CMScript
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Member of a medical scheme? Know your guaranteed benefits!
CMS Council for Medical Schemes

Chronic lymphocytic leukemia

Chronic lymphocytic leukemia (CLL) is the most common type of leukemia in adults, and it rarely occurs in children. CLL cells often build up slowly over many years. The cells in this regard have a longer survival rate compared to normal cells and, over time, they crowd out normal cells. A five-year survival rate of approximately 80 percent in men and 85 percent in women, is normally observed. There is currently no cure for CLL, however, there are treatments that help manage the illness.

What is Chronic lymphocytic leukemia?

Leukemia is cancer of the blood. Normal cells divide in an orderly way, and they die when they are worn out or damaged. Cancer occurs when the cells grow out of control. The cancer cells keep on growing and generating new cells. This causes problems in the part of the body where the cancer originally started to develop.

Chronic lymphocytic leukemia is a type of cancer that starts in the white blood cells (called the lymphocytes). These cells are normally specialised white blood cells as they produce antibodies that help to protect the body against infection and disease. In CLL, the lymphocytes are abnormal and cannot function properly.

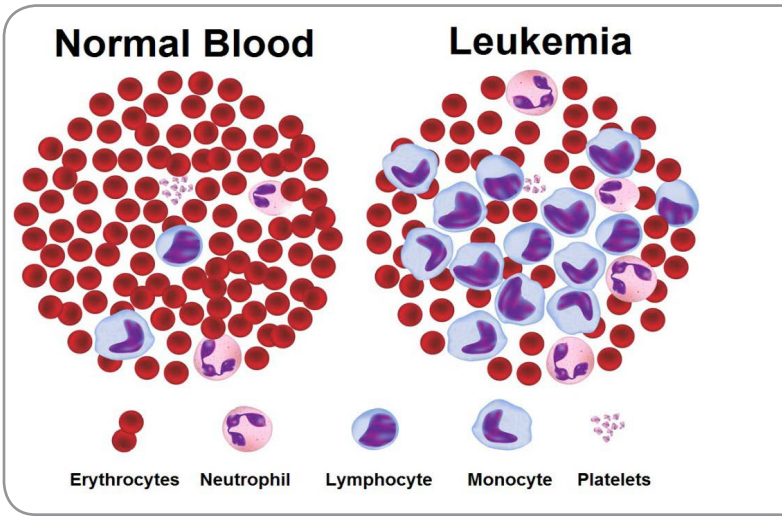

Figure 1: Leukemia – What we know so far

What are the signs and symptoms of Chronic lymphocytic leukemia?

Many people with chronic lymphocytic leukemia have no early symptoms. Those who do develop signs and symptoms may experience:

- Swollen lymph nodes
- Nose bleeds
- Bleeding easily
- Fatigue
- Loss of appetite
- Fever
- Severe infections
- Enlarged spleen or liver
- Night sweats
- Unexplained weight loss
- Bone pain
- Anemia

What are the risk factors of Chronic lymphocytic leukemia (CLL)?

Family history – If you have a parent, sibling or children (first-degree-relatives) diagnosed with CLL, your risk is 3 to 4 times higher than people who do not have first-degree-relatives diagnosed with the illness. Having relatives that are Russian, Jewish or Eastern European Jewish also increases your risk.

Gender - CLL is slightly more common in males than in females, for reasons unknown.

Age – CLL is mostly found in people who are 70 years or older. The average age of the diagnosis is 72 years.

A second cancer – Once you are diagnosed with CLL, your risk is higher to develop a second type of cancer.

Certain chemical exposures – Agent Orange was a herbicide used during the Vietnam War, that caused extensive medical problems, including CLL.

How do you diagnose Chronic lymphocytic leukemia?

The following tests may be used to diagnose CLL:

- **Blood tests** – CLL can be diagnosed with blood tests because the cancer cells are easily identified in the blood. The first blood test done when suspecting a blood problem is called a complete blood count (CBC). The CBC measures the different cells in your blood, such as the red blood cells, the white blood cells and platelets. You may have CLL if your blood contains too many white blood cells, however, other tests are needed to know for sure.
- **Flo cytometry** – This test is important to confirm the diagnosis of CLL. Flo cytometry, also known as immunophenotyping, looks for certain markers on or in a cell that helps to identify what type of cell it is. This test can be used to see if the increase lymphocytes in a sample of blood is due to CLL, a different blood disorder or if it is the body's response to an infection.
- **Bone marrow tests** – This test may not be necessary for diagnosis for most patients. It is used for some patients to help determine their chances of recovery, or to provide more information on other abnormal blood counts. Bone marrow tests are often done before starting treatment. They might also be repeated during or after treatment to see if treatment is working.
- **Routine microscopic exams** - A doctor specialising in lab tests (pathologist) looks at the bone marrow samples under a microscope. They may also be reviewed by a doctor specializing in blood diseases and cancer (hematologist/oncologist). The doctor will look at the size, shape and other characteristics of the white blood cells to classify them into specific types.

Staging of Chronic lymphoblastic leukemia

Patients at stage 0 are at low risk, those at stages I or II are at intermediate risk, and those at stage III or IV are at high risk:

- **Stage 0:** There are too many lymphocytes found in your blood. Your lymph nodes are not swollen, and your red blood cells and platelets are normal.
- **Stage I:** There are too many lymphocytes found in your blood and your lymph nodes are larger than normal.
- **Stage II:** There are too many lymphocytes found in your blood, the liver or spleen is larger than normal, and your lymph nodes may be larger than normal.
- **Stage III:** There are too many lymphocytes found in your blood with too few red blood cells. Your lymph nodes, liver or spleen may be larger than normal.
- **Stage IV:** There are too many lymphocytes found in your blood with too few platelets and there may be too few red blood cells in your blood. Your liver or spleen may be larger than normal.

How do you prevent Chronic lymphocytic leukemia?

There are very few known risk factors for CLL, and most of these cannot be avoided. It is therefore not possible to prevent CLL.

How do you treat or manage Chronic lymphocytic leukemia?

The treatment goals of CLL are to slow the growth of the CLL cells; to provide long periods where there are no signs of CLL; to improved survival rate; and to help people feel better when they have other symptoms. A person with CLL is usually treated by a hematologist/oncologist. Supportive Care - Treatment may not be necessary in the early stages of the illness. Doctors will carefully monitor your condition with blood tests and physical examinations, about every 3 months for the first year, to determine how aggressive the illness is. Treatment will only be started once your CLL progresses. This is called watchful waiting and is the current standard of care for people with CLL who have minimal changes in their blood counts and no symptoms.

Treatments for intermediate & advanced stages:

- Chemotherapy is a drug treatment that kills fast growing cells, including cancer cells. It can be administered through a vein or taken in pill form. You may receive a single or a combination of drugs, depending on your situation. This is known as a regimen and may be given in cycles. A cycle of chemotherapy refers to the time it takes to give the drugs and the time required for the body to recover.
- White Blood Cell (Neutrophil) Growth Factors - Treatment for CLL may include administering blood cell growth factors to improve low white blood cell counts to help tolerate the side effects of higher doses of chemotherapy.
- Radiation – It is sometimes used to shrink large masses that interfere with the function of a body part. This treatment is rarely used.
- Splenectomy - CLL cells can gather in the spleen and become problematic in some people with CLL. Surgical removal (splenectomy) of a very enlarged spleen may improve blood cell counts. This approach is only used if the patient's spleen is affected by CLL.
- Clinical Trials - Clinical trials are research studies

that involve people, and test new ways to prevent, detect, diagnose, or treat diseases. People who take part in cancer clinical trials have an opportunity to help in the development of improved cancer treatments. They also receive state-of-the-art care from cancer experts.

What is covered under PMB level of care?

CLL is included in the PMBs under the Diagnostic Treatment Pair (DTP) code 910S - Multiple myeloma and chronic leukemias. The treatment component specified for this DTP, according to the PMB Regulations, is stated as "Medical management which includes chemotherapy and radiation therapy".

In terms of chemotherapy and radiation therapy, the guidelines and treatment protocols used in the State sector constitute PMB level of care.

The medical schemes can have protocols to be able to make funding decisions for the diagnosis, treatment and care of PMBs. It is important for the treating doctor to register the member's condition with the medical scheme to allow for funding of CLL as PMB. If additional tests, consultations and treatment are required, the doctor should provide the medical scheme with motivation for further funding.

References:

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2. Cancer Association of South Africa (CANSA). (2017). Fact Sheet on Adult Chronic Lymphoblastic Leukaemia (CLL). Available from: http://www.cansa.org.za/files/2017/07/Fact-Sheet-Adult-Chronic-Lymphoblastic-Leukaemia-CLL-NCR-2012-NA-web-June-2017.pdf [Accessed 17 Sep. 2018]
3. Mayo Clinic. (2018). Chronic lymphocytic leukemia. Available from: https://www.mayoclinic.org/diseases-conditions/chronic-lymphocytic-leukemia/symptoms-causes/syc-20352428 [Accessed 17 Sep. 2018]
4. National Cancer Institute. (2018). Chronic Lymphocytic Leukemia Treatment. Available from: https://www.cancer.gov/types/leukemia/patient/cll-treatment-pdq [Accessed 17 Sep. 2018]
5. Figure 1: Leukemia – What we Know So Far. Available from: http://leukemia-research.org/leukemia-what-we-know-so-far/ [Accessed 17 Sep. 2018]

WHAT ARE PRESCRIBED MINIMUM BENEFITS?

Prescribed Minimum Benefits (PMBs) are defined by law. They are the minimum level of diagnosis,treatment, and care that your medical scheme must cover – and it must pay for your PMB condition/s from its risk pool and in full. There are medical interventions available over and above those prescribed for PMB conditions but your scheme may choose not to pay for them. A designated service provider (DSP) is a healthcare provider (e.g. doctor, pharmacist, hospital) that is your medical scheme's first choice when you need treatment or care for a PMB condition. You can use a non-DSP voluntarily or involuntarily but be aware that when you choose to use a non-DSP, you may have to pay a portion of the bill as a co-payment. PMBs include 270 serious health conditions, any emergency condition, and 25 chronic diseases; they can be found on our website

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