Prostate cancer risk rises in men with inherited genetic condition

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Genetic counselor Victoria Raymond consults with physicians in the University of Michigan's Cancer Genetics Clinic. Credit: University of Michigan Comprehensive Cancer Center

Men with an inherited genetic condition called Lynch syndrome face a higher lifetime risk of developing prostate cancer and appear to develop the disease at an earlier age, according to a new study led by researchers at the University of Michigan Comprehensive Cancer Center.

Lynch syndrome is an inherited condition linked to a higher risk of several types of cancer. People with Lynch syndrome have up to 80 percent lifetime risk of colorectal cancer and are also more likely to develop endometrial, gastric, ovarian, urinary tract, pancreatic and brain tumors. Overall, about 1 in 440 people are carriers for the genetic mutation, making it one of the most common inherited cancer conditions.

The findings in prostate cancer have implications for screening younger men who may be at higher risk of the disease. Recent guideline recommendations advise against prostate cancer screening in men younger than 75 who do not have any symptoms.

"For men with an inherited risk factor for prostate cancer, they should still be thinking about prostate cancer screening. Our study suggests men with Lynch syndrome might benefit from regular prostate cancer screening," says lead study author Victoria M. Raymond, a certified genetic counselor with the University of Michigan's Cancer Genetics Clinic.

The researchers looked at 198 families who have a strong family history of cancer and were enrolled in registries at the University of Michigan Comprehensive Cancer Center or at Dana Farber Cancer Institute. These family registries included 4,127 men who were included in this analysis.

Among men with a mutation linked to Lynch syndrome, the researchers estimated their lifetime risk of prostate cancer to be 30 percent, compared to 18 percent among the general population. Men aged 20-59 who carried this mutation also faced a higher risk of prostate cancer than the general public.

Results of the study appear online in the *Journal of Clinical Oncology*.

Earlier studies have suggested that Lynch syndrome might play a role in inherited prostate cancer, but studies to date have been controversial.

"It's been tricky to figure out if prostate cancer is really associated with Lynch syndrome. It's a very common cancer. When you see it occurring in families, it's difficult to figure out if that's because it's associated with Lynch syndrome or just because it's really common," Raymond says.

The current study uses a more rigorous statistical analysis and pulls from a larger number of people. This same method has previously linked Lynch syndrome to endometrial cancer and pancreatic cancer.

Prostate cancer statistics: 238,590 Americans will be diagnosed with prostate cancer this year and 29,720 will die from the disease, according to the American Cancer Society

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