

[Home](#) > [Research and Advocacy](#) > [Research Summaries](#) > [New Analysis Provides Clearer Picture of Cancer Risks Associated With Lynch Syndrome](#)

PDF generated on July 30, 2016 from
<http://www.cancer.net/new-analysis-provides-clearer-picture-cancer-risks-associated-lynch-syndrome>

[New Analysis Provides Clearer Picture of Cancer Risks Associated With Lynch Syndrome \[1\]](#)

JCO Research Round Up
February 13, 2012

Lynch syndrome is an inherited condition of cancer predisposition caused by mutations in certain genes involved in repairing DNA damage, called “mismatch repair” genes. A new study published in the *Journal of Clinical Oncology* provides a new, clearer picture of the cancer risks that carriers of these mutations face, which could ultimately help guide future screening efforts to detect these cancers at an early stage.

In the study, researchers at The University of Melbourne in Australia confirmed the increased risk of cancers already recognized to be associated with Lynch syndrome, including those of the colon, uterus, ovary, kidney, stomach, and bladder. They also reported that mutation carriers face a significantly increased risk of breast and pancreatic cancers.

The researchers followed a group of more than 400 individuals with a mutation in one of the four “mismatch repair” genes associated with Lynch syndrome, and more than 1,000 of their relatives who were not carriers of these mutations. Study participants were evaluated every five years at recruitment centers affiliated with the Colon Cancer Family Registry in Australia, New Zealand, Canada, and the United States.

After a median follow-up of five years, they found that compared to the general population, individuals with Lynch syndrome had a 20-fold greater risk of colorectal cancer; a 30-fold greater risk of endometrial (uterine) cancer; a 19-fold higher risk of ovarian cancer; an 11-fold greater risk of kidney cancer; a 10-fold greater risk of pancreatic, stomach, and bladder cancers; and a

four-fold greater risk of breast cancer.

Those with Lynch syndrome also tended to be diagnosed with these cancers at an earlier age than cancer patients in the general population. The study found no evidence showing that family members without mutations associated with Lynch syndrome faced an increased risk of cancer compared to the general population; as a result, they do not need more intense cancer screenings than the general population.

The researchers said their findings regarding breast cancer were unexpected. They suggest that further studies to clarify breast cancer risk are needed to determine the optimal age for mammography for each patient, and to determine if other tests, such as MRI, should be recommended in women with Lynch syndrome. Currently, individuals with Lynch syndrome typically undergo colonoscopy at an earlier age than the general population, but no other special screening regimens have been agreed upon.

About Lynch Syndrome

DNA errors are a common occurrence within cells and under normal circumstances, a set of genes called “mismatch repair genes” correct a specific type of DNA errors called mismatches. Patients with Lynch syndrome, however, have a mutation in one of four of specific “mismatch repair genes.” This means that sometimes their cells are not able to repair certain DNA errors, which can result in additional gene mutations and cancer development.

According to the National Cancer Institute, one to three percent of the population may have Lynch syndrome, and the disease is particularly associated with high risk of colon cancer. In fact, researchers estimate that three to five of every 100 colon cancers are caused by Lynch syndrome. Individuals with Lynch syndrome also tend to be diagnosed with cancer at a younger age than people in the general population, and are at greater risk of developing multiple cancers during their lifetime.

What this Means for Patients

This study adds to growing body of evidence linking specific inherited genetic mutations to certain cancers. Over time, as improved screening methods become available, the findings may help doctors refine screening guidelines for breast, uterus, colon, and other cancers among patients with Lynch Syndrome. In the meantime, patients with Lynch syndrome are advised to work with their doctors to determine which screening tests are appropriate, so cancers can be detected and treated as early as possible.

Helpful Links:

[Lynch Syndrome](#) [2]

[Genetics](#) [3]

Links

[1] <http://www.cancer.net/new-analysis-provides-clearer-picture-cancer-risks-associated-lynch-syndrome>

[2] <http://www.cancer.net/patient/Cancer+Types/Lynch+Syndrome>

[3] <http://www.cancer.net/patient/All+About+Cancer/Genetics>

[4] <http://www.cancer.net/patient/Cancer+Types>