



## Cancer Research Center

# Highlights of 2021

Despite the challenges of the pandemic, Cancer Research Center continues to flourish. In 2021, we improved access to clinical trials by further integrating our east and west campuses. We surpassed last year's accrual to trials by 25%. And we're making great strides in advancing our strategic plan.

To ensure we open the best trials for our patients, we refined the processes of our Cancer Research Review Committee. This helped create a more diverse trial portfolio tailored to the needs of our patients. Collaboration continues with International Diabetes Center, cannabis research leaders, and others in the early phase research space. This collaboration highlights our important role in the larger cancer research community. These efforts also support our mission to provide innovative cancer care that seamlessly integrates clinical research and quality improvement into routine care close to home.

### Looking ahead

Our accomplishments in 2021 set a foundation for the future. Much of our success comes from the dedication and hard work of our staff, as well as support from leaders and cancer providers throughout our cancer program.



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



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

## Staying true to our mission and values

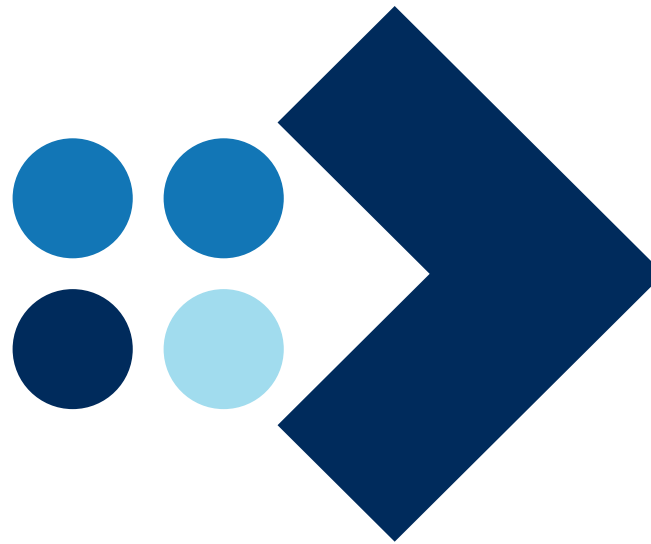
### Making clinical trials more equitable

Research opportunities, including clinical trials that incorporate the newest cancer treatments, offer patients another treatment option and lead to discoveries that can improve care. But research that isn't available to everyone can lead to missed opportunities for patients and science.

It's critical that all studies are equitable and accessible to the diverse communities we serve. That's why we joined a project led by the American Society of Clinical Oncology (ASCO) and the Association of Community Cancer Centers (ACCC). We were one of 75 research sites invited to participate in implicit bias training aimed at reducing barriers to clinical research opportunities. We also piloted a self-assessment tool from ASCO and ACCC intended to improve policies, procedures and programs that may inadvertently hinder participation in trials. The tools and knowledge gained are helping us ensure studies are equitable and inclusive to all.

### Expanded access helps maintain trusted relationships

Year-over-year, more patients are enrolling in the cancer research studies we offer. A trusted relationship with their primary oncologist is an important part of this experience. To maintain these relationships, we are expanding access to all our studies to include both our west campus at Frauenthuh Cancer Center in St. Louis Park and our east campus at Regions Cancer Care Center in St. Paul. Patients will now be able to participate in studies at their main cancer clinic and see their own oncologist.



## Virtual clinic supports safe, effective cannabis use by patients

Cannabis use is becoming more prevalent in patients with cancer. It helps manage multiple symptoms with minimal side effects. As more states legalize cannabis and the stigma on its use decreases, patients seem more interested in using cannabis in their treatment plans. However, patients and providers often lack knowledge about cannabis, including risks and benefits, dosage, and legality.

We created the Cannabis and Cancer Research and Education (CanCaRE) Clinic to bridge this gap. The clinic was developed by Dylan Zylla, MD, MS, and Sarah Jax, APRN, CNP. The clinic provides education for patients with cancer who want to safely use cannabis in their care plan. The clinic is also creating a robust registry of patients with cancer who are using cannabis, so this data can help inform oncology providers and patients.

The CanCaRE clinic uses virtual one-on-one patient consults to answer cannabis-related questions and provide updates on completed clinical trials and ongoing research opportunities. Our clinicians provided initial consultations with 69 patients and follow-up visits with 12 patients. The results of a patient satisfaction survey found that 91% of respondents said they learned and benefitted from their appointment and would recommend CanCaRE to family and friends with cancer.



## New breast cancer treatments: From the laboratory to the bedside

About 80% of breast cancers are ER-positive (ER+), which means the cancer cells grow in response to the hormone estrogen. Endocrine therapy is the standard treatment in these tumors and includes the use of drugs to block the effects of estrogen on cancer cells.

TTC-352 is a new drug developed for patients whose breast cancer no longer responds to endocrine therapy. We tested this drug in a Phase 1 clinical trial for women with ER+ metastatic breast cancer. Results showed that TTC-352 was safe and resulted in 43% of patients having stable disease.

This past year, we began to combine TTC-352 with everolimus to see if this combination is effective in cancer cells that do not respond to fulvestrant, a common endocrine therapy. We are performing these studies in a laboratory setting on breast cancer cell lines. We will have preliminary data in 2022. If shown to be effective in the lab, we will apply for additional grant funding for a new Phase 1 clinical trial.

## Artificial intelligence technology can support research excellence

Carefully monitoring the change in cancer size on imaging studies is vital to the success of the research trial. To promote consistency and research excellence, we are implementing the mint Lesion™ software platform by Mint@ Medical. It will be in place by April 2022. This program includes step-by-step guidance through each imaging test with questions to answer or measurements to make. This helps us ensure imaging tests are evaluated similarly every time a new scan is performed, making it easier for radiologists to analyze the scan and for oncologists to interpret the findings to the patient. By using mint Lesion™, we will be better able to track disease progression based on the specific criteria outlined in our clinical trials protocols. This allows us to more quickly see if a patient is responding to study treatments.

## Helping patients with cancer manage hyperglycemia

Hyperglycemia is a common and potentially serious complication related to the administration of apelisib — the first PI3K inhibitor approved for treatment of metastatic breast cancer when used in combination with fulvestrant (endocrine therapy). To address this challenge, we reached out to International Diabetes Center, another center within HealthPartners Institute. They are a leader in continuous glucose monitoring (CGM) research.

Together we developed a study using CGM to improve the clinical management and outcomes of hyperglycemia in patients using various chemotherapy regimens. Our goal is to better understand hyperglycemia so we can help patients manage this condition. The study, funded by Novartis Pharmaceuticals, will start in early 2022.

## Bringing treatment for rare form of melanoma to the Midwest: An update

For patients who have metastatic uveal melanoma, treatment studies are hard to find. Last year, we launched and led a study for uveal melanoma at Regions Hospital and Frauenthuh Cancer Center. This was important for patients in our region as it was one of only three available studies for this disease in the Midwest. Using a combination of two experimental drugs, PAC-1 and entrectinib, we sought the most effective doses with the fewest number of side effects. We completed enrollment on the first dose level, which has proven to be safe. We will start enrolling patients on the second dose level in early 2022.

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 Carter Family Foundation, the Engdahl Family Foundation, and the many patients, families and community organizations who make this work possible.

## BY THE NUMBERS

94

The number of patients we saw in our CanCaRE clinic in 2021.

19

Our clinical trials are available for 19 different cancer types.

30

Cancer Research Center currently has 30 actively accruing studies.

30

Number of patients enrolled in Phase 1 clinical trials in 2021.

38

Number of advanced practitioners serving as primary or sub-investigator on clinical trials.

197

Number of patients pre-screened to participate in clinical trials.

63

Number of patients newly enrolled in our studies in 2021.





## Evaluating cannabis use in national online survey

Despite a lack of data, nearly one in four patients with cancer who use cannabis believe it may treat their cancer, at times foregoing traditional therapy. With the help of HealthPartners Institute's Center for Evaluation and Survey Research, our research team created a survey to better understand cannabis use and beliefs among patients with cancer who use cannabis. Our findings were presented by Dylan Zylla, MD, MS, at the annual International Cannabinoid Research Society Symposium in June 2021.

The online survey was completed by 730 patients with cancer from 14 countries and 38 U.S. states. Nearly 75% of those patients said they were currently using cannabis, and 39% of cannabis users believed that cannabis helped treat or control their cancer, in addition to alleviating symptoms. The type of cannabis used, and dosage, varied greatly among patients. Many patients were using cannabis along with standard therapies.

We recently launched the second phase of this project, and plan to compile a case series to validate these claims.

### 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

**Arkadiusz Dudek, MD, PhD**  
Early Phase Therapeutics Program (EPTP)  
Medical Director

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

**Yan Ji, MD, PhD**  
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**Tom Gavin**  
Program Operations Supervisor



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## Select publications

Each year, our authors contribute to science and improvements in care by disseminating their research findings. In 2021, our authors published 14 peer-reviewed papers, books and book chapters. Here's a selection of that work.

Buras AL, **Mallen AR**, Wenham RM, Montejo ME. Stage IIIc endometrial cancer review: current controversies in adjuvant therapy [review]. *Gynecol Oncol Rep.* 2021 May;36:100754.

Hensing TA, Wang X, Stinchcombe TE, Gao J, Knopp MV, Watson M, **Dudek AZ**, Graziano SL, Patel JD, Faller BA, Dragnev KH, Kozono D, Vokes EE. Alliance Foundation Trial 09: a randomized, multicenter, phase 2 trial evaluating two sequences of pembrolizumab and standard platinum-based chemotherapy in patients with metastatic NSCLC. *JTO Clin Res Rep.* 2021 Jul 13;2(8):100208.

**Zylla DM, Eklund JP, Gilmore GE, Gavenda A, Guggisberg JM, Vazquez-Benitez G, Pawloski PA**, Arneson T, Richter SA, Birnbaum AK, Dahmer S, Tracy M, **Dudek AZ**. A randomized trial of medical cannabis in patients with stage IV cancers to assess feasibility, dose requirements, impact on pain and opioid use, safety, and overall patient satisfaction. *Support Care Cancer.* 2021 Dec;29(12):7471-8.

**Guggisberg J, Schumacher M, Gilmore G, Zylla DM**. Cannabis as an anticancer agent: a review of clinical data and assessment of case reports. *Cannabis Cannabinoid Res.* 2021 Aug 7 [epub ahead of print].

Sinicrope FA, Shi Q, Smyrk TC, Goldberg RM, Cohen SJ, Gill S, Kahlenberg MS, Nair S, Shield AF, **Jahagirdar BN**, Jacobson SB, Foster NR, Pollak MN, Alberts SR. Association of adiponectin and vitamin D with tumor infiltrating lymphocytes and survival in stage III colon cancer. *JNCI Cancer Spectr.* 2021 Oct;5(5):pkab070.

Pocobelli G, Dublin S, Bobb JF, Albertson-Junkans L, Andrade SE, Cheetham TC, Salgado G, Griffin MR, Raebel MA, Smith DH, Li DK, **Pawloski PA**, Toh S, Taylor L, Hua W, Horn P, Trinidad JP, Boudreau DM. Prevalence of prescription opioid use during pregnancy in eight US health plans during 2001-2014. *Pharmacoepidemiol Drug Saf.* 2021 Nov;30(11):1541-50.

Skinner H, Hu C, Tsakiridis T, Santana-Davila R, Lu B, Erasmus JJ, Doemer AJ, Videtic GMM, Coster J, Yang AX, Lee RY, Werner-Wasik M, Schaner PE, **McCormack SE**, Esparaz BT, McGarry RC, Bazan J, Struve T, Paulus R, Bradley JD. Addition of metformin to concurrent chemoradiation in patients with locally advanced non-small cell lung cancer: the NRG-LU001 phase 2 randomized clinical trial. *JAMA Oncol.* 2021 Sep;7(9):1324-32.