

cancer

D I S C O V E R Y & C A R E



From disaster to breakthrough:

UPMC pathologist pioneers
radiation and thyroid cancer link

UPMC Cancer Centers *and*
University of Pittsburgh Cancer Institute



A Comprehensive Cancer
Center Designated by the
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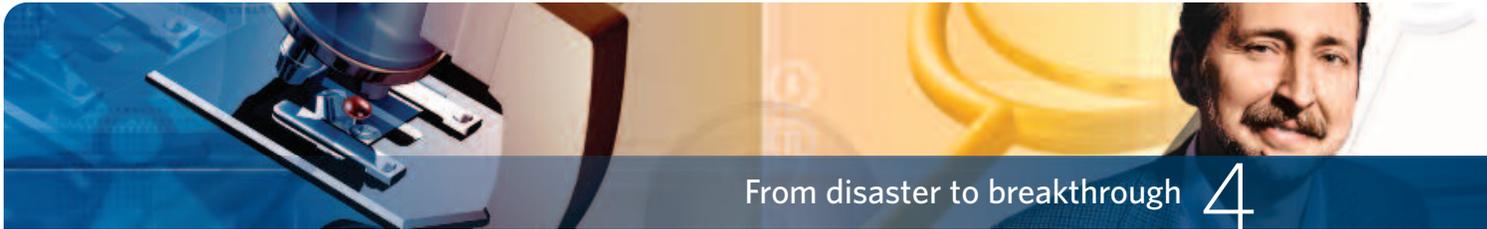
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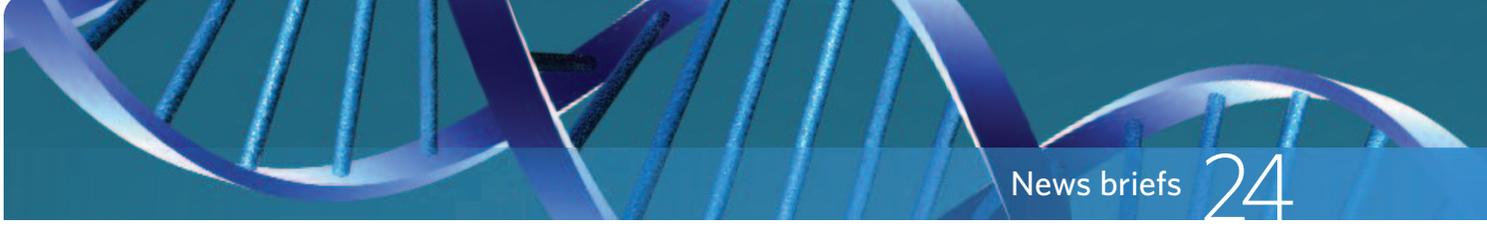
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The Power of Partnership

a future without cancer



Our UPCI physician-researchers are on the frontlines of translating scientific discovery into everyday clinical practice.

Cancer research has always been ground-breaking science, with discoveries coming in many forms for preventing, detecting, treating, and defeating this devastating disease.

At the University of Pittsburgh Cancer Institute (UPCI) and UPMC Cancer Centers, our mission has been to accelerate the transition of our scientific endeavors from the lab to the bedside — or, in other words, to enable our patients to benefit from our research in the fastest time frame possible.

Our UPCI physician-researchers are on the frontlines of translating scientific discovery into everyday clinical practice. Their innovative work already is changing the way cancer is detected and treated.

One example of this progress is the work of UPCI researcher Yuri Nikiforov, MD, PhD, who is featured in this issue. Dr. Nikiforov used his experience in the former Soviet Union to feed his fascination with the relationship between exposure to radiation and the development of thyroid cancer. Now, the fruits of his unique molecular research have been borne out in the development of tests that can detect cancer in cells that appear benign, and may, in the future, predict a person's susceptibility to develop thyroid cancer after radiation exposure.

Our researchers are making progress in this field every single day. But to continue making these kinds of strides in advancing scientific discovery, we must rely on the support of our Pittsburgh family — the patients and relatives, business and community leaders — who contribute their time, treasures, and talents to helping our institution grow and prosper. And thanks to that family, UPCI now begins its 25th year, and will commemorate this achievement throughout the 2010-2011 academic year.

As we celebrate this significant milestone in our institution's history, we also celebrate the milestones that have been achieved in cancer research and care over the past quarter century. Along that path, our understanding of cancer has advanced thousandfold, and more people are alive today because of our increased knowledge of this disease. But this journey must continue.

I look forward to continuing our partnership as we work toward a future without cancer.

A handwritten signature in black ink that reads "Nancy E. Davidson". The signature is fluid and cursive.

Nancy E. Davidson, MD

*Director, University of Pittsburgh Cancer Institute and UPMC Cancer Centers
Associate Vice Chancellor for Cancer Research*

Hillman Professor of Oncology

*Professor of Medicine
University of Pittsburgh School of Medicine*



From disaster to breakthrough:

UPMC pathologist pioneers radiation and thyroid cancer link



“In a tragic way, Chernobyl was a unique opportunity for us to freely understand the biology of radiation.”

Yuri Nikiforov, MD, PhD

In 1986, Yuri Nikiforov, MD, PhD, was a pathologist and researcher at a pediatric hospital in Minsk in the former Soviet Union when Reactor Number 4 exploded at the Chernobyl nuclear power plant, spewing radioactive isotopes into the air. Millions of people in surrounding countries were exposed to high doses of radiation. Four years after the accident, Dr. Nikiforov began diagnosing an unprecedented number of thyroid cancers in patients who had been exposed to radiation as a result of the Chernobyl accident.

As criticism over the Soviet Union’s initial mishandling of the disaster dissolved, Dr. Nikiforov had only begun to answer a lingering medical question posed by the tragedy. With more

than 10 million people potentially exposed to radiation in the air, grass, and drinking water, why did such a disproportionate number of people present with thyroid cancer?

Dr. Nikiforov’s career path would eventually lead him to UPMC as a premier pathologist in understanding thyroid cancer, and developing state-of-the-art diagnostic procedures that have become standard practice when diagnosing the disease. Dr. Nikiforov works with UPMC’s Multidisciplinary Thyroid Center and the University of Pittsburgh Cancer Institute (UPCI) to pioneer efforts in developing novel strategies for earlier diagnosis, more effective treatment, and the prevention of thyroid cancer.

Continued

Identifying the Inherited Risks

Similar tragedies in Hiroshima and Nagasaki, Japan, suggested a link between radiation exposure and thyroid cancer; however, due to a lack of specific technology at the time, little was understood of the connection. “In a tragic way, Chernobyl was a unique opportunity for us to freely understand the biology of radiation and how radiation induces cancer in children and adults,” says Dr. Nikiforov. “We hoped to find a way to minimize or completely prevent the carcinogenic effects of radiation.”

Dr. Nikiforov and his team began to investigate and understand the genetic markers related to thyroid cancer. He identified specific mutations that occur in the RET and BRAF genes as a result of radiation exposure.

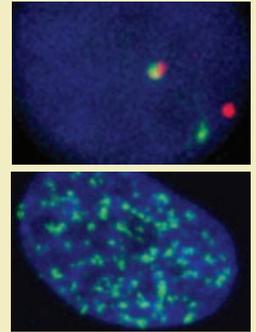
Research has shown that the presence of each of these mutated genes plays a role in the development of cancer. Dr. Nikiforov discovered that damage induced by radiation forces activation of the RET and BRAF genes, leading to tumor development in the thyroid. The BRAF gene mutation is an indicator of the aggressiveness of the thyroid cancer. Knowing how aggressive a cancer is may affect a patient’s treatment plan, allowing surgeons to determine how extensive tumor removal should be.

Today, Dr. Nikiforov’s research focuses on discovering how certain inherited genetic features make a person susceptible to developing radiation-induced cancer. A mutation of the RET gene may indicate a person’s high susceptibility to radiation-induced thyroid cancer.

In the aftermath of the explosion at Chernobyl, approximately 1 million children were exposed to significant doses of radiation; approximately 4,000 developed thyroid cancer. “This demonstrated an inherited predisposition to cancer,” said Dr. Nikiforov. An eventual unraveling of a genetic code that leads to increased cancer susceptibility could benefit cancer patients who would typically consider radiation therapy as a treatment plan for their cancer. “This has profound implications,” says Dr. Nikiforov. “If



“The panel of genetic markers really helps to make for a more specific and accurate diagnosis of cancer in thyroid nodules.”



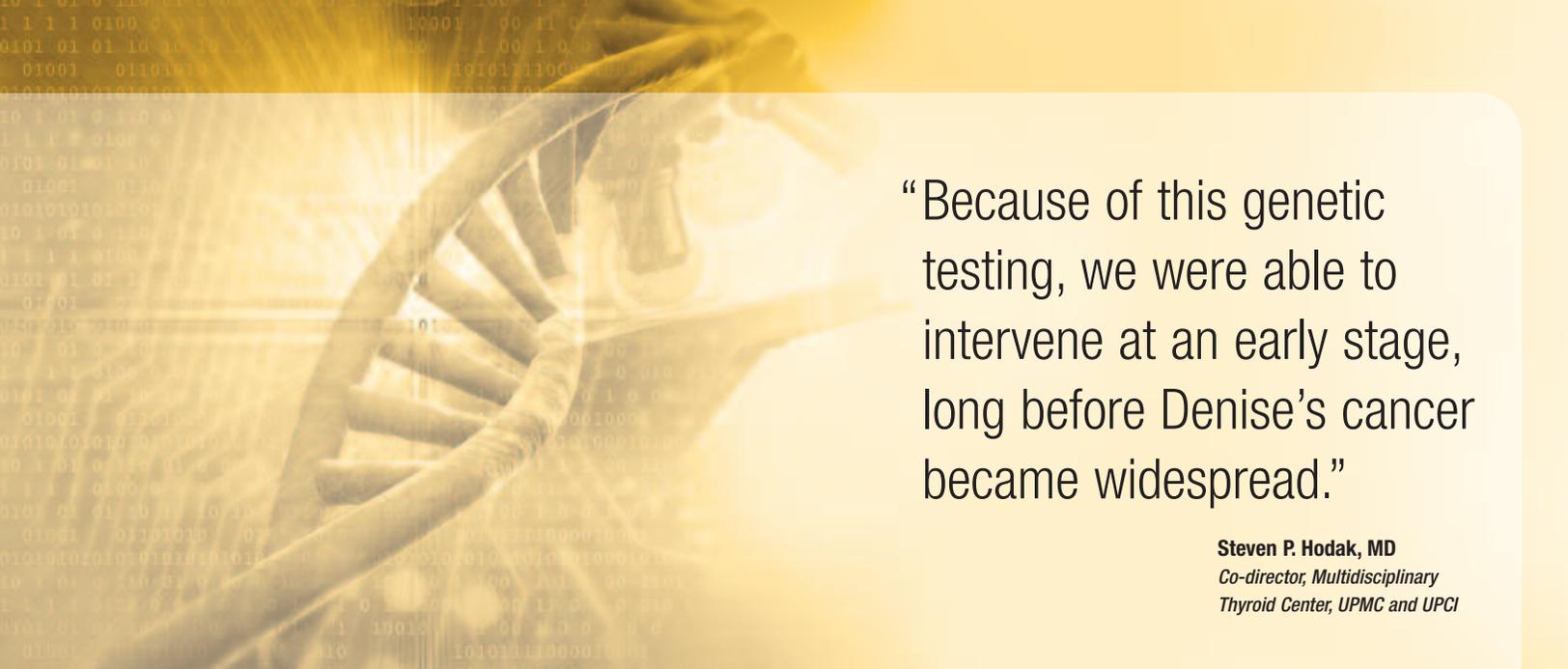
we knew who was predisposed to radiation-induced cancer, oncologists may recommend a different treatment plan to prevent the patient from developing a secondary cancer,” says Dr. Nikiforov. This discovery could also lead to a future screening tool that could determine who has the least risk of developing radiation-induced cancers in work environments, such as nuclear power plants and the NASA space program.

Looking Beyond the Microscope

Dr. Nikiforov’s research transcends the barriers of the lab and holds major clinical applications for the more than 38,000 people each year diagnosed with thyroid cancer. Endocrinologists traditionally diagnose thyroid cancer using fine needle aspiration (FNA), which involves removing cells from a nodule using a thin needle. Pathologists review this sample under a microscope to determine if the cells are malignant or benign. For patients with inconclusive results, the tumor cells can be studied against Dr. Nikiforov’s identified genetic mutations to better determine the likelihood of cancer. “The panel of genetic markers really helps to make for a more specific and accurate diagnosis of cancer in thyroid nodules,” says Dr. Nikiforov. These novel genetic markers can be used to diagnose a cancer even if the thyroid cells appear benign under the microscope.

Dr. Nikiforov’s genetic testing is recognized as an effective method of diagnostics by the American Thyroid Association. At UPMC’s Multidisciplinary Thyroid Center, patients have access to this state-of-the-art molecular diagnostic evaluation from its pioneering source.

Dr. Nikiforov remains interested in uncovering additional markers that will definitively determine if a tumor is malignant or benign. The National Cancer Institute has awarded Dr. Nikiforov a \$1-million grant to continue his research with UPMC and to identify new genetic markers and understand the reason for the rapidly growing incidence of thyroid cancer in the United States. Additional findings could ultimately change the future of cancer care and diagnosing cancer for thousands worldwide.



“Because of this genetic testing, we were able to intervene at an early stage, long before Denise’s cancer became widespread.”

Steven P. Hodak, MD
Co-director, Multidisciplinary
Thyroid Center, UPMC and UPCI

Importance of Genetic Testing in the Fight Against Cancer

Twelve years after Denise Murphy was diagnosed with a small thyroid nodule, she could feel a change in the size of her thyroid, despite the use of medication to suppress the nodule. In 2007 and 2008, Denise had two fine needle aspiration (FNA) procedures, both negative for cancer.

Due to continued neck discomfort and painful swallowing, UPMC endocrinologists would ultimately send a sample of thyroid tissue obtained from the FNA to be tested for genetic markers discovered and pioneered by Yuri Nikiforov, MD, PhD, director, Thyroid Molecular Diagnostics, UPMC and University of Pittsburgh Cancer Institute (UPCI). The results would make Denise a poster child for Dr. Nikiforov’s work.

Endocrinologists and their patients typically rely on FNA as a method of diagnosing thyroid cancer. Endocrinologists extract thyroid tissue from a patient and submit it to a pathology laboratory where it is examined under a microscope to determine if the tissue contains malignant or benign cells. According to Steven P. Hodak, MD, co-director, Multidisciplinary Thyroid Center, UPMC and UPCI, and Denise’s endocrinologist, FNA can be falsely negative in up to 2 percent of cases. “Even though repeated FNAs can reduce the risk of false negative testing, it can’t be eliminated completely,” says Dr. Hodak.

Denise’s biopsy tested positive for a mutation in a thyroid signaling protein called RAS. “Patients with an RAS mutation have an increased risk for thyroid cancer or may already have a hidden thyroid cancer that can be missed on FNA,” says Dr. Hodak. “The mutation of Denise’s RAS gene suggested a cancer could be forming in her thyroid.”

As a patient of UPMC’s Multidisciplinary Thyroid Center, Denise had the benefit of cross collaboration between key physicians that

would ultimately lead to a tailored treatment plan. While working as a phlebotomist in an outpatient lab at UPMC Montefiore, Denise had heard good things about Sally E. Carty, MD, co-director, UPMC Multidisciplinary Thyroid Center, UPMC and UPCI. “I knew she had an excellent reputation and I wanted to meet with her to discuss my options,” says Denise. Based on the genetic testing, the painful swallowing, and other complications, such as development of autoimmune thyroiditis, Denise chose to have her entire thyroid surgically removed.

After surgery, the RAS-positive nodule in Denise’s thyroid tested positive for a papillary microcarcinoma, which, if left untreated, could have spread throughout the nodule and thyroid.

Like every surgery, the procedure had risks. As a skilled soprano in her church choir, Denise was told that surgery could change her voice or worse — she might never sing again. “It was a major mental hurdle I had to overcome,” says Denise. “There were a lot of risks involved, but Dr. Carty’s skilled hands prevented that.”

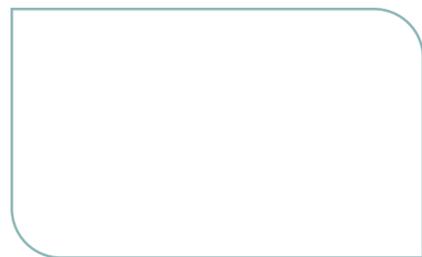
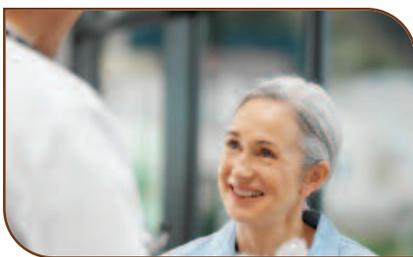
Once Denise healed, she found she was able to sing again in her church choir. “I waited a few weeks after the surgery even to try, but I do have my voice and I’m thankful,” says Denise.

Denise takes medication to regulate the hormones that would naturally be produced by her thyroid. “I feel very lucky,” says Denise. “Because of the genetic test and the skilled hands of my surgeon, my thyroid cancer was caught early; it saved my life.”

“Because of this genetic testing, we were able to intervene at an early stage, long before Denise’s cancer became widespread,” says Dr. Hodak. “That’s the power of this mutational testing.”

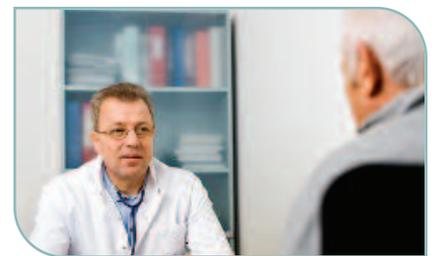
Denise Murphy’s treatment and results may not be representative of all similar cases.

BUILDING RELATIONSHIPS to FIGHT CANCER





At her third session of a seven-week radiation treatment plan, breast cancer survivor Patricia Taylor, 64, looked her radiation oncologist in the eye and said, “Whatever happens to me, I want to tell you that in my heart I know you’re giving me your very best. Whatever the outcome, I know you care about me, not just as a patient, but as a person, and that matters to me; it matters a lot.”



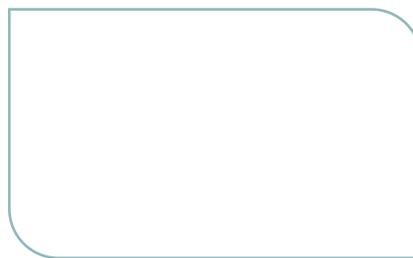
What mattered to Patricia in those crucial days and weeks is what matters to all cancer patients every single day: confidence in their doctors. Patients and physicians agree that clinical outcomes may be improved by a strong patient-physician relationship. Studies have shown that patients are more likely to comply with their physicians' recommendations if they feel comfortable with and cared about by their doctors, and have good communication with them.



Powerful Partnerships Enhance the Circle of Care

In cancer treatment, when lives are on the line, patient-centered care is about partnership. UPMC Cancer Centers and the University of Pittsburgh Cancer Institute (UPCI) foster partnerships that extend among members of the entire health care team, patients, and their families. Effective treatment is founded on partnerships between patients and doctors, researchers and donors, laboratory and clinical researchers, and between the cancer institute and community advocates.

“It is a theme we return to again and again,” says Nancy E. Davidson, MD, director, UPCI and UPMC Cancer Centers. “All of these partnerships are essential to our continued success in the fight against cancer.”



Investigating the Physician-Patient Relationship

Patient-preference studies have typically looked at patient relationships with their primary care physicians and medical oncologists. Until recently, however, few studies have examined the vital relationship between patients and their radiation oncologists.

Cancer patients often can feel overwhelmed and burdened by the psychological impact of dealing with a life-threatening cancer diagnosis. Solid, positive relationships between patients and their radiation oncologists can therefore build confidence and engage the patients' full participation in achieving positive outcomes.

When Patricia was diagnosed with breast cancer on Christmas Eve 2008, she knew she “wanted to be treated by the best.” A year earlier, her husband, James, 71, was diagnosed with prostate cancer, and while researching the field of radiation oncology in Pittsburgh, her search led her to Dwight E. Heron, MD, FACRO, director of Radiation Oncology Services, UPMC Cancer Centers. “The word on the grapevine was that he knew his stuff, that he had heart and treated people as individuals.”



**BUILDING
RELATIONSHIPS
to
FIGHT
CANCER**

Patricia had indeed found the right man to treat her husband's cancer, as well as her own. Dr. Heron was an investigator in a study of the relationship between patients and radiation oncologists. Beginning in 2006, this ground-breaking study, funded by the American Society of Radiation Oncology and UPMC Cancer Centers, took a systematic approach to examining this unique patient-physician relationship.

"The radiation oncologist is uniquely positioned to develop strong bonds with patients by virtue of daily radiation treatments that continue for six to eight weeks," says Ajay Bhatnagar, MD, MBA, adjunct professor, Radiation Oncology Services, UPMC Cancer Centers. "Both patient and physician benefit through the trust established during these complex treatment regimens."



Led by Dr. Bhatnagar as principal investigator, the study surveyed a total of 508 patients with breast, lung, or prostate cancer who received radiation therapy. Patricia was among them. The survey focused on interaction and communication, such as the use of everyday language, as well as physical and emotional behavior, such as a physician's touch.

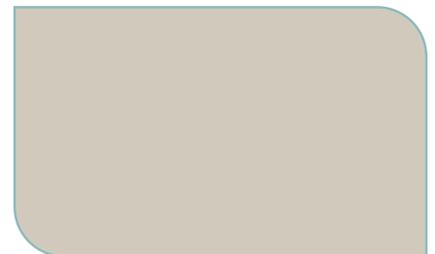
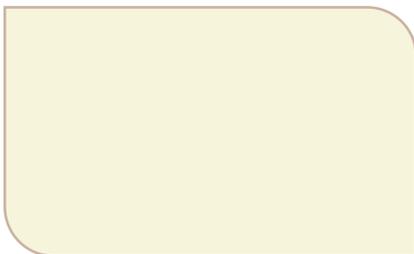
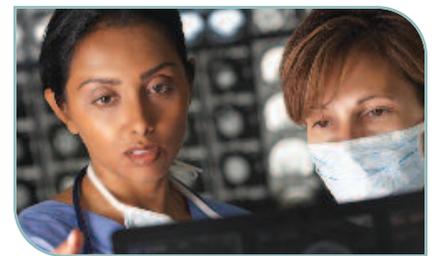
"The ability of the physician to communicate clearly and comfortably with the patient is a critical part of treatment," says Dr. Heron.

On her third day of treatment, when Patricia expressed her feelings so openly with Dr. Heron, she remembers he was holding her hand. "He always spoke right to me, eye to eye, never at me or around me," she recalls. "He gave me faith and he gave me confidence." A year after her radiation treatments, Patricia is cancer free.



UPMC Cancer Centers and UPCI physicians and researchers are at the forefront of innovative cancer treatment and research that impacts patient-centered care. Now, thanks to the research of Drs. Bhatnagar and Heron, as well as other investigators in the study, and thanks to patients like Patricia who participated in the study, physicians are gaining a deeper understanding of how the strength of the patient-physician relationship can influence positive clinical outcomes.

These patients' treatment and results may not be representative of all similar cases.





Remembering
Jeffrey E. Shogan, MD

For Jeffrey E. Shogan, MD, caring for others came naturally, and it was this caring nature that allowed him to become a well-liked and highly successful medical oncologist. But even as a businessman, his caring nature was evident as he played a leading role in establishing UPMC Cancer Centers in several underserved communities throughout western Pennsylvania and abroad. In one of his most recent ventures, he sought to establish a medical clinic in Thailand, a project that, unfortunately, he never had the opportunity to finish.

Dr. Shogan, director of business services and chief business officer of UPMC Cancer Centers, passed away in January 2010 at age 56.

“Jeff was an extraordinary individual,” says Stanley Marks, MD, director of clinical services and chief medical officer, UPMC Cancer Centers. “He was an equally skilled oncology physician,

“His blend of physician skills, business acumen, and compassion for people was unique.”

Stanley Marks, MD

businessman, and humanitarian. He had an ability to see an opportunity for change that the rest of us couldn't. His blend of physician skills, business acumen, and compassion for people was unique. We were fortunate at the Cancer Centers to have benefited from his visionary approach to providing oncology services.”

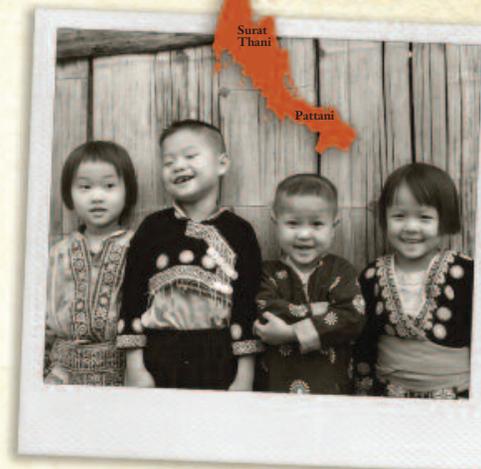
Dr. Shogan was a brilliant medical oncologist who helped to grow the stem cell transplantation program at Allegheny General Hospital before joining UPMC; he also was an integral part of the development and growth of UPMC Cancer Centers. It was his vision and resolve that led to the inception and expansion of one of the largest cancer care networks in the country. His efforts also were fundamental in the international expansion of UPMC Cancer Centers, where he helped to set up two centers in Ireland, and was in the planning stages for centers in the United Kingdom, Cyprus, and Turkey.

Through the years, Dr. Shogan touched the lives of many people, including his patients. He was admired by colleagues for his remarkable rapport with patients. When his patients learned of his untimely passing, they likened his death to that of losing a friend or family member.

A Pittsburgh native, Dr. Shogan grew up in Monroeville, Pa. After completing his bachelor's degree at Yale University, he served two years in the Peace Corps stationed in Thailand, followed by a year in Nigeria working with Westinghouse, before attending medical school at the University of Pittsburgh.

Dr. Shogan's humanitarian efforts extended well beyond his years in the Peace Corps. He established scholarship funds for local students with financial burdens, often purchased text books for nursing and medical students in third-world countries, and helped the small country of Bhutan with its health care needs.

Dr. Shogan's wife and children plan to carry on his vision to open the clinic in Thailand.



During his time in the Peace Corps, he became passionate about the Thai people and their culture. Over the past few years he found time to go back and volunteer, working with children at a Thai orphanage. And most recently, he had begun the process of planning and funding a charitable medical clinic for Thai refugees.

“Jeff felt very strongly about bringing better health care to third-world countries like Thailand,” Dr. Marks says. “To that end, we are working diligently to make that dream a reality. That spoke volumes about him. No matter how tough or politically difficult a challenge was, he was always up to the task. We will miss him greatly.”

Dr. Shogan will long be remembered for the legacy he left on the local health care community and abroad.

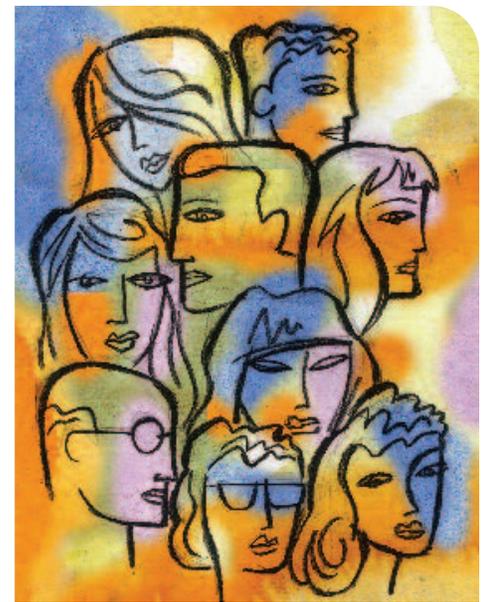
Charity

STARTS AT HOME



PHILANTHROPIC EFFORTS TRANSLATE TO BETTER CARE FOR CANCER PATIENTS

Since its inception in 1985, the University of Pittsburgh Cancer Institute (UPCI) has made exemplary strides in detecting, treating, and eliminating cancer. As the best and brightest in their field, our physicians and researchers have demonstrated an ongoing commitment to advancing UPCI's mission through their pioneering clinical and scientific efforts. This commitment does not end at the bedside or the research lab.



Motivated by personal experiences, inspired by patient progress, and encouraged by the selflessness of other donors, a strong core of our physicians and researchers has demonstrated additional dedication as Circle of Hope members in support of UPCI's research and UPMC Cancer Centers' patient care programs. This special link among our physicians, researchers, patients, caregivers, and donors has helped to foster amazing successes throughout UPCI's 25-year history.

"I am honored to be leading an organization where our physicians, researchers, and staff have such a level of commitment to our mission," says Nancy E. Davidson, MD, director, UPCI and UPMC Cancer Centers, and donor. "Our physicians and researchers are making the ultimate commitment: Not only are they giving of themselves through patient care and research, they are making a sustainable investment that will ensure the growth of our cancer programs well into the future."

GETTING PERSONAL

All donations make an impact, whether they fund a specific program or provide support for the organization's highest priority needs, such as basic research programs, clinical research, patient care programs, recruitment of new physicians and scientists, patient education, and outreach programs.

One of the channels through which UPMC Cancer Centers and UPCI physicians and researchers give back is by creating endowment funds at UPCI. These funds play an essential role in supporting and helping to advance the mission of UPMC Cancer Centers and UPCI. They are permanent legacies that provide significant recognition, as well as vital annual income.

Adam M. Brufsky, MD, PhD, co-director, Magee-Womens Breast Cancer Program, and members of his family, established the Ruth C. Brufsky Fund for Clinical Research on Pancreatic Cancer in honor of his mother, who died of the disease.

"This fund provides seed money for things that might otherwise not be funded, such as clinical speakers and research," says Dr. Brufsky. "Although the fund is in its infancy, it is beginning to make a difference. Already we have sponsored the Ruth C. Brufsky Memorial Lecture and have provided funds for clinical trials."

Stanley M. Marks, MD, director, clinical services and chief medical officer, UPMC Cancer Centers, also understands firsthand how consistent, annual philanthropic support can augment the impact of providing exceptional cancer care. He has experienced this through the growth of the Stanley M. Marks, MD, Endowed Research Fund, established by grateful patients and colleagues to honor the outstanding level of patient care Dr. Marks works to uphold, while contributing to valuable research that will influence the quality of future care. "By donating to these endowments, we are able to work toward a goal of improving treatments and outcomes. These research dollars are vital to finding new and better treatments," says Dr. Marks.

Similarly, the Sampson Family Endowed Chair in Thoracic Surgical Oncology, a permanent endowment established by a grateful patient, family, and friends in 2005, is designed to support outstanding leadership within the Lung and Thoracic Malignancies Program at UPCI and the Department of Cardiothoracic Surgery. James Luketich, MD, was honored with the chair after treating Myles D. Sampson, who was diagnosed with esophageal cancer. "These endowments help to find new

ways of diagnosing and treating cancer,” says Dr. Luketich, who also has supported the chair. “I’m honored to be a part of this effort, and I look forward to seeing the advances in detection and treatment options it will provide.”

“We as doctors have to set an example and show where our hearts are.”

Blair Jobe, MD

Recently recruited to UPMC Cancer Centers and UPCI by Dr. Luketich, Blair Jobe, MD, recognizes and supports the philanthropic cycle necessary to sustain and advance programs. For example, while grateful patients and families provide support for research efforts he leads, Dr. Jobe chooses to honor those who support his efforts by joining them as a philanthropic partner. Dr. Jobe works with, and donates personally to the Michael J. Newton Esophageal Cancer Research Fund, relocated to the University of Pittsburgh, to support esophageal cancer research through the Heart, Lung, and Esophageal Surgery Institute. “We as doctors have to set an example and show where our hearts are,” says Dr. Jobe. “If we are going to ask others to donate to our causes, then we need to be willing to donate also.”

RECOGNIZING A NEED

Some physicians want to make a more immediate impact on the lives of their patients who are affected by cancer. Physicians, researchers, and staff across the network have chosen to put their charitable dollars toward UPMC Cancer Centers’ Patient Assistance Fund, created to help cancer patients across the network overcome some of the financial barriers associated with completing their treatment. The fund is designed to provide partial, short-term assistance to help eligible patients and their families with care-related costs, primarily nutritional support.

Barry C. Lembersky, MD, clinical associate professor of medicine and contributor to the fund, sees the Patient Assistance Fund as a way to help patients meet basic everyday needs to live life beyond the scope of their treatments. “Having cancer and getting the correct treatment can be expensive, even for patients with excellent health insurance. There are almost always considerable out-of-pocket expenses. By providing patients with temporary financial relief, we can help patients concentrate on getting well; without it, many patients would not be able to complete their treatment,” says Dr. Lembersky. Since its inception in 2005, nearly 1,300 patients in need at 20 different UPMC Cancer Centers have benefited from the Patient Assistance Fund.

Similar to the Patient Assistance Fund, the OHA Endowed Patient Assistance Fund was initiated by Oncology Hematology Associates (OHA), an affiliated oncology group of UPMC Cancer Centers. After watching many of their patients struggle financially, the group wanted to make a philanthropic difference by establishing a fund and donating to help financially-challenged cancer patients. The fund was established as an endowment in order to last into perpetuity to ensure that help will be available for patients in need.

“Donating to the fund is a way to return our good fortune to the community,” says Patrick Kane, MD, a cancer physician in UPMC Cancer Centers’ network and a supporter of the OHA Endowed Patient Assistance Fund. “Many of our patients have been affected by the economic downturn, and donating to this fund allows us to see immediate results and help people right now.”

Another key supporter of the OHA Endowed Patient Assistance Fund, Kiran Rajasenan, MD, an oncologist in UPMC Cancer Centers’ network, supports the fund as a way of giving back to the patients who have relied on the OHA practice for excellent cancer care. “Contributing to the fund is important to me because it ensures these funds will be used for our own patients,” says Dr. Rajasenan. “It helps provide financial assistance to our patients in need, thereby allowing them to focus their energy on their health issues.”

BRIDGING SCIENCE AND THE CLINIC

To improve patient care, UPCI’s philanthropy cycle is deeply rooted in translational research. Among our talented researchers, Theresa L. Whiteside, PhD, director emerita, Immunologic Monitoring and Cellular Products Laboratory, UPCI, knows the demands, requirements, and labor necessary to be successful in translating lab discoveries into practical applications at the bedside. Her research lab evaluates human immune cells’ responses to tumor cells and is working to discover how to reverse the effect cancer cells have on a human’s immune cells. Dr. Whiteside generously and consistently supports translational efforts in immune therapy. “Philanthropy can provide a necessary bridge for accomplishing translation effectively, and relatively rapidly,” says Dr. Whiteside. “I want to see the findings made in our laboratories applied to therapy, so that patients can benefit from novel discoveries as soon as possible.”



As a clinician, Peter Ellis, MD, believes that his direct care with patients is strongly influenced by the efforts conducted in UPCI's research labs. "I am able to do everything I do because of the research that was done by those before me," says Dr. Ellis. "That's why I have chosen to help support the researchers who are advancing cancer care."

Similarly, David Stefanik, MD, a cancer physician in UPMC Cancer Centers' network, believes strongly in the work being performed in his colleagues' laboratories and supports their efforts through philanthropic donations. "I contribute to UPCI to support the work of Grace Yu, PhD, and Michael Epperly, PhD," says Dr. Stefanik. "They work hard at the task of seeking

new ways to protect all of us from cancer. I will continue my contributions because of the importance of the work being done and the caliber of the people involved." Dr. Stefanik supports Drs. Yu and Epperly's research in targeting cells that contribute to the growth of tumors.

CONTRIBUTING TOWARD THE FUTURE

With each donation, UPMC Cancer Centers and UPCI physicians and researchers are working to build the future of the organization from within. "The dedication and selflessness of our physicians, researchers, and all our donors is remarkable," says Dr. Davidson. "Each donation, no matter the size or the recipient, helps to reinforce the vision for our future."

A FAMILY'S PHILANTHROPIC EFFORTS ADVOCATE FOR AWARENESS

As a retired cancer specialist, Jack Hill, MD, has seen many patients diagnosed with cancer — he just never expected his own daughter to be one of them. When Suzanne Hill Alfano developed a nagging cough and discovered a nodule over her clavicle several weeks later, Dr. Hill recognized the seriousness of the symptoms.



Dr. and Mrs. Hill with their daughter, Suzanne, and her daughters, Victoria and Katherine.

Thirteen months later, Mrs. Alfano succumbed to lung cancer, leaving behind two daughters, ages 7 and 3, and parents who decided to dedicate themselves to increasing awareness about lung cancer.

In memory of their daughter, Dr. Hill and his wife, Peggy, set up the Suzanne Hill Alfano Endowment for Lung Cancer Research at the University of Pittsburgh Cancer Institute (UPCI) to support lung cancer research and awareness. They hope their long-term commitment to UPCI will not only honor their daughter, but also contribute to finding a cure. "We could lie down and feel sorry for

ourselves, but we didn't want to be victims. We wanted something positive to come from Suzanne's death," says Mrs. Hill.

Not only do they support the cause financially, but Dr. and Mrs. Hill also have spent countless hours advocating for awareness that lung cancer is not just a smoker's disease. According to Mrs. Hill, non-smokers, particularly young women, now make up 15 to 20 percent of lung cancer patients. "My daughter never smoked a day in her life," says Mrs. Hill. "We are trying to get the word out that you don't have to be a smoker to develop lung cancer."

As part of these efforts, Dr. Hill travels around the country speaking to groups about lung cancer, and has even lobbied the Pennsylvania Legislature to provide more money for cancer research. "If we, as surviving family members don't step up, there will be no one to carry the banner for those lost to this disease," says Dr. Hill. "That is why we have chosen to take up this cause and we encourage others to also."

"Jack is actively involved because he wants to help raise money to fund research," says Mrs. Hill. "I am involved because I am so angry that something like cancer took my daughter. I don't want anyone else to have to go through the pain and trauma Suzanne and her young family went through."

At UPMC Cancer Centers and UPCI, the combination of personal commitment, such as that embodied by Dr. and Mrs. Hill, and philanthropy has a powerful effect on the quality of care offered, not only to patients but to the field of cancer medicine, as well.



THE POWER OF PARTNERSHIP: A FUTURE WITHOUT CANCER

Philanthropy has many forms — donations, sponsorships, underwriting, community-based events, planned giving, in-kind support, and volunteerism — each one as important as the next.

No use of resources yields a better return than the collective impact of your generosity on our patients and their families. When one person is diagnosed with cancer, a vast network of people connected to that individual weathers the effects of the disease. At UPMC Cancer Centers and the University of

Pittsburgh Cancer Institute (UPCI), your continued support ensures that we can continue to unravel the mysteries of cancer. And every time we do, we move another step closer to improving the lives of all cancer patients and survivors.

From all of us at UPMC Cancer Centers and UPCI, thank you for your ongoing partnership in all of our philanthropic efforts and, above all, for sharing our commitment to a future without cancer.

ENDOWED CHAIRS

A number of endowed chairs support the mission of UPMC Cancer Centers and the University of Pittsburgh Cancer Institute. The income generated from endowed chairs enables our scientists, clinicians, and their teams to strengthen established areas of expertise, expand new initiatives, and forge new frontiers in science that benefit our patients and their families now and into the future.

The Claude Worthington Benedum Endowed Chair in Radiation Oncology
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These dedicated partners have given or helped to raise a cumulative total of \$1 million or more in support of cancer research and care.

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FAMILY LEGACY SOCIETY

Often, a personal experience with cancer or the loss of a loved one to the disease spurs a family or others to establish funds that honor a patient or caregiver through support of continuing efforts to better detect, prevent, and treat cancer.

Suzanne Hill Alfano Endowment for Lung Cancer Research
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The Annual Fund provides vital support for the operation of clinical programs, basic and clinical research programs, recruitment of new physicians and scientists, seed money support, medical and patient education, and outreach programs. Those listed have made sustained annual investments at the following designated levels.

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The Circle of Hope honors individuals, family foundations, and privately held companies that make contributions of \$10,000 or more in a calendar year. This list recognizes those who were members in 2008, 2009, and through 2010 to this point of publication.

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The 2010 Hillman Cancer Center Gala was held Nov. 30, 2010 at the Monroeville Convention Center. The event, *Celebrate! A Future Without Cancer*, commemorated 25 years of UPCI and once again supported cancer research priorities. For more information please contact the UPCI and UPMC Cancer Centers Development department at 412-623-4700.

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Every gift to UPMC Cancer Centers and the University of Pittsburgh Cancer Institute plays a vital role in advancing research and enhancing patient care. Unfortunately, space is too limited to list the individual names of donors that gave gifts at levels of \$1 to \$249. Please know your support is truly appreciated.

If we have made any errors in any name or omitted anyone from this list, please accept our apologies and notify us at 412-623-4700.

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The power of partnership: A future without cancer

On Oct. 6, 2009, 650 of the region's most influential community and civic leaders and supporters gathered at the new Monroeville Convention Center for the 2009 Hillman Cancer Center Gala to celebrate more than \$3.6 million raised to advance cancer research and patient care programs at Hillman Cancer Center.

The 2009 gala theme, The Power of Partnership, exemplified the key partnerships that together form the core mission of UPCI and UPMC Cancer Centers to provide excellence in patient care, education, and research.

Guests were treated to a performance by Emmy award-winning actress and singer Kristin Chenoweth, a dance performance by the Pittsburgh Ballet Theatre School, and dinner prepared by UPMC executive chef Brad Kelly and his team. Pittsburgh native actor Michael Keaton served as master of ceremonies for the evening.

Gala leadership and supporters included honorary chairs Elsie and Henry Hillman and Cathy and Sy Holzer; gala chairs Susan and Steve McGalla; and presenting sponsor PNC.

Researchers receive patent for DNA therapy

In January 2010, the United States Patent and Trademark Office awarded a patent to physician-researchers from the University of Pittsburgh School of Medicine for the development of a new DNA therapy for head and neck cancers. Standard treatments for head and neck cancers are often ineffective and accompanied by debilitating side effects. The new treatment is based on a form of genetic therapy called antisense, or AS, in which a synthesized strand of DNA or RNA targets the epidermal growth factor receptor (EGFR) within head and neck tumors. Expectations were exceeded during the Phase I study, which was designed primarily to determine the safety and potential toxicity of EGFR AS injections. Not only were the AS injections well-tolerated, but tumors disappeared or shrank considerably in 29 percent of patients. A Phase II study evaluating the safety and efficacy of EGFR AS injections in combination with another drug is currently underway.



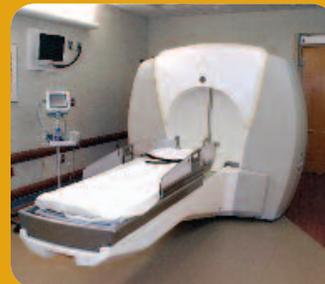
UPCI researcher awarded V Foundation grant

The V Foundation for Cancer Research awarded a \$1-million grant to Jill M. Siegfried, PhD, co-director of UPCI's Lung and Thoracic Malignancies Program, to establish two new clinical trials for lung cancer patients at UPMC Cancer Centers. The first trial, based on Dr. Siegfried's research, examines estrogen's role as a lung cancer proliferation agent. The Phase II trial focuses on the use of an aromatase inhibitor, a class of drugs designed specifically to counteract estrogen production. By targeting estrogen, researchers hope to extend the lives of women with lung cancer. Founded in 1993 by ESPN and Jim Valvano, legendary former basketball coach of North Carolina State University, the V Foundation has raised more than \$90 million to fund cancer research nationwide.

Milestone in neurosurgery

In December 2009, UPMC neurosurgeons performed their 10,000th Gamma Knife® procedure, a milestone surgery that further distinguishes UPMC as a leader in radiosurgery experience. Gamma Knife radiosurgery is a multidisciplinary procedure, requiring the expertise of radiation oncologists and medical physicists, who partner with neurosurgeons in the treatment of complex brain tumors. UPMC Cancer Centers is a highly regarded international training and research center, offering instruction to medical experts worldwide. Gamma Knife, first used in North America in 1987 by a UPMC clinician, destroys brain tumors often considered to

be inoperable. Gamma Knife procedures are noninvasive and use radiation to target diseased brain tissue, resulting in bloodless brain surgeries that require no incisions.



Pittsburgh Steelers team members visit Hillman Cancer Center

Three Pittsburgh Steelers visited patients and families at Hillman Cancer Center in Shadyside. The team's center, Justin Hartwig; tight end, Shawn McHugh; and right guard, Trai Essex signed autographed pictures, posed for pictures, and shared stories with patients. Patients enjoyed the afternoon with the players and UPMC Cancer Centers and Hillman Cancer Center appreciated the visit.



Photo courtesy of the Pittsburgh Steelers

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The University of Pittsburgh Cancer Institute, working in conjunction with UPMC Cancer Centers, UPMC's clinical care delivery network, is western Pennsylvania's only National Cancer Institute (NCI)-designated Comprehensive Cancer Center, reflecting the highest level of recognition by NCI.

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UPMC Cancer Centers offers cancer patients exceptional care and innovative treatments close to home. Working in tandem with the University of Pittsburgh Cancer Institute, western Pennsylvania's only National Cancer Institute-designated Comprehensive Cancer Center, UPMC Cancer Centers provides the latest advances in cancer prevention, detection, diagnosis, and treatment at community-based locations throughout the region. The University of Pittsburgh Cancer Institute comprises the academic and research activities for cancer at the University of Pittsburgh and UPMC.

For information about supporting cancer research efforts and patient care at UPMC Cancer Centers and the University of Pittsburgh Cancer Institute, contact us at 412-623-4700.

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