

Testing for Hereditary Cancers Can Be a Lifesaver

Some people aren't ready yet, while others believe "forewarned is forearmed" when it comes to cancer-causing genetic variants.

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For Josh Henderson, 66, of Olympia, getting genetic testing was a no-brainer.

"The first time I came to Fred Hutch, my oncologist suggested it," said the retired IT manager who received a metastatic prostate cancer diagnosis in 2022. "I have an interest in science, and I was curious, so I decided as long as the insurance pays for it, I'd do it."

It did, so he did, and a blood sample was sent off for analysis. Soon after, he learned his cancer was indeed driven by a genetic mutation or variant, but not one he knew anything about.

"I'd never heard of [CHEK2](#), but I had a genetic counseling session where they explained what it was and how it can inhibit DNA repair," he said. "It was an 'Aha!' moment. My great grandfather and great uncle both died of colorectal cancer. And that can be caused by a CHEK2 mutation."

Why wasn't he offered testing earlier, considering his family history of cancer?

"I didn't have cancer in my immediate family, so everybody discounted it," he said. "But my first visit to a urologist was when I was 40. My prostate was a little enlarged then, but my urologist said there was nothing to worry about since there was no family history."

Research shows germline genetic testing — testing for a cancer risk gene you may have inherited — can save lives. Not just the patient's, but their family members, as well. But not everyone realizes they have cancer in the family and those who do know of their family's cancer history may not want to know if they themselves carry a risk for the disease.

Still others — like Henderson — may not know they qualify for genetic testing. Hereditary Cancer Awareness Week, which was marked September 28 to October 4 this year, provides an opportunity to reflect on family health history and on all the ways we can keep our families healthy in the future. [Read more about how to determine if you have hereditary cancer in your family.](#)

Targeted treatments, underutilized testing

Henderson received his first PSA (prostate specific antigen) test at 63. That's also when he received his diagnosis.

"The PSA came back as 48 [very elevated]," he said. "I had low-volume metastasis."

He still appreciated having the knowledge, not just for himself but for his family. Certain variants of CHEK2 may increase a person's risk for breast, ovarian, prostate, thyroid and other cancers.

"I'm the type that wants to know everything and I'm also a strong believer in 'forewarned is forearmed,'" he said. "It's good to know these things. Although I do still wonder if genetic testing had been available earlier, it might have been something I could have nipped in the bud."

It's a good question, one that Fred Hutch Cancer Center clinicians grapple with more and more.

"If we can identify patients with inherited cancer risk variants through genetic testing, they'll have more treatment options," said [Heather Cheng, MD, PhD](#), recently named Fred Hutch's Clinical Director of Cancer Genetics.

This is especially true, she said, with advanced prostate, breast, pancreatic or ovarian cancers.

"There are FDA-approvals for a class of drugs called PARP inhibitors which are especially effective for treating prostate cancers with certain inherited cancer risk genes," she said. "Our research shows more than 10% of patients with metastatic prostate cancer carry hereditary cancer risk gene variants, including in genes such as BRCA2."

According to the National Cancer Institute, or NCI, up to 10% of all cancers may be caused by inherited genetic changes. But not all cancer risk genes have been identified. And not all people who are candidates for genetic testing have received it. Testing for increased cancer risk variants of BRCA1 and BRCA2, among the most well-known cancer risk genes, in fact, is woefully underutilized, including in Washington state.

The [Community Cancer Care Report](#) put out by Fred Hutch's health economics institute HICOR, found only 63% of patients with breast cancer and only 55% of patients with ovarian cancer received genetic testing for BRCA1 or BRCA2. And though they're also linked to BRCA1 and BRCA2, only 15% of patients with pancreatic cancer and 6% of eligible patients with prostate cancer received genetic testing.

Why don't people get tested?

In some cases, it's simple lack of awareness — either on the part of a patient or their physician. Others may be hesitant to test for genetic risk variants as they may believe it will affect their health insurance, life insurance or employment. Some people may be worried about cost. Anxiety can play a factor, as well, as some simply prefer not to know.

One group in particular stands out as not regularly opting for genetic testing: men.

“Men have genetic testing done ten times less than women, even though half the people who carry cancer risk gene variants are men,” Cheng said.

Unfortunately, patients who aren’t tested for cancer risk gene variants may miss the opportunity to benefit from new targeted therapies such as PARP inhibitors and immune checkpoint inhibitors. Similarly, their blood relatives may miss out on a better understanding of their risk for a number of cancers as well as the opportunity to be proactive.

Still, awareness remains low. While many have heard of BRCA1 and BRCA2 — named in part for their link to BReast CAncer — many more don’t realize that these risk genes are just the start. Not only do BRCA mutations drive other cancers, there are dozens of other cancer risk genes beyond BRCA1 and BRCA2, including some that have yet to be identified. And genetic testing is increasingly an essential part of precision cancer treatment and care.

Henderson, who runs the website for www.OlyUsToo.org, the Olympic chapter of Zero Prostate Cancer, said it’s crucial for men with prostate cancer to be offered genetic testing, especially if they have blood relatives — parents, grandparents, aunts, uncles, siblings, children, nieces, nephews — with cancer.

“It’s tough to get men to do anything related to their health,” he said. “But I want them to know how important this is for them.”

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