

A COMPARATIVE ANALYSIS OF ARTIFICIAL INTELLIGENCE-BASED DIGITAL CHOLANGIOSCOPY AND PROBE-BASED CONFOCAL LASER ENDOMICROSCOPY FOR DETECTING MALIGNANT BILE DUCT LESIONS: A SINGLE-CENTRE RETROSPECTIVE STUDY

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Poster

Hepatobiliary

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A retrospective study of 90 patients with indeterminate biliary lesions found that a novel DSOC-based AI model achieved diagnostic accuracy similar to DSOC-guided probe-based confocal laser endomicroscopy for identifying neoplasia.

KEY POINTS

- The DSOC-AI model achieved 97.7% sensitivity, 75% specificity, 98.8% positive predictive value, and an AUC of 0.79 for detecting neoplasia in biliary strictures, with no statistically significant difference compared to DSOC-pCLE (AUC 0.72, $P=0.634$).
- DSOC-pCLE demonstrated 94.2% sensitivity, 100% specificity, and 100% positive predictive value, though with a lower negative predictive value of 44.4%.
- The gold standard for neoplasia diagnosis was based on clinical evolution, imaging, or surgical specimen findings during 12-month follow-up, with both AI and pCLE methods using neovascularity or specific classification criteria to identify malignancy.
- The study was a historic cohort of patients who underwent DSOC-pCLE from June 2014 to November 2021, with tumor suspicion as the most common indication (55.6%), and the authors recommend larger multicentric trials with proportional neoplastic and non-neoplastic samples.
- This comparison may interest gastroenterologists and interventional endoscopists evaluating diagnostic approaches for indeterminate biliary strictures.

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