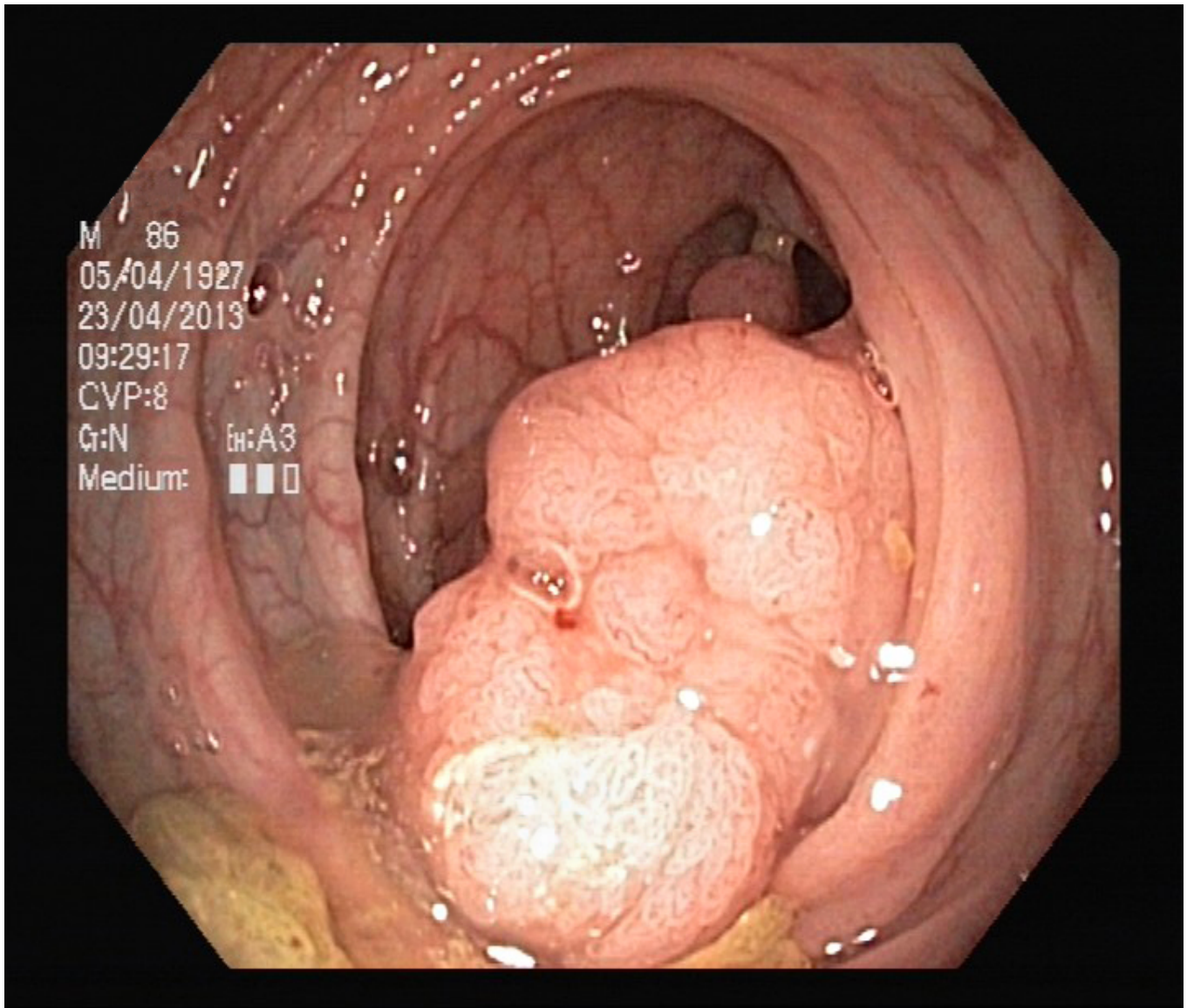


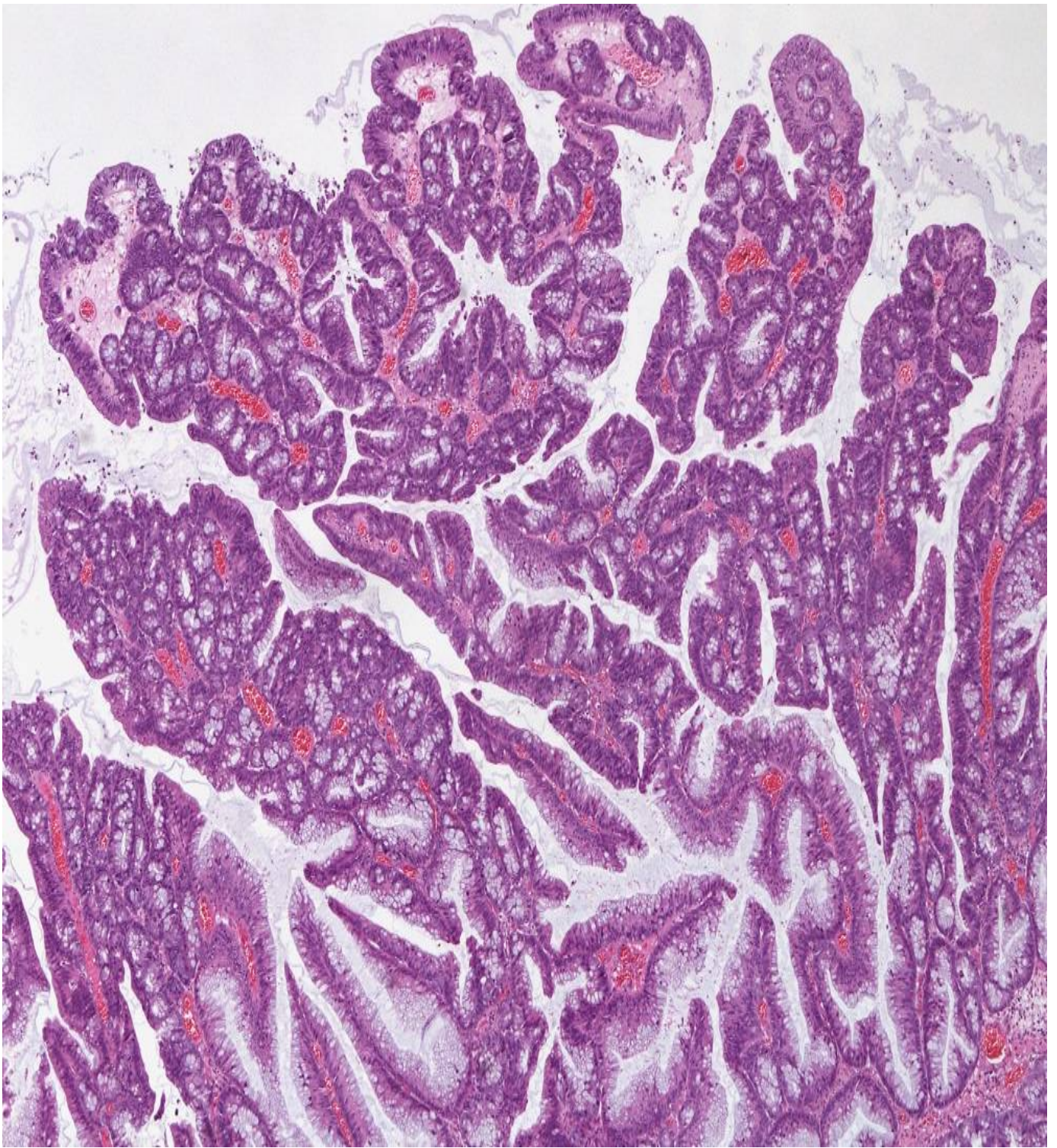
# May 2013

An 86-year-old male presents with a large polyp within the sigmoid colon.

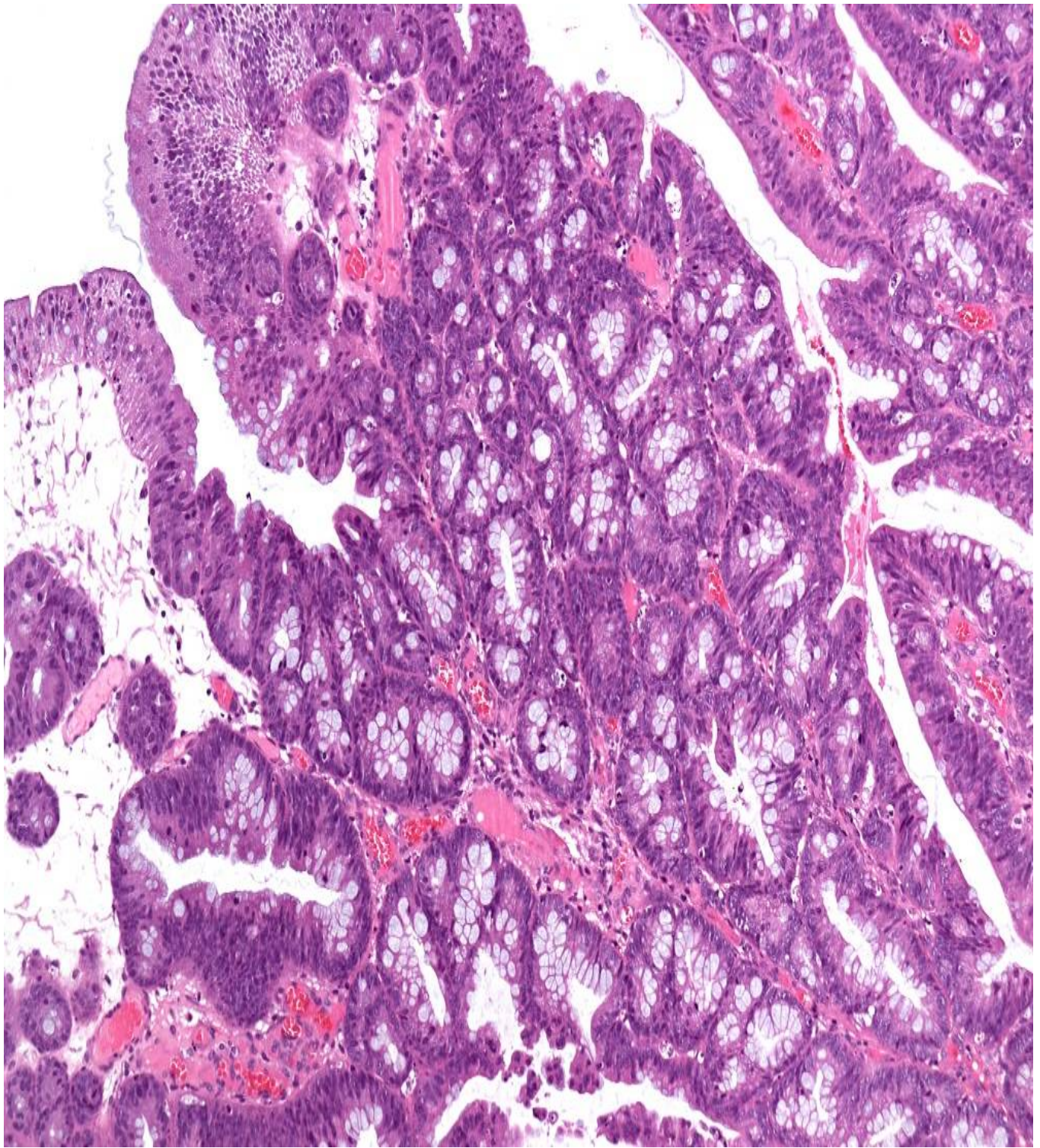
What is your diagnosis?







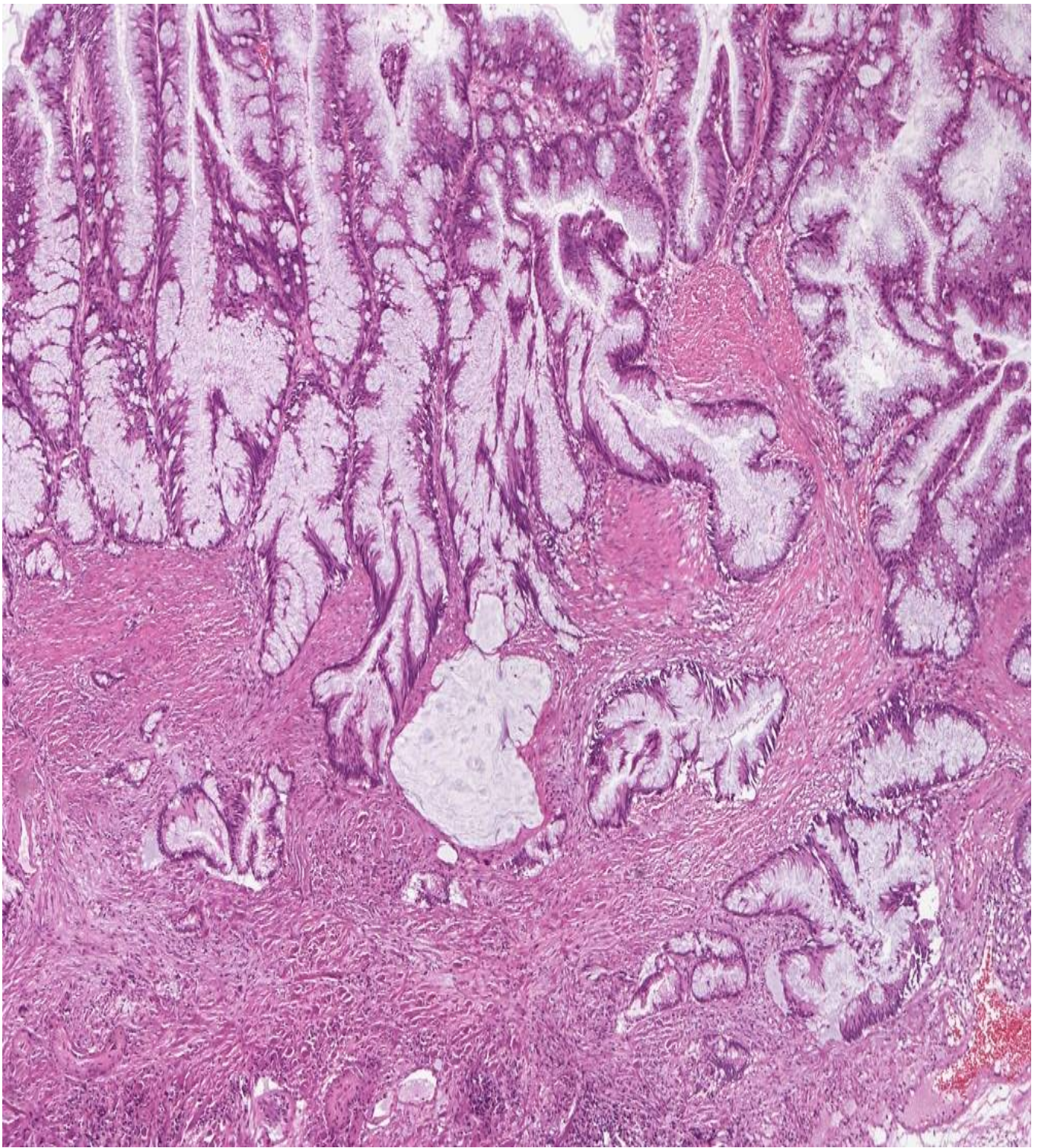




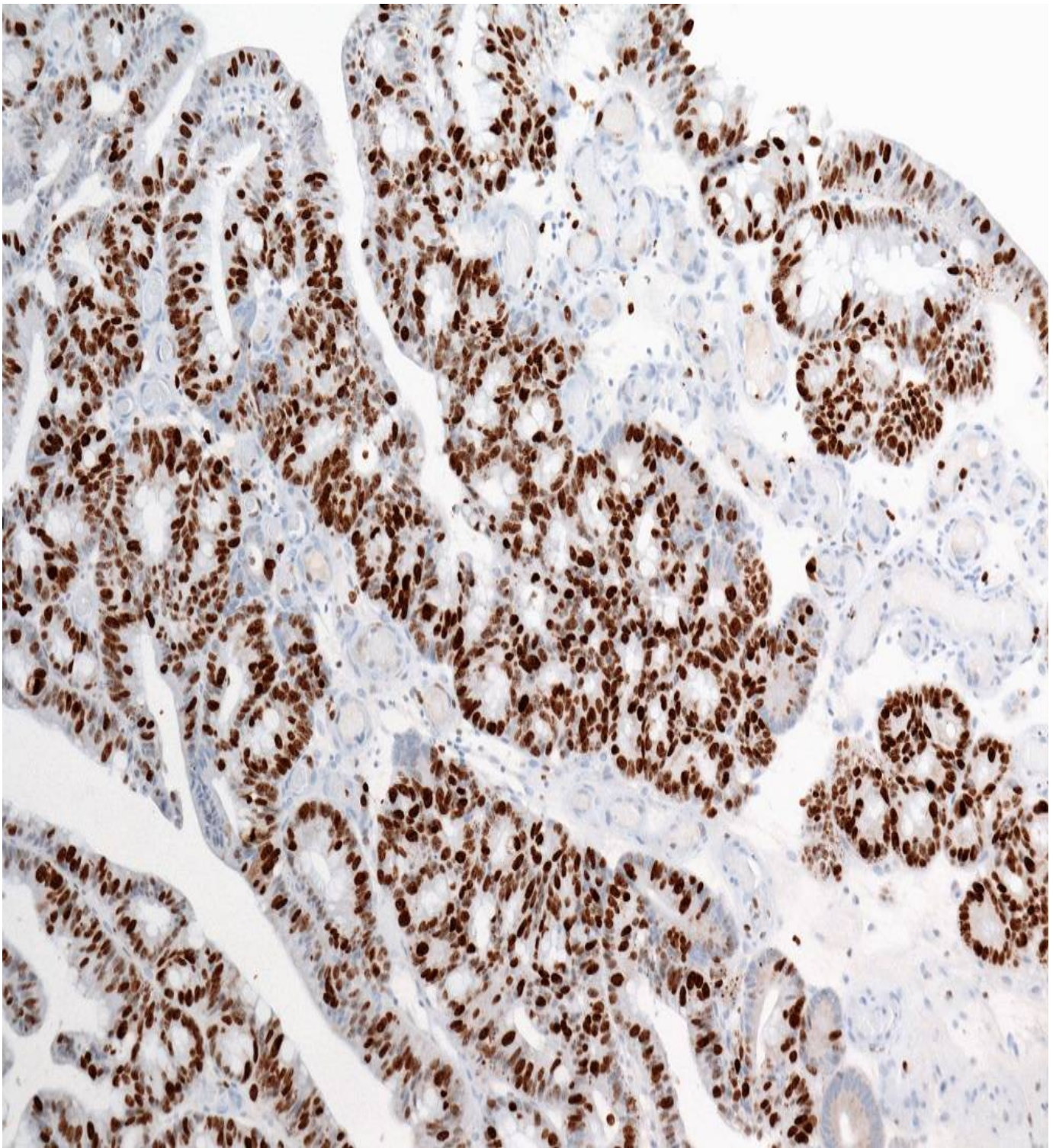












## Diagnosis

Microtubular Adenoma (with progression into submucosal invasive adenocarcinoma).

## Comment

Histology shows a dysplastic lesion characterized by villous-like fronds with garlands of closely packed microtubules lining the slopes (Panels B-D). The neoplastic cells are basophilic and show irregular nuclei with marked hyperchromasia and pseudo-stratification. Note submucosal tumour invasion at the basal resection margin (pT1 G1; Panel E). The Ki-67 (MIB-1) stain reveals high proliferative activity in the microtubules and lower staining on the villous-like surface (Panel F).

In 1997, Kubo and co-workers reported a histological phenotype of colorectal adenoma characterized by villous-like frond with sequential microtubular structures lining the slopes of the fronds. This lesion was initially referred to as “villomicroglandular” adenoma, later on as “microtubular” adenoma and was included in the 2010 Edition of the WHO Classification. The clinical significance is largely unknown and data regarding the molecular background are not available.

Microtubular adenomas are rare. They account for only approximately 1% of colorectal adenomas. They have to be differentiated from conventional tubular, tubulovillous, and villous adenomas which all characteristically show accentuation of proliferative activity in the upper parts of the lesion, particularly on the surface. The differentiation from traditional serrated adenomas (TSA) is challenging. In fact, some pathologists may regard the presented lesion as TSA with high grade intraepithelial neoplasia (dysplasia) and progression to cancer. Typically, however, TSA show columnar cells with markedly eosinophilic cytoplasm and nuclei which are somewhat atypical and hyperchromatic, but not as much as known from conventional and from microtubular adenomas. In addition, TSA usually demonstrate low Ki-67 expression, generally limited to “ectopic crypts” with their bases not seated adjacent to the muscularis mucosae. Future studies involving molecular pathology are needed to elucidate the molecular background of microtubular adenomas, thereby clarifying the issue whether microtubular and traditional serrated adenomas are truly different lesions or not.

## For further reading

- › Rubio CA. Colorectal adenomas: time for reappraisal. *Pathol Res Pract.* 2002;198:615-20.
- › Rubio CA, Nesi G, Messerini L, Zampi G. Serrated and microtubular colorectal adenomas in Italian patients. A 5-year survey. *Anticancer Res.* 2005;25:1353-9.
- › Torlakovic EE, Gomez JD, Driman DK, Parfitt JR, Wang C, Benerjee T, Snover DC. Sessile serrated adenoma (SSA) vs. traditional serrated adenoma (TSA). *Am J Surg Pathol.* 2008;32:21-9.

## Presented by

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