



## Cancer Research Center

# Highlights of 2023

We are thrilled to present the 2023 Annual Highlights for our HealthPartners Institute Cancer Research Center. This year's report is a testament to our steadfast commitment to combat cancer through research innovation and advance the well-being of patients and families living with cancer. In 2023, the Cancer Research Center continued its mission of serving patients by offering unique care approaches and support to those affected by cancer. We continue to make great strides in driving research excellence by implementing new artificial intelligence technologies and growing our innovative early-phase therapeutics and medical cannabis research programs.

We are grateful for the unwavering support, partnership, and belief in our vision from HealthPartners, clinical leaders, research collaborators and partners, and our community. The challenges of fighting cancer are substantial. That's why the strength of our collective resolve is so important. Together we stand at the forefront of progress, transforming challenges into opportunities, and paving the way for a brighter future. We are proud of the accomplishments highlighted in this report and of our mission to benefit patients through innovative cancer care that integrates clinical research and quality improvement into routine care close to home.



Dylan Zylla, MD, MS  
Medical Director



Joanna Hill, MBA, CCRP  
Administrative Director

## Artificial intelligence advances imaging evaluations as well as recruitment

This year, we became the only cancer research center in the Twin Cities to leverage artificial intelligence (AI) technology in our research operations. First, we launched the mint Lesion™ platform by Mint® Medical, which ensures imaging tests are evaluated in a standardized way every time a new scan is performed. This makes it easier for radiologists to analyze the scan and for oncologists to interpret the findings to the patient. Using mint Lesion™ makes it easier to track disease progression based on the specific criteria outlined in our clinical trials protocols, allowing us to more quickly and accurately identify how a patient's disease is responding to study treatments.

Second, we finalized our plan to integrate the BEKHealth platform, which uses natural language processing (NLP) techniques to better match patients to clinical trials. This system extracts data on patients' symptoms, diagnoses, treatments, labs, and behavioral habits, to generate reports that match complex clinical trial criteria. This will help us seamlessly determine which patients qualify for trials and enhance communication with their treating oncologists.

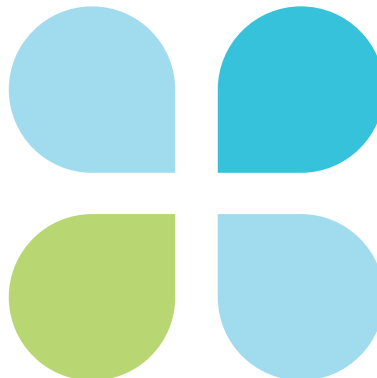
## Studying Axelopran to reduce side effects of opioid medications in pancreatic cancer treatment

Patients with pancreatic cancer suffer severe pain, and opioids are commonly used to help manage this pain. Unfortunately, opioids can cause constipation and decreased quality of life, and also may directly support the growth of the tumor. Signaling through opioid receptors may promote pancreatic cancer growth and is associated with shorter survival time. We are exploring a novel therapeutic that blocks only the opioid receptors outside the brain in patients with advanced pancreatic cancer receiving standard of care chemotherapy. By doing so, we may lessen constipation and other side effects of opioid medications, maintain pain control, and also block the potential mechanisms that may lead to faster pancreatic cancer growth.

## Study uses continuous glucose monitoring to better manage hyperglycemia when using alpelisib

Metastatic breast cancer is the second most common cause of death from cancer in women. Almost half of patients with hormone-positive, HER-2 negative metastatic breast cancer have a PIK3CA mutation, which causes tumor growth. Alpelisib (Piqray®) is a drug that blocks cancer cell growth caused by the PIK3CA mutation and is an approved treatment in combination with fulvestrant for metastatic breast cancer patients. Studies show that on average, patients receiving alpelisib lived five months longer without cancer growth. However, hyperglycemia is a common and potentially serious complication of alpelisib administration. Hyperglycemia contributes to dehydration, infection, increased emergency department visits, hospitalizations, and potentially shorter survival times if drug discontinuation or reduction is required due to hyperglycemia.

Together with HealthPartners Institute International Diabetes Center, we launched a study to characterize and better understand how alpelisib affects glucose control. Using a continuous glucose monitor (CGM) and following a hyperglycemia prevention and management regimen, this study will lead to better glucose management in patients with metastatic breast cancer who receive alpelisib. In addition, we hope it will minimize the side effects associated with hyperglycemia — improving patients' quality of life.



## Patient-reported outcomes provide insight and inform decisions

The collection of patient symptoms and quality-of-life measures using Patient-Reported Outcomes (PROs) is becoming increasingly common in cancer care. Through PROs, we can prioritize patients' perspective and experience, which helps shift health care toward a more patient-centered approach. We have an ongoing collaboration with national experts at University of North Carolina at Chapel Hill to study the feasibility of collecting and adjusting symptom questionnaires as quality metrics for patients with cancer undergoing chemotherapy and immunotherapy.

This year we completed enrollment of 110 patients from HealthPartners cancer clinics. We will combine our findings with those of other organization-wide PRO work to provide a comprehensive picture of each cancer patient's condition, including their physical, emotional, and social well-being. Having insight into how patients feel and function will enable us to make more informed decisions about treatment options, leading to more effective and personalized care.

## Philanthropy helps launch key cannabis research projects

In early 2021, we opened our Cannabis and Cancer Research and Education (CanCaRE) clinic, which provides education for cancer patients interested in safely and effectively incorporating cannabis into their care plan. As interest in cannabis use continues to grow, we strive to bridge knowledge gaps, address patient needs, and drive policy and advocacy through several medical cannabis research initiatives. Medical cannabis may have a profound impact on patient health, and we continue to be a leader in helping patients, clinicians and policymakers understand how cannabis impacts patients living with cancer.

Because government funding is limited for this rapidly evolving field, philanthropy has been critical for advancing our work. This funding helped launch key pilot projects that will provide important initial data and allow us to compete for larger grants. We are grateful for the generous contributions received thus far. Several new research proposals are in development. We look forward to sharing our findings in the future.

## CanAroma study evaluates the effectiveness of topical cannabinoids

Aromatase inhibitors (AIs) are commonly used for post-menopausal women with hormone-positive breast cancer. AIs improve breast cancer recurrence rates and lower breast cancer mortality. Unfortunately, nearly two out of three women with estrogen-receptor positive breast cancer treated with AIs experiences aromatase inhibitor-induced musculoskeletal symptoms (AIMSS) which include arthralgia, joint stiffness and bone pain. AIMSS leads to poor adherence with or discontinuation of therapy in up to 20% of patients. Current therapeutic interventions such as yoga, aspirin or naproxen, and acupuncture have shown only limited success in improving AIMSS. Therefore, the presence of AIMSS may negatively impact breast cancer recurrence and survival.

We have partnered with researchers at the University of Minnesota to evaluate the effectiveness of topical cannabinoids as treatment for AIMSS. Topical cannabinoids may offer relief with minimal side effects while also avoiding the systemic effects of inhaled or ingested cannabinoids. We have enrolled 20 of our planned 30 patients to date.

### BY THE NUMBERS

665

The number of study visits completed

20

Number of studies currently available to patients

338

Number of patients pre-screened to participate in clinical trials

3

Average number of months to activate a study within the Cancer Research Center

143

Number of patients newly enrolled in our studies in 2023

12

Number of Investigator-Initiated trials that are in development

Generous giving from individuals and community partners enables us to conduct research that improves health and well-being in our community and beyond. We recognize the crucial role of giving in furthering research and discovery. We are grateful to the Engdahl Family Foundation and the many patients, families and community organizations who make this work possible.

## Welcome Tim Larson

In July, we welcomed Timothy Larson, MD, to serve as medical director for our Early-Phase Therapeutics Program. Dr. Larson is a highly accomplished physician and clinical researcher who brings a wealth of knowledge and expertise to our team. He served as medical director of oncology research at organizations throughout the Twin Cities. He has clinical experience treating many cancers including lung and GI tract. He has co-authored research papers in *Clinical Cancer Research* and has published in the *American Journal of Clinical Oncology* and *Clinical Colorectal Cancer*. Since starting his role as medical director, Dr. Larson has collaborated closely with Arkadiusz (Arek) Dudek, MD, (the original founder of the Early-Phase Therapeutics Program) to ensure we find and develop innovative research studies. Under Dr. Larson's leadership, we will remain at the forefront of progress, continually working to improve the quality of life and treatment options for our patients via novel approaches.



### Leadership team

**Joanna Hill, MBA, CCRP**, Center Administrative Director

**Dylan Zylla, MD, MS**, Center Medical Director

**Daniel Anderson, MD, MPH**, Core Investigator and MMCORC Principal Investigator

**Kurt Demel, MD, PhD**, Core Investigator

**Grace Gilmore, MS**, Program Operations Supervisor

**Yan Ji, MD, PhD**, Core Investigator

**Timothy Larson, MD, MS**, Early-Phase Therapeutics Program (EPTP) Medical Director

**Rachel Lerner, MD, MS**, Core Investigator

**Jayanthi Vijayakumar, MBBS**, Core Investigator



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### Select publications

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