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## WHAT IS MINIMAL/MEASURABLE\* RESIDUAL DISEASE (MRD)?

After a patient achieves complete remission based on standard test results, there may be cancer cells that remain in the body, known as MRD. For this reason, more sensitive tests will be done to detect whether the patient is negative or positive for MRD.

\*These terms may be used interchangeably.

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## TESTS USED

- MRD testing uses highly sensitive methods that can look for a small amount of cancer cells in a very large sample of cells.
- The most widely used tests are **flow cytometry**, **next-generation sequencing (NGS)**, and **polymerase chain reaction (PCR) assays**.
- These tests use samples of bone marrow cells (taken by aspiration) and/or peripheral blood cells (taken through a vein).

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## POSITIVE VS. NEGATIVE

A patient can have a positive or negative MRD result.

- **Positive Test Result:** There are still residual cancer cells detected in the body after treatment—called "MRD positivity."
- **Negative Test Result:** There aren't any residual cancer cells detected in the body after treatment—called "MRD negativity."

It is encouraging when these sensitive tests cannot find any cancer cells.

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## HOW MRD TESTING CAN BE USED

MRD testing can help doctors to:

- Determine how well the cancer has responded to treatment
- Confirm and monitor remissions
- Find cancer recurrence sooner than with other tests
- Identify patients who may be at a higher risk of relapse
- Identify patients who may need to restart treatment
- Identify patients who may benefit from other treatments

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## MRD TESTING IN SPECIFIC BLOOD CANCERS

The type of MRD testing used varies depending on the type of blood cancer.

- **Acute Lymphoblastic Leukemia (ALL):** Flow cytometry, polymerase chain reaction (PCR) and next-generation sequencing (NGS)
- **Acute Myeloid Leukemia (AML)/Advanced Myelodysplastic Syndromes (MDS):** Flow cytometry, PCR, NGS
- **Chronic Lymphocytic Leukemia (CLL):** Flow cytometry, PCR, NGS
- **Chronic Myeloid Leukemia (CML):** PCR
- **Lymphoma:** Flow cytometry, PCR
- **Myeloma:** Flow cytometry, NGS and imaging tests
- **MDS:** Specific testing has not been determined but is being explored to better understand the disease in clinical trials.
- **Myeloproliferative Neoplasms (MPNs):** PCR

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## INSURANCE COVERAGE

MRD tests are considered specialized tests and can be expensive. Patients need to be aware that:

- MRD testing may require prior authorization from an insurance provider.
- The blood or bone marrow sample for the test may be sent to an out-of-network laboratory which can result in out-of-network fees for patients.

Ask your treatment team to inform you if an MRD sample is being sent out to a laboratory. Speak to your insurance provider to find out the cost of MRD testing.

For additional information, visit [www.LLS.org/booklets](http://www.LLS.org/booklets) to download or print the booklet *Minimal Residual Disease (MRD)*.

Please reach out to our Information Specialists for more information about this and other disease, treatment, and support questions and concerns at **800.955.4572** or [www.LLS.org/InformationSpecialists](http://www.LLS.org/InformationSpecialists).

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