

Leukemia Program Newsletter

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A New Expert Joins our Leukemia Program



Dr. Dawn Maze (Photo: Jaime Claudio)

DR. DAWN (SHEPPARD) MAZE IS THE LATEST MEMBER TO JOIN OUR GROWING TEAM of expert clinicians in the Leukemia and Related Blood Disorders Program at the Princess Margaret Cancer Centre. She has recently relocated from Ottawa where she was a member of The Ottawa Hospital Leukemia Program and the Centre for Transfusion Research.

Originally from Newfoundland and Labrador, Dr. Maze completed medical school, postgraduate training in internal medicine, and masters in clinical epidemiology at Memorial University. With a developing interest in hematology and immunology early in her career, being part of a family member's cancer journey helped shape her career direction. She then moved to Kingston for a Hematology Fellowship at Queen's University to advance her training. The program at Queen's, being smaller and focused offered many opportunities for hands-on involvement in the laboratory, and in all areas of hematology and pathology. Her exposure and experience to these fields provided her with the exceptional foundation of her career. During her fellowship, she became interested in the expertise at the Centre for Transfusion Research in Ottawa. Their work in all areas of transfusion medicine such as blood and marrow transplantation, cellular therapies using mesenchymal stem cells (those that give rise to bone, cartilage, muscles, and fats), and the optimal use of blood products to

provide supportive care for patients with blood cancers influenced her decision to pursue more advanced training. In Ottawa, she received a 2-year fellowship in transfusion medicine research with a clinical focus on leukemia and bone marrow failure syndromes, and stem cell transplantation.

Following her fellowship, Dr. Maze joined the staff of physicians in the Leukemia, and Blood and Marrow Transplant Programs at The Ottawa Hospital with an appointment as a Clinician Investigator with the Ottawa Hospital Research Institute. The goal of her research is to determine the safest and most effective ways to use blood products to support patients with hematological cancers and those undergoing stem cell transplantation.

Most of her personal time these days is spent raising her two young boys. She also enjoys hiking and running and has recently run her second half marathon. Dr. Maze feels honored to be a part of the leukemia and related blood disorders program here at the Princess Margaret Cancer Centre, one of the top 5 cancer centres in the world, where patients can access world-class care with the latest in treatments and research. With a dedicated, multidisciplinary team to help see patients through their individual journeys, she is excited to be part of the team bringing clinical expertise in leukemia and related blood disorders. Importantly as well, she is keen on improving the supportive care and quality of life of patients by optimizing transfusion practices.

Dawn Maze and Jaime Claudio

Increasing Patient Safety

Staff and patients at The Princess Margaret Cancer Centre are working together to create a safer environment. Two recent examples from the Leukemia program demonstrate how change starts when team members, including patients, take responsibility for safety in their areas.

Hallway Mirrors

Congestion can be as much of an issue inside Toronto hospitals as it is outside them. Stretchers, nurses, wheelchairs and patients are all moving through the narrow hallways at Princess Margaret, creating conditions for collisions at the corners where hallways intersect.

"I walk around the unit for exercise and when I was on the 14th floor they had mirrors on the ceiling so you could see if anyone was coming around the corner," says Kathie Atcheson, patient, Princess Margaret. "When I moved up to the 15th floor they didn't have the mirrors and holy cow! There are a lot more corners!"

"I had seen the safety huddle board in the hallway and after a close call with another patient pushing an IV pole, I told my nurse that the mirrors might be a good idea to improve safety," says Kathie. "They put them up really quickly."

Susan Coffey, registered nurse, Princess Margaret, raised the concern at the team's daily safety huddle.

"We look at the same thing for a long time but patients have fresh eyes, they see things we don't," says Susan.

After nearly two months at Princess Margaret, Kathie is happy to have returned home, but she's glad that by speaking up she was able to leave the hospital a safer place than she found it, for patients and staff.

Transfer boards

Of course, not all patients are mobile. Some need assistance moving from stretcher to bed. Staff use what's called a transfer board for this purpose. The board is essentially a bridge between the stretcher and the bed, staff slide patients across the board to minimize discomfort and prevent injury for everyone.

The boards had become worn, torn and were starting to crack. Gary Courneyea, Porter, Princess Margaret, brought the issue up with Bee-Jay Realubit, Unit Manager, Princess Margaret, to see if something could be done.

"As a leader part of my job is making sure staff have the tools they need to do their work," says Bee-Jay. "When people voice concerns, I take that very seriously and the best way for me to validate their concerns is by taking action."



Gary Courneyea, Porter, Princess Margaret Cancer Centre, demonstrates one of the new transfer boards (Photo: UHN)

"Bee-Jay asked me to speak with my manager as well, but the response I got was basically 'yes, absolutely,'" says Gary. "They asked for our input on which new boards to order and ended up choosing the one recommended by my colleague James Townsend."

The new boards are in place on Bee-Jay's unit. They have a special covering that rolls around the board, reducing the pushing and pulling required, and also reducing the chance of an injury to staff when they are transferring patients.

"I do five or 10 of these transfers every day and the new boards require much less force to move the patient," says Gary. "It makes the job immensely easier for us and it's more comfortable for the patients."

Once the boards were in use the team encountered a challenge – how best to clean the new equipment. In the spirit of continuous improvement, they are working with their Managers and Infection control to find and communicate a solution.

Michael Ronchka

Recent Clinical and Basic Research Presented During the ASH Meeting

The American Society of Hematology (ASH) meeting is the major annual event to learn first hand the hottest discoveries in malignant and non-malignant hematology. It is attended by more than 20,000 hematology professionals around the world interested in the educational experience and the current trends and discoveries in the field through thousands of scientific abstracts. This year's 58th meeting was held in San Diego, California on Dec 2-6, 2016 and was attended by the leukemia program's physicians, scientists, and fellows who presented the program's latest research and discoveries. Below are the abstracts that were presented from our leukemia research program:

Dobson SM, Waanders E, Vanner R, Gan OI, McLeod J, Grandal I, Payne-Turner D, Edmonson M, Gu Z, Ma X, Fan Y, Abelson S, Gupta P, Rusch M, Shao Y, Shi L, Pounds S, Olsen S, Neale G, Easton J, Guidos CJ, Danska JS, Zang J, Minden MD, Mullighan CG, Dick JE. ***Linking Subclonal Genetic Diversity with Functional Heterogeneity Identifies Diagnosis Subclones Destined to Relapse.***

Zarabi SF, Chan S, Gupta V, Khalaf D, Lutynski A, Minden MD, Rostom AR, Rydlewski A, Schuh AC, Sibai H, Yee K, Schimmer AD. ***Remissions after third induction chemotherapy for primary non-responders with Acute Myeloid Leukemia (AML) are uncommon and short-lived.***

Spiegel J*, McNamara C*, Arruda A, Panzarella T, Kennedy J, Stockley T, Sukhai M, Thomas M, Bartoszko J, Ho J, Siddiq N, Schimmer A, Schuh AC, Sibai H, Yee K, Claudio J, Devlin R, Minden MD, Kamel-Reid S, Gupta V. ***Impact of Genomic Alterations on Outcomes in Myelofibrosis Patients Undergoing JAK1/2 Inhibitor Therapy***

Ho JM, Dobson SM, McLeod J, Jin L, Ng SWK, Mitchell A, Shlush LI, Zandi S, Eppert K, Minden MD, Dick JE, Wang JCY. ***CD200 Is a Marker of LSC Activity in Acute Myeloid Leukemia***

Law AD, Sukhai MA, Thomas M, Arruda A, Ibrahimova N, Chan SM, Gupta V, Minden MD, Schimmer AD, Sibai H, Yee KWL, Barber DL, Stockley TL, Kamel-Reid S, Schuh AC. ***Utility of Next Generation Sequencing in Prognostication and Therapeutic Decision Making in Cytogenetically Normal AML with DNMT3A mutations***

Gupta V, Kosionek HE, Kilsovic RB, Galvin JP, Berenzon D, Yacoub A, Mesa RA, Tognoni G, Prosperini G, Di Lelio A, Serone E, Marfisi L, Orellano A, Potiphar L, Samalam ME, Singer Weinberg R, Dueck AC, Meed A, Mascarenhas

JO, Hoffman R. ***Exploring the Potential of JAK1/2 Inhibitor Ruxolitinib with Reduced Intensity Hematopoietic Cell Transplantation (HCT) for Myelofibrosis: Stage I Results of a Prospective Trial Conducted through the Myeloproliferative Disorders – Research Consortium (MPD-RC)***

Liyanage SU, Hurren R, Voisin V, Wang X, Bridon G, Xu C, Maclean N, Shamas-Din A, Minden MD, Bader GD, Laposa R, Schimmer AD. ***Leveraging nucleoside metabolism and dependence on oxidative phosphorylation to target mtDNA biosynthesis in AML.***

Khan DH, Mullokandov M, Wu Y, Gronda M, Hurren R, Wang X, Maclean N, Laister R, Gross A, Schimmer AD. ***The mitochondrial carrier homolog 2 (MTCH2) regulates the differentiation of AML cells by influencing the localization of pyruvate dehydrogenase complex and H3 and H4 histone acetylation.***

Jeyaraju DV, Voisin V, Xu C, Hurren R, Gronda M, Wang X, Jitkova Y, Soriano J, Maclean N, Bader GD, Schimmer AD. ***Inhibition of the Mitochondrial Protein Import Machinery is Selectively Cytotoxic to Acute Myeloid Leukemia (AML) Cells and Stem Cells.***

The authors found that they can selectively kill AML and AML stem cells (the mother of all AML cells) through a therapeutic strategy that disrupts the reliance of the AML cells on the transport of protein in the energy powerhouse of the cell known as mitochondria.

Kanfar S, Arruda A, Gupta V, Yee K, Schimmer AD, Schuh AC, Sibai H, Chan S, Minden MD. ***Outcomes of Adult Philadelphia Positive Acute Lymphoblastic Leukemia Patients Treated with Pediatric Multi-Agent Chemotherapy and Imatinib and the Impact of Residual Disease Monitoring on Survival***

The study showed that ALL patients given bone marrow transplant had slightly better relapse-free survival compared to those treated with chemotherapy and a new generation drug called Imatinib. However, when the overall survival of the two groups were compared, both fared equally well. Therefore, having a strategy to monitor the presence of remaining leukemia cells will help spare those patients with excellent response to chemotherapy from the side effects of bone marrow transplant.

Finding your Spirit

"Just so you know, I'm not sure I believe in God."

That was me, talking to a woman in the Spiritual Care Centre at the Princess Margaret Cancer Centre. I was three weeks into a leukemia diagnosis. I was tired, overwhelmed and very scared.

I had passed the Centre many times since becoming a patient. Tucked into a hallway across from the blood lab, it's easy to miss, although if your eye catches the sign for the adjacent Conway Chapel, you're in the right place. Perhaps the Chapel sign was the reason I never stopped in. After all, I didn't go to church or pray. I was sure I didn't belong there.

Until that day, when I wandered in desperately seeking reassurance that I could get through the tough days ahead.

I remember the woman putting her arm around me as I cried. What we talked about both surprised and comforted me. We didn't talk about religion or praying. We talked about finding strength in the things that make you happy. "What makes you get up every morning even though you feel terrible?" she asked. I left feeling a little more hopeful, and with a new perspective on what it means to have faith.

That was eight years ago.

I recently visited the Spiritual Care Centre again and met Sharon Konyen, a spiritual care provider. When I shared this story, she wasn't surprised.

"People often say that they walk by many times, but don't come in because they think we're all about religion," she says. "I don't care if you go to church. My job is not to convert, but rather, to make sure your spirit is getting the support it needs."

What does that mean?

"It's important that people have something that supports their spirit, their well-being, especially during times of fear



Lisa Machado, with her children Grace (left) and Anthony (right). Lisa, diagnosed with Chronic Myelogenous Leukemia in 2008, is the founder of the Canadian CML Network. She can be reached at info@cmlnetwork.ca

and uncertainty," she says. "This doesn't have to be religion. For some, it's going to the cottage, or doing yoga. We help guide them toward what gives them peace and purpose so they can be stronger and better able to cope."

For those who believe in a specific religion, Konyen says that a cancer diagnosis can bring on a crisis of faith, causing people to question their beliefs.

"There's a sense of loss," she says, "They feel abandoned by their religion, a religion they expected to be there for them, but is not."

Konyen helps them explore their understanding of God.

"We ask questions like, 'Have you felt God in your life before, and how did that turn out?'" she explains. "It's important to realize that God doesn't make bad things happen, or stop bad things from happening. God sees you through."

Not everyone comes into the centre looking for deep conversations about life or faith. For some, it's just a quiet place to reflect. And whether you're a believer or not, peace and quiet may be just what you need to move forward.

Lisa Machado

The Princess Margaret Cancer Foundation

The Princess Margaret Cancer Foundation raises and stewards funds to support the Princess Margaret Cancer Centre, one of the top 5 cancer research centres in the world. The Princess Margaret is a comprehensive cancer centre that offers full suite of services at the provincial, national and international levels, and is a key resource for complex cancer care spanning the continuum from diagnosis to palliation and survivorship across disease sites. Philanthropy is critical to making this possible.

For more information on how you can help support our leukemia program at the Princess Margaret, please contact:

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The Princess Margaret
Cancer Foundation  **UHN**

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