

# 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?

Normal 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 or make other healthy blood cells, such as platelets and red blood cells.

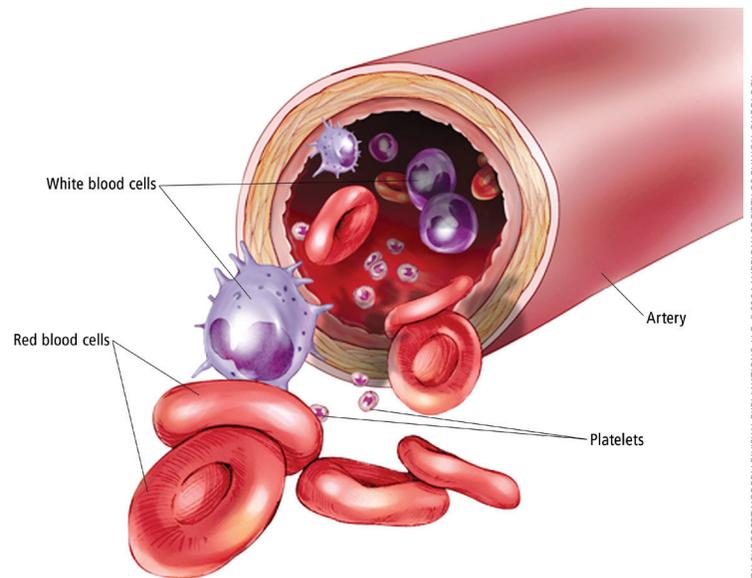


ILLUSTRATION BY ROBERT MORREALE/VISUAL EXPLANATIONS, LLC. © 2004 AMERICAN SOCIETY OF CLINICAL ONCOLOGY

## 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 at [www.cancer.net/aml](http://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 are no signs or symptoms of leukemia in the bone marrow. After remission, further therapy to prevent the AML from coming back is given. Stem cell/bone marrow transplantation may be used for patients with a high risk of having the leukemia come back. Targeted therapy may be an option for some people with AML that has specific genetic changes. Radiation therapy may be used when AML spreads to the brain or to shrink solid tumors called chloromas. 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 supportive 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 health care team

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

- 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 available for 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 of cancer care, who can help me?
- Where can I find emotional support for me and my family?
- Whom should I call with questions or problems?

Find more questions to ask the health care team at [www.cancer.net/aml](http://www.cancer.net/aml). For a digital list of questions, download Cancer.Net's free mobile app at [www.cancer.net/app](http://www.cancer.net/app).

The ideas and opinions expressed here do not necessarily reflect the opinions of the American Society of Clinical Oncology (ASCO) or The Conquer Cancer Foundation. The information in this fact sheet is not intended as medical or legal advice, or as a substitute for consultation with a physician or other licensed health care provider. Patients with health care-related questions should call or see their physician or other health care provider promptly and should not disregard professional medical advice, or delay seeking it, because of information encountered here. The mention of any product, service, or treatment in this fact sheet should not be construed as an ASCO endorsement. ASCO is not responsible for any injury or damage to persons or property arising out of or related to any use of ASCO's patient education materials, or to any errors or omissions.

To order more printed copies, please call 888-273-3508 or visit [www.cancer.net/estore](http://www.cancer.net/estore).

**ASCO** Cancer.Net  
Doctor-Approved Patient Information

### AMERICAN SOCIETY OF CLINICAL ONCOLOGY

2318 Mill Road, Suite 800, Alexandria, VA 22314 | Toll Free: 888-651-3038 | Phone: 571-483-1300  
[www.asco.org](http://www.asco.org) | [www.cancer.net](http://www.cancer.net) | [www.conquer.org](http://www.conquer.org)  
© 2017 American Society of Clinical Oncology. For permissions information, contact [permissions@asco.org](mailto:permissions@asco.org).

## WORDS 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

### 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/bone marrow transplant:

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

### Targeted therapy:

Treatment that targets specific genes or proteins that contribute to cancer growth and survival

MADE AVAILABLE THROUGH

**CONQUER  
CANCER**  
FOUNDATION  
of the American Society of Clinical Oncology