

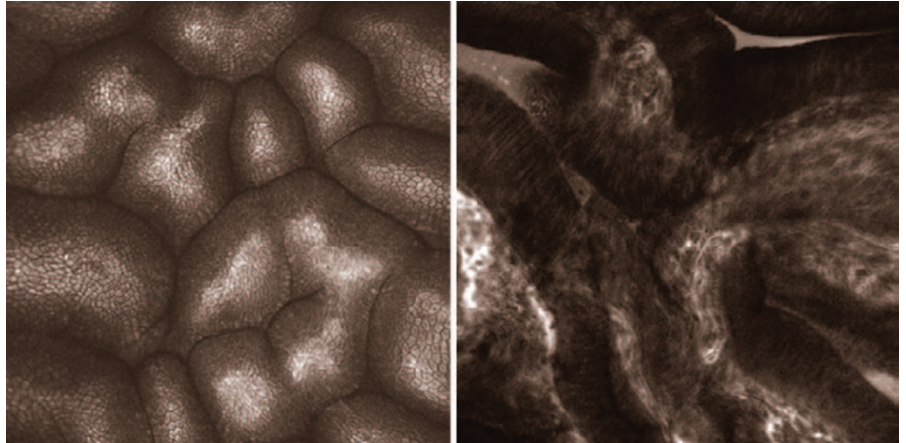
ENDOSCOPY

Value of CLE for gastric cancer detection

A recent single-center study from China has addressed the gap in knowledge with regard to the diagnosis of gastric superficial cancerous lesions by using confocal laser endomicroscopy (CLE). This technique provides real-time *in vivo* histological evaluation of tissue by combining endoscopic evaluation with white light imaging. In this study, CLE was found to have significantly superior accuracy, and higher sensitivity and specificity for the diagnosis of these lesions compared with white light endoscopy.

As gastric cancer is the fourth most common cancer worldwide and the prognosis of advanced gastric cancer is so poor, new and noninvasive techniques to detect early gastric cancers are sought after. The utility of CLE in this setting has been investigated in previous studies; however, the newness of CLE means that diagnostic criteria to assess different types of lesions with this modality are lacking.

In their two-part study, Wen-Bo Li and colleagues expand on the findings of preliminary studies by developing and then testing a set of diagnostic criteria for the identification of gastric superficial cancerous lesions by CLE. The overall diagnostic value of CLE was compared with that of white light endoscopy in a prospective cohort of patients with gastric lesions. Histology was used as the gold standard for diagnosis.



Confocal laser endomicroscopy images of normal mucosa with pyloric glands (left) and high-grade intraepithelial neoplasia (right). Reproduced from *Gut*, Li, W-B *et al.* © 2010 with permission from BMJ Publishing Group Ltd.

182 and 1,786 patients with definite or suspected inflammatory or superficial neoplastic gastric lesions were enrolled in the phase I and phase II parts of this study, respectively. Gastric cancer and/or high-grade intraepithelial neoplastic lesions could be accurately distinguished from noncancerous lesions by CLE. Diagnostic accuracy, sensitivity and specificity of CLE were all significantly superior to that of white light endoscopy for the identification of gastric superficial cancerous lesions.

“This study is, to date, the biggest prospective study on the CLE diagnosis of gastric cancer, and provides the most reliable data on its diagnostic value for gastric cancer,” says Yan Qing Li, a

contributing author of the study. “These criteria are easy to apply in clinical practice and CLE might be helpful for the early detection of gastric cancers and screening and surveillance of populations at high risk of gastric cancers.”

Li and colleagues believe that real-time *in vivo* CLE might have an important role in the management of gastrointestinal diseases and plan to take their work forward by performing a multicenter, randomized, controlled study.

Rachel Thompson

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