

Risk of colorectal cancer after detection and removal of adenomas at colonoscopy

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In the United States, a large proportion of endoscopists are conducting surveillance examinations after polypectomy along the American Gastroenterological Association guidelines (1).

In the guideline, patients can be stratified more definitely at their baseline colonoscopy into those at lower risk or increased risk for a subsequent advanced neoplasia. People at increased risk have either 3 or more adenomas, or advanced adenomas which is an adenoma with high-grade dysplasia, or with villous features, or an adenoma 1 cm or larger in size. It is recommended that they have a 3-year follow-up colonoscopy. People at lower risk who have 1 or 2 small (<1 cm) tubular adenomas with no high-grade dysplasia can have a follow-up evaluation in 5-10 years. People with hyperplastic polyps only should have a 10-year follow-up evaluation, as for average-risk people. After this guideline published, several studies have examined the risk of advanced colorectal neoplasia in patients with previously endoscopically resected colorectal adenomas to quantify their risk of developing a subsequent advanced adenoma or cancer. A pooled analysis of eight prospective studies (with a total of 9,167 subjects) estimated that the risk of advanced colorectal neoplasia was 12 percent during a median follow-up of four years; 58 patients (0.6 percent) developed invasive cancer (2). The strongest risk factors were advanced neoplasia in the initial polypectomy, older age, and the number and size of prior adenomas.

However, in most of studies, evidence for surveillance intervals continues to be based primarily on adenoma recurrence rather than on Colorectal Cancer (CRC) incidence. In this study, authors aimed to assess risk of CRC rather than adenoma recurrence. They showed that patients

with a history of detection and removal of at least one adenoma had a strongly and significantly reduced risk of CRC up to 5 years after colonoscopy compared with people who had never undergone large-bowel endoscopy. They concluded that extension of surveillance intervals to 5 years should be considered, even after detection and removal of high-risk polyps, whereas it is the common understanding that a surveillance interval of 3 years is needed after detection and removal of high-risk adenomas, which is mainly based on studies that focused on risk of advanced adenomas following colonoscopic polypectomy (3-7).

This study was conducted retrospectively. However, the authors sought to raise evidence level. This is multicenter study with 22 hospitals, and they could recruit 6,422 persons, and this is five fold samples of their previous report (8). Personal interviews were conducted by trained interviewers who visited the patients during hospitalization or, if they had already left the hospital, at their homes. The standardized interviews lasted for about 1 hour. Furthermore, they sought to validate the obtained information by medical records from the participants' physicians.

There is evidence of substantial overuse of surveillance colonoscopies, especially after detection and removal of low-risk adenomas (9-12). So, it is important to evolve the adequate time interval to surveillance colonoscopy after adenoma removal.

Recently, several new risk factors have suggested in many studies. An increased body mass index (BMI) is associated with an increased risk of colorectal adenomas (13). COX-2 agents demonstrated significant reductions in advanced and metachronous adenomas (14-16). Aspirin also reduces the

incidence of metachronous adenomas and probably cancer (17). Ursodeoxycholic acid reduces the risk of adenomas with high-grade dysplasia (18).

Further and even larger studies are needed to more precisely define surveillance intervals with enhanced risk stratification.

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