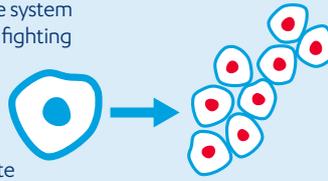


# Chronic Lymphocytic Leukaemia (CLL)

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

CLL is generally a slow growing blood cancer that originates from B cells, a type of white blood cell (lymphocyte)

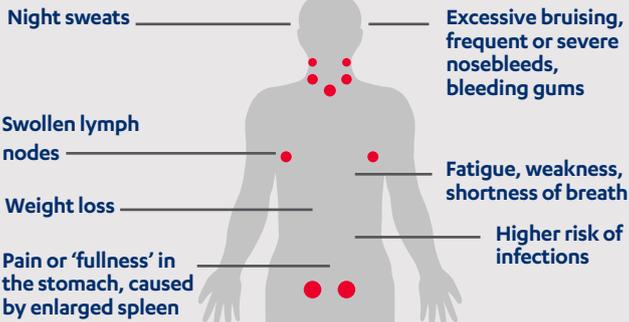
B cells are part of the immune system and play an important role in fighting infection in the body. CLL is the result of a malfunction of B cells which causes them to become malignant and reproduce at an abnormal rate



In malignant B cells there is a malfunction in the cellular signalling pathways which control cell proliferation, adhesion, migration and survival. 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>3,4</sup>

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



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



The incidence rate in the Western world is approx. four cases a year per 100,000 people

CLL is more prevalent in men than women

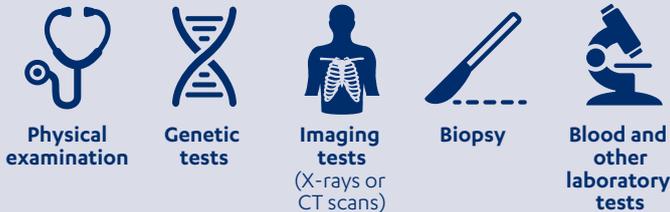
**>70**  
Age at diagnosis

**5 Years**  
Overall, the period for which 78% of CLL patients will survive after diagnosis

For more information on disease burden and prevalence please visit [www.diseaselelens.com](http://www.diseaselelens.com)

## Diagnosis <sup>3,4</sup>

Diagnosis and staging of CLL may include the following examinations:



## Chromosomal Abnormalities & CLL <sup>7,8</sup>



of CLL patients have some form of chromosomal abnormality. Many of these patients - for instance those with genomic alterations called del17p or del11q - often have poorer response rates and higher mortality rates than patients with no chromosomal abnormalities.



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 ten year median predicted survival for CLL patients without abnormalities



## Staging <sup>6,9</sup>

The Binet staging system is most often used in Europe for CLL



## Treatment <sup>\*10,11,12,13,14</sup>

Patients commonly receive multiple treatments over the course of their disease



CLL can be a challenging disease to treat. Many patients will relapse or become resistant to treatment

CLL treatments have improved in recent years. Many promising new therapies are currently being investigated<sup>15</sup>



People impacted by blood cancer need more than treatment and care. To improve awareness and further support patients and their families, Janssen has launched 'Make Blood Cancer Visible' - a campaign to get people talking about blood cancers and bring forward patient perspectives.

#LETSTALKABOUTBLOODCANCER

visit [www.facebook.com/letstalkaboutbloodcancer](http://www.facebook.com/letstalkaboutbloodcancer)

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

# Chronic Lymphocytic Leukaemia (CLL)

## References

1. Hallek M. Signaling the end of chronic lymphocytic leukemia: new frontline treatment strategies. *Blood*. 2013;112:3723-34.
2. Chiorazzi M, Rai KR, Ferrarini M. Chronic lymphocytic leukemia. *N Engl J Med*. 2005;352:804-15.
3. Gore JM. Chronic myeloid leukemia and chronic lymphocytic leukemia. *JAAPA*. 2014;27(2):45-6.
4. American Cancer Society. Detailed guide: CLL diagnosis. Available at: <http://www.cancer.org/cancer/leukemia-chroniclymphocyticcll/detailedguide/leukemia-chronic-lymphocytic-diagnosis> Last accessed February 2016.
5. Siegel R, DeSantis C, Virgo K, et al. Cancer treatment and survivorship statistics, 2012. *CA Cancer J Clin*. 2012;62:220-41.
6. Eichhorst B, Dreyling M, Robak T, et al. Chronic lymphocytic leukemia: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol*. 2011;22(Suppl.6):vi50-vi54.
7. Stilgenbauer S, Bullinger L, Lichter P, et al. Genetics of chronic lymphocytic leukemia: genomic aberrations and VH gene mutation status in pathogenesis and clinical course. *Leukemia*. 2002;16: 993-1007.
8. Döhner H, Stilgenbauer S, Benner A, et al. Genomic aberrations and survival in chronic lymphocytic leukemia. *N Engl J Med* 2000;343:1910-6.
9. American Cancer Society. Detailed guide: CLL staging. Available at: <http://www.cancer.org/cancer/leukemia-chroniclymphocyticcll/detailedguide/leukemia-chronic-lymphocytic-staging> Last accessed February 2016.
10. American Cancer Society. Chemotherapy – what it is, how it helps. Available at: <http://www.cancer.org/acs/groups/cid/documents/webcontent/003321-pdf.pdf> Last accessed February 2016.
11. American Cancer Society. Radiation therapy – what it is, how it helps. Available at: <http://www.cancer.org/acs/groups/cid/documents/webcontent/003299-pdf.pdf> Last accessed February 2016.
12. National Cancer Institute. Biological therapies for cancer. Available at: <http://www.cancer.gov/about-cancer/treatment/types/immunotherapy/bio-therapies-fact-sheet> Last accessed February 2016.
13. American Cancer Society. Stem cell transplant. Available at: <http://www.cancer.org/treatment/treatmentsandsideeffects/treatmenttypes/bonemarrowandperipheralbloodstemcelltransplant/stem-cell-transplant-types-of-transplant> Last accessed February 2016.
14. Cancer.net. Leukemia - chronic lymphocytic - CLL: treatment options. Available at: <http://www.cancer.net/cancer-types/leukemia-chronic-lymphocytic-cll/treatment-options> Last accessed February 2016.
15. Cancer Research UK. Types of treatment for non-Hodgkin lymphoma. Available at: <http://www.cancerresearchuk.org/cancer-help/type/non-hodgkins-lymphoma/treatment/types> Last accessed February 2016.



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