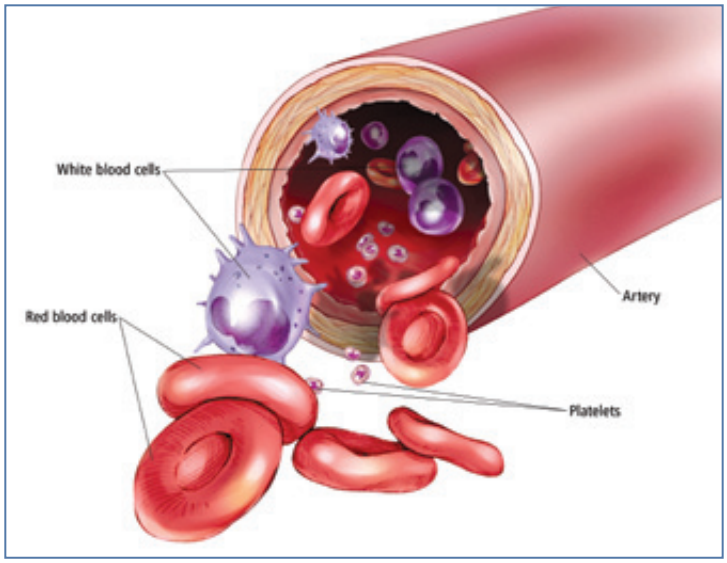
ASCO ANSWERS

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 (spongy tissue inside of bones), but it can spread to other areas, such as the brain, skin, and gums. AML develops quickly and often requires immediate treatment.



Find additional cancer information at www.cancer.net.

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.

WHAT DOES SUBTYPE MEAN?

There are different kinds of AML called subtypes that are named according to the type of normal, immature white blood cell it most looks like. The subtype is classified (described) by the morphology (cancerous cells' appearance under a microscope), typically using the World Health Organization classification system. AML is also classified by cytogenetic (chromosome) and genetic changes in the cancerous cells. More information is available 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 overall health. Chemotherapy is the primary treatment; a combination of drugs may be used. The goal of induction therapy (the initial treatment) is to achieve a complete remission (normal blood counts, no leukemia in the bone marrow, and no symptoms). After remission is accomplished, consolidation therapy (further therapy given to prevent the AML from coming back) is given. Stem cell transplantation may be used instead of consolidation therapy for patients at high risk for recurrence (return of the cancer). 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.

HOW CAN I COPE WITH ACUTE MYELOID LEUKEMIA?

Absorbing the news of a cancer diagnosis and communicating with your doctor are key parts of the coping process. Seeking support, becoming organized, and considering a second opinion are other steps. Understanding your emotions and those of people close to you can be helpful in managing the diagnosis, treatment, and healing process.

ASCO Answers is a series of fact sheets produced by the American Society of Clinical Oncology. ASCO is the world's leading professional organization representing doctors of all oncology subspecialties who care for people with cancer.

QUESTIONS TO ASK THE DOCTOR

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

- What AML subtype do I have?
- Can you explain my pathology report (laboratory test results) to me?
- What is the expected timeline for my treatment plan? Do I need to start treatment right away?
- Would you explain my treatment options?
- What clinical trials are open to me?
- What is the goal of each treatment? Can my AML be cured?
- How will this treatment affect my daily life? Will I be able to work, exercise, and perform my usual activities?
- If I'm worried about managing the costs related to my cancer care, who can help me with these concerns?
- Will this treatment affect my ability to become pregnant or have children?
- What long-term side effects may be associated with my cancer treatment?
- Where can I find emotional support for me and my family?
- Whom do I call for questions or problems?
- Is there anything else I should be asking?

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

Cancer.Net™

Doctor-Approved Patient Information from ASCO®

For more information, visit ASCO's patient website, www.cancer.net, or call 888-651-3038.

TERMS TO KNOW

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

Clinical trial:
A research study that tests a new treatment or drug

Chemotherapy:
The use of drugs to destroy cancer cells

Cytogenetics:
Analysis of a cell's chromosomes

Hematologist:
A doctor who specializes in treating blood disorders

Lymph node:
A tiny, bean-shaped organ that fights infection

Metastasis:
The spread of cancer from where the cancer began to another part of the body

Oncologist:
A doctor who specializes in treating people with cancer

Prognosis:
Chance of recovery

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

Stem cell transplant:
Procedure that replaces diseased bone marrow with healthy stem cells that create new bone marrow

Tumor:
An abnormal growth of tissue