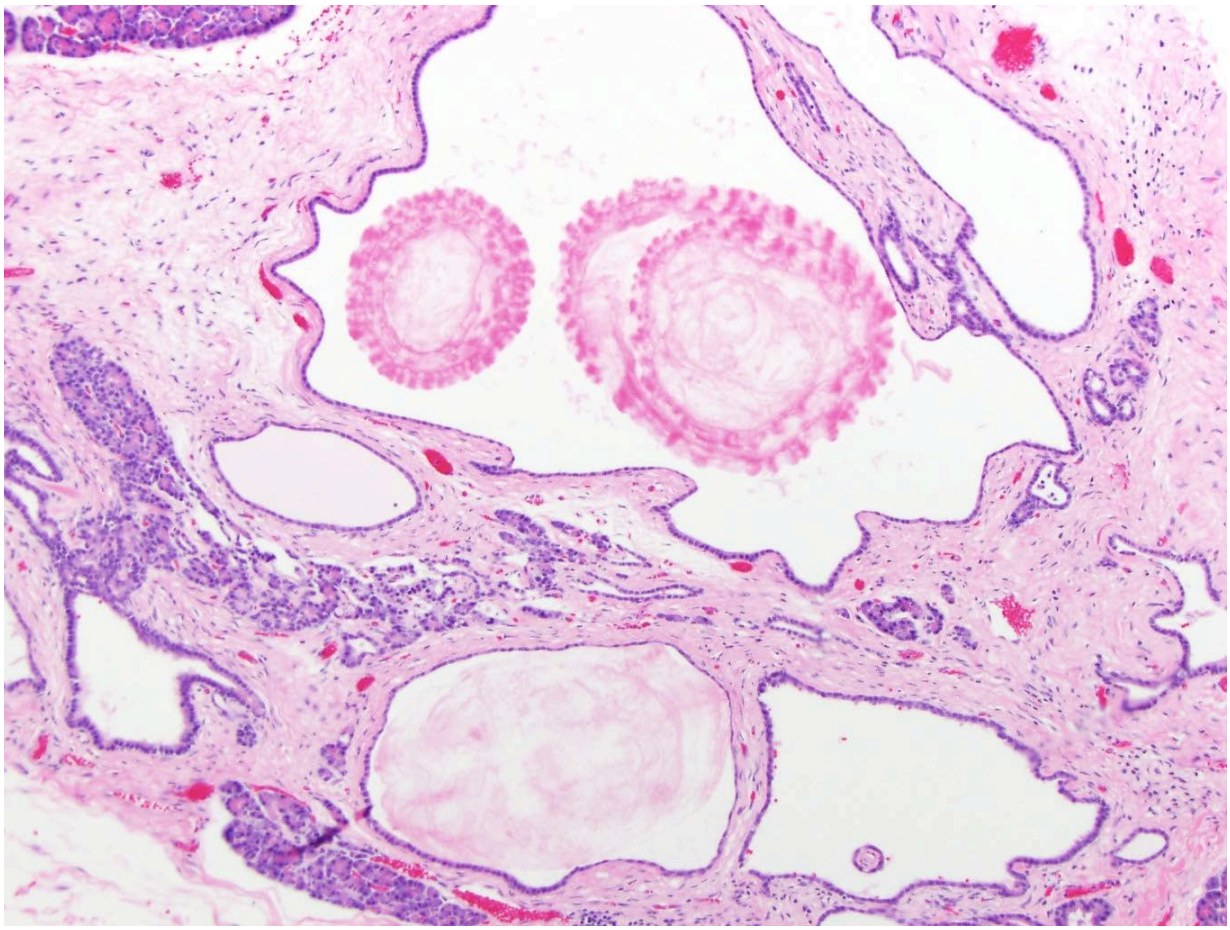
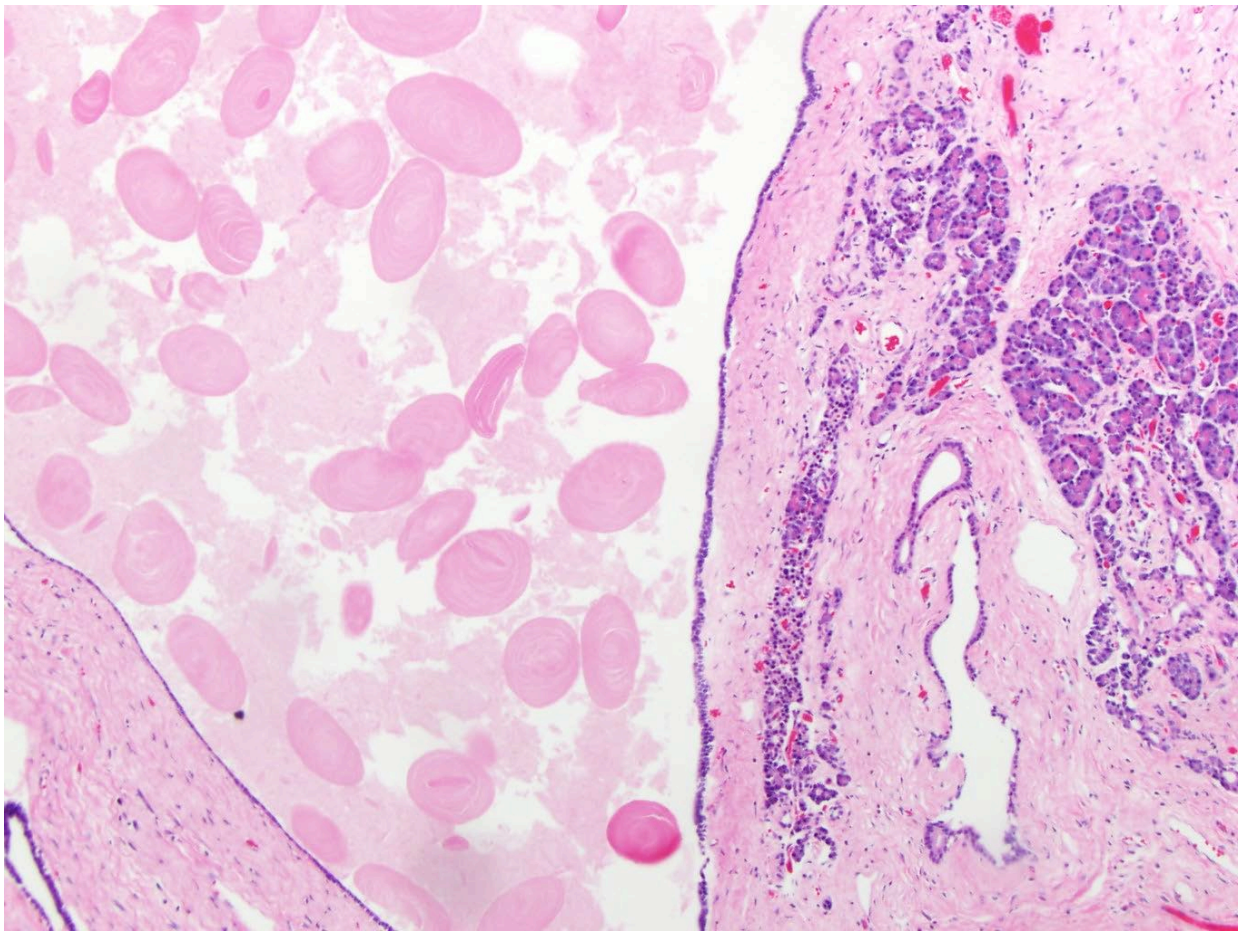
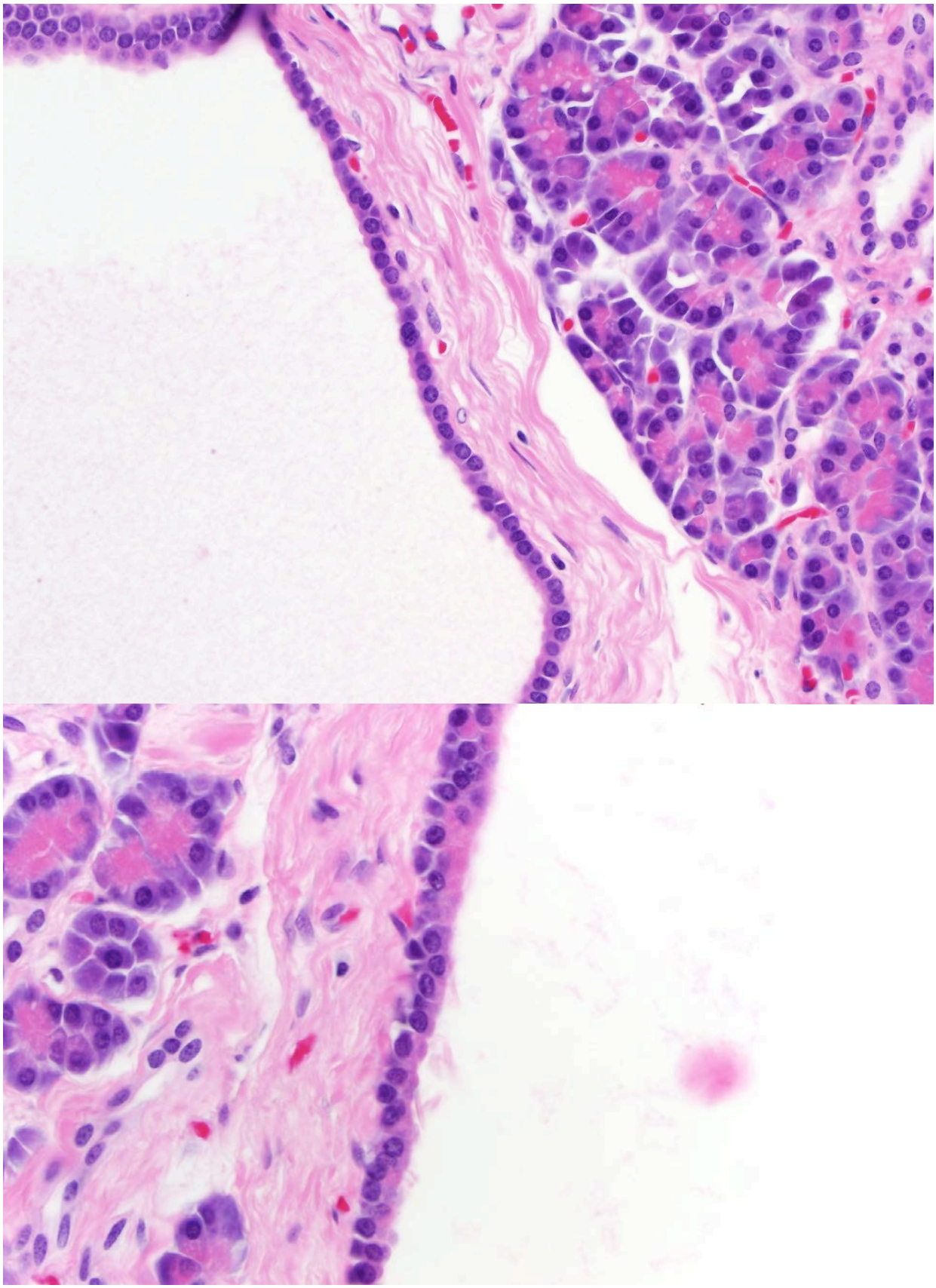
Case: A 15-year-old boy present with abdominal pain. Imaging detects a cystic pancreatic head mass that is subsequently removed. Gross examination reveals a well-circumscribed multi-loculated cystic lesion with a fibrous pseudocapsule measuring 5 cm. No papillary projections are identified.







What is your diagnosis?
A) Serous cystadenoma
B) Cystic fibrosis
C) Acinar cell cystadenoma
D) Mucinous cystic neoplasm
E) Intraductal papillary mucinous neoplasm

Answer and Discussion:
C) Acinar cell cystadenoma
Acinar cell cystadenomas (also called "cystic acinar transformation") is an uncommon pancreatic condition found in adults. They can be unilocular or multilocular cysts and exhibit multicentricity. On microscopy, the cyst lining is composed of cuboidal cells with round, basally oriented nuclei, and granular cytoplasm that is eosinophilic in the apical aspect and basophilic in the basal aspect. Clusters of acinar cells are found adjacent to the cyst. The cyst contents are often lamellated eosinophilic concretions. PAS and PAS-D stains highlight the zymogen granules. Immunohistochemistry may be positive for trypsin, chymotrypsin, and lipase. In contrast to normal acinar cells, CK7 is positive. A recent study suggests that these lesions are not neoplasms and should not be called acinar cell cystadenomas, but instead called Cystic Acinar Adenomatoid Transformation (CAAT). The study looked at 6 cases of which 3 were unilocular and 3 were multilocular. They found various degrees of ductal dilatation with incorporation into the acinar parenchyma and involvement of islets of Langerhans. They hypothesized that early lesions start as marked ductal dilatation with expansion and incorporation into the pancreatic parenchyma, and then fusion into a late stage of a unilocular cyst with a thick hyalinized wall.

References:
Adsay NV. Cystic lesions of the pancreas. Modern Pathology (2007) 20 S71-S93.

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