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## [Leukemia - Acute Lymphocytic - ALL - Introduction \[1\]](#)

This section has been reviewed and approved by the [Cancer.Net Editorial Board \[2\]](#), 01/2016

**ON THIS PAGE:** You will find some basic information about this disease and the parts of the body it may affect. This is the first page of Cancer.Net's Guide to Adult Acute Lymphocytic Leukemia. To see other pages, use the menu. Think of that menu as a roadmap to this full guide.

Leukemia is a cancer of the blood. Leukemia begins when healthy blood cells change and grow out of control. Acute lymphocytic leukemia (ALL) is a cancer of the immature lymphocytes, a type of white blood cell involved in the body's immune system. ALL is also called acute lymphoid leukemia or acute lymphoblastic leukemia. Acute means that the disease begins and gets worse quickly. Patients with ALL usually need immediate treatment. ALL is most common in young children and adults older than 50, but people of any age can develop ALL.

### **About lymphocytes**

Lymphocytes are 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 people with ALL, new lymphocytes do not develop into mature cells, but stay as immature cells called lymphoblasts.

There are 3 different types of lymphocytes: B cells, T cells, and natural killer (NK) cells.

- B cells make antibodies.

- T cells fight infections by activating other cells in the immune system and by destroying infected cells.
- NK cells fight microbes and cancer cells.

About 85% of people with ALL have the B-cell subtype and about 15% have the T-cell type. The NK-cell subtype is quite rare.

## **About ALL**

In people with ALL, the abnormal cells crowd other types of cells in the bone marrow. This prevents the production of the following cells:

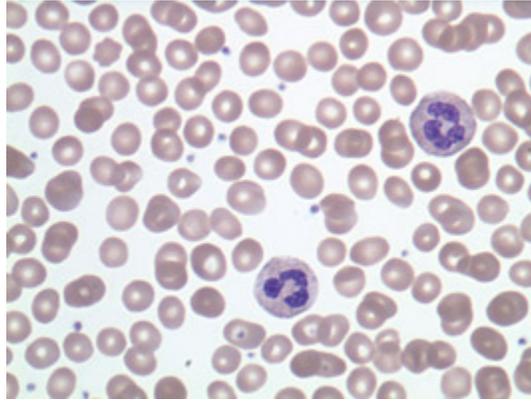
- Red blood cells, which carry oxygen
- Other types of white blood cells
- Platelets, which are parts of the blood needed for clotting

This means that people with ALL may have problems related to having too few healthy blood cells, including:

- Anemia, from not enough red blood cells
- Infections because they do not have enough of the type of white blood cells called neutrophils that fight bacteria
- Increased risk of bruises or bleeding because of a low level of platelets

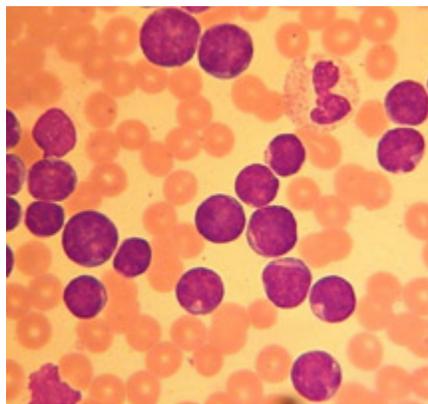
Lymphoblasts may also collect in a person's lymphatic system and cause swelling of the lymph nodes. Some cells may invade other organs, including the brain, liver, spleen, thymus, or the testicles in men.

Unlike other types of cancer, the spread of ALL to other parts of the body does not mean the cancer is automatically considered to be in an advanced stage. Acute leukemia is usually found throughout the body when it is diagnosed and it may still be cured.



Normal peripheral blood with two neutrophils

[Click to Enlarge](#)



ALL disease

[Click to Enlarge](#)

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*This section is about ALL in adults. Read about [childhood ALL](#) [3].*

## Looking for More of an Introduction?

If you would like more of an introduction, explore these related items. Please note these links will take you to other sections on Cancer.Net:

- **ASCO Answers Fact Sheet:** Read a [1-page fact sheet](#) [4] that offers an introduction to this type of cancer. This fact sheet is available as a PDF, so it is easy to print.
- **Cancer.Net Patient Education Video:** [View a short video](#) [5] led by an ASCO expert in leukemia that provides basic information and areas of research.

- **Cancer.Net En Español:** [Read about ALL in Spanish](#) [6]. [Infórmase sobre leucemia linfocítica aguda en español](#) [6].

The [next section in this guide is Statistics](#) [7]. It helps explain how many people are diagnosed with this disease and general survival rates. Or, use the menu to choose another section to continue reading this guide.

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#### **Links**

[1] <http://www.cancer.net/cancer-types/leukemia-acute-lymphocytic-all/introduction>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/31283>

[4] [http://www.cancer.net/sites/cancer.net/files/asco\\_answers\\_all.pdf](http://www.cancer.net/sites/cancer.net/files/asco_answers_all.pdf)

[5] <http://www.cancer.net/node/27376>

[6] <http://www.cancer.net/es/node/31350>

[7] <http://www.cancer.net/node/19038>