

# CORNERSTONE Critiques

Commentary by Richard A. Johnson, MD, on Current Literature

## Patient Experience and Preferences Toward Colon Cancer Screening: A Comparison of Virtual Colonoscopy and Conventional Colonoscopy

Akerkar GA, Yee J, Hung R, McQuaid K. *Gastrointest Endosc.* 2001;54:310–315.

**Background:** Virtual colonoscopy has excellent sensitivity for the detection of cancer and polyps greater than 1 cm in diameter. For virtual colonoscopy to succeed as a screening test for colorectal neoplasia, it must be well tolerated and accepted by patients. **Methods:** Patients referred to the GI clinic for colonoscopy for any indication were recruited to undergo virtual colonoscopy before conventional colonoscopy. Patients were asked to complete a questionnaire twice: after virtual colonoscopy and after completing both tests. Three variables, overall pain, discomfort, and lack of respect, were assessed by using a 7-point Likert scale with higher scores denoting a worse experience. Patients' preferences for virtual colonoscopy versus conventional colonoscopy were determined with a time tradeoff technique. To verify response stability, patients were asked to return an additional questionnaire by mail at 24 hours. **Results:** 295 patients completed

the questionnaire immediately after the procedures, and 83 patients completed the questionnaire at 24 hours. At both 0 and 24 hours, patients reported more pain, discomfort, and less respect after virtual colonoscopy than conventional colonoscopy ( $P < 0.01$ ). The overall agreement (Kappa statistic) between times 0 and 24 hours was fair. Patients reported that they preferred conventional colonoscopy and would wait longer for conventional colonoscopy (mean = 4.9 weeks) than undergo a virtual colonoscopy ( $P < 0.01$ ). **Conclusions:** Patients tolerate both virtual colonoscopy and conventional colonoscopy, although they report more pain, discomfort, and less respect undergoing virtual colonoscopy. Efforts to improve patient experience during virtual colonoscopy need to be investigated.

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### COMMENTARY

#### Just Because It's "Virtual" Doesn't Make It Painless

This study of patients who underwent back-to-back virtual colonoscopy followed by conventional colonoscopy indicated greater patient pain and discomfort with virtual colonoscopy. This finding is really not surprising given that virtual colonoscopy requires similar preparation and insufflation of air into the colon via the rectum but without conscious sedation as with conventional colonoscopy. Sedation provides the patient with a considerable increase in pain tolerance as well as some short-term amnesia. Conscious sedation for conventional colonoscopy is a mandate, which will make it difficult for it to ever become an inexpensive procedure like mammography. Therefore, when we soon get to the point in medicine where everything cannot be free, the real question the patient will ask is: "If I have to pay for the service with my own money, which should I choose?" In this instance patients may very well indicate a preference for some pain if they can save \$1,500. This is a legitimate market-based question similar to questions asked in most service industries but is at present a highly aberrant notion in our "market-based" US health care system.

## Tc-99m HMPAO White Blood Cell Scintigraphy in the Assessment of the Extent and Severity of an Acute Exacerbation of Ulcerative Colitis

Bennink R, Peeters M, D'Haens G, et al. *Clin Nucl Med.* 2001;26:99–104.

**Purpose:** Ulcerative colitis (UC) is a chronic inflammatory bowel disease with frequent exacerbations, including the risk for toxic megacolon and severe complications. In very active disease, colonoscopy should not be performed to assess the severity and the extent of the disease. The aim of the current study was to determine whether Tc-99m HMPAO-labeled white blood cell (WBC) scintigraphy can be used as an alternative to colonoscopy to determine the extent and the severity of the disease in critically ill patients. **Methods:** Twenty consecutive patients (7 women, 13 men; age  $38.1 \pm 13.1$  years) who had a severe attack of UC underwent scintigraphy on the day of admission. Leukocytes were labeled with 200 MBq (5.35 mCi) Tc-99m HMPAO. Planar anterior and posterior imaging of the abdomen was performed 45 and 120 minutes after WBC reinjection. The tracer uptake in the different colon segments was scored visually compared with bone marrow uptake. A symptom score was made and C-reactive protein was measured as a serologic marker of inflammation. Rectosigmoidoscopy with biopsy was performed within 24 hours

of scintigraphy. Scintigraphic, endoscopic, and histologic results were compared for disease activity.

**Results:** The mean symptom score was  $12.7 (\pm 0.7)$  on a scale of 21, and the mean C-reactive protein level was  $6.8 (\pm 1.2)$  mg/L. No significant difference was found between the scintigraphic score of the rectum and the endoscopic or the histologic score. The best correlation was found with the latter ( $r = 0.66, P < 0.01$ ). Based on the results of scintigraphy, disease involved the left side of the colon up to the splenic flexure in 10 patients. The other patients had pancolitis. **Conclusions:** Disease severity can be determined adequately by planar WBC scintigraphy in patients with severe attacks of UC. Because the presence and severity of disease correlates well with endoscopic and histologic findings, WBC scintigraphy can assess disease extent without the need for colonoscopy. This decreases the number and severity of complications that can occur in already critically ill patients.

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#### A Noninvasive Approach that Correlates Well with Histopathology

This comparison evaluation of 20 individuals with acute exacerbation of UC showed excellent correlation of scintigraphy results and histology specimens with respect to the degree of inflammation. The amount of radiation from the procedure is quite small, hence this method would appear to give the practitioner another means of assessing patients with exacerbated UC. The noninvasive nature of the method is attractive given that the potential for one adverse outcome with colonoscopy is severe exacerbation of UC.

## Patterns of Colon Cancer Screening Among Companies in the U.S.: A Descriptive Survey

Oliveria SA, Christos PJ, Visintainer PF, et al. *Am J Health Promot.* 1999;13:146–148.

A questionnaire was mailed to 789 companies classified as Fortune 500 companies in 1994/1995 to measure the prevalence of colon cancer screening programs. Of the 479 (61%) who responded, 37% offered colon cancer education and awareness programs and 24% offered screening programs at the work site. The most common forms of screening

were fecal occult blood tests (97%) and digital rectal exams (71%). Most of those who provided screenings provided complete reimbursement for the screening (78%) and also insurance coverage for external screenings (83%).

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#### Who Should Promote Health Care Services?

Although most of the companies provided some type of insurance benefit for colorectal cancer screening, with a surprising 49.7% coverage figure for colonoscopy, there was little effort to promote colorectal cancer screening throughout the workplace. The authors make the plea that corporate America should be more proactive in this cause. This plea may be somewhat misguided given that more compliance with colorectal screening programs will do little for the corporations. In contrast to other health matters that are promoted by corporations, such as smoking cessation, which might provide a modicum of corporate benefit, screening for colon cancer will do little for their bottom line except most likely reduce it. Preventing a few colon cancers will do little for the corporations, but it will do a lot for the few who have the cancer prevented. Therein lies the rub. Why should a corporation encourage something for which they have to pay and provides little benefit to them unless they are forced? This is the underlying problem with the tax-subsidized third-party health care financing system in the United States—the payers for services are not the direct beneficiaries of the services.