On this page

Chronic Lymphocytic Leukemia

Chronic lymphocytic leukemia (CLL) is the most common adult leukemia, affecting the blood and bone marrow (spongy tissue in bones). Treatment can often slow or stop cancer growth.

What is chronic lymphocytic leukemia (CLL)?

Healthy white blood cells help your body fight infection and disease. With chronic lymphocytic leukemia, your bone marrow produces too many immature white blood cells (lymphoblasts).

These abnormal cells fail to properly develop. They crowd out healthy white blood cells, red blood cells, and platelets, and can spread to the lymph nodes, spleen, and liver.

The condition can also lead to diffuse large B-cell lymphoma (DLBCL), an aggressive form of non-Hodgkin lymphoma. DLBCL grows quickly but often responds well to treatment.

If the cancer primarily affects the lymph nodes instead of the blood and bone marrow, it's known as small lymphocytic lymphoma (SLL). SLL and CLL are essentially the same disease, but occur in different locations.

Chronic lymphocytic leukemia facts and stats

- Chronic lymphocytic leukemia is more common in adults and more common among men than women, particularly white men.
- CLL is most frequently diagnosed among people aged 65–74.
- The median age at diagnosis is 70.

For survival rates, view our **leukemia statistics** (https://leukemiarf.org/leukemia/statistics/) webpage.

Causes and risk factors of chronic lymphocytic leukemia

Scientists know that chronic lymphocytic leukemia is caused by changes (mutations) in genes that control the growth of bone marrow cells. The exact reason for those changes is unknown.

White people over age 50 are more likely to develop CLL. Other risk factors include:

- Agent Orange (herbicide used in the Vietnam War)
- Family history of CLL or other bone and blood marrow cancers
- Monoclonal B-cell lymphocytosis (MBL), a precancerous condition that causes an increase in B cells (a type of white blood cell)

Symptoms of chronic lymphocytic leukemia

Chronic lymphocytic leukemia grows slowly, so many people don't experience any symptoms. If you do experience symptoms, they may include:

- Enlarged lymph nodes in the groin, neck, stomach, or underarms
- Fatigue
- Fevers
- Frequent infections
- Night sweats
- Pain below the ribs on the left side (from an enlarged spleen)
- Weight loss

Types of chronic lymphocytic leukemia

Doctors categorize chronic lymphocytic leukemia based on the type of white blood cell affected by cancer and the rate of growth. B cells help the body find invaders like cancer cells. T cells can destroy those invaders.

The two main types of CLL are:

- **B-cell chronic lymphocytic leukemia:** Affects B cells and makes up most CLL cases; **hairy cell leukemia (HCL) (https://leukemiarf.org/leukemia/chronic-lymphocytic-leukemia/hairy-cell-leukemia/)** is a type of B-cell chronic lymphocytic leukemia

- **T-cell prolymphocytic leukemia:** Affects T cells and makes up a small percentage of CLL cases; **large granular lymphocytic leukemia (LGLL) (https://leukemiarf.org/leukemia/chronic-lymphocytic-leukemia/large-granular-lymphocytic-leukemia/)** is a type of T-cell chronic lymphocytic leukemia.

Diagnosing chronic lymphocytic leukemia

Chronic lymphocytic leukemia diagnoses are given by your doctor. Tests may include:

- **Blood tests:** These tests show the extent of cancer and any signs of infection. Blood tests measure levels of white and red blood cells, the amount of inflammation in the body, and liver and kidney function. A blood test can also look for genetic changes.
- **Bone marrow biopsy and aspiration:** Doctors use these tests to look for leukemia cells in the bone marrow. They use thin, hollow needles to remove small samples of bone marrow and bone tissue for analysis.
- **Lymph node biopsy:** Your doctor may remove part or all of a lymph node (gland that helps your body fight infection) to examine it for signs of cancer.
- **Genetic testing:** Doctors may use bone marrow samples to look for genetic changes that can lead to CLL. Genetic information can help guide treatment.
- **Imaging:** Doctors may use these tests, which produce detailed images of the body, to check for signs of cancer in other parts of the body. Imaging tests may include CT scan or ultrasound.

Watch and wait for chronic lymphocytic leukemia

Chronic lymphocytic leukemia grows slowly, so doctors often recommend a "watch and wait" approach, also known as watchful waiting or active monitoring. Evidence shows treating CLL in its early stages doesn't offer any benefits.

While you'll have regular doctor visits and tests, you won't need treatment unless you develop symptoms or changes in your blood counts.

Treatments for chronic lymphocytic leukemia

If you need treatment, options depend on your symptoms and overall health. You will likely receive treatment for more advanced stages of CLL. Stages describe how far the cancer has spread. They are:

- **Stage 0:** Red blood cell and platelet counts almost normal, no enlarged lymph nodes, spleen, or liver
- **Stage I:** Red blood cell and platelet counts almost normal, enlarged lymph nodes
- **Stage II:** Red blood cell and platelet counts almost normal, enlarged spleen, possible enlarged lymph nodes
- **Stage III:** Red blood cell counts low and platelets almost normal, possible enlarged lymph nodes, spleen, or liver

- **Stage IV:** Red blood cell counts low or almost normal and platelet counts low, enlarged lymph nodes, spleen, or liver

Chronic lymphocytic leukemia treatment may include:

- **Targeted therapy (https://leukemiarf.org/patients/treatment/options/targeted-therapy/):** Targeted drugs and other substances can often stop the growth of cancer cells or kill them while minimizing harm to surrounding healthy tissue.
- **Chemotherapy (https://leukemiarf.org/patients/treatment/options/chemotherapy/):** These drugs destroy cancer cells. You receive chemotherapy drugs through an injection in the vein or in pill form.
- **Radiation therapy (https://leukemiarf.org/patients/treatment/options/radiation-therapy/):** You may have radiation therapy if CLL affects your lymph nodes or spleen. Radiation uses focused beams of energy to target and kill cancer. Doctors carefully plan treatments to pinpoint the location of the cancer and reduce harm to nearby healthy tissue.
- **Immunotherapy (https://leukemiarf.org/patients/treatment/options/immunotherapy/):** These drugs help your immune system fight off cancer. Immunotherapy treatments include antibodies, drugs that help your body develop antibodies, and targeted therapies that block cancer cells from multiplying. CAR T-cell therapy, which uses lab grown immune cells to attack cancer, is an FDA-approved treatment for adults whose cancer either doesn't respond to treatment or returns.
- **Stem cell transplant (https://leukemiarf.org/patients/treatment/options/transplants/):** A stem cell transplant (also called a bone marrow transplant) may be an option in rare cases if other treatments haven’t worked. The doctor extracts damaged stem cells (blood-forming cells in the bone marrow) and replaces them with healthy cells from a donor.
- **Clinical trials (https://leukemiarf.org/clinical-trials/):** Clinical trials available at some medical centers may give eligible patients access to promising treatments not widely available. Therapies like CAR T-cell therapy, which uses manufactured T cells to fight cancer, may be an option through trials.

Helpful resources

It’s easy to feel overwhelmed by a cancer diagnosis, but support can make a difference. We offer **peer support** (https://leukemiarf.org/patients/support/) programs to connect you with others who understand the challenges that cancer brings. Our offerings include an online support community and a mentoring program. We also have a **directory of resources (https://leukemiarf.org/patients/resources/)** to help patients and caregivers.

Want more information?

Sign up to receive emails about upcoming CLL patient webinars, the latest treatment updates, and other patient resources.

SIGN UP (HTTPS://LEUKEMIARF.ORG/EMAIL-SIGN-UP/)

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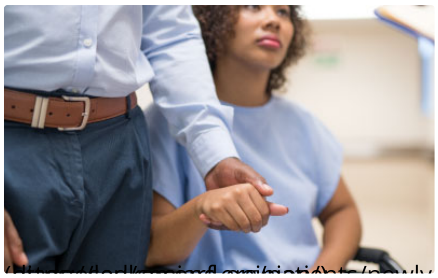
Coping with your diagnosis

Choosing a treatment provider



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