



HOW A CANCER INSTITUTE CAME TO BE

BY JAMES P. SWYERS

# INVISIBLE NO MORE

“E mbarrassing” is how Thomas Detre describes the landscape for cancer care in Pittsburgh in the mid-1980s—and he would know. In 1984, Detre, an MD, became Pitt’s senior vice chancellor for the health sciences with responsibility for the University’s six health sciences schools, including the School of Medicine. As such, he also became an unofficial “go-to” person for medical advice or referrals.

“I’ve never adopted the parochial attitude that we’re the best in everything,” says Detre, now a Distinguished Service Professor of Psychiatry. “When people would ask me where I thought they would receive the best care, I sent them wherever I thought was the best place possible.”

Although Pitt was making great strides at the time in many areas of medicine, for cancer care, the best place to go was usually somewhere else. (The notable exception was work in breast cancer being done by Bernard Fisher, MD ’43, who ultimately changed the treatment protocol for the disease and even established a regimen for prevention.) Overall, however, the University was “very thin” in terms of cancer expertise, Detre recalls. Consequently, cancer patients and their families often found it better to travel to Cleveland, Philadelphia, New York, or Washington, D.C., for treatment.

As Ronald Herberman steps down this winter, he ends an era of extraordinary growth for the University of Pittsburgh Cancer Institute.

ILLUSTRATION | TIMMY KUCYNDA  
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The fact that the University of Pittsburgh Cancer Institute (UPCI) today ranks among the foremost cancer centers in the United States is a testament to how much things have changed in the past 20-some years—as well as to the determination of one man: Ronald Herberman, founding director of UPCI, associate vice chancellor for cancer research, Hillman Professor of Oncology at Pitt, and director of the UPMC Cancer Centers. Herberman will step down this February as director of UPCI and UPMC Cancer Centers. With that act ends an era of astonishing growth.

“I’ve heard people say that Ron Herberman is made of steel, but I tell everyone he’s really made of titanium. ... He’s one of the most persistent people I’ve ever met,” says Detre.

In January 1984, a University task force concluded that a consortium consisting of Pitt, its affiliated hospitals, and Carnegie Mellon University should work together to establish a regional cancer institute; all of the parties agreed to provide start-up money. Not long after Detre became senior vice chancellor for the health sciences, the Richard King Mellon Foundation gave \$3 million to help establish the institute.

With initial funding in hand, Detre appointed a search committee to find a director, but viable candidates were reluctant about Pittsburgh, which still bore the scars of a smoky steel town whose heyday had passed. Eventually, the committee found a well-respected expert in chemotherapy who agreed to an interview.

However, as Detre recalls, the candidate “would not do.” He wanted someone more in tune with newer, more innovative cancer therapies, someone who could effectively lead the institute into the future. He assembled eminent oncologists and researchers—one of whom later won a Nobel Prize—to identify the credentials such a candidate should have. Like Detre, his advisers believed that molecularly targeted cancer treatments would come to the forefront and that much could be learned about cancer by better understanding the body’s immune system.

Gerald Levey, head of the search committee and chair of the Department of Medicine at the time, knew someone who fit that description perfectly. It was Herberman, who had begun a long and notable career at the National Cancer Institute (NCI) in 1966, two years after earning his MD from New York University. Levey and Herberman had been friends since their days as residents at Massachusetts General Hospital.

From the outset of Herberman’s career, immunology was the focus of his work.

In the early 1970s, Herberman’s laboratory discovered that a type of immune cell called a natural killer cell could attack cancerous tumors, and he demonstrated its importance in resisting the spread of cancer. Based on evidence that some people develop a natural immunity to cancer, his lab also organized a national program for improving cancer diagnosis based on immune markers, a field now known as immunodiagnosis. Likewise, the lab developed a novel diagnostic tool by detecting biochemical markers in the blood, urine, and tissue of people with cancer. (He remains engaged in natural killer cell research with close collaborators—though he gave up his own lab years ago because of administrative responsibilities.)

Herberman played a major role in establishing NCI’s Biological Response Modifiers Program, which funded research on biological and immunological cancer treatments like immune messenger molecules, vaccines, gene therapy, and bone marrow transplants.

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However, when contacted about the Pittsburgh job, Herberman, like the others, was reluctant.

“The reaction I got from my colleagues at NCI was that I shouldn’t even bother going to Pittsburgh because there wasn’t much going on in cancer at the time. In addition, the hospitals were too independent and weren’t under control of the University. The general consensus was that it would probably be too much trouble, and it probably would fail,” Herberman recalls. Only after considerable arm-twisting did he agree to an interview.

Herberman had been to Pittsburgh only once before, and it was a quick trip—no sightseeing. This time, he was surprised to find the city so attractive. However, he remained skeptical. Detre listened patiently to his concerns, assured him they were solvable, and suggested he ask around for input from others.

Herberman did and found that Detre was known as a man of his word—and more. Under Detre’s leadership, Western Psychiatric Institute and Clinic had secured tens of millions of dollars in clinical research grants, established three National Institute of Mental Health centers of excellence, recruited top-level researchers and clinicians, and emerged as a research powerhouse with a wealth of groundbreaking studies

on topics ranging from psychopharmacology to the genetics of mental disorders. Herberman also was impressed by the collection of University-affiliated hospitals. At NCI, his access to cancer patients was limited; he saw the setup in Pittsburgh as much more feasible for the kinds of studies he wanted to conduct. He finally agreed to take the job.

In September 1985, the fledgling cancer institute consisted of Herberman, a secretary, and a three-room suite in the former Eye and Ear Hospital.

Barbara Duffy Stewart soon joined UPCI as one of its first employees. She recalls that on her first day on the job, while helping unpack a pile of boxes shipped from NCI, Herberman never removed the jacket of his corduroy suit despite the sweltering heat. It was a telling sign, because throughout the early frantic days of the institute, Herberman never lost his cool, says Duffy Stewart, who is now executive director of the Association of American Cancer Institutes.

“Thank goodness for his personality. When something unexpected would happen, and the rest of us would go crazy, he was able to keep everyone on an even keel,” she says.

Not long after Herberman arrived, John Kirkwood,

an MD and highly regarded melanoma researcher from Yale University, joined UPCI as its clinical director. Another early recruit was Theresa Whiteside, a PhD who was already at Pitt in the Department of Pathology. “Ron wanted me to start an immunological monitoring laboratory for the cancer institute very similar to the one I ran for the Department of Pathology; however, this would be for monitoring patients’ immune responses to cancer therapy,” she recalls.

With Kirkwood and Whiteside on board, Herberman began aggressively recruiting more basic scientists and physicians. *Places Rated Almanac* had recently named Pittsburgh America’s Most Livable City for the first time (an accolade repeated in 2007), and he used this distinction as leverage to convince potential recruits to come and see what the city and its new cancer center had to offer. Come they did, few at first but many more before long. Herberman’s concerns grew about the availability of space and resources to support them. In 1986, the Mellon Foundation donated another \$3 million, followed by \$8 million in 1989 so that two floors of the University’s new Biomedical Science Tower (BST) would be devoted to cancer research. In addition, Herberman put a core grant from NCI to work in 1988 to develop infrastructure and to build shared facilities for the institute’s research faculty. Nevertheless, for UPCI to become a leading cancer

center, the quest for additional funding and space had really just begun.

In 1990, after only five years, UPCI won a powerful endorsement with its designation by NCI as a comprehensive cancer center—"the youngest center ever to receive that distinction," Herberman says—in recognition of its far-reaching strengths in cancer treatment, research, education, and prevention. UPCI today is one of only 39 comprehensive cancer centers in the country and the only one in Western Pennsylvania.

Throughout the 1990s, while UPCI increasingly incorporated faculty from both Pitt and Carnegie Mellon into its research projects, it was pretty much an "invisible" cancer institute, with clinicians and researchers scattered around the campuses of both universities. What the institute needed more than anything was a home. That opportunity came in 1997 when UPMC wanted to acquire Shadyside Hospital. One condition mandated by the hospital's board of trustees for the merger was that UPMC establish a center of excellence there.

Although Herberman was intrigued by the prospect of relocating UPCI's inpatient program to Shadyside, he didn't want to leave the outpatient and research activities in Oakland, fearing that would fragment the institute even more. So, before agreeing to the move, he wanted a commitment for a new outpatient facility and space for the institute's research labs. UPMC initially bristled at the idea; "shocked" is how Herberman describes the reaction he got. Disappointed but determined, he set out to build a case for more space. Building lab space at Shadyside would not only allow UPCI to move all of its personnel to one location, but also free up two floors of space in BST. Finally convinced, UPMC officials announced plans in 1998 for the cancer center's new facility to be built adjacent to Shadyside Hospital and launched a capital campaign to fund it. Pittsburgh philanthropists Henry and Elsie Hillman provided the lead \$10 million gift for the project and a name for the building. The Hillman Cancer Center today serves as home to UPCI as well as the flagship of the UPMC Cancer Centers, a network of 45 clinical care facilities in Western Pennsylvania and the surrounding region. The \$130 million clinical and research complex opened in 2002. An adjacent facility, the UPMC Cancer Pavilion, houses administrative offices and a 400-seat auditorium.

In 2005, the Hillmans gave \$20 million more—at the time, the largest single gift ever to Pitt and UPMC—to create the Hillman Fellows Program for Innovative Cancer Research, which provides seed money to stimulate collaborative and novel cancer research, and to launch a major five-year initiative to raise \$200 million for UPCI's future growth and development.

Through the years, UPCI has become more closely

associated with the nation's older, more established cancer centers. In addition, UPCI and the UPMC Cancer Centers now constitute one of the largest clinical cancer operations in the country and provide cancer care to nearly half of the patients in the region, including more than 30,000 new ones each year. The influence extends far beyond the region now; among UPMC's most recent ventures are two new cancer centers in Ireland.

UPCI's stature has grown, and so has Herberman's. Among his honors in recent years are the Governor of Pennsylvania's Award for Excellence in Science and Medicine and a Lifetime Science Award from the Institute for Advanced Studies in Immunology and Aging.

Colleagues speak of his vigor and energy. Herberman is also a reserved, intensely personal man not given to idle rhetoric. He has a permanent loss of peripheral vision as the result of surgery on his pituitary gland. Herberman is himself a cancer survivor. Six years ago, he was diagnosed with chronic lymphocytic leukemia. "It was quite disconcerting until I got reassurances that things could go well for me," he says. His leukemia has progressed very little and may well continue in that state for some time. "Fortunately I'm still feeling good," he says.

His leadership at Pitt has made a difference for untold other cancer patients.

For example, one of his first recruits, Kirkwood, has significantly advanced the treatment of melanoma, the deadliest form of skin cancer. Using a naturally occurring immune-stimulating protein called interferon, Kirkwood's group has demonstrated the regression of disease in some patients along with dramatic improvements in long-term survival.

UPCI is making significant advances in the diagnosis, prevention, and treatment of many other cancers, including breast cancer, head and neck cancers, lung cancer, and cancers of the blood and lymphatic systems. For instance, Whiteside's Immunologic Monitoring and Cellular Products Laboratory assesses patients' immune response to therapy; it can measure multiple parameters, including immune-cell types and functions as well as the cells' ability to manufacture cytokines. "We now can detect cancer and cancer progression much earlier because we can look for 10 to 15 mark-

ers rather than the one or two we were able to study 20 years ago," says Whiteside.

She also oversees a facility for generating cells and cellular products for cancer therapies like vaccines. "We're developing products for as many as nine clinical trials, not only for cancer but also for other conditions such as HIV and diabetes," she says.

And Herberman is excited about his own research partnership with Michael Lotze, a Pitt professor of surgery and bioengineering and director of strategic partnerships for UPCI. That work is unveiling how natural killer cells collaborate with dendritic cells (which are key to the body's immunity).

An institute that began with a couple of employees in 1985 now employs approximately 500 people, many of them highly respected scientists and physicians in more than 30 disciplines who have come from some of the world's leading academic research centers.

UPCI's latest headline-grabbing recruit is Nancy Davidson, who will assume Herberman's directorship duties on March 1. (See story p. 16.) Davidson, a renowned oncologist, comes from the Johns Hopkins Sidney Kimmel Comprehensive Cancer Center's Breast Cancer Program, which she directed, and is known for her work identifying the role hormones, including estrogen, play in gene expression and cell growth in cancer.

"I'm very pleased we were successful in recruiting Nancy Davidson," says Herberman. "She has the breadth of vision and background that prepares her to take on a large and complex cancer institute."

Looking back at how that institute grew, he says, "Overall, it was a terrific experience. Something I'm extremely proud of—to be given a chance to build a cancer institute and have so many terrific colleagues." Building a home for UPCI, the Hillman Cancer Center, was the cherry on top for Herberman—"It's much more than I'd first envisioned."

And these days, when Pittsburghers ask Detre where to go for cancer care, he advises them to stay right here. ■

*This article, which has been updated, first appeared in Excellence Defined, the University of Pittsburgh School of Medicine's 2007 report.*

At the Hillman Cancer Center, research takes place down the hall from clinical care.

