

Understanding biomarker testing: how it can impact your endometrial cancer experience

Biomarker tests are used in gynaecologic oncology, including endometrial cancer (sometimes referred to as “womb” or “uterine” cancer), to help your healthcare team better understand how the cancer may behave, and to identify treatment options that are most likely to work for an individual and their specific cancer. Biomarkers are specific characteristics found in cells, such as proteins or DNA, and endometrial cancer has biomarkers that can be identified through testing. This guide provides clear, practical information so you can feel confident and prepared when talking with your care team about biomarker testing options.

“Testing is extremely valuable. If there are patients that have a cancer and have a genetic mutation, they may be eligible for certain therapeutics based on their genetic predisposition.”
- Dr Amina Ahmed, gynaecologic oncologist and director, RUSH MD Anderson Cancer Center



What we know

Feeling overwhelmed by information? You are not alone. Our multi-national survey* of 818 individuals with gynaecologic cancer revealed:

9 of 10

people want to know more about testing options to inform their treatment

34%

of people did not have genetic testing, even though 64% had a family history of gynaecologic cancer

74%

of those who had genetic testing wish their healthcare provider explained the results more clearly

Different types of cancers often need different types of biomarker testing. Understanding what tests may be most important for you can help you get the right information.

About testing

Why does testing matter?

Knowing your biomarker status can help you and your healthcare team understand your prognosis and identify the treatment approach that may be right for you. Tumour testing is the most common type of biomarker testing in endometrial cancer. Tumour and genomic testing can help determine how your specific cancer may act, progress and respond to certain treatments. While less common, genetic testing can help determine your risk for developing certain cancers and conditions.

* GSK Your Cancer Is Our Challenge (YCIOC) Survey, conducted online by The Harris Poll in March-May 2024. Available at: <https://www.gsk.com/en-gb/behind-the-science-magazine/gynaecologic-cancer-survey-treatment-access/>. Last accessed: November 2025.



Material provided by GSK

Material was developed in collaboration with advisory committee consisting of patients, advocates and healthcare providers.

Common types of biomarker testing: what's the difference?



Tumour testing

- **What it looks for:** presence or absence of specific proteins/ biomarkers that can help predict cancer behaviour or potential response to treatments to help determine which treatment is best for you.
- **When it's done:** during or after diagnosis.
- **How it's done:** often a tissue sample from the tumour.



Genomic testing*

sometimes called "somatic" testing

- **What it looks for:** changes within your cancer cells' DNA to help personalise treatment.
- **When it's done:** after a cancer diagnosis.
- **How it's done:** often on the tumour itself, via biopsy or surgery.

*Genomic testing in endometrial cancer is not considered standard of practice in all countries.



Genetic testing

sometimes called "germline" testing

- **What it looks for:** changes in specific genes that might increase your risk of certain cancers. Gene changes can either be inherited (run in your family), or can develop during your lifetime.
- **When it's done:** can be done anytime — before, during, or after diagnosis — often to assess risk if you have a family history of cancer.
- **How it's done:** typically a blood or saliva sample.

Common endometrial cancer biomarkers: mismatch repair (MMR) and microsatellite instability (MSI)



Your DNA is the instruction manual for your body. It tells your cells how to grow, work and repair themselves. Sometimes, small mistakes happen when DNA is copied. Your body has a system for fixing these mistakes called **mismatch repair (MMR)**.

- When it works well, it's called proficient MMR (pMMR).
- When it doesn't work properly, it's called deficient MMR (dMMR), which can lead to more DNA errors.
- dMMR can be caused by an inherited genetic condition called Lynch syndrome, which can increase the risk of developing certain cancers.
- Tumour tests can determine if the cancer is pMMR or dMMR.

Over time, the errors that build up in people with dMMR can cause even more changes in DNA. This is called microsatellite instability (MSI). MSI is common in cancers that are dMMR, and having one or both of these biomarkers looked at can help your cancer team decide which treatments may work best.

Other, less common endometrial cancer biomarkers to test for include:

- p53: a genetic change, which can be found through tumour testing.
- Estrogen and progesterone receptor testing: used for determining prognosis and for your treatment plan.
- HER2 testing: used to determine if your cancer may respond to treatment that targets the HER2 protein.
- POLE testing: used to help inform prognosis.

Questions you may wish to ask your care team

Understanding the testing process

- Will there be biomarker testing on the biopsy for my cancer diagnosis? If not, when will biomarker testing take place?
- What specific tests do you recommend? Will the testing provide me with other health-related information beyond how it applies to endometrial cancer?
- How will this testing inform my treatment plan?
- Will there be any costs for me associated with the tests you feel are important?
- Are there any financial assistance programmes I can explore?
- How will the tests be conducted? How long will it take to get the results?
- Will I need additional biopsies if further testing is required?
- What support is available to me and my family before and after receiving my test results? (e.g., genetic counselling, mental health counselling, referral to social worker, and/or support groups.)

Understanding your test results

- What do my test results mean?
 - Can you explain which results helped to determine my diagnosis?
 - Can you explain which results are important for understanding how my cancer may behave and what treatment options may be best?
- What do the test results indicate about my prognosis or the likelihood of my cancer responding to certain treatments?
- How do my test results impact my treatment plan?
- What is genetic counselling? Is this something I should consider, given my results? If yes, could you refer me to a genetic counsellor?
- Are there any additional tests, specialists I should see or ongoing surveillance that we should consider?
- Should anyone else in my family be tested, based on my test results?
- Given my results, are there symptoms I should look out for?
- Do my results increase my risk for any other types of cancer?

Things to consider for your next appointment

When navigating decisions about your endometrial cancer, it's important to ask the right questions to help you feel informed. To feel prepared for your appointment with your doctor, consider doing the following:



Print out this discussion guide or download it to your phone. During your appointment, refer to the questions above to help guide your conversation with your doctor about testing.



Add other questions you may have to the notes section.



Bring a family member or close friend to the appointment to help you take notes and feel supported.

Notes

My questions



My test results



My next steps



For more information, please visit yourcancerourchallenge.com