Hereditary Breast and Ovarian Cancer Syndrome (*BRCA1/BRCA2*)

Estimated 20 minutes read

01 **Your result**

Austin, this test did not find any of the DNA differences it looked for linked to hereditary breast and ovarian cancer (HBOC) syndrome.

However, because you indicated you have a family history of HBOC syndrome when you activated your test you may have a higher than typical chance of having HBOC syndrome. People with HBOC syndrome have a DNA difference in their *BRCA1* or *BRCA2* genes that can lead to a much higher chance of developing breast cancer and several other cancers.[1]

02 **Key takeaways**

- This test cannot rule out whether someone has HBOC syndrome. This test only looked for 27 of the more than 2,400 DNA differences in the *BRCA1* and *BRCA2* genes linked to HBOC syndrome.[2-5] It's possible you could have a DNA difference linked to this condition that this test did not look for.
- You reported a family history of HBOC syndrome when you activated your test. People with a family history of HBOC syndrome have a higher chance of having a DNA difference linked to HBOC syndrome.[6]
- You could also develop cancer for reasons other than HBOC syndrome.[6]
- You can learn more by reviewing this report and accessing genetic counseling resources from PMHealth, the independent clinician network that provided clinical oversight for your test.
- **If you only do one thing, do this:**
  Talk to a healthcare provider about your family history of HBOC syndrome. A healthcare provider may recommend additional genetic testing or cancer screening for you. They will likely request information about your family member's HBOC syndrome test result to ensure the correct follow-up test is ordered for you. You may find it helpful to fill out your family health history and take it with you when you talk to a healthcare provider.

  Fill out your family health history

03 **What this means for you**

People with a family history of HBOC syndrome are more likely to have HBOC syndrome.

Because of the family health history you reported when you activated this test, you may have a higher than typical chance of having HBOC syndrome. This is because the DNA differences in the *BRCA1* or *BRCA2* genes linked to HBOC syndrome are passed down in families.[7]

This test looked at only a limited number of DNA differences linked to HBOC syndrome. This test might not have looked for the DNA difference that runs in your family, so you could still have HBOC syndrome.

Chances of developing various cancers before age 70

It's also important to note that most cases of cancer are not caused by inherited DNA differences.[7] Females without an inherited cancer condition still have around a 12% chance of developing breast cancer, for instance.[8] Males without an inherited cancer condition still have around a 12% chance of developing prostate cancer.[9] It's important to talk with a healthcare provider about recommended cancer screenings.

Given your reported family history of HBOC syndrome, additional testing may be recommended for you. Talk with a healthcare provider about next steps.

> Talk with a healthcare provider about your family history of HBOC syndrome.

04 **What is HBOC syndrome?**

HBOC syndrome is the most common inherited cause of breast and ovarian cancer.

In the U.S., around 1 in 200 people have a DNA difference linked to HBOC syndrome.[7]

While breast and ovarian cancer are the most likely, other cancers are also linked to HBOC syndrome in both males and females.[10-17]

> HBOC syndrome is caused by DNA differences in one of two genes — *BRCA1* and *BRCA2* — that help control cell growth.

The chances of developing these cancers depend on a number of factors. For instance, a family history of breast cancer can make it more likely you would develop breast cancer.[7] The particular gene that has the DNA difference is another factor that affects the chances of developing different types of cancer.[1,2-5]

Cancer can happen when cells start growing out of control. HBOC syndrome is caused by DNA differences in one of two genes — *BRCA1* and *BRCA2* — that help control cell growth.[1] DNA differences can cause those genes to not work properly.

Ethnicity

HBOC syndrome is more common in people of certain ethnicities. About 1 in 40 people of Ashkenazi Jewish descent have HBOC syndrome, for example.[7] This is because there are three DNA differences that are linked to HBOC syndrome that are more common in people of Ashkenazi Jewish descent. These DNA differences are called "founder mutations."

05 **What you can do**

Talk to a healthcare provider about your family history of HBOC syndrome and any personal or family history of cancer.

A healthcare provider may recommend additional testing for HBOC syndrome. They will likely request information about your family member's HBOC syndrome test results. This will ensure the correct follow-up test is ordered for you.

AncestryHealth® has created an easy-to-use tool to help you collect your family health history. Access this resource here, add your family's health history, and share it with a healthcare provider.

There are also actions you can take to try to lower your chances of developing cancer.

1. **Get screened.**
   Catching cancers like breast and ovarian cancer early is critical for improving your chances of treating them.[18-21] Many cancers, including breast cancer, can be caught early with regular screenings.[22] Talk with a healthcare provider about when to start and how often you should be screened.
2. **Don't smoke.**
   Smoking causes about a third of all cancer deaths in the U.S.[23-25]
3. **Maintain a healthy weight.**
   Being overweight or obese is linked to about 1 in 12 cancers in the U.S.[26]
4. **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.[27-29]

06 **Limitations**

This test cannot rule out having HBOC syndrome as it looks at only a limited number of DNA differences linked to HBOC syndrome.

This test used microarray technology.[2-5] This technology only looked for 27 of the more than 2,400 DNA differences in the *BRCA1* and *BRCA2* genes that scientific research has found are linked to HBOC syndrome.[7] These are the DNA differences this technology can best detect, but it's possible you could have DNA differences linked to HBOC syndrome that this test did not look for.

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.

Occasionally, this test fails to measure some of the 27 DNA differences that it's designed to look for.

There are other genes this test did not look at that may contain a DNA difference that is linked to inherited cancer risk.

The interpretation of your result may change as more is learned about which DNA differences are tied to an increased risk of 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 PMHealth, 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 your report provided by PMHealth. **You should consult a healthcare provider before taking any action, including before making any treatment, dietary, or lifestyle changes.**

07 **If you only do one thing, do this:**

Talk to a healthcare provider about your family history of HBOC syndrome.

Based on your reported family history of this condition, a healthcare provider may recommend additional genetic testing or cancer screening for you. They will likely request information about your family member's HBOC syndrome test result. This will ensure the correct follow-up test is ordered for you. You may also find it helpful to fill out your family health history and take it with you when you talk to a healthcare provider.

Fill out your family health history

What else can you do?

Ask a question

AncestryHealth® has partnered with PMHealth, the independent clinician network comprised of board-certified physicians and genetic counselors that provided clinical oversight for your test. If you still have questions about your test, you can submit a question to a PMHealth genetic counselor below.

Ask a genetic counselor a question

provided by PMHealth

08 **Resources**

Learn more | FAQ | References

Here are some places to start:

- Bright Pink
- FORCE: Facing Our Risk of Cancer Empowered
- Genetics Home Reference

Download report

NEXT
Lynch Syndrome
Select the cancer risk