



Questions and Answers About Leukemia

What is leukemia?

Leukemia is cancer of the white blood cells. It develops in the bone marrow and spreads into the blood and to other organs. There are several types of leukemia. They are grouped in two ways: by how rapidly the disease develops (acute vs. chronic leukemia) and by the type of blood cell involved (lymphocytic and myeloid leukemia being the most common). In acute leukemia, bone marrow cells are immature and are unable to function normally. The number of abnormal cells increases rapidly. In chronic leukemia, cells are more mature and can carry out some of their normal functions. The number of abnormal cells increases more slowly. The most common types of leukemia are acute lymphocytic leukemia, acute myeloid leukemia, chronic lymphocytic leukemia, and chronic myeloid leukemia. In children leukemia is the most common cancer, and acute lymphocytic leukemia is the most common type of leukemia. In adults, acute myeloid leukemia is the most common occurring type, followed by chronic lymphocytic leukemia.

What are the early signs of leukemia?

Some of the warning signs of leukemia include:

- Fever, chills and other flu-like symptoms
- Weakness and fatigue
- Frequent infections
- Loss of appetite
- Weight loss
- Swollen or tender lymph nodes, liver or spleen
- Easy bleeding or bruising
- Tiny red spots under the skin
- Swollen or bleeding gums
- Sweating, especially at night
- Bone or joint pain
- Anemia

These symptoms can also come from other, less serious conditions. Seeing your health care provider is the only way to find out what may be causing these symptoms.

How is leukemia diagnosed?

Your health care provider may do one or more of the following procedures to determine if you have leukemia:

- Complete medical history
- Physical exam
- Blood tests
- Imaging tests such as x-rays, ultrasound, CT scan, MRI, bone scan
- Bone marrow biopsy

- Surgical lymph node biopsy
- Lumbar puncture

What are the treatments for leukemia?

The main type of treatment for leukemia is chemotherapy. This may be used alone or in combination with:

- Bone marrow transplants
- Radiation therapy
- Interferon therapy (immunotherapy)
- Surgery-splenectomy (removal of the spleen)

The treatment plan chosen is based on the type of leukemia, the patient's age, white blood cell count, genetics of the cancer, and whether or not there was a preleukemic condition or a previously treated cancer.

What can I do to reduce my risk of leukemia?

There is currently no known way to prevent most types of leukemia, especially among children. Smoking is the most significant avoidable risk factor among adults. About 20% of adult acute myeloid leukemias are attributed to cigarette smoking. Also, avoiding chemicals linked with leukemia, such as benzene, may lower the risk of developing leukemia. Both children and adults who have been treated previously for cancer with radiation and chemotherapy, who are taking immune suppressing drugs, or who have certain genetic conditions such as Down's Syndrome are at higher risk of developing acute leukemia. Individuals who are concerned about this cancer should discuss their concerns with their health care providers.

Where to Find More Information on Leukemia

American Cancer Society
phone: 1-800-ACS-2345,
web site: www.cancer.org

National Cancer Institute
phone: 1-800-4-CANCER
web site: www.rex.nci.nih.gov

Leukemia Society of America
phone: 1-800-955-4572
web site: www.leukemia.org

