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# The role of confocal endomicroscopy for diagnosis of solid pseudopapillary tumor of the pancreas

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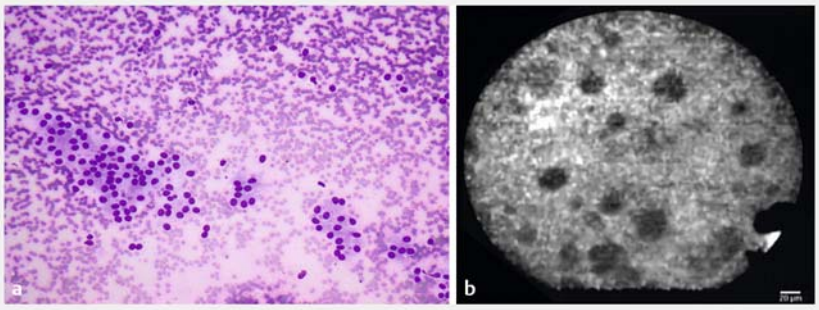
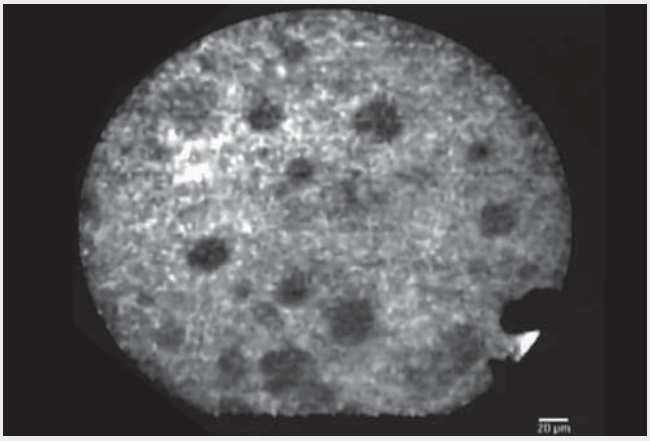
The patient is a 31-year-old woman with a past medical history of asthma who presented with a 2-month history of left flank pain that radiated to the back. Initial labs including hepatic and biliary profile were unremarkable. Computed tomography (CT) of the abdomen and pelvis was significant for a 12.5-cm well-circumscribed mass with internal septations in the pancreatic tail with an anterior enhancing solid component. Endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) was performed followed by confocal laser endomicroscopy (▶ **Fig. 1 a, b**), which revealed small- to medium-sized dark clusters of cells consistent with tumor cells (▶ **Video 1**).

The patient had a distal pancreatectomy with successful resection of the tumor (▶ **Fig. 2 a, b**) and the diagnosis was confirmed by means of immunohistopathology analysis (▶ **Fig. 3**).

A solid pseudopapillary tumor of the pancreas is a rare pancreatic tumor that comprises 1–2 % of pancreatic tumors and is often diagnosed in females in the second or third decade of life [1]. Clinical presentation often ranges from lack of symptoms to abdominal pain with an enlarging abdominal mass [2]. Most tumors are found in the pancreatic body and tail and contain varying morphological features including solid components, hemorrhage, calcifications, and cystic features [2]. Recent studies have reported diagnostic accuracy of solid pancreatic tumors with EUS-FNA ranging from 60 % to 96 %; although diagnosis could be missed in approximately 25 % of cases [3, 4]. Furthermore, there could be a dilemma in diagnosis if initial EUS-FNA findings are negative. With this in mind, needle-based confocal laser endomicroscopy (nCLE) provides a reliable adjunct to diagnosis. All of the studies on nCLE in solid pancreatic tumors to date have revealed high accuracy with identification of lesions [5]. However, none have included a solid pseudopapillary tumor. With this report, we aim to shed light on the potential utility of nCLE as a more definitive diagnostic adjunct for a solid pseudopapillary tumor and to encourage further research on this matter.




▶ **Fig. 1** **a** The cytology aspirate smear shows a moderately cellular sample composed of bland, uniform cells with a moderate amount of cytoplasm with central to slightly eccentric round to oval nuclei with fine, evenly distributed chromatin. Mitotic figures are not identified. The cells are arranged in loose clusters with an acinar formation. **b** Confocal laser endomicroscopy revealing cluster of small round dark cells without atypia of solid pseudopapillary tumor.



**Video 1** Endoscopic ultrasound and confocal laser endomicroscopy of solid pseudopapillary tumor of the pancreas.

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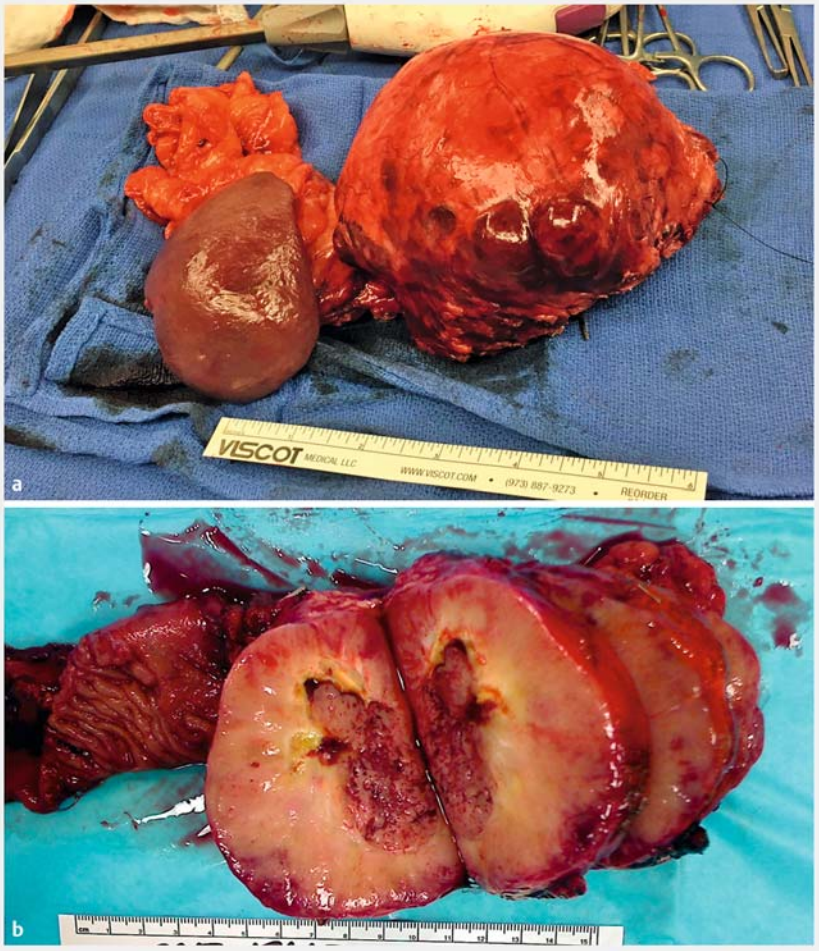
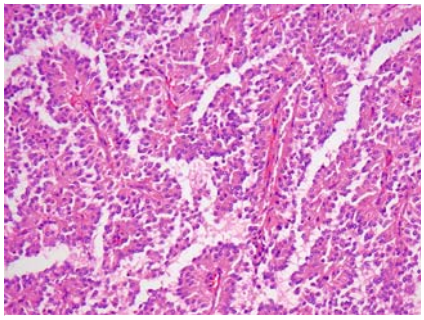
## Competing interests

The authors declare that they have no conflict of interest.




▶ **Fig. 2** **a, b** Gross appearance of the resection specimen shows a well- demarcated cystic lesion consisting of soft, friable gray-white tissue.



▶ **Fig. 3** Typical appearance of solid pseudopapillary neoplasm with discohesive cells around small capillary-sized blood vessels of pseudopapillary appearance.

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