Track your disease throughout your cancer journey

Minimal Residual Disease (MRD) Testing

For patients with blood cancers

Learn more about:

›› What is MRD?
›› Why is MRD testing important?
›› MRD testing considerations.
What is MRD?

Minimal residual disease (MRD) is a measure of the amount of cancer in the body, specifically the very small number of cancer cells that remain during or after treatment. MRD testing can be useful to see if you are responding to treatment or if the cancer has come back.¹

Even when you have no signs or symptoms of disease (remission), a small number of cancer cells can stay in your body. These cells can increase over time and cause disease symptoms (relapse).

MRD tests can detect a very small number of cancer cells in your body before disease symptoms appear.

Remission: A decrease in or disappearance of signs and symptoms of cancer.²

Relapse (also called recurrence): The return of a disease or the signs and symptoms of a disease after a period of improvement.²
MRD testing can start the conversation with your doctor about:

**Treatment response and patient goals**
With MRD testing, you and your doctor have a way to track and talk about how you are responding to treatment. MRD testing, along with other information, can help your doctor predict the long-term results of your treatment. Knowing how much residual disease is still in your body could allow your doctor to better tailor your treatment plan and match it with your care goals.

**If a treatment change should be considered**
During treatment, if MRD testing shows the number of cancer cells is not getting smaller, you and your doctor can talk about trying another treatment. During remission or after discontinuation of maintenance therapy regular MRD testing can be used to detect early signs of recurrence before symptoms appear.

**The optimal balance between treatment and quality of life**
MRD test results, when used with other information, can help confirm remission status. You and your doctor can then talk about options such as adjusting treatment or stopping maintenance therapy. Patients who have no cancer cells found after treatment stay in remission longer than those who still have some cancer cells found after treatment.
**MRD testing considerations**

A number of specialized testing methods have been developed for measuring MRD. Start a conversation with your doctor about MRD testing and how it can help track your disease.

**Focus on Sensitivity**

Sensitivity is an important factor when testing for MRD. In this context, sensitivity is the ability of a test to detect a small amount of MRD. The more sensitive an MRD test is, the better it is at finding even just a few cancer cells among many normal cells.

Sensitivity is important to MRD testing because new treatments are more effective at getting rid of cancer cells. More effective treatments mean that it can be harder to detect MRD after treatment.

Sensitivity is only one factor to think about when selecting an MRD test method. Your doctor will be able to guide which MRD test to use based on a number of factors.

**MRD test methods:**

**Flow cytometry**

Flow cytometry is a method in which a tag is attached to the outer part of cancer cells. Then the cells are counted. Test results show how many cells had a tag.

**Sample:** Needs at least 10 million cells for maximum sensitivity. Samples must be tested immediately.

**Results:** In less than 1 day. Usually done locally or sent to a third-party lab.

**Sensitivity:** Usually can find around 5 cancer cells in a sample of 1,000 cells. The most sensitive flow tests can find around 1 cancer cell in a sample of 100,000 cells.

**Polymerase chain reaction (PCR)**

In PCR, a DNA sequence that is unique to your cancer cells is identified, copied many times, and counted.

**Sample:** Needs at least 2 million cells for maximum sensitivity. Samples can be tested immediately or stored for later.

**Results:** Typically 4 to 5 weeks.

**Sensitivity:** Can find 5 cancer cells in a sample of 100,000 cells. The most sensitive PCR tests can find 1 cancer cell in a sample of 1 million cells.

**Next-generation sequencing (NGS)**

NGS is a newer method of DNA sequencing. NGS identifies DNA sequences that are unique to your cancer cells.

**Sample:** Needs at least 1 million cells. Samples can be tested immediately or stored for later.

**Results:** Typically 1 week. Usually sent to a lab that specializes in this testing.

**Sensitivity:** Can find 1 cancer cell in 1 million cells, provided sufficient sample material.

---

*This content and its publisher or sponsor do not endorse the use of any particular treatment. The full instructions for use of any therapy, including any limitations, should be reviewed by a healthcare provider.*
References


