



April 2025 Update



- MN Lions Survivorship Research Awards
- Childhood Cancer Survivor Program App
- Additional Lions-Supported Survivorship Research
- Recent program updates



- Projects required to have direct application to childhood cancer survivorship
- With the flexibility of available funds, we were able to encourage applications from research areas that had the highest needs:
 - Cardiac health
 - Healthcare delivery
 - Genetic predisposition to late effects
 - Mental health & neurocognitive late effects



Beshay Zordoky, MSc, PhD
Department of Experimental and Clinical Pharmacology
University of Minnesota College of Pharmacy



Role of Immunosenescence in Delayed Cardiac Complications of Chemotherapy





- Childhood cancer survivors have higher risk for heart diseases because of the chemotherapy they receive
- This risk gets even higher (>10x) in survivors with high blood pressure, yet we do not know why this is or how it happens

Dr. Zordoky has developed a mouse model that mimics the human heart with high blood pressure after receiving chemotherapy as a child



Aim 1: Using his mouse model, he tested the short- and long-term effects of chemo on immune organs (bone marrow, spleen, etc.) and showed the effects of high blood pressure on the heart and spleen of adult mice exposed to chemo when they were very young.

Aims 2,3: He showed that certain genetic changes in the mice help protect against the chemo-induced heart damage. More work is being done to understand how this works.

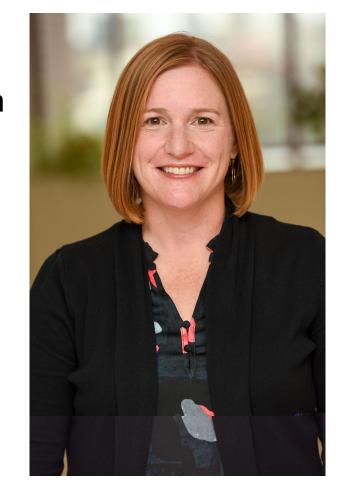
Current Progress: After completing this work, Dr. Zordoky's team presented their data at the 2025 American Association for Cancer Research Annual Meeting and successfully obtained large grant funding from the American Cancer Society!



Jenny Poynter, MPH, PhD
Division of Pediatric Epidemiology and Clinical Research
University of Minnesota Medical School
Associate Director for Community Outreach and
Engagement, Masonic Cancer Center

Project Title:

Genetic susceptibility to platinum-related neurotoxicity in pediatric adolescent germ cell tumor survivors





- Platinum chemotherapies are commonly used in children and young adults with germ cell tumors –use of cisplatin has resulted in survival >90%
- Short- and long-term consequences of cisplatin include hearing loss and neuropathy

Dr. Poynter has assembled the largest cohort of survivors of germ cell tumors to date—she will examine whether survivors' genetics predict their likelihood of developing hearing loss or neuropathy







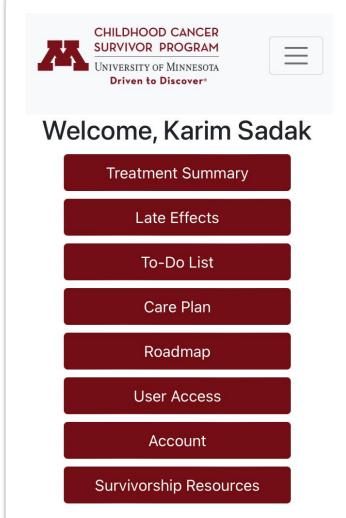


- Up and running in late 2024
- ~30 childhood cancer survivors now have the app on their phones

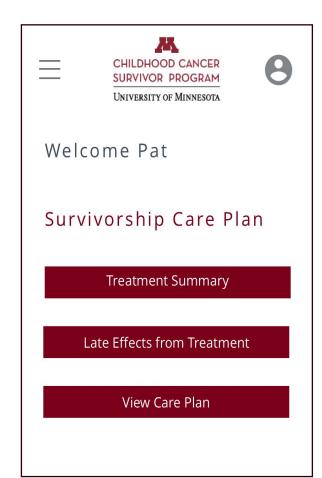












- The foundation of our survivor care

 Survivor Care Plan
- Survivor Care Plan summarizes a patient's cancer journey:
 - Diagnosis information and all their prior treatments
 - List of health conditions caused by their prior treatments
 - Roadmap for the future (what tests to get, why they're needed, when to get them and for how long we need to get them)



- Great interest and excitement from survivors
- Set-up has been done both in-person and remotely
 - ~5-10 minutes
- Feedback has been real time with great suggestions
 - "This would have been great right when I entered the survivorship program"
 - "There's some times in my life I would use the app a lot and other times when I won't need it for months."





Feedback is coming in through a survey sent to survivors:

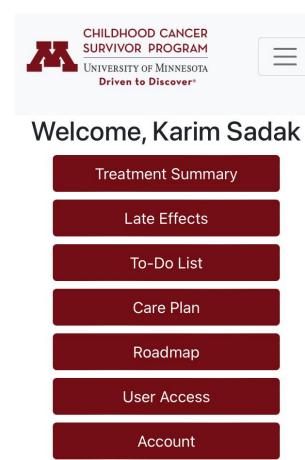
Please rate the experience of getting your account set up for the app and adding it as an app on your phone.

What did you think about the amount of time spent setting up your new account on the app?

Do you feel that the process to create your account got in the way of your care during your visit?

Did you have any troubles when you tried to get into the app, after your initial set up?

Is there anything we could have done differently with this process so far? Or other general comments.

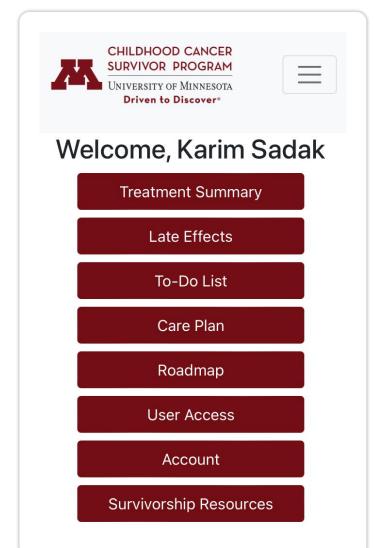




Survivorship Resources

I can't wait to use this!

It was fine!





The sign in process was quick, easy, and user friendly.



Feedback will continue to be collected:

(1) Surveys

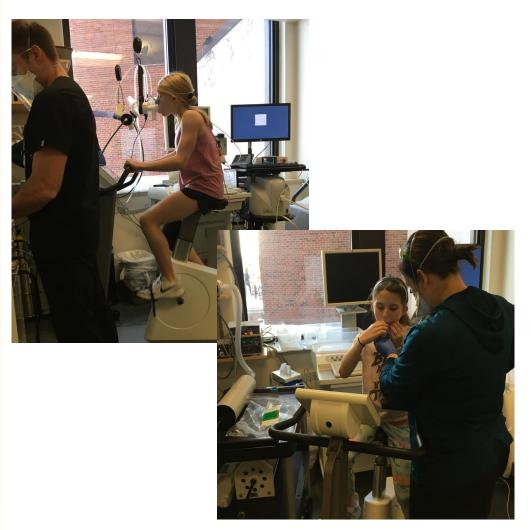
- Immediately after getting the app (about the set up process)
- After 6-12 months (about how they are using the app and what they think about it)

(2) Utilization Data

- Tracking the sections of the app that survivors access (content)
- Looking at how often and when survivors are using the app (timing)
- Take this feedback to the IT team to make improvements



The ALL-CHAMPS Study



- Childhood cancer treatments involve chemotherapy drugs that alter how nerves in the body work, this is called <u>peripheral</u> <u>neuropathy</u>
- Cancer survivors are left with numbness, tingling, pain or weakness in their arms and legs. This can limit their ability to be physically active
- It is not known how peripheral neuropathy impacts fitness, <u>particularly heart and</u> <u>lung function</u>, among survivors



The ALL-CHAMPS Study

- We are actively recruiting and testing survivors and have had an excellent response rate—survivors are excited to participate and have enjoyed learning about their fitness levels
- Next, we will test healthy controls (non-cancer patients) to compare to the survivors

 We anticipate completing testing this summer and hope to have preliminary data to share next year!



Survivorship Program Updates

- We held our first Survivorship Program retreat in February
 - More than 30 researchers, clinicians and research staff attended
 - Identified program priorities in: Survivorship Care Delivery, Burdens of Cancer Treatment (financial, time toxicity), and Epidemiology/Late Effects
 - Goal to increase program visibility, create new collaborations, and increase survivorship grant funding



Survivorship Program Updates

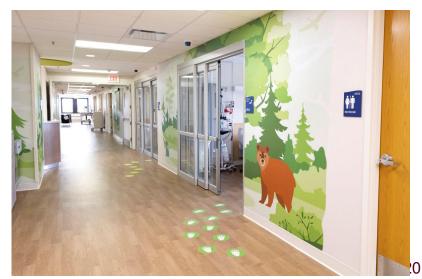
- The Childhood Cancer Survivorship Working Group has become the Late Effects Epidemiology & Genetics (LEEG) Working Group
 - We support the research of multiple pre- and post-doctoral trainees with interest in childhood cancer survivorship, along with 3 data analysts
 - Includes faculty investigators and trainees from multiple disciplines—Epidemiology, Biostatistics, Pediatric Oncology, Public Health
 - Multiple research abstract and manuscript submissions
 - Teaching research and presentation skills and supporting career development
- Ongoing growth and interest will allow us to support additional trainees in the upcoming academic year



Survivorship Program Updates

- The University of Minnesota pediatric oncology and survivorship program clinic was completely renovated this year and now includes a dedicated survivorship research room
- Within the Childhood Cancer Survivorship Program, our team completed nearly 350 visits in 2024!
- Expanding services to provide survivorship care for patients treated at Essentia in Duluth











Thank You!