Alarming Rise in Many Gastrointestinal Cancers in Young People

Dana-Farber experts report rising rates of colorectal, pancreatic, esophageal, and other less common GI cancers in people under 50.

July 9, 2025 By Dana-Farber Cancer Institute

Dana-Farber Cancer Institute experts report findings from a literature review that rates of early onset gastrointestinal cancers are rising rapidly, with the youngest groups experiencing the highest rise in rates. These alarming rises apply not just to colorectal cancer, but also to pancreatic cancer, esophageal and stomach cancers, as well as rarer gastrointestinal cancers of the appendix, biliary cancer, and neuroendocrine tumors.

The number of newly diagnosed cases of early onset gastrointestinal cancers rose by 14.8% between 2010 and 2019, according to the review. The rise in early onset cases disproportionately affects people who are Black, Hispanic, of Indigenous ancestry, and women.

“Early onset colorectal cancer has received attention because it was one of the first gastrointestinal cancers to be identified as having a significant shift in the demographic profile of the disease, and because it is the most common early onset gastrointestinal cancer. Historically, colorectal cancer was primarily diagnosed in adults in their 60s and 70s, but in the 1990s a rising incidence in younger populations was first reported,” said senior author Kimmie Ng, MD, MPH, director of the Young-Onset Colorectal Cancer Center at Dana-Farber. “This study takes a wider view and shows that other gastrointestinal cancers are also rapidly rising in young people, including pancreatic cancer, esophageal and gastric cancer, and other rare GI cancers.”

The count of young onset gastrointestinal cases is highest in the oldest group – people aged 40 to 49 – but the rise in rates is progressively steeper in younger groups. For example, people born in 1990 are twice as likely to develop colon cancer and four times as likely to develop rectal cancer compared to those born in 1950, according to the authors.

The authors also note that recent data from the Centers for Disease Control and Prevention (CDC) indicated a more than tripling of the incidence of colorectal cancer in people aged 15 to 19 and a near doubling in people aged 20-24.

The review was published today in the British Journal of Surgery.

What is driving the rising rates of early onset gastrointestinal cancers?

It is not clear what is driving the rising rates of gastrointestinal cancers in young people, but there are common risk factors across gastrointestinal cancers. Factors that people can manage with lifestyle changes include obesity, a sedentary lifestyle, the consumption of processed foods, alcohol use, and smoking. According to the study, heavy alcohol use doubles the risk of gastric cancer, and obesity nearly doubles the risk of colorectal and pancreatic cancers. Smoking also increases the risk of these cancers.

“One of the best things you can do for your health is to stop smoking,” said co-first author Sara Char, MD, a medical oncology fellow at Dana-Farber. “Reducing alcohol use and incorporating lifestyle changes such as getting regular excise and minimizing processed foods are also positive choices.”

Conditions such as fatty liver disease, diabetes, and acid reflux also can increase the risk of different gastrointestinal cancers. “It is important for patients to stay up to date with primary care and to be actively engaged in preventive medicine related to these and other risk factors,” said Char.

The researchers found that inherited genetic mutations that increase the risk of gastrointestinal cancers were more common among people with early onset cancers compared to average onset cancers. But most early onset cancers were not associated with an inherited mutation and instead occurred from a mutation that occurred sporadically, likely triggered by an environmental factor.

“Lifestyle factors such as obesity, a Western-pattern diet including a lot of processed foods, and a sedentary lifestyle are likely contributing to a lot of early onset cases,” said co-first author Catherine O’Connor, a medical student at Harvard Medical School.

How are screening and treatment of gastrointestinal cancers changing?

Screening for colorectal cancer begins at age 45, recently lowered from age 50 due to rising rates of early onset disease. People with a family history of the disease or of pre-cancerous polyps removed during screening colonoscopy may be eligible for screening at age 40 or 10 years prior to their relative’s first polyp or cancer diagnosis.

“It is helpful for people to know if they have a family history that includes colorectal cancer or polyps,” said Char. “People don’t always want to talk about colonoscopy histories with their loved ones, but it is important information.”

Screening for other gastrointestinal cancers is not generally available, but certain symptoms can be an early indicator of the development of cancer. Symptoms such as blood in the stool, persistent acid reflux, heartburn, or unexplained abdominal or back pain all warrant a follow-up with a primary care doctor. In addition, a sudden onset of diabetes in adulthood is also an important potential warning sign of pancreatic cancer.

“It is important for people to be aware of symptoms and follow up with a doctor if they see or feel anything unusual,” said Char.

Treatment guidelines for early onset gastrointestinal cancers are the same as for average onset disease. However, the report notes that while younger patients are more likely to receive more aggressive treatment, this does not always provide benefits in terms of survival.

“More research is required to fully understand if there are biological differences between early and average onset disease, and if treatment differences are warranted,” said Char. “We need representation and diversity in the epidemiologic studies and other research that we conduct, so that we’re taking a holistic view of these diseases across a diverse population.”

“We need to be thinking not only about the risk factors for these diseases but also how to screen, diagnose, and treat young people with these cancers,” said Ng.

The team also reports that young patients with early onset gastrointestinal cancers have unique concerns, including worries about fertility and sexual dysfunction, financial strain, and psychosocial factors. The Young-Onset Colorectal Cancer Center at Dana-Farber Cancer Institute provides support that caters to the unique needs of young patients, including patient navigation, genetic counseling, fertility preservation, financial counseling, psychosocial support, and nutrition advice.

This news release was published Dana-Farber Cancer Institute on July 8, 2025.
