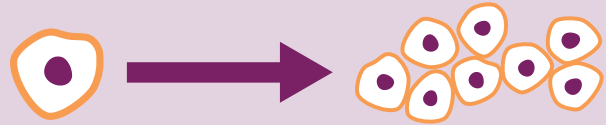


# Chronic Lymphocytic Leukemia (CLL)

## What is CLL?<sup>1,2</sup>

CLL is a slow-growing blood cancer that most commonly arises from B cells, a type of white blood cell (lymphocyte) that originates in the bone marrow



B cells are part of the immune system and play an important role in fighting infection in the body. CLL is the result of a malfunction in the normal lifecycle of a B cell, which causes the B cell to become malignant and reproduce at an abnormal rate

In malignant B cells there is a dysfunction in the cellular signalling pathways which control the cell. This causes the malignant B cells to move to and remain within the protective environment of the lymphatic system, such as bone marrow and the lymph nodes. In these environments they build up in large numbers as they continue to proliferate and survive

## Signs and Symptoms<sup>3</sup>

For some people, CLL is asymptomatic. However, possible signs of CLL may include:

- Night sweats
- Excessive bruising, frequent or severe nosebleeds, bleeding gums
- Swollen lymph nodes
- Fatigue, weakness, shortness of breath
- Weight loss
- Higher risk of infections
- Pain or 'fullness' in the stomach, caused by enlarged spleen

## Prevalence and Patients<sup>4,5,6</sup>



CLL is more prevalent in men than women

72

Average age at diagnosis

Older CLL patients can be more difficult to treat given their overall health and the potential for other pre-existing conditions

8-12  
years

However, prognosis varies based on stage and presence of chromosomal abnormalities

## Diagnosis<sup>7</sup>

Several exams and tests may be used to help diagnose CLL:

- Physical examination
- Genetic tests
- Imaging tests (X-rays or CT scans)
- Biopsy
- Blood tests

## Chromosomal Abnormalities & CLL<sup>8,9</sup>



of CLL patients have some form of chromosomal abnormality in their B cells. Some of these patients may have poor response to conventional treatment, rapid disease progression and short survival



The median predicted survival for patients with the del 17p mutation is just two to three years and for patients with the 11q mutation is six to seven years - significantly less than nine - to 10-year median predicted survival for CLL patients without chromosomal abnormalities

## Rai Staging<sup>10</sup>

The Rai staging system is most often used in the U.S. for CLL

- Stage 0**: High lymphocyte count
- Stage 1**: High lymphocyte count plus enlarged lymph nodes
- Stage 2**: High lymphocyte count plus an enlarged spleen (and possibly an enlarged liver), with or without enlarged lymph nodes
- Stage 3**: High lymphocyte count plus anemia, with or without enlarged lymph nodes, spleen, or liver
- Stage 4**: High lymphocyte count and too few blood platelets, with or without anemia, enlarged lymph nodes, spleen or liver

## Treatment<sup>\*11, 12, 13, 14, 15</sup>

Patients commonly receive multiple treatments over the course of their disease

- Chemotherapy
- Radiation therapy
- Biologic therapy
- Stem cell transplant therapy
- Immunomodulating agents
- Other oral oncology agents

Treatments have improved in recent years, but CLL can still be a challenging disease to treat. Many patients will relapse or become resistant to treatment

There remains an urgent need for new treatments for difficult-to-treat patients who have relapsed or who cannot tolerate the other available therapies

\*All medicines and therapies have side effects; patients should talk to their doctors about which therapies are appropriate for them

# Chronic Lymphocytic Leukemia (CLL)

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