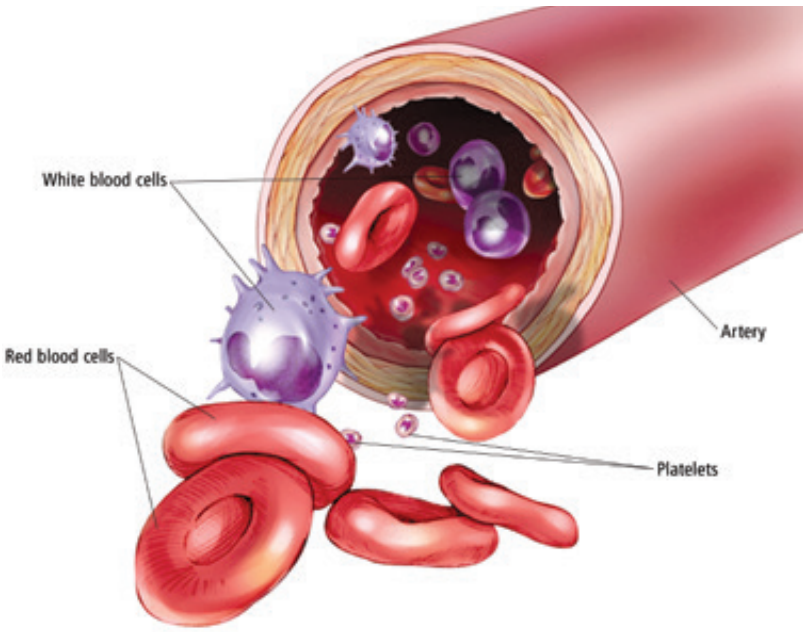
ASCOanswers

Childhood AML

What is acute myeloid leukemia?

Acute myeloid leukemia (AML) is a cancer of the blood that begins in the bone marrow, the spongy red tissue in the inner part of the large bones. AML is also called acute nonlymphocytic leukemia or acute myelogenous leukemia. AML is the second most common form of leukemia in children.



What is the function of bone marrow?

Bone marrow is where a person's blood cells are made. Healthy bone marrow cells mature into one of three types of blood cells. In AML, the bone marrow makes large numbers of immature cancerous cells, called myeloblasts, that do not become mature blood cells. These blasts fill up the bone marrow, prevent healthy blood cell production, and build up in the bloodstream. Abnormal myeloblasts can also spread to other organs or may form a solid tumor called a chloroma.

What does subtype mean?

There are several different subtypes of AML that are described based on morphology. This is how much the AML blasts look like healthy, immature bone marrow cells under a microscope. The newest method of subtyping, the World Health Organization 2008 classification, also takes into consideration the cytogenetic (chromosome) causes of AML. More information about this is available at www.cancer.net/childaml.

How is acute myeloid leukemia treated?

The most common treatment for AML is chemotherapy. There are two phases of chemotherapy: (1) induction, which destroys as many cancer cells as possible and causes remission (when the AML temporarily or permanently goes away); and (2) intensification, which destroys any cancer cells remaining after induction, which may be too few to find with modern tests. The risk that the cancer will come back after treatment differs based on the subtype. The higher the risk of recurrence, the more likely the doctor is to recommend a stem cell transplant. Radiation therapy is generally used only if cancer has spread to the brain and chemotherapy isn't effective or to treat a chloroma.

When making treatment decisions, consider a clinical trial. Most children with cancer are treated as part of one. Talk with your child's doctor about all treatment options. The side effects of AML treatment can often be prevented or managed with the help of your child's health care team.

How can I help my child or teen cope with acute myeloid leukemia?

Helping your child or teenager understand a cancer diagnosis is a key part of the coping process. Children and adolescents with AML should be treated at a cancer center with access to pediatric specialists. Absorbing the news of a cancer diagnosis and communicating with your child's health care team are key parts of the coping process. Seeking support, organizing your child's health information, making sure all of your questions are answered, and participating in the decision-making process are other steps. Talk with your child's 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.

ASCO ANSWERS is a collection of oncologist-approved patient education materials developed by the American Society of Clinical Oncology (ASCO) for people with cancer and their caregivers.

Questions to ask the doctor

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

- What subtype of AML has been diagnosed? What does this mean?
- Can you explain my child's pathology report (laboratory test results) to me?
- Would you explain my child's treatment options?
- What clinical trials are open to my child? Where are they located, and how do I find out more about them?
- What treatment plan do you recommend for my child? Why?
- What is the goal of each treatment? Is it to eliminate the cancer, help my child feel better, or both?
- Who will be part of the treatment team, and what does each member do?
- How will this treatment affect my child's daily life? Will he or she be able to go to school and perform his or her usual activities?
- What short-term and long-term side effects may be associated with my child's cancer treatment?
- What can be done to relieve the side effects?
- What are the chances that the AML will come back after treatment?
- What follow-up tests will my child need, and how often will he or she need them?
- If I'm worried about managing the costs related to my child's cancer care, who can help me with these concerns?
- Where can I find emotional support for my child? For my family?
- Whom should 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/childaml.

TERMS TO KNOW

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

Chemotherapy:
The use of drugs to destroy cancer cells

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

Hematologist:
A doctor who specializes in treating blood disorders

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

Pediatric oncologist:
A doctor who specializes in treating children and teens with cancer

Prognosis:
Chance of recovery

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

Remission:
The temporary or permanent disappearance of the signs and symptoms of cancer

Stem cell transplant:
Procedure that replaces diseased bone marrow with healthy stem cells that create new bone marrow or provides stem cells to help the bone marrow recover after high-dose chemotherapy

Tumor:
An abnormal growth of body tissue

MADE AVAILABLE THROUGH

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of the American Society of Clinical Oncology

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