Study Finds Colorectal Cancer Rates Have Risen Dramatically in Gen X and Millennials

Three in ten rectal cancer diagnoses now in patients under 55

February 28, 2017 – A new study finds that compared to people born around 1950, when colorectal cancer risk was lowest, those born in 1990 have double the risk of colon cancer and quadruple the risk of rectal cancer.

The study is led by American Cancer Society scientists and appears in the Journal of the National Cancer Institute. It finds colorectal cancer (CRC) incidence rates are rising in young and middle-aged adults, including people in their early 50s, with rectal cancer rates increasing particularly fast. As a result, three in ten rectal cancer diagnoses are now in patients younger than age 55.

Overall, CRC incidence rates have been declining in the United States since the mid-1980s, with steeper drops in the most recent decade driven by screening. Recently though, studies have reported increasing CRC incidence in adults under 50, for whom screening is not recommended for those at average risk. However, these studies did not examine incidence rates by 5-year age group or year of birth, so the scope of the increasing trend had not been fully assessed.

To get a better understanding, investigators led by Rebecca Siegel, MPH of the American Cancer Society used "age-period-cohort modeling," a quantitative tool designed to disentangle factors that influence all ages, such as changes in medical practice, from factors that vary by generation, typically due to changes in behavior. They conducted a retrospective study of all patients 20 years and older diagnosed with invasive CRC from 1974 through 2013 in the nine oldest Surveillance, Epidemiology, and End Results (SEER) program registries. There were 490,305 cases included in the analysis.

The study found that after decreasing since 1974, colon cancer incidence rates increased by 1% to 2% per year from the mid-1980s through 2013 in adults ages 20 to 39. In adults 40 to 54, rates increased by 0.5% to 1% per year from the mid-1990s through 2013.

Rectal cancer incidence rates have been increasing even longer and faster than colon cancer, rising about 3% per year from 1974 to 2013 in adults ages 20 to 29 and from 1980 to 2013 in adults ages 30 to 39. In adults ages 40 to 54, rectal cancer rates increased by 2% per year from the 1990s to 2013. In contrast, rectal cancer rates in adults age 55 and older have generally been declining for at least 40 years, well before widespread screening.

Opposing trends in young versus older adults over two decades have closed a previously wide gap in disease risk for people in their early 50s compared to those in their late 50s. Both colon and rectal cancer incidence rates in adults ages 50 to 54 were half those in adults ages 55 to 59 in the early 1990s, but in 2012 to 2013, they were just 12.4% lower for colon and were equal for rectal cancer.

"Trends in young people are a bellwether for the future disease burden," said Siegel. "Our finding that colorectal cancer risk for millennials has escalated back to the level of those born in the late 1800s is very sobering. Educational campaigns are needed to alert clinicians and the general public about this increase to help reduce delays in diagnosis, which are so prevalent in young people, but also to encourage healthier eating and more active lifestyles to try to reverse this trend."

In addition, the authors suggest that the age to initiate screening people at average risk may need to be reconsidered. They point out that in 2013, 10,400 new cases of CRC were diagnosed in people in their 40s, with an additional 12,800 cases diagnosed in people in their early 50s. "These numbers are similar to the total number of cervical cancers diagnosed, for which we recommend screening for the 95 million women ages 21 to 65 years," said Siegel.

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