

Older women with diabetes face higher risk for colon cancer

May 2 2010

A research team led by Mayo Clinic physicians has found that older women with diabetes face a more than doubled risk for some types of colorectal cancer. The findings are being presented at Digestive Disease Week 2010, the annual meeting of the American Gastroenterological Association.

Colorectal cancer remains the third-leading cause of cancer deaths among women in the United States. Diabetes has been identified as a colon cancer risk factor, but the mechanisms aren't completely understood. For this population-based cohort study, researchers examined data from 37,695 participants of the Iowa Women's Health Study (IWHS), which enrolled women ages 55-74 in 1986 and remains ongoing. Of these women, 2,361 reported a diagnosis of Type 2 diabetes and 1,200 developed colorectal cancer.

To find the links between colorectal cancer and diabetes, the researchers worked with regional pathology laboratories to obtain tumor tissue samples from IWHS participants who were diagnosed with colorectal cancer. They linked the tissue samples with other IWHS data, looking for cancer pathways and risk factors, and whether those risk factors were associated with three different molecular markers: microsatellite instability (MSI), CpG island methylation (CIMP), and BRAF gene mutations.

"Diabetes was more strongly associated with the MSI-high, CIMP-positive and BRAF-mutation cancer subtypes in this group of older

women," says Mayo Clinic gastroenterologist Paul Limburg, M.D. Dr. Limburg explains that diabetes appeared to confer a greater than twofold increase in risk for these molecularly-defined tumors, compared to women without diabetes.

"Knowing that diabetic women have these findings should help to facilitate more appropriate colorectal cancer prevention and treatment options," says Anthony Razzak, M.D., a Mayo Clinic research fellow and presenter at the conference. "Our findings may lead to new strategies for colon cancer screening, chemotherapy and chemoprevention in women with diabetes."

"From a research perspective, this information allows us to clarify how environmental exposures and other risk factors might effect tumor formation at a molecular level," says Dr. Razzak. For future projects, the researchers will work to understand more about the biology of [colorectal cancer](#) and how it is influenced by diabetes, as well as other chronic conditions and exposures. They hope to use that information to improve patient care.

"Unfortunately, [diabetes](#) and [colon cancer](#) are both very common in the United States, so making links between these disorders has substantial public health implications," says Dr. Limburg.

Provided by Mayo Clinic

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