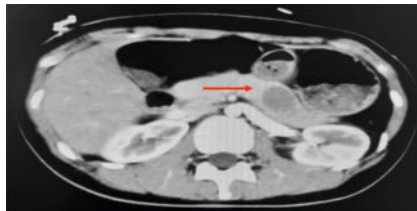
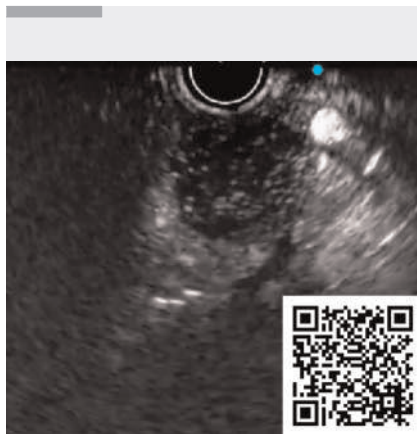


The characteristic “alveolus nest sign” in solid pseudopapillary neoplasm of the pancreas

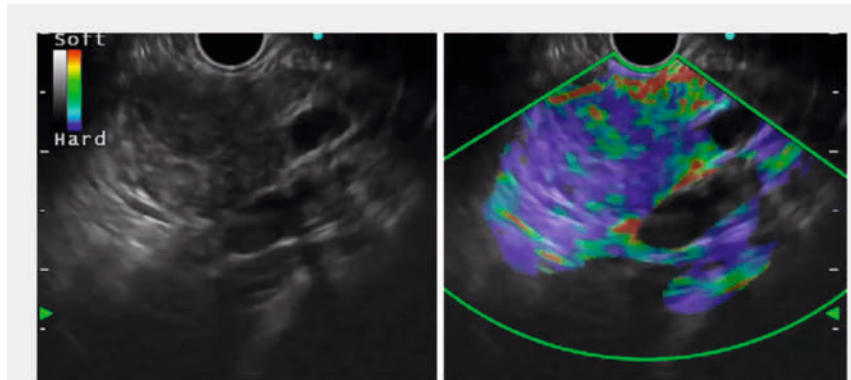
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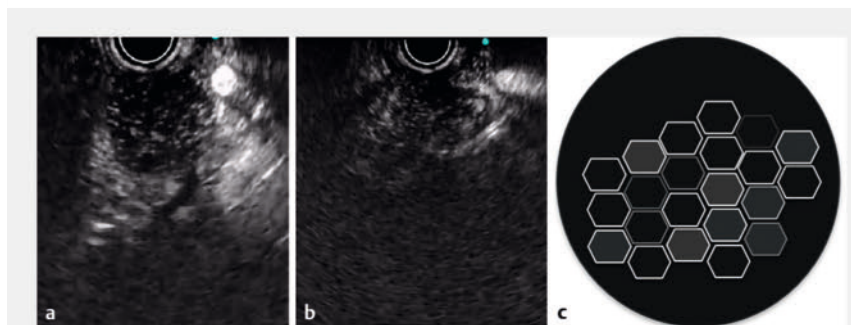
► **Fig. 1** Contrast-enhanced computed tomography scan revealed a round, well-defined, hypodense lesion (red arrow) within the pancreatic body.



► **Video 1** The alveolus nest sign during the arterial and venous phases of contrast-enhanced harmonic endoscopic ultrasound.



► **Fig. 2** Endoscopic ultrasound elastography revealed a 2×2.5-cm hypoechoic mass that was predominantly hard (blue) with dispersed heterogeneous soft (green) areas.



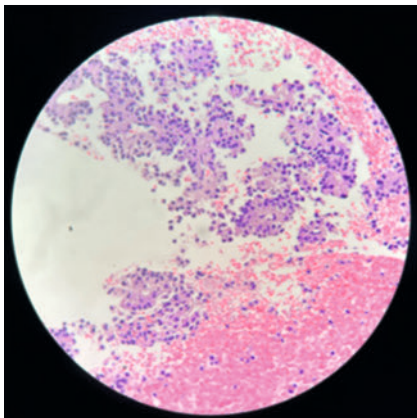
► **Fig. 3** Contrast-enhanced harmonic endoscopic ultrasound revealed hyperechoic solid granular components interspersed with small anechoic regions within the pancreatic mass. **a** Arterial phase. **b** Venous phase. **c** Visual representation of the alveolus nest sign.

A 23-year-old woman presented with a 1-week history of abdominal pain radiating to the back. The pain was not relieved by proton pump inhibitors. Contrast-enhanced abdominal computed tomography scan demonstrated a round, well-defined, hypodense lesion within the pancreatic body (► **Fig. 1**). On endoscopic ultrasound (EUS) elastography there was a 2×2.5-cm hypoechoic mass that was predominantly hard (blue) with dispersed heterogeneous soft (green)

areas (► **Fig. 2**). Contrast-enhanced harmonic endoscopic ultrasound (CH-EUS) revealed hyperechoic solid granular components interspersed with small anechoic regions within the pancreatic mass (► **Fig. 3**). These characteristics were typical of the “alveolus nest sign” and were present during the arterial and venous phases of CH-EUS (► **Video 1**). EUS-guided fine-needle biopsy with subsequent histopathologic examination (► **Fig. 4**) and immunohistochemical

analysis (► **Fig. 5**) yielded a definitive diagnosis of solid pseudopapillary neoplasm (SPN). The patient underwent distal pancreatectomy for definitive treatment.

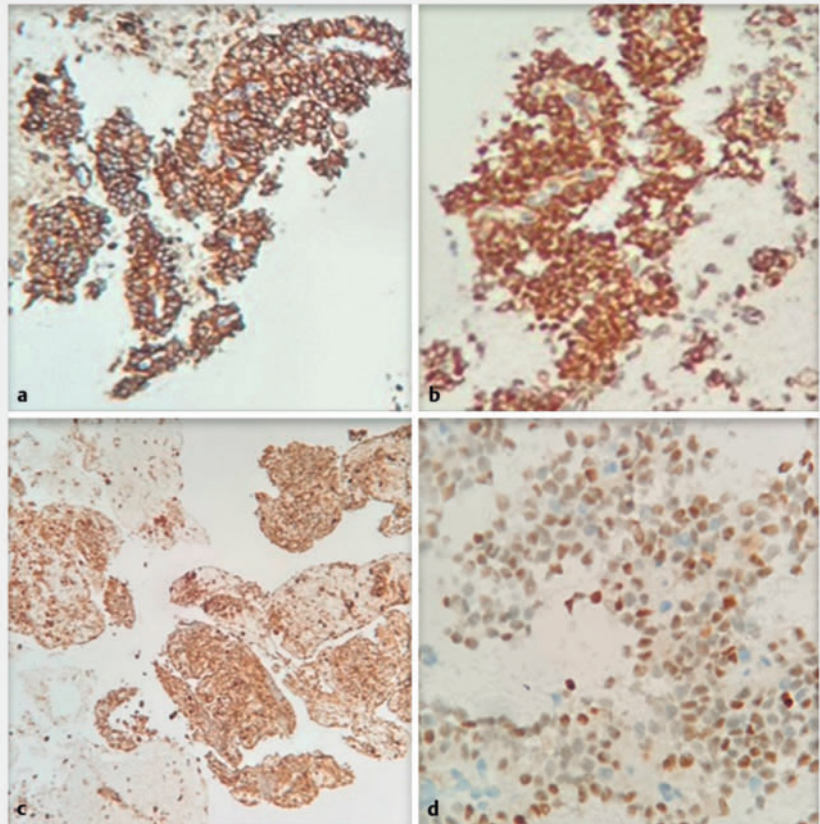
SPN is an uncommon pancreatic neoplasm exhibiting low malignant potential. It predominantly affects young females and is characterized by indolent behavior, with an excellent long-term prognosis for the majority of patients [1–4]. CH-EUS examination may reveal char-



► **Fig. 4** Histopathology specimen showed scattered epithelioid cells with clear or eosinophilic cytoplasm arranged in sheets or papillary shapes.

acteristic features suggestive of SPN pathology, including the presence of an intralesional pseudopapillary architecture or intratumoral clefing, also termed the “alveolus nest sign” [1,2]. On CH-EUS, the alveolus nest sign is seen as a region with isoechogenicity to hyperechogenicity, containing a solid and granular component. This component is interspersed with multiple small anechoic areas of varying sizes. These anechoic regions become evident on CH-EUS typically 40 seconds after contrast injection. The presence of this sign at any time within 40 seconds to 5 minutes post-contrast administration is considered characteristic of the alveolus nest sign [1,2]. CH-EUS is useful in differentiating SPN of the pancreas from other pancreatic tumors. Alveolus nest sign is a characteristic feature of SPN on CH-EUS.

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► **Fig. 5** Immunohistochemical tests showed the following positive results. **a** CD56. **b** β-catenin. **c** α-1-antitrypsin. **d** Progesterone receptor.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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