BREAKTHROUGH MEDICINE — EXCEPTIONAL CARE FOR A HEALTHY COMMUNITY SUMMER / AUTUMN 2005

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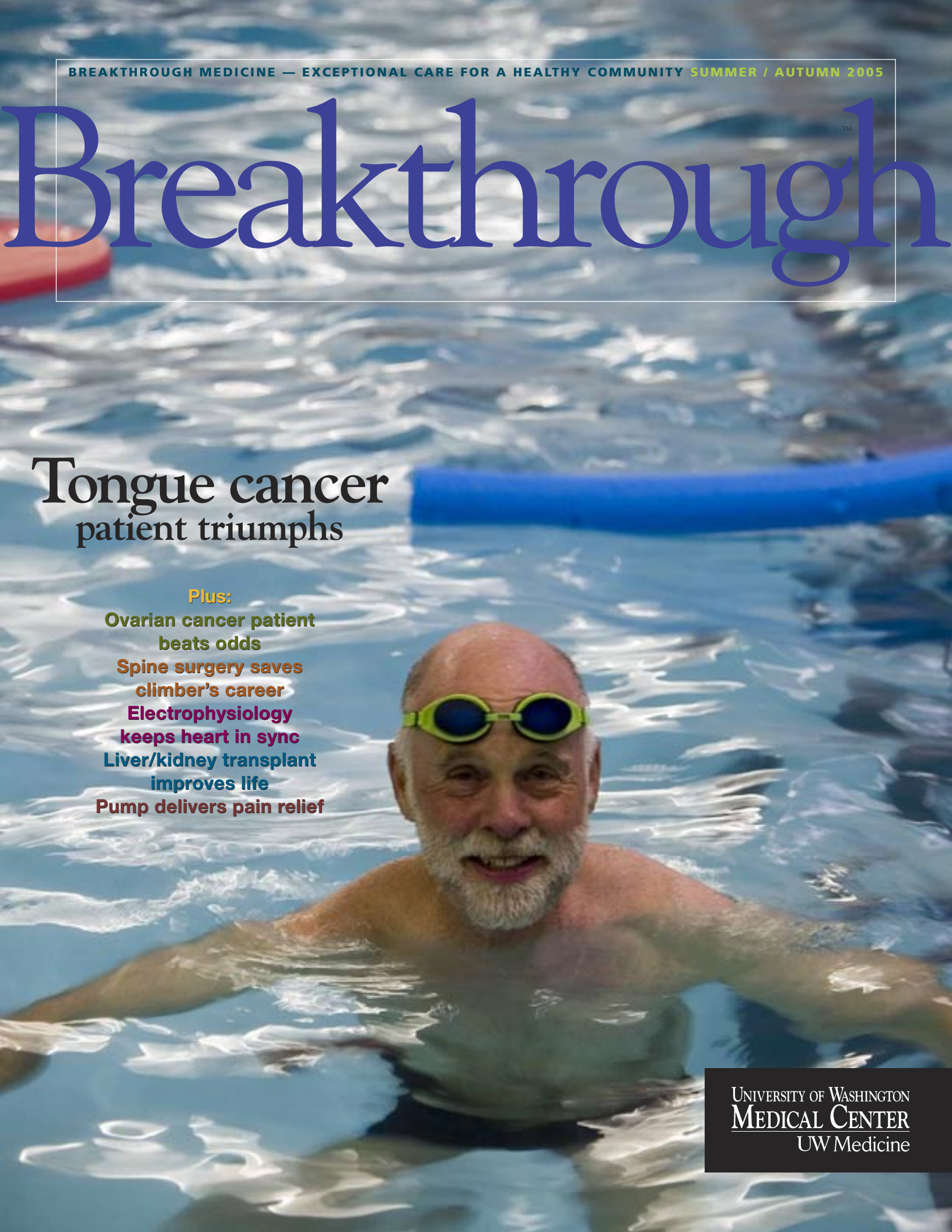


Tongue cancer patient triumphs

Plus:

Ovarian cancer patient beats odds

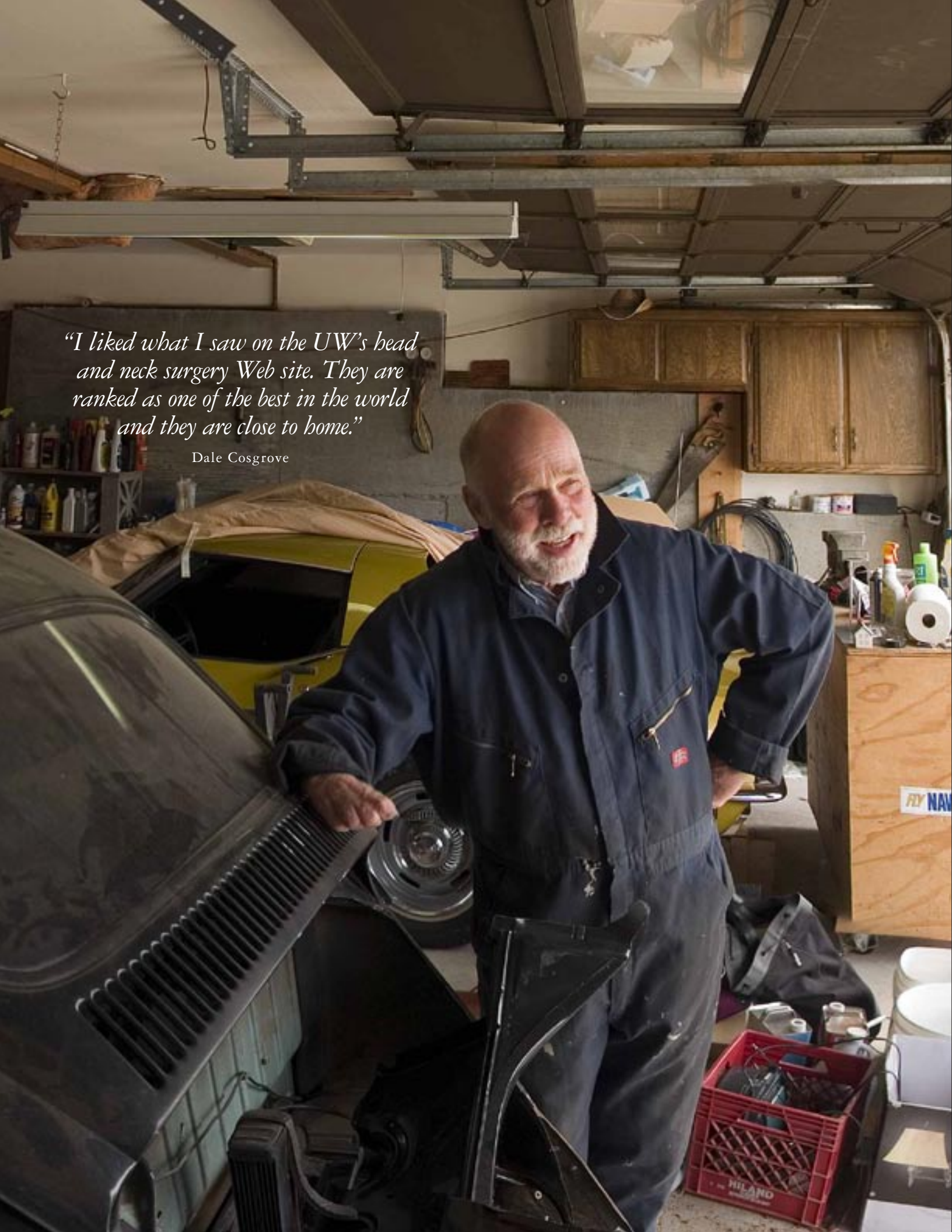
Spine surgery saves climber's career

Electrophysiology keeps heart in sync

Liver/kidney transplant improves life

Pump delivers pain relief

University of Washington Medical Center
UW Medicine



"I liked what I saw on the UW's head and neck surgery Web site. They are ranked as one of the best in the world and they are close to home."

Dale Cosgrove

Tongue cancer patient trimumphs

Dale Cosgrove, a former competitive swimmer, has always demanded the best from himself. So, it was natural that when he was diagnosed with tongue cancer, he would demand the best medical care possible.

"I had a swollen lymph node; I thought it was a wisdom tooth," Cosgrove says. " In August 2003, when I went in for a routine physical, my doctor saw the lump on my neck and referred me to a head and neck specialist here in Bellingham. He did a CT scan. It turned out to be a tumor at the base of my tongue."

Cosgrove researched his options.

"I talked to family and friends who recommended that I go to a teaching hospital, because they are always on the cutting-edge of medical treatments. I looked at MD Anderson in Houston, and the University of Washington Medical Center (UWMC)," Cosgrove says. "I liked what I saw on the UW's head and neck surgery Web site. They are ranked as one of the best in the world and they were close to home."

He began treatments at UWMC Otolaryngology – Head and Neck Surgery Center. His case was discussed at the multidisciplinary head and neck tumor board, in which surgeons, medical oncologists, and radiation oncologists decide the best course of action.

"He had a mass on the left side of his neck and the base of the tongue," says **Dr. Mary Austin-Seymour**, UW radiation oncologist and professor of radiation oncology. "Surgical treatment would have required the removal of the entire tongue. Without the tongue, he would have had no speech or swallowing capabilities. We decided that concomitant chemotherapy and radiation therapy would be the best course of treatment to preserve function and to cure the cancer."

"Chemotherapy clearly improves the outcome when used in combination with radiotherapy," says **Dr. Renato Martins**, UW medical oncologist and assistant professor of medicine. "A number of national and international studies have shown improvement in survival and disease control with this treatment. "

From November 2003 to January 2004, Cosgrove received radiation therapy five days a week for seven weeks. In between, he was hospitalized for chemotherapy infusion.

The treatment proved successful — the primary tumor in the tongue disappeared. Surgery was later performed to remove his lymph nodes.

"When head and neck tumors spread to the lymph nodes of the neck, it is critical that the disease is eliminated from these nodes as well as the primary site," says **Dr. Neal Futran**, UW professor and director of Otolaryngology-Head and Neck Surgery. "If enlarged lymph nodes remain, they are removed surgically to make sure there are no live cancer cells still present. Most often we are able to remove the lymph nodes only, without the associated nerves, muscles, and blood vessels. This maintains full head and neck function."

UWMC provides a multidisciplinary team of head and neck specialists in one location. "Head and neck cancer patients require extensive care and services often not provided at other centers," Austin-Seymour says. "In addition to surgeons and oncologists, we provide nurses and nurse practitioners, dieticians, and social workers that specialize in the care of head and neck cancer patients."

Cosgrove is grateful for the care he received. "I can't say enough about the expert care I received from the doctors, nurses, therapists, and receptionists who were so supportive of me, my wife, and family."

UW Medical Center
Otolaryngology-Head and Neck Surgery Center
206-598-4022
www.uwent-headneck.org

Dr. Mary Austin-Seymour

Dr. Renato Martins

Dr. Neal Futran

Ovarian cancer patient beats odds

Suzanne Larsen is no stranger to cancer.

"Mother had uterine cancer; grandmother and two maternal aunts had breast cancer; father had prostate cancer, and two paternal aunts had ovarian cancer — one died at age 46," Larsen says. "I also had two friends who died from ovarian cancer. They were treated by their family doctors who then sent them to UW Medical Center for what I would call damage control — it was too late."

When she was diagnosed with ovarian cancer at age 51, Larsen knew she wanted to see the experts at UWMC immediately. "I wanted to go where they did this a lot and had a high success rate. I felt that I would have a better chance of survival at a teaching hospital, because of the combination of research, medical expertise, and state-of-the-art technology."

Larsen met with **Dr. Benjamin Greer**, UW professor of obstetrics and gynecology and director of Gynecologic Oncology. "I asked Dr. Greer to treat me with a treatment protocol that he would use if I were his daughter or wife."

Greer treated Larsen's cancer with a combination of surgery (to remove most of the tumor) and chemotherapy. "We treated her with a primary surgery to remove most of the tumor, followed by chemotherapy of taxol and carboplaten. After the chemotherapy, we also performed a second-look laparotomy to ensure that there were no microscopic cancer cells remaining," Greer says.

Greer acknowledged that the availability of UWMC's resources increased Larsen's chances of having a good medical outcome.

In October, the Seattle Cancer Care Alliance (SCCA) will open its Women's Center, which will make care for women-specific cancers more conveniently available. The Women's Center will house the breast and gynecologic oncology programs, mammography and breast imaging, the Wellness Clinic, and the Breast and Ovarian Cancer Prevention Clinic.

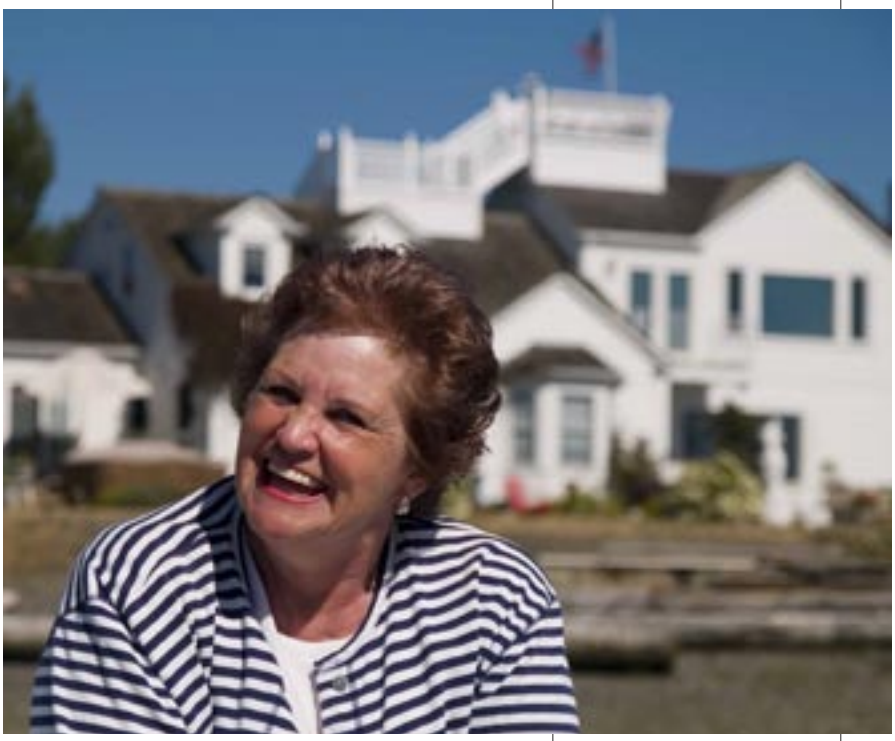
"With the opening of the Women's Center, we will expand our capacity to provide our interdisciplinary approach to patients with gynecologic cancers, as well as breast cancer, all in one place." Greer says. "The gynecologic oncology program is multidisciplinary and consists of gynecologic oncologists, radiation oncologists, pathologist, nurse case managers, nurse practitioners, social workers, pharmacists, and research personnel."

Larsen says the care she received extended beyond their clinical expertise and technology.

"Everyone involved understood our situation. Even when I came home, they contacted us. I felt that they were truly caring for me and my family, not just moving us along. Thanks to the care I received, I'm cancer free. This is certainly a much better outcome than what my friends experienced."

Seattle Cancer Care Alliance
206-288-7222
www.seattlecca.org

Dr. Benjamin Greer



"This is certainly a much better outcome than what my relatives and friends experienced."
Suzanne Larsen

Spine surgery saves climber's career

World-renown mountain climber **Peter Whittaker** is no stranger to risk and injury.

"I've spent 28 years as a mountain guide — skiing, trekking, climbing. I've been through four avalanches, sustained injury — ruptured my spleen, my Achilles tendon, both my knees have been reconstructed, fractured ribs," Whittaker says. "I live a very active life."

But, one day last spring, the 46-year-old athlete who has climbed mountains all over the world, including Everest, Rainier, and Kilimanjaro, was playing on a "toy" in his backyard and fractured his spine.

"I fell about 25 or 30 feet from the end of a 300-foot zip line — a suspended cable with a pulley on it. We had put one together in the back yard for the kids. I was testing it. It was a backyard toy that gained too much velocity and got out of control. After the accident it became clear I was going to need some spine work. I wanted experts who could put me back together in the best possible way — a way that would allow me to continue my active lifestyle in the future."

Whittaker did his research — he talked to health professionals who were experts in their fields and asked who they would go to for care. **Dr. Ted Wagner**, UW professor of orthopaedics and sports medicine, and the UW Bone and Joint Center were mentioned most often.

"He presented with an unstable t-11 — a spine fracture of the 11th thoracic vertebrae, which is mid-back, but he had normal spinal cord function," Wagner says, adding that to repair the fracture and to retain flexibility, he took a bone from Whittaker's hip and soldered it into place.

"The anatomy of spine was restored using a titanium system of screws and rods. The surgery allowed him to get up the following day and to be discharged within four days," Wagner says. "We expect the spine to be entirely healed within four months, and he should be able to resume guiding and climbing."

Wagner says several technological breakthroughs have changed the precision and recovery rate for spine surgery, including improved magnification and lighting through fiber optics and the change in hardware from steel to high-grade titanium.

"We can anchor screws and hooks on vertebrate and create forces that are much stronger and lighter and allow for significant correction of the injury." Wagner says. "At the same time, disk spaces can be replaced with bone titanium or high-grade carbon cages between the spinal disks for structural strength and flexibility."

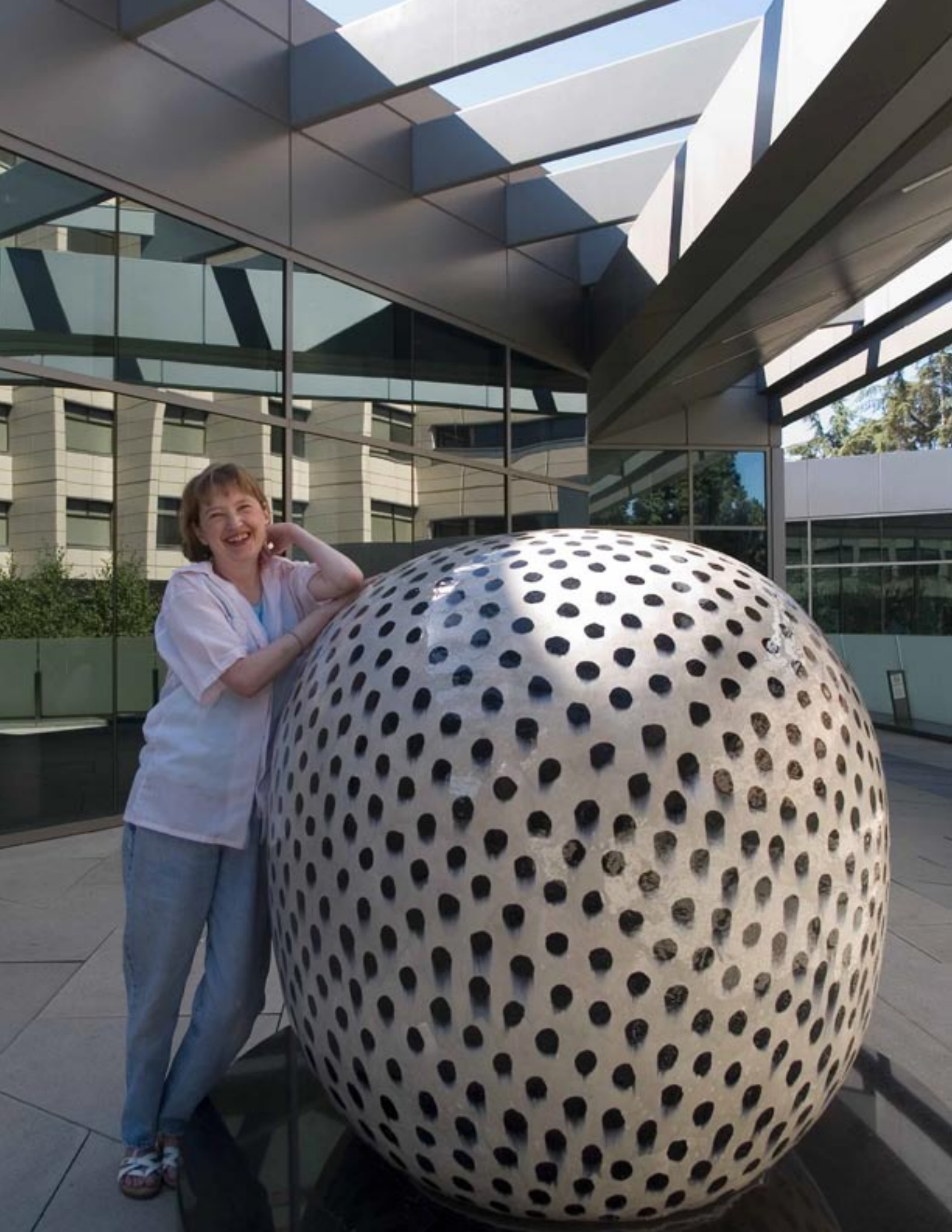
"I wanted experts who could put me back together into the best possible way — a way that would allow me to continue my active lifestyle in the future." Peter Whittaker

Six weeks after surgery, Whittaker has returned to managing his businesses, including Rainier Mountaineering, Inc. Will he climb again?

"Absolutely, my prognosis is pretty good. I should be 90 to 100 percent functional in a few months. I've been scheduling some winter climbs and skiing in Austria with my wife and my kids, as well as a luxury ski trip to the Dolomites in Italy."

UW Bone and Joint Surgery Center
206-598-4288
www.orthop.washington.edu

Dr. Ted Wagner



Electrophysiology
keeps heart in sync

Morgain Cole, 44, was born with a congenital heart defect called tricuspid atresia—the right ventricle of her heart never developed. At 13 days old, she had her first heart surgery.

"Doctors at Children's Hospital and Regional Medical Center inserted a Potts shunt, then a new technology, to channel blood to my lungs," says Cole, who has been treated over the years with various shunts, including a Blalock Taussig shunt. When she was 23, doctors added a Blalock shunt to the existing shunt that allowed blood to get to her lungs. In 1996, the Blalock shunt finally became too small. She had two options, either a heart-lung transplant or rebuild the Blalock shunt. She and her physicians decided to rebuild the shunt.

"Because of her unusual heart anatomy, an essential problem for Morgain is getting blood to her lungs," explains **Dr. Karen Stout**, Cole's cardiologist and UW assistant professor of medicine. "The shunts are used to ensure that some blood gets to the lungs, but are not definitive surgical treatments and often require additional procedures to keep patients oxygen levels up."

Cole suffers from atrial arrhythmias (irregular heartbeats) as a consequence of her congenital heart disease, a common problem among patients with heart defects. "My heart speeds up; it's really weird; my heart clicks on and off like a light switch. It's like having a Mexican hat dance in my chest. You can see my neck and chest thumping. When the adrenalin kicks in, it can be very scary."

In 2004, **Dr. Robert Rho**, UW assistant professor of medicine in cardiology and an electrophysiologist at UW Medical Center, performed an ablation procedure on Cole to treat the arrhythmia.

"We have been very successful in treating a number of complex atrial arrhythmias in patients who have normally configured hearts. However, a special group of patients are those who have complex congenital heart disease like Ms. Cole. She is representative of a growing population of patients who have benefited from the improvement in the care of complex congenital heart disease," Rho says. "Working closely with congenital heart disease specialists and cardiothoracic surgeons in a multidisciplinary approach, we are able to make the difficult decisions on how best to treat patients like Ms. Cole.

"Heart arrhythmias are common in these individuals. Treatment requires careful planning because their unique anatomy and fragile hemodynamics adds a level of complexity to performing procedures successfully in these patients," Rho adds.

The UWMC Electrophysiology Lab features technologies like state-of-the-art mapping systems for analysis of cardiac arrhythmias and intracardiac ultrasound to see movement inside the heart. The magnetic three-dimensional system used in Cole's procedure allowed Rho to create a realistic electrical map of Cole's heart while the intracardiac ultrasound allowed him to guide special catheters through veins in her legs to her heart. Once the mechanism of her arrhythmia was determined, Rho applied a series of carefully placed radiofrequency ablation lesions where the arrhythmia was coming from until it stopped.

"Dr. Rho performed the entire procedure through my groin without having to make any incisions, while I was awake," Cole says.

Advanced Technology

The Regional Heart Center has the state-of-the-art Biosense Carto system for analysis and ablation of cardiac arrhythmias. The system shows doctors where to focus high frequency radio waves to repair irregular heartbeats. A small burn (ablation)

Continued on next page

from left:
Dr. Robert Roh,
Morgain Cole, and
Dr. Karen Stout

is made on the tissue that is responsible for the abnormal heartbeats. The system combines several technologies to record the electrical activity of the heart and to position the ablation catheter. A software program reconstructs the shape of the heart and the pattern of electrical activity during an episode of arrhythmia. The system is used on patients who have complex rhythm abnormalities to guide electrical mapping of the arrhythmia and like a GPS (global positioning satellite) it allows monitoring of catheter movement inside the heart to guide the radiofrequency lesions.

The intracardiac ultrasound is a tiny ultrasound that is at the tip of a catheter that can be inserted through a patient's groin. This technology allows the operator to directly see the heart and all of its chambers throughout a procedure. "It is a valuable tool in congenital heart patient procedures to guide the operator through the complicated anatomy and provide continuous monitoring of the heart and the catheters placed inside the heart," says Rho.

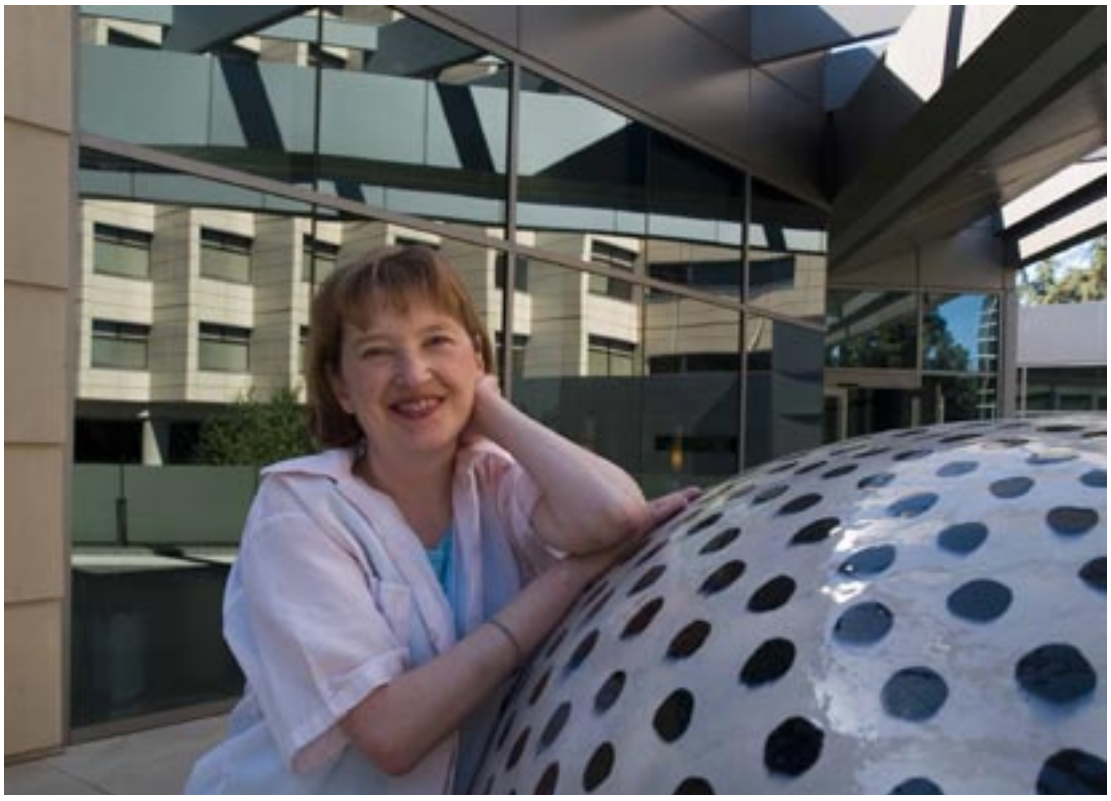
Cole thinks the procedure has been a huge success — it's changed her life. Although she still has irregular heartbeats, "they're not as severe or as fast as they were at first, and they certainly aren't as scary." Cole says, adding that she attributes her successful outcome to a number of factors. "Timing, luck, and a competent, skillful, and caring medical team — all play a part in my outcome."

Today, Cole works part-time in a doctor's office as a bookkeeper and enjoys her life.

"Working makes me feel better — I feel that I'm contributing something of value to the office and to my household. I also love children; spending time with my nieces and nephews is so revitalizing. I appreciate life. I really like life."

UW Medicine Regional Heart Center
206-598-8200
www.uwheartcenter.org

"Working closely with congenital heart disease specialists and cardiothoracic surgeons in a multidisciplinary approach, we are able to make the difficult decisions on how best to treat patients like Ms. Cole." Dr. Robert Rho



Liver/kidney transplant improves life

A twist of fate — a motorcycle accident — may have saved **Roger Rodarte**'s life.

Blood tests taken after the accident revealed he had cirrhosis of the liver and kidney disease. He was referred to UW Medical Center's liver and kidney specialists.

"Liver failure sometimes can cause the kidneys to shut down. When the kidneys stop working properly as a result of liver failure, it's called hepatorenal syndrome," says **Dr. Raimund Pichler**, UW clinical assistant professor of medicine in the Division of Nephrology. Determining the cause of kidney problems in patients with liver disease is no easy matter, he says.

"In Roger's case, the question was: Was the kidney failure caused by liver cirrhosis or was there an inherent problem with the kidney that may or may not have been related to liver failure?" Pichler says.

A biopsy showed he had diabetic kidney disease, the most common cause of kidney failure in the United States. Rodarte, who also has high blood pressure, says the diagnosis helped explain his declining health.

"I was always tired and my legs were swelling up so bad that I was up to 298 pounds just from water retention. I had repeat visits to the emergency room where liters of liquid were suctioned from my stomach. I was always cold and jaundiced. I thought, Why me? I can't go on like this. I got very depressed," says Rodarte.

Pichler and his team considered a number of factors before deciding to give Rodarte a combined liver/kidney transplant.

"Roger had protein in his urine, Type 2 diabetes for 14 years, high blood pressure, abnormal clotting, and decreased kidney function. He was a high-risk patient," Pichler says. "On one hand, we had to look at his likelihood of survival without the combined transplant. Compared to a liver transplant alone, a combined liver-kidney transplant improves patient survival if the kidneys are failing. However, if the kidney failure is related to liver cirrhosis, a liver transplant will normalize kidney function and a liver transplant alone with be sufficient (and no kidney transplant is needed). Since kidneys are a scarce resource (the waiting list for a kidney transplant in our area is up to four years long) we have to make sure that we only give combined liver-kidney transplants to patients who really need them."

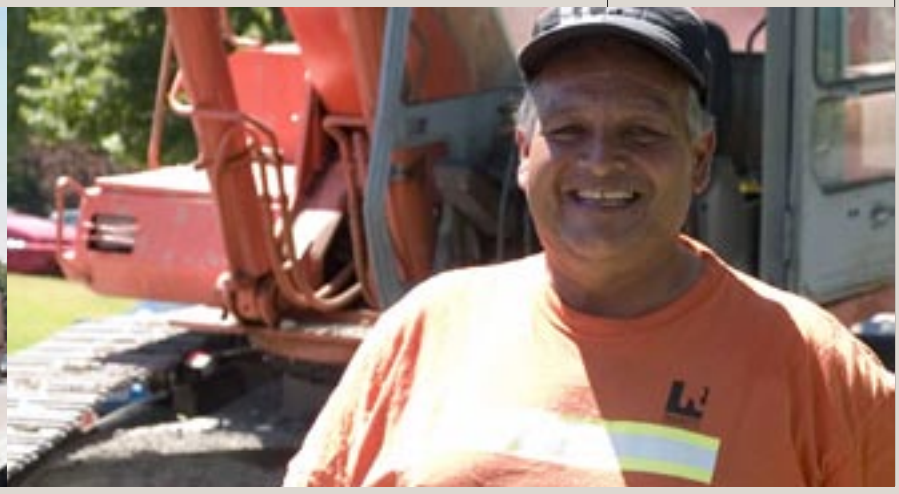
On April 20, 2005, Rodarte received a combined liver-kidney transplant. "It was a miracle," he says. "It was a 14-hour operation with 24 hours in recovery, and ten days in the hospital," he says, adding that his recovery has been "phenomenal."

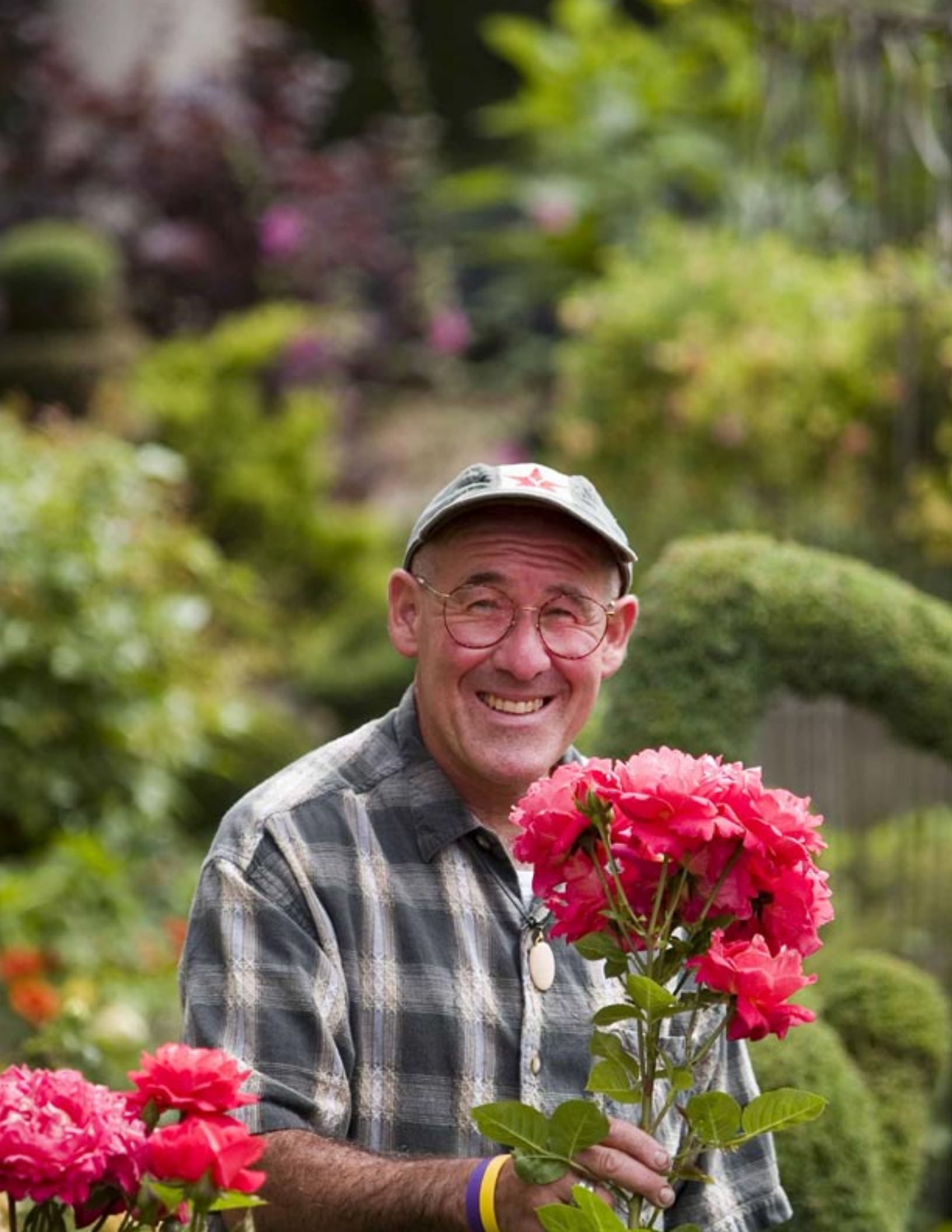
Three months after surgery, Rodarte returned to his job as a construction site foreman. The quality of his life continues to improve. "I feel very good; I now have lots of energy. I have a second chance to enjoy my life – to stop and smell the roses."

Medical Specialties Clinic
206-598-4282 www.uwmedicine.org

Dr. Raimund Pichler

"A combined transplant improves survival rate if there is a kidney problem." Dr. Raymond Pichler





Pump delivers pain relief

On Super Bowl Sunday 1997, **Sheldon Arkin** suffered excruciating stomach pain that wouldn't go away.

Doctors at a Tacoma hospital diagnosed Arkin with pancreatitis and tried to determine the cause. Initial tests showed that the gall bladder was dysfunctional and was causing problems. "I had my gall bladder removed, but the pain continued to escalate," Arkin recalls.

Doctors referred Arkin to the Digestive Disease Center at UW Medical Center, where gastroenterologist **Dr. Michael Kimmey** performed an endoscopic retrograde cholangiopancreatography (ERCP) – a procedure used to diagnose and treat diseases of the digestive tract, including the pancreas, which produces a digestive enzyme. Kimmey, director of the center and UW professor of medicine, discovered that Arkin's pancreatic ducts were blocked. He implanted stents in an attempt to keep the ducts open. However, after each of several implants, the stents became dislodged or plugged, leaving Arkin in constant pain and forcing him to take heavy doses of pain medication.

"To be able to function at work, I basically wouldn't eat all day, then at night I would eat and use oral pain meds to try to handle it. I lost a lot of weight – from my usual 145 to 120 pounds. I was wasting away," Arkin says. "The enormous amounts of pain medication I was on definitely took a toll."

Because of the severity of Arkin's pain and the failure of oral pain medication to alleviate it, in 1999 Kimmey referred Arkin to pain management specialist **Dr. John Loeser**, UW professor of neurological surgery and anesthesiology.

Loeser decided to use a pump and catheter to administer Arkin's pain medication directly to his spine. The Food and Drug Administration had only approved its use to deliver pain medication in 1995. The device previously had been used successfully to treat spasticity in patients with such diseases as multiple sclerosis, spinal cord injury, or cerebral palsy.

The hockey-puck sized pump is surgically implanted in a small pocket subcutaneously on the abdomen, while a catheter is inserted into the fluid space around the spinal cord under the skin, and tunneled under the skin and connected to the pump. The pump is programmed to deliver medication either continuously or at varying rates and times.

Delivering pain medication directly into the spinal fluid is particularly effective because it does not have to circulate systemically to alleviate pain, but blocks the signal at its source — the spinal cord. Loeser says this method of pain relief is "100 times more potent than oral or transdermal medications."

"This is advanced interventional pain management for people who have major pain problems that are not adequately resolved by systemic narcotics," Loeser says. "Some patients have to take so much oral narcotic pain medication that they are unable to pursue their normal activities. Pain takes over people's lives. If you can alleviate the pain, you can give people back a normal life."

Arkin agrees.

"It worked for me. Now, I have my life back. I work full time and hardly ever miss work. I love my job and spending time with my family."

Multidisciplinary Pain Center
206-598-4282
www.uwmedicine.org

Dr. John Loeser

"Pain takes over people's lives. If you can adleviate the pain, you can give people back a normal life." Dr. John Loeser

Listening Mothers

Listening Mothers is a new program at UW Medical Center for new mothers and their babies (up to 8 months old). It is a small group session designed to ease the adjustment to parenthood, led by trained facilitators, Teresa Williams and Krista Murtfeldt, perinatal social workers at UWMC. The goal of the program is to nurture the relationship between mother and baby by focusing on their emotional interaction.

If you are a new mother, here is an opportunity to connect with other mothers, learn about your baby's emotional development, become the parent you want to be, and learn about yourself as you parent your infant. This new support service is open to patients of UWMC and the larger community, supported by Family Services of King County and UWMC. Groups meet for 90 minutes each week for eight weeks.

To register, call 425-450-0332.

Sisters give gift of fun

When Alexa Driscoll, 11, and her sister Samantha, 9, visited their mother Laura Driscoll during her cancer treatments at the UW Medical Center, they would frequently play in the 8th-floor Family Room. Of course, it was quickly apparent that the games and toys had been well used by other families over the years. Many of the games were incomplete, pieces were missing, and the videos were out of date.

The Driscoll sisters decided to do something about this state of affairs. In lieu of receiving gifts on their birthdays in May and June, they decided to accept donations of games, videos, toys, and books for the Family Room. Their friends responded generously.

"We are happy we could help the families that come to the University of Washington [Medical Center], especially the kids," Alexa said. "And, we are glad our friends felt the same way. They were so generous."

Samantha added, "It will be good for the kids who come to the room to have some more fun things to do."

During a recent ceremony in the Family Room, Alexa and Samantha presented the gifts to UWMC Executive Director Kathleen Sellick. The girls received a large thank you card signed by the staff of the three units that use the Family Room.

Photo: **UWMC Executive Director Kathleen Sellick** (center) **is surrounded by the generous Driscoll family** (left to right) **Jonathan, Bill, Samantha, Alexa, and Laura.**

Written by Marsha Rule • Photos by Gavin Sisk and William Stickney • Design by Sancho Design

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