Bill Kucic spoke softly while recounting stories about his daughter, Stephanie, who he lost only a few months ago. His voice broke with emotion but his determination was clear: “I want people to know how lucky we were to have time with her and how the Gamma Knife surgery gave us more time than we would have otherwise had.”

Stephanie’s story began in 1999, just after she graduated from the Indiana University of Pennsylvania with a degree in nutrition. A quiet girl, Stephanie was passionate about horseback riding, and embraced the family tradition of serving for her local volunteer fire company. “She loved running into those burning buildings!” Bill recalled with a laugh.

During a routine checkup, her doctor noticed an irregular mole on her neck and asked her to have it checked out. “So, Steph went to a dermatologist who looked at it and said there was nothing to worry about,” Bill recounted. Indeed, though the dermatologist monitored the mole and continued to assure Stephanie that it was normal, she became concerned when the mole’s surface became flaky, so she returned to her regular doctor.

“He jumped all over her—he said ‘I thought I told you to have that removed!’” said Bill. “And so she made an appointment with a great surgeon who removed the mole.”

A post-surgical biopsy indicated that Stephanie had melanoma, and that the depth of disease penetration was troubling. “She had to have major surgery on her neck to remove the melanoma,” Bill recalled. “But she had a great surgeon, and she was able to recover pretty quickly.”

Six years later, however, Stephanie noticed a lump on her thigh. “It had been bothering her, I remember,” said Bill, “and we needed to have it checked out. So she went to the doctor, had it biopsied, and it turned out to be the same melanoma she’d had removed from her neck in 2000.”

A combination of therapies including surgery and a clinical drug trial were pursued. “She had surgery in the spring of 2007 to have three tumors removed,” Bill recounted. “She took some time to heal, but soon after that, Stephanie met with John M. Kirkwood, MD, at the University of Pittsburgh Cancer Institute, a melanoma specialist who got her into a clinical trial.” Halfway through, the discovery of a new tumor caused her to be removed from the trial, a major setback for Stephanie and her family.

“They found a tumor in her brain, so Dr. Kirkwood sent us to see Dr. Lunsford to have the tumor removed by the Gamma Knife,” Bill said. An internationally recognized authority on stereotactic surgery and minimally invasive surgery, L. Dade Lunsford, MD is responsible for bringing the Gamma Knife to UPMC, the first center in the United States to offer this state-of-the-art, minimally invasive form of brain surgery.

“I work in the medical technology field, so I’d heard

(continued on page 8)
Donating to the Department of Neurological Surgery

The success of the Department of Neurological Surgery in reaching our goals—outstanding patient care, technologically-advanced neurosurgical training for the physicians of today and tomorrow, and ground-breaking basic science and clinical research—requires more than the dedication of our world-renowned faculty and our outstanding residents.

Financial gifts to the department also play an important role in helping us reach our goals. It can help us improve the lives of people from all over the world.

The generous financial support of patients, our friends, institutions, and the community at-large is essential in continuing our mission. Through this financial support, we can provide comprehensive health care services and further the boundaries of medical research and technology.

Financial gifts are an opportunity to be part of the lifesaving medical care, advanced training and forward-looking research that is a hallmark of our department.

Evidence-based patient care is built on a strong program of research, and we embrace an educational mission which seeks to train the next generation of neurosurgeons. These are expensive endeavors which depend on the generous support of many people. To all friends, grateful patients and caring family members who have provided gifts and commitments during the past year, please accept our sincere gratitude on behalf of the patients who will ultimately benefit.

For more information on donations, contact James A. Olsen at the University of Pittsburgh/UPMC Medical Health Sciences Foundation at (412) 647-7781 or ojim@pmhsf.org.

for MORE information on the University of Pittsburgh Department of Neurological Surgery, visit our website at www.neurosurgery.pitt.edu
Ten years ago, however, he developed a debilitating pain in his back, radiating to his left pectoral muscles and sternum. His son-in-law, a surgeon, advised him to seek medical attention. He consulted with medical experts in northeastern Ohio and on the east coast. He was diagnosed with myasthenia gravis and thymoma, and learned that he had a small tumor pressing on a nerve in his back, between the T-2 and T-3 vertebrae.

In 1999 he had surgery at another medical center to remove the tumor, the thymus gland, and a small piece of his lung tissue. This was followed by an experimental radio isotope treatment, which eventually brought some pain relief. A few years later the pain returned, and in 2005 he had intensive chemotherapy. Doctors marveled at his ability to tolerate the drug cocktail. Again he was able to obtain relief from the pain.

In fall 2008, the pain became severe again and, unfortunately, this time the doctors he consulted were unable to devise an effective treatment strategy or even provide temporary pain relief.

With the advice of his son-in-law, he contacted the UPMC spine radiosurgery program. Because he was in constant pain, and unable to walk or even sit, his family laid him on some sleeping bags on the back floor of a van, and his wife drove him the two hours from their home in northeastern Ohio to UPMC Presbyterian in Pittsburgh.

Though by then despondent and in constant pain, Isoldi was immediately impressed with the UPMC staff and facilities. On the same day, Isoldi met John Flickinger, MD, from the Department of Radiation Oncology and Peter Gerszten, MPH, MD, from the Department of Neurosurgery who work together as a team on all spine radiosurgery cases.

He distinctly recalls Gerszten’s first words to him. “He said ‘I can help you—this is what I do.’ He and his staff were polite and professional, and inspired my confidence.”

After a careful review of Isoldi’s symptoms, test results and medical history, Dr. Gerszten recommended spine radiosurgery using the Elekta Synergy platform. “Spine radiosurgery,” explained Dr. Gerszten, “is a minimally invasive procedure that enables surgeons and radiation oncologists to precisely aim a powerful beam of radiation.”

“With this technique we can safely focus radiation at small targets that might be inaccessible to open surgeries and unresponsive to other treatments.” In 2008, Dr. Gerszten co-authored the textbook *Spine Radiosurgery*, the first book of its kind and now widely used to train others in this relatively new field.

Although spine radiosurgery is almost always provided on an outpatient basis, the patient must be immobilized during the procedure. The staff fitted Isoldi with a special mask to help immobilize him during the treatment, and then scheduled him for the actual treatment.

The treatment does not require any sedation or anesthetic, which was very attractive to Isoldi. “After years of law enforcement work, I well know the devastating effects that narcotics can have, and I try to avoid them whenever possible, even for pain relief.”

Within a few weeks of his treatment Isoldi started to feel better. In March of this year he was back on his feet again, walking comfortably for the first time in many months. Most importantly, his pain had begun to subside. “After having been in pain for most of the past decade, I had come to accept it as inevitable. The relief I have felt following spine radiosurgery far exceeded my expectations.”

“Although each case is unique, we have found that patients who meet our criteria for spine radiosurgery often experience significant relief from pain and other symptoms following treatment,” commented Dr. Gerszten.

Isoldi is grateful to all of the UPMC physicians and staff who had a hand in his care, and is impressed with the quality of care provided to him. And although his workout routine is not entirely back to normal yet, he is again lifting weights, building up his strength gradually, and hopes to be jogging again sometime soon.
Campbell quickly returned to his physician asking for an alternative method of treatment. “I was referred to a neurosurgeon here in Pittsburgh who wasn’t part of the UPMC system. And as I waited for my appointment, I kept hearing about a particularly skilled UPMC surgeon, Dr. Joseph Maroon.” Two of Campbell’s friends had had good experiences with Joseph Maroon, MD, whose expertise in spinal surgery piqued Campbell’s interest. “I heard such wonderful things about him, I said, ‘How can I get a hold of this wonder man?’”

Though he might shy away from the title “wonder man,” Dr. Maroon serves as professor and vice chairman of the department of neurological surgery at the University of Pittsburgh School of Medicine. He is regarded as a premiere specialist in the surgical treatment of injuries and diseases to the brain and spine, particularly with microscopic and minimally invasive procedures. Consistently listed among America’s best doctors, Dr. Maroon’s patients travel from all over the world to seek his care.

“I managed to get an appointment with Dr. Maroon in mid-January,” Campbell recounted. With the family’s annual scuba dive trip scheduled for March, Campbell was concerned about how his treatment plan would affect this highly anticipated trip.

“I told Dr. Maroon during our first meeting that I was concerned about being in severe pain, and that I might not be able to join my family on our trip,” said Campbell.

As luck would have it, a previously scheduled surgery was cleared from Dr. Maroon’s calendar at the last minute, creating an immediate opportunity for Mr. Campbell to have the pain-relieving spine surgery he required. “It was so wonderful!” Campbell said. “I had my first appointment on January 21 and I underwent surgery the very next day!”

Campbell’s outpatient procedure was completed in a few hours, with great success. “The pain relief was immediate,” Campbell recalled. “I didn’t even have to take the pain medicine that was prescribed—I handled everything with ibuprofen.”

And though his physical activity was restricted, he was happily able to travel with his family to Little Cayman for their annual trip.

“Prompt return to physical activity following back surgery, once considered unthinkable, is now quite commonplace,” said Dr. Maroon. “Minimally invasive spine surgery techniques, some pioneered here in Pittsburgh, have made this possible. Through many years of experience treating professional and amateur athletes, I have learned that this return to physical activity is not only possible but is also often a vitally important factor in the healing process. For this reason I encourage all my patients to resume physical activity as soon as is medically indicated.”

Through his post-surgical treatment, Campbell remembered experiencing some tenderness around his incision, but nothing that compared to the pain he experienced before his procedure. “I was totally healed within a month,” he remembered happily. “The surgery was a complete success. I was worried about getting lost in the bureaucracy of a big system like UPMC, but that didn’t happen at all. Everyone was professional, courteous, and really nice throughout the whole process.”

Upon reflection, Campbell recognized that his good experience was not unique. “Our whole family has had positive experiences with UPMC. My granddaughter had an ear operation, and when my son, a police officer, was shot in the line of duty a few years ago he was treated wonderfully at Presbyterian,” he said.

As a gesture of gratitude, Campbell decided to support UPMC philanthropically; one donation was made in support of Dr. Maroon’s work, and the other to the UPMC Community Care Fund, which helps to cover the cost of medical treatment for men and women in the community who are under or uninsured. When asked about the motivation for these gifts, Campbell said, “It was simple: we were very appreciative of everyone’s assistance so we thought it was an appropriate way to say thank you.”

“Philanthropic support enables us to conduct research that will benefit other patients, in this region and around the world,” Dr. Maroon said. “My colleagues and I are grateful to the Campbells and to the many other families and friends who support our lifesaving work.”

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by Emily Martin
UPMC Medical and Health Sciences Foundation

I’ve had a chronic lower back problem for years,” Carl Campbell said with a hint of a chuckle in his voice. “I would pull muscles doing the simplest things—my back would go out if I bent down to pick up a toothbrush.”

An avid scuba diver, Campbell knew that his active lifestyle could quickly become derailed by back problems. Despite his pre-disposition to such issues, Campbell forged ahead with a number of home improvement projects, including one in particular that required him to spend long periods of time in uncomfortable positions. “It was bad, and I ended up with pretty significant pain in my back, as well as sciatic pain,” Campbell remembered.

When home remedies failed to offer the 66-year-old relief, he turned to his family physician. “He confirmed that I had a sciatic problem,” Campbell recalled, “and he suggested a non-invasive treatment plan—physical therapy, stretching, and such—which I tried, but it just didn’t seem to provide enough pain relief.”
Richard Hertzberg’s excruciating and unpredictable trigeminal neuralgia pain led to his early retirement from Lehigh University where he had served as chairman and professor of Materials Science and Engineering. The debilitating effects of trigeminal neuralgia (TN) have been well-documented over the centuries. It is a chronic condition that affects the trigeminal nerve, one of the largest nerves in the head. The National Institutes of Health characterizes the resulting pain as “extreme, sporadic, sudden burning or shock-like face pain that lasts anywhere from a few seconds to as long as two minutes per episode. These attacks can occur in quick succession throughout the day. The intensity of pain can be physically and mentally incapacitating.”

“Trigeminal neuralgia is one of the most severe pain syndromes that any person can face,” agrees professor and vice chairman of neurological surgery Douglas Kondziolka, MD.

The trigeminal nerve has three branches. Hertzberg’s condition affected the mandibular branch which passes through the lower jaw, teeth, gums and bottom lip.

Sensitivity to cold made it impossible for him to remain in Pennsylvania during the winter. Sensitivity to vibration had consequences that were even more limiting. “I would trim my beard one hair at a time,” recalled Hertzberg, “because to proceed more rapidly would risk triggering daggers of pain in my jaw.” Even the facial vibrations resulting from his own speech would sometimes induce symptoms.

He was able to lecture only by speaking very softly and using a microphone, just to get through the hour without being overwhelmed with pain. “Each semester I began my lectures by explaining my condition to the students and asking them not to be afraid if the pain were to suddenly knock me off my feet.”

Unable to fulfill the duties of his job, and never knowing when the pain might return, Hertzberg was desperate for an effective treatment.

Although TN is often difficult to diagnose correctly, Hertzberg was fortunate to be in the care of a perceptive internist who diagnosed the condition and began a treatment program. After several unsuccessful attempts to treat his symptoms using medication, physical therapy, acupuncture, and pain management clinics, Hertzberg contacted UPMC and the University of Pittsburgh’s Department of Neurosurgery.

“I knew of the reputation of the faculty here, and was willing to try anything they recommended, even surgery.”

UPMC offers a variety of treatment options for patients whose TN condition has not responded to medication. Microvascular decompression, a surgical technique pioneered at UPMC, involves the placement of a Teflon pad to prevent the blood vessel from pressing on the nerve. Unfortunately, two such surgical procedures in the spring of 1995 were not effective in Hertzberg’s case.

He then returned to UPMC in June of that year for another procedure with Dr. Kondziolka that gave him temporary relief until early 1999. At that point, Dr. Kondziolka proposed image-guided radiosurgery using the Gamma Knife to help reduce the sensitivity of the trigeminal nerve.

“Medication can be effective but for others it may be of little benefit or side effects become disabling,” notes Kondziolka. “Surgery is an important part of trigeminal neuralgia care, and Gamma Knife radiosurgery has become our least invasive approach when appropriate. Performed as an outpatient, over 800 patients have now undergone the procedure here, and typically 80% will have significant pain relief.”

The treatment brought temporary success.

“I woke pain free,” recalled Hertzberg with gratitude. “After five years of pain and unsuccessful treatments, I did not expect any immediate results. Even Dr. Kondziolka had cautioned that it might be months before he could evaluate the effectiveness of the treatment. Those who have not experienced TN will never understand the relief I felt at that point.”

Unfortunately, Hertzberg’s pain returned in 2001 and he returned to UPMC for follow-up Gamma Knife treatment, all under Kondziolka’s care. The memory of the pain, and the fear of its return, are always present, but Hertzberg is now able to lead a normal life. “Although I carry an emergency script medicine at all times, since the spring of 2002 I have been virtually pain free.”

Kondziolka is also pleased with the results of Hertzberg’s treatment. “We continually strive to improve the effectiveness of the treatment modality,” he explained. “Over the years, we have conducted numerous research studies to study patient outcomes, and to determine the optimum technique. In our training courses, we focus on the need for precise nerve targeting.”

The enthusiastic Hertzberg is doing his part to ensure that others will benefit from this level of care. “I am grateful to Dr. Kondziolka, and to the entire neurosurgery team, for the attentive care and effective treatment they have provided during my five separate visits to UPMC.

I have referred several other patients, and send a gift each year to the Gamma Knife program because I want to support their outstanding work.”

by James Olsen
UPMC Medical and Health Sciences Foundation
Department faculty well-represented at 2009 AANS meeting

Following is a list of presentations made by department faculty during the recent American Association of Neurological Surgeons annual meeting held this past May in San Diego, CA.

Founded in 1931 as the Harvey Cushing Society, the American Association of Neurological Surgeons (AANS) is a scientific and educational association dedicated to advancing the specialty of neurological surgery in order to provide the highest quality of neurosurgical care to the public. The organization has over 7,400 members worldwide.

**Practical Clinics:**
“Cranial Radiosurgery.” Director: De Salles AAF. Faculty: Friedman WA, Gerszten PC, Gorgulho AA, Niranjan A, Sisti MB.


“Spinal Radiosurgery.” Co-directors: Bilsky MH, Gerszten PC. Faculty: Angelov L, Chang SD, Henderson FC, Sheehan JP.

**Breakfast Seminars:**
“Cerebral Trauma State-of-the-Art Treatment.” Moderator: Valadka AB, Panelists: Colohan AR, Manley GT, Okonkwo DO, Ullman JS.


**Plenary Sessions:**


“Long Term Follow-Up of Cortical Stimulation to Treat Major Depressive Disorder.” Eskandar EN, Kopell B, Kondziolka D.

**Section Seminars:**


AANS/CNS Section on Neurotrauma. Moderators: Manley G, Okonkwo DO.

**Posters:**
“CerviCore Disc Replacement vs. Fusion for Single-Level Cervical Radiculopathy: One-Year Outcomes from Four Study Sites in a Prospective Randomized Controlled Trial.” Maroon JC.

“CerviCore vs. Fusion in Radiculopathy Patients: Radiographic Range of Motion at One Year.” Maroon JC.


“Outcome Predictors of Stereotactic Radiosurgery for Trigeminal Schwannomas: Tumor Control and Functional Preservation.” Kano H, Niranjan A, Kondziolka D, Flickinger JC, Lunsford LD.

“Case Reports: Vitamin C Deficiency Presenting as Post-operative Bleeding.” Jasthy SL, Leers SA, Bursick D, Kennedy M.
In the News

- Joseph C. Maroon, MD, appeared as a special guest on the June 24 edition of CBN-TV’s The 700 Club discussing recent scientific findings identifying a group of natural substances—including resveratrol—that can activate a specific set of genes in humans, helping promote a longer, healthier life.
- Dr. Maroon was also quoted in a July 13 Los Angeles Times feature health article on resveratrol. The paper also reviewed Dr. Maroon’s book The Longevity Factor in the same issue.
- Dr. Lunsford was quoted in a July 9 Boston Globe article dealing with a neurofibromatosis type 2 patient who had her hearing restored through use of cancer treatment drug.

Congratulations

- Dr. Lozanne was selected as the best resident teacher by department faculty for 2008-09 and Daniel Prevedello, MD, and Elizabeth Tyler-Kabara, MD, PhD, were chosen as best faculty teachers by the residents.
- Dr. Pollack became a member of the Society of Neurological Surgeons in May.
- Sherman Culver was recognized via proclamation by the Pittsburgh City Council as a Northside Leadership Conference Neighborhood Awardee for his community work with the Perry Hilltop Citizens Council.
- In June, Dr. Maroon received his 2009 Super Bowl XLIII championship ring from the Pittsburgh Steelers for his role as the team’s neurosurgeon.

Welcome

Stephanie Greene, MD, assistant professor of neurological surgery, Children’s Hospital of Pittsburgh; Elizabeth Collier, medical secretary for Peter Gerszten, MD; Kathleen Ross, nurse for Daniel Wecht, MD; James McPhilomy, Jr., nurse for Adnan Abla, MD; Lauren Smith, medical secretary at Westmoreland County Community Neurosurgery; Kerri Lawless, researcher for neurotrauma research team.

Announcement

Jonas Johnson, MD, professor and chair of the Department of Otolaryngology, is serving as interim chair of the Department of Neurological Surgery while the University of Pittsburgh conducts a nationwide search to find a new chair.

Recent donations to our department

A. Leland Albright Chair
- Up to $1,000:
  United Way of Allegheny County

Center for Image Guided Neurosurgery
- $5,000 - $10,000:
  Ben Silverman
- $1,000 - $5,000:
  Mr. & Mrs. Eugene Epstein
- Up to $1,000:
  Lucie Racicot

Heindl Fund
- $5,000 - $10,000:
  Mr. & Mrs. Carl L. Campbell

Faculty: Michael Horowitz, MD
- $25,000 - $50,000:
  Microtherapeutics Inc.

General Neurosurgery Fund
- Up to $1,000:
  C. A. Baker, DMD
  United Way of Allegheny County

MINC
- Up to $1,000:
  Isabel L. Purvis

MINC Endovascular: Tudor Jovin, MD
- Up to $1,000:
  Mr. & Mrs. Albert Solkov

MINC Research Development Fund
- Up to $1,000:
  Dagmar S. Bridges
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  Ray Price
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  Mr. & Mrs. John F. Rankin
  Sylvia L. Werner

Neurosurgical Endowment Fund
- $5,000 - $10,000:
  United Way of Allegheny County

Neurotransplantation Research
- Up to $1,000:
  Mr. & Mrs. Robert Lee Graham

Peter E. Sheptak Chair
- $5,000 - $10,000:
  Dr. & Mrs. Peter Edward Sheptak

For more information on donations, contact James Olsen at the University of Pittsburgh/UPMC Medical Health Sciences Foundation at (412) 647-7781.
(continued from page 1)

Over the subsequent two years Stephanie’s condition fluctuated and she returned to UPMC and Dr. Lunsford for more Gamma Knife procedures. “What was really nice,” Bill remembered, “was that there aren’t cognitive side effects with the Gamma Knife. It doesn’t change your personality the way traditional brain surgery can. When she had whole brain surgery, it really slowed her down. She went into a haze, and it was very difficult to see her that way.”

Stephanie lost her battle with melanoma on April 14, 2009.

“It’s been tough to take,” Bill stated simply. “Stephanie, she was never the outgoing type. She wasn’t the leader, wasn’t the extrovert, but she loved her family and her friends, and we were lucky to have her for as long as we did.”

“Stephanie was an outstanding patient and a remarkable young woman,” recalled Dr. Lunsford. “Her recent passing touched us all deeply. We mourn her loss and extend our sympathies to her family and friends.”

“Stephanie’s story is also a powerful reminder of the need for greater awareness of melanoma, and how an apparently innocuous condition can quickly become aggressive and dangerous. Stephanie lived as long as she did because she and her family were attentive and proactive.”

“We urge everyone to carefully monitor any unusual skin conditions, and to promptly seek the advice of a dermatologist or other qualified specialist if you have any concerns.”