

ASCO ANSWERS

ACUTE MYELOID LEUKEMIA

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 the source of a person's blood. Normal immature bone marrow cells mature into one of three types of blood cells: white blood cells (that fight infection), red blood cells (that carry oxygen throughout the body), and platelets (that help blood to clot). In AML, the bone marrow produces large numbers of abnormal, immature cancerous cells (called myeloblasts) that do not become mature blood cells. These blasts fill up the bone marrow, prevent normal 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.

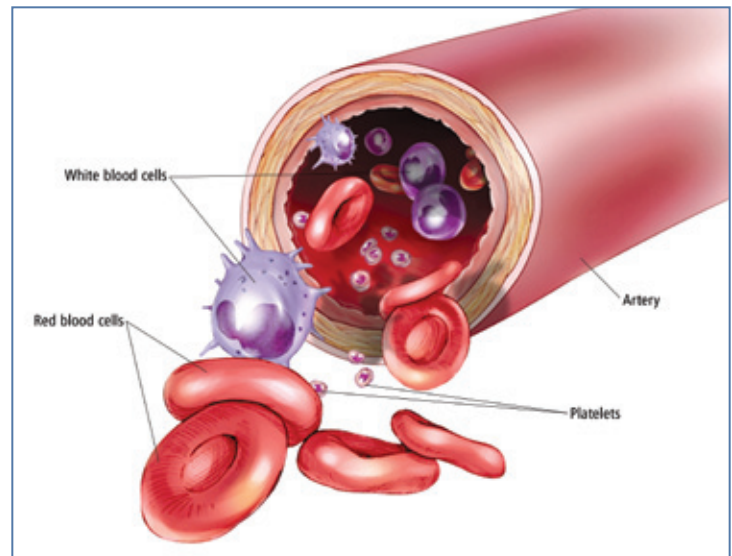


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Find additional cancer information at www.cancer.net.

WHAT DOES SUBTYPE MEAN?

There are several different subtypes of AML that are classified (described) based on morphology (how much the AML blasts look like normal, 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 each subtype 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 kills as many cancer cells as possible and causes remission (when the AML temporarily or permanently goes away); and (2) intensification, which kills any cancer cells remaining after induction. The risk that the cancer will come back after treatment differs for each child. The higher the risk, the more likely a stem cell transplant is considered. Radiation therapy is generally used only if cancer has spread to the brain and chemotherapy isn't effective; it may also be used 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 cancer should be treated at a pediatric cancer center. These centers not only provide access to the latest treatments, they offer age-appropriate programs for social and emotional needs. Encouraging your child and other family members to share their emotions 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 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?
- What treatment plan do you recommend for my child? Why?
- Who is 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?
- If I'm worried about managing the costs related to my child's cancer care, who can help me with these concerns?
- What short-term and long-term side effects may be associated with my child's cancer treatment?
- What are the chances that the AML will come back after treatment?



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acute myeloid
leukemia

- What follow-up tests will my child need, and how often will he or she need them?
- Where can I find emotional support for my child? For 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/childaml.

Cancer.Net™

Doctor-Approved Patient Information from ASCO®

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

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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

Metastasis:

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

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

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