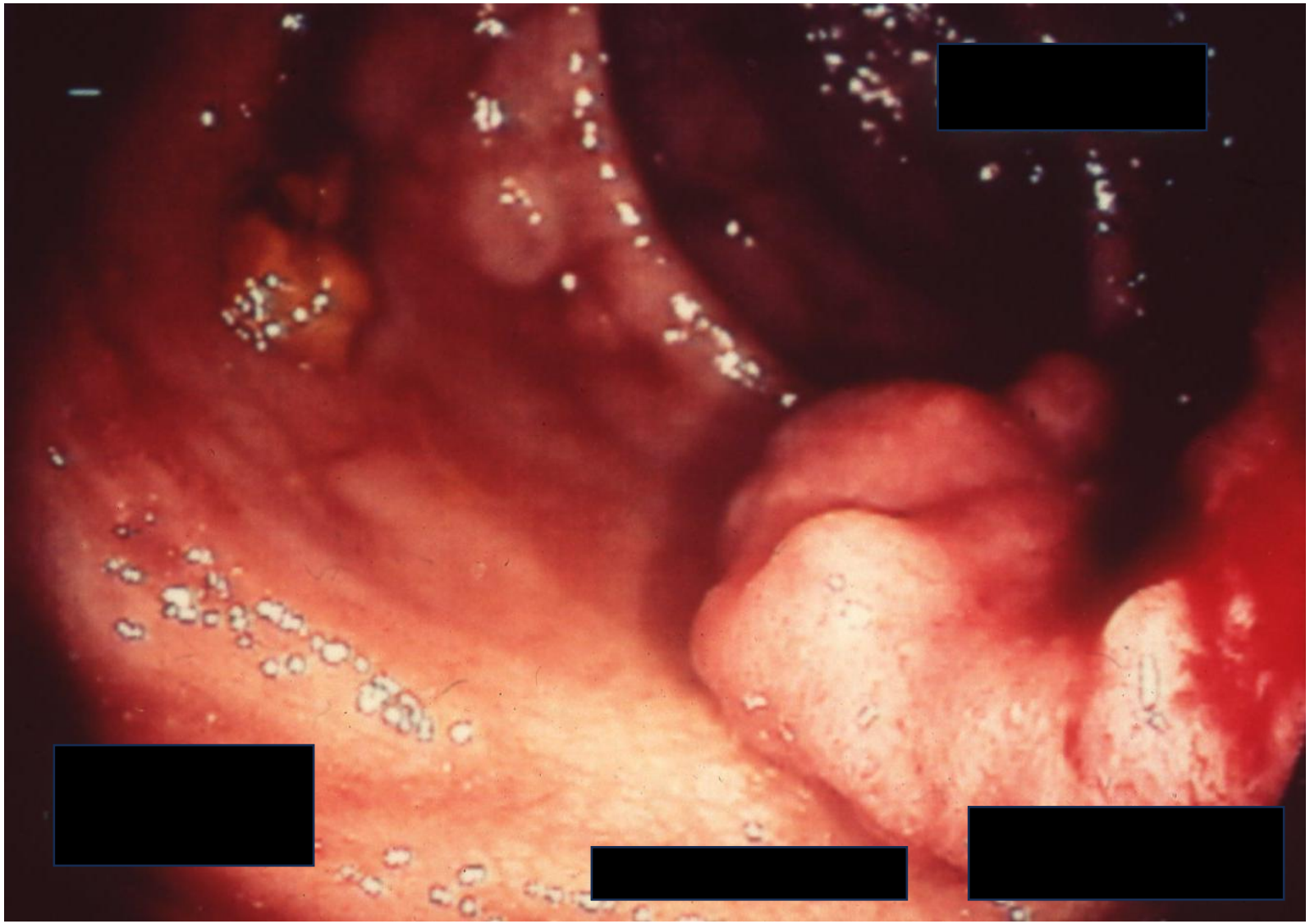
Micropapillary adenocarcinoma of the rectum

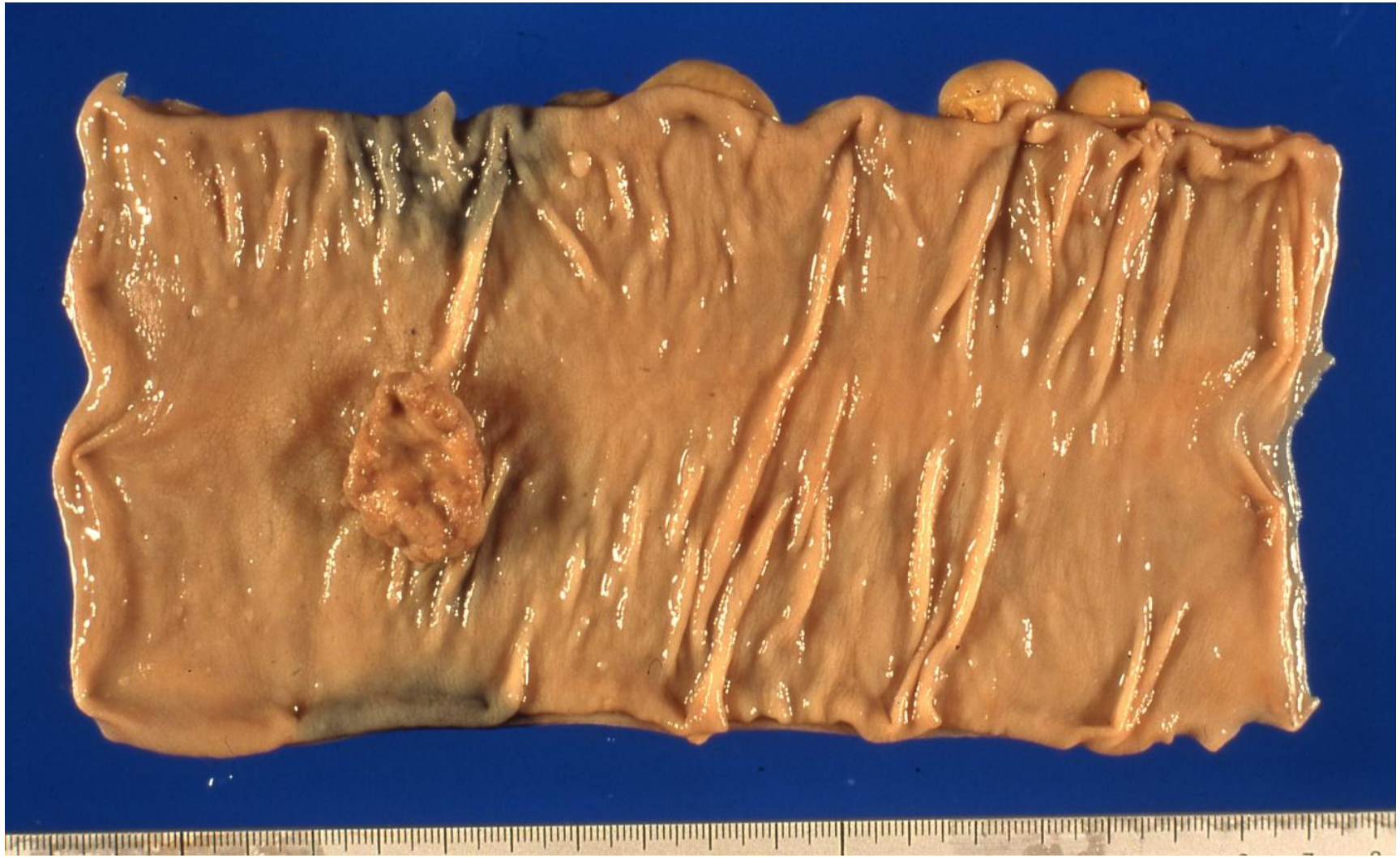
Micropapillary features in colorectal carcinomas portend a high likelihood of advanced local disease and nodal/distant metastases. Micropapillary colorectal adenocarcinoma is often associated with a cribriform pattern and nodal metastases with prominent necrosis. it also shows frequent mutations in KRAS and BRAF, while microsatellite instability (MSI) is very uncommon. Epithelial mesenchymal transition (EMT) is often suggested, including focal loss or decrease of AE1/AE3 and membranous E-cadherin, occasional vimentin-positive carcinoma cells and focal nuclear localization of SMAD4.

Here presented is a 60 y-o male case of early-stage (T1) micropapillary adenocarcinoma of the rectum measuring 2 cm, but with lymph node metastasis.

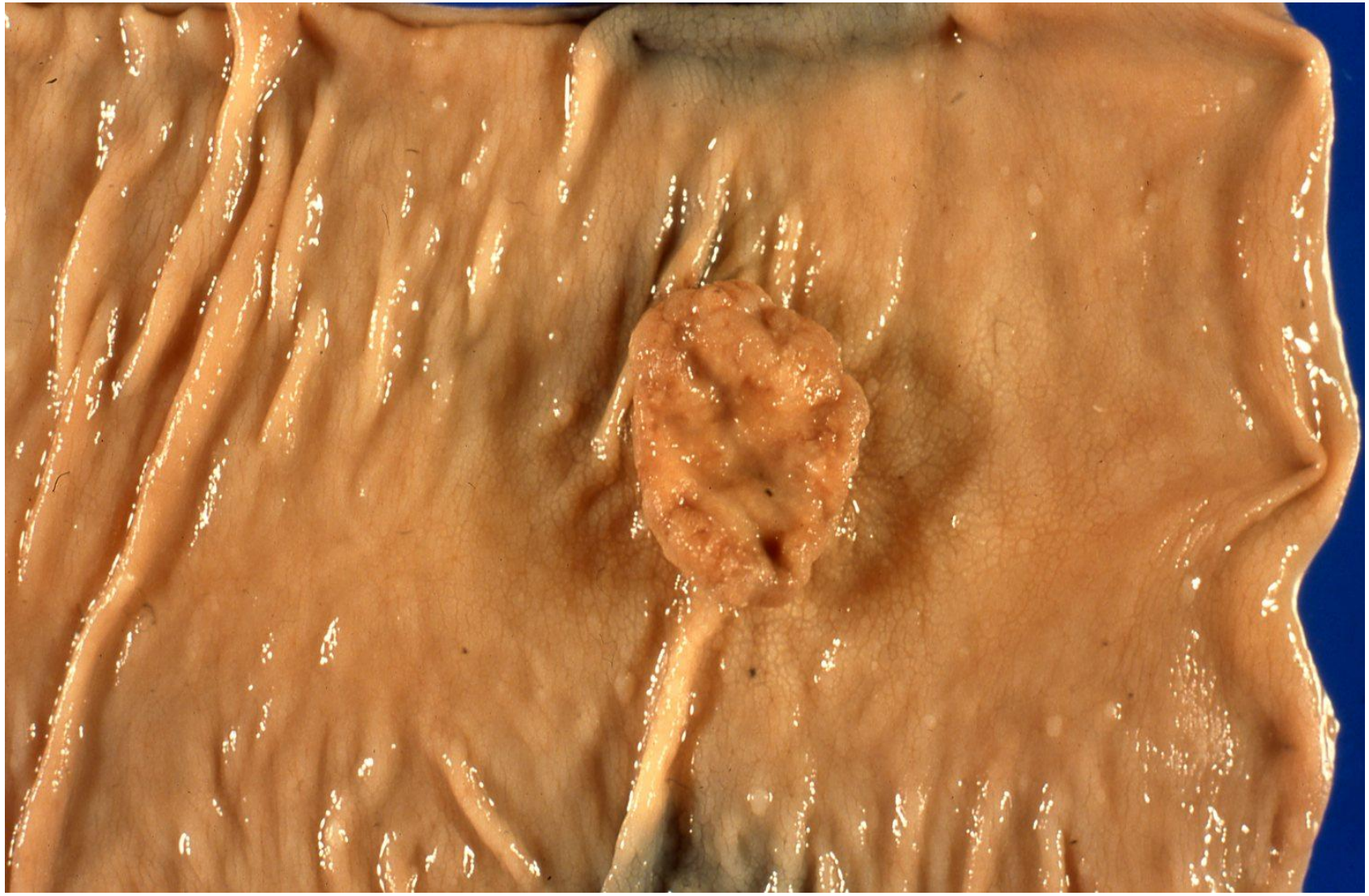
Ref.: Gonzalez RS, et al. Micropapillary colorectal carcinoma. Clinical, pathologic, and molecular properties, including evidence of epithelial-mesenchymal transition. Histopathology 2016; 70(2): 223–231. doi: 10.1111/his.13068



Micropapillary adenocarcinoma of the rectum seen in a 60 y-o male patient. Colonofiberscopic evaluation discloses a solitary 2 cm-sized elevated mass with central ulceration.



Micropapillary adenocarcinoma of the rectum anteriorly resected from a 60 y-o male patient (gross appearance after formalin fixation). A 2 cm-sized elevated lesion with central ulceration is seen in the rectal mucosa.



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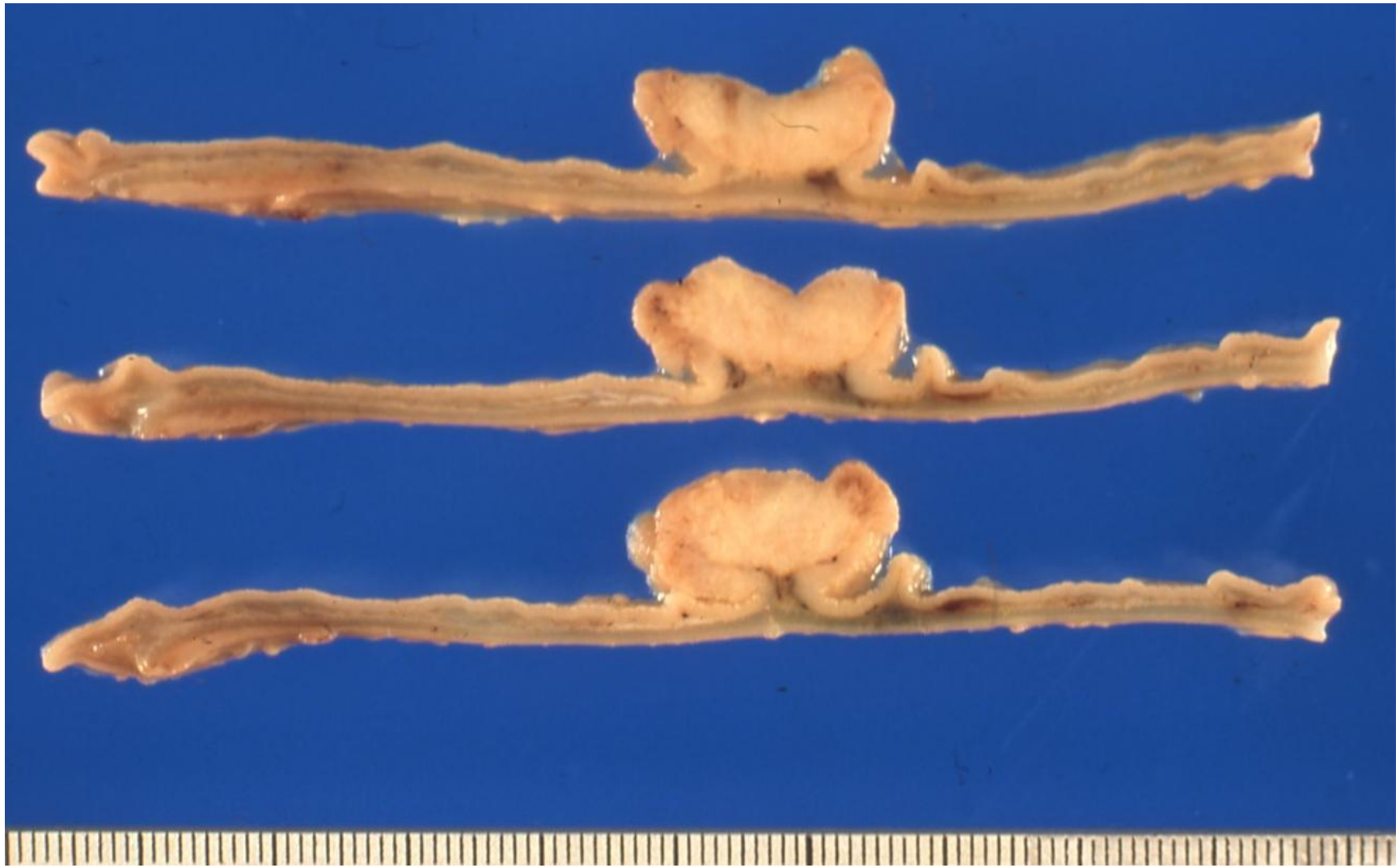

Micropapillary adenocarcinoma of the rectum anteriorly resected from a 60 y-o male patient (cut surfaces after formalin fixation). A 2 cm-sized elevated lesion with central ulceration shows submucosal invasion, not reaching the proper muscle layer (T1).

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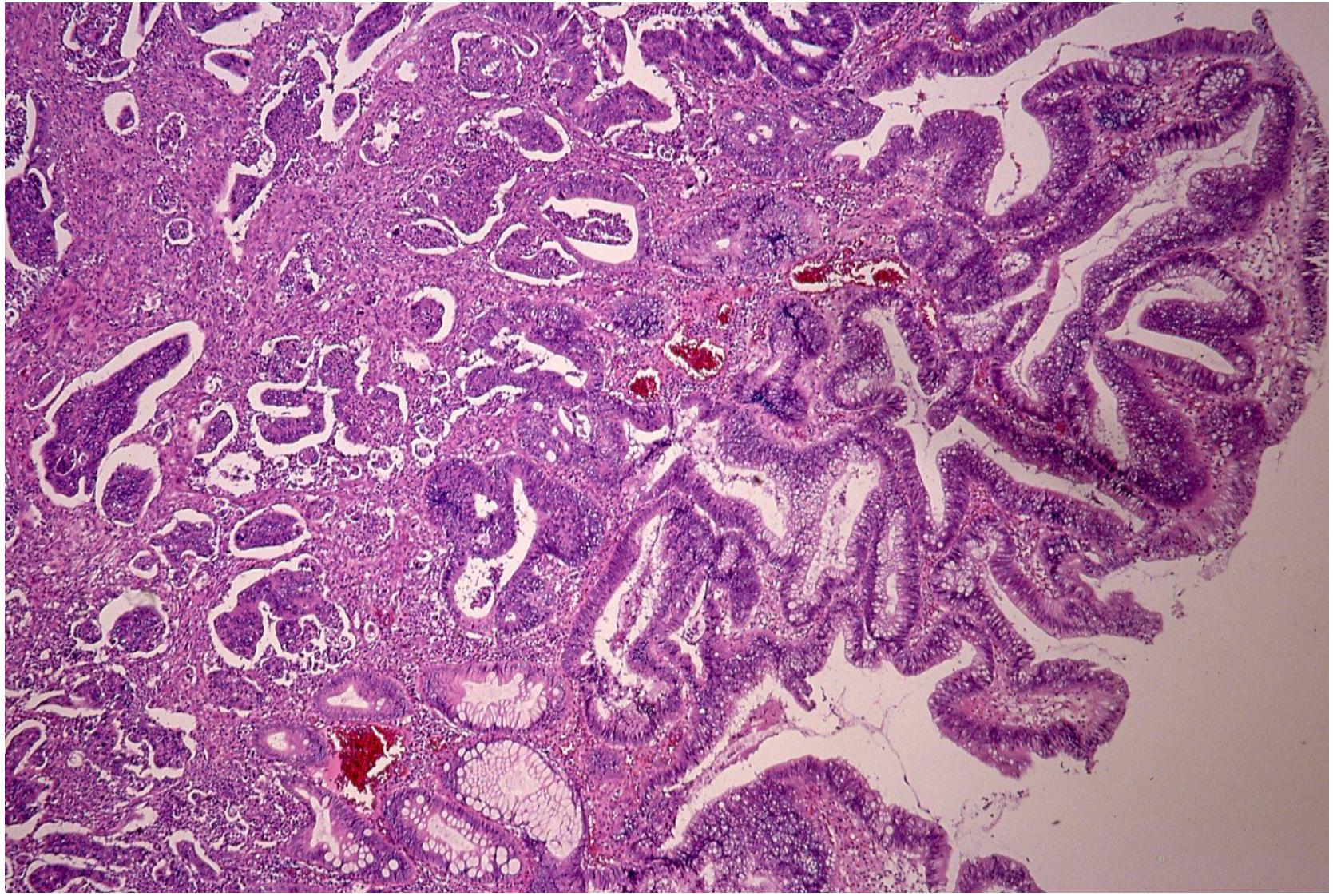
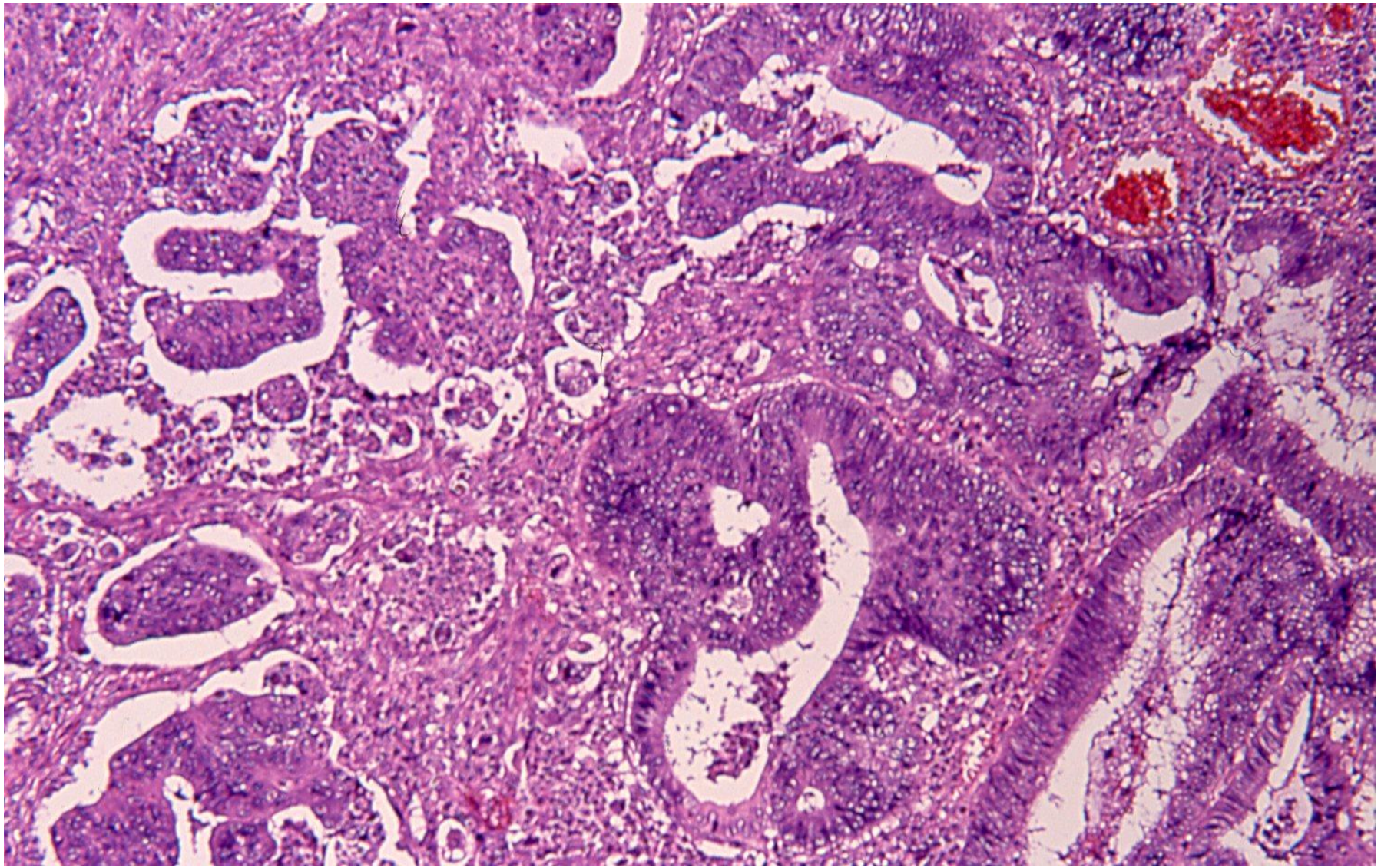
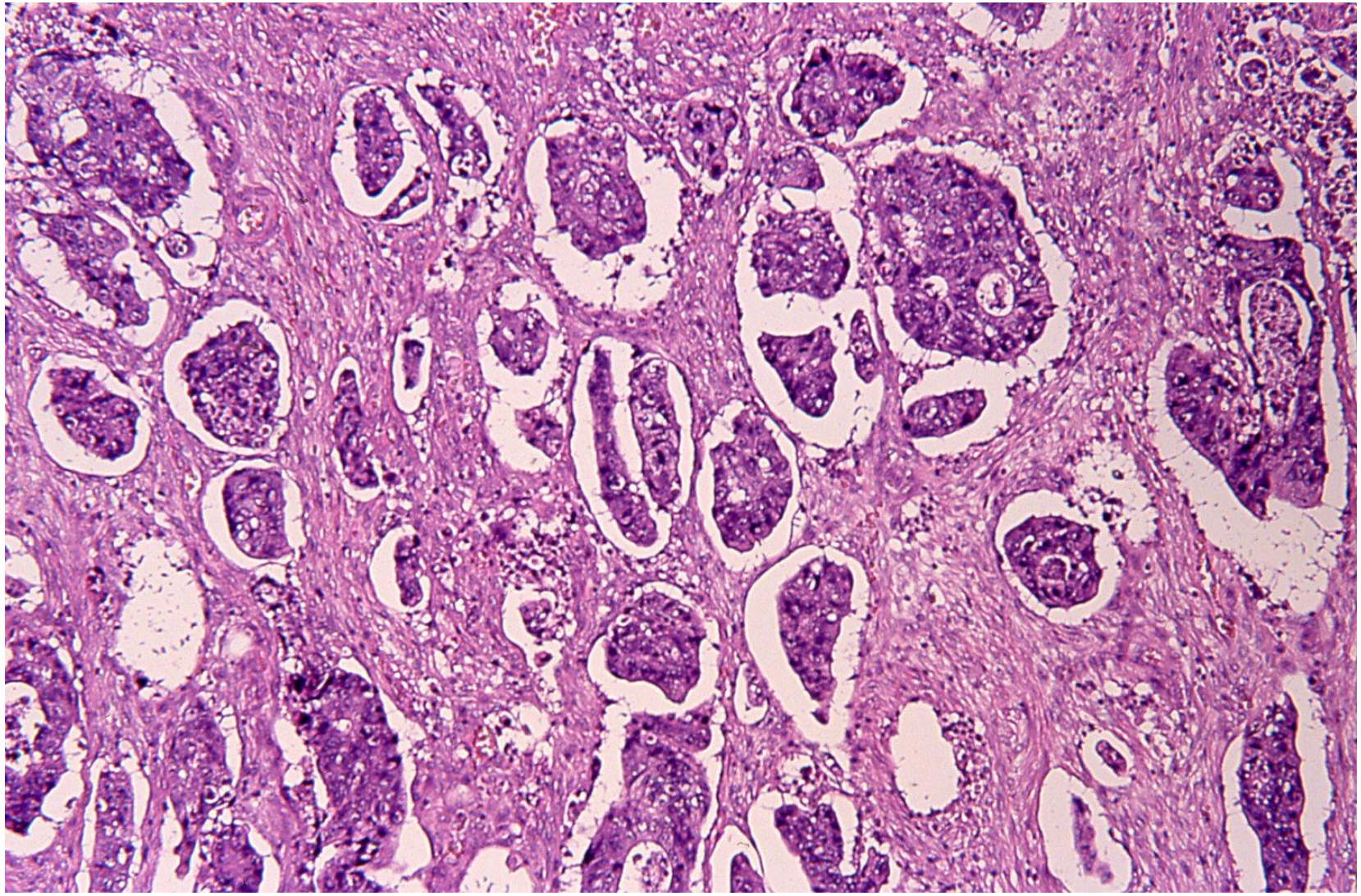


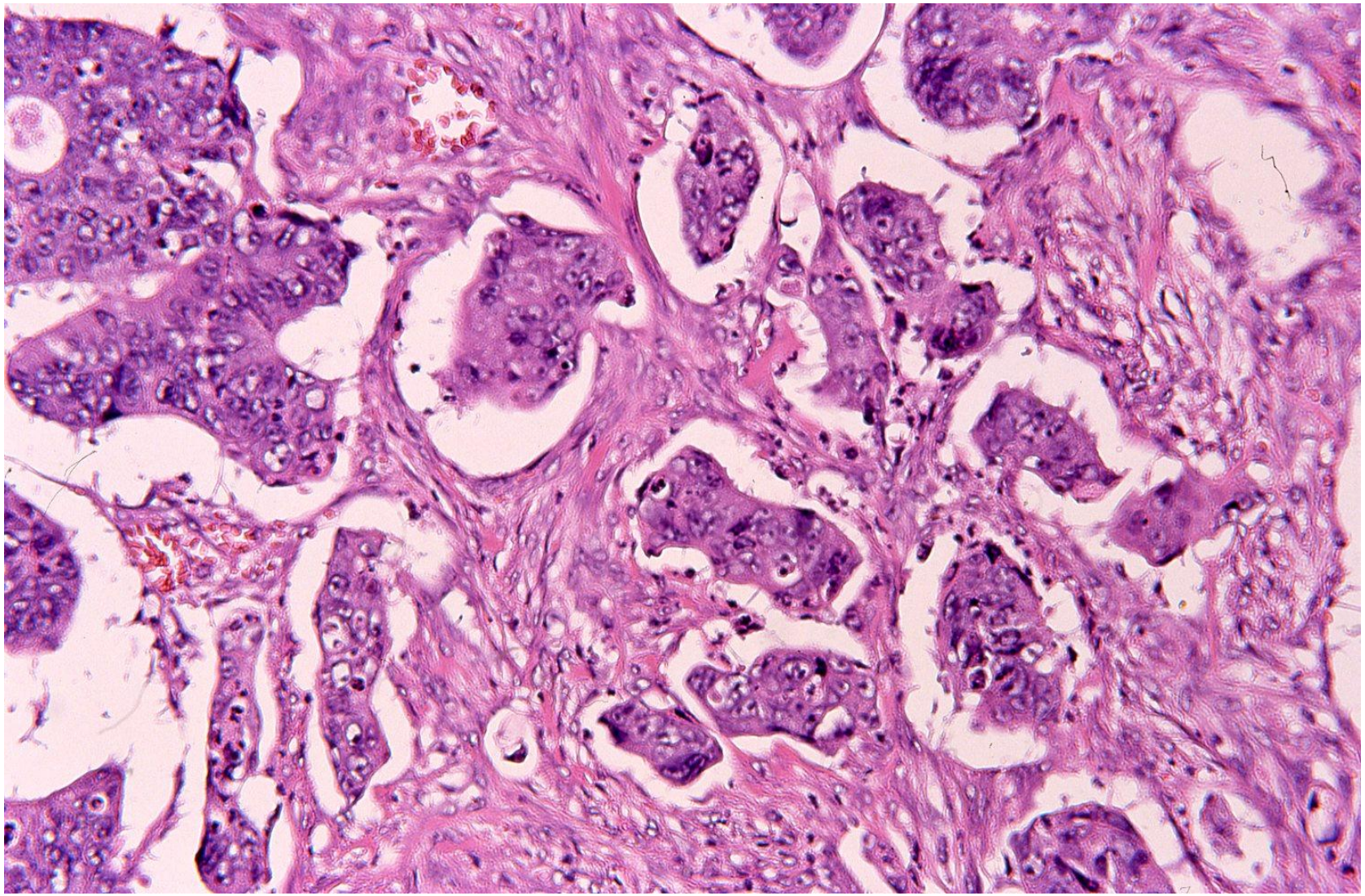
Micropapillary adenocarcinoma of the rectum anteriorly resected from a 60 y-o male patient (H&E-1). The elevated lesion is covered with papillary adenocarcinoma component. The submucosal invasion by micropapillary adenocarcinoma cells is evident.



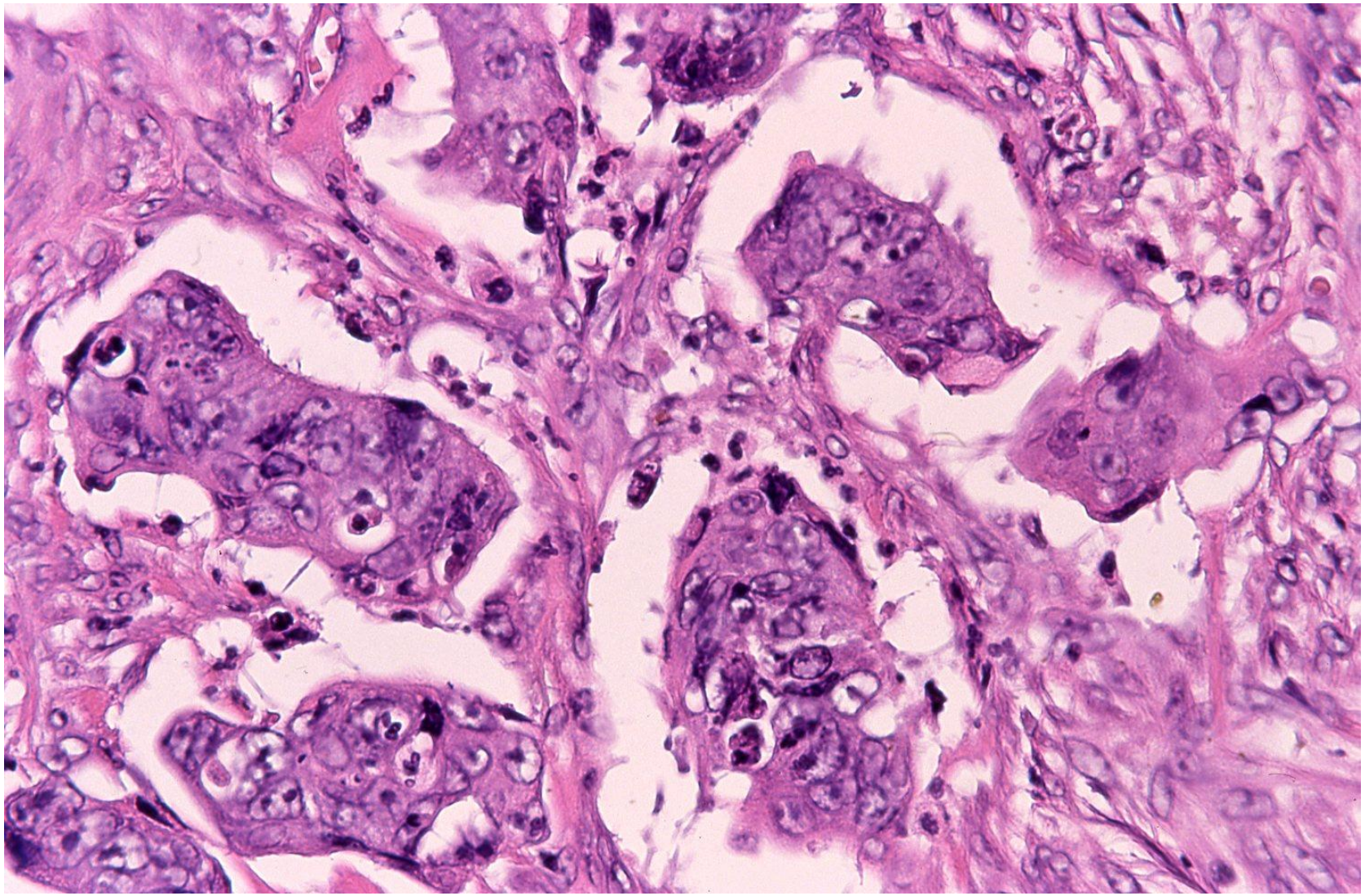
Micropapillary adenocarcinoma of the rectum anteriorly resected from a 60 y-o male patient (H&E-2). The elevated lesion is covered with papillary adenocarcinoma component. The invasion by micropapillary adenocarcinoma cells is evident.



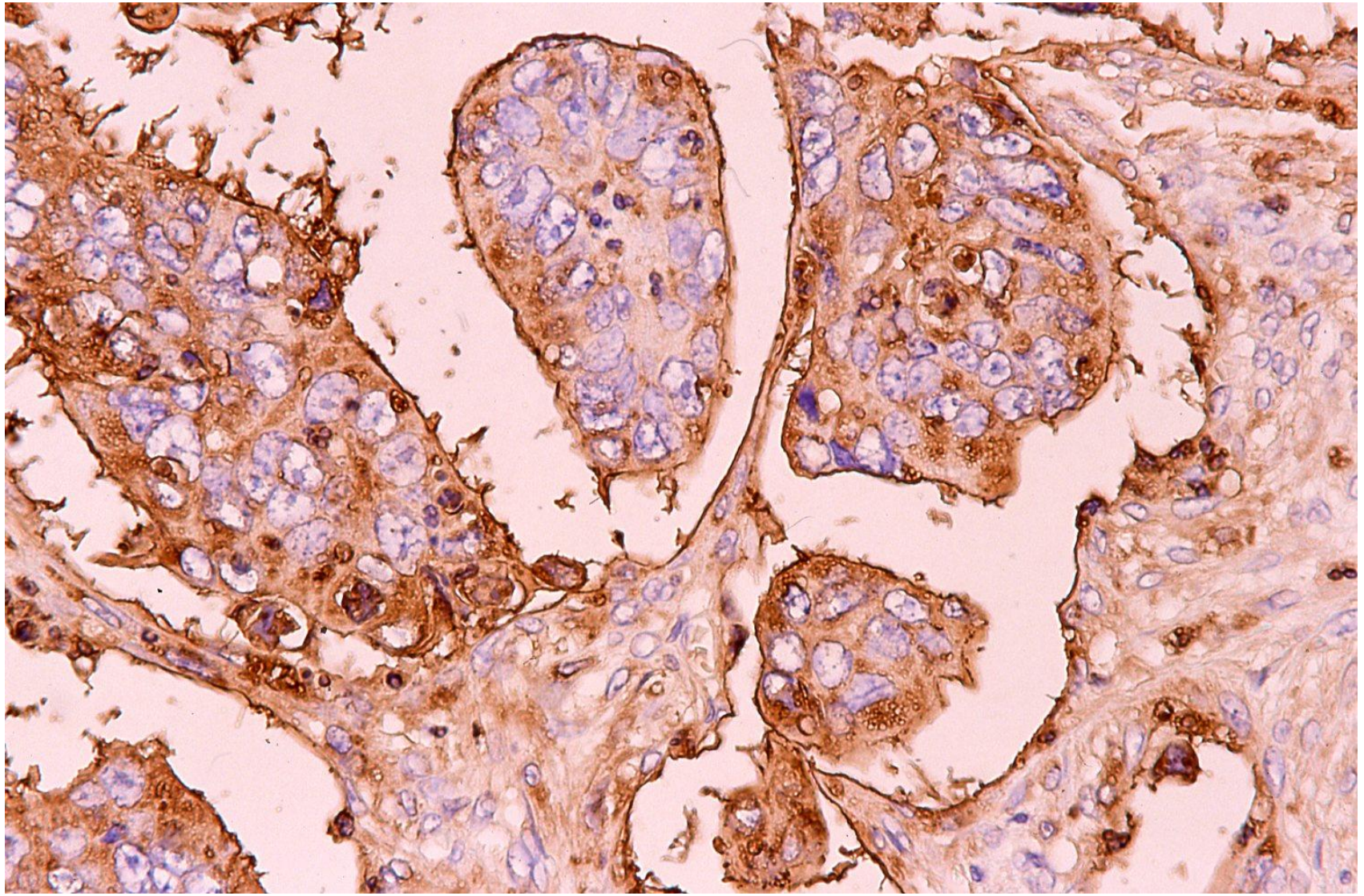
Micropapillary adenocarcinoma of the rectum anteriorly resected from a 60 y-o male patient (H&E-3). The submucosal invasion solely consists of the micropapillary adenocarcinoma component.



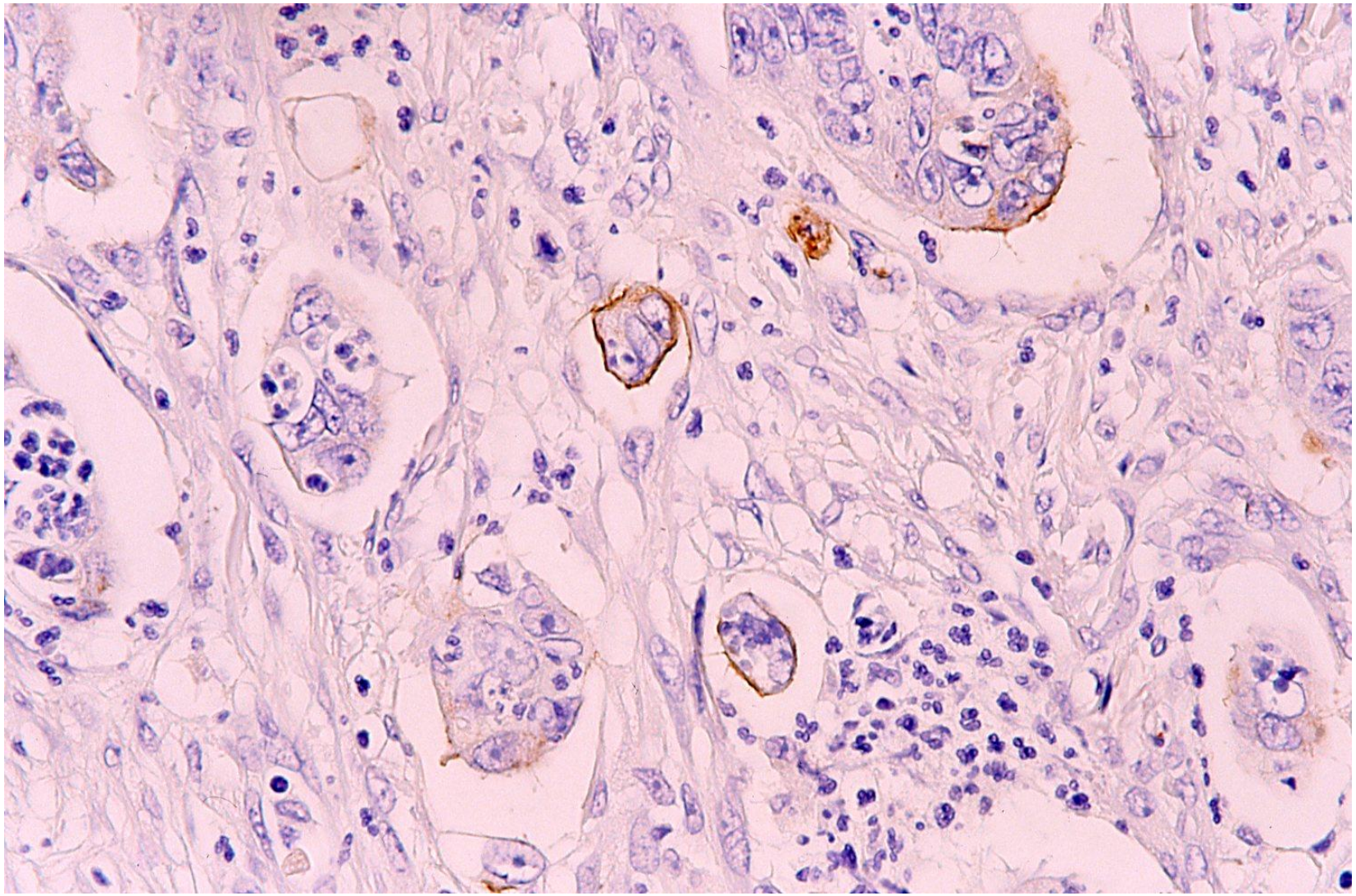
Micropapillary adenocarcinoma of the rectum anteriorly resected from a 60 y-o male patient (H&E-4). The submucosal invasion solely consists of the micropapillary adenocarcinoma component.



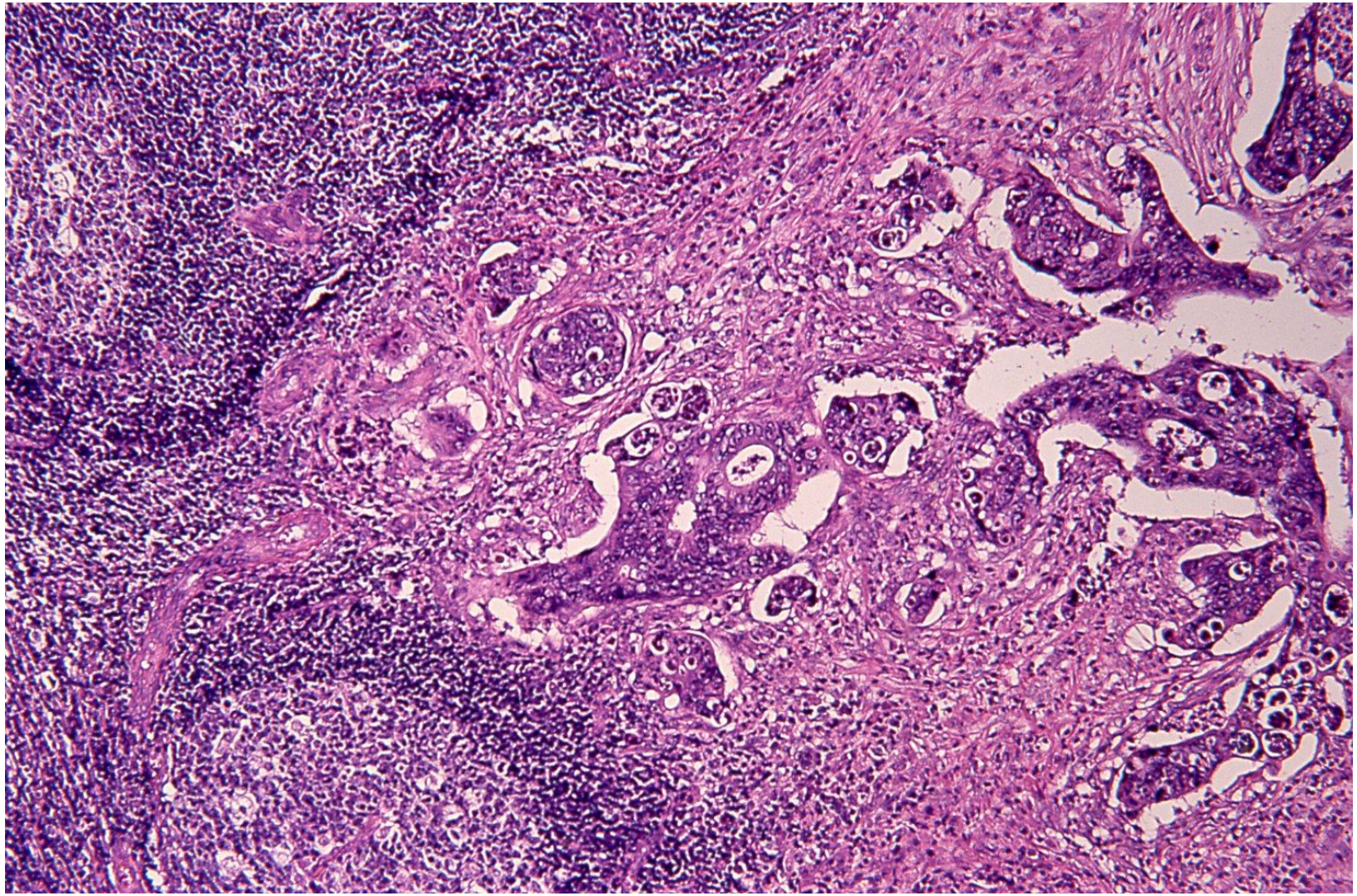
Micropapillary adenocarcinoma of the rectum anteriorly resected from a 60 y-o male patient (H&E-5). The submucosal invasion solely consists of the micropapillary adenocarcinoma component.



Micropapillary adenocarcinoma of the rectum anteriorly resected from a 60 y-o male patient (immunostaining for CEA). The micropapillary adenocarcinoma component in the submucosal layer diffusely express CEA. Plasma membrane positivity with an inside-out pattern is discerned.



Micropapillary adenocarcinoma of the rectum anteriorly resected from a 60 y-o male patient (immunostaining for EMA). The micropapillary adenocarcinoma component in the submucosal layer focally express EMA. Plasma membrane positivity with an inside-out pattern is characteristic.



Micropapillary adenocarcinoma of the rectum anteriorly resected from a 60 y-o male patient (H&E: lymph node metastasis). The micropapillary adenocarcinoma component is metastatic to the regional lymph node. The nodal met of the early-stage cancer (T1) indicates aggressiveness of the tumor.