The annual Strain For The Brain event held June 4, 2016, at Miller Park was another huge success, raising more than $98,000 to fund brain tumor research. The majority of proceeds stay local, supporting research through the Froedtert Hospital Foundation’s Brain Tumor fund. A portion goes to UW-Health for brain tumor research.

Major goals of the Strain For The Brain event are to help prolong lives, find newer treatments and, ultimately, a cure for brain tumors that rob friends and loved ones of so many years. This year, survivors wore green shirts and everyone else wore white shirts with the same logos. Tortoise and Hare, a race timing company, provided official timing for the event.

Strain For The Brain honors the struggles of those who have lost their battles after awe-inspiring and heroic fights. It also honors the efforts of surviving loved ones, who are often overlooked. Neuro-oncologist Jennifer Connelly, MD, joined in the 5K event, along with hundreds of runners and walkers. One survivor who conquered glioblastoma multiforme, a Grade 4 tumor that typically has a short survival time, commented that he was happy to help in any way possible. His presence is always an inspiration to all who attend.

Unpaid organizers such as lead

continued on pg. 3
MR-linac radiation therapy technology may open treatment possibilities for brain tumor patients
Christopher Schultz, MD, Radiation Oncologist

Many patients with brain tumors are familiar with radiation therapy treatment machines or linear accelerators, which we call “linac” for short. These machines accelerate electrons and use powerful magnets to steer negatively charged particles into a metal target. The collision produces photons or “X-rays” that can be focused on tumors. When photons collide with a tumor’s chromosomes, the photons kill, shrink or halt further tumor growth.

If you’ve had radiation therapy, you’re probably familiar with magnetic resonance imaging (MRI) scanners as well. Getting an MRI scan is one of the first things we do when planning a course of radiation therapy. As radiation oncologists, we rely on MRI scans to help outline the borders of the tumor — the target that is to be irradiated. Equally important, the MRI scan helps us identify uninvolved brain tissue that we want to avoid treating to minimize side effects. The trick is to conform the size and shape of the high dose, tumor-killing radiation beam to be slightly larger than the size and shape of the tumor while keeping the radiation dose to surrounding structures as low as possible.

Many of you have experienced a “treatment planning drill,” at the beginning of treatment. What if we could repeat this process daily or weekly to further personalize treatment by adapting to changes in the size and shape of a tumor during the course of treatment? Until now, linac and MRI machines have been housed separately, making these repeated MRI scans impractical for the patient and treatment team. Because the machines rely on strong magnetic fields and radiofrequency waves – the MRI to generate images and the linac to deliver radiation beams – locating separate machines near each other for convenient imaging before treatment isn’t an option. The MRI’s magnetic fields would affect the electron beam in the linac, causing the linac to malfunction. Magnetic fields and microwave radiation from the linac would degrade MRI image quality.

Now, single device incorporates the function of an MRI imaging device and linac treatment device together without disrupting the function of either machine. Elekta’s MR-linac system was specially engineered to contain magnetic fields and radio frequency waves within each unit. This allows both technologies to function optimally in a single machine.

The MR-linac was delivered to the Froedtert & the Medical College of Wisconsin Clinical Cancer Center at Froedtert Hospital campus on Sept. 17, 2016. MR-linac integrates, for the first time, an ultramodern radiotherapy system and a high-field MRI scanner with novel software. It enables a physician to capture diagnostic-quality images of tumors and surrounding tissues during radiation therapy delivery. The MR-linac is designed to improve targeting of tumor tissue while reducing exposure of healthy tissue to radiation. It could allow physicians to precisely target a tumor and lock onto it during treatment, even when tumor tissue is moving during treatment or changes shape, location, size or composition between treatment sessions.

An added feature of MR imaging is the potential to identify the part of the tumor that is actively growing. That information may provide the opportunity to increase dose just where it is needed.

Froedtert & MCW Froedtert Hospital is the second U.S. and fifth global site to install the MR-linac, joining a global consortium of institutions that are working together to introduce and define the best uses for the new technology. Brain tumors could be one of the first types of tumors to be treated with the MR-linac. Clinical trials are expected to begin in 2017. Learn more: froedtert.com/mrlinac.
As a board-certified physician assistant, my role in the Froedtert & the Medical College of Wisconsin Brain and Spine Tumor Program is to provide clinical services and compassionate support to patients with central nervous system tumors. I also provide care in the neurofibromatosis clinic.

My path toward becoming a physician assistant and working in neuro-oncology was full of twists and turns. It was inspired and propelled by my mother’s diagnosis with a meningioma, a benign brain tumor but a tumor I call, “a big trouble maker.” The journey was long and challenging due to medical complications, but my mother is stable today. It is my privilege to serve a community of patients where my head and my heart are exercised equally. A compassionate and team-based approach is of utmost importance in treating our patients. My goal is to provide high-quality service that recognizes our patients and their families as key members of the care team.

I am a recent addition to neuro-oncology at the Froedtert & MCW Clinical Cancer Center at Froedtert Hospital. I graduated in 2015 from a physician assistant program at Concordia University Wisconsin with a master’s degree in physician assistant studies. During my time with Froedtert Hospital, I have continued to learn from our patients and families, from my supervising physician, Jennifer Connelly, MD, and our neuro-oncology team. I am inspired every day by the beautiful spirits of our patients, and I thank them for allowing me to be a part of their care.

Dr. Connelly, along with radiation oncologist Joseph Bovi, MD, and neurosurgeon Wade Mueller, MD, motivate and inspire patients and families. These doctors, along with many other experts, often speak at the brain tumor support group organized and moderated by Renae O’Keefe, RN. The group meets on the third Tuesday of each month. It is an incredibly helpful resource for those newly diagnosed, undergoing treatment or dealing with recurrences and for longer-term survivors and loved ones, who offer counsel to new members in a supportive and welcoming way.

A new development: Our event has loosely merged with Run With Wolfes, an annual run and walk in Menomonee Falls. Runs With Wolfes honors the Wolfe family’s son, Eric, whom they lost to a brain tumor, and others who suffered or are suffering from brain tumors.

We’re planning the next Strain For The Brain for June 2017 — to be confirmed. We strive to continue these successful events and hope to see you there.

Strain For The Brain, Inc., is a registered 501(c)(3) charitable organization, so donations are tax-deductible to the extent allowed by law, and employee-matched donations are welcome. The Strain For The Brain planning committee consists of unpaid volunteers.

Profile

Magdalena Walentynowicz, MPAS, PA-C

I am very proud to call myself a nurse with the Froedtert & the Medical College of Wisconsin Brain and Spine Tumor Program team. Before joining this team, I worked in allergy; ear, nose and throat; dermatology and a few other clinics at the Froedtert & MCW Town Hall Health Center. I am thankful for a smooth transition into the Brain and Spine Tumor Program with the support of my amazing team members. I am incorporating knowledge from previous experience, while learning new information on a daily basis. On most days, you will find me in the Hope Clinic of the Froedtert & MCW Clinical Cancer Center at Froedtert Hospital, seeing patients or coordinating care over the phone. I was born and raised in Wisconsin and am a huge baseball fan. I have enjoyed getting to know so many of our patients who may be reading this, and I look forward to meeting more in the future.
Support Groups and Events

The Froedtert & MCW Cancer Network offers support groups and sponsors events of interest to brain tumor patients and their families. For more information about our support groups, please visit froedtert.com, or call 414-805-3666 or 800-272-3666 (unless otherwise noted).

BRAIN TUMOR SUPPORT GROUP

The Brain Tumor Support Group is for patients and family members who are looking for information and encouragement. Meetings are designed for open discussion of concerns related to brain tumors with many sessions featuring speakers who focus on a variety of topics specific to this disease.

YOUNG ADULT ONCOLOGY GROUP

Children's Hospital of Wisconsin offers the Young Adult Oncology Group for cancer survivors (on and off treatment) ages 18 to 39. This group provides survivorship support, education and social activities.

CANCER CAREGIVERS SUPPORT GROUP

This support group is for friends, family members or others caring for people with cancer. It promotes open communication of feelings, as well as providing relaxation and stress relief. Various topics of interest to the caregiver are also presented. (This group is made possible by donations to Froedtert Hospital Foundation.)

EPILEPSY SUPPORT GROUP

This support group is open to people with epilepsy, their family members, or caregivers. A guest speaker, each month, speaks on topics of interest related to seizures.

CALENDAR

Brain Tumor Support Group
Third Tuesday of each month
6:15–8 p.m.
Open discussion: 6:15–7 p.m.
Featured speaker: 7–8 p.m.
Froedtert & MCW Clinical Cancer Center at Froedtert Hospital campus,
Conference Room L, First Floor
For topic and speaker information, please see the listing in the Hope Clinic in the Clinical Cancer Center, or call 414-805-3666 or 800-272-3666.

Cancer Caregivers Support Group
Fourth Tuesday of each month
5:30–7 p.m.
Clinical Cancer Center
Conference Room J, Lobby Level
Various speakers are offered.

Young Adult Oncology Group
Meets monthly; Dates and times vary.
Sponsored by Children's Hospital of Wisconsin, the Medical College of Wisconsin and the Clinical Cancer Center.
More information: Kristin Bingen, 414-955-4148 or kbingen@mcw.edu.

Epilepsy Support Group
Fourth Wednesday of each month
6:30-8 p.m.
Froedtert Hospital campus
2NT Conference Room
North Tower, Second Floor
For questions, concerns or suggestions, please call Linda Allen, RN, (Epilepsy Program coordinator) at 414-805-3641 or LeeAnn Lathrop, MSW (social worker) at 414-805-2894.