

# Lynch Syndrome

## 01 Your result

Lynn, you may have a higher than typical chance of developing colon cancer and several other cancers.

This is due to a **difference in your DNA** that is linked to an inherited condition called Lynch syndrome.<sup>[1]</sup>

## 02 Key takeaways

- ✔ This does not mean you will develop cancer — just that your chances of developing certain cancers are much higher than typical.<sup>[14]</sup>
- ✔ Follow-up testing and cancer screenings can improve your chances of catching cancer early, when it may be more treatable.
- ✔ Your family members, such as your parents, siblings, and children, may also have this same DNA difference and a higher chance of developing cancer.<sup>[8]</sup>
- ✔ To support you, your purchase of AncestryHealth® includes access to special resources. You can set up a one-on-one phone call or video conference with a PWNHealth genetic counselor or submit a question for a reply via a secure platform.
- ✔ If you only do one thing, do this: Share your physician report with a healthcare provider as soon as possible. Only a healthcare provider can determine whether you have Lynch syndrome.

[Download physician report](#)

**Genes tested**

This test found a DNA difference in your **MSH2** gene.

This test also looked for DNA differences in 15 other genes linked to a higher chance of developing cancer: **APC, ATM, BMPRIA, BRCA1, BRCA2, CHEK2, MLH1, MSH6, MSH2, MSH3, MSH4, MSH5, MUTYH, PALB2, PMS2, POLD1, POLE, SMAD4, and STK11.** These genes are primarily associated with a higher chance of developing breast cancer and colon cancer. Though it cannot rule them out, this test did not find any DNA differences linked to a higher chance of cancer in those genes.

This information is helpful for a healthcare provider to know and is included in the physician report you can download and bring to them.

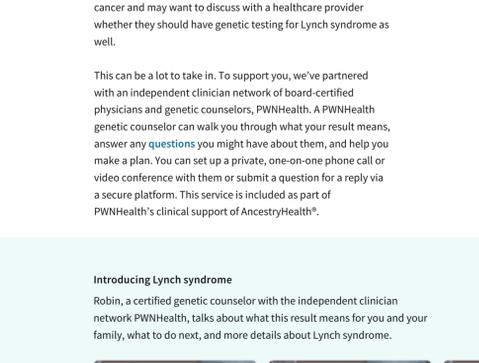
## 03 What this means for you

Your chances of developing colon cancer may be as high as 5 in 10.<sup>[14]</sup>

People with Lynch syndrome have a higher chance of developing certain cancers than someone in the general U.S. population. The two most common cancers they develop are colon cancer and uterine cancer.<sup>[14]</sup>

Your chances of developing colon cancer could be as high as 52%.<sup>[14]</sup> This is much higher than the typical chance of around 4%.<sup>[15]</sup> Women may also have up to a 57% chance of developing uterine cancer, compared to the typical chance of around 3%.<sup>[13,14]</sup> Not all people with Lynch syndrome have the same cancer risks. The chances depend on your specific DNA difference and other factors.<sup>[14]</sup> The physician report includes more details about your particular result to discuss with a healthcare provider.

### Chances of developing various cancers before age 70<sup>[1]</sup>



Having Lynch syndrome doesn't mean you have cancer now or will develop it in the future. What it does mean is that you have a higher chance than typical of developing certain types of cancer, often at a younger age.

You can work with a healthcare provider to make a plan to try to catch cancer early when it is more treatable.

The best way to catch cancers early is with cancer screenings like colonoscopies. Medical guidelines recommend people with Lynch syndrome get colonoscopies earlier and more often than typical.<sup>[13,14]</sup> This is because they have a higher chance of developing colon cancer at a younger age.

People with Lynch syndrome are most likely to develop colon and uterine cancer. But they may also have a higher than typical chance of developing prostate, ovarian, stomach and several other cancers.<sup>[14]</sup>

It is important that you talk with a healthcare provider about this test result and discuss appropriate next steps.

It is also important to share this result with your family. Some members of your family may have a higher chance of developing cancer and may want to discuss with a healthcare provider whether they should have genetic testing for Lynch syndrome as well.

This can be a lot to take in. To support you, we've partnered with an independent clinician network of board-certified physicians and genetic counselors, PWNHealth. A PWNHealth genetic counselor can walk you through what your result means, answer any questions you might have about them, and help you make a plan. You can set up a private, one-on-one phone call or video conference with them or submit a question for a reply via a secure platform. This service is included as part of PWNHealth's clinical support of AncestryHealth®.

**Introducing Lynch syndrome**  
Robin, a certified genetic counselor with the independent clinician network PWNHealth, talks about what this result means for you and your family, what to do next, and more details about Lynch syndrome.

Chances to develop cancer  
4 mins

What do I do now?  
2 mins

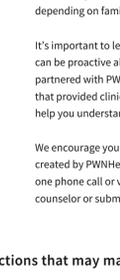
What does this mean for my family?  
30 secs

## 04 What is Lynch syndrome?

Around 1 in 280 people living in the United States has Lynch syndrome.<sup>[1]</sup>

You're far from alone. Lynch syndrome is the most common inherited cause of colon cancer.<sup>[14]</sup> People with Lynch syndrome may also be more likely to develop uterine, prostate, ovarian, stomach and several other cancers.<sup>[14]</sup>

**Lynch syndrome is the most common inherited cause of colon cancer.**



The chances of developing these cancers depend on a number of factors, like your personal health history. For instance, your chances of developing colon cancer may be higher if you have had ulcerative colitis, colon polyps, or certain previous cancers.<sup>[13,14]</sup> The particular **gene** that has the DNA difference is another factor that affects the chances of developing cancer.<sup>[9]</sup>

Cancer is caused by damage to your DNA. Most of the time our cells can fix this damage. But in people with Lynch syndrome, cells cannot fix the damage as well.<sup>[15,16]</sup>

## 05 How inheritance works

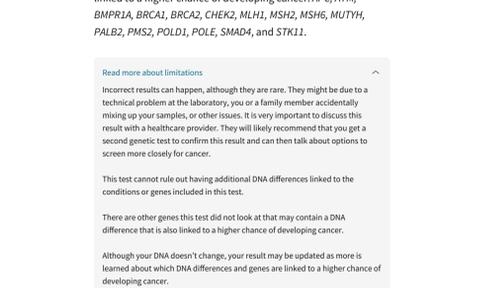
Each child of someone with Lynch syndrome has a 1 in 2 chance of having it as well.

In almost all cases of Lynch syndrome, people inherit the condition from one of their biological parents. This means that if you have a DNA difference linked to Lynch syndrome, at least one of your parents probably has it too. It also means each of your biological brothers and sisters has a 1 in 2 chance of having it, as do each of your children.<sup>[8]</sup>

It is important that you share your result with your family members so they can get tested for Lynch syndrome. The American Medical Association does not recommend genetic testing for people under age 18 unless it would affect their medical care during childhood.<sup>[17]</sup> A healthcare provider can answer any questions about whether and when family members should get tested.

Here is how the inheritance works: You have two copies of most of your genes, one from each of your parents. To have Lynch syndrome, you only need to inherit a DNA difference linked to Lynch syndrome from one of your parents.<sup>[9]</sup> This type of inheritance is called autosomal dominant inheritance.

### How Lynch syndrome is inherited



It's also important to know that if two people with a DNA difference in the same gene linked to Lynch syndrome have a child together, their child has a 1 in 4 chance of having a serious condition called constitutional mismatch repair deficiency (CMMRD). Children with CMMRD have a greater chance of developing cancers such as brain and blood cancers early in life.<sup>[18]</sup>

## 06 What you can do

This information about your genes is only the beginning.

There are actions people with your result can take. The first thing to do is to share your physician report with a healthcare provider and discuss appropriate next steps.

The most important thing people with Lynch syndrome can do after talking to their healthcare provider is to regularly get cancer screenings such as colonoscopies. Catching cancer early can significantly increase your chances of treating it. For colon cancer, for instance, the **five-year survival rate** is 90% when it's caught early.<sup>[19]</sup>

Most people start colon cancer screening with colonoscopies after age 45. But current medical guidelines recommend people with Lynch syndrome start colonoscopies between ages 20 to 25, or even earlier depending on family history.<sup>[13,14]</sup>

It's important to learn more about Lynch syndrome so that you can be proactive about your health. AncestryHealth® has partnered with PWNHealth, the independent clinician network that provided clinical oversight for your test, to support you and help you understand your result.

We encourage you to take advantage of **educational videos** created by PWNHealth. You can also set up a private, one-on-one phone call or video conference with a PWNHealth genetic counselor or submit a question for a reply via a secure platform.

### Actions that may make a difference

Lifestyle changes usually don't have a big effect on whether people with Lynch syndrome develop the cancers linked with Lynch syndrome.<sup>[20]</sup> That's why it's so important to regularly get cancer screenings, as recommended by the National Comprehensive Cancer Network and American Cancer Society. There are however many reasons to continue to live a healthy lifestyle:

- 🚭 **Don't smoke.** Smoking causes about a third of all cancer deaths in the U.S.<sup>[21]</sup> It can cause colon cancer in people who have smoked for a long time.<sup>[22]</sup> In people with Lynch syndrome, smoking can increase the chance of colon cancer even further.<sup>[23]</sup>
- 🏋️ **Maintain a healthy weight.** Being overweight or obese is linked to about 1 in 12 cancers in the U.S., including colon cancer.<sup>[24]</sup> Studies have shown it can increase the chances of developing colon cancer in people with Lynch syndrome.<sup>[16]</sup>
- 🥦 **Eat more vegetables, fruits, and whole grains.** Diet can affect your chances of developing certain cancers. Limiting red meat and processed meat (like hot dogs and lunch meat) and eating more foods that are high in fiber (like vegetables, fruits, and whole grains) may help reduce the chances of developing colon cancer for some people.<sup>[2,20]</sup>
- 🏃 **Stay active.** Getting enough exercise and increasing your physical activity may help to reduce the chances of cancer for some people, in part by controlling their weight.<sup>[25]</sup>
- 🍷 **Drink less.** Drinking no more than 2 alcoholic drinks a day for men and 1 for women can lower the chances of developing many cancers for some people, including colon cancer.<sup>[26]</sup>



Remember to consult with a healthcare provider before making any health, treatment, lifestyle, or dietary changes.

## 07 Limitations

This test cannot tell you whether you will develop cancer, just whether you have a higher chance of developing it.

This test informs you about differences in your DNA in 16 genes linked to a higher chance of developing cancer: **APC, ATM, BMPRIA, BRCA1, BRCA2, CHEK2, MLH1, MSH2, MSH6, MUTYH, PALB2, PMS2, POLD1, POLE, SMAD4, and STK11.**

**Read more about limitations**

Incorrect results can happen, although they are rare. They might be due to a technical problem at the laboratory, you or a family member accidentally mixing up your samples, or other issues. It's very important to discuss this result with a healthcare provider. They will likely recommend that you get a second genetic test to confirm this result and can then talk about options to screen more closely for cancer.

This test cannot rule out having additional DNA differences linked to the conditions or genes included in this test.

There are other genes this test did not look at that may contain a DNA difference that is also linked to a higher chance of developing cancer.

Although your DNA doesn't change, your result may be updated as more is learned about which DNA differences and genes are linked to a higher chance of developing cancer.

This test was performed by our laboratory partner. For further technical details on the limitations of this test, [download your physician report](#).

AncestryHealth® includes laboratory tests developed and performed by an independent CLIA-certified laboratory partner, and with oversight from PWNHealth, the independent clinician network of board-certified physicians and genetic counselors that provided clinical oversight for your test. The test results are not diagnostic and do not determine your overall chance of developing a disease or health condition. The tests are not cleared or approved by the U.S. Food and Drug Administration. Any healthcare recommendations in the report are made by PWNHealth. You should consult a healthcare provider before taking any action, including before making any treatment, dietary, or lifestyle changes.

## 08 If you only do one thing, do this:

Share your physician report with a healthcare provider as soon as possible.

Make an appointment as soon as possible and ask a healthcare provider about next steps. This is important because catching the cancers that Lynch syndrome can cause requires special screening. Download your physician report to take with you to your appointment. The physician report contains guidance for healthcare providers on what the next steps should be.

[Download physician report](#)

**What else can you do?**

**Get support from a PWNHealth genetic counselor**

We encourage you to set up a private, one-on-one phone call or video conference with a genetic counselor. You can also submit a question for a reply via a secure platform. Access to these resources is included with your AncestryHealth® purchase and provided by PWNHealth, the independent clinician network of board-certified physicians and genetic counselors.

You can also submit a question to a PWNHealth genetic counselor below.

Set up a one-on-one session

Ask a genetic counselor a question

provided by PWNHealth

**Share your result with your family**

Because Lynch syndrome runs in families, your family members have a much higher chance of having it too.<sup>[8]</sup> That is why it is important for you to share your result with them. That way they can work with a healthcare provider to decide whether they want to have genetic testing to learn more about their health.

[Download your AncestryHealth report](#)

## 09 Resources

[Learn more](#) [FAQ](#) [References](#) [About test](#)

**Learn more about your result**

My result showed a difference in my DNA that is linked to Lynch syndrome. Does that mean I have cancer? [View](#)

If I have no family history of cancer, does this result still mean I have a higher than typical chance of developing cancer? [View](#)

Should I tell a healthcare provider about my result? [View](#)

Can I start taking actions to lower my risk right away? [View](#)

Should I tell my family about my result? [View](#)

How likely are my relatives to have Lynch syndrome? [View](#)

How accurate is this test? [View](#)

Should I get another test to confirm this result? [View](#)

Can my personal health history or that of my close relatives affect how likely I am to get cancer? [View](#)

Will the information I input into the AncestryHealth® family health history tool change the result in my health report? [View](#)

What should I do next? [View](#)

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Check out the [health support articles](#) for more information.

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