# UNDERSTANDING CHRONIC LYMPHOCYTIC LEUKEMIA

## ABOUT CHRONIC LYMPHOCYTIC LEUKEMIA (CLL)

## CLL IS ONE OF THE MOST COMMON TYPES OF LEUKEMIA IN ADULTS.1

CLL makes up 25% to 30% of leukemias in the U.S.<sup>2</sup>

CLL is a type of cancer in which too many blood stem cells become abnormal lymphocytes, also called leukemia cells, which are not able to fight infection very well. The increase of leukemia cells in the blood and bone marrow leaves less room for healthy white blood cells, red blood cells, and platelets, which may lead to infection, anemia, and easy bleeding.<sup>1</sup>

### **Autoimmunity in some CLL patients:**

- The immune system cells make abnormal antibodies that attack normal blood cells, which can lead to low blood counts.3
- If the antibodies attack red blood cells, it's called autoimmune hemolytic anemia.4
- Less often, the antibodies attack platelets and the cells that make them, leading to low platelet counts.<sup>2,5</sup>

Many patients with CLL do not have obvious symptoms of the disease, so CLL is often detected during routine blood tests and physical exams. If a patient does have symptoms, they can include swollen lymph nodes, weakness and fatigue, unintentional weight loss, unexplained fevers, and night sweats.1

### **ABOUT SMALL LYMPHOCYTIC LYMPHOMA (SLL)<sup>6</sup>**

- SLL is a related cancer that shares many key similarities with CLL.
- CLL and SLL are essentially different forms of the same disease, often referred to as CLL/SLL. The main difference between CLL and SLL is the location of the cancer cells. When the cancer cells are mainly in the blood and bone marrow, though possibly in certain organs, it is CLL. When the cancer cells are mainly in the lymph nodes and rarely in the blood, it is SLL.



In 2020 there were 207,000 people estimated to be living with CLL in the U.S.<sup>7</sup>



There have been approximately 19,000 new cases of CLL in the U.S. in 2023<sup>7</sup>



The likelihood that the average person will get CLL in their lifetime is 1 in 175 or ~0.6%8

The risk of diagnosis is slightly higher in men than women



Median survival of CLL is **10 years**<sup>2</sup>



diagnosis is **70 years**<sup>8</sup>

# CLL STAGING<sup>9</sup>

The staging of CLL upon diagnosis is determined by the abnormal increase in

number of lymphocytes (lymphocytosis), presence of enlarged lymph nodes, presence of enlarged spleen and/or liver, presence of anemia, and presence of thrombocytopenia (abnormal decrease in the number of platelets).

In the U.S., the Rai staging system defines CLL

in the following stages upon diagnosis: INTERMEDIATE RISK **HIGH RISK** 

#### **LOW RISK** STAGE 0:

Abnormal increase in the number of

lymphocytes in the blood and marrow

## **STAGES 1&2:**

Abnormal increase in the number of lymphocytes in

the circulating blood and the marrow Enlarged lymph nodes

> OR Abnormal increase

in the number of lymphocytes

in the circulating blood and the marrow Enlarged spleen and/or liver

#### **STAGES 3&4:** Abnormal increase in the number of

lymphocytes in the circulating blood and the marrow Anemia (low red blood cell count)

**OR** Abnormal increase in the number of

lymphocytes in the circulating blood

and the marrow Thrombocytopenia (low platelet count)

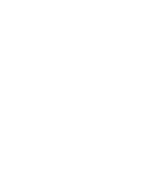
## A CLL treatment plan is affected by certain factors, including the age and other health

TREATING CLL

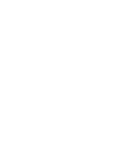
conditions of the patient at the time of diagnosis, among other considerations.<sup>1</sup> Current approaches to help manage CLL/SLL include:

R approach that involves closely monitoring a patient's condition,

Active surveillance strategy, an



but not initiating treatment until symptoms arise or change.<sup>1</sup>



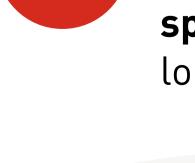
### Bruton's tyrosine kinase (BTK) inhibitors, B-cell lymphoma 2

allogeneic stem cell

**Approved drug therapies:** 

Targeted therapies such as

(BCL-2) inhibitors, monoclonal antibodies, and phosphatidylinositol 3-kinase (PI3K) inhibitors. Chemotherapy can also be used.<sup>1,3</sup> In relapsed or refractory CLL or in high-risk cases, doctors might use



**splenectomy** based on the location of cancer cells.1

Rarely used options include

radiation therapy and



transplantation.1



## **REFERENCES:**

1. NIH. Chronic Lymphocytic Leukemia Treatment (PDQ®)-Patient Version. Accessed on November 13, 2023.

Drugs. Cancers (Basel). 2020 Feb; 12(2): 282. Published online 2020 Jan 23. doi: 10.3390/cancers12020282

- https://www.cancer.gov/types/leukemia/patient/cll-treatment-pdq#\_48 2. S. Mukkamalla, A. Taneja, D. Malipeddi, et al. Chronic Lymphocytic Leukemia. [Updated 2023 Feb 18]. StatPearls. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK470433/ 3. C. Vitale, M. Montalbano, C. Salvetti, et al. Autoimmune Complications in Chronic Lymphocytic Leukemia in the Era of Targeted
- 4. NIH. Hemolytic Anemia. Anemia Hemolytic Anemia | NHLBI, NIH. Accessed on November 13, 2023. 5. S. Mittal, M. Blaylock, D. Culligan, et al. A high rate of CLL phenotype lymphocytes in autoimmune hemolytic anemia and immune thrombocytopenic purpura. *Haematologica*. Vol. 93 No. 1 (2008): January, 2008 https://doi.org/10.3324/haematol.11822 6. Lymphoma Research Foundation. Getting the Facts: Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma. https://lympho-
- ma.org/wp-content/uploads/2018/04/LRF\_FACTSHEET\_CLL\_SLL.pdf. Accessed on October 24, 2023. 7. National Cancer Institute. Cancer Stat Facts: Leukemia - Chronic Lymphocytic Leukemia (CLL). Accessed on October 24, 2023. https://seer.cancer.gov/statfacts/html/clyl.html
- 8. Hallek M, Al-Sawaf O. Chronic lymphocytic leukemia: 2022 update on diagnostic and therapeutic procedures. *Am J Hematol*. 2021;96(12):1679-1705. doi:10.1002/ajh.26367 9. SEER Training Modules, Staging. U. S. National Institutes of Health, National Cancer Institute. https://training.seer.cancer.gov/leukemia/abstract-code-stage/staging.html. Accessed on November 13, 2023.