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CML InterAction

THE OFFICIAL NEWSLETTER
OF **THE CML SOCIETY OF CANADA**

Welcome!

The CML Patients Support and Guidance Organization

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www.cmlsociety.org

Welcome to the first edition of CML InterAction, the definitive newsletter published for and by patients with Chronic Myelogenous Leukemia (CML).

The CML Society was established in 2006 as a relevant response to the needs expressed by the patient community in Canada. Bringing together patients, leading medical experts and stakeholders, the CML Society provides support, education and information on CML, current and emerging treatments and management strategies 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. Our goal is to provide patients with tools and education that will help them take charge of their condition. With better knowledge and understanding of CML treatment options, treatment access and financing, and psycho-social support, patients will be able to move forward and better face the challenges of CML in Canada.

Sharing stories helps. This first edition provides an introduction of the CML Society. Future editions will present topics relevant to treatment and care and living our best lives in spite of CML.

We are grateful to both Dr. Jeff Lipton and Dr. Pierre Laneuville, who we are fortunate to have on our team, as well as to their colleagues for their perseverance, commitment and dedication to patients across Canada.

We hope you find that this publication provides you with useful information and a chance to be connected and stay informed on the latest issues in CML.

Thanks for reading, and please write to us with your thoughts and ideas on topics for future editions. We look forward to hearing from you: **info@cmlsociety.org**

Contents

***The web site of the CML Society offers an innovative feature:** click on your province for information regarding government reimbursement, private insurance coverage, and special access programs specific to your region.*

Your CML Society:
WHAT WE DO

The CML Society of Canada actively works to respond to the distinct needs of people living with CML and their families through a variety of services, activities and forums for discussing and sharing experiences and knowledge.

Info / Education and Support

- Help patients access medical, mental health and wellness professionals.
- Organize regular meetings for regional information sharing.
- Disseminate the latest information through the website and newsletters and periodic emails on emerging issues.
- Organize seminars to share information from medical conferences (e.g. American Society of Hematology, American Society of Clinical Oncology).

Advocacy

The CML Society will establish and maintain communication with public bodies whose decisions impact the well-being of patients. The Society will lobby federal and provincial governments in order to ensure that they are kept apprised of developing activities and to help effect desired outcomes for the benefit of CML patients.

What is a clinical trial?

By Dr. Jeff Lipton

CLINICAL TRIALS CAN BE DIVIDED INTO TWO MAIN GROUPS:

those with a biological endpoint and those with a clinical endpoint.

Biological endpoint trials are designed to look at scientific aspects of patient disease and/or therapy. Very simply, patients generate material such as blood or bone marrow that allows us look into the biology of a disease or the effects of certain interventions, such as drug therapy, on patient cells. Usually these are studies that will not benefit patients directly, but are looking at the understanding of biological processes in order to set the stage for new treatments down the line or try to explain the outcomes of current therapies.

Clinical endpoints are those trials designed to look at new therapies that go beyond the current standard of care for patients with a certain disease in the hope of improving the outcome. This is what is done with a new drug or combination of existing drugs.

They are divided into five phases of study

THE PRELIMINARY PHASE is often called "First in Man", where a new drug that has shown promise in the lab with cell studies and then animal studies, is looked at to see if it can be used in patients. This is usually done in a very limited number of centers.

PHASE 1 The next level or Phase 1 is really a toxicity study. A new drug is given to patient volunteers, often with a variety of advanced diseases, to see if the drug is toxic and to determine the maximum dose of a drug that can be given safely. There is usually no expectation in such a trial that any benefit to the patient will be found, so if it is, it is a plus. The subjects of such a trial may not even have the disease that will be the ultimate target of this drug. In CML, this was actually seen with the most recent class of drugs that are currently in use or just approved. Once the safe dose is determined, the drug would go to Phase 2.

PHASE 2 studies are designed to actually show efficacy of a drug when given at safe levels, and to obtain more toxicity data on that drug. Imatinib and Dasatinib have actually been approved for salvage therapy on the basis of Phase 2 studies. Such approval however is rare and if given, is because there no reasonable alternative to treatment.

PHASE 3 studies then go on to show whether the new drug is better than the current best standard of care, whether it is another drug or even just supportive care. These studies are randomized and patients may get the study drug or the standard. Patients cannot request what they will get. This type of study, in this case for example, IRIS study, is what showed imatinib to be superior to interferon/cytarabine for front line therapy in CML, this type of study is usually necessary to get a drug approved by regulatory authorities in each country.

PHASE 4 studies are post-marketing studies designed usually by pharmaceutical companies to explore new aspects of therapy with a drug that is already on the market.

It is important for patients to know that just because a study site or pharmaceutical company offers a study, it is not necessarily better than what the current standard is. It is most important to ask the type of study, what are the patient benefits and risks, and what the standard alternative is. So if a patient is doing well on therapy, a trial to look at something new is not necessarily that is not necessarily that patient's best options.

Also, because a patient chat line talks about the wonders of a new drug for a certain person, does not mean that it would be better for another patient whether they are responding to alternative treatments or even if they are not responding. Trials are designed to prove this in large populations, not just by anecdotal reports on individuals.

A WORD OF ADVICE:

Ask a lot of questions and be wary when you do not get complete answers. The main point to remember is that if a certain treatment was proven to be the best available, then it would be the standard treatment, not on a study.

The CML Society of Canada

Established in 2006 in response to increasing patient demand, the CML Society provides services and advocacy in the areas of patient support, information and education, current and emerging treatments, and research for patients diagnosed with Chronic Myelogenous Leukemia, their families and care-givers.

The rapid development of treatment and the impact of longer term survival have created the need for an organization with a unified voice in the management and treatment of CML. The needs of the increasing number of surviving patients must be addressed with specialized care and monitoring. The CML Society of Canada also encourages organizations in their effort into finding a cure for CML.

For more information: **www.cmlsociety.org** or **1-866-912-7575**

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, and although they can function normally initially they ultimately crowd out the healthy cells.

CML is distinguished from the other types of leukemia by a genetic abnormality in the 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 chromosome.

It is not fully understood as to what causes this chromosomal abnormality, though it appears that exposure to benzene or very high doses of radiation may be significant risk factors.

That said, it is important to note that there has been no evidence linking medical or dental x-rays to an increased risk of developing CML.

In Canada, there are approximately 460 new cases each year, which represents 1 case for every 100,000 people. It is estimated that approximately 5,000 Canadians are currently living with this rare form of leukemia, which usually occurs during or after middle age.

CML is considered an "orphan disease" and like many orphan diseases, patient information, services and support are often limited, even non-existent. However, CML patients have benefited from exceptional research breakthroughs over the last 10 years, which brings also tangible hope to many other leukemia/cancer patients.

Signs and symptoms: Possible signs of CML include lack of energy, exhaustion, and shortness of breath or dizziness when walking or running. Unexplained weight loss, night sweats, fever, and pain and/or a feeling of fullness below the ribs on the left side may also be signs of CML. In many cases however, patients are asymptomatic and are diagnosed from a routine blood test.

There are three phases of CML:

Chronic phase – healthy white blood cells are functioning normally although there has been an overproduction of white cells. Patients may experience few or no symptoms during this phase which can last anywhere from three months to a few years.

Accelerated phase – there is an increase in the number of white blood cells and immature cells in the bloodstream. 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.

Diagnosis:

Tests that examine the blood and bone marrow are used to detect and diagnose CML.

THE BASIC BIOLOGY OF BLOOD CELLS

Cells are the structure of life. All living things on earth are made up of one or many trillions of cells whose chemical reactions are important for life. These chemical reactions must take place at the right speed and at the right time in order to maintain a normal metabolism in living organisms.

Cells are programmed to reproduce at certain intervals and to live for specific periods of time. Normally, cells are formed, mature, carry out their function, die, and are replaced with new cells. CML often exists for years with only moderately elevated numbers of leukemic cells and few symptoms.

At some point, however, white cells reproduce uncontrollably, do not mature and die out as they should, and eventually crowd out the healthy cells

To learn more about the biology of cells, managing, and monitoring CML, treatment options and responses to treatment, and other relevant issues, visit

WWW.CMLSOCIETY.ORG

Canadian recommendations for the treatment and management of CML

As with most developments in medicine, the management of CML is an evolving process. New drugs, tests and philosophies aimed at improving the overall treatment of patients must be evaluated on an ongoing basis. In fact, these are already under review in a number of areas.

The availability of current and emerging treatments will continue to alter the clinical and laboratory management of CML. These changes in practice have initially been reviewed by the Canadian Consensus Group on the Management of CML, an advisory board of Canadian hematologists and oncologists created in 2004 and co-chaired by Dr. Pierre Laneuville and Dr. Jeffrey Lipton. Their collaboration has resulted in a new set of Recommendations for the optimal care of CML patients.

These recommendations have been established for the consistent management of CML by all physicians across Canada and to try to make sure that similar resources are available to patients. They are designed to help physicians keep up to date with therapies that are not routine for many of them. They are not called "guidelines" as this would imply uncontroversial evidence of their validity.

These recommendations represent what has been submitted for peer review publication and we are the only official version. They also do not reflect new drugs that are currently not available in Canada. New drug therapies will be addressed as they become available.

Please visit cmlsociety.org under the "Treatment - Options" section for the complete published version of the current Recommendations. These will be continually updated as newer drugs become available

Mission Statement:

The CML Society unifies and brings the voice of survivors to the management of Chronic Myelogenous Leukemia (CML), the elimination of suffering, and the improvement of care and quality of life issues - through patient support and networking, education, advocacy, and encouraging research.

The Board of Directors of the CML Society of Canada

Cheryl-Anne Simoneau,
President

Susanne Aucoin,
Patient Advisory Board Liason

Stewart Sklar, LL.B.,
Patient Advisory Board Liason

Janine Lepage,
M.Sc

Medical Advisors

Dr. Pierre Laneuville, Medical Advisor *is an Associate Professor (GFT-U) in the Department of Medicine and Oncology at McGill University and the former Head of Hematology for the McGill University Health Center. Dr. Laneuville is best known for his research on the molecular mechanisms underlying the genesis and transformation of chronic myelogenous leukemia. He is the current President of the Canadian Hematological Society and Chairman of the Canadian Consensus Group on the Management of Chronic Myeloid Leukemia (CCGM-CML).He has served on numerous basic and clinical research panels including the Medical Research Council of Canada, the Leukemia Research Fund of Canada, the National Cancer Institute of Canada Clinical Trials Hematology Executive, and the Canadian Blood and Marrow Transplant Group. He has held a number of research grants supported by the MRC, LRFC, CRSI, MSSC, and is actively engaged in clinical trials for hematological malignancies and stem cell transplantation.*

Jeff Lipton, PhD MD FRCPC, Medical Advisor *is an Associate Professor of Medicine at the University of Toronto and a Staff Physician on the Leukemia and Allogeneic Bone Blood and Marrow Transplant Services at the Princess Margaret Hospital. His clinical practice is in chronic leukemias and bone marrow failure syndromes as well as allogeneic stem cell transplant. Research interests in particular are in CML and its therapy, outcomes and supportive care in BMT, especially the therapy of fungal infection and in the therapy of bone marrow failure syndromes. Jeff serves on the Unrelated Donor Transplant Advisory Board of the CBS, is an advisor to the Center for Research on Bone Marrow Transplantation (CIBMTR), has served on the Clinical Trials Group of the CBMTG, is President-Elect of the CBMTG, a previous chief of the allogeneic stem cell transplant program at PMH and is on several international advisory boards relating to the therapy of CML. He has authored or co-authored more than 125 peer reviewed papers and 100 abstracts.*

New Corporate Secretary

John Sao Miguel, *John brings more than 20 years of corporate finance experience in public and private companies to his role at The CML Society of Canada. John is currently employed at Diablo Technologies and prior to joining Diablo, John was CFO for PointShot Wireless, and Uplift Technologies, were he assisted both companies in securing venture capital investment and for VR Interactive Corporation, where he participated in taking this company public. As Chief Operating Officer of Jellett Biotek Limited, he secured the company's first major round of venture capital. From 1990 to 1997, he worked for National Sea Products (now High Liner Foods Inc) where he was promoted to Corporate Treasurer in 1993. Prior to this, John spent over 9 years working for domestic and international banks in the capital markets and treasury operations. John holds a Bachelor Degree in Economics from Concordia University and a Masters in Business Administration from Saint Mary's University.*

Do you know your PAB?

Meet your national Patient Advisory Board (PAB), newly established by the CML Society of Canada in January 2007:

Each PAB member, representing one of the Canadian provinces or regions, is responsible for facilitating the establishment of regional support groups and disseminating relevant information/education programs, while also defining local issues and bringing them to the attention of the CML Society's national advocacy group.

British-Columbia

Shalyn Linklater (Burnaby) is a full time mom with three young kids, who worked as a doula in the childbirth field. With this background Shalyn brings experience in patient support, education, outreach and advocacy programs to the PAB. Shalyn's husband Tim, diagnosed with CML in September 2006, is a specialist in 2D and 3D animation at EA Sports, also working on films such as X-Men 2, Scooby Doo 2 and Italian Job. Both enjoy snowboarding, climbing, running and a variety of other sports - even playing hockey against each other!

britishcolumbia@cmlsociety.org

Alberta

Cam Williams (Cardston) diagnosed with CML in June 2006, is an elementary school teacher instructing grade 6 students. With his wife **Coralee**, also a school teacher, they have three young children. Cam graduated in 1999 with a Bachelor of Science and a Bachelor of Education from the University of Lethbridge. Cam enjoys woodworking and a variety of team sports and more recently has become involved in water sports.

alberta@cmlsociety.org

Prairies

Margot Miller (Winnipeg) diagnosed with CML in April 2005, brings expertise drawn from a variety of recreational work over the years. Her involvement has been primarily with seniors in program planning and facilitation in the areas of entertainment, education, physical fitness, palliative care and recreational therapies. Margot also has experience in conflict mediation and advocacy. She received her B.A. in Physical Education and Psychology in 1978 from the University of Western Ontario. Margot and her husband **Harold** have four children. Her interests include yoga, complimentary medicine and nutrition, researching environmental causes of illness and and being an active community member.

prairies@cmlsociety.org

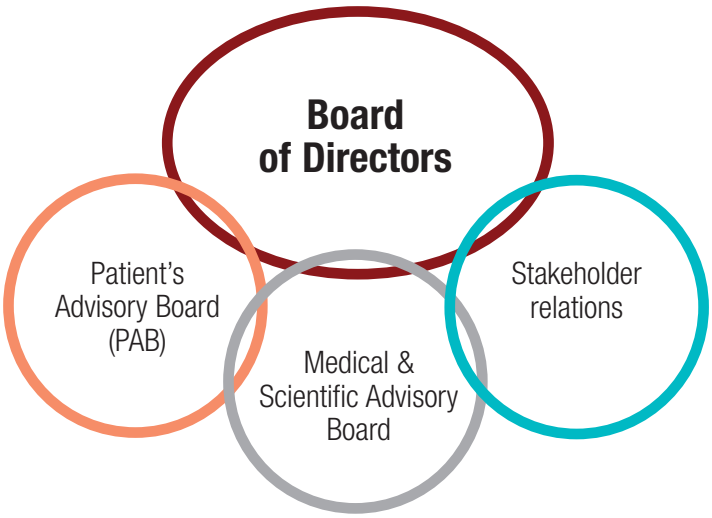
Ontario

Trevor Aucoin (Baxter) is married to **Susanne** who was diagnosed with CML in June 2005 and together they have three children. Trevor is currently employed at the Town of Innisfil as a Waterworks Operator and has been with the Town for 13 years. His hobbies include camping, playing guitar, singing and also cheering on the Toronto maple leafs.

ontario@cmlsociety.org

Susanne Aucoin (Baxter) was diagnosed with CML in June 2005. She is married with 3 children. Susanne attended college and graduated with a Registered Nursing Diploma. Her area of interest was oncology and palliative care. Susanne is currently an associate at Honda of Canada Manufacturing where she has been employed since 1999. Her hobbies include camping, reading, cheering on the Maple Leafs, and spending time with friends and family.

ontario@cmlsociety.org



CML Society organization

Ontario (Toronto region)

Stewart Sklar (Toronto) diagnosed with CML in March 2003, is a practicing lawyer in Toronto. He has been operating his own practice since 1978 in the preferred areas of real estate, corporate-commercial and wills and estates. A graduate of the University of Toronto (B.A. '73) and the University of Western Ontario (LL.B. '76), Stewart is married with two daughters, aged 18 & 22, and enjoys woodworking, cooking, fitness and travel.

toronto@cmlsociety.org

Québec

Cheryl-Anne Simoneau (Montreal) is studying full time towards a specialization in Bio Medical Ethics, diagnosed with CML in November 2000. Earlier at McGill University, Cheryl-Anne developed her skills in Strategic marketing, sales and management information systems in the NGO not for profit sector, and Canadian Pharmaceutical Industry. She brings nearly 20 years of experience in the Canadian pharmaceutical industry in strategic marketing and sales. Cheryl-Anne is married, has one daughter and recently attended her daughter's BA graduation ceremony. Her hobbies include, hiking, SCUBA diving, and skiing. Other passionate interests are reading, philosophy and meditation.

quebec@cmlsociety.org

Atlantic provinces (to be announced)

PAB members defined their mandate and established various committees (Web Site Development, Newsletter Editorial Board, Strategic Issues and Priorities, etc.), at their first meeting held in Montreal January 20-21, with the kind counsel of Dr. Jeff Lipton and Dr. Pierre Laneuville.

The committees' projects will be featured in our next newsletter.

We invite you to connect with your provincial or regional PAB representative if you would like to receive more information about the CML Society – or simply to become involved. You'll be joining quite a wonderful group of people in this changing world!

The Patient's Voice

By Cheryl-Anne Simoneau

Approximately 500 Canadians learn they are diagnosed with CML each year. Worldwide, CML has an incidence of one-to-two cases per 100,000 and is responsible for 15 to 20 per cent of all adult cases of leukemia.

In November 2000, over six years ago and at the age of 43, I became one of those cases.

A routine blood test, which turned out to be anything but routine, changed my life. My white blood cell count was 145,000 which is somewhere near 10 times higher than what it should be. The test was repeated, just to be sure. An hour later, Dr. Pierre Laneuville Director of Hematology at the McGill University Health Centre, came to the ER to tell me that he was 99% sure I had CML. Those first few minutes of my "new life's journey" were spent in a struggle to catch my breath. Dr. Laneuville was saying, "If you had to get any form of cancer, this is the one to get, there are new breakthrough treatments"… I took a deep breath and exhaled slowly. My "mantra" for those first few minutes was "Just Breathe".

In the days and weeks that followed I went for a Bone Marrow Biopsy, which confirmed the diagnosis and more blood tests while I "surfed" the Internet relentlessly for information on CML. The first time I "googled" CML, I remember keeping one eye shut waiting for the results to be "pinged" back.

The scary news was that without treatment you could last 3 to five years.

At the time that I was being diagnosed in 2000, something very exciting was happening, the world was about to get its first signal transducer inhibitor in the war against cancer - and it was specifically designed for CML!

CML is probably the most understood and researched malignancy. The first consistent chromosomal abnormality associated with this specific type of leukemia was discovered in 1960. It was a "breakthrough" in cancer biology. In 1973, the Ph chromosome was identified as being the result of a t(9;22) reciprocal chromosomal translocation. In 1983 the t(9;22) translocation was shown to involve ABL proto-oncogene normally on chromosome 9 and a previously unknown gene on chromosome 22, later termed BCR for breakpoint cluster region. The deregulated Abl tyrosine kinase activity was then defined as the pathogenic principle. These "breakthroughs" eventually led to the development of Abl-specific tyrosine kinase inhibitors that selectively inhibit the growth of BCR-ABL positive cells *in vitro* and *vivo*.

Importantly, the development of these new types of TKI's and SRC kinase inhibitors has allowed researchers to learn even more about this disease and transfer this knowledge to other types of cancers, solid tumors included. So, while CML represents a small percentage of the overall cancer population, I can assure you the impact of the breakthroughs for this disease spans the entire spectrum of cancer research.

It is now 2007, and we are just about to see second and third generations of these specifically targeted drugs complete phase II trials and to be made available through expanded access programs. Patients for whom current treatment has "failed" or have become intolerant have renewed hope and new opportunities with these emerging treatments.

Interestingly, earlier work with Interferon has not been lost. It has led to new research in immunotherapy and we hear that there will be clinical trials in this area. Additionally, new approaches to stem cell transplants are improving outcomes for patients whose disease has not been halted in spite of these treatments. Can a cure be that far away?

Thanks to these new drugs, most of the younger CML patients can hope to live well into retirement. They are life prolonging, but they are not without side effects. A portion of patients on treatment have developed resistance and/or intolerance to some of these drugs. After all cancer is a formidable enemy. Indeed the lack of stability in cancer cells in general underscores the absolute necessity to continue our research into finding a cure.

I am pleased that the CML Society, driven by patients, guided by physicians with significant contributions from science and corporate stakeholder communities is determined to make these treatments available equitably everywhere in Canada.

It is now over six years since I was diagnosed with CML. Last June I watched my daughter receive her BA, an event I was only able to attend through the help of innovative drugs and very good health care from Dr. Laneuville and the entire team at the Royal Victoria Hospital in Montreal.

I did not realize that being diagnosed with such a disease would offer me a chance to explore and learn so much about cancer research, drugs and life. Along the way, I have made many friends and hopefully, now through this organization, we can all join together to live our best lives, in spite of having such a serious disease.

Cheers!

Feedback and Subscription Form

Please give us your comments and ideas for future articles, as well as your feedback on the articles in the current issue.
By e-mail: subscription@cmlsociety.org **By regular mail:** CML Society, 115 Chesnut, Baie d'Urfé (Qc), H9X 2M2

☐ I would like to subscribe to the newsletter and receive information by E-mail regarding emerging issues, as well as national and regional events organized by the CML Society of Canada.

☐ by e-mail at _____ (e-mail) ☐ by regular mail at _____

_____ (complete postal address)

Name: _____ Region or city: _____

Becoming an Active Member:

☐ I would also like to become actively involved in the CML Society, and would like to know more about the opportunities.

Please contact me by phone at _____ or by e mail at _____

NOTE: Your name and private information remains strictly confidential and highly protected by the CML Society and will not be circulated under any circumstances.