

## A-B-C

### The Phases of CML

After your doctors have received all your test results, they will know more about how far your disease has developed and they can identify which of three stages it is at. About 90% of people are in the chronic phase when diagnosed:

**Accelerated phase** – There is an increase in the number of white blood cells and immature cells in the bloodstream which crowd out other functioning cells. The bone marrow loses its ability to function and symptoms begin to appear and worsen.

**Blast phase** – More than 30% of the cells in the bloodstream and the bone marrow are immature cells, or so-called blast cells. The disease may be life-threatening in this phase.

**Chronic phase** – Healthy white blood cells are functioning normally, although there is an overproduction of abnormal white cells that are in various stages of maturation. People may experience few or no symptoms during this phase, which can last anywhere from three months to a few years.

*Your doctors use the stage of your CML to work out the treatment you will need.*

## WHAT

### does that mean?

#### Some medical terms explained

**Blast cell:** An immature white blood cell that does not function properly.

**Blood count:** The number of red and white blood cells and platelets in a blood sample.

**Bone marrow:** The soft tissue inside bones that produces blood cells.

**Bone marrow test:** A simple procedure involving collecting a small sample of cells or tissue from the bone marrow.

**Chromosome:** An organized structure of DNA and protein that is found in cells.

**FISH Assay** (*fluorescence in situ hybridization*): is a cytogenetic technique that allows scientist to localize the presence or absence of specific DNA sequences on chromosomes. In our case it finds the Philadelphia Chromosome.

**International Scale:** A standardization process to ensure that all laboratories performing PCR testing on CML patients cell samples adhere to the same standardization process.

**Leukemia:** A broad term generally used to refer to a variety of cancers of the blood and bone marrow.

**Log Reduction:** It is a mathematical term used to express the reduction of CML cells in your body and how well you may be responding to treatment.

**PCR** (*Polymerase chain reaction*): A molecular duplicating process that creates millions of copies of a desired portion of DNA through repeated cycling of a reaction using heating/cooling. This process enables scientists to obtain DNA information from small specimens. **Watch the CML Society of Canada educational video "What is PCR" on Youtube:** <http://www.youtube.com/watch?v=ZwgynKh6J5U>

**Philadelphia chromosome:** The chromosome abnormality that causes CML caused by pieces from two different chromosomes breaking off and joining together to create this new, abnormal chromosome.

**Platelets:** The blood cells that promote clotting to help stop bleeding.

**Prognosis:** A medical term referring to the chance of a patient's recovery and the doctor's prediction of how that patient will progress.

**Remission:** The disappearance of the signs and symptoms of disease.

**White blood cells:** Blood cells that help fight infections

## WHAT NOW?



Helping you  
start to live  
with Chronic  
Myelogenous  
Leukemia

If you or someone you care about has just been diagnosed with CML, you're likely feeling a range of emotions. Perhaps relief in finally being able to put a name to what's been wrong. But also fear in facing the unknown challenges of dealing with a scary-sounding disease.

CML is serious, but the good news is that doctors have learned a lot about the disease in recent years and new treatments have made it much more manageable.

Today, the majority of people with CML who are careful about following treatment can expect to be able to manage their disease for many years, and still enjoy a full and satisfying life.

## WHAT IS CML?

One of four types of leukemia, chronic myelogenous leukemia (*also known as chronic myeloid leukemia*) or CML is a slowly progressing cancer of the blood and bone marrow. It is characterized by an overproduction of white blood cells which do not mature, ultimately cannot carry out their intended function and crowd out the healthy cells.

CML is distinguished from the other types of leukemia by a genetic abnormality in the white blood cells called the Philadelphia chromosome, which promotes the growth of leukemia cells and seems to be present in nearly 90% of CML cases. Named for the city where it was discovered, the Philadelphia chromosome is thought to be acquired after birth and is formed when two chromosomes (*9 and 22*) switch some of their gene material, forming a new, abnormal chromosome.

**What are some better things Philadelphia is known for?**

**Fictional boxer Rocky Balboa**

**The Liberty Bell**

**Philly cheese steak sandwiches**

**Cream cheese (*and cheesecake!*)**

## MANAGING CML

CML is more manageable than you perhaps imagine. The majority of people being treated for the chronic phase of the disease can go about their day-to-day activities and with medication remain symptom free for very long periods.

You will be given an individual treatment plan that takes into account your type of cancer, its characteristics, its stage, your personal situation and your wishes. The treatments for CML aim at reducing the growth of abnormal white cells (*leukemia cells*) in the bone marrow to bring about a remission and control the symptoms.

It is important to follow closely the treatment plan your doctor gives you because your CML is likely to get worse if treatment is stopped. Sometimes the treatment itself stops working, but there are other drug treatments to try then. This is the reason why your doctor will use a variety of blood and bone marrow tests to monitor your response to treatment.

The management of CML is an evolving process, and as we learn more and new medications and tests are developed, overall treatment, and the prognosis for patients such as you, will improve.

## THE BEST TIP

Here's perhaps the best thing to remember in facing a health challenge like CML:

## YOU ARE NOT ALONE!

Discuss your feelings and questions openly with people you trust – family, friends, spiritual advisors – and, of course, your doctor. When meeting your doctor, write your questions in advance and take notes, or have someone come with you to listen, take notes and give you support.

And turn for support to the CML Society of Canada to learn from the many others who have already travelled the road you are now on. There really is strength in others!

**"Always keep a positive attitude and frame of mind, especially on tougher days. Tell yourself that you will defeat the disease; it cannot defeat you."**

It is important to recognize that a diagnosis of CML represents a change in your life, the lives of your family members and those close to you. In time, and with better understanding of this disease, you should be able to live well with CML.

THIS BROCHURE  
**AIMS TO HELP YOU**  
START DOWN  
THAT ROAD!

**Established in 2006, the CML**  
(Chronic Myelogenous Leukemia) **Society** provides support, education and information on CML, current and emerging treatments and research initiatives for people living with CML and their families. Through these efforts and ongoing advocacy, the mission of the CML Society is to help reduce suffering and improve care and the quality of life of CML patients.

**Tel: 1-866-931-5165**

**[www.cmlsociety.org](http://www.cmlsociety.org)**

