'60s Bob Kunkel (MD '60) has never had a headache in his life, but he knows how to treat every kind. As a first-year physician at the Cleveland Clinic, Kunkel worked under a senior physician who listened to patient headache complaints when most other doctors ignored them. Kunkel saw how patients appreciated him for taking them seriously and relieving their pain and thus found his own specialty. In the 1970s, he established a headache center at the Cleveland Clinic, where he has since treated everything from brain-searing cluster headaches to recurring migraines. He was president of the American Association for the Study of Headache from 1980 to 1982, and served as the U.S. representative on the steering committee for the International Headache Society. After almost 50 years of crafting the study of headache into a serious specialty, Kunkel is now retired, but he still can’t escape his area of expertise. He is a volunteer in a study comparing headache sufferers to non-sufferers.

'70s When Ronald David (Pediatrics Resident '78) tries to explain to his daughter why he moved from hospital administration to pastoral education, he calls himself “peripatetic.” She retorts “very pathetic,” and tells him he can never make up his mind. But for David, working with theological students at the Hospital of the Good Samaritan in Los Angeles is a logical next step in his varied career. He was chief resident at Children’s Hospital of Pittsburgh. As a Pitt assistant professor of pediatrics, he cofounded a transitional infant care program at the Children’s Home of Pittsburgh before moving into public health administration. He was acting deputy secretary of health for Pennsylvania under Governor Robert Casey. He joined the faculty of Harvard University’s John F. Kennedy School of Government as a lecturer in public policy with a research interest in women’s health. As chief medical officer for the District of Columbia’s Health and Hospitals Public Benefit Corporation, he says that he witnessed much despair and dysfunction, as well as “moments of miracle and majesty.” Spirituality is an essential but overlooked component of health, says David, who is now a certified clinical chaplain. He guides theological students in Los Angeles through their encounters with the sick and dying and is writing a book about the relationship between health, spirituality, and religion.

'80s Peter Lambrou (Orthopaedic Surgery Resident '82) met the crew of US Airways Flight 1549 after it crash-landed in the Hudson River last January. The airline and pilots’ association asked him to medically screen the crew before they spoke to the press. Lambrou knows the pressures involved in guiding jet planes through the sky. He’s in his 23rd year with US Airways as a commercial pilot and has piloted transoceanic flights to Frankfurt and Madrid. The president and founder of the Center for Aviation Medicine near Pittsburgh, Lambrou helps pilots regain their licenses after losing them for medical reasons. As a pilot who cannot remember a time when he did not want to be a pilot, he says he understands why they want to be airborne again.

At Lahey Clinic in Massachusetts, Anthony Gray (MD '85) expands lungs, implants stents, drains fluids, and opens new airways to help patients breathe better. One of Gray’s hardest jobs is easing the transition for a patient who won’t survive lung disease. “At the same time, it is the one aspect of my job I wouldn’t change for anything. It’s an act of love that brings me closer to my patients.” Patients at the outpatient pulmonary rehabilitation clinic, which he directs, are often severely limited by advanced lung disease. With intensive, supervised exercise and education, these patients often achieve significantly higher levels of functioning. In the mid-1990s, he and his mentor at Lahey started the first interventional pulmonary fellowship program, of which there are now 11 in the country.

'90s On Mondays, Peter Ubel (Internal Medicine Fellow '94) gives his two sons 20 minutes each of screen time if they want it. But if they wait until Tuesday, dad gives 25 minutes. If they hold out until Friday, dad gives 40 minutes. “They have yet to make it to Friday,” laments Ubel. He says that if his sons were rational creatures, according to Adam Smith’s classic model of economics, they would wait until Friday. But they’re not rational. None of us are. This is the central premise behind Ubel’s latest book, Free Market Madness (Harvard Business Press, 2009), about the clash between the harmful choices we actually make compared to the rational choices capitalist theory presupposes we make. In medicine, this same capitalist philosophy supports the theory of patient autonomy, but Ubel argues that sometimes others need to make choices for us. Ubel is a professor of internal medicine at the University of Michigan, where he directs the Center for Behavioral and Decision Sciences in Medicine.

About to remove a tumor from the brain of a 3-day-old infant, Paul Grabb (Neurological Surgery Resident '95) suddenly stopped operating and blurted out a four-letter word: Foot! Inside Sam Esquibel’s tiny skull was a foot and other partially developed organs. Esquibel was born with a rare congenital disorder. Grabb and his colleague in the OR, Dr. Anthony Gray, removed the foot and performed a craniectomy to prevent the tumor from growing. The surgery was successful, and Esquibel is now doing well. Esquibel’s case is one of many that highlight the importance of pediatric surgery and the need for more surgeons to specialize in this field.

Peter Ubel (above), Paul Grabb (on the left) with a colleague in the OR.
W. GREGORY FEERO

CONFUNDING EXPECTATIONS

When Greg Feero (MD/PhD ’98) graduated from the University of Pittsburgh School of Medicine, he achieved a first for the school’s Medical Scientist Training Program (or MSTP, also known as the MD/PhD program). He was the first graduate to, by sheer choice of residency, utterly stun and perplex the mentors who had guided him through seven-plus years of scientific and medical education.

“I said, ‘Look, guys. I want to do family medicine,’” he recalls.

Feero’s mentors expected him to enter a highly specialized area of medicine and to publish original, transformative, biomedical research. Feero, whose PhD is in human genetics, had done extensive laboratory investigation into the barriers to delivering new genes to skeletal muscles. He hoped to someday develop a gene therapy for muscular dystrophy.

“I was being groomed to become a neurologist,” Feero says. But for his last clinical rotation in medical school, he arranged to spend a month at Maine Dartmouth Family Practice. Amid the forests, rivers, and small towns of rural Maine, he was an odd duck as an MD/PhD student. For a scholarly paper, he wrote about the coming collision of genomics and primary care. It was unlike anything any other intern had done.

Months later, he transferred out of his neurology residency and into the Maine Dartmouth Family Residency Program, which prides itself on having 60 percent of its trainees go on to practice in a rural setting.

Today, Feero remains a rare bird: He’s a clinical associate professor of family medicine at West Virginia University, caring for patients in a quiet corner of the Mountain State called Harpers Ferry. At the same time, he is the chief of the Genomic Healthcare Branch of the National Human Genome Research Institute in Bethesda, Md., and senior adviser to the director of NHGRI for genomic medicine.

His area is the ongoing collision of the Human Genome Project and family medicine. Family physicians, he says, cannot ignore the implications of genome-wide association studies, which attempt to tease out the genes that confer risk for, say, heart disease or diabetes.

For example, says Feero, “if you are unlucky enough to inherit the worst risk markers for age-related macular degeneration at several particular points on your genome, your risk goes up 250-fold for getting AMD. That’s a small percentage of the population—1 in 25,000 individuals—but if you inherit that 250-fold risk increase, you should definitely not be smoking. You might want to be on vitamins to prevent AMD.”

Because genetic risk isn’t always so clear, however, Feero thinks the lasting impact of genome-wide association studies won’t be in disease risk prediction—it will be in identifying new target pathways for drug development and preventative approaches. Nobody would have guessed that a gene for a protein in the blood that helps regulate inflammation was involved in AMD, he points out. But the discovery of that connection suggests a paradigm-shifting strategy for treating AMD.

Feero eyes family medical histories as powerful genomic instruments. In 2004, the U.S. surgeon general and NHGRI created a Web-based tool for recording family history. However, it required the patient to store the data, print it out, and carry it to the physician. Feero thought the tool should be compatible with electronic health records. Today, you can use it to record your family medical history (at www.familyhistory.hss.gov). And if your health care provider has secure e-mail, as UPMC does, you can send it directly to your electronic health record.

The next step, which Feero is working on, is to create simple tools for physicians to interpret this data for specific health risks. —Chuck Staresinic
Kevin Judy (MD ’84) started the brain tumor center at the University of Pennsylvania Neurological Institute in 1992 after moving there from Johns Hopkins University. Judy’s current research focuses on finding more effective methods of delivering radiation treatment. In one method, Judy implants a balloon in the abscess where a tumor once was. Catheters connect the balloon to the base of the skull, where Judy injects radioactive fluid into the balloon. After the appropriate amount of radiation has been administered, Judy aspirates the radioactive fluid from the balloon and removes the balloon.

Judy recently spoke in front of a group of medical students at Penn when he saw a nametag that read “Katie Baratz.” He asked if she knew any Baratz’s from Pittsburgh, and Katie was impressed that he pronounced her name correctly (with the emphasis on the first syllable). Explanation: Katie is the daughter of Judy’s Pitt med classmates Mark and Arlene Baratz (both MD ’84).

“I was Baratz, she was Brown, and we were sitting right across from each other,” recalls Mark Baratz. Mark and Arlene shared lab space in the first months of medical school. They squeezed their wedding into a weekend-long break between their third and fourth years of school, and had their first daughter, Katie, during their residencies. Mark completed his Pitt orthopaedic surgery residency in 1989, and Arlene completed her radiology residency in 1990.

Arlene Baratz, a private practice breast radiologist in Pittsburgh, has become involved with a support group for androgen insensitivity syndrome (AIS), a disorder of sexual development in which girls have XY chromosomes but otherwise develop as women because their bodies do not respond to androgen. Her oldest daughter, Katie, was diagnosed with AIS at age 6. She and her mother have talked about it on The Oprah Winfrey Show, and the diagnosis fueled the younger Baratz’s interest in practicing medicine.

Mark Baratz is a professor of orthopaedic surgery at Drexel University with a focus on patient-directed research. For patients with arthritic thumbs, he designed a device composed of five different-sized knobs to simulate everyday tasks like turning a key or using a can opener. By measuring torque, it gives patients a practical standard to monitor their progress.

Last year, Mark Baratz pulled out his blues harmonica and played a benefit concert for his old classmate Jim Withers (MD ’84). Baratz’s blues band collected eight trash bags of winter clothing and raised $1,500 for Withers’ street medicine program, Operation Safety Net. Withers first realized the importance of building long-term relationships with patients when he accompanied his dad on house calls in rural Pennsylvania. After working with leprosy patients in India in his fourth year of medical school, Withers knew he wanted to help marginalized people. Now, Operation Safety Net, which puts more than 100 student volunteers on the street to treat Pittsburgh’s homeless, is being used as a model by other cities. Withers is coordinating the fifth International Street Medicine Symposium in Atlanta, for the Street Medicine Institute, a nonprofit he founded to help cities around the world start their own such programs.

Jim Withers remembers Tim Whitney (MD ’84, Plastic Surgery Resident ’93) as the most creative member of the class. But Whitney recalls being humbled by the amazing qualities of his classmates. Whitney came to Pittsburgh after taking a year off to kayak the rivers of Northern California. Now in private practice in Northwestern Washington state, Whitney enjoys sketching out his artistic vision for his patients before surgery. He has come to deplore television reality shows that skew perceptions of his field. He performs different procedures every day, he says, often helping patients reconstruct their bodies after cancer, surgery, or trauma. —BE
Bypassing residency for the lab, Schnitzer went straight from medical school to a postdoc in cell biology.

A NEW TARGET FOR JAN SCHNITZER
BY SHARON TREGASKIS

The way Jan Schnitzer (MD ’85) sees it, for the last 40 years, scientists intent on developing a magic bullet to fight cancer have been targeting the wrong places. The problem, he says, boils down to the extension of a basic concept in tumor biology known as angiogenesis, the process of blood vessel production initiated by a tumor to make sure it has the building blocks for unrestricted growth. “The bull’s-eye for most people . . . has been tumor cells,” he says. Schnitzer has focused, instead, on starving out myriad kinds of cancer by understanding—and interrupting—the role of blood vessel proteins in angiogenesis. “We’re trying to create magic bullets, too,” he says, “but we changed the bull’s-eye.”

Until recently, Schnitzer was the scientific director of San Diego’s Sidney Kimmel Cancer Center. With the 25 scientists in his lab, he developed techniques to image molecules in living organisms, mapped hundreds of blood vessel proteins from healthy and diseased organs, and tested targeted cancer therapies that leave healthy tissue unscathed. “He’s a prolific investigator, on the fast track to discovery in areas which people are finding very hard—how to deliver drugs and reduce toxicity,” says Suresh Mohla, associate director of the Division of Cancer Biology at the National Cancer Institute (NCI). “If he can devise methods which can determine, through imaging, where the drug is being targeted, and whether the drug is effective in that area, that will go a long way to change the way we think of chemotherapy and will certainly be helpful in eliminating its side effects.”

For the better part of a decade, Schnitzer’s was a lone voice in the wilderness. After a string of rejections for NCI funding in the late ’90s, he penned a pointed response to his reviewers—and got a grant, an event he likens to the bursting of a dam. “It was like going from desert to fertile ground,” says the scientist, who found himself at the epicenter of a hot new line of research.

“You get a lot of criticism in this business, a lot of naysayers,” says collaborator David Cheresh, a professor of pathology at the University of California, San Diego. “Jan has enough determination and confidence in his own abilities to know he can overcome the obstacles that will be thrown his way.”

That combination continues to yield results. Today, the Pittsburgh native holds a half-dozen patents for techniques to sample the lining of the blood vessel and the nanoscale protein repositories that dot its surface, known as caveolae. He also serves as coprincipal investigator on a $13 million, five-year program project grant from NCI to test tumor-vascular targeting agents. Schnitzer’s post-MD career took a trajectory like that of a PhD in biophysics. Instead of a residency, he did a postdoc in cell biology at Yale University followed by a string of academic appointments—and a six-year hiatus to found a biotech startup called Vascular Genomics in the late ’90s. He now directs a new institute, the Proteogenomics Research Institute for Systems Medicine, which is in San Diego.

“Jan’s ability to cut across both clinical and translational science is a big benefit,” says Cheresh, Schnitzer’s co-PI on the NCI project grant. “Not only does Jan ask critical questions we’d all love to have answers to, he also designs the systems and approaches to answer those questions.”