

Your 2022 footprint on Canadian myeloma research and scientific advancements

Myeloma Canada Impact Report
2022



**MYELOMA
CANADA**
MAKING MYELOMA MATTER

www.myeloma.ca

MYELOMA CANADA: In pursuit of a cure

11 a day.

77 a week.

330 a month.

4,015 a year.

That's how many Canadians were diagnosed with myeloma in 2022 as reported by the Canadian Cancer Society, and the number is rising steadily.

The **PROGRESS** is real.
LIVES are improving.
The **CURE** is getting closer.

Myeloma Canada's promise

To improve the lives and empower all Canadians affected by myeloma, accelerate access to the best care, while supporting the pursuit of its cure and prevention.

Science and research are amongst the important elements in delivering on our promise to our community. In 2022, over **\$1.244 million dollars** were invested in research and scientific advancements to improve diagnosis, enhance quality of life and to support the quest for a cure.

Highlighted in this report are the cutting-edge programs and projects that were made possible by funds raised through your generosity and of the generosity of our sponsors.

Myeloma Canada is the only national charitable organization created by, and for, Canadians impacted by multiple myeloma.

We pledge to cultivate and maintain an inclusive environment for our community and our organization. This includes respecting and addressing the diverse needs of all people—First Nations, Métis, and Inuit; under-represented and marginalized populations; the LGBTQIA2S+ community; cultural, racial, and ethnic minorities—in all that we do.



BUILDING HOPE THROUGH SCIENCE AND RESEARCH

MYELOMA CANADA RESEARCH PRINCIPLES

Myeloma Canada is committed to supporting prioritized, clinically relevant research projects that correspond to, and further, our promise. Projects in which we invest identify and address knowledge gaps in the diagnosis, treatment and science of myeloma and related plasma cell disorders, with the goal of improving quality of life, and ultimately, in finding a cure for this devastating disease.

As a grassroots organization, our research investment principles are anchored in the core values that support the priorities identified by our myeloma community.

As such, they must satisfy one or more of the following principles:

1. have a direct impact on **improving quality of life and/or survival**,
2. have a direct impact on **increasing access** to new therapies, new treatment combinations, or improved treatment administration,
3. contribute to **health systems improvements** for people with myeloma, or a related plasma cell disorder.

While some projects may be conducted regionally, the research impact must benefit the national, or international, myeloma community.

Myeloma Canada has been making myeloma matter since it was founded in 2005. To learn more, visit myeloma.ca.

2022 HIGHLIGHTS

Myeloma Canada research investments

Fueling innovative trials through the Canadian Myeloma Research Group

Myeloma Canada continues to be a strong supporter of the Canadian Myeloma Research Group (CMRG), a not-for-profit research organization that has common goals with Myeloma Canada. In 2022, Myeloma Canada contributed \$300,000 to CMRG's research activities including made-in-Canada clinical trials and the National Myeloma Database platform. To find out more about the CMRG and the wonderful work they do, please visit their website at www.cmrg.ca.

21

clinical trials sites across Canada

9

clinical trials

13

abstracts published



Supporting the use of Real-World Evidence (RWE) to help sequence myeloma combination therapies

The CMRG has one of the largest and most comprehensive multiple myeloma databases in the world.

In 2022, Myeloma Canada was a financial supporter of the CMRG's work on a Real-World Evidence (RWE) study undertaken by the CMRG in collaboration with the Canadian Agency for Drugs and Technologies in Health (CADTH). The study utilized the CMRG database to characterize treatment outcomes in newly diagnosed transplant-ineligible multiple myeloma patients, and aims to evaluate outcomes of different treatment sequences in this population.

The objectives of the study are to understand:

1. What is the comparative efficacy and safety of drug combinations for newly diagnosed, previously untreated myeloma in patients who are not eligible for autologous stem cell transplant?
2. What is the comparative efficacy and safety of drug combinations for myeloma in patients who have relapsed or are refractory to first-line and second-line drugs?

The CMRG's study is part of a larger ground-breaking CADTH project entitled, "Optimal Pharmacotherapy for Transplant-Ineligible Multiple Myeloma". The project is the first reimbursement review of its kind in Canada because it utilized RWE, cost-effectiveness economic evaluation, and patient group insights from past reimbursement reviews to help determine an optimal treatment sequence for both newly diagnosed transplant-ineligible myeloma and relapsed/refractory myeloma.

To learn more about the reimbursement review project, get an update on its status, or read the final report(s), go to:

www.cadth.ca/optimal-pharmacotherapy-transplant-ineligible-multiple-myeloma.

Real-world evidence
collaboration
Treatment sequencing



Furthering our research priorities: The Aldo Del Col Research Grant

The Aldo Del Col Research Grant competition was launched in 2022 in honour of the legacy and memory of Myeloma Canada's co-founder.

Aldo Del Col Research Grants fund patient-prioritized Canadian research projects that help address the knowledge gaps in the diagnosis and treatment of myeloma, and/or related plasma cell disorders, identified through the **Myeloma Priority Setting Partnership (PSP)**.

The project, the first of its kind for myeloma, started in 2019 and concluded in 2021 with the publication of the Top 10 future myeloma research questions as identified by our Canadian myeloma community:

1. How can we cure myeloma?
2. Are novel immunotherapies (e.g., CAR T) effective for the treatment of myeloma?
3. How can we improve the diagnosing (e.g., faster, less invasive) of myeloma, and what is the impact of earlier diagnosis on patient outcomes (e.g., organ damage, bone deterioration)?
4. What are new treatments for myeloma patients that will improve life expectancy with fewer adverse side effects (e.g., pain, nausea, neuropathy, immune suppression)?
5. How can we personalize a patient's treatment based on their type of myeloma and genetic profile, and what is the impact of personalized medicine on treatment efficacy and disease outcomes?
6. How can we prevent bone deterioration and/or repair bones that have been damaged without negative side effects (like those associated with bisphosphonates) or surgery?
7. How can we safely reduce, cycle, or stop the use of medications (e.g., Dexamethasone and Revlimid) to reduce the side effects of treatment and maintain control over myeloma?
8. How can we reduce or manage the short-term effects (e.g., diarrhea, nausea, fatigue, emotional challenges, skin reactions) and long-term effects (e.g., vision loss, loss of muscle strength) of myeloma treatment?
9. What is the most effective way (i.e., drug combinations, sequence, frequency, and intensity) to treat refractory, relapsed, and drug resistant myeloma?
10. Can we develop treatments specifically for high risk or aggressive myeloma that will improve outcomes for these patients?



“The PSP was a ground-breaking project that speaks to the essence of Myeloma Canada and our science and research funding strategy. As a patient-driven organization, consulting and involving Canadians impacted by myeloma to help drive our future investments is of paramount importance. Due to the authenticity and impact of this project, we have had tremendous feedback and interest from donors and researchers alike to support these priorities.”

– Martine Elias, Executive Director - Myeloma Canada

2022 Aldo Del Col Research Grant winners

In 2022, two Aldo Del Col Research Grants were awarded by an independent review committee of healthcare professionals and Canadians living with myeloma.



Dr Alissa Visram
Ottawa Hospital Research Institute, Ottawa, ON

RESEARCH: Can BCMA trogocytosis compromise the anti-tumour activity of CAR-NK cells?

Chimeric antigen receptor (CAR) T-cell therapies are associated with significant side effects such as cytokine release syndrome (CRS) and prolonged manufacturing delays because a patient’s own T-cells are used.

CAR Natural Killer (CAR-NK) cells are a promising alternative to CAR T-cell therapy because there is a lower risk of CRS, neurologic side effects, and they can be used “off the shelf” (the patient’s own cells are not used).

Dr Visram’s research team has developed a CAR-NK cell. The Aldo Del Col Research Grant will allow them to better understand barriers to CAR-NK persistence and to optimize the CAR-NK cell.

The results of this exciting study will bring Dr Visram and her research team one step closer to their goal of developing an effective and accessible CAR-NK therapy that can be tested in a clinical trial with Canadian myeloma patients.

This research project touches upon many priorities of the Myeloma Priority Setting Partnership, including #2, #4 and #5.

Myeloma Canada is also proud to support ongoing research programs under the leadership of Dr Arleigh McCurdy at the Ottawa Hospital Research Institute, a centre of excellence in myeloma research and care.

Immunology

CAR-NK cells

Natural Killer cells

2022 Aldo Del Col Research Grant winners



Margaret McNeely, PhD –
*Cross Cancer Institute,
Edmonton, AB*

RESEARCH: A Novel eHealth Application to Support Exercise Prehabilitation prior to Stem Cell Transplantation for Individuals with Multiple Myeloma

Although stem cell transplant (SCT) is an important treatment for myeloma, people often experience significant physical and functional decline after undergoing SCT. **Prehabilitation is a strategy that aims to enable an individual to better withstand a forthcoming treatment, such as SCT, through exercise.**

Exercise may help reduce the loss of muscle strength associated with myeloma treatment and prove beneficial to the individual's function, quality of life and recovery after SCT. This study will provide needed information to support exercise as an available intervention for individuals with myeloma in the induction treatment phase prior to SCT.

Given the impact of induction therapy on the immune system and other barriers to exercise participation such as time and travel, the study team will test a virtual exercise program using an innovative application (app) called Healthy Eating, Active Living, Mindful Energy (HEAL-ME). This app was co-designed by the research team and myeloma patient advisors.

Unique features of HEAL-ME include:

- scheduled 1:1 and group video conferences between a healthcare professional and an individual with chronic disease, and
- the ability to facilitate semi-supervised, home-based wellness programming.

The exercise module of HEAL-ME offers independent video sessions designed by a certified exercise physiologist/physiotherapist and the ability to deliver interactive, dynamic group exercise classes.

Dr McNeely's study addresses Priority #8 of the Myeloma Priority Setting Partnership (PSP), i.e.: reduce and manage both short and long-term effects of myeloma treatment.

Prehabilitation
exercise
better outcomes

Myeloma Canada Research Chair in Multiple Myeloma at the Hôpital Maisonneuve-Rosemont

Supporting our international leaders in allogeneic stem cell transplant research

Over the past 20 years, the Department of Hematology and Oncology at Hôpital Maisonneuve-Rosemont in Montreal, Quebec has been gaining much international recognition for their work in allogeneic stem cell transplants. This is largely due to the leadership of Dr Richard LeBlanc and Dr Jean Roy. Together, they have developed significant expertise in allogeneic transplants for the treatment of hematological cancers, and more specifically, myeloma.

Today, thanks to ongoing research, overall results of allogeneic transplants have markedly improved. This is a result of a combination of better donor selection, better supportive therapies, and more effective antibiotics.

Innovation international leadership

Allogeneic transplants



Efficacy versus effectiveness in multiple myeloma management

Previous research studies have consistently shown that outcomes on treatment are better in “ideal” clinical-trial settings when compared to “real-world” settings. However, the magnitude of differences in outcomes between ideal and real-world treatment regimens within a Canadian context is unknown.



Dr Hira Mian and her research team at the Juravinski Cancer Centre in Hamilton propose to use an Ontario population administrative database to

compare the real-world efficacy and toxicity outcomes of standard upfront, and relapsed regimens used to treat multiple myeloma, versus published clinical trial outcomes.

This study will allow physicians to better understand and counsel Canadian patients on the expected benefits and risks of therapy.

Real-world treatment

benefits & risks Therapy



2022 HIGHLIGHTS

Myeloma Canada's scientific impact

Supporting young myeloma investigators: The Andrew R Belch MEET Grant

The Dr Andrew R Belch Myeloma Education and Enriched Training (MEET) Grant was created to foster the development and participation of qualified young Canadian myeloma investigators at national and international medical/scientific meetings or conferences.

A total of 6 Dr Andrew R Belch MEET Grants were awarded in 2022:



Dr Jean-Sébastien Claveau
*Hematologist and Multiple Myeloma
Fellow, Mayo Clinic, Rochester, MN*

TOPIC: Bortezomib maintenance after upfront allogeneic transplantation in myeloma patients: less chronic GVHD and immunosuppression but still no impact on survival.

Poster abstract presented at the 48th Annual Meeting of the European Society for Blood and Marrow Transplantation (EBMT) held March 19-23, 2022.



Samantha Fowler
*Clinical Research Manager, Maritime
SPOR SUPPORT Unit Horizon Health
Network, Saint John, NB*

TOPIC: Moving from research priorities to clinical research: Implementing the results of a Priority Setting Partnership on multiple myeloma.

Poster abstract presented at the 19th International Myeloma Society Annual Meeting, August 25-27, 2022.



Dr Guido Lancman

*Princess Margaret Cancer Centre,
Toronto, ON*

TOPIC: Infections and Severe Hypogammaglobulinemia in Multiple Myeloma Patients Treated with Anti-BCMA Bispecific Antibodies

Oral abstract presented at the 64th Annual American Society of Hematology, December 10-13, 2022



Afsaneh Panahi

*PhD Candidate, Terry Fox
Laboratory – BC Cancer,
Vancouver, BC*

TOPIC: Identification of Misclassified Multiple Myeloma Patient Risk Subgroups with a Novel Biological Disease Stratifier.

Poster abstract presented at the 19th International Myeloma Society Annual Meeting, August 25-27, 2022.



Dr Holly Lee

*Hematologist and Research Fellow,
University of Calgary, Calgary, AB*

TOPIC: Point Mutations in BCMA Extracellular Domain Mediate Resistance to BCMA Targeting Immune Therapies.

Oral abstract presented at the 19th International Myeloma Society Annual Meeting, August 25-27, 2022.



Dr Alissa Visram

*Hematologist, The Ottawa Hospital,
Ottawa, ON*

TOPIC: The Impact of Marginalization on Treatment Receipt and Overall Survival in Newly Diagnosed Multiple Myeloma Patients in Ontario: A Population-based Cohort Study.

Oral abstract presented at the 19th International Myeloma Society Annual Meeting, August 25-27, 2022.

Myeloma Consensus Guidelines

Recognizing the need for medical consensus on the diagnosis, treatment, and management of myeloma throughout Canada, Myeloma Canada led the development of the first Canadian evidence-based myeloma treatment guidelines in collaboration with a team of Canadian myeloma experts – the Canadian Myeloma Research Group Consensus Guideline Consortium (CMRG-CGC).

Supported in part by industry sponsors and spearheaded by Myeloma Canada, the Canadian Evidence-based Myeloma Consensus Guidelines are now a series of peer-reviewed publications aimed at improving, standardizing, and educating healthcare professionals on the management of myeloma in Canada.

Although some provinces do have their own guidelines, the Canadian Evidence-based Myeloma Consensus Guidelines take provincial variations in access and funding into consideration. The overarching goal is to provide Canadian healthcare professionals with concise recommendations upon which therapeutic decisions can be made. The focus is on relevance, applicability, and the use of various tests available in routine Canadian practice.

First consensus guidelines published in 2020

“Consensus Guidelines on the Diagnosis of Multiple Myeloma and Related Disorders”

Second consensus guidelines published in August 2021

“Management of Myeloma Manifestations and Complications: The Cornerstone of Supportive Care”

Third consensus guidelines In development

“First Line Treatment of Newly Diagnosed Transplant Ineligible Multiple Myeloma”





Supporting the Quebec Plasma Cell Dyscrasia Group

Since knowledge evolves very rapidly in the field of plasma cell diseases, it is often difficult to remain up to speed with new information. The Quebec Plasma Cell Dyscrasia Group (GMPQ) contributes to the transmission of knowledge by providing therapeutic guidelines, training, and publications to the medical community. This Quebec-based nonprofit organization brings together Quebec physicians who specialize in plasma cell diseases. Its mission is to promote excellence in myeloma care in Quebec by encouraging

the dissemination of knowledge and clinical research. This mission is fulfilled in three primary ways:

- by providing guidelines on the treatment of plasma cell diseases to healthcare personnel in Quebec;
- by providing training to healthcare professionals who treat plasma cell diseases in Quebec;
- by playing a role in advancing research on plasma cell diseases.



SCIENTIFIC
ROUNDTABLE
MAKING MYELOMA MATTER

12th and 13th annual Myeloma Canada Scientific Roundtable

2 hybrid events held in Montreal, QC
May 13-14 2022 and November 4-5, 2022

Myeloma Canada was the first, and remains the only, Canadian organization to bring together top myeloma experts (doctors, researchers, clinicians, and nurses) from the major myeloma treatment and research centres across Canada, with international myeloma specialists, industry partners, and patient representatives, on an annual basis to:

- discuss the state of clinical trials in Canada and develop high-impact made-in-Canada clinical trials for patients across the country;
- exchange highlights of recent myeloma research and treatment development work;
- review new myeloma therapies in the research pipeline;
- facilitate planning and collaboration of future Canadian myeloma research.

Thanks to the financial support from industry sponsors, the hugely successful 13th annual Myeloma Canada Scientific Roundtable was chaired by Dr Nizar Bahlis from Calgary, AB and Dr Annette Hay from Kingston, ON. This year's agenda featured highly valuable presentations on T-cell and other cellular therapies, and sparked important discussions and knowledge-sharing for the treatment, and eventual cure, of myeloma.

Industry partners
**myeloma
experts**
Patient voice
Collaboration



You keep critical myeloma science and research moving forward.

Your support enables us to sponsor important science and research initiatives that help improve the lives of all Canadians impacted by myeloma.

Together, let's do all we can to stop this complicated cancer from cutting short the lives of those we love. Join us in our quest to help find a cure for the thousands of Canadians living with this complex disease.

On behalf of the Canadian myeloma community, we are grateful for you and your continued support.

Thank you

Myeloma Canada

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CANADA**

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