

**First Population-wide Evidence: Colonoscopy Protects From Cancer
Even sigmoidoscopy may be very beneficial**

Persons who have had a colonoscopy in the past ten years are much less likely to be diagnosed with advanced precancerous stages of bowel cancer. Particularly on the left side of the colon, the risk for cancer and precancerous stages is dramatically reduced, as scientists of the German Cancer Research Center (Deutsches Krebsforschungszentrum, DKFZ) have found out. Their results underline the great potential of colonoscopy for preventing bowel cancer.

What is the use of taking a colonoscopy examination? Can the number of dangerous advanced precancerous growths be reduced? Is this equally true for all anatomical segments of the colon? So far, relevant data had only been obtained in clinical trials. A group of scientists headed by Professor Hermann Brenner of the German Cancer Research Center (Deutsches Krebsforschungszentrum, DKFZ) have now explored these questions in a broad cross-section of the population. Included in the study were approximately 3,300 people from the Saarland who participated in a colonoscopy exam within the statutory colon cancer screening program. All participants were questioned as to whether they had already taken a colonoscopy within the last ten years prior to the screening colonoscopy.

In persons with a previous colonoscopy, the researchers found significantly less advanced precancerous lesions than in study participants who had their first colonoscopy (6.1% versus 11.4%). To investigate whether the reduced occurrence of precancerous lesions is the same for all bowel areas, the researchers separately evaluated the data for individual anatomical segments of the colon. They found a marked risk reduction in what is called the descending colon, i.e. the left side of the colon, which directly merges with the rectum and where cancer most frequently occurs. Here, the study found two thirds less advanced precancerous lesions in those participants who had previously had a colonoscopy than in participants without previous colonoscopy.

Thus, the results underline the great potential of colonoscopy for preventing colorectal cancer. In view of the particularly high risk reduction in the left part of the colon, the smaller variant of a full colonoscopy known as sigmoidoscopy may also have great relevance for cancer prevention. This examination is a much less unpleasant procedure for participants, because there is no need for bowel cleansing the day before the examination. Hence, people might be more inclined to decide in favor of participating in a screening exam. "Therefore, we should consider adding sigmoidoscopy to the statutory colon cancer screening program in Germany," Hermann Brenner suggests. "Such an offer would probably also be accepted by many people who do not wish to take a colonoscopy. We could prevent many more cancers this way – and that is our goal, after all!"

A picture for this press release is available at:

<http://www.dkfz.de/de/presse/pressemitteilungen/2010/images/Darmkrebs.tif>

Figure Caption: Tissue section of a colon carcinoma. Intercellular contacts (desmosomes) are labeled in red.

Photography: Dr. Lutz Langbein, German Cancer Research Center

Hermann Brenner, Michael Hoffmeister, Volker Arndt, Christa Stegmaier, Lutz Altenhofen, and Ulrike Haug:
Protection from Right- and Left-Sided Colorectal Neoplasms after Colonoscopy: Population-Based Study. *Journal of the National Cancer Institute* 2009, DOI: 10.1093/jnci/djp436

The German Cancer Research Center (Deutsches Krebsforschungszentrum, DKFZ) is the largest biomedical research institute in Germany and is a member of the Helmholtz Association of National Research Centers. More than 2,000 staff members, including 850 scientists, are investigating the mechanisms of cancer and are working to identify cancer risk factors. They provide the foundations for developing novel approaches in the prevention, diagnosis, and treatment of cancer. In addition, the staff of the Cancer Information Service (KID) offers information about the widespread disease of cancer for patients, their families, and the general public. The Center is funded by the German Federal Ministry of Education and Research (90%) and the State of Baden-Württemberg (10%).

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