

Gastrointestinal and Liver Pathology at Rush

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Case of the Month Answer – April 2011

Contributed by Drs. Richa Jain and Shriram Jakate

Diagnosis: Metastatic papillary serous adenocarcinoma.

Endoscopically and histologically, this structuring mass shows overlying normal colonic mucosa without any dysplastic or adenomatous changes. There is an “outside-in” pattern of tumor infiltration consistent with metastasis or extension from an adjacent organ.

Furthermore, the histological pattern- papillary adenocarcinoma (Fig.1) is unlike a colonic primary. This is supported further by immunohistochemical stains showing the tumor cells to be cdx-2 negative (Fig.2), CK7 positive (Fig.3) and CK20 negative (Fig.4). The tumor cells were nonreactive for WT-1 and calretinin. In addition, the patient did have a history of total abdominal hysterectomy and bilateral salpingo-oophorectomy in 2004.

Metastases to the GI tract from carcinomas of breast, lung and other sites is well known. In small biopsy specimens, however, it may be a challenging task for pathologists to separate primary versus a metastatic tumor. The presence of a precursor lesion adjacent to the tumor favors colonic primary adenocarcinoma. Also, absence of mucosal involvement, extensive lymphatic involvement and infiltration from the serosal end towards the mucosa favor a metastatic tumor. The colonic adenocarcinomas are overwhelmingly positive for CK20 and cdx-2, and negative for CK7, whereas the reverse holds true for adenocarcinomas arising in other sites. A panel of selected additional immunostains may be of help in further identification of the primary site (e.g. ER, TTF-1, WT-1, PSA, RCC, CDX-2, HepPar1).

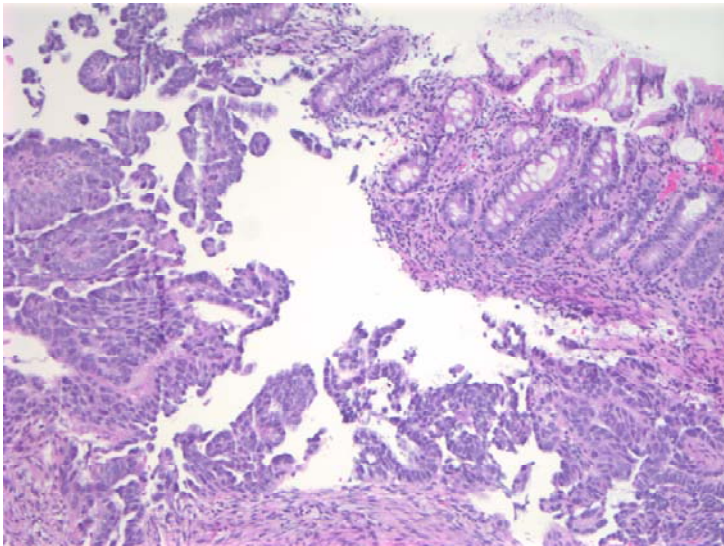


Fig. 1: Tumor in submucosa

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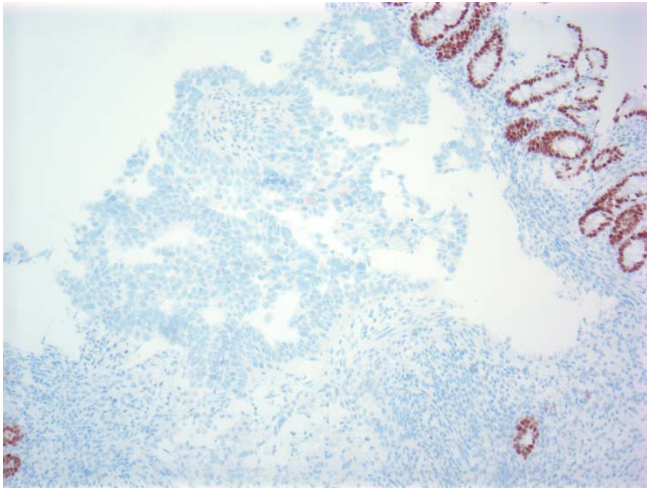


Fig.2: cdx-2 negative

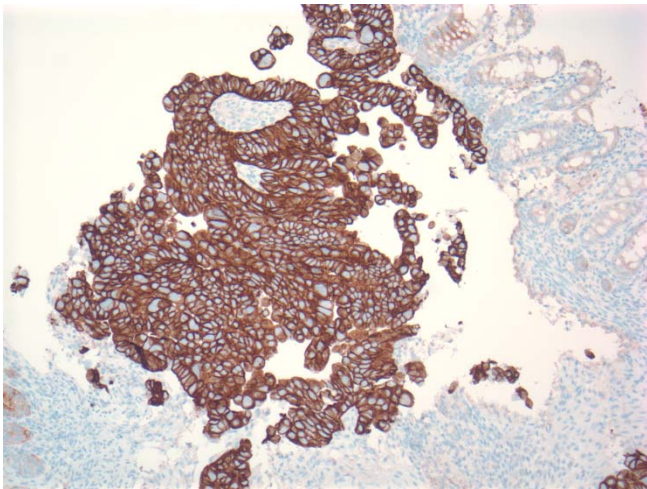


Fig. 3: CK7 positive

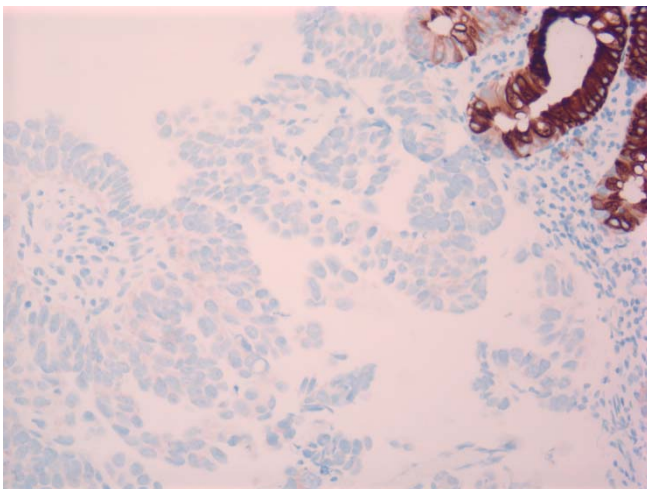


Fig. 4: CK20 negative

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References:

1. Odze RD, Goldblum JR. Surgical pathology of the GI tract, liver, biliary tract, and Pancreas, 3rd Ed. Saunders Elsevier, 2009