

Virtual colonoscopy or Computed Tomographic Colonography (CTC) KEY QUESTIONS and SCHEDULE

Brief Background: Colon cancer is the nation's second leading cause of cancer deaths, and an estimated 52,000 people will die from it this year. Screening can save lives by finding growths before they turn cancerous. Colonoscopies, considered the gold standard test, are recommended every 10 years for everyone over 50 and more frequently after polyps are found or for high risk individuals. Only about one-half the population gets the recommended screening.

Traditional colonoscopy involves taking laxatives to cleanse the bowel and sedation for the procedure. A tube is inserted in the rectum and snaked through the large intestines by a gastroenterologist. Generally, any polyps that are spotted, regardless of size, are taken out in the process. CTC involves taking laxatives to cleanse the bowel and inflating the colon (with air or gas using a small tube inserted in the rectum). A CT scanner is used to take a series of X-rays of the colon and a computer to create a 3-D view. A radiologist then checks the images for suspicious polyps. If any polyps need to be removed, the patient must then have a regular colonoscopy.

CTC has been proposed as a less invasive alternative to conventional colonoscopy to screen for colorectal cancer, with the potential to induce more individuals to get screened. After more than a decade of research on CTC, however, questions remain about several important issues.

- The accuracy of CTC compared to conventional colonoscopy; and the variation in performance among providers and imaging types
- Likely impact of CTC on population screening rates
- Issues of redundancy between CTC and colonoscopy for removal of identified polyps
- Management of incidental findings in lung, liver, and kidney
- Cost and cost-effectiveness of CTC

Evidence Review Approach

The HTA program

Key questions for investigation:

1. What is the evidence to describe sensitivity, specificity, and other key test characteristics of CTC compared primarily to optical colonoscopy, but also in the context of the test characteristics of accepted modalities of colorectal cancer screening.
2. What is the evidence related to test characteristics of CTC variance according to the type of scanning machine and software, bowel preparation, reader training, and other operational factors?

3. What is the evidence about patient attitudes and acceptance of screening between CTC and colonoscopy?
4. What is the evidence about the cost impact of CTC?

To the extent that information was found on the following topic, it will be summarized, though it was not a primary question investigated in the already produced report.

- What is the evidence about patient characteristics that influence benefits and harms of CTC over usual cancer screening?
- Summarize clinical guidelines and CMS coverage policy and include the guidelines in appendices.

CT Colonography Review Schedule

Milestone	Estimated date of completion
Task Order Approval: Finalized Key questions, objectives, scope, work plan	1-7-08
Publish Current report as Draft HTA evidence appraisal	1-11-08
Public and agency review comments due	1-25-08
Final Report Updated by assessment vendor; project materials submitted	2-1-08
Presentation prepared and present to HTCC	2-15-08