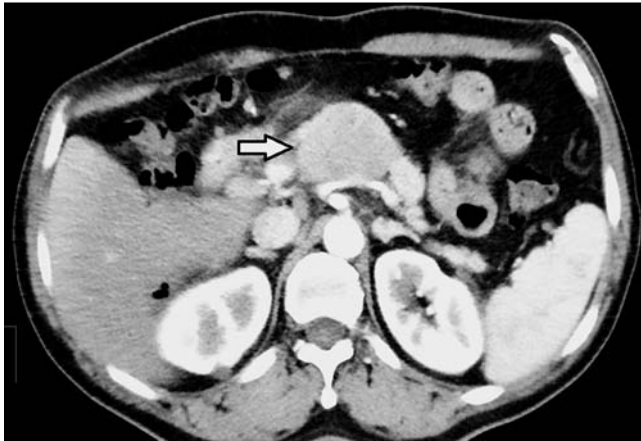
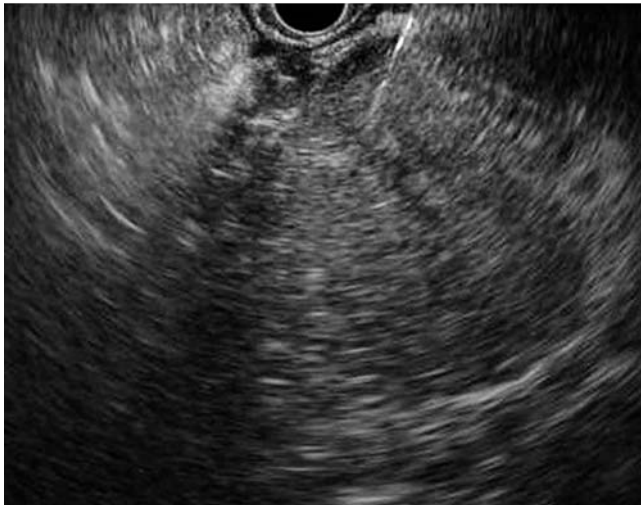


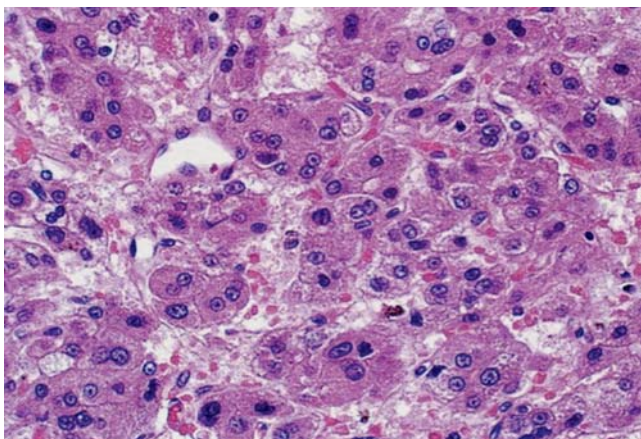
## Endoscopic ultrasound diagnosis of a primary hepatoid carcinoma of the pancreas



**Fig. 1** Abdominal computed tomographic scan. The arrow indicates a 60 × 50-mm solid mass in the pancreatic body of a 59-year-old man with a history of diabetes mellitus and smoking undergoing evaluation for symptoms of weight loss and abdominal discomfort.



**Fig. 2** Endosonographic image showing a 19-gauge needle inserted into the pancreatic mass.



**Fig. 3** Histologic image. The neoplastic cells are arranged in solid nests and a trabecular pattern, with moderate atypia and rare mitoses (hematoxylin and eosin, × 40).

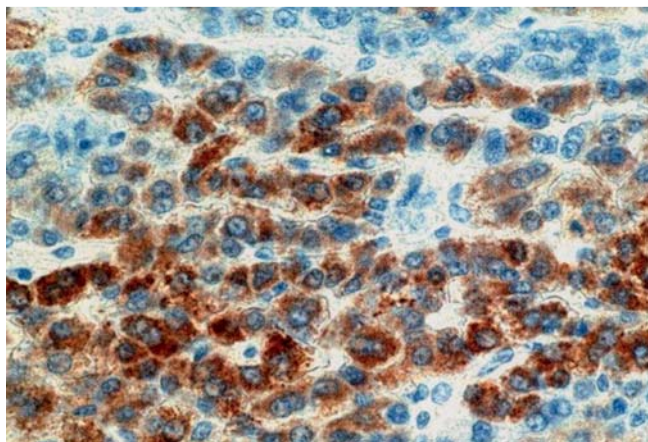
A 59-year-old man with a history of diabetes mellitus and smoking was referred for the evaluation of weight loss and abdominal discomfort. Abdominal computed tomography revealed mild ascites, multiple liver nodules, hepatic hilar lymphadenopathy, and a 60 × 50-mm solid exophytic mass in the pancreatic body (● Fig. 1). The serum lipase, transaminase, bilirubin, alpha-fetoprotein (AFP), chromogranin A, cancer antigen (CA) 19-9, and carcino-embryonic antigen (CEA) levels were within normal range.

Endoscopic ultrasound-guided fine-needle biopsy (EUS-FNB) of the pancreatic mass was performed with a 19-gauge Pro-Core needle (Cook Medical, Winston-Salem, North Carolina, USA) (● Fig. 2). On histologic examination, the specimen exhibited monomorphic neoplastic cells, with moderate atypia and occasional mitoses, arranged in solid nests and a trabecular pattern. The cells had indistinct cytoplasmic borders, large central oval nuclei, occasional nucleoli, and abundant eosinophilic cytoplasm, with the appearance of hepatocellular carcinoma (HCC) (● Fig. 3). No bile production was identified. The tumor cells reacted strongly with Hep Par 1 and were negative for chromogranin, synaptophysin, AFP, cytokeratin (CK) 7, and CK20 (● Fig. 4). Primary pancreatic hepatoid carcinoma or metastatic/ectopic HCC was suspected. Sorafenib (Nexavar; Bayer HealthCare Pharmaceuticals and Onyx Pharmaceuticals) at a reduced dose of 200 mg twice daily was commenced and produced a short-term clinical benefit. The patient's condition then quickly deteriorated, hepatic failure developed, and he died 4 months after the diagnosis.

Pancreatic hepatoid carcinoma is an uncommon neoplasm sharing morphologic and immunohistochemical features with HCC. It seems to originate from ectopic liver tissue located in various organs, including the pancreas. Specifically, pancreatic hepatoid carcinoma, despite its morphologic appearance of a well-differentiated carcinoma, is a very aggressive neoplasm that is often associated with liver and lymph node metastases at the time of diagnosis, mimicking a metastatic HCC [1–3].

In this case, histologic typing was obtained by EUS-FNB of the pancreatic mass, after which immunohistochemistry and the clinical behavior led to a diagnosis of pancreatic hepatoid carcinoma.

Endoscopy\_UCTN\_Code\_CCL\_1AF\_2AZ



**Fig. 4** On immuno-histochemical staining with Hep Par 1, the neoplastic cells exhibit cytoplasmic granular immunopositivity (×40).

#### Bibliography

**DOI** <http://dx.doi.org/10.1055/s-0034-1392430>  
 Endoscopy 2015; 47: E367–E368  
 © Georg Thieme Verlag KG  
 Stuttgart · New York  
 ISSN 0013-726X

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Competing interests: None

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