

Home > Types of Cancer > Leukemia - Acute Lymphoblastic - ALL - Childhood > Leukemia - Acute Lymphoblastic - ALL - Childhood - Classification

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Leukemia - Acute Lymphoblastic - ALL - Childhood - Classification [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board \[2\]](#), 03/2014

ON THIS PAGE: You will learn about the factors that doctors use to describe this type of cancer. This is called classification. To see other pages, use the menu on the side of your screen.

While there is no staging system for childhood ALL compared to other types of cancer, there are a number of factors that help doctors choose the best treatment plan and predict the chance that the disease will come back after treatment. Doctors plan the child's treatment based on these and other factors:

Age. Infants younger than 12 months and children age 10 and older need more intensive treatments.

White blood cell counts. Children with very high white blood cell counts need more intensive treatments. Commonly, white blood cell counts are labeled as very high if they are more than 50,000 per microliter (ml).

Immunophenotyping. This test shows the types and amounts of proteins made or expressed by the leukemia cells. Knowing if the cancer cells express the proteins more like those of normal white blood cells called B-cells or T-cells will help doctors plan appropriate treatment and is useful to help predict how well treatment will work.

Genetic abnormalities in the leukemia cells. Abnormal numbers of chromosomes, abnormal structural changes in a chromosome, or certain molecular genetic changes in the chromosomes of leukemia cells may affect outcome and treatment. Note that the genetic changes referred to here are changes in the genes of the leukemia cells, not the child's cells--most children with leukemia have completely normal genes.

Response to early treatment. How well treatment works in the first one to four weeks of treatment may predict the disease's overall response to treatment. This will be determined by examining the child's blood or bone marrow regularly. Recent studies have shown that some children may need more intense treatment to improve the chance of a cure. This includes children whose cancer is not responding well to early treatment or those who have high levels of

residual leukemia cells (cells remaining after treatment) at the end of remission induction (see [Treatment Options \[3\]](#)).

Information about the cancer's stage will help the doctor recommend a treatment plan. The next section helps explain the treatment options for this type of cancer. Use the menu on the side of your screen to select Treatment Options, or you can select another section, to continue reading this guide.

Links:

[1] <http://www.cancer.net/cancer-types/leukemia-acute-lymphoblastic-all-childhood/classification>

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

[3] <http://www.cancer.net/node/19030>