UC Health

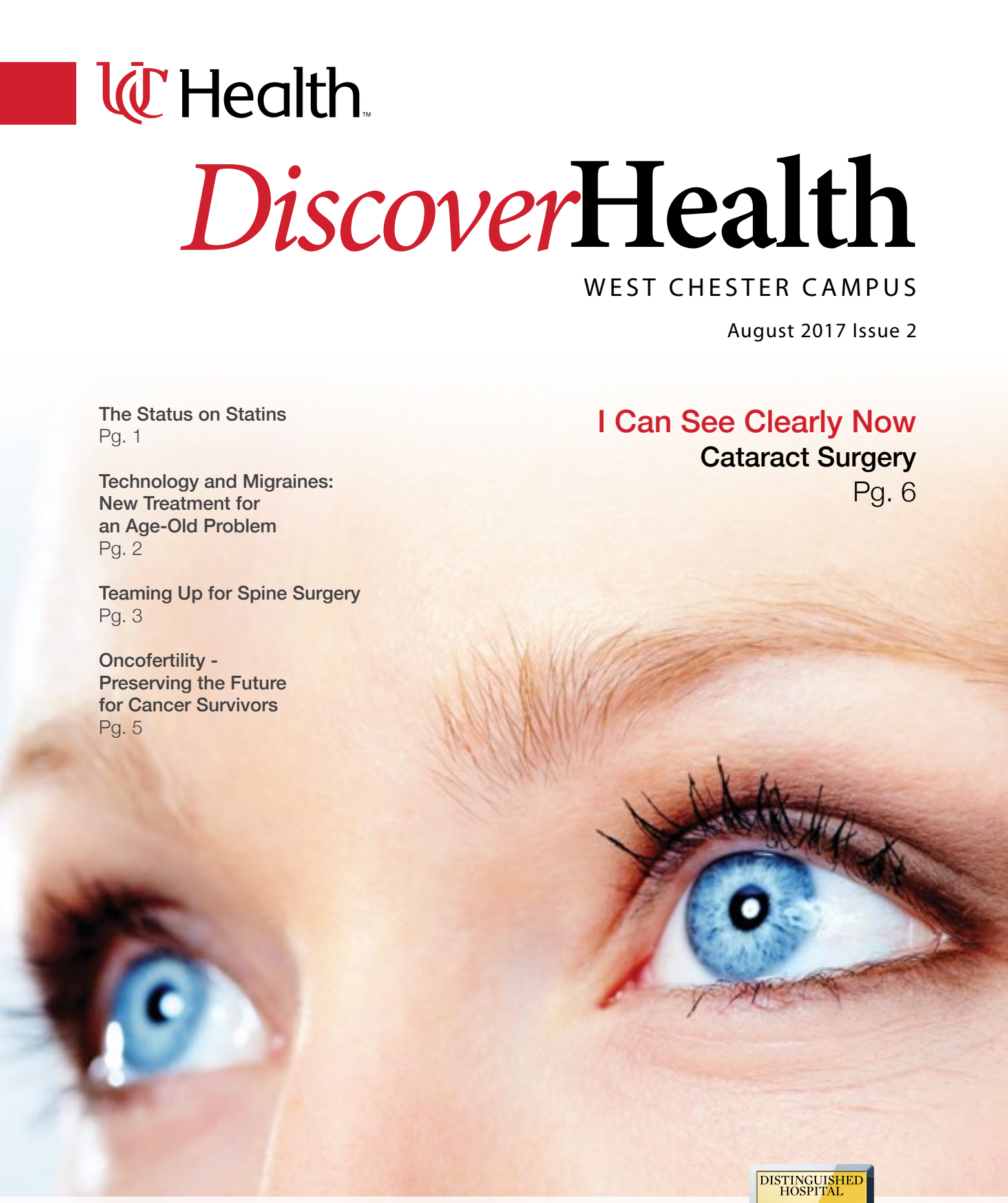
DiscoverHealth

WEST CHESTER CAMPUS

August 2017 Issue 2

I Can See Clearly Now

Cataract Surgery



West Chester Hospital – ranked among the top 5% of hospitals nationwide for clinical excellence

DISTINGUISHED HOSPITAL
CLINICAL EXCELLENCE™
2017
★★★★★
healthgrades

1

The Status on Statins
Can they really help prevent Alzheimer's?

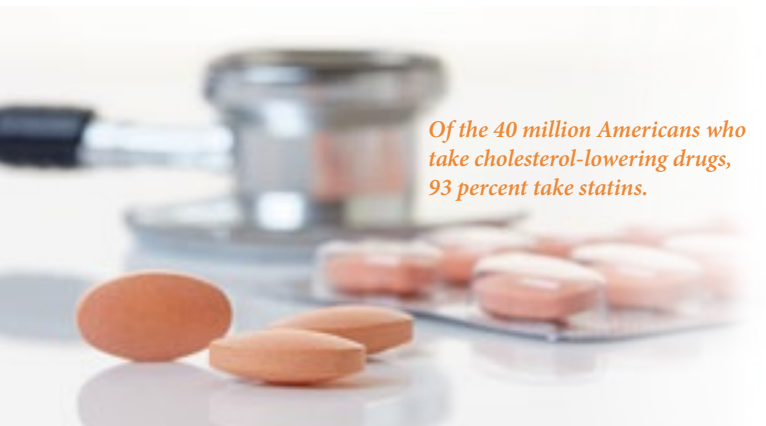
Rhonna Shatz, DO, director of the UC Memory Disorders Center, hears the question at least once a week: "Can statins really help prevent Alzheimer's Disease?"

Findings by *The Journal of the American Medical Association* (JAMA) indicate that high exposure to statins, a common medication used to treat high cholesterol, is associated with a lower risk of Alzheimer's disease in certain populations. The study included nearly 400,000 statin users age 65 and older.

Q: What evidence is there that cholesterol plays a role in memory and thinking? What role do statins play?

Shatz: High LDL ("bad") cholesterol in mid-life increases the risk of Alzheimer's disease, and people with Alzheimer's disease decline faster if they also have high LDL and elevated blood sugar. Research has found that people with cholesterol-induced fatty liver disease have smaller brain volumes, which is a measure of brain aging. Large, long-term randomized controlled trials have shown that exercise and diet, which lower LDL cholesterol, also can help elderly, at-risk patients improve or maintain cognitive function.

Cholesterol is linked to the formation of beta-amyloid, the protein associated with Alzheimer's disease. Decreasing cholesterol may also reduce beta-amyloid production and postpone the onset or progression of Alzheimer's.



Of the 40 million Americans who take cholesterol-lowering drugs, 93 percent take statins.

Q: Can statins provide other benefits in addition to lowering cholesterol?

Shatz: Yes. Statins increase blood flow to the brain and offer protection because of their antioxidant and anti-inflammatory qualities. They may also stimulate the NMDA (N-methyl-D-aspartate) receptor, which is important in the formation of long-term memories.

Rhonna Shatz, DO
Neurologist

There is evidence that the anti-inflammatory effect of statins is more likely to be at work in dementia prevention. Inflammation occurs early in Alzheimer's sufferers, up to two decades before the disease becomes apparent.

Depression and anxiety also are associated with inflammation in the brain. Mood changes including anxiety and depression are recognized as early symptoms of Alzheimer's. Statins improve mood, and the mechanism may be through the reduction of inflammation.

Q: When should people consider taking statins?

Shatz: At any age, and as early as possible, statin therapy should be prescribed for high LDL cholesterol. Because of increasing childhood obesity, cholesterol screening should begin in childhood. Individuals with a family history of Alzheimer's might consider initiating statins regardless of cholesterol levels. New-onset anxiety or depression in mid-life should be recognized as a symptom of brain stress, and statins may be the most targeted treatment.

There is overwhelming evidence that statin use is protective, particularly if used before any cognitive symptoms are present. This means that statins – in addition to high-quality sleep — may be the best available treatment for dementia that we have in 2017.

Learn more about about the UC Memory Disorders Center by visiting UCHealth.com/memory-disorders.

Heart Attack Treatment Might be in Your Face

Researchers at the University of Cincinnati have received $2.4 million in federal funding to pursue research on a new cell therapy that would repair heart damage using modified cells taken from the patient's own facial muscle.

"(With current treatment methods) there is very limited heart muscle regeneration after a person has a heart attack," says principal investigator Yi-Gang Wang, MD, PhD, professor in the UC Department of Pathology and Laboratory Medicine and director of Regenerative Medicine Research at the UC College of Medicine.

These methods include medication therapy, heart bypass or heart transplant, but none of these treatments can regenerate cells lost during heart attack.

Over the last decade, Dr. Wang's research team has determined that facial muscle (masseter) cells develop in close proximity to heart muscle cells (cardiomyocytes) and have similar gene expression. By removing certain skeletal muscle genes and enhancing cardiac genes, masseter cells can be "reprogrammed" into cells that have an identical genetic make-up to cardiomyocytes, including the ability to spontaneously beat to pump blood.

These cells would then be administered via injection or a patch, Wang says.

"One of the major advantages of this technique in the clinical setting will be that cells taken from the patient lessens the risk of rejection and tumor formation. These are your own natural cells," says Dr. Wang.

A Drug-Free Tool for Migraine Prevention

2

Anyone who has experienced migraine headaches is all too familiar with the excruciating pain they may cause. Treating migraines can feel like chasing a moving target, but as technology and medicine advance, so do the options for relief.

Brinder Vij, MD, associate director of the UC Health Headache and Facial Pain Center, is exploring the recently FDA-approved electrotherapeutical system Cefaly® as an option for treating patients with frequent episodic migraines.

"Neurostimulation has been used as a pain management tool at headache centers for a long time. We are now offering the Cefaly device at West Chester Hospital to provide our patients with another tool for prevention," says Dr. Vij.

Cefaly, popular in Canada since its certification in 2010, is now available in the U.S. Its new, pocket-sized design comes with a USB cable, a wall charger, an electrode and a storage case – allowing for convenient use at home or on the go.

Cefaly works through safe, painless neurostimulation of the nerves known to transmit migraine pain: a bundle of nerves called the trigeminal nerve. Referred to as "the great sensory nerve of the head and neck," the trigeminal nerve acts as the physiological gate to channel pain signals to the brain.

"Micro-stimulation to the area helps the nerve endings to produce endorphins, which are natural, pain-relieving radicals," says Dr. Vij. "Cefaly vibrates, stimulating the area, and floods that physiological gate with non-painful signals – crowding out any painful signals that are trying to get through to the brain."

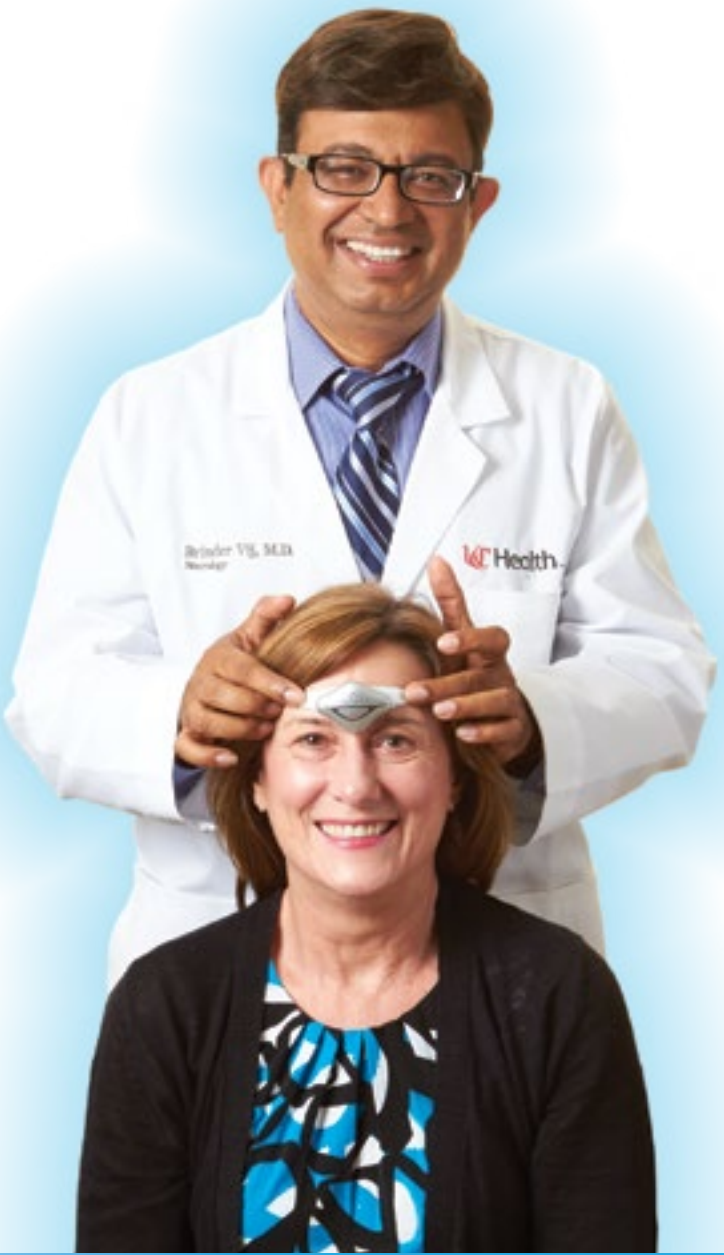
Using Cefaly is easy: simply apply an adhesive electrode to the forehead, connect Cefaly to the electrode (it is magnetized) and press the power button. Micro-impulses begin to stimulate the trigeminal nerve endings and will last for 20 minutes. The level of stimulation can be ramped up several settings to allow for optimal results.

"Sometimes it takes a few sessions before people become accustomed to the vibrating sensation," says Dr. Vij. "For the patients who say it works for them, Cefaly is like a prevention homerun."

Perhaps the best aspect of Cefaly is that it is an effective, drug-free pain reliever. For migraine sufferers who are overwhelmed with an assortment of side-effect-producing medications, this drug-free option is like a breath of fresh air.

Cefaly requires a prescription and costs approximately $300. The current version is specialized for prevention, but future designs may include settings to stop acute migraine attacks and for stress reduction.

"Migraines affect the productivity of a huge group of people in our community, so I feel satisfied when people tell me that my assistance has given them a higher quality of life," says Dr. Vij.



Learn more about the UC Health Headache and Facial Pain Center by visiting UCHealth.com/headache-facial-pain.

3

Team Approach:
Communication & Collaboration Banish Back Pain

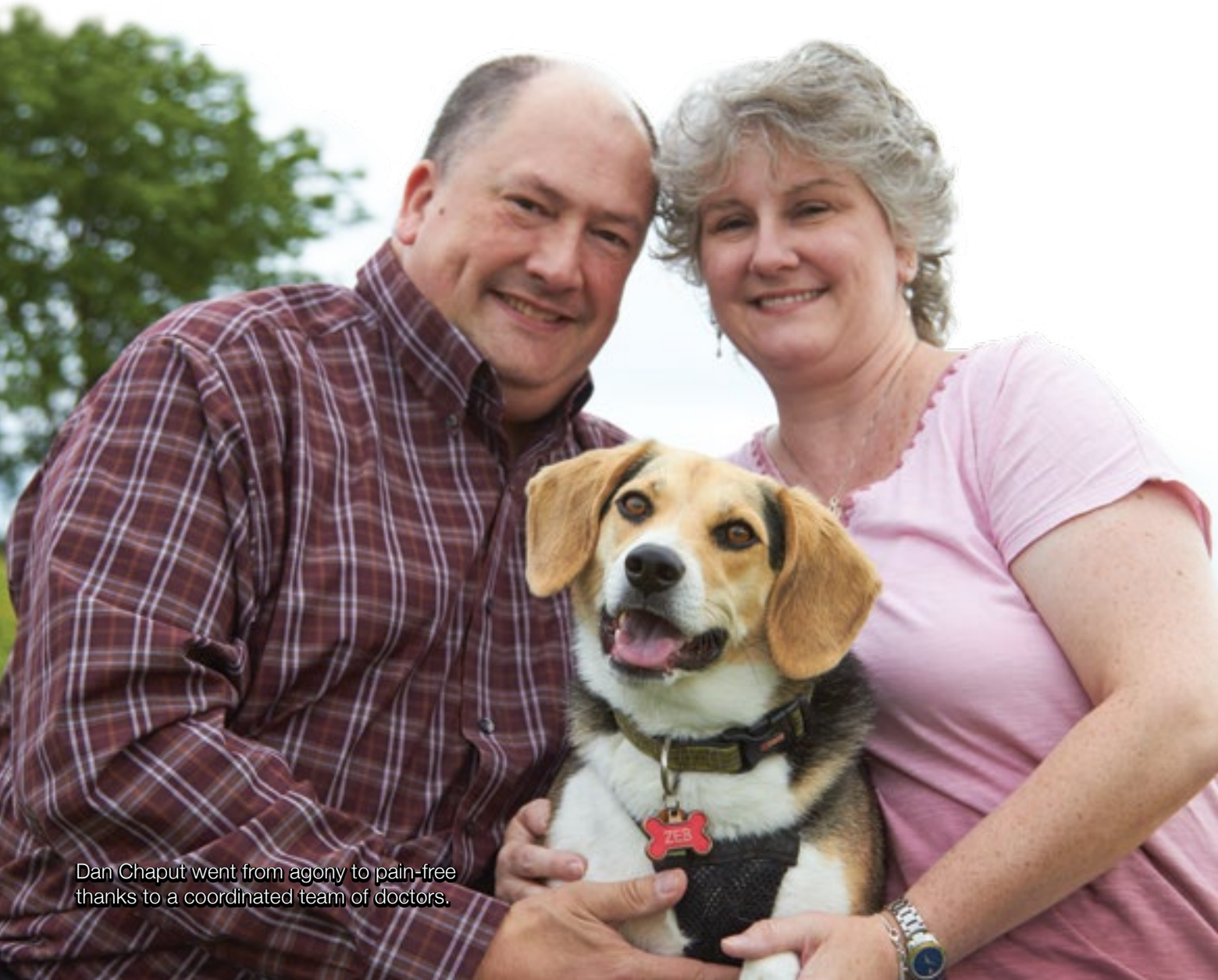
"I was walking through the hospital lobby when I saw a man lying on a bench in obvious pain," says Tom Daskalakis, chief administrative officer for West Chester Hospital. "This was somewhat unusual even for a hospital, so I stopped to see if he needed assistance."

A week earlier, Dan Chaput's back pain became so excruciating it left him unable to sit or stand. Lying flat on his back was the only position that allowed some relief. He made an appointment with his primary care doctor, Kyle Kaufman, MD, but a day later was still in so much pain that his wife insisted on taking him to the West Chester Hospital emergency room.

"After being taken to a bed, he was given the utmost care from the ER staff," says Shanon Chaput. "He was given medications to help relieve the pain and instructions for follow up care."

After first injuring his back in 2015 and recovering with the aid of physical therapy, the injury was exacerbated while mowing his lawn in 2016. A pinched nerve, caused by a dislocated disc in his lower back, was the source of Dan's agony.

"Mr. Chaput was in a severe amount of discomfort when he came to me early on about his back pain," says Dr. Kaufman, a UC Health internal medicine specialist,



Dan Chaput went from agony to pain-free thanks to a coordinated team of doctors.

"We treated him for the disc injury, but as he became intensely uncomfortable, we escalated his care."

Fast forward one week and Dan, still in pain, was lying flat on his back – this time in the West Chester Hospital lobby. When Daskalakis found him on the bench, the hospital leader immediately began making calls to staff and physicians, squeezing in an appointment for Dan to receive an MRI. He also acquired a gurney so that Dan could be moved about the hospital while lying down, because sitting in a wheelchair was unbearable.

Coincidentally, the next day another vital member of Dan's care team saw him lying in the lobby of the UC Health Spine Center awaiting a cortisone shot.

"I was walking through the waiting area and saw a patient in the most-severe pain," says Robert Ernst, MD, a UC Health neuroradiologist at West Chester Hospital and the UC Health Spine Center. "We immediately took him to an exam room to perform an epidural injection to alleviate some of the pain." That same day, Dr. Ernst called Ferhan Asghar, MD, a UC Health spine surgeon at West Chester Hospital and assistant professor in the Department of Orthopaedic Surgery and Sports Medicine at the UC College of Medicine.

"Dr. Ernst told me that Mr. Chaput needed surgery sooner rather than later," says Dr. Asghar, who reviewed the MRI results and agreed with this recommendation. "We were able to schedule his surgery just a few days after his evaluation, and I performed a microdiscectomy (a minimally-invasive surgical procedure used to treat a herniated lumbar disc)."

Dan's pain vanished following the surgery. "I am, and continue to be, completely pain free. I felt well cared for, and my care was highly personalized; I wasn't just another number. Every member of the staff went above and beyond."

Shanon agrees, noting that Kristy, the surgery scheduler at Dr. Asghar's office, "went into overdrive, calling the insurance company to push the surgery approval through, booking time in the OR, scheduling blood work, scheduling the pre-op and imaging with Dr. Kaufman – she even gave the lab her personal cell phone number so we could receive blood work results as quickly as possible."

"The continuum of care and the true team approach to providing the highest level of medical expertise to our patients is what sets UC Health apart." says Daskalakis. "All of Dan's physicians, their staff members, and hospital employees were in constant communication and on the same page regarding his course of treatment."

Dan and Shanon are grateful for the quick response and compassion they were shown. "We are sincerely thankful to Drs. Asghar, Ernst and Kaufman, and the hospital team, for their dedication to us, and the exceptional care we received."

Tom Daskalakis
WCH Chief Administrative Officer

Robert Ernst, MD
Neuroradiologist

Ferhan Asghar, MD
Orthopaedic Surgeon

Kyle Kaufmann, MD
Internal Medicine Physician

Call (513) 298-DOCS to find a doctor who can help relieve your back pain.

5 Oncofertility: Preserving the Future for Cancer Patients

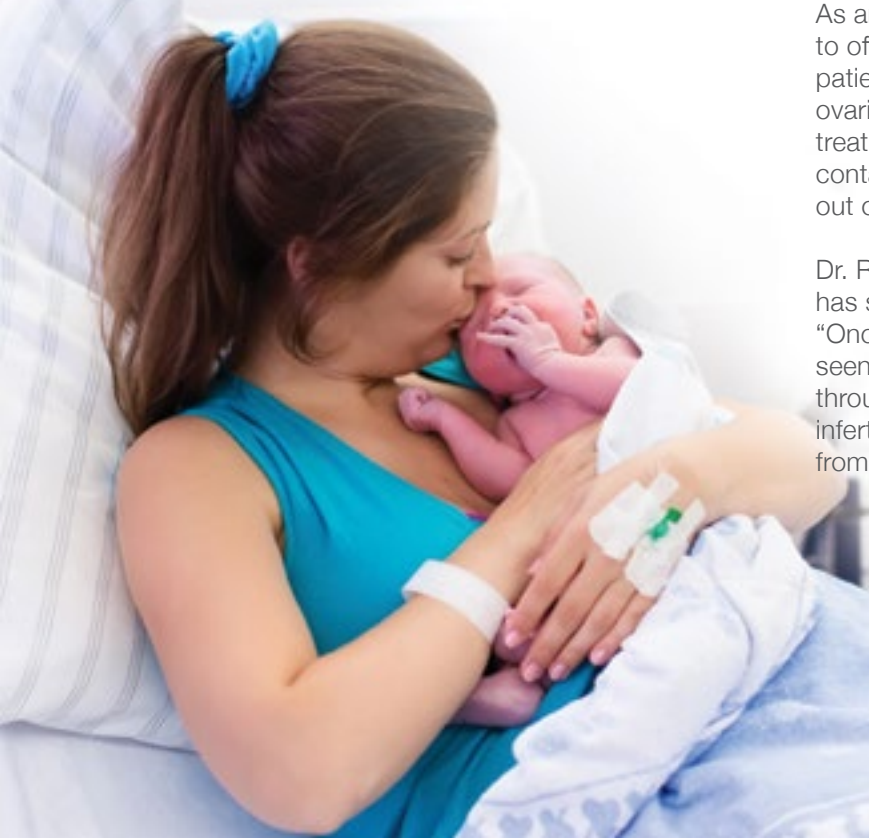
At only 18 months old, Erika Smith* was diagnosed with Wilms tumor (nephroblastoma), a type of cancer that starts in the kidneys. Radiation therapy near Erika's ovaries left her in remission from cancer, but also with decreased reproductive potential.

Now 22, married and hoping to start a family, Erika sought the services of UC Health's Oncofertility Clinic,dedicated to helping people who are diagnosed with cancer, or who are cancer survivors, pursue options to preserve their fertility. "My experience with UC Health has been amazing," says Erika. "At each appointment they take the time to talk with me and carefully assess my results."

Julie Sroga-Rios, MD, a UC Health Assistant Professor of Obstetrics & Gynecology and Director of the UC Health Oncofertility Clinic, says those close relationships with patients are the foundation of the oncofertility program.

"We're an encouraging resource for our patients, offering comprehensive counseling and the knowledge that they have fertility options; that they ultimately have hope," says Dr. Rios.

Erika decided to build up a bank of embryos to use in the future through in vitro fertilization (IVF).



An additional option Erika may pursue is called intrauterine insemination (IUI), which involves placing sperm inside the uterus to facilitate fertilization.

Julie Sroga-Rios, MD
Oncofertility Specialist

"All the staff at UC Health are so warm and kind – they're out of this world," says Erika. "They know it's a difficult experience to go through, and every person in the program is completely on your team."

In addition to the specialized care from physicians, UC Health's Oncofertility Clinic also has a designated oncofertility navigator. Larry Peters, RNA, a UC Health assistant professor in the department of obstetrics and gynecology, shepherds patients through their journey.

Amid the overwhelming flurry of tests, treatments, surgical procedures and other appointments that patients with cancer face, Peters ensures that oncofertility appointments are as seamless as possible at UC Health. "He puts patients at ease right away," says Dr. Rios. "He ensures appointments are scheduled quickly and meets with each patient personally to answer their questions."

As an academic institution, UC Health has the ability to offer experimental techniques and therapies to patients. For example, they are now looking into ovarian tissue cryopreservation (freezing) – a new treatment in which the outer layer of an ovary, which contains a large number of immature eggs, is taken out of the body and frozen for future use.

Dr. Rios was drawn to oncology and fertility and has served as director of the clinic for five years. "Oncofertility merges both worlds," she says. "I've seen patients who didn't have counseling, went through their cancer treatment, and later came to us infertile without many options. I hope to prevent that from happening for as many people as possible."

Call (513) 558-9902 or visit UCHealth.com/fertility for more information about oncofertility services.

** Patient name has been changed for privacy.*

I Can See Clearly Now:
Simultaneously Correcting Cataracts and Astigmatism

Approximately one in three U.S. citizens have astigmatism, as reported by the American Academy of Ophthalmology. Astigmatism causes blurry vision due to the cornea being less than perfectly round.

Patients with both cataracts and astigmatism traditionally undergo two separate surgical procedures to regain clear vision. Now, ophthalmologists are using specialized intraocular lenses (IOLs) to correct both issues with just one surgery.

"We have the benefit of tremendous technology," says Michael Prokopius, MD, a UC Health ophthalmologist at West Chester Hospital. State-of-the-art equipment is used to evaluate patients considering cataract and astigmatism surgery, and to create a single lens that addresses both.

IOLs are implants used to replace the eye's natural lens. Toric IOLs in particular result in better vision without the need for glasses after recovery. Research has shown that toric lenses can correct astigmatism more effectively than limbal relaxing incisions, a common surgical procedure for astigmatism.

"Artificial lenses on the market today are very advanced," says Dr. Prokopius. "The technology is even more advanced in a toric lens as it has to precisely correct the astigmatism in addition to correcting the patient's overall vision."

Michael Prokopius, MD
Ophthalmologist

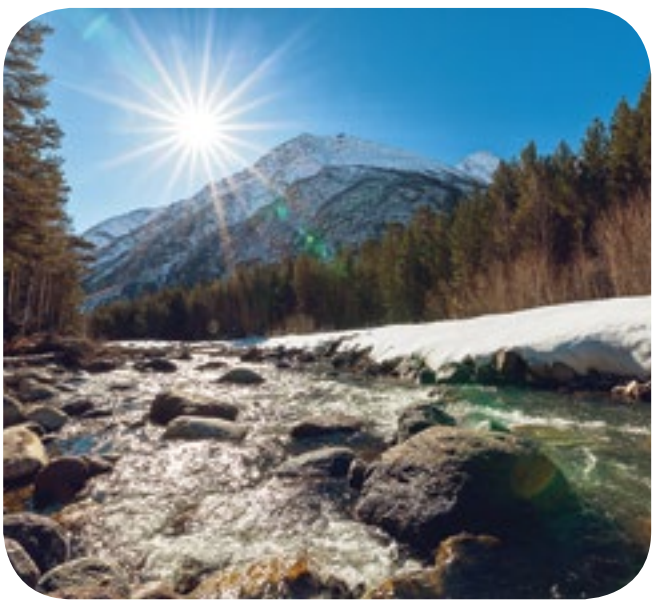
Toric lenses are an out-of-pocket expense. However, the benefits consistently outweigh the cost, according to many patient surveys across the U.S. For example, toric IOLs enable patients to see well without glasses or contact lenses, and to have improved vision when driving at night.

"Depending on how advanced the cataract is along with the type of surgery selected, many patients begin to note vision improvement on the same day of surgery. The typical recovery period is approximately four weeks," says Dr. Prokopius.

Cataracts are a clouding of the eye's lens, causing blurry, foggy, diminished sight. By age 80, more than half of all Americans either have a cataract or have undergone cataract surgery, according to the National Eye Institute.

Call (513) 298-DOCS to find a physician who performs cataract surgery.

Vision with Cataracts



Vision with a Healthy Lens

UC Health
West Chester Hospital
7700 University Drive
West Chester, OH 45069

Discover Health is a quarterly magazine published by UC Health West Chester Hospital to provide accurate and timely health information. It is offered as a health education tool featuring news and stories centered around academic-based, discovery-driven health care. It is not a substitute for consultation with a personal physician. West Chester Hospital is located at 7700 University Drive, West Chester, OH 45069. For information, call (513) 298-3000 or visit UCHealth.com/WestChesterHospital. If you do not wish to receive future issues of this publication, please email WCH@UCHealth.com.

Health Events Calendar

West Chester Hospital is a health information resource for people in its surrounding communities. Events and activities listed are held within West Chester Hospital, 7700 University Drive, West Chester, Ohio 45069, unless otherwise noted.

Upcoming Events

- **Back Pain Seminar**
  Wed., Sept. 27, 7-8:30 p.m. and
  Sat., Sept. 30, 9-10:30 a.m.
- **Reproductive Health Seminar**
  Thurs., Nov. 9 (7-8:30 p.m.) and
  Sat., Nov. 11 (9-10:30 a.m.)
- **Joint Pain Seminar**
  Sat., Dec. 2 (9-10:30 a.m.) and
  Wed., Dec. 6 (7-8:30 p.m.)
- **Weight Loss Information Seminars**
  Free seminars are available for both surgical and non-surgical weight loss programs. Visit UCHealth.com/weightloss to register or call (513) 939-2263 to learn more.
- **Diabetes Seminar**
  Sat., Sept. 23, 9 a.m. - Noon
  To register, call (513) 298-FAST (3278)

  Diabetes Support Group
  Free for adults with type 1 and type 2 diabetes.
  Multiple dates available. Call (513) 475-7400 for information.
- **Childbirth Education Classes & Tours**
  Maternity unit tours are offered free of charge. Childbirth education and newborn care classes are available at a minimal cost. To register, visit UCHealth.com/WCHEvents. Breastfeeding support group is available every Wednesday at 10 a.m. Learn more at UCHealth.com/BabyCafe.

Register for events online at UCHealth.com/WCHEvents or by calling (513) 298-3000. Seminars are held in the plaza conference room located on level A of the hospital.