

Prevalence of pre-cancerous masses in the colon same in patients in their 40s and 50s

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The prevalence of pre-cancerous masses in the colon is the same for average-risk patients who are 40 to 49 years of age and those who are 50 to 59 years of age, reports a new study in *Gastroenterology*, the official journal of the American Gastroenterological Association (AGA) Institute.

Currently, standard protocol recommends screening patients age 50 and over for colon cancer based on the increasing incidence of colon cancer at that age. Because observational studies have shown that it takes a decade for pre-cancerous growths, or adenomas, to develop and progress to cancer, the increase in colon cancer prevalence in the over-50 age group, in fact, may be the result of undetected adenomas that were present in the individuals in their 40s.

Investigating this hypothesis, a team of researchers, led by Drs. Alfred I. Neugut and Andrew Rundle from Columbia University Medical Center, compared colonoscopy results, broken down by age group. Analyzing records from a centralized digital medical record system provided by EHE International, the team reviewed 553 screening colonoscopies for patients ages 40 to 49 and 352 screening colonoscopies for patients ages 50 to 59. Individuals who could be deemed "high-risk" because of a family history of colon cancer, a personal history of inflammatory bowel disease or any malignancy other than skin cancer were excluded from the sample.

Of the records reviewed, in the 40 to 49 age group, 79 patients, or 14

percent, had one or more adenoma. Similarly, the 50 to 59 age group had 56 patients, or 16 percent, with one or more adenoma.

"Our results support the theory that adenomas, which later may lead to cancer, form at an age earlier than we screen for today," said Alfred I. Neugut, MD, PhD, professor of medicine and epidemiology at Columbia University Medical Center and head of cancer prevention and control for the Herbert Irving Comprehensive Cancer Center of Columbia University Medical Center and New York-Presbyterian Hospital. "With this information in hand, it is logical to think that if we were to recommend screening for colon cancer at age 40, we may be able to decrease its prevalence even further and save more people from having to battle the disease."

Though the number of adenomas was relatively similar in the two age groups, there was a doubling in the prevalence of abnormal cell growth, or advanced neoplasia, in the 50 to 59 age group versus the 40 to 49 age group. While not statistically significant, in the 40 to 49 age group, 11 patients, or 2 percent, had an advanced neoplasm, and in the 50 to 59 age group, 13 patients, or 4 percent, had an advanced neoplasm.

"What this implies is that while the number of pre-cancerous growths is very similar in both age groups, there is a progression toward cancer in older patients," said Andrew Rundle, DrPH, assistant professor of epidemiology at Columbia's Mailman School of Public Health.

"Abnormal cell growth is a warning sign of cancer, so the fact that there's an increase in advanced neoplasia in the older age group is in line with the increased colon cancer incidence we see in individuals over the age of 50. Detecting adenomas when patients are in their 40s could mean that we are able to drastically lower the prevalence of colorectal cancer. Additional studies need to be done to look specifically at this possibility and the cost-benefit of beginning screening at an earlier age."

EHE International, which sponsored the research, has been providing comprehensive physical exams for 95 years, and since 2002 has been using a digital electronic medical record system that can provide anonymous, de-identified data for biomedical research. "We are thrilled that the medical record data that we have accumulated over the years through our business can be used to conduct such important research and promote the greater good," said Deborah McKeever, president of EHE International.

Only one prior study has investigated the prevalence of colorectal adenomas in average-risk individuals aged 40 to 49 years in the U.S., and it reports very similar findings: an adenoma prevalence of 11 percent in the age group.

Source: American Gastroenterological Association

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