

# Rhode Island Hospital Breakthroughs

For our friends and supporters.

2022

## GROUND-BREAKING PROCEDURE LEADS TO LIFE-CHANGING RESULTS

**H**aving tremors is . . . and I'll try to say this as kindly as I can . . . a bummer," explains Susan Taylor-Plante. And she should know. Susan has had essential tremor, a nervous system disorder that causes uncontrollable, often violent shaking in the hands—and sometimes affects the head, voice, arms, or legs—since she was just 12 years old.

The cause of essential tremor is unknown, but the results can be severely disabling. For a lifetime, Susan has struggled with daily tasks like eating, drinking, writing, and getting dressed. But now, at 70, things are greatly improving for the grandmother from Fall River, Massachusetts, thanks to a groundbreaking procedure she underwent recently at Rhode Island Hospital called a focused ultrasound thalamotomy. The procedure does not require a skin incision and uses high-intensity focused pressure waves to treat the brain circuit responsible for tremors.

"A lot of neurological diseases, especially movement disorders, result from dysfunction of particular brain circuits," explains Wael Asaad, MD, PhD, Director of the Functional and Epilepsy Neurosurgery Division at the Norman Prince Neurosciences Institute. "In the case of tremors, there is a brain circuit that goes from the cerebellum to the motor cortex through a structure in the middle of the brain called the thalamus, and that tremor signal gets propagated to the motor cortex and ultimately can appear in the hands. For patients like Susan, it prevents them from being able to do basic, everyday things. But, if you can stop that signal from getting to the motor cortex, you can stop the tremors. And that is what this procedure does—it causes a permanent disconnection in that pathway."

### How it works

The procedure, which is available at only one other hospital in New England, is specifically for essential tremor and some



Patient receiving focused ultrasound thalamotomy

**"The results were phenomenal, like a miracle. Now I can watch my grandkids without them asking me 'Why are you always shaking?' or go to a birthday party without worrying if the cake is going to fall all over me when I try to eat it."**

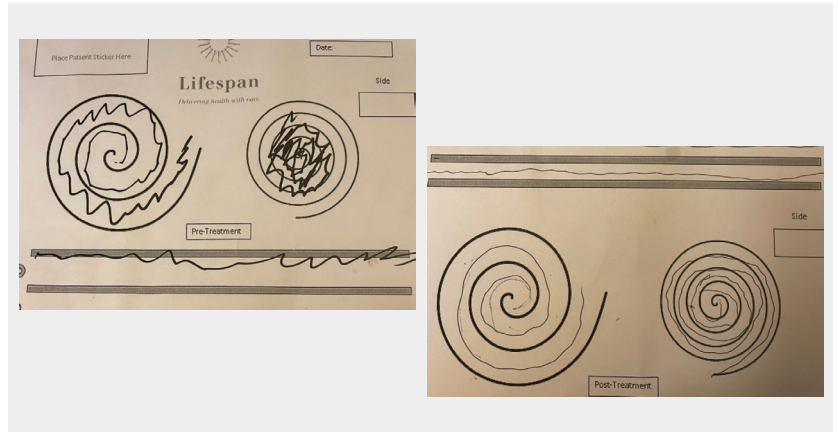
—Susan Taylor-Plante, patient

Parkinson's patients who do not improve with medications. It uses real-time MRI guidance to target the exact spot in the brain responsible for the tremor. Then, an ultrasound helmet sends more than 1,000 beams of energy through the patient's skull to thermally remove the area without damaging surrounding tissue.

*(continued on page 2)*



MRI brain scans detects Parkinson's Disease



A steadier hand. Pre- and post-treatment sketch diagrams show Susan's progress

After each energy application, the patient is instructed to perform tasks—like draw a circle or lines—to gauge the ongoing level of tremor improvement during the treatment and make certain there are no side effects. A final MRI scan is done at the end of the procedure to assess the ablated area. The single-session procedure usually takes about three hours, and, after a short recovery, patients return home the same day.

“The results were phenomenal,” Susan reports, “like a miracle. Now I can watch my grandkids without them asking me ‘Why are you always shaking?’ or go to a birthday party without worrying if the cake is going to fall all over me when I try to eat it.”

Reflecting on her experience, Susan says, “At first, it was scary. I mean, someone is playing with your brain. But the whole team at Rhode Island Hospital was so caring and attentive. From Dr. Asaad, who has the bedside manner of a saint, to the nurse who shaved my head, to the gentleman who did my MRI, and Ann in the office who spoke to me like a friend . . . everyone, they were all wonderful.”

### ‘More promise on the horizon’

Within the last few months, the FDA approved a second target for focused ultrasound treatment, the globus pallidus, a structure in the brain involved in the regulation of voluntary movement that is deranged in Parkinson’s Disease and Dystonia. As a result of that approval, Rhode Island Hospital is now able to offer another exciting procedure: focused ultrasound pallidotomy, which may help certain patients with Parkinson’s Disease. The minimally invasive procedure improves tremors, rigidity, and other motor problems.

Given how advanced the technology is, Dr. Asaad believes that MRI-guided high-intensity focused ultrasound could be used to treat other issues besides tremors in the not-so-distant future. “There’s definitely a lot of promise on the horizon,” Dr. Asaad says, “because new experimental versions of this device have the potential to be even more effective and treat a much wider range of neurological diseases.”

Of course, testing these new techniques and conducting the kind of research needed is an expensive proposition, Dr. Asaad adds, which is why he is so thankful for the generous participation of our donors, who he says, “see the vision in using this technology in innovative and amazing ways.”

**Parkinson's Disease**

**Symptoms**

- TREMOR
- WRITING CHANGES
- SPEECH CHANGES
- RIGID MUSCLES
- IMPAIRED BALANCE

# MEET STEPHANIE GRAFF, MD, LIFESPAN'S NEW DIRECTOR OF BREAST ONCOLOGY

Lifespan recently appointed Stephanie Graff, MD, to serve as Director of Breast Oncology at the Lifespan Cancer Institute. An acclaimed national expert in the field, Dr. Graff shares her thoughts on her new role, the future of breast cancer care, and the power of philanthropy.



Stephanie Graff, MD

## What motivated you to join the Lifespan team?

Lifespan and Brown have tremendous energy and momentum moving toward becoming an NCI-designated cancer center, which recognizes scientific leadership in laboratory and clinical research and supports programs, faculty, and facilities that enable better and more innovative approaches to cancer prevention, diagnosis, and treatment. So, the prospect of helping to build something special here was exciting to me.

## Where is the future of breast cancer care headed?

There is an amazing legacy of multi-disciplinary care here at Lifespan, where breast cancer patients are under the supervision of a comprehensive team of providers. I would like to see us expand that model to include patients living with metastatic disease, rare tumor types, and especially those in clinical trials. It is critical we bring the kinds of clinical trials here that not only help us treat people and the cancers they are diagnosed with today, but advance the translational science that, hopefully, helps us make tomorrow's cancers obsolete.

## Why are clinical trials so important?

I believe the best treatment for any breast cancer patient is in a clinical trial, because you are comparing a current standard of care with something potentially better. Also, trial participants aren't only getting the care of their own doctors and nurses, they are also getting the expertise of the clinical trial safety team. Currently, we are conducting clinical trials to evaluate usage and frequency of the standard oral therapy for patients with metastatic breast cancer; look at novelty targets to see if they are more effective at binding the HER2 protein than historical therapies; study brain metastasis treatments; and explore outcomes for pregnant cancer patients, just to name a few.

## What impact does philanthropy have?

Most of what we do in cancer care is driven by philanthropy. Whether it is training and development, supporting infrastructure, helping us grow our geographic space, you name it. Even when we are opening a clinical trial. We need freezers that go to -80 degrees Fahrenheit, we need couriers who can transport specimens at a certain temperature in a certain timeframe from Newport to Rhode Island Hospital . . . funding resources like these is life-changing to our patients.



# GOLF TOURNAMENT SUPPORTS IMPORTANT RESEARCH

In November 2020, Donald Daniels lost his courageous, three-year battle against glioblastoma (GBM), a rare and very aggressive form of cancer that can occur in the central nervous system. In Donald's case, it was an inoperable brain tumor that proved fatal. To honor his memory, his wife Angela and his family created an event in her late husband's name to raise funds for the hospital she says, "definitely extended his life."

"Donny was an avid golfer and there's nothing else that would honor him more than establishing a tournament in his name," she says. "Knowing how hard he fought the cancer and seeing the level of care he received, I wanted to be able to give back and have his name be part of something that helps Rhode Island Hospital advance its research and increase clinical trials."



Donny golfing during treatment

The inaugural Donald Daniels Memorial Golf Tournament took place in October 2021 at Crestwood Country Club in Rehoboth, Massachusetts. More than 100 golfers participated and raised more than \$13,000. Moving forward, Angela says she hopes to make the tournament an annual event.

"Unfortunately, there's no cure for this disease and research for GBM is much slower than other cancers, like breast cancer, for example," explains Neuro Oncology Nurse Practitioner Arieana Farmiotiotis, who cared for Donny. "In the world of brain tumors, we still have a long way to go—which is why these donations are so important."

If you'd like to participate in this year's tournament, which takes place Monday, August 29, at Crestwood, **please contact Senior Philanthropy Officer, Andrew Miller, at (401) 444-2893 or AMiller16@Lifespan.org.**

## DONOR-SPONSORED RESOURCES BRING RELIEF TO WEARY WORKERS

Being a doctor, nurse, or support staff at Rhode Island Hospital can be stressful during "normal" times, and when you add the challenges of a pandemic, the level is ratcheted up exponentially.

But thanks to more than \$50,000 in contributions from our caring donor family—which were used to fund a respite room and wellness cart—hospital staff has been able to enjoy moments of comfort and calm in the eye of what otherwise has been a stormy time. The respite room, located on the seventh floor of the hospital's main building, features two massage chairs, plants, soothing battery-operated candles, an amber Himalayan salt lamp, aromatherapy, and relaxing rain or ocean sounds. There's also a snack and bottled water station.

For those unable to make it to the respite room during their shifts, the wellness cart comes to them. Several times a week, the cart makes its "rounds" and serves up hot chocolate, tea, coffee, bottled water, granola bars and other snacks to grateful staff.

"These offerings are intended to enhance the physical and emotional well-being of hospital staff and boost their body, mind, and spirit," says Adrienne Walsh, Manager of Volunteer Services. Adrienne and Volunteer Services facilitate both the room and cart and sees firsthand the positive impact they have, which is why she's so appreciative of the support it took to make them happen. "We're honored and grateful to receive the generous donations that were earmarked specifically for employee programming," she explains. "The gifts are so important to our ability to offer these resources."

*Breakthroughs*, a publication of the Rhode Island Hospital Foundation, is published for the friends and supporters of Rhode Island Hospital. For more information, please contact the Development Office at 401-444-6758.

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