

RAPID ON-SITE CONFOCAL MICROSCOPY USING VIVASCOPE FOR TUMOR BIOPSIES DURING EUS: A COMPARATIVE ANALYSIS WITH CLASSICAL HISTOLOGY

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Poster

Pancreas

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VivaScope confocal laser microscopy achieved 98% concordance with standard histology for real-time diagnosis of EUS-guided biopsies in 52 patients with suspected malignancy, though three false positives occurred when chronic pancreatitis was misinterpreted as neuroendocrine tumor.

KEY POINTS

- In 12 of 52 patients (23%), VivaScope results changed immediate clinical management, particularly regarding obstructive jaundice.
- VivaScope showed high interobserver agreement (Cohen's kappa 0.95) and 98% concordance (51/52 cases) with final histology; standard pathology had 100% interobserver agreement.
- Final diagnoses included 37 malignant lesions (23 pancreatic adenocarcinomas, 3 cholangiocarcinomas, 2 pancreatic neuroendocrine tumors, 9 other malignancies) and 15 benign cases (14 chronic pancreatitis, 1 schwannoma).
- Three false positives occurred when chronic pancreatitis was interpreted as pancreatic neuroendocrine tumor; one false negative occurred when pancreatic adenocarcinoma was interpreted as benign.
- The authors caution that VivaScope cannot reliably show fine nuclear details such as granular chromatin critical for neuroendocrine tumor diagnosis, and tissue compression artifacts can mimic neuroendocrine architecture.

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