Increased risk of small bowel cancer in individuals with celiac disease—but absolute numbers are low

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Through a unique database, KI researchers have studied the risk of small bowel cancer in individuals with celiac disease. Principal investigator Louise Emilsson, affiliated researcher at the Department of Medical Epidemiology and Biostatistics, associate professor at HELSAM, Oslo University and co-author Jonas F Ludvigsson, professor at Karolinska Institutet, reflect on their work recently published in Gastroenterology.

Louise Emilsson says: "Primary small bowel cancer is a heterogeneous group of cancers that historically have been difficult to detect with delay in diagnosis that can affect prognosis. There are few high quality studies on these cancers to assess risk or guide therapy. To improve this situation I have initiated a research project; "INKSCAPE—Increased Knowledge of Small-bowel CAncer Prognosis & Epidemiology" in collaboration with professor Ludvigsson and his unique ESPRESSO database of Swedish gastrointestinal pathology. This study on celiac disease and small bowel cancer is the first publication from the INKSCAPE project and I am very happy to see it published in Gastroenterology."

The study compared risk of small bowel cancer in 48,119 individuals with celiac disease and 239,249 reference individuals. The researchers could also differentiate between different types of small bowel cancers and found that risk of small bowel adenocarcinomas was increased three-fold in celiac patients compared to reference individuals whereas risk of carcinoids was not increased. The study further showed that celiac patients were also at increased risk of small bowel adenomas (precursors of adenocarcinomas). Absolute risk in celiac patients was however low and could be described as 1 extra case of small bowel adenocarcinoma in every 2944 patients with celiac disease followed for 10 years. The study also compared the risk of small bowel adenocarcinomas in celiac patients with mucosal healing vs. persistent villous atrophy. The study supports a strong but not statistically significant association with lower risk of small bowel adenocarcinoma in individuals that reach mucosal healing at follow-up biopsy. The researchers concluded that the results do not imply a need for surveillance but celiac individuals with signs or symptoms of malignancy should merit further investigation for small bowel adenocarcinoma.

Emilsson continues: "Our nationwide cohort design has several strengths; it distinguishes between different types of small bowel cancers, outcome data were based on histopathological examination and we also report estimates for small bowel adenomas (precursors). Our study found no association with carcinoids, which suggests that lead-time and detection biases are limited."

Ludvigsson comments: "Several features of our study means it contrasts to earlier research. First, we chose only to consider small intestinal cancer diagnosed at least one year after celiac diagnosis. That is important since counting cancers at time of celiac diagnosis will otherwise overinflated risk estimates. Other strengths include the large number of patients (more than 48,000) and that we followed up patient for very many years."


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