

Study shows superiority of chromoendoscopy in dysplasia detection in patients with IBD

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Chromoendoscopy is superior to random biopsy or white-light colonoscopy in detecting dysplasia in patients with inflammatory bowel diseases (IBD), according to a long-term surveillance study led by James F. Marion, MD, Professor of Medicine at Icahn School of Medicine at Mount Sinai, and Director of Education and Outreach at The Susan and Leonard Feinstein Inflammatory Bowel Disease Clinical Center at The Mount Sinai Hospital, published online in the journal *Clinical Gastroenterology and Hepatology*.

Chromoendoscopy is an inexpensive technique that uses stains during endoscopy to highlight differences in mucosa, as well as dysplastic and malignant changes that could indicate [colorectal cancer](#) risk. Current standard surveillance has relied on white light colonoscopy, non-targeted biopsies, targeted sampling, and removal of lesions. However, there is growing consensus that adjunct methods to improve the detection of subtle mucosal abnormalities—chromoendoscopy being the most promising—enhance detection. These techniques are part of current treatment guidelines based on previous work by Dr. Marion's research team.

"While there has been a growing consensus on the superiority of chromoendoscopy compared to other dysplasia surveillance methods over the last decade, these results are the first to demonstrate this superiority through long-term surveillance," said Dr. Marion. "Since patients with IBD are at an estimated five to ten times greater risk of developing colorectal cancer, it is important to be able to accurately

detect dysplasia, so we can prevent cancer morbidity and mortality, while also reducing unnecessary surgeries to remove the colon."

This long-term, prospective study, the first of its kind, analyzed data from 68 Mount Sinai patients with ulcerative colitis or Crohn's disease. It showed that chromoendoscopy was more likely to find the precancerous lesions known as dysplasia when they were present. A negative chromoendoscopy result also proved an excellent predictor that advanced dysplasia would not develop and colon resection would not be needed. Understanding of the natural history of dysplasia and cancer in colitis has also been deepened with this work.

The patients in the study were part of the original cohort of a prospective study evaluating the superiority of chromoendoscopy that was published in the *American Journal of Gastroenterology* in 2008. The patients were followed from June 2006 through October 2011; each patient was analyzed by random biopsy, targeted white-light examination, and chromoendoscopy. Specimens were reviewed by a single blinded pathologist.

In the 208 examinations conducted, 44 dysplastic lesions in 24 patients were identified; 6 were detected by random biopsy, 11 by white-light examination and 27 by chromoendoscopy. Ten patients were referred for colectomy and no carcinomas were found.

"Despite the abundant evidence supporting improved dysplasia detection in patients with IBD through chromoendoscopy screening and its incorporation into our guidelines, many gastroenterologists continue to rely on expensive random biopsies for detection of dysplasia and colorectal cancer," Dr. Marion said. "We hope these long-term findings resonate throughout the GI community and prompt screening changes, thus improving patient outcomes. Chromoendoscopy is an inexpensive, easy-to-learn technique that allows us to manage our patients without

surgery. Our current guidelines will need to be revisited."

The researchers note that these findings carry important implications for long-term follow-up. Additional surveillance studies with large numbers of [patients](#) from multiple centers having long-term follow-up are planned.

More information: James F. Marion et al. Chromoendoscopy is More Effective Than Standard Colonoscopy in Detecting Dysplasia During Long-term Surveillance of Patients with Colitis, *Clinical Gastroenterology and Hepatology* (2015). [DOI: 10.1016/j.cgh.2015.11.011](#)

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