Better Health Brought Home to You

SPRING 2010

UT SOUTHWESTERN MED

New cancer screening guidelines: Do they make sense for you?

Latest twist in neck surgery

Lose weight the smart way

medical MARVEL

How this high-tech device kept Michael LeBlanc going without a heartbeat

UT SOUTHWESTERN
MEDICAL CENTER
UNIVERSITY HOSPITALS & CLINICS

REQUEST AN APPOINTMENT AT UTSOUTHWESTERN.ORG

About UT Southwestern Medical Center

UT Southwestern Medical Center ranks among the top academic medical centers in the world. Our mission is to improve health through innovative patient care, research, and education. Founded in 1943, UT Southwestern has evolved rapidly into a premier research institution, pioneering breakthroughs in cancer, cardiovascular disease, neurosciences, and women's health. UT Southwestern's faculty includes four members awarded Nobel Prizes since 1985. Patient care is provided in our university hospitals and clinics, where we offer the latest advanced treatments and technologies.

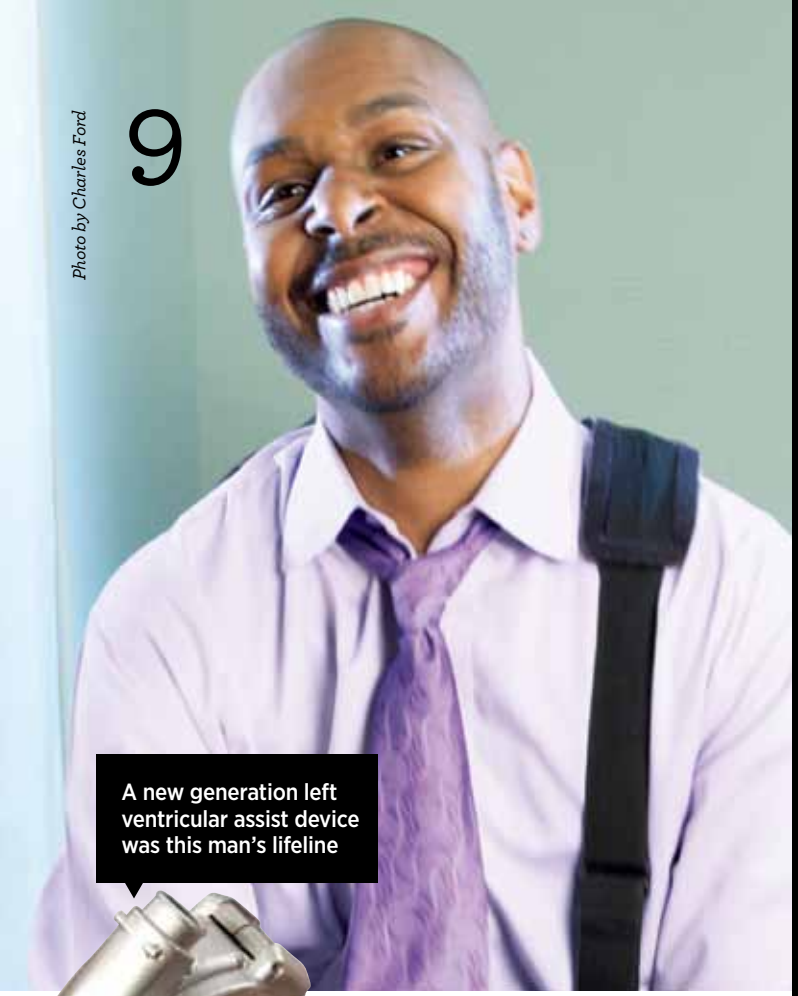


Photo by Charles Ford

9

A new generation left ventricular assist device was this man's lifeline

"I was blacking out for no reason, which was weird because I don't really get sick. I kept getting weaker and weaker."

—Michael LeBlanc, on his mysterious life-changing illness

FEATURES

A Sneak Peek Inside

5

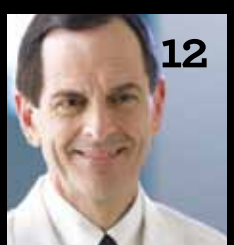
"Starving yourself doesn't work. On an ongoing basis, you've got to have a healthy dietary program overall. A diet can't just be about losing weight."

—Eve Guth, MD, on mistakes dieters make

9

"Heart transplantation is still the gold standard in terms of long-term survival. However, with technology rapidly advancing, patients may someday be able to use LVAD devices indefinitely."

—Dan Meyer, MD, on a new device that helps failing hearts



12

"The purpose of the neck is to provide range of motion for your senses. With fusion you lose some mobility. With the artificial disk, you lose nothing."

—Kevin Gill, MD, on an artificial disk for neck and arm pain

CONTENTS

SPRING 2010

On the cover *Michael LeBlanc holds his new generation heart pump. Photo by Charles Ford.*

The future of medicine, today

Modern medicine is at its best when innovation and discovery intersect with excellent patient care. But that convergence is not simply serendipitous, at least not at UT Southwestern Medical Center; it's by design. As an academic medical center and a leading research facility with some of the country's foremost medical minds, our mission is to push the frontiers of medicine while bringing the latest advances to patient care. We're not just keeping pace with medicine; we're delivering the future of medicine, today.

Take, for instance, our story on page 9 about a young man whose heart stopped beating for six months, yet with the help of new technology and skilled UT Southwestern surgeons, he survived while waiting for his ultimate wish to come true.

We also fill you in on an exciting development in the treatment of excruciating neck and arm pain. Traditional treatments over the past 50 years have fixed the pain, but left patients with an unavoidable side effect. Not anymore, thanks in part to a leading UT Southwestern spine surgeon. On page 12, learn about the surgery that's bringing neck and arm care into the 21st century.

In our "3 Questions" story on page 5, we talk to an expert on medically supervised weight loss at UT Southwestern. She offers information on the fastest, healthiest way to lose weight quickly, along with some pitfalls to avoid and issues to consider.

Finally, how do you evaluate the complicated landscape around controversial medical developments? Last fall, medical authorities in the U.S. created shock waves when they recommended changing long-standing guidelines on breast and cervical cancer screening. The implications for women's health care could be enormous. Two UT Southwestern cancer experts offer their thoughts on the controversies on page 6.

We're bringing you modern medicine at its best and a look at the future of medicine, today. Knowledge and information about the latest in medicine can help you and your family be at your best as well, physically speaking—and shape a future that's just as promising.

"...our mission is to push the frontiers of medicine while bringing the latest advances to patient care."

UT SOUTHWESTERN MED

Publisher
Dorothea W. Bonds

Executive Editor
Al Marucci

Managing Editor
Ashlie Brookhart McGill

Creative Director
Shayne Washburn

Art Director
Jay Caldwell

Contributing Editor
Heidi Harris Cannella

Contributing Writers
LaKisha Ladson
Aline McKenzie
Katherine Morales
Connie Piloto
Russell Rian
Amanda Siegfried
Alan Van Zelfden

Contributing Photographers
Charles Ford
David Gresham
Carter Rose

Production
Cheryl Sudol
Kathy Watson

Editorial Consultant
Don Nichols

UT Southwestern Med is published by UT Southwestern Medical Center and produced by the Office of Communications, Marketing and Public Affairs.

UT Southwestern Med strives to offer current news about health topics of interest to our readers. It is not intended to provide personal medical advice, nor to substitute for consultation with a professional health care provider.

If you are receiving multiple copies, have a change of address, or do not wish to receive this publication, please e-mail UTSWMed@utsouthwestern.edu or write to UT Southwestern Med, 6333 Forest Park Rd., Dallas, TX 75235-8519.

A breast cancer doctor who targets the tumor.

And restores the woman.

UT Southwestern is pioneering aggressive cancer treatments without the collateral damage. Dr. Roshni Rao and the team of cancer specialists at UT Southwestern have aggressively pursued new solutions in treating breast cancer. Their minimally invasive surgical techniques have helped hundreds of women beat cancer – without radical tissue removal or disfiguring scars. Dr. Rao understands that being a cancer survivor and being a whole woman should go hand in hand. And she's helping make UT Southwestern the future of cancer care, today.

The future of medicine, today.

Here for you in the heart of Dallas.
utsouthwestern.org | 214-645-8300

UT SOUTHWESTERN
Medical Center

Ophthalmology

With this simple tip, protect your eyes

The same ultraviolet light that browns your skin may also be burning your eyes. "Excessive exposure may increase the risk for the formation of a fleshy tissue over the cornea called pterygium, some forms of cataract, and possibly macular degeneration," says V. Vinod Mootha, MD, Associate Professor of Ophthalmology at UT Southwestern.

Wear sunglasses with UV filters when outdoors for prolonged periods, he says.

When you're choosing sunglasses, keep in mind:

▸▸Lens darkness doesn't guarantee ultraviolet protection.

▸▸Close-fitting glasses with sufficient UVB, UVA blockage may offer even more protection.

You can get professionally fitted and protective eyewear, including sunglasses and goggles, at the UT Southwestern Optical Shop. Call 214-645-2023.

Nutrition

On the run? 3 easy ways you can still eat healthy

A busy lifestyle can lead to a poor diet, but with a little planning and effort, you can eat healthy, says Jo Ann Carson, PhD, a Professor of Clinical Nutrition at UT Southwestern and a registered dietitian. She recommends these **eat-smart strategies**:

1 Prepare food on the weekends that you can eat during the week. "For example, precut your veggies so they're ready to put in a stir fry or a salad."

2 Use the plate method. "Fill one-half of a plate with vegetables that aren't starchy, one-fourth with starchy food, and the other fourth with lean meat. Add fruit and a glass of skim milk."

3 Keep it simple. "The more simple things you prepare, the easier it is to keep the fat, sugar, and salt lower," she says.

Helpful info: Visit nutrition.gov, eatright.org, or utsouthwestern.org/nutrition.

Stress Management

The secret to a perfect vacation

Planning a getaway soon? Leave the baggage behind when taking a vacation, says Munro Cullum, PhD, Chief of Psychology at UT Southwestern.

"Being 'on-call' during vacation can mean being on edge, which can detract from being in the moment and allowing your mind to have a break," he says.

Sufficient de-stressing may take several days, so disconnect from e-mail, voice mail, and anything else tethering you to the 'to-do' world, to the extent possible, he advises. Relax; put life in a broader perspective. And don't forget to get adequate sleep, exercise, and eat a proper diet.

Medical Breakthrough

BODY'S OWN VEINS BEST SOURCE FOR AORTIC GRAFTS

THE DISCOVERY Replacing infected aortic grafts with the body's own veins is more durable and less prone to new infection than using synthetic or cadaver grafts.

THE SIGNIFICANCE Graft infections are one of the most serious complications in patients undergoing aortic grafting procedures for peripheral arterial disease and aortic aneurysms. In about 1 percent to 2 percent of patients, the grafts become infected—a complication that causes amputation and death if left untreated. But a vascular surgical technique pioneered by G. Patrick Clagett, MD, Chief of Vascular Surgery at UT Southwestern, reduces the incidence of reinfection, according to the results of a UT Southwestern study recently published in the *Journal of Vascular Surgery*. Dr. Clagett's procedure removes the infected graft and replaces it with sections of veins from the patient's thighs, rather than another synthetic graft or vessels harvested from human cadavers.

WHAT IT MEANS TO YOU "When we use the patient's own tissue to construct a new graft, it provides an advantage because they are less likely to form clots within the graft and less likely to develop new blockages," says Dr. Clagett. "Patients also need fewer subsequent procedures, a common problem with the other treatments for this complication." In addition, patients don't need to be on lifelong antibiotic therapy because the aortic reconstruction is fashioned with the patient's own tissue, rather than foreign material.

WHAT'S NEXT The use of these large vein grafts has been extended to treating other conditions affecting large arteries throughout the body.

Photo by Carter Rose

Eve Guth, MD

Insider tips from our weight-loss expert on shedding those pounds you need to lose

Q: WHAT'S THE BIGGEST MISTAKE PEOPLE MAKE WHEN TRYING TO LOSE WEIGHT?

Dr. Guth: Many people have unrealistic expectations. They expect to lose 20 pounds in two weeks, and when they don't, they get frustrated and give up. Or, they don't eat healthfully when they diet; they just eat lettuce and nothing else. Starving yourself doesn't work. You've got to put gas in the engine. The liquid protein program we offer at UT Southwestern specifically does that. It's also the fastest way to start losing weight. It's less than 1,000 calories a day with choices like soups and shakes, and most people will lose about three pounds a week. On an ongoing basis, you've got to have a healthy dietary program overall. A diet can't just be about losing weight. A medically supervised program can help.

Q: ARE LAP BAND AND GASTRIC BYPASS SURGERIES GOOD OPTIONS?

Dr. Guth: I always tell patients that surgery should be your last stop. If you can tell yourself that you've tried everything, but can't make it work, that's when surgery may be appropriate. Most insurance companies require at least six months of medically supervised weight loss to qualify for surgery. That has the effect of reinforcing that you've got to make a long-term commitment to diet, exercise, and behavioral change. If you don't, then you're not going to be successful, and you shouldn't have surgery. It introduces an element of personal accountability into weight loss. Some patients lose enough weight during their six-month supervised program that they end up not going to the operating room. Generally, however, if you have a body mass index of 35 or more, surgery is worth thinking about.

Q: IS THERE A PSYCHOLOGICAL REASON FOR OBESITY?

Dr. Guth: There can be. Food is an emotionally loaded social and cultural issue. For instance, in some cultures, food is love; if you go to grandma's house and don't eat, you're insulting grandma. At our clinic, we have a psychologist who works with patients. I've had patients who never realized they gained all that weight the year their mother got sick, or they got a divorce, or a child got involved with drugs. They simply lost control. If there's emotional baggage, it's worth talking to someone; otherwise you're not going to be successful in a weight-loss program.

Dr. Guth, Assistant Professor of Internal Medicine, specializes in obesity prevention and treatment, weight management, and nutrition. She received her medical training at the UCLA School of Medicine and completed a residency in internal medicine at the University of Southern California. To learn more about the medically supervised liquid protein program at UT Southwestern, or to schedule an appointment, call 214-645-8300.

New breast and cervical cancer guidelines challenge long-held beliefs

Last November, U.S. medical authorities recommended changing long-standing guidelines on how often women should be screened for breast and cervical cancer. The bottom line: screen less frequently. Though the new recommendations are by no means the only set of screening guidelines, they did generate lots of reaction. Two UT Southwestern cancer specialists weigh in on the controversies.

Cervical cancer screening—Less testing won't increase risk

By David Scott Miller, MD
Director of the Gynecologic Oncology Program
Professor of Obstetrics and Gynecology
UT Southwestern Medical Center

The timing was coincidental, but the same week that sweeping changes for breast cancer screening were proposed, the American College of Obstetricians and Gynecologists announced new guidelines on how often women should be screened for cervical cancer.

The new guidelines say women should begin cervical cancer screening—Pap tests—at age 21. Thereafter, women should be screened every other year until age 30. After 30, women should be screened only every three years, assuming they have had three consecutive normal tests. Previously, women were advised to get their first Pap test three years after they began having sexual intercourse—but no later than age 21—and to have an annual exam up to age 30. For women 30 and older, the old recommendation was to test every two to three years.

The new guidelines don't apply to women with certain risk factors, such as HIV or organ transplants. Those women may need more frequent screening.

A great success story

Cervical cancer screening has been one of the great public health success stories. Since the introduction of Pap tests, cervical cancer cases and deaths in the U.S. have declined more than 50 percent.

So why tinker with success? It comes down to the desire to decrease unnecessary testing and potentially harmful treatment. Almost all cervical cancer is caused by the human papillomavirus (HPV), a sexually transmitted infection that can take 10 to 20 years to develop from the virus stage to an actual cancer. More often than not, particularly in younger women, the body will clear itself of the HPV infection before it becomes cancer, and treatment isn't needed. (Incidentally, cervical cancer vaccines are highly effective at protecting against HPV, thereby stopping cervical cancer before it can begin.)

Nonetheless, when Pap tests reveal abnormalities or growths in the cervix, the resulting follow-up tests can raise anxiety in patients, and in a small number of cases, increase procedures that can cause problems with future pregnancies, such as premature birth or an increased risk of needing a Cesarean section—or even infertility.

Screening is essential

Routine screening is essential. **Women need to seek out health care providers who understand the issues and are prepared to take responsibility for providing good reproductive health care**.

At UT Southwestern, we have already begun incorporating the new recommendations. Here, women can expect to be seen by a physician knowledgeable about the latest medical thinking, and they'll have access to a team of pathologists experienced in evaluating unclear or questionable diagnoses. That gives women an advantage in their battle against cervical cancer.

Dr. Miller earned his medical degree at the University of Oklahoma and completed a fellowship in gynecologic oncology at Stanford University. He is widely known as an authority on cancers of the female reproductive system. To schedule an appointment, call 214-645-8300.

Breast cancer screening—Not perfect, but it *does* save lives

When the U.S. Preventive Services Task Force, a panel of independent medical experts, announced a significant departure in how often women should be screened for breast cancer, it was jolting news.

For years, women have been advised to have a mammogram every year beginning at age 40. And they've been told to self-exam at home. Now suddenly, women—and doctors—were being told those recommendations were no longer valid.

The new guidelines say women ages 40-49 need not be screened for breast cancer—instead, screening should start at age 50; women ages 50-74 should be screened every two years, rather than annually; and for women 75 or older, there's no benefit to being screened. For any age group, self-screening doesn't help, they say.

The new screening guidelines are for women of average risk of developing breast cancer. Those with a family history of breast cancer or who genetically are predisposed to develop the disease should be screened more often.

But what could have caused such a shocking change in recommendations, and more importantly, what should women do now?

Harm in testing?

The panel's reasoning for making changes came down to this: Early, routine mammography screening may lead to false positive results and subsequent follow-up procedures and treatments that could create anxiety, resulting in psychological harm in patients. The panel concluded these "harms" occurred too frequently for women in their 40s to benefit from screening. But is that really the case?

The positive effects of screening mammography were first reported in the early 1990s. Since then, the death rate from breast cancer has declined 30 percent. Before screening mammography, the mortality rate was unchanged for 50 years. In screened women 40-49 years old—the age group we're being told doesn't need screening—the mortality reduction in clinical trials has been reported as high as 48 percent.

Impact on insurance

The Task Force's recommendations are likely to have an impact on what insurers will, and won't, pay for. Coverage for annual mammograms beginning at age 40 could soon go by the wayside. In my opinion, that would be a tragedy. Much of the progress made in the last 30 years would be lost. It's clear that if breast cancer is found early through screening, a woman will likely have less treatment and a better chance of cure.

That's why the American Cancer Society and I, and many other medical organizations, continue to recommend that women have an annual mammogram beginning at age 40. At a minimum, talk to your doctor about the issues and then determine together the best course for you. At the UT Southwestern Center for Breast Care, we're available and have the expertise to advise you on this important lifesaving issue.

By W. Phil Evans, MD
Director of the Center for Breast Care
Professor of Radiology
UT Southwestern Medical Center

Dr. Evans received his medical training at UT Southwestern. He is a Fellow in the American College of Radiology, President of the Society of Breast Imaging, and a national officer in the American Cancer Society. Dr. Evans sees patients at the UT Southwestern Center for Breast Care. To schedule an appointment, call 214-645-8300.

For a more complete discussion of these issues, visit utsouthwestern.org/screening.

Restoring Women

Breast reconstruction *and* a tummy tuck

With just one cancer-fighting procedure, you can get both

For women worried about the appearance of their breasts following breast cancer surgery, there's even more reason for hope, and perhaps something to look forward to—a thinner waistline—thanks to UT Southwestern plastic surgeons.

With the **DIEP flap procedure**, available at UT Southwestern, surgeons can reconstruct breasts after a mastectomy using skin and fat from the abdomen—offering patients a breast reconstruction and a tummy tuck in the same procedure.

"This procedure can offer women seeking breast reconstruction after a mastectomy the advantages of a more natural breast with the effects of a tummy tuck," says Michel Saint-Cyr, MD, Assistant Professor of Plastic Surgery and one of only about 40 U.S. surgeons routinely performing it.

The procedure can be done immediately after a mastectomy, so patients have breast tissue removed yet awaken with reconstructed breasts. Because surgeons use the patient's own tissue, the breast looks and feels more natural.

The surgery is more complex than traditional reconstructive surgery, but preserves muscles for quicker recovery and less postoperative pain. Nonetheless, the new procedure may not be suitable for everyone.

"It's very important to use an individualized approach to patient care, so that all the latest available options are discussed with the patient," says Dr. Saint-Cyr. "That may not necessarily happen if the physician doesn't have experience in all these procedures."

Innovative Technology

Breathing just got easier for paralysis patients

A breakthrough medical innovation now available at UT Southwestern makes it easier for spinal cord injury patients to breathe easier. A small, surgically implanted device replaces cumbersome external ventilators, making patients more mobile and less likely to incur other respiratory problems.

UT Southwestern is one of only two Texas facilities and just one of 25 nationwide equipped to implant the **NeuRx Diaphragm Pacing System**, which the FDA approved in 2008. Implanting the battery-powered device is less invasive than previous treatments, giving it another advantage over traditional ventilators.

"Patients who have (upper vertebrae) spinal cord injuries are unable to breathe efficiently because the nerve signals no longer function," says Michael DiMaio, MD, Associate Professor of Cardiovascular and Thoracic Surgery at UT Southwestern.

These damaged nerve signals need to be stimulated to induce breathing. The NeuRx device is equipped with four tiny electrodes that physicians implant directly into a patient's diaphragm muscle. The electrodes are connected to an external battery pack that electrically stimulates the muscle and phrenic nerves. When the diaphragm contracts, air enters the lungs, which closely simulates normal breathing.

In addition to spinal cord injury patients, the NeuRx device can also be used on patients with other diseases or conditions that hinder breathing.

Medical Breakthrough

NOVEL RADIATION THERAPY GOOD FOR FRAIL PATIENTS

THE DISCOVERY Stereotactic body radiation therapy (SBRT) is an effective treatment for early-stage lung cancer in patients with coexisting medical problems, according to a recent national study led by UT Southwestern physicians.

THE SIGNIFICANCE Until recently, lung cancer patients suffering simultaneously from other medical issues such as emphysema, stroke, and heart disease had few viable treatment options, because surgically removing tumors from these frail patients presents prohibitive risks. However, UT Southwestern physicians have found that noninvasive SBRT therapy, which delivers multiple high-dose radiation beams to a tumor in a concentrated, precise manner, is highly effective at destroying lung cancer cells. In the study, 98 percent of patients undergoing SBRT therapy did not have a local recurrence of lung cancer, and despite their extreme frailty, more than half were alive three years after diagnosis.

WHAT IT MEANS TO YOU "These findings have changed the standard of care for lung cancer patients with coexisting serious medical problems," says Robert Timmerman, MD, Professor of Radiation Oncology and Neurosurgery at UT Southwestern and national principal investigator of the Radiation Therapy Oncology Group study. According to Dr. Timmerman, results are similar to risks for healthier patients who undergo radical surgery.

WHAT'S NEXT Researchers are conducting clinical studies to determine if SBRT is as beneficial to healthier lung cancer patients who might otherwise opt for radical surgery.

Medical MARVEL

Michael LeBlanc had no discernible heartbeat or blood pressure for six months. Yet, thanks to a positive attitude, UT Southwestern surgeons, and a pocket-sized piece of technology, he's

NOT MISSING A BEAT

Photo by Charles Ford

Photo by Charles Ford

WHILE MOST YOUNG MEN IN THEIR 30S ARE ESTABLISHING CAREERS, FINDING SPOUSES, AND STARTING FAMILIES, MICHAEL LEBLANC WAS FIGHTING FOR HIS LIFE.

He ticks off a list of harrowing ailments that usually affect people almost twice his age. Before his 40th birthday, Michael had already suffered a stroke and a heart attack. Even his mother, Shearlyn LeBlanc, was uncertain of what would happen.

"Michael was getting so bad so fast, we didn't know what was going to happen," she says. "It's the most painful thing you can imagine to watch your child suffer."

But through it all, Michael's unstoppable personality helped guide his family through the minefield of health battles, while UT Southwestern cardiologists and surgeons helped his weakened heart keep pace with his optimism.

Michael moved to the Dallas area 11 years ago from Commerce, Texas, eager to begin shaping his future. But the normal trajectory of his daily life veered wildly one day when he experienced a simple episode of fainting. Thinking he was just fatigued or coming down with something, Michael waited to visit a doctor.

After a few more fainting episodes, however, "I went to the doctor to have myself checked out, and that's when they told me my heart was really weak," Michael says. "I couldn't figure out what had happened."

Life-changing diagnosis

LIKE MOST YOUNG, HEALTHY people, Michael didn't initially comprehend the gravity of his situation.

"I was blacking out for no reason, which was weird because I don't really get sick. I have never been a sickly person," Michael says. "I kept getting weaker and weaker."

After a few more doctors' visits elsewhere in the Dallas/Fort Worth area, Michael received a life-changing diagnosis: heart failure. Occasionally, viruses can attack the heart and leave it severely damaged, but people may not know until months or years later they even had a virus.

Michael's heart continued to weaken, and he sought treatment at a Dallas hospital, where doctors implanted a defibrillator, which delivers electric shocks to the heart if sensors detect it isn't beating effectively.

"Having that thing go off is like getting kicked in the chest by a horse," Michael says. "It was really bad."

Help for a weak heart

EVEN WITH THE DEFIBRILLATOR, Michael suffered a heart attack in April 2009, followed by a stroke in July. Luckily, he was able to get to an emergency room before the stroke did too much damage.

After several more weeks in and out of hospitals, Michael was finally referred to UT Southwestern Medical Center, where he met with cardiologists and cardiovascular and thoracic surgeons. They deemed him a good candidate for the newest generation of a device designed specifically to help patients with seriously weakened hearts, called left-ventricular assist devices, or LVADs.

LVADs partially or completely replace the function of a failing heart by helping the heart move blood throughout the body.

"Michael had cardiomyopathy, which causes the heart to dilate. The muscle becomes weaker, and it can't pump efficiently," explains Dan Meyer, MD, Professor of Cardiovascular and Thoracic Surgery at UT Southwestern and Michael's surgeon. "UT Southwestern has always had a presence in studying new mechanical assist devices, so we were honored to be only one of two sites in the state selected to implant the HeartWare LVAD as part of a national clinical trial."

Dr. Dan Meyer consults with Michael.

Photo by Carter Rose

Michael and his mother, Shearlyn. Love and support helped him pull through.

A pocket-sized lifeline buys time

Michael was the first patient in North Texas to receive this newest LVAD in September 2009 during surgery at UT Southwestern. It was his lifeline while he awaited a heart transplant. The HeartWare Ventricular Assist System is a little smaller than a hockey puck and two and a half times smaller than the earliest LVADs, making it more practical and convenient for patients with damaged or weakened hearts to live normally.

"The pump is designed to rest inside the patient's chest. A small cable attached to the device exits the body and connects to an externally worn controller," says Dr. Meyer, a fellowship-trained physician who is Director of Mechanical Assist Devices at UT Southwestern.

"Heart transplantation is still the gold standard in terms of long-term survival for patients like Michael," says Dr. Meyer. "However, with technology rapidly advancing—making new heart pumps ever more durable—patients may someday be able to use LVAD devices indefinitely."

Getting back to normal

Only a few weeks after his surgery, Michael's energy level started creeping back up. His smile returned to its usual mega wattage, and everyone noticed the difference.

"I was very fortunate to have my Michael back," his mother says. "You couldn't even tell there was anything wrong with him."

Michael was able to adjust to some of the stranger side effects of his new device, including having no discernible heartbeat. The LVAD keeps blood moving continually with no pulsation, so he no longer had a palpable heartbeat or traditionally measurable blood pressure.

Michael was the first patient in North Texas to receive this new technology. It was his lifeline while he awaited a heart transplant.

"It was a little weird. That's for sure," he says of his heartbeat-free status. "But you got used to it fast."

In the meantime, he continued spending time with friends and family, awaiting a phone call that would change his life again—that he had a new heart waiting.

A wish fulfilled

Michael celebrated his 41st birthday in February—a major milestone considering the tribulations he'd endured over the previous 12 months. Ever the survivor, he had one unfulfilled wish: a new heart.

Less than a week after his birthday, Michael's doctors called and told him to come to the hospital immediately. A new heart was waiting.

"It was truly amazing. I'd literally wished for this day to come and four days later, I got the call," says Michael.

He underwent heart transplant surgery at UT Southwestern. Doctors removed the LVAD and his defibrillator. Less than two weeks later, he was back home and adjusting to his new life.

"I'm grateful that my doctors here had the technology and expertise to get me through to this point," Michael says. "If I hadn't had the LVAD, things wouldn't have turned out so well."

GOING MOBILE

With new artificial disks, neck and arm pain sufferers find relief and enjoy a new twist—full mobility

Even now, more than four years later, Caron Boswell still vividly remembers the searing pain in her arm, as puzzling as it was intense.

"I woke up one morning and felt like somebody was yanking my shoulder out of its socket," says the 47-year-old defense industry procurement specialist from Fort Worth. "I was debilitated. I couldn't move. Nothing had happened the night before, and that's what was so mystifying."

For Jay Norelius, the onset of pain was just as sudden and, ultimately, just as excruciating. "I was in California visiting my newest grandson and awoke one morning with a slightly sore neck," says the retired airline pilot from Irving. "But it just progressed and kept getting worse. The pain started moving down my arm and into my wrist, hand, and fingers. By the time I got back home, I couldn't function. The only way I could relieve the pain was to hold my arm up over my head. I knew something was wrong."

A surprising diagnosis

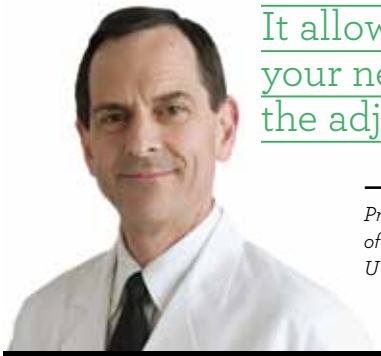
Indeed, something *was* wrong. But what could cause such out-of-the-blue, intense pain? Physicians eventually referred both Caron and Jay to Kevin Gill, MD, Professor and Vice Chair of Orthopaedic Surgery at UT Southwestern Medical Center, who has won international awards for his research in orthopaedics and spine problems. His expert take: The source of their pain was not their arm, but their *neck*—more specifically, a damaged disk between the vertebrae in the upper spine that was pressing against nerves that lead to the arm and hands. And he offered a new way to alleviate their pain—artificial disks—that promised a dramatic improvement over previous methods.

Pain free—and full mobility

For decades, the standard surgical procedure to fix Caron's and Jay's problem was to remove all or part of the damaged disk, insert a bone graft between the vertebrae, and hold it in place with a metal plate. But that approach, known as bone fusion, had significant drawbacks. It limited the patient's mobility, and it tended to wear out the adjacent vertebral disk and lead to another round of surgery. Still, it *was* better than living with horrible arm pain or weakness.

Dr. Gill, however, is an expert in replacing damaged cervical disks with artificial ones that leave patients pain-free—and with full mobility. He is one of just 10 doctors in the U.S. who participated in a clinical trial for an artificial disk, which the FDA approved in 2007. Since then, he has implanted more than 100 in patients.

The artificial disk, (center), is inserted between two vertebrae.



> The beauty of the artificial disk is the mobility it offers. It allows full flexibility of your neck, and it protects the adjacent joints."

—Kevin Gill, MD
Professor and Vice Chair of Orthopaedic Surgery, UT Southwestern Medical Center

"The beauty of the artificial disk is the mobility it offers," says Dr. Gill. "Mobility in the neck really matters. The purpose of the neck is to provide range of motion for your senses—your eyes, nose, ears, and mouth. With fusion, you lose some mobility. With the artificial disk, you lose nothing. It allows full flexibility of your neck, and it protects the adjacent joints."

Opting for mobility

Artificial disk surgery usually lasts about an hour and typically requires an overnight hospital stay. Surgeons make a small 1- to 2-inch incision in the front of the neck, remove the damaged disk, and implant the new artificial one, which is made of polyethylene and stainless steel. Except for some soreness in neck muscles, recovery is quick, usually just a week or two, says Dr. Gill.

Even so, Caron hesitated to undergo surgery back in 2005, instead opting for injections every six months. But when the intense pain suddenly returned in 2008, she knew it was time to have surgery. "Dr. Gill gave me a choice between fusion and artificial disk," she says. "Fusion, in my mind, was never an option. I didn't want it."

Similarly, Jay also opted for the artificial disk. "Being a pilot at the time (in 2004), I didn't want to lose my mobility. I thought it would hamper my career," says Jay. "Plus, I'm an outdoor kind of guy. I didn't want to have something that would limit my physical ability."

Still going strong

Caron's surgery 18 months ago and Jay's nearly six years ago (while the artificial disk was still in clinical trial) have both yielded similar results—no more pain and full mobility.

"Dr. Gill is my hero," says Caron. "Now that I've had this surgery, I'm a new woman. I went from being debilitated and not being able to do anything to being alive. I have so much mobility in my neck. I can do whatever I want to do."

Jay concurs: "It's been a 100 percent success for me. I have no problems with mobility. And going on nearly six years now, I make the assumption that the chances of the problem recurring are small."

Jay also offers this advice for people experiencing pain due to spinal disk damage: "Don't delay getting it fixed, because you're probably not going to get better. It's not going to fix itself. And make sure you see a sophisticated, skilled surgeon who is experienced in this type of procedure."

Dr. Gill sees patients at the UT Southwestern Spine Center, which offers treatments for a wide range of spine and neck problems. No referral is needed. To schedule an appointment with Dr. Gill, or any of the experts at the Spine Center, call 214-645-8300.

Will an artificial disk relieve your pain?

The FDA has approved the artificial disk for use in patients ages 18 to 60 to treat neck and arm pain and weakness. "Depending on the age of the patient, you tend to get different reasons for the problem," says Dr. Gill. "If you're under 50, the pain and weakness are usually caused by a herniated disk. If you're over 50, it's normally bone spurs or the disk simply wearing down. In either case, the pain can start very suddenly and with no warning."

You could be a candidate for cervical artificial disk surgery if you have these signs, says Dr. Gill:

- Sudden neck and arm pain
- Numbness and weakness in the neck and arm
- Loss of shoulder, arm, or hand function
- Symptoms continue for 4 to 6 weeks

Motility/Dysphagia

Some things are hard to swallow

Most of us take swallowing for granted, but for many, it can be an ordeal. Pain while swallowing, not being able to swallow, the sensation of food getting stuck in your throat—they're just some of the symptoms of possible problems with the mechanism that moves food or liquid from your mouth to your stomach. That, in turn, can lead to malnutrition, dehydration, weight loss, or even respiratory problems.

The UT Southwestern Motility and Dysphagia Clinic offers an integrated approach to the diagnosis and treatment of complex swallowing problems and does it in a way that emphasizes convenience for patients.

"Traditionally, patients with difficult swallowing problems are asked to see different specialists and undergo a variety of diagnostic procedures, which can require multiple visits spread out over several weeks or months," says Ted Mau, MD, PhD, Assistant Professor of Otolaryngology–Head and Neck Surgery, who is a clinic member. "Our clinic provides **coordinated care** so that patients can receive the services in one location in a single day."

A visit to the clinic begins with a joint appointment with a gastroenterologist, an otolaryngologist, and a speech-language pathologist. All three specialists see the patient at the same time and interview the patient together. They then discuss the case and determine what diagnostic tests, if any, are needed. Tests are carried out the same day, if possible.

"Treatment can include medical management, diet modifications, visits with a speech-language pathologist for swallowing retraining, Botox injections, esophagus dilations, or even surgery," says Xinqing Fan, MD, Assistant Professor of Internal Medicine, who is also a clinic member. "The Motility and Dysphagia Clinic is an excellent resource for diagnosis and treatment."

To schedule an appointment at the Motility and Dysphagia Clinic, call 214-645-8300.

Hernia/Abdominal Wall

Gut check: expert help for hernia sufferers

Heavy lifting has long been known to cause hernias, but it's by no means the only thing: genetics, poor nutrition, obesity—even persistent sneezing and coughing—can all weaken abdominal muscles and allow internal organs or tissue to push through the abdomen wall, causing pain, discomfort, and unsightly bulges.

Whatever the source of the hernia, the **Hernia and Abdominal Wall Repair Program** at UT Southwestern can help with treatment and repair.

"We handle acquired and congenital hernias in both adults and children," says Edward Livingston, MD, Chief of GI/Endocrine Surgery and Co-Director of the program. "We also offer a full range of services, including imaging, diagnosis, medical management, noninvasive slings and treatments, and both open and laparoscopic surgery, if needed."

Along with hernias, the team offers expertise in surgically treating abdominal walls weakened due to injury or accident, prior surgery, pregnancy, or other causes. Surgeons can also correct genetic and inherited abdominal wall defects in infants and children, make cosmetic repairs, and even correct the results of unsuccessful procedures done elsewhere.

"Patients benefit from the comprehensive, multidisciplinary strategy we use to evaluate and treat hernias and abdominal wall defects," says Andrew Trussler, MD, Assistant Professor of Plastic Surgery and also a Co-Director of the program. "We bring together UT Southwestern experts in GI/endocrine surgery, general surgery, plastic surgery, internal medicine, imaging, and radiology, as well as pediatric surgeons and specialists. And we do it all in a centralized location. No other facility in North Texas provides the scope and convenience of service that we offer."

To schedule an appointment, call 214-645-8300.

Pulmonary Hypertension

A nice breath of fresh air

That shortness of breath, fatigue, and even chest pain you've been feeling may not simply be an indication you're out of shape—it could be pulmonary hypertension, a lung disorder in which arteries that carry blood from the heart to the lungs become narrowed. A visit with the pulmonary specialists at UT Southwestern could have you breathing easier.

"We currently provide treatment with new therapies to more than 1,000 patients," says Fernando Torres, MD, Associate Professor of Internal Medicine and Director of the Pulmonary Hypertension Program at UT Southwestern.

Among the treatments offered are **noninvasive imaging techniques**.

"We're at the forefront of using cardiac MRI technology and are the only program in Texas routinely using it to manage and treat pulmonary hypertension," says Dr. Torres.

The pulmonary hypertension clinic is staffed with two board-certified physicians, two nurse practitioners, and a full complement of nurses and medical assistants. Staff members work closely with referring cardiologists, pulmonologists, rheumatologists, and primary care physicians to provide comprehensive care. Patients who have a substandard response to therapies can be referred to the lung transplant team for evaluation.

"Our specialists have the knowledge and experience needed to diagnose the problem, determine the correct course of treatment, and then implement it," says Dr. Torres. "We provide comprehensive care—from diagnosis to long-term management—for patients with this challenging lung disease."

To schedule an appointment, call 214-645-8300.

DID YOU KNOW? The Pulmonary Hypertension Program at UT Southwestern Medical Center is one of the largest centers of its kind in the United States and the largest in North Texas.

Personalized Health Care

MyChart—your secure, online health connection

It's like a 24/7 house call. Whichever clinic you visit at UT Southwestern Medical Center, you can conveniently review your health records, send a message to your doctor, request prescription refills, receive laboratory results, review physician instructions, make appointments, and much more—all online—via UT Southwestern's secure Internet portal called "MyChart."

MyChart is easy to use and navigate, making the link between you and your health information as fast as a keystroke. And it's available whenever you need it—from home or at work—so you won't have to wait until your clinic or physician's office is open.

"MyChart helps you become an active member of your health care team," says Bruce Meyer, MD, Executive Vice President for Health System Affairs. "It enables you and your physician to work together as partners in your treatment."

Information in MyChart is encrypted, so no one will be able to see your personal information online but you. Enrollment is voluntary and free; simply ask to be enrolled during your next visit to any UT Southwestern clinic. You'll be given an initial access code that will allow you to set up your own login identification and password from the privacy of your computer.

"MyChart is a **fast, easy way to enhance your health care experience**," says Dr. Meyer. However, don't use it to send messages requiring urgent attention. "For urgent medical matters," he advises, "contact your physician's office, call 9-1-1, or go to a local emergency room."

To learn more about MyChart, visit utsouthwestern.org and click on the quick link for MyChart.

Recent faculty awards and honors

David W. Russell, PhD
Professor of Molecular Genetics

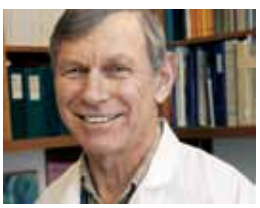
The award: The American Society for Biochemistry and Molecular Biology's 2010 Avanti Award in Lipids recognizing outstanding contributions in lipid research.

His work: For nearly 30 years, Dr. Russell has dedicated himself to defining the role various enzymes play in metabolically breaking down cholesterol into components such as sterol hormones, vitamins, and bile acids. His research not only has revealed important aspects that govern the regulation of this biochemical process, it also has identified genes that trigger diseases when cholesterol and lipids are metabolized abnormally. Dr. Russell's lipid research has garnered him numerous national awards since he joined UT Southwestern in 1982. He was elected to the National Academy of Sciences in 2006.

Peter Snell, PhD
Adjunct Associate Professor of Internal Medicine

The award: The New Zealand Order of Merit knighthood, a title bestowed upon those who have distinguished themselves by their eminence, talents, contributions, or other merits.

His achievements: As Director of the UT Southwestern Human Performance Laboratory, Dr. Snell conducts exercise and metabolic studies on patients with a variety of adverse metabolic conditions. He focuses on exercise training and its impact on athletic performance, aging, and health, particularly the prevention of heart disease. Dr. Snell is also widely known for his athletic achievements, including breaking the world record in the one-mile run in 1962. While competing for his native New Zealand, he won a gold medal during the 1960 Olympics in Rome with a record-setting victory in the 800-meter race. He won two additional gold medals during the 1964 Olympics in Tokyo competing in the 800-meter and 1,500-meter races.



Daniel K. Podolsky, MD
President, UT Southwestern Medical Center

The award: Election to the Institute of Medicine, a component of the prestigious National Academy of Sciences. Inductees are selected based on international distinction in science, clinical medicine, public health, or medical administration. Institute members shape policies affecting public health and advise the federal government on issues involving medical care, research, and education.

His achievements: Dr. Podolsky is an authority on inflammatory bowel disease and served as Chief of Gastroenterology at Massachusetts General Hospital for 19 years. In 2009, the American Gastroenterological Association awarded him the Julius Friedenwald Medal for Distinguished Service—the association's highest honor—for his lifelong contributions to the field of gastroenterology. Most recently he has been engaged in exploring how intestinal cells guide immune responses and the body's symbiotic relationship between its own intestinal cells and the microflora. Prior to becoming President of UT Southwestern in September 2008, he served as Chief Academic Officer at Partners HealthCare.

H. Dwight Cavanagh, MD, PhD
Vice Chair of Ophthalmology

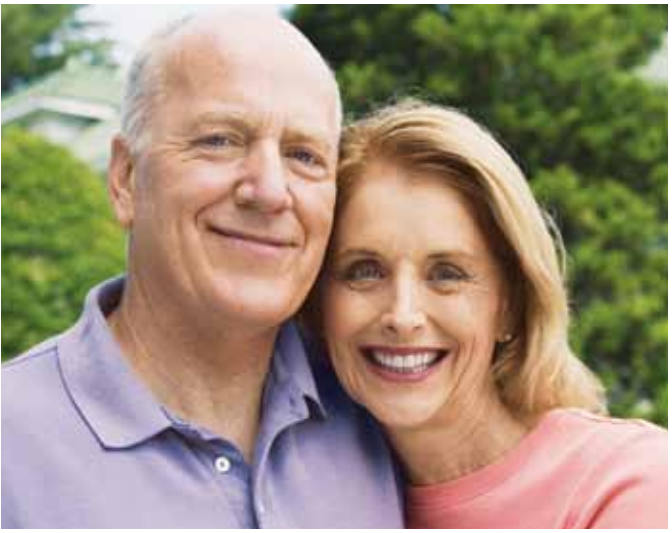
The award: The Cornea Society's 2009 Castroviejo Medal, one of the top ophthalmology prizes in the world. It is awarded to an ophthalmologist who promotes the exchange of scientific ideas related to the cornea, anterior segment, and external eye.

His achievements: The Castroviejo Medal is the newest entry in a lengthy history of recognition for Dr. Cavanagh's clinical and research efforts. Among other honors, he has won the Dr. Donald Korb Award for Excellence from the American Optometric Association—the first medical doctor to receive that award. He is currently president of the International Society for Contact Lens Research, a group limited to 100 elected members worldwide. Dr. Cavanagh's research focuses on the cornea, including cell biology, transplantation, wound healing, bioimaging, and contact lenses. He is working on a new generation of contact lenses that reduce corneal infections and block bacteria by allowing better oxygen flow to the eye.

Luis Parada, PhD
Chair of Developmental Biology

The award: The Children's Tumor Foundation 2009 Friedrich von Recklinghausen Award recognizing Dr. Parada's decades of research on neurofibromatosis.

His research: Dr. Parada, Director of the Kent Waldrep Center for Basic Research on Nerve Growth and Regeneration, has conducted extensive research on neurofibromatosis, a set of genetic disorders in which tumors form along nerves. Among his accomplishments is his work on the interaction of a cancer-related gene with NF1, the most common neurofibromatosis. He recently developed a genetically engineered mouse model for NF1-related skin tumors. "This award reflects many years of work and many laboratory members and collaborators," says Dr. Parada. "Studying neurofibromatosis has been one of the most rewarding endeavors of my career because it has opened so many scientific portals, but also because we have had the opportunity to impact the quality of patients' lives."



30 THOUSAND

Number of men in the U.S. killed each year by PROSTATE CANCER

Urologist reaches surgical milestone

Prostate cancer is the second-most common cancer among men in the U.S., killing an estimated 30,000 each year. But prostate cancer can be treated and even cured when patients are in the care of an experienced physician. UT Southwestern urologists are among the country's most experienced at surgical treatment of prostate cancer.

Claus Roehrborn, MD, Professor and Chair of Urology at UT Southwestern, recently reached a major milestone when he and his surgical team of nurses and physician assistants completed their **500th prostatectomy using a state-of-the-art robotic device**.

Of the 1,200 urologists certified on the robotic device, Dr. Roehrborn ranks in the top 4 percent in terms of volume—making him and his team among the most experienced surgeons for performing robotically assisted surgery to remove diseased prostate glands.

The four-armed robot Dr. Roehrborn uses, called DaVinci, provides surgeons better camera views and more precise surgical manipulations than are available in traditional surgeries. Surgeons control the technically advanced robot with a joystick. UT Southwestern purchased the robot in 2006, and surgeons use the device to perform two to four prostate procedures each week.

"We use the robotic procedure to remove the entire prostate and sometimes lymph nodes in patients with localized prostate cancer," says Dr. Roehrborn. "Surgery remains the best chance of cure for many of the nearly 200,000 men diagnosed annually with this disease."

The DaVinci robot allows urologic surgery teams to perform prostate surgery in about three hours, while trimming the hospital stay for patients in most cases to just an overnight visit, says Dr. Roehrborn.

Stimulus funds support patient research

UT Southwestern **has been awarded more than $63 million to date** for basic and patient-oriented research from the American Recovery and Reinvestment Act of 2009, the $787 billion stimulus package President Barack Obama signed into law last year.

UT Southwestern's research grants have come primarily from the National Institutes of Health and most are for a period of two years. "The funding we've received is going to an array of research-related uses that will, hopefully, further our understanding of specific diseases and lead to new treatments and enhanced patient care," says Suzanne Rivera, PhD, Vice President for Research Administration at UT Southwestern.

The stimulus package grants, which totaled $10 billion overall, are intended to support laboratory and patient-centered studies aimed at improving the nation's health, including projects focusing on cancer, heart disease, kidney disease, neurodegenerative diseases, and diabetes.

News flash...

Joseph Takahashi, PhD, a pioneer in the study of circadian rhythms, has been named **Chair of Neuroscience at UT Southwestern**. A member of the prestigious National Academy of Sciences and an investigator with the Howard Hughes Medical Institute, Dr. Takahashi was Director of the Center for Functional Genomics at Northwestern University before joining UT Southwestern's faculty.

Daniel K. Podolsky, MD, President of UT Southwestern, calls Dr. Takahashi "an outstanding choice" to lead the Neuroscience Department. "Dr. Takahashi's discoveries have uncovered the most basic mechanisms of body regulation. He has also taken advantage of new genetic techniques nearly as quickly as they have been invented, displaying a versatility and constant desire to reeducate himself."

DID YOU KNOW? Five of the 29 urologists listed in *D Magazine* as being the best in Dallas practice at UT Southwestern Medical Center. Fourteen of the 29 urologists trained at UT Southwestern.

UT SOUTHWESTERN
MEDICAL CENTER

5323 Harry Hines Blvd.
Dallas, Texas 75390-8588

NON PROFIT
US POSTAGE
PAID
DALLAS, TX
PERMIT 2650

The future of medicine, today.

UT SOUTHWESTERN
Medical Center

For an appointment, visit utsouthwestern.org
or call 214-645-8300.