

Leukemia - Acute Myeloid - AML - Latest Research [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 11/2014

ON THIS PAGE: You will read about the scientific research being done now to learn more about AML and how to treat it. To see other pages, use the menu on the side of your screen.

Doctors are working to learn more about AML, ways to prevent it, how to best treat it, and how to provide the best care to people diagnosed with this disease. The following areas of research may include new options for patients through clinical trials. Most cancer centers are actively involved in clinical trials focused on increasing the number of people cured of AML. Always talk with your doctor about the diagnostic and treatment options best for you.

Understanding AML biology. Research on the biology of AML is ongoing to learn more about how leukemia develops and to improve its treatment, particularly for older patients.

New drugs and treatment regimens. Researchers are looking at the use of existing drugs given in different doses and schedules, as well as new drugs. Specific research includes the use of drugs called hypomethylating therapy, such as azacitidine or decitabine. A new drug combination is also being researched called CPX-351, which combines the drugs cytarabine and daunorubicin.

Targeted therapy [3]. Targeted therapy is a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. Researchers are studying ways to block how specific genetic changes found in AML cells affect the body. For example, about 30% of patients with AML have changes in the *FLT3* gene, which can increase the growth of AML cells. Quizartinib is a drug that stops the changed *FLT3* gene from working that is being tested in clinical trials. Other targeted therapies are being researched that stop AML cells from becoming resistant to chemotherapy when the chemotherapy stops working. Specific targeted therapy drugs being researched include midostaurin, lenalidomide (Revlimid), sorafenib (Nexavar), Histone Deacetylase inhibitors (HDAC inhibitors) and other drugs that are targeted to specific gene mutations such as IDH1 and IDH2, c-KIT and RAS.

Immunotherapy [4]. Immunotherapy, also called biologic therapy, is designed to boost the body's natural defenses to fight the leukemia. It uses materials made either by the body or in a laboratory to improve, target, or restore immune system function. Researchers are specifically looking at vaccines and the use of antibodies directed against the AML cells

Stem cell/bone marrow transplantation. Different ways to make stem cell transplantation safer,

easier, and more effective are also being studied (see [Treatment Options](#) [5]).

Supportive care. Clinical trials are underway to find better ways of reducing symptoms and side effects of current AML treatments in order to improve patients' comfort and quality of life.

Looking for More About the Latest Research?

If you would like additional information about the latest areas of research regarding AML explore these related items that take you outside of this guide:

- To find clinical trials specific to your diagnosis, talk with your doctor or [search online clinical trial databases now](#) [6].
- Visit ASCO's [CancerProgress.Net](#) [7] website to learn more about the historical pace of research for leukemia. Please note this link takes you to a separate ASCO website.

The next section addresses how to cope with symptoms of the disease or the side effects of its treatment. Use the menu on the side of your screen to select [Coping with Side Effects](#), or you can select another section, to continue reading this guide.

Links:

[1] <http://www.cancer.net/cancer-types/leukemia-acute-myeloid-aml/latest-research>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/24729>

[4] <http://www.cancer.net/node/24726>

[5] <http://www.cancer.net/node/19072>

[6] <http://www.cancer.net/node/24878>

[7] <http://www.cancerprogress.net/timeline/leukemia>