

Are patients with ulcerative colitis at higher risk of developing colorectal cancer (CRC)?

Patients with ulcerative colitis (UC) have an increased risk of developing colon cancer. Estimates of this risk vary depending on two main risk factors, including the extent of the disease (how much of the colon has been inflamed) and duration of disease. A family history of colon cancer in a first-degree family member also increases the risk of cancer, particularly if the family member had colon cancer before the age of fifty. Patients who have had UC for more than 10 years and patients with ulcerative pancolitis (disease involving the entire colon) have the highest risk of developing cancer. Patients with left-sided UC have a slightly higher risk of developing CRC than the general population. It is therefore recommended that patients with pancolitis and left-sided UC undergo a screening colonoscopy 8–10 years after the onset of the disease. Routine surveillance colonoscopies should then be performed every 1–2 years. Patients with ulcerative proctitis (disease limited to the rectum) are not considered to be at increased risk of developing CRC and generally do not need to undergo surveillance colonoscopy.

Are patients with Crohn's disease at higher risk of developing colorectal cancer (CRC)?

Patients with only small intestine Crohn's disease are not considered to be at higher risk for CRC than the general population. However, patients with Crohn's disease that have major colonic involvement (one third or more of the colon) can have up to a 5% risk of developing CRC. Similar to patients with ulcerative colitis, the duration and extent of the disease are major risk factors for developing CRC. It is recommended that patients with Crohn's disease affecting the colon undergo a screening colonoscopy 8–10 years after the onset of the disease. Routine surveillance colonoscopies should then be performed every 1–2 years similar to patients with ulcerative colitis.

How does the diagnosis of primary sclerosing cholangitis (PSC) affect the risk of colorectal cancer?

Primary sclerosing cholangitis is a disease affecting the bile ducts that drain bile from the liver and gallbladder. Patients with inflammatory bowel disease (Crohn's disease or ulcerative colitis) are at increased risk of developing PSC. Patients with PSC and ulcerative colitis are considered four times more likely to develop CRC than patients with ulcerative colitis alone. For patients with inflammatory bowel disease and PSC, a screening colonoscopy should be performed every 1–2 years.

How do we understand biopsy results performed during colonoscopy?

During screening and surveillance colonoscopies, multiple biopsies are taken from the colon. The biopsies are taken to assess inflammation and to search for cells

that might indicate an increased risk for developing cancer. The abnormal cells that increase the risk of colorectal cancer are termed “dysplasia.” Dysplasia is the abnormal growth of tissue with cellular changes that increase the risk of becoming cancer cells. The pathologist (physician who examines the biopsies under a microscope) will attempt to determine any presence of dysplasia that may include: (1) Indefinite dysplasia, (2) Low-grade dysplasia, (3) High-grade dysplasia, or (4) Carcinoma (presence of cancer cells).

When the appearance of dysplasia is uncertain, biopsies may be reported as “indefinite for dysplasia.” In patients with inflammatory bowel disease it is often difficult to distinguish dysplasia when there is active inflammation of the colon. In such cases, a colonoscopy should be repeated in 3–6 months to re-assess the patient’s degree of inflammation and repeat biopsies searching for dysplasia.

Patients whose biopsies are reported as low-grade dysplasia should generally have a repeat colonoscopy in 3–6 months. However, patients who are found to have low-grade dysplasia again or multiple areas of low-grade dysplasia throughout the colon should strongly consider a colectomy (removal of the colon) as low-grade dysplasia may soon progress to high-grade dysplasia and/or colon cancer.

In patients with high-grade dysplasia, a colectomy (removal of the colon) is generally recommended. Patients found to have high-grade dysplasia can often have areas of unidentified, undiagnosed colon cancer cells elsewhere in the colon. The finding of cancer cells (carcinoma) on biopsy always indicates a need for colectomy.

How can patients decrease the risk of developing dysplasia and colorectal cancer?

Taking medications to treat the inflammation in the colon is the most important way to decrease the risk of developing dysplasia or colorectal cancer. Medications have been shown in research studies to not only improve symptoms, but to also promote healing in the colon and prevent the development of abnormal pre-cancerous cells. These medications can include different formulations of mesalamine and immunomodulators. Taking medications each and every day as prescribed by your gastroenterologist improves the chances of achieving remission, remaining free of symptom flares, and preventing colorectal cancer.

Reference:

Itzkowitz, S.H., Present, D.H., 2010, Colorectal Cancer Screening and Surveillance in Inflammatory Bowel Disease, *Gastroenterology*, v.138, p. 738–745. <http://download.journals.elsevierhealth.com/pdfs/journals/0016-5085/PIIS0016508509022021.pdf>

