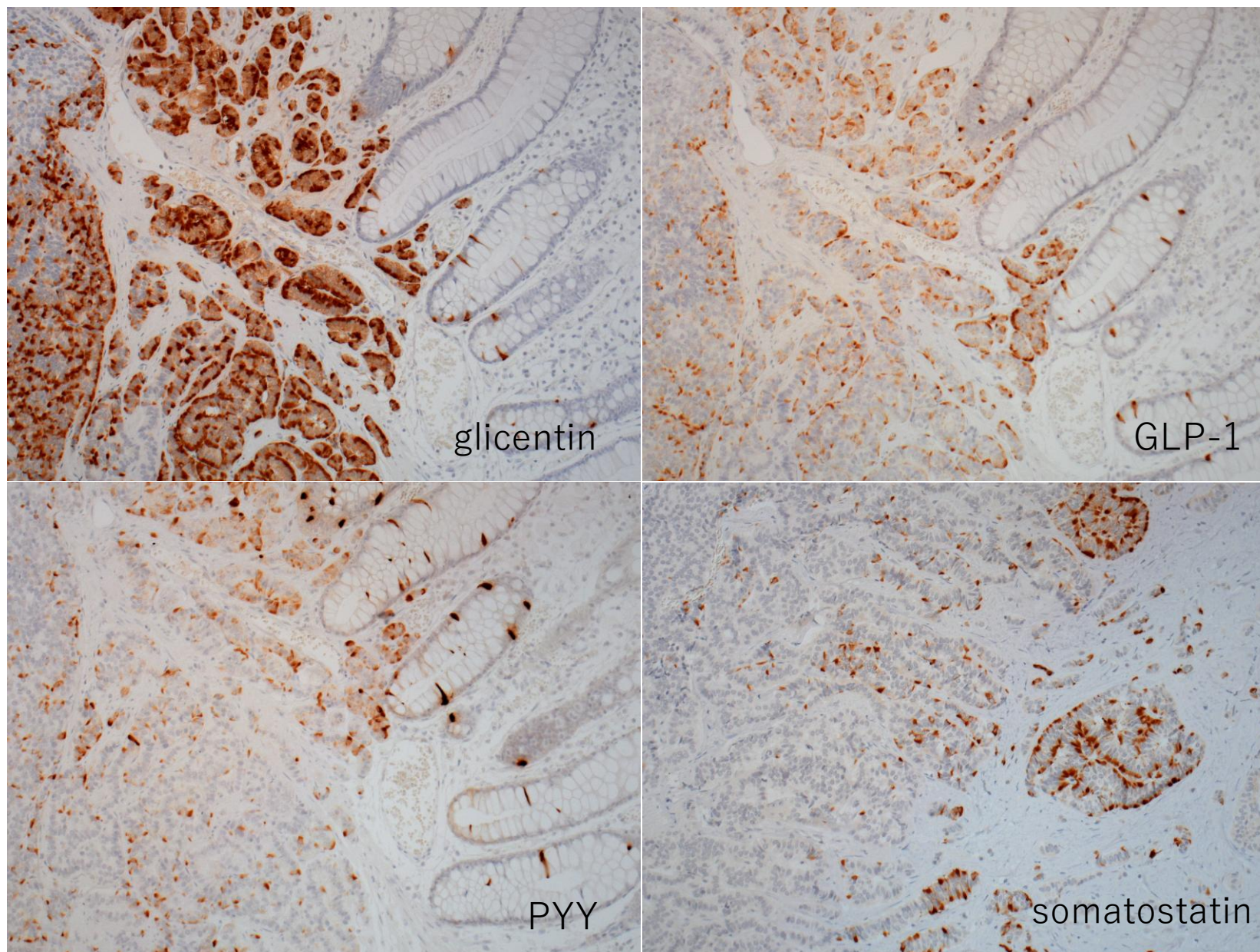
Serotonin	5 lesions (CGA-positive)
Glicentin	9 lesions
GLP-1	2 lesions
PYY	4 lesions
BPP	1 lesion
Somatostatin	3 lesions



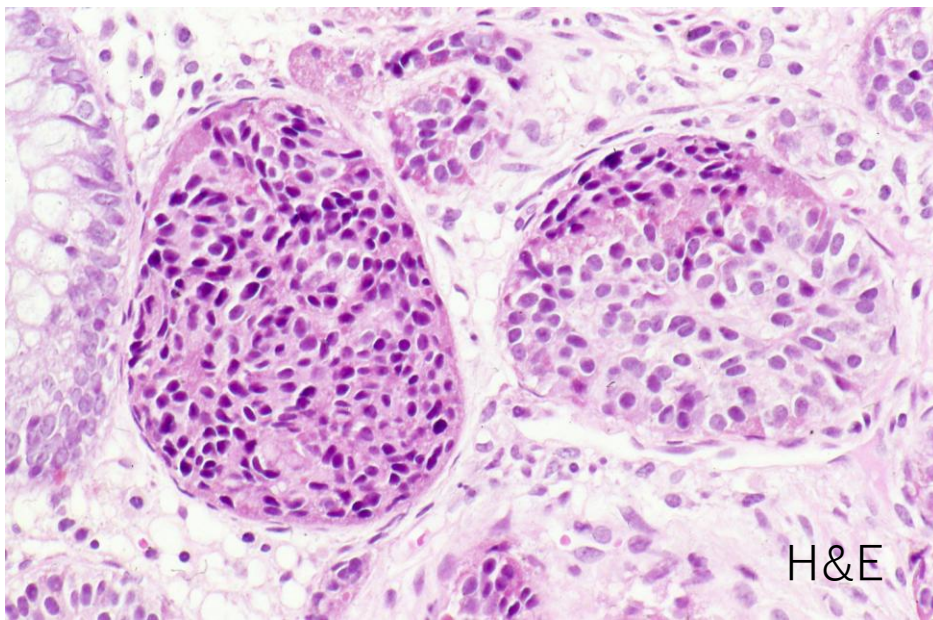
Representative neuroendocrine marker expression in rectal carcinoid tumor. Synaptophysin and NCAM (CD56) are consistently positive, while chromogranin A is negative. Non-neoplastic neuroendocrine cells in the crypt is chromogranin-immunoreactive.



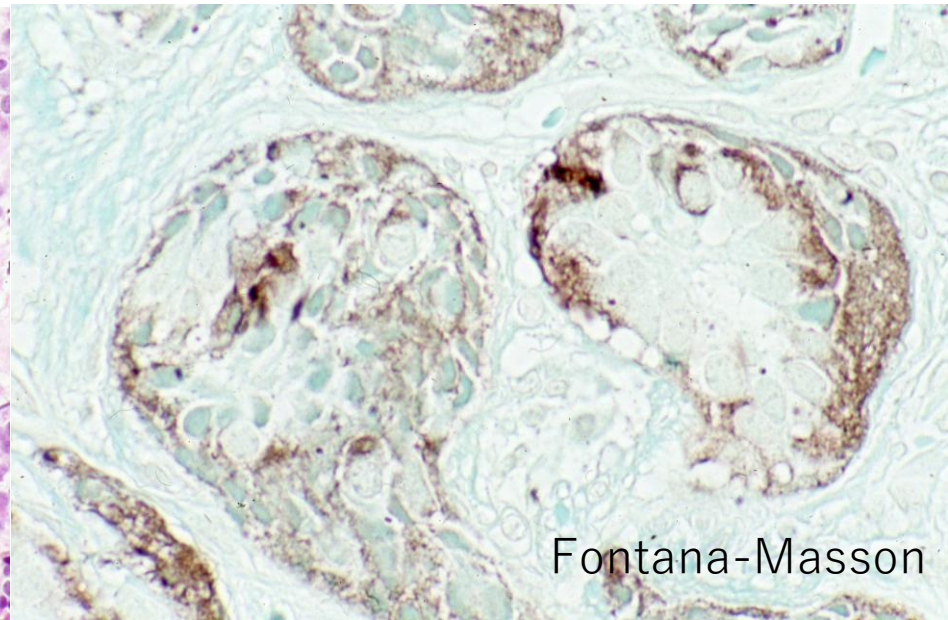
Rectal carcinoid tumor seen in a 50-year-old male patient. Submucosal growth of monomorphous tumor cells with a ribbon-like arrangement is observed. H&E



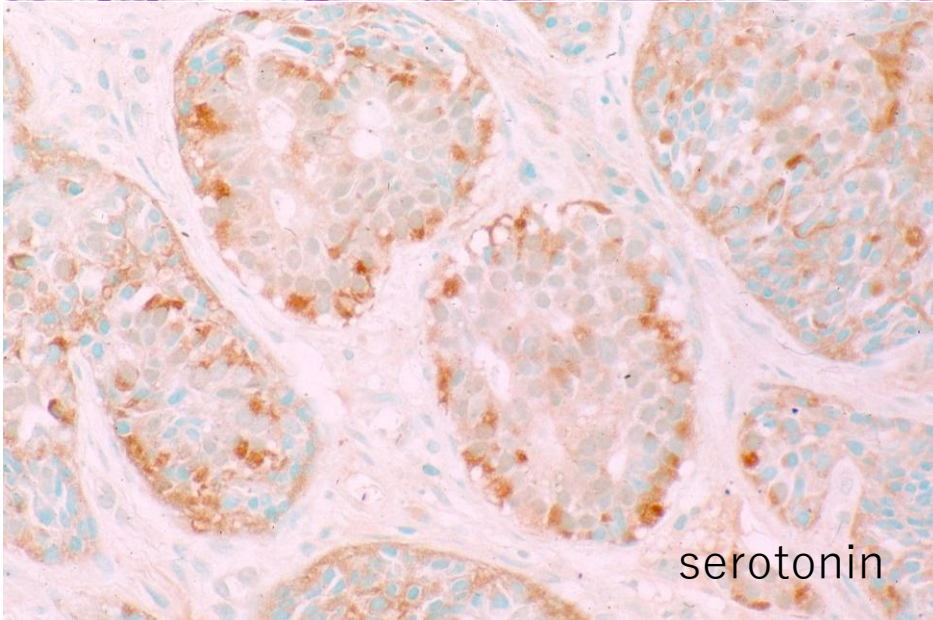
Rectal carcinoid tumor seen in a 50-year-old male patient. The tumor cells are diffusely immunoreactive for glicentin and GLP-1. PYY and somatostatin are also observed in a considerable number of the tumor cells.



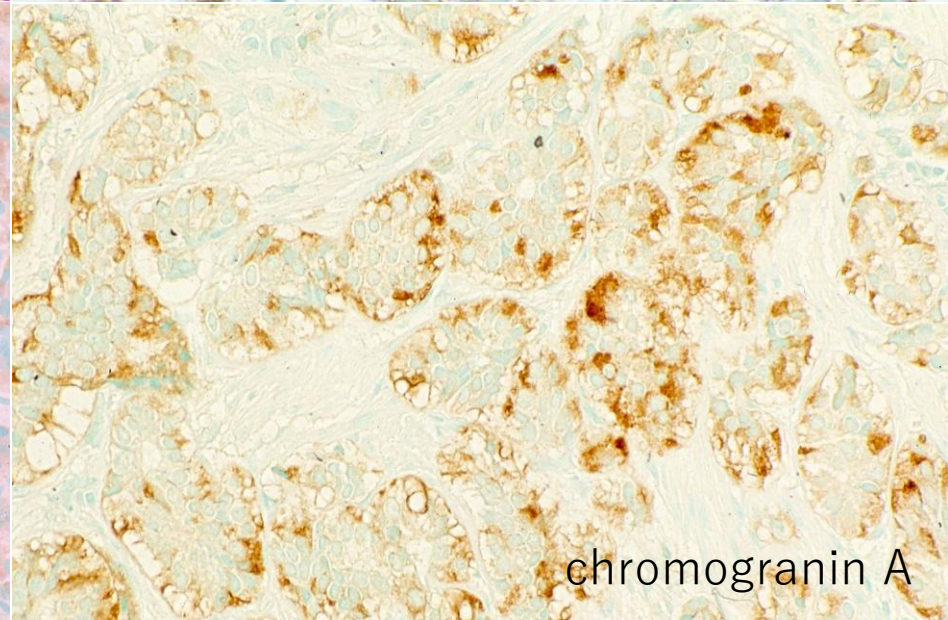
H&E



Fontana-Masson

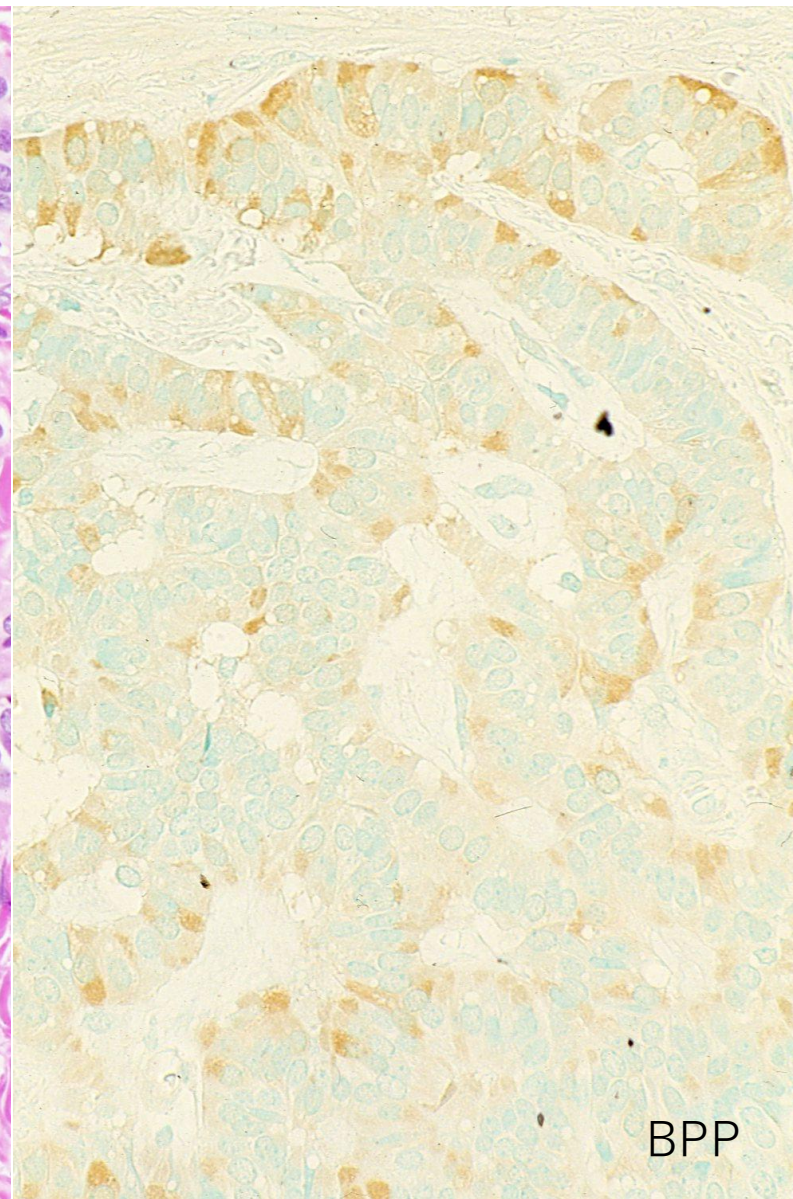
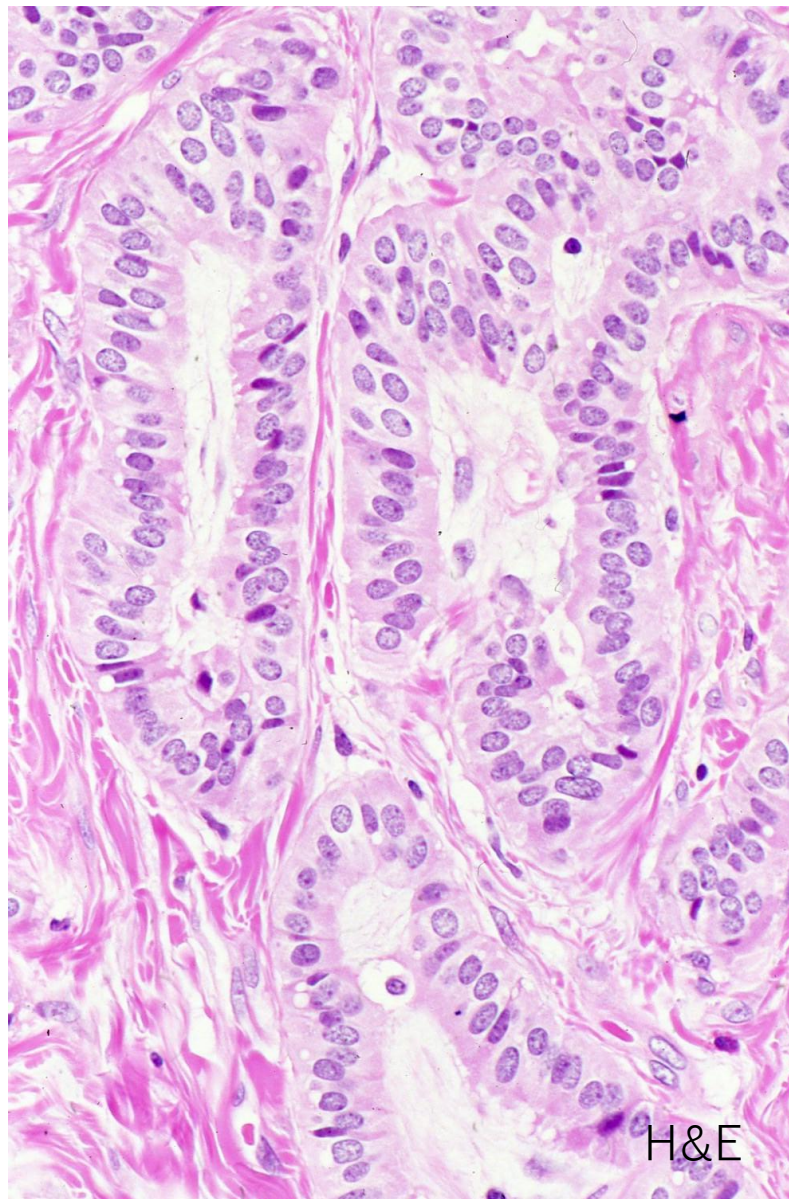


serotonin



chromogranin A

Serotonin-producing rectal carcinoid. Eosinophilic granular cytoplasm is seen in H&E staining. Fontana-Masson-reactive argentaffin cells are diffusely positive for serotonin and chromogranin A.



In this rectal carcinoid, bovine pancreatic polypeptide (BPP) immunoreactivity is diffusely identified.