Virtual Colonoscopy Patient Brochure
Adapted from The ACR

Virtual Colonoscopy is a safe, highly accurate, non-invasive method to screen both for colon cancer and for polyps, the precursors of colon cancer. This brochure will answer the most common questions about Virtual Colonoscopy.

Colon Cancer Facts

Cancer of the colon and rectum (colorectal cancer) is the second leading cause of death from cancer in the United States. 143,000 new cases of colorectal cancer are anticipated in 2013, with approximately 50,000 deaths. The lifetime risk for colon cancer in an individual in the US is approximately 6%. Most colorectal cancers begin as small polyps—called adenomas—on the surface of the colon. These can take between 5-15 years to become cancerous. The goal of both traditional colonoscopy and Virtual Colonoscopy is to find these polyps while they are small and harmless.

What is Virtual Colonoscopy? How does it differ from traditional colonoscopy?

Virtual Colonoscopy is a safe, non-invasive procedure for colon cancer screening and prevention. Its goal is the same as that of traditional colonoscopy: to identify polyps in the colon. Polyps have been shown to be the precursor of most colon cancers, and the goal of both traditional colonoscopy and Virtual Colonoscopy is to find these potentially dangerous polyps before they become actual cancers.

Unlike traditional colonoscopy, no sedation is required during a Virtual Colonoscopy. Patients do not require a chaperone to and from the procedure, and can go directly to work following the study. In traditional colonoscopy a long tube—a colonoscope—is introduced into the rectum and maneuvered all the way to the beginning of the colon. A small risk of colon perforation from the colonoscope exists in traditional colonoscopy. In Virtual Colonoscopy, only a very small flexible tip is placed into the rectum to allow the insufflation of the colon with air or carbon dioxide—a completely safe gas. In patients without active disease in the colon, there is essentially no risk of significant perforation with Virtual Colonoscopy.

One additional benefit of Virtual Colonoscopy over traditional colonoscopy is that Virtual Colonoscopy can often detect other existing but unsuspected medical problems such as abdominal aortic aneurysm or cancers of the kidney, lung and lymph nodes. While only 1 in 300 patients undergoing a Virtual Colonoscopy will have colon cancer, 1 in 200 will have an unsuspected kidney, lung, or lymph node cancer.

Who should have a Virtual Colonoscopy?

According to guidelines endorsed by the American Cancer Society and other national medical groups, screening for colon cancer utilizing a technique that examines the entire colon—traditional colonoscopy, Virtual Colonoscopy, or barium enema - is
recommended for average risk individuals beginning at age 50. For those at higher risk for colon cancer (a personal or family history of colon cancer, personal history of ovarian, endometrial or breast cancer, or a history of ulcerative colitis or Crohn’s disease), screening is recommended to begin at age 40.

Virtual Colonoscopy is appropriate for all patients who are candidates for colon cancer screening. Virtual Colonoscopy has been shown to be of equal or greater accuracy as traditional colonoscopy for identifying the polyps most likely to progress to colon cancer. It is also highly accurate for detecting already existing colon cancers.

What can I expect before, during and after my Virtual Colonoscopy?

In order to obtain the best images of the colon, a bowel preparation is required to remove all stool prior to the examination. Multiple preparations are available for this purpose. While we sometimes change our preparation based on patient preference our current favored preparations are polyethylene glycol (e.g. GoLytely® 2-3 liters or generic equivalent in a single dose or in the form of MyraLAX® as a split dose. All patients also drink a small volume of an oral contrast agent to “tag” residual fluid and stool. Both iodinated agents (Omnipaque) and for patients who are allergic to iodine, a barium agent is used.

It is necessary to distend the colon in order to see all surfaces and identify possible polyps. A very small, flexible and completely safe tube will be gently placed in the rectum to deliver the gas. Carbon dioxide is utilized to distend the colon. Carbon dioxide is electronically administered via an automated pump. Two scans are then performed, one while lying on your back, and the second either lying on your stomach or on your side. Each scan takes approximately 10 seconds. Following the second scan, the Virtual Colonoscopy is complete and you may dress and leave. A small number of patients require a third scan while lying on one side. The carbon dioxide used to distend the colon is rapidly absorbed and exhaled during normal breathing and most patients feel normal immediately after completion of the study.

How accurate is Virtual Colonoscopy?

For the detection of polyps greater than 8 mm in size—less than 1% of such polyps are cancerous—Virtual Colonoscopy has been shown to be at least as accurate as traditional colonoscopy. Virtual Colonoscopy has shown better detection for already existing colon cancers than traditional colonoscopy. Neither Virtual Colonoscopy nor traditional colonoscopy will detect every polyp or colon cancer.

What are the risks of both traditional colonoscopy and Virtual Colonoscopy?

Traditional colonoscopy is most often performed with sedation, which requires each patient to have a chaperone following the procedure. Virtual Colonoscopy does not require any sedation, and therefore patients can drive themselves to and from the
procedure and immediately return to work. Traditional colonoscopy carries a small risk of colon perforation—approximately 3 patients per 1000 will have a perforation. In patients without active colon inflammation, perforation in Virtual Colonoscopy is exceedingly rare.

Virtual Colonoscopy involves some radiation exposure. However, with current scanners and techniques, the radiation dose is equivalent to living at sea level for one year. According to the American Association of Physicists in Medicine, this dose is insignificant.

Ninety percent of patients (9 out of 10) who undergo Virtual Colonoscopy will have no polyps detected and require no follow up. Ten percent (1 out of ten) will have a significant polyp detected and will then require colonoscopy to remove that polyp.

Where should I have my Virtual Colonoscopy?

The ACR and other academic centers have programs that train radiologists in the optimum performance of Virtual Colonoscopy. You can contact your local radiology providers to find out if their radiologists have undergone this recommended training. The ACR can also provide assistance.

Will insurance cover my Virtual Colonoscopy?

Twenty-one states and the District of Columbia have statutes that require private insurers to cover Virtual Colonoscopy. Medicare currently does not cover screening Virtual Colonoscopy for asymptomatic patients but does cover diagnostic Virtual Colonoscopy for those patients who are unable to have a traditional colonoscopy and also have some symptom requiring colon evaluation. The United States Preventive Services Task Force and Medicare plan to re-evaluate Virtual Colonoscopy in 2014. Bills requiring Medicare coverage for screening Virtual Colonoscopy are also currently under review in Congress.