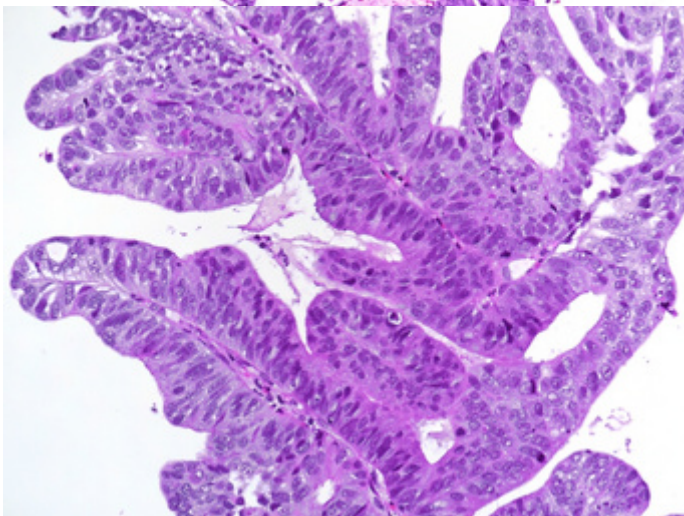
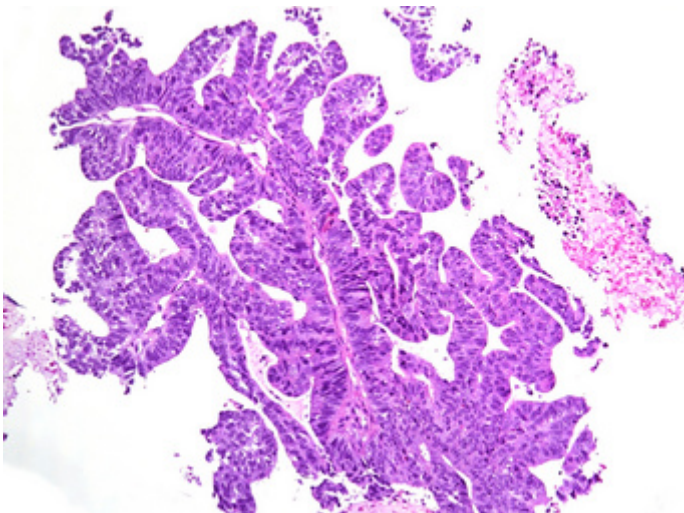
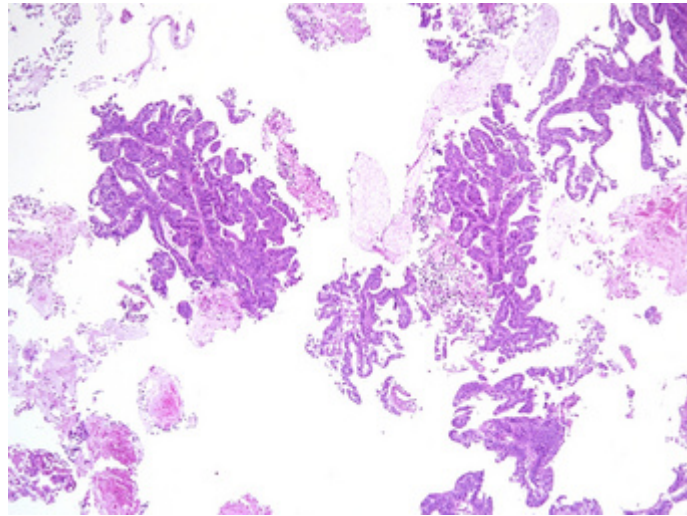
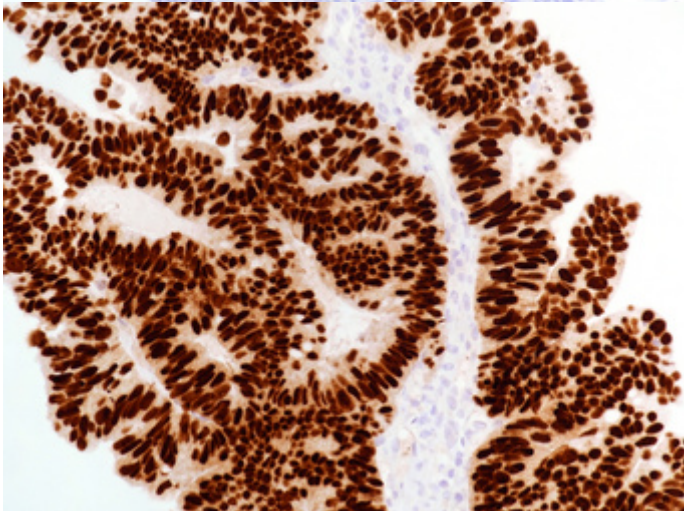
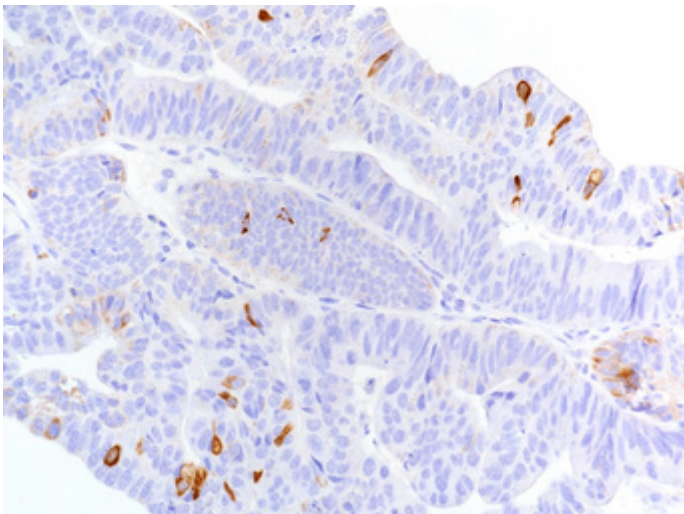
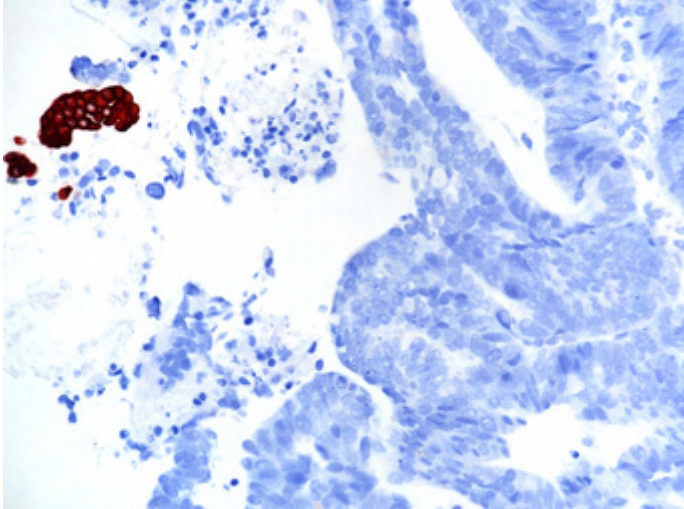
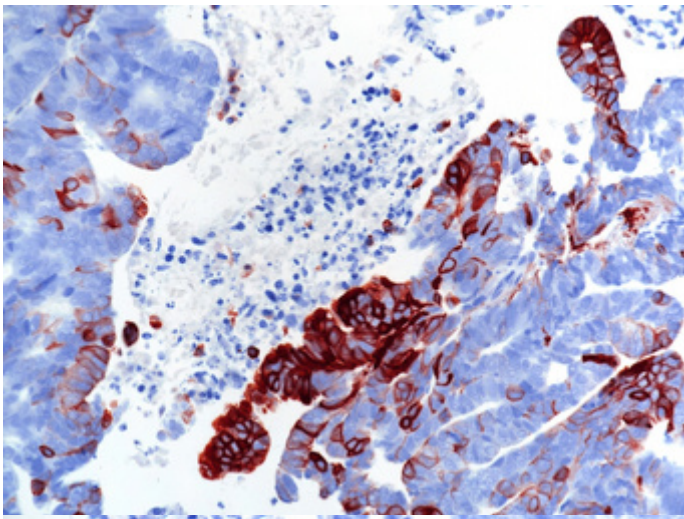


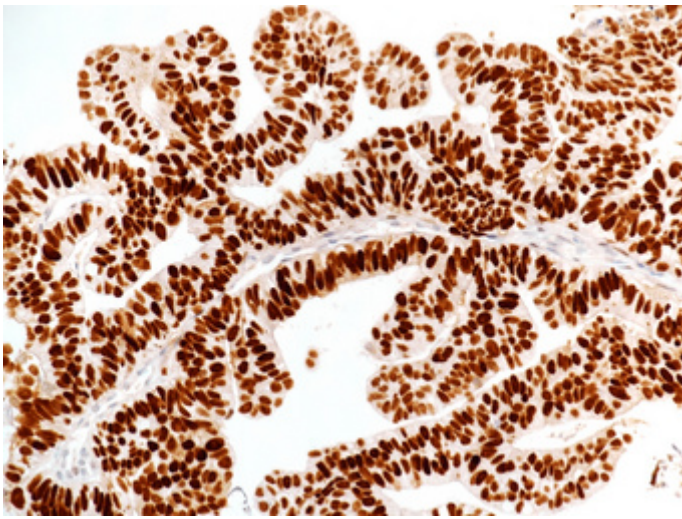
November 2018

An uncommon cause of jaundice in a 73-year-old male.

What is your diagnosis?







Diagnosis:

Bile duct metastasis due to colorectal cancer.

Comment:

A 73-year-old male with history of colorectal carcinoma (operated eight years previously) and resection of metachronous liver metastases (five and six years previously) and known pulmonary metastases (under chemotherapy: FOLFIRI plus Panitumumab) developed jaundice due to obstruction of the common bile duct (Panel A). On CT scan the wall of the bile duct appeared thickened. No mass lesion was detected within the liver.

The patient underwent endoscopic retrograde cholangiopancreatography (ERCP) and biopsies were taken from the stenosis. Histological analysis revealed a moderately-differentiated adenocarcinoma with papillary features and presence of dirty necrosis (Panels B-D). There were also isolated fragments of non-neoplastic bile duct epithelium. Further examination using immunohistochemical staining was made. The tumour cells were positive for keratin 20 (Panel E), yet negative for keratin 7 (Panel F; non-neoplastic epithelium serving as internal control), suggesting an intestinal phenotype. Positivity for MUC2 (Panel G), CDX2 (Panel H) and SATB2 (Panel I) proved the lesion to be a secondary tumour, that is, bile duct metastasis due to colon cancer.

The biliary duct is a rare, yet characteristic site for colon cancer metastasis. It often leads to a diagnostic dilemma, since primary cholangiocarcinoma (potentially treatable with surgery) has a similar clinical presentation. Several case reports are available in the literature.

A panel of diagnostic markers is needed for accurate diagnosis. While adenocarcinomas arising from the biliary ducts are almost invariably keratin 7 positive (and usually negative for keratin 20, except for staining of single cells) colon cancer and its metastasis usually show stronger keratin 20 positivity, compared to the rare positivity for keratin 7. Please note, CDX2 (and also MUC2) may be seen in (particularly ampullary) primary bile duct tumours, indicating an intestinal phenotype, which may encounter in addition to pancreatobiliary (and rare gastric) phenotypes. The positivity for SATB2 in our case strongly suggests metastatic disease.

Biliary metastasis must remain a differential when reviewing a patient presenting with painless jaundice, having prior history of colon malignancy. Immunohistochemical tests may be necessary to differentiate it from primary cholangiocarcinoma. Development of biliary metastasis confers a poor outcome in terms of survival.

For further reading:

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