Study: Lynch Syndrome Patients Carry Mutations That Increase Cancer Risk

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AsianScientist (Feb. 16, 2012) - People with Lynch syndrome carry mutations in several genes that are required for repairing errors that occur in our DNA. Cells in their bodies are thus unable to correct these errors, putting them at a high risk of developing several types of cancers.

Researchers at the University of Melbourne analyzed cancer incidence in 450 people with mutations in any one of the four mismatch repair genes associated with Lynch syndrome.

Study participants were evaluated every five years at recruitment centres in Australia, New Zealand, Canada, and the US.

The study, published online in the *Journal of Clinical Oncology*, confirmed the increased risk of cancers already known to be associated with Lynch syndrome. These include colon, uterus, ovary, kidney, stomach, and bladder cancers.

The increased cancer risk ranged from a 10-fold greater risk of stomach and bladder cancers to a 30-fold increased risk of endometrial (uterine) cancer.

Unexpectedly, they also found that Lynch syndrome patients faced a moderately increased risk of developing breast (4-fold higher) and pancreatic (10-fold higher) cancers. People with Lynch syndrome also tended to be diagnosed with these cancers at an earlier age than people in the general population.

The researchers say that further studies are needed to determine if mammographic or MRI screening should be recommended for people with Lynch syndrome. Currently, individuals with Lynch syndrome typically undergo colonoscopy at an earlier age than the general population, but no other special screening regimen have been agreed upon.

> “While not a common condition, approximately 20,000 Australians have Lynch syndrome and a very high risk of cancer,” said Associate Professor Mark Jenkins, the leader of the study.
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> “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.”
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> “In the meantime, genetic testing will give people a clearer indication of their real risk level and clarify what they could or should not do to reduce their risks of cancer.”

The article can be found at: Win et al. (2012) Colorectal And Other Cancer Risks For Carriers And Noncarriers From Families With A DNA Mismatch Repair Gene Mutation: A Prospective Cohort Study.

Source: University of Melbourne.
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