

## Childhood ALL

### What is acute lymphoblastic leukemia?

Acute lymphoblastic leukemia (ALL) is a cancer of the blood. It begins when normal blood cells, called lymphocytes, change and grow uncontrollably. ALL is the most common type of childhood cancer.

### What are lymphocytes?

Lymphocytes are a type of white blood cell made in the bone marrow, the spongy, red tissue in the inner part of the large bones. Lymphocytes are found in the blood, lymph nodes, and spleen. Healthy lymphocytes fight bacterial and viral infections. In ALL, new, immature lymphocytes known as lymphoblasts do not develop into mature cells. Instead, these blasts fill up the bone marrow, prevent normal blood cell production, and build up in the bloodstream. Abnormal lymphoblasts can also spread to other organs and tissues, including the lymph nodes, liver, spleen, in a girl's ovaries, in a boy's testicles, spinal fluid, and skin.

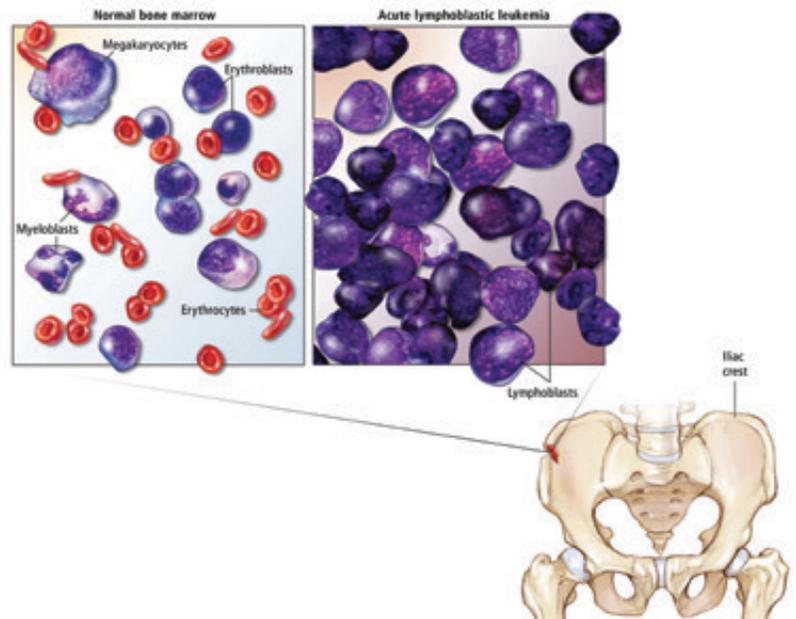


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### What factors determine how acute lymphoblastic leukemia is treated?

When deciding on a treatment plan, doctors consider a patient's age and white blood cell counts, the results of a specialized test that looks at the various proteins expressed by the leukemia cells, called immunophenotyping, the presence of genetic abnormalities in the leukemia cells, and the cancer's response to early treatment.

### How is acute lymphoblastic leukemia treated?

Chemotherapy, the primary treatment for ALL, is generally done in four phases to get rid of the tumor (called a remission) and then to destroy any remaining cancer cells. Several drugs may be used and may be given by mouth or injection. Radiation therapy for ALL is typically used only when cancer spreads to the brain, spinal fluid, or a boy's testicles. It is also used for high-risk ALL to help prevent the spread of leukemia to the spinal fluid. Stem cell/bone marrow transplantation is most often used for recurrent or refractory ALL.

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 treatment can often be prevented or managed with the help of your child's health care team. This is called supportive care and is an important part of the overall treatment plan.

### How can I help my child or teen cope with acute lymphoblastic 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 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.

## 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 health care team:

- What is the diagnosis? 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?
- 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 are the chances that the ALL 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 this concern?
- 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/childall](http://www.cancer.net/childall).

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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

### **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

### **Recurrent ALL:**

Cancer that comes back after treatment

### **Refractory ALL:**

When the leukemia does not go into remission

### **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

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