

Inside Story HIGHLIGHTS

From the Pacific Radiology Referrer Newsletter



Pacific Radiology



CT Colonoscopy Update

Recently CT colonoscopy gained world wide attention when President Obama underwent this procedure as part of his first routine physical. The fact that the leader of the free world has chosen to be screened with this exam is a testament that CTC works as a front line colorectal cancer screening tool.

CT colonoscopy (CTC) is a simple, well tolerated examination, performed to detect colonic lesions. CTC provides a full study of the colon, is safe, well accepted by patients, with minimal discomfort. The examination is performed without sedation meaning Obama was able to retain his presidential powers during the procedure, and was able to return to work that afternoon. An additional advantage to CTC is that it allows the detection of extra-colonic findings.

This technique is now well established, and widely used in the investigation of symptoms of colorectal malignancy, and screening for polyps.

There are two principle applications for CTC.

1. Investigation of symptomatic patients

CTC has an excellent sensitivity for cancer in symptomatic patients. Symptoms include:

- > Blood in stools



- > Change in bowel habit
- > Anaemia
- > Abdominal pain
- > Weight loss
- > Constipation



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This technique is contraindicated in inflammatory bowel disease as there may be an increased risk of perforation, and the mucosal changes associated with this group of diseases are not optimally assessed.

In patients with rectal bleeding, and a normal CTC, optical colonoscopy is advised to exclude an inflammatory colitis, flat infiltrating carcinoma or angiodysplasia.

2. Screening for polyps

CTC fulfils the criteria for a screening test in that it is minimally invasive and of relatively low cost. By comparison optical or conventional colonoscopy is an invasive, time consuming and relatively expensive test, but remains the most appropriate investigation in high risk groups, as biopsy is possible at the time of examination.

CTC has a high average sensitivity and specificity for large and medium colorectal polyps and excellent sensitivity for cancer in symptomatic patients.

CTC sensitivity in polyp detection by polyp size:

- > 10 mm or larger polyps – 81%
- > polyps 6–9 mm – 62%
- > polyps 5 mm or smaller – 43%

<5mm lesions are not reported because the accuracy of CTC at this polyp size is low. There is general agreement that the risk of advanced features is very low in lesions this size, although there is still some controversy regarding management of this size category of lesion.

CTC has been shown to be more accurate in polyp detection than double contrast barium enema, and equivalent to optical colonoscopy in diagnosing significant size lesions.

An additional application for CTC is the examination of the remainder of the colon following incomplete colonoscopy due to strictures, obstructing masses, or redundancy.

In summary, CTC is currently a viable alternative imaging tool for colorectal polyp detection, and is the radiologic investigation of choice in symptomatic patients.

~ Terence Cousins