

Leukemia

Leukemia is a cancer that starts in the bone marrow, the soft tissue inside the bone where blood cells develop. Abnormal blood cells are generated within the bone marrow, multiply, and can spread throughout the body, crowding out healthy white and red blood cells, and platelets. These abnormal cells make it difficult for normal white blood cells, red blood cells, and platelets to function properly within the body, making a person prone to infection, anemia, bruising, and bleeding. The four most common types of leukemia are: acute lymphocytic leukemia (ALL); acute myeloid leukemia (AML); chronic lymphocytic leukemia (CLL); and chronic myeloid leukemia (CML). Acute leukemia is characterized by rapidly growing cells and quickly diminishes a person's health. Chronic leukemias develop and progress slowly over time.

Statistics

- In 2021, it is estimated that **61,090 Americans** will be diagnosed with new cases of leukemia and **23,660 will die** from the disease.
- In 2021, approximately **4,399 Texans** will be diagnosed with leukemia, resulting in an estimated **1,853 deaths**.
- Leukemia accounts for about **1 in every 3 cancer cases** in children, making it the **most common childhood cancer**.
- Most leukemias are diagnosed in adults **age 55 and older**.
- ALL accounts for **74 percent** of leukemias in people age 19 and under. ALL risk is highest in children **younger than 5** and rises again after age 50.
- Although rarely diagnosed before age 45, AML is the **second most common leukemia** in both adults and children. Average age of diagnosis is 68.
- CLL, which is rare in children, is the **most diagnosed leukemia** type in adults. Average age of diagnosis is 70.
- CML, also rare in children, accounts for about **15 percent** of all leukemias. Average age of diagnosis is 64.

Risk Factors

- **Radiation and chemotherapy:** People exposed to high levels of ionizing radiation, like cancer patients, are at a greater risk for developing leukemia. Leukemia can be a complication of chemotherapy treatments.
- **Exposure to certain chemicals and workplace environments:** Exposure to benzene, a chemical found in cigarette smoke, solvents, gasoline, rubber production, chemical plants, oil refineries, shoe manufacturing, and some glues, art supplies, cleaning products, and paints, increases acute myeloid leukemia risk.
- **Smoking:** Cigarette smoking is a direct risk for contracting AML as cancer causing agents in tobacco smoke enter the bloodstream and can be transported through the body.
- **Blood disorders:** People with certain blood disorders including polycythemia vera, essential thrombocythemia, idiopathic myelofibrosis, and myelodysplastic syndrome are at increased risk.
- **Genetic diseases:** People with congenital syndromes such as Down syndrome, Trisomy 8, Fanconi anemia, Bloom syndrome, ataxia-telangiectasia, Diamond-Blackfan anemia, Schwachman-Diamond syndrome, Li-Fraumeni syndrome, neurofibromatosis type 1, Klinefelter syndrome, Wiskott-Aldrich syndrome, familial platelet disorder syndrome, and Kostmann syndrome are at a greater risk.
- **Family history:** Having first-degree relatives with CLL more than doubles the risk for developing CLL.

Symptoms

- Swollen lymph nodes
- Frequent fevers or sweating at night
- Feelings of weakness or tiredness
- Shortness of breath
- Reoccurring infections
- Pain or fullness in upper abdomen
- Enlargement of liver or spleen
- Bleeding and bruising easily
- Unexplained weight loss
- Appetite loss
- Bone or back pain
- Pinpoint flat spots on the skin, called petechiae

Treatment Options

Treating leukemia varies depending on the type of leukemia, age, medical history, general health of the patient, stage of the cancer, and the patient's treatment goals. However, patients with acute leukemia must be treated immediately due to the rapid progression of the disease. Treatment options for leukemia include:

- Watchful waiting (for those with chronic leukemia)
- Radiation therapy
- Immunotherapy
- Chemotherapy
- Surgery
- Monoclonal antibodies
- Targeted therapy
- Stem cell transplant
- Palliative care

About Texas Oncology

Texas Oncology is an independent private practice with more than 500 physicians and 210 locations across the state. Meeting the oncology needs of Texans for more than 35 years, the practice includes Texas Center for Proton Therapy, Texas Breast Specialists, Texas Oncology Surgical Specialists, Texas Urology Specialists, and Texas Center for Interventional Surgery. As a lead participant in US Oncology Research, Texas Oncology played a role in the development of more than 100 FDA-approved therapies. For more information, visit www.TexasOncology.com.

Sources: American Cancer Society, American Society of Clinical Oncology, National Cancer Institute, Leukemia & Lymphoma Society, and Texas Cancer Registry



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