

Acute Myeloid Leukemia

What is acute myeloid leukemia?

Acute myeloid leukemia (AML) is a cancer of the blood that affects the production of all blood cells, including neutrophils, a type of white blood cell. AML is usually found in the blood and bone marrow, which is the spongy tissue inside of bones. However, it can spread to other parts of the body, such as the brain, skin, and gums. AML develops quickly and often needs immediate treatment.

What is the function of neutrophils?

Healthy neutrophils help fight infections caused by bacteria. Mature neutrophils develop from immature white blood cells in a process called differentiation. In AML, this process is disrupted and too many immature cells called myeloblasts or blasts build up in the body. Blasts do not work like fully developed, healthy blood cells and cannot fight infections.

What does subtype mean?

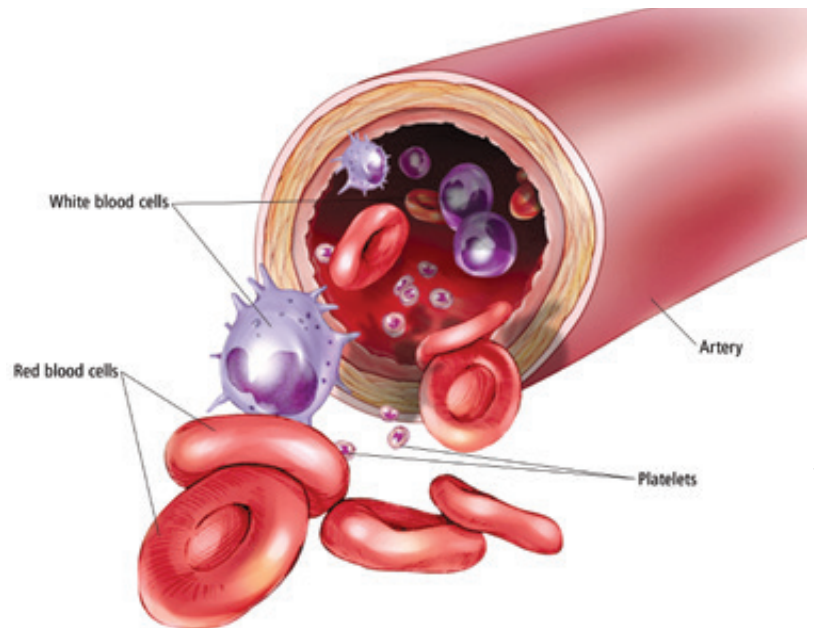
AML is classified into different subtypes that are named according to the type of healthy, immature white blood cell it most looks like. The subtype is described by what the cancerous cells look like under a microscope, called morphology, typically using the World Health Organization classification system. AML is also classified by cytogenetic, or chromosome, and genetic changes in the cancerous cells. Find more information about AML subtypes at www.cancer.net/aml.

How is acute myeloid leukemia treated?

The treatment of AML depends on its subtype, morphology, cytogenetics, changes to the cancer's genes, and the patient's age, overall health, and preferences. Chemotherapy with a combination of drugs is the primary treatment. The goal of initial treatment is to achieve a complete remission, which means that the blood counts are normal and there is no leukemia in the bone marrow and no symptoms. After remission, further therapy is given to prevent the AML from coming back. Stem cell transplantation may be used for patients with a high risk of having the leukemia come back. Radiation therapy may be used when AML spreads to the brain or to shrink a solid tumor called a myeloid sarcoma. When making treatment decisions, people may also consider a clinical trial; talk with your doctor about all treatment options. The side effects of AML treatment can often be prevented or managed with the help of your health care team. This is called palliative care and is an important part of the overall treatment plan.

How can I cope with acute myeloid leukemia?

Absorbing the news of a cancer diagnosis and communicating with your health care team are key parts of the coping process. Seeking support, organizing your health information, making sure all of your questions are answered, and participating in the decision-making process are other steps. Talk with your health care team about any concerns. Understanding your emotions and those of people close to you can be helpful in managing the diagnosis, treatment, and healing process.



Questions to ask the doctor

Regular communication is important in making informed decisions about your health care. Consider asking the following questions of your health care team:

- What AML subtype has been diagnosed?
- Can you explain my pathology report (laboratory test results) to me?
- Would you explain my treatment options?
- What clinical trials are open to me? Where are they located, and how do I find out more about them?
- What treatment plan do you recommend? Why?
- What is the goal of each treatment? Is it to eliminate the leukemia, help me feel better, or both?
- Who will be part of my treatment team, and what does each member do?
- How will this treatment affect my daily life? Will I be able to work, exercise, and perform my usual activities?
- Will this treatment affect my ability to become pregnant or have children?
- What long-term side effects may be associated with my treatment plan?
- What follow-up tests will I need, and how often will I need them?
- If I'm worried about managing the costs related to my cancer care, who can help me with these concerns?
- Where can I find emotional support for me and my family?
- Whom should I call for questions or problems?

Additional questions to ask the doctor can be found at www.cancer.net/aml.

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TERMS TO KNOW

Bone marrow biopsy:

Removal and analysis of a bone marrow sample from the center of the bones

Chemotherapy:

The use of drugs to destroy cancer cells

Clinical trial:

A research study that tests a new treatment or drug

Cytogenetics:

Analysis of a cell's chromosomes

Hematologist:

A doctor who specializes in treating blood disorders

Leukemia:

A cancer of the blood

Lymph node:

A tiny, bean-shaped organ that fights infection

Oncologist:

A doctor who specializes in treating cancer

Prognosis:

Chance of recovery

Radiation therapy:

The use of high-energy x-rays to destroy cancer cells

Remission:

The absence of any signs or symptoms of disease

Stem cell transplant:

Procedure that replaces diseased bone marrow with healthy stem cells that create new bone marrow

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