A NOVEL ENDOSCOPIC MODALITY FOR MICROVASCULAR BLOOD FLOW RATE ANALYSIS USING MAGNIFYING ENDOSCOPY IN THE EARLY GASTRIC CANCER

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An automated blood flow rate analysis system demonstrated higher diagnostic accuracy than endoscopists in differentiating differentiated-type early gastric cancer from benign patchy redness using magnifying endoscopy with blue laser imaging.

KEY POINTS

- The automated system achieved sensitivity 90.3%, specificity 89.7%, PPV 87.2%, and NPV 92.3% using a 1.09 mm/sec blood flow cut-off value for cancer diagnosis.
- Expert endoscopists using MESDA-G achieved sensitivity 85.9%, specificity 87.2%, PPV 80.0%, and NPV 85.5%; trainee endoscopists showed lower accuracy with sensitivity 70.0% and NPV 71.0%.
- The retrospective study included 31 differentiated-type early gastric cancers and 40 benign patchy redness lesions evaluated by magnifying endoscopy with blue laser imaging from December 2017 to September 2021.
- The authors suggest the automated analysis system may be useful as a new diagnostic modality and could potentially diagnose lesions difficult for endoscopists to identify.
- This material is most relevant to gastroenterologists and endoscopists interested in image-enhanced endoscopic techniques and artificial intelligence applications in early gastric cancer diagnosis.

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