

# We believe in research-based treatments.

## Know the facts about leukemia

Leukemia, cancer of the bone marrow and blood, is characterized by an uncontrolled accumulation of blood cells. There are four categories:

- **Acute Lymphocytic Leukemia (ALL)**
- **Acute Myelogenous Leukemia (AML)**
- **Chronic Lymphocytic Leukemia (CLL)**
- **Chronic Myelogenous Leukemia (CML)**

The two categories of acute leukemia are rapidly progressing. The two categories of chronic are more slowly progressing. Understand the risk factors, signs and symptoms of leukemia.

## Risk factors

The cause of leukemia continues to be studied but, in most cases, is not evident. However, there are indicators linked to an increased risk.



**Exposure:** High doses of irradiation, benzene and chemotherapy drugs can be associated with a higher risk.



**Genetic abnormalities:** DNA mutations (gene defects) can cause cancer during cell growth and division.



**Race/Ethnicity:** ALL is more common in Caucasians than in African Americans. CLL is more common to North America and Europe than Asia.



**Gender:** Leukemia is slightly more common in males than in females.



**Smoking:** A proven risk factor for AML. As many as 1 in 5 cases of AML are caused by smoking.



**Family history:** Parents, siblings or children of CLL patients have an increased risk.

## Signs and symptoms

Anyone who experiences these symptoms should consult a physician, as they can be early signs of leukemia:

- **Bruising easily**
- **Frequent nosebleeds or bleeding and swelling of the gums**
- **Slow healing of cuts**
- **Frequent infections, including the skin, lungs and kidneys**
- **Swollen lymph nodes**
- **Discomfort in bones or joints**
- **Small red dots (called petechia) under the skin**
- **Pale complexion from anemia**
- **Tiring easily**
- **Shortness of breath during physical activity**
- **Weight loss**
- **Fever**
- **Dizziness or light-headedness**
- **Vomiting**

# LEUKEMIA FACTS

## Diagnosis

Blood tests done during annuals or other physicals are one of the common ways leukemia is diagnosed before any symptoms begin. In this case, or in the case of symptoms indicating leukemia, patients are referred to a hematologic oncologist, a physician who specializes in cancer of the blood. This specialist will likely conduct a full physical examination, order blood tests and/or perform a bone marrow test. Blood and marrow samples are used to diagnose and classify the approach to treatment and the intensity of drug combinations.

## Treatment

**Clinical trials.** Willamette Valley Cancer Institute and Research Center is actively involved in national clinical trials to research and develop new drugs for safe and effective therapies specifically targeting blood-borne diseases such as leukemia. Research at WVCI has already led to exciting new advancements in drug therapies that are becoming available to cancer patients nationwide. Because of these advances, the survival rate for leukemia has tripled in the past 45 years to approximately 50 percent.

**Comprehensive care** provided by board-certified oncologists, researchers, nurses and social workers.

**Systemic therapies**, including chemotherapy (pills or injection), immunotherapy and biologic and hormone therapies.

**On-site support services**, such as patient navigation, counseling, charitable assistance, nutrition planning and more.

**For more information or to schedule an appointment, call 541-683-5001 or 1-888-384-9822.**

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1-888-384-9822 | 541-683-5001  
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Willamette Valley Cancer Institute is united in healing with The US Oncology Network, one of the nation's largest community-based cancer treatment and research networks dedicated to expanding patient access to high-quality care.



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