broadening the conversation about cancer

Cancer and color: How race changes the picture



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One Man's Stand

n a recent Sunday in August, as I on a recent Sunday in August, as I sate atting cold cuts and macaroni salad in a church social hall, I heard an elderly woman say, "He fought." She leaned across the table. "*He fought.*" I'd known the person she was talking about. It was hard to argue the point.

On a table at the front of the room sat photos of a steady-eyed man with a close-clipped beard: in side-by-side portraits with his smiling wife, Rose; crouching in the snow with camoclad hunting buddies; gathering squinting grandchildren in front of him. A small, stapled sheaf of paper lay nearby, the words "Birthday Card for Pop Pop" scrawled on it in crayon.

He fought.

Five years ago, Don Bordner was diagnosed with cancer of the eye. After radiation treatment damaged his optic nerve, he began wearing a patch—and suffering pirate jokes with typical good humor. Then came prostate cancer, and after that, liver tumors. There was chemo and more chemo. Those close to him—my family included—perceived his illness not in complaints, but in the gradual quieting of a man known as a practical jokester, who loved to socialize, kept Texas longhorn cattle, and had a passion for cooking.

Nonetheless, Don made and refused to cancel plans, even when the

pain got bad. A week before he died, he celebrated his 68th birthday by going out to dinner with family and friends. Late on the night of August 19, after visiting friends, he walked into an emergency room. A few hours later, he was dead.

He fought.

It is difficult to know what words to use when describing experiences with cancer—perhaps because, as Fox Chase

president Michael V. Seiden has said, "Cancer is personal." The fall 2010 issue of *Forward* ("What's in a Word? The Changing Language of Cancer") discussed how, in the martial language of the "War on Cancer," patients "lose their battle" with the disease or become "survivors." While such language empowers some, it also can suggest that "winning" is simply a matter of fighting hard enough.

I will never know what Don experienced in these last months and years, but I believe he lived them on his terms. While cancer affected and eventually ended his life, he did not allow it to define that life. He took a quiet stand against the disease, as tough and determined as any longhorn.

Each person who experiences cancer must deal with it in his or her own way. But if Don's experience was a fight, then I like to think he won.

-Abbey J. Porter, Editor



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Since becoming president of Fox Chase, Michael Seiden has faced a failed expansion attempt and a financial meltdown—and emerged to set a bold new course for the Center.

ON THE COVER:

Cancer and color

Cancer is not color-blind. This issue's cover story explores how race affects cancer patients, as well as clinicians and scientists, and looks at the case for making cancer care and research more ethnically diverse.

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SEALING THE HISTORIC AFFILIATION between Fox Chase and Temple University Health System are Fox Chase president and CEO Michael V. Seiden, left, and TUHS president and CEO Larry R. Kaiser. The deal culminated Seiden's first five years at the helm of Fox Chase, a period in which the new president and the Center—faced serious challenges.

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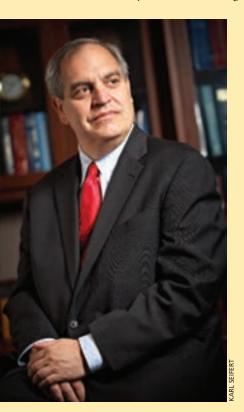
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forward thinking

Evolving Face, Steady Heart

he clinicians, scientists, and administrative leaders who distinguish Fox Chase do so by hatching bold, inventive ideas and having the wherewithal to see them through. Cancer demands no less of us. Our patients demand no less.

Fox Chase has become the esteemed institution it is today by continually plunging forward: pursuing the next discovery about the workings of cancer cells, developing the next



lifesaving medical technology, insisting on the highest standards in personalized patient care.

The seed that would become Fox Chase was planted more than a century ago, in 1904, when American Oncologic Hospital was founded as one of the first cancer hospitals in the country. It admitted just over 200 patients in its first year, operating out of a converted Victorian house in West Philadelphia.

Last year, nearly 38,000 people entrusted their care to Fox Chase. That number continues to climb.

The Fox Chase of today—a National Cancer Institute-designated comprehensive cancer center that excels in both research and treatment—was born of a bold decision made four decades ago: to merge the American Oncologic Hospital with the Institute for Cancer Research. *(See story on page 32.)* At the time, the union challenged the staffs and cultures of the two institutions. Looking back, however, it seems a natural step that built a powerful new organization and advanced cancer science and medicine.

My fellow Fox Chase leaders and I recently made another decision vital to building an even stronger Fox Chase. In July, the Center became part of Temple University Health System. *(See story on page 15.)* While Fox Chase maintains its mission and identity, the affiliation provides needed opportunities to grow our facilities and services. This step also seems natural, as the two academic medical centers possess complimentary strengths and Temple-affiliated Jeanes Hospital adjoins the Center's campus.

The face of Fox Chase has evolved over the Center's long history and will continue to do so. But while the structures that house Fox Chase may change to meet patient needs, the qualities that germinated the country's earliest anti-cancer efforts continue to pulse at the heart of Fox Chase: a dedication to caring for cancer patients and prevailing over the disease that affects far too many.

Muchael Seider

Michael V. Seiden President and Chief Executive Officer



Forward FALL 2012

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RESEARCH

The Talbot Research Library at Fox Chase

PRINTING Innovation Printing

Published October, 2012

Forward magazine is published twice a year for friends of Fox Chase Cancer Center by the communications department of Fox Chase.

Inquiries: Email Editor@fccc.edu or call 215-728-4788.



READERS OF ALL AGES are welcome to comment online at forward.foxchase.org.

Docs Rank Among Top in Region Magazine Highlights Achievements

ne in four Fox Chase doctors was ranked among the best in the region by *Philadelphia* magazine, which included 31 Center physicians of varying specialties in its annual "Top Doctors" issue in May.

The list—which features doctors who are peer-nominated, then screened by physicianled research teams based on criteria such as education and experience—serves as a guide for those seeking expert medical care in the Philadelphia area.

Fox Chase advances in three areas are included in the cover story, "Miracle Medicine," which highlights novel ways Philadelphia doctors are saving lives: laparoscopic surgery, for the single-port surgical technique; lung cancer, for the study of an experimental device that tests patients' breath for signs of disease; and doctor/patient communication, for an iPad software application called drawMD.

DrawMD allows doctors to show patients, in full color, what their surgery will look like. "It makes us more efficient, and it also



DrawMD, a software application featured in *Philadelphia* magazine's "Top Doctors" issue, is demonstrated by developer Alexander Kutikov, a urologic surgeon.

engages the patient," says urologic surgeon Alexander Kutikov, who developed the application. "A picture's worth a thousand words."

Geneticist Recognized for 'Lifetime Achievement'

uring her more than 50-year career at Fox Chase, geneticist Beatrice Mintz has helped to unravel the origins of cancer by asking what she calls "big questions." These questions have led her to make great strides in cancer research—including through the development of chimeric and transgenic mouse models that enable scientists to identify links between development and cancer and explore the biology of cancer over the lifetime of an animal.

Her achievements earned her the American Association for Cancer Research's annual Award for Lifetime Achievement in Cancer Research in April. The award was established in 2004 to honor individuals who have made significant fundamental contributions to cancer research, either through a single discovery Beatrice Mintz developed chimeric and transgenic mouse models that became important research tools.

or a body of work, and demonstrated a lifetime commitment to progress against cancer.

"Dr. Mintz's scientific insights have led to new directions in developmental cancer biology and genetics," said Margaret Foti, chief executive officer of the AACR. "Her groundbreaking work has helped shape our understanding of stem cell behavior and the tumor microenvironment in cancer and has provided scientists with important tools to study the many types of cancer."

IN BRIEF

CENTER EFFORTS PROTECT VALUABLE RESEARCH FUNDS

Working with the Pennsylvania Cancer Alliance—a statewide consortium of eight cancer centers—Fox Chase was instrumental in persuading the state legislature to maintain the allocation of "tobacco settlement" funds to support biomedical research. The proposed fiscal year 2013 budget threatened to divert the funds, which total \$60 million annually, into long-term care. A lobbying campaign waged by alliance members convinced legislators to continue to direct more than two-thirds of the funds towards medical research. The funding is crucial for providing stable support for long-term research projects.

CONFERENCE TO ADDRESS RARE BREAST CANCER

Fox Chase will host the third international inflammatory breast cancer conference December 1-2 at the Sofitel Philadelphia. The program is designed for clinicians, researchers, and patient advocates interested in the rare and deadly disease, including oncologists, radiologists, pathologists, fellows, residents, physician assistants, advanced practice clinicians, nurses, gynecologists, and family physicians. Topics will include epidemiology and risk factors, as well as updates on research and treatments. Medical oncologist Massimo Cristofanilli co-directs the program. More information is available by contacting the office of continuing medical education at 215-728-5358 or CME@fccc.edu or visiting www.ibc2012.com

FOX CHASE AMONG NATION'S 50 BEST CANCER HOSPITALS

Fox Chase once again has been listed among the top 50 cancer hospitals in the nation in *U.S. News & World Report's* annual "Best Hospitals" rankings, with kidney disease designated as a high-performing specialty area. Fewer than 3 percent of the U.S. hospitals evaluated ranked in the top 50 nationally in one or more specialty. Fox Chase also ranked 25th in reputation for cancer care, and 47 Fox Chase physicians in 17 specialty areas were listed as *U.S. News* "Top Doctors"—a peer-nominated list that is reviewed by a physician-led research team.

Ovarian Cancer Expert Honored

our years after his retirement from Fox Chase, medical oncologist and ovarian cancer expert Robert F. Ozols was honored by the American Society of Clinical Oncology for his significant contributions to enhancing cancer care.

Ozols accepted the society's 2012 Distinguished Achievement Award in recognition of his extraordinary leadership in oncology in June at ASCO's annual meeting in Chicago. An



Ozols spent two decades at Fox Chase and served as senior vice president and chief clinical officer.

internationally recognized leader in the advancement of chemotherapy research, Ozols spent two decades at Fox Chase and served as senior vice president and chief clinical officer prior to retiring in 2008. His research focused on how cancer cells develop drug resistance and on overcoming that resistance.

Recipients of ASCO's "Special Awards" the organization's most prestigious honors—comprise researchers, patient advocates, and leaders of the global oncology community who have made significant strides in cancer treatment and served as oncology leaders.

Ozols also has received several other honors for his contributions to cancer research and treatment, including the 25th annual Bristol-Myers Squibb Award for Distinguished Achievement in Cancer Research in 2002, an award he shared with former Fox Chase president Robert C. Young.

Center Top-ranked for Postdocs

he Scientist magazine placed the Center third in the country in its 2012 "Best Place to Work for PostDocs" survey an improvement from rankings of eighth in 2011 and 17th in 2010. The Center was the only academic institution in the region to rank among the top 10.

"I think [the ranking] reflects on our strong culture of mentoring, integration of basic and clinical research pertinent to cancer, and a common view that our postdoctoral fellows really are the engines of scientific progress," says immunologist Glenn Rall, who oversees the postdoctoral program at Fox Chase.

Fox Chase also was featured in a special section called "Small Town in a Big City," which describes the Center's work environment as intimate despite its location in a large city and bustling healthcare region.



Postdoctoral researcher Joy Little works in the laboratory of molecular biologist Erica A. Golemis.

DAISY Awards Honor Fox Chase Nurses

fter 33 year-old J. Patrick Barnes succumbed to a rare autoimmune disease in 1999, his family founded the DAISY Award for Extraordinary Nurses in honor of the exemplary nursing care he received. The DAISY (Diseases Attacking the Immune System) program was launched at Fox Chase in January and has been implemented at more than 1,000 healthcare organizations worldwide.

The quarterly awards are based on clinical skills, compassion, and ability to provide extraordinary patient care. Nurses can be nominated by patients and their families, as well as colleagues.

Sue Coady, a nurse in the surgical stepdown unit, was named the first DAISY recipient at Fox Chase in March. "She always exemplifies skilled and compassionate nursing, but recently she truly demonstrated her superb skills by saving the life of one of our patients," said nominating nurse Janet Miller-Stocklin.

In July the award went to infusion room nurse Terri Cuddahy, whom colleague Donna Ozovek described as the best nurse she has ever encountered. "Terri is the epitome of what it means to be a nurse," Ozovek said.

Among the gifts provided to each winner by the DAISY Foundation is a hand-carved stone sculpture from Zimbabwe entitled "The Healer's Touch." In addition to sponsoring the DAISY Awards, the foundation funds nursing research and honors nursing faculty.

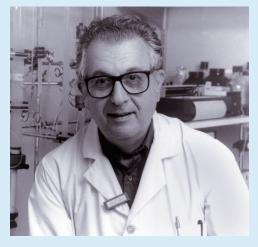


Nurse Sue Coady, third from left, Fox Chase's first DAISY Award winner, celebrates with, from left, president and CEO Michael V. Seiden; Anne Jadwin, vice president of nursing; surgeon John P. Hoffman; nominating nurse Janet Miller-Stocklin; and Joanne Hambleton, senior vice president for patient services.

Co-inventor of Hepatitis B Vaccine Dies *Immunologist Helped Save Millions of Lives*

R etired Fox Chase researcher Irving Millman, who played an instrumental role in the development of the hepatitis B vaccine and screening test, died in April at the age of 88.

The hepatitis B vaccine is credited with saving millions of lives and adding several months to the average human life span. "Not many people can say they have had an impact like that," said Jonathan Chernoff, Fox Chase chief scientific officer, in a lengthy obituary in the *Washington Post*.



Millman's death came one year after that of Nobelist Baruch Blumberg, with whom he collaborated at Fox Chase to create the vaccine, which has been administered to billions of people worldwide. Millman's screening test led to a 25-percent reduction in the risk of contracting hepatitis B from blood transfusions. For these accomplishments, the scientist was inducted into the Inventors Hall of Fame in 1993.

Millman's experience in immunology and virology was pivotal to the Center's vaccine-development efforts, Fox Chase scientist W. Thomas London told the *Washington Post*.

London, who also worked on the hepatitis B research, explained that Millman devised a way to separate the hepatitis B virus from a human blood sample, purify and then kill the pathogen. The process was dangerous work that constantly exposed Millman and his colleagues to the virus.

Medical Oncologist Wins Funding for Survivorship Research

he National Comprehensive Cancer Network recognized medical oncologist Crystal Denlinger as a promising young investigator, presenting her with one of four 2012 Young Investigator Awards in May. The awards, which focus on assessing and improving outcomes of cancer care, provide researchers with grants of \$150,000 over two years.

Fox Chase is a founding member of the NCCN and a national leader in the movement towards better survivorship care—Denlinger's area of expertise. The clinician won funding for a project to evaluate adherence to NCCN guidelines for the care of colorectal and non-small cell lung cancer survivors.

In comments accompanying the evaluation of her proposal, the NCCN review committee described Denlinger as "a strong new investigator with an impressive record...of work in cancer survivorship."

Denlinger is the principal investigator in eight ongoing studies at Fox Chase and a member of the newly created NCCN Cancer Survivorship Panel.



How race changes the picture

By Karin Beuerlein

Cancer is not color-blind. Race makes a difference—for patients, and for providers. When doctors and scientists are disproportionately white, what is the impact on cancer care and research?

rom the time she first pressed her eye to a microscope, Camille Ragin was fascinated with the structure of the human cell. "It's so complex," she says, "and yet so organized." She was drawn to biology in high school and once visited her aunt, a cytotechnologist who examined cell specimens for illness under the microscope, at work in the lab of the local hospital.

That visit provided a moment of clarity for Ragin. "I thought, this laboratory thing is really cool," she says. She could envision doing that kind of work, in fact, for the rest of her life.

Ragin, who is black and a native of Jamaica, is now an epidemiologist at Fox Chase who studies cancer patterns in African populations. She did not waver in her pursuit of a research career, and in that, she's uncommon; blacks and Hispanics are among the minorities most likely to be underrepresented in cancer care and research. For example, while blacks make up 12 percent of the American population, only two percent of oncologists are African American. The numbers for Latinos are similar: 15 percent versus 3 percent.

There was never a question about whether Ragin would move forward with her plans to study biology. She had strong support at home for her choices, including a family willing to sacrifice to provide the financial means for her to pursue a college degree. "I was always encouraged by my family to do the best I could," she says. "My mother is an educator, and my father worked his way up the ranks to a finance career in government."

She graduated from her Ph.D. program at the University of Pittsburgh as the lone face of color in a class of a dozen or so. "I didn't consider it an obstacle," she says of her singular status. Then she laughs. "I considered it a dare."

Ragin is determined not to let anything get in the way of accomplishing her goals. It's just her personality, she says.

Such a personality may be a requirement for racial and ethnic minorities who want to establish careers in cancer care and research. When few role models are available, trailblazing becomes the only option. That fact may discourage many capable and curious minds from entering cancerrelated professions or staying in them for the long haul; not everyone has a disposition suited for swimming against the tide.

At Fox Chase, where Ragin joined the faculty in August 2011, she is still headed upstream. "The city [of Philadelphia] is very diverse," she says, "but in my immediate work environment there is little diversity."

That's a situation Fox Chase is working to change—with good reason.



A case for many colors

What should be done to make cancer research and care more racially and ethnically diverse—and why? The question isn't idle: Cancer itself isn't color-blind. Cancer is far deadlier for African Americans, for instance, than for Caucasians. Different cancers affect certain racial and ethnic populations disproportionately, and experts find that beyond the influence of genetic and socioeconomic factors, profound cultural differences also influence how patients perceive and report the pain and discomfort that can lead to diagnosis. If research and care are disproportionately white, those differences may be noticed too late, if at all.

For example, the distrust of the healthcare system that is widely documented in the black population leads to delayed screenings and preventive care. "You don't need to be black to treat a black patient," says Sandra Wong, chairwoman-

Epidemiologist Camille Ragin, a native of Jamaica, became interested in science at a young age.

"MANY MINORITIES DON'T REALIZE THE OPPORTUNITY IS THERE BECAUSE THEY SIMPLY HAVEN'T BEEN EXPOSED TO A CAREER IN SCIENCE."

TOMMY LEONARDI



he U.S. Census Bureau announced in May that for the first time in American history, "minority" babies had become the majority.

elect of the Health Disparities Advisory Group for the American Society for Clinical Oncology. "But you do need someone on your staff who can help you understand what it's like."

The same is true in the laboratory, says J. Robert Beck, chief academic officer at Fox Chase, who oversees a program that pairs minority research students with scientist-mentors. "Research is no different from any other occupation," he says, "in the sense that you bring your own experiences, cultural values, and history to your job. Researchers who come from a background different from the Western Caucasian tradition will bring their own perspectives—not only to what they're observing, but even more importantly, to deciding what questions to ask and what approaches to take."

Just how urgent is the problem? The U.S. Census Bureau announced in May that for the first time in American history, "minority" babies had become the majority: more Hispanic, African American, and Asian babies were being born as of 2011 than white ones.

"I would say there's a major train coming," says Karen Johnson Dugger, Fox Chase's director of organizational development and training, "but the truth is, it's already here."

Dugger, who is responsible for creating a culture shift within Fox Chase that increases workforce diversity, started her task just four short years ago. She's enthusiastic about the prospect of real dialogue among the staff, but clear-eyed about the need to move quickly.

"We're late to the game," Dugger admits. "Every organization has got to adapt to what's coming. New healthcare workers want to come to a place where people look like them. If we're not that organization, they'll go somewhere else. The same goes for patients: If they can go 10 miles away to another facility where their language is spoken and their religion is respected and people look like them, they will."

Dugger is working several angles to create a diverse environment at Fox Chase: recruiting (she's using a new recruiting video of current employees featuring a real spectrum of color, faith, and ethnicity); sponsoring educational programs designed to get employees talking about cultural issues; and providing training in cultural competence learning how to speak to patients in their idiom so that they feel cared about and, most importantly, so the warning signals of cancer aren't lost in translation.

Fox Chase is making progress. It's slow, Dugger says, but a shift of this magnitude can't happen overnight. Over the past two years, the percentage of the staff that is black, Hispanic, Asian, or another minority has inched upward. It's a change that eventually will lead to more multicultural leadership and management—one that looks, thinks, and perceives more like the population it's designed to serve.

When color doesn't matter

Information technology entrepreneur Lawrence James was just 28 when he became a patient at Fox Chase. "It was a tough time for me," he says, "but I wouldn't have wanted to be anywhere else." James, who is African American, was seeking a second opinion on a diagnosis of a rare thymoma—a tumor of the thymus gland—and came under the care of medical oncologist Ranee Mehra. Mehra correctly suspected a misdiagnosis and ran tests that concluded James' cancer was a germ cell tumor, which required a completely different treatment. Her intervention likely saved James' life.

Although he was seen by Mehra, who is of Indian descent, and medical oncologist Yu-Ning Wong, who is Chinese, James says in his overall experience of Fox Chase, people of color were the exception. "I didn't see a lot of faces



f you're in a burning building or your plane is about to crash, color and class and money quickly become trivial. We're all human beings facing mortality, and that's where we come together."

of color around me, to be honest," he says. "If I did, they were mostly on the nursing staff or the maintenance staff."

Did that fact matter? "Absolutely not," he says. "I don't know if I'm different from everybody else, but when I was here as a patient I was looking for other things in people: compassion, support, love, hope. That was what was important to me in the people I encountered, not color or ethnicity.

"If you're in a burning building or your plane is about to crash," he adds, "color and class and money quickly become trivial. We're all human beings facing mortality, and that's where we come together."

In the face of that reality, tallying up numbers and colors can seem petty. But for every young, health-savvy patient like James, there may be an elderly black man who doesn't trust that surgery is safe—and who might not seek a second opinion. Or an Asian woman reluctant to express her pain because she believes it's undignified to draw attention to herself. Or a Hispanic man whose religious beliefs lead him to conclude mistakenly that his cancer is inevitable and therefore untreatable—and whose English is inadequate to express that conviction to his doctor.

For patients less engaged with the healthcare system because of the racial/ethnic divide, seeing faces like their own above the stethoscope—faces they're more likely to trust may mean the difference between getting successful treatment and finding out they've waited too long. And doctors who share their culture may perceive such situations before they become life-threatening.

Starting at the source

Creating more diversity in cancer research and care starts with getting more young black and brown faces peering into microscopes in the first place. "The pipeline problem starts early," ASCO's Wong says. Delivering a high-quality science education to children of color is critical. The results of Pennsylvania's state science exams (administered by the Pennsylvania System of School Assessment) paint a sobering picture. In 2011, black and Hispanic students consistently performed at a lower level than white students. In grade four, 90 percent of white students tested at a "proficient" level or better, while only 59 percent of black students and 65 percent of Hispanic students did so; by grade 11, the numbers dwindle to 12 percent of blacks and 15 percent of Hispanics versus 47 percent of whites. (Asian students scored as well as or better than white students at all levels.)

Those numbers seem to offer a significant clue as to why only 12 percent of medical students nationwide are African American, Hispanic, or Native American, when those three groups make up 25 percent of the American population.

"These kids need role models," Wong says. "Often, when minority kids have been exposed to cancer, it's in a bad context—someone they love has died from it." Studies have found that black and brown children often identify with athletes and entertainers rather than scientists or physicians because of their strong presence in popular media.

"Many minorities don't realize the opportunity is there because they simply haven't been exposed to a career in science," epidemiologist Ragin says. "That's how I learned: I got my feet wet and found out that I absolutely loved it."

Once a minority student has chosen science, the next step is to increase the visibility of oncology or research as a career. The workforce component of ASCO's Diversity in Oncology Initiative, funded largely by Susan G. Komen for the Cure[®], focuses on ways of retaining and recruiting minority students, including loan repayment programs and travel awards. But Wong is particularly excited about one pillar of the program: connecting minority students with capable mentors. "One person can really make a difference," she says. "Meaningful interaction with a mentor can be very influential. It has a domino effect."

Fox Chase offers such mentorship through several programs. Ragin has mentored students from historically black colleges and universities for the past two summers, offering laboratory experience in epidemiology plus the opportunity to partner with faculty on a research project. All of the participating students have kept in contact with her, and one has returned for a second stint in a different program. Another, a native of the Caribbean like Ragin, asked to be connected with a collaborator in her home country so she could continue her research there. "You could tell how interested these students were," Ragin says. "And now they have that experience under their belts." One-on-one change may be slow, but it's also the most powerful kind of change there is. If Ragin's charges indeed enter the field of cancer research, they'll bring a unique perspective to whatever staff they join—but they'll also become neighbors in the communities they serve. When that happens, they'll become trusted sources of information and role models themselves. That's a crucial first step in breaking down the barriers that prevent minority patients from getting the best care possible.

One by one—that's how dominoes fall.

Karin Beuerlein is a freelance writer whose health-related articles have appeared in Eating Well, Better Homes & Gardens, and Yoga Journal, among other publications. She lives in Knoxville, Tennessee.

Scientists Unite to Investigate African Cancer Connection

amille Ragin's work as an epidemiologist allows her to explore a question close to her heart: Why do blacks suffer more than whites when it comes to cancer?

During Ragin's postdoctoral work in Pittsburgh, she realized that blacks were seriously underrepresented as subjects of study in cancer research. "I started off focusing on head and neck cancer," Ragin says. "It would always strike me: In each study I read, I'd look at the study population and I'd see such a disproportionately small number of African Americans compared to Caucasians. I'd ask myself, why is that? Great studies are being published, but the question of whether they actually apply to black or other racial minorities is still unanswered."

To fill that gap, Ragin, a native of Jamaica, founded the African-Caribbean Cancer Consortium, or AC3, in 2006. AC3 is an umbrella organization for researchers who work exclusively among three main populations of African ancestry: natives of Africa and the Caribbean, and African-Americans. The consortium focuses on five types of cancer based on the expertise of its members: head and neck, breast, prostate, cervical, and lung.

"One of our goals is to use the consortium as a means for networking and collaboration," Ragin says. "The other is to conduct multi-centered studies in a standardized way using the same



instruments, so that we'll truly be able to understand how biology and the environment interact to influence cancer risk."

Now that relationships have been established and a few pilot projects run, AC3's next step is to start planning its studies. Ragin is thrilled at the potential discoveries that await.

"Everything I do excites me," she says. "I have so much work to do—and I love it all."



FOR MORE INFORMATION about the African-Caribbean Cancer Consortium, visit ac3online.org.

THE CHANCE TO PLAN

Fertility Program Helps Patients Look to Future

By Katrina Woznicki

hirty-year-old Anna Sadbeck calls her youngest son Paul her "miracle baby." That's because Paul, who celebrated his first birthday in August, was conceived after Anna was diagnosed with cervical cancer a few years ago—invasive cervical squamous cell carcinoma, stage 1b1, to be exact.

Sadbeck's doctors had wanted to perform a radical hysterectomy to remove the cancer. Sadbeck, who had one son already, hoped to have more children and be a stay-at-home mom. Those hopes, temporarily dashed, revived when she consulted Mark Mor-

gan, chief of gynecologic oncology at Fox Chase. He recommended a fertility-preserving surgery called a vaginal radical trachelectomy, in which much of the cervix and surrounding tissue, as well as pelvic lymph nodes, are removed, but the uterus is left intact.

Of the estimated 11.2 million cancer survivors in the United States, almost half a million are of reproductive age.

After the procedure, Sadbeck conceived Paul through artificial insemination, carried him to term, and conceived again naturally several months later. Today, check-ups show her to be cancer-free as she awaits the birth of her third child in December.

Sadbeck is not alone. Of the estimated 11.2 million cancer survivors in the United States, almost half a million are of reproductive age. Standard cancer treatments including chemotherapy, radiation, and surgery can affect fertility and the ability to carry a pregnancy to term. As cancer care becomes increasingly tailored to the patient and treatments such as vaginal radical trachelectomy offer less invasive and equally effective outcomes, more young patients and their families are inquiring about fertility preservation.

PRESERVING OPTIONS

To better meet the needs of younger patients, Fox Chase recently launched an oncology-fertility program that serves male and female patients affected by a variety of cancers, including prostate, breast, ovarian, cervical, and uterine. The service connects patients of reproductive age with infertility specialists, including reproductive endocrinologists who understand the biological and medical challenges of having children after cancer.

"Even if fertility preservation is not the ultimate outcome, patients can benefit from reproductive endocrinology consultation by learning what their options may be," says Cynthia A. Bergman, a gynecologic oncologist at Fox Chase.

On a national level, reproductive health after cancer is being addressed through groups such as the Oncofertility Consortium, an interdisciplinary initiative based at Northwestern University in Chicago. Funded by the National Institutes of Health, the program aims to advance reproductive health and quality of life for young survivors.

Photo by Tommy Leonardi

Standard cancer treatments can affect fertility for both men and women. A Fox Chase program helps patients preserve their options for having children after cancer.

Sex and the Cancer Patient

t's not easy for cancer patients or doctors to talk about, but it's just as important to people's well-being as nutrition and exercise. It's sex.

"Sexuality is a vital part of one's overall health, and it's a way for patients to still be themselves and not have their lives dominated by a cancer diagnosis," says Sharon Schwartz, nurse practitioner and oncofertility specialist.

Sexuality and sexual function can be affected at every stage of a patient's cancer experience, from the anxiety at diagnosis to the common treatment side effects of nausea and fatigue to the physical and emotional changes that occur during recovery. A 2008 study reported that 80 percent of cancer patients experience a decrease in their sex lives. But cancer doesn't have to mean the end of a patient's sex life; rather, it can provide an opportunity for providers to help patients define a new normal when it comes to sex.

Studies suggest that sex isn't talked about enough at any stage of cancer treatment. A University of Chicago Medical Center survey of data from 261 gynecologic and breast cancer patients found only 7 percent had asked for medical advice for sexuality problems, though 42 percent were interested in such help.

The emerging field of "oncosexology" addresses this undercounseled topic with the aim of making sexual health a routine part of cancer patients' care. Sexual intimacy can be healing for both body and mind; evidence suggests that having sex releases chemicals in the brain, including oxytocin, serotonin, and other endorphins that lower blood pressure and levels of cortisol, a stress hormone.

Oncosexology researchers report that cancer patients would like their physicians to bring up the topic of sex, to help them better understand the brain-body connection in an effort to restore their sex lives. They also want recommendations, whether it's the use of lubrication to reduce pain during intercourse; sexual stimulation devices for ostomy patients; adjusting antidepressant drugs, which can stymie libido; or a more general prescription, like trying new positions during sex or being open to new ideas about intimacy with a sexual partner—ideas that just might help patients reclaim an important part of their lives.



Renowned cyclist and testicular cancer survivor Lance Armstrong also has brought cancer and fertility into the national spotlight through Fertile Hope, an initiative developed by the Lance Armstrong Foundation. Fertile Hope provides information and support to cancer patients and survivors at risk of infertility.

Cancer treatment can affect fertility in a number of ways. For example, in women, chemotherapy can damage eggs stored in the ovaries, and radiation can damage the uterus. For men, treatments can affect both sperm quality and sexual function.

It's important, Bergman says, for patients to consult their doctors about fertility issues early in the process. "It can be reassuring to cancer patients to have any questions or issues addressed before beginning any kind of treatments," she notes.

Timing is especially critical if patients need to begin lifesaving treatments immediately. "While we can generally secure an appointment for our patients with a reproductive endocrinologist within a few days, the process from consultation to actual oocyte retrieval, for instance, takes an average of 17 days," Bergman says. "Early connection with the specialist helps minimize any delays of cancer treatments."

BEYOND CANCER

Patients' ability to have children after cancer depends on factors such as their age, type of cancer, and the types of treatment, including chemotherapy dose and the target and amount of radiation. Fertility-preserving options range from the cryopreservation of eggs or sperm to obtaining donor eggs or sperm to using gestational carriers if a patient's uterus has been damaged by radiation.

Sharon Schwartz, the nurse practitioner who heads Fox Chase's program, notes that that initiative can be a boon to both patients and doctors. "Instead of leaving these questions to individual oncologists, the oncologists can refer their patients to us and we'll address patients' fertility concerns and guide them toward the right specialists," she explains. "This takes the burden off the oncologists."

The primary challenge she encounters is raising awareness of the newly available services. "Our biggest problem is letting patients know this program exists," she says.

The program provides an invaluable service, Schwartz says: "Patients get to think beyond cancer and about the possibility of having a family if that's what they want. We don't want anyone looking back wishing they had known more about the choices available to them and had made a more informed decision."

A NEW CHAPTER

FOX CHASE JOINS TEMPLE IN HISTORIC AFFILIATION By Katrina Woznicki

On July 1, Fox Chase Cancer Center embarked on a new chapter: as an affiliate of Temple University Health System. The joining of the two academic medical centers capped off Fox Chase's years-long search for a means of expanding its existing campus and services.

Fox Chase president and CEO Michael V. Seiden, who calls the affiliation "logical and synergistic," says it places the Center "in a stronger position than ever to meet the needs of cancer patients."

Larry R. Kaiser, president and CEO of TUHS and dean of Temple's School of Medicine, says the affiliation "helps both institutions set the stage for opportunities to grow and improve patient care, conduct more research, and enhance educational programs."

GROWING PAINS

The union is historic for Fox Chase, which has functioned independently since its founding more than a century ago in the form of the American Oncologic Hospital. The Fox Chase of today grew out of another landmark partnership: the 1974 merger of the hospital with the Institute for Cancer Research. *(See story on page 32.)* Since then, Fox Chase has oper-



ated as a hub of top cancer care and research. It is one of only 41 National Cancer Institute-designated comprehensive cancer centers in the nation.

With a 100-bed inpatient facility, Fox Chase cares for more than 37,000 patients each year, and that number is on the rise: The Center saw 8,400 new patients in 2011. In recent years, increasing patient volumes and aging facilities created a pressing need for expansion.

Regional demographics made that need all the more urgent. Pennsylvania is "growing and graying," Seiden notes, even as the overall population lives longer—and increasing age is a risk factor for most types of cancer. About three-quarters of all cancers in the United States are diagnosed among people 55 and older, according to the American Cancer Society. U.S. Census Bureau data from 2010 shows the Northeast has one of the highest percentages of elderly people in the United States, and in Pennsylvania, the number of individuals age 85 and older increased 29 percent between 2000 and 2010, from 237,567 to 305,676.

The affiliation with Temple reflects a larger trend: Hospitals are merging or being bought and sold at an increasing rate, according to recent reports, and that trend is expected to continue, fueled by changes in insurance reimbursement rates and financial pressure resulting from the global financial recession.



Longtime physician-scientist Paul Engstrom, acting chairman of medical oncology and senior vice president for extramural research programs, agrees that medicine is moving toward larger healthcare delivery systems.

"Fox Chase—as a small, boutique cancer hospital—would not survive," he says. "We had to integrate services so that all types of care are available within our own system, and we couldn't do that without joining Temple. If everyone is going to be aligned in these systems and we're not part of one, we won't receive referrals."

TEMPLE-AFFILIATED JEANES HOSPITAL sits adjacent to Fox Chase; its facilities and 33-acre campus offer opportunities for Center growth.

THE ROAD TO TEMPLE

Recent years have brought Fox Chase its share of challenges. "Fox Chase had some tough years after the 2008 economic collapse," Seiden notes. The Center had issued \$124 million in bonds to cover construction-related debt in 2007, the same year Seiden assumed the presidency. After the economic collapse, however, the hospital's creditors threatened to call in their bonds, leaving Fox Chase financially vulnerable.

After weathering the economic storm, Fox Chase needed to grow strategically and physically to remain viable. "Our shortterm strategy was to improve inpatient services and hospital facilities; our longterm strategy focused on expansion," Seiden says. "We had internal and external challenges to address, ranging from managing our facility to preparing for national healthcare reform. A strategic alliance with a regional academic partner would help Fox Chase accomplish these goals."

Initial attempts to grow the campus had met with frustration. In 2004, Fox Chase launched an effort to expand into a portion of adjoining Burholme Park. However, after the city of Philadelphia

Fox Chase with Temple's Jeanes Hospital embodies the organizations' longstanding connection—and new alliance. agreed to lease the land to the Center in 2008, the city's Orphan's Court blocked the deal, ruling it would conflict with the will of the philanthropist who created the park—a decision upheld by the Commonwealth Court. Though Center leaders explored other options, from moving the campus altogether to splitting it among multiple sites, each had major drawbacks.

As a potential partner, Temple stood out. Temple-affiliated Jeanes Hospital sits adjacent to Fox Chase; its facilities and 33-acre campus offer opportunities for Center growth. Temple is also a major teaching institution with a robust research portfolio. Seiden is adamant about the importance of research to the Center's future.

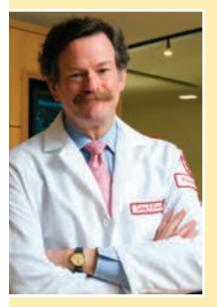
"What is the essence of prevailing over cancer?" he asks. "It's not only outstanding and compassionate clinical care, it is research. Even if you have the best physicians and technology, hundreds of thousands of people still die each year from cancer. If you want to change that statistic, you need to invest in research."

For Temple, the affiliation with an NCI-designated cancer center provides a new profile in cancer science and medicine. "This relationship establishes Temple's position as a leader in cancer care and research at the local, regional and national levels," Kaiser says. "It provides for exciting opportunities to grow and enhance the cancer-related patientcare, research, and educational programs of Temple's healthcare enterprise and marks a fresh direction in cancer research and treatment in Philadelphia." In particular, Temple stands to benefit from Fox Chase's strengths in clinical trials and translational research.

PATIENT GAINS

Fox Chase patients stand to gain multiple benefits. The integration of services with Jeanes Hospital will provide access to additional rehabilitation and intensivecare facilities, and Temple is home to top

MEET LARRY KAISER 'Student of Cancer' Flies High at Temple Helm



y the time he was 15 and volunteering at a St. Louis hospital, Larry Kaiser knew that a career in medicine was his future.

That same drive continues today as Kaiser, who in 2011 assumed the helm of Temple's healthcare enterprise, seeks to transform healthcare in Philadelphia and to grow Temple as a national destination for premier medical care. Even with his multiple roles as dean of the Temple University School of Medicine, president and CEO of Temple University Health System, and the university's senior executive vice president for the health sciences, Kaiser still makes time for seeing patients.

An acclaimed surgeon and designer of surgical instruments, Kaiser identifies himself as "a student of cancer," having spent much of his career focused on treating lung cancer, particularly mediastinal tumors those that connect between the left and right thoracic cavities—and mesothelioma, an aggressive disease associated with asbestos exposure.

Kaiser's interest in cancer dates to his years as a surgery oncology fellow at the University of California at Los Angeles, and he practiced thoracic surgery at Memorial Sloan-Kettering Cancer Center shortly after his training. Between 1991 and 2008, he held a succession of leadership positions at the University of Pennsylvania, including oversight of its lung transplantation program and serving as chairman of the department of surgery and surgeon-in-chief. He moved to Houston in 2008 to become president of the University of Texas Health Science Center. In the months that followed, he racked up thousands of frequent flyer miles commuting home to Pennsylvania on weekends to see his family.

"I've always embraced change and challenge, and I share Dr. Seiden's commitment to elevating the standards of cancer care," Kaiser says. "We have an opportunity to build a medical center that truly stands out, and as one of my favorite baseball caps that sits in my office says, 'I didn't come here to lose.'"

programs in blood-based cancers including acute leukemia and myelodysplasia, bone marrow transplant, and neurobiology and neuropathology. "We weren't as strong in these areas," Seiden says. "By collaborating with Temple, we can advance the study and treatment of diseases such as blood-based cancers and brain tumors."

For Fox Chase staff, everyday operations will continue apace under the affiliation, Seiden says. The two organizations will review areas of growth and overlap and may formalize existing collaborations, such as the training of Temple medical residents in oncology at Fox Chase, but there are no immediate plans for major restructuring. In fact, Fox Chase may add staff over time as it looks to develop its outpatient services, increase the number of private rooms available to patients, and expand its laparoscopic and robotic surgery services.

While the transition will take time, it's the right move for Fox Chase, says chief operating officer Gary Weyhmuller. "Healthcare and the economy have changed," he says. "People will look back in years to come and say this was the right idea."

The UNEXPECTED PRESIDENCY of MICHAEL V. SEIDEN

FOX CHASE LEADER REFLECTS ON FIRST FIVE YEARS

By Abbey J. Porter

Photos by Tommy Leonardi

n his first five years as president of Fox Chase, Michael V. Seiden faced a contentious fight to expand the Fox Chase campus, a financial crisis that brought the Center to its knees, and the daunting task of securing the Center's future. It's a good thing he likes a challenge.

On the wall of Michael Seiden's office hangs a framed plaque that reads, "An Easy Path Creates a Lame Donkey."

The saying could be a motto for Seiden's approach to life—an approach that helped bring him, in 2007, from Boston to Philadelphia and the helm of Fox Chase.

Prior to coming to the Center, Seiden led the gynecologic cancer program at Dana-Farber/Harvard Cancer Center and served as chief of the clinical research unit in the cancer science division at Massachusetts General Hospital. He had done his residency at the hospital and was subsequently put in positions of increasing responsibility there—but resting on his laurels isn't Seiden's style.

"I was very happy in Boston, I was happy at MGH, but I knew I would probably do another big thing one day," he recalls. "I had no idea what it was."

A clue arrived in October 2006 in the form of an email from a recruiter. Fox Chase Cancer Center was looking for a new president. Seiden could have been forgiven for ignoring the message altogether. His wife, Jean, who had been diagnosed with breast cancer in 2002, had experienced a recurrence in 2004. The email arrived the day she died.

As it was, Seiden talked to the recruiter a few weeks later. She had asked him to recommend candidates, which he did. At the end of their conversation, the recruiter told him that his name also had been mentioned. Seiden said, "I'm a clinicianscientist; I have no business experience. I'm not the right guy for this job." She replied, "Isn't that up to the search committee to decide?"

Taking a new job in a new city was the farthest thing from the mind of the 48year-old father of two. Seiden told her, "Look, my wife just died three weeks ago, I've got a 14-year-old at home, and we've been in this community our entire life. I really can't imagine leaving."

After a pause, the recruiter told him that her husband also had died when she was making a major life transition. "Let me just suggest," she said, "that you have no idea what your life is going to look like six months from now. Try to envision what your life was like before your wife got sick. If this is the kind of job you might have aspired to, why don't you send your CV?"

Her words struck a chord.

"While I had never woken up saying I wanted to be a cancer center director or CEO of a hospital," Seiden says, "I did know that, one of these days, I wanted to do something bigger than what I was currently doing. So I thought about it—not a whole lot, maybe a couple of hours and I sent my CV in."

The rougher path

Michael Seiden looks people in the eye when he talks, and his voice is measured and resonant. Those who know him might describe him as self-possessed. So they might be surprised to hear him describe his childhood. "I was a bit of a geeky, wimpy, uncoordinated, but fortunately somewhat smart kid," he says. "I was picked on mercilessly for the first 15 years of my life." He relied on intelligence and ingenuity for selfpreservation. "I used to have to figure out, How can I manipulate this guy who's twice my size so he's less likely to push me in the locker or take my lunch money? Maybe I could offer to do his math homework or help him do the science experiment."

But that experience may have helped form Seiden's tendency to seek out the next challenge, the rougher path.

"I probably grew up with a little bit of an inferiority complex," he says, "so I'm probably always trying to prove to myself that maybe I can accomplish something."

Seiden was influenced by an important role model: his father, a Brooklyn native who grew up with "very modest means." The first in his family to graduate from college, Stanley Seiden attended the Reserve Officers' Training Corps and became a Marine lieutenant. After being discharged, Robert C. Young. The internationally esteemed oncologist, known for his research on the treatment of lymphoma and ovarian cancer, had led the organization for 18 years.

Seiden also knew change was afoot at the busy cancer center. During interviews with board members, he had learned of the need for the Center—and its aging facilities—to expand. The plan: Fox Chase would obtain use of 19 acres of adjacent parkland. "I was told we'd have that property before I got here," he says.

But the Center had not obtained the land when Seiden arrived in June 2007. Finally, in March 2008, a bill was signed approving Philadelphia's lease of the land to the Center. "Within an eye blink, the city was sued," Seiden recalls. The filing in Orphan's Court alleged that the expansion would conflict with the will of the philanthropist who had created the park. A two-year legal battle ensued in which the court ruled against the Center—a decision upheld by the Commonwealth Court.

"IN 2008, IT BECAME CLEAR THAT MY LEGACY WAS GOING TO BE, CAN I SAVE FOX CHASE FROM BECOMING EITHER IRRELEVANT OR BANKRUPT?"

he began working in department stores and eventually became president of department store chains across the county, including Gimbel's in Pittsburgh.

By the time he was in kindergarten, young Michael—a self-described "klutz" and frequent visitor to emergency rooms knew he wanted to be a doctor. His resolve, and a focus on oncology, concretized with the premature death of his father from pancreatic cancer. Some of his interest was academic, however: "I wanted to pick a hard problem," he says.

Seiden knew when he accepted the Fox Chase presidency that he was choosing another challenge.

For starters, he was stepping into the big shoes of popular outgoing president

Before the dust had settled, the economic recession arrived, and with it the collapse of the stock market—an occurrence Seiden describes as "a cataclysmic event for the Fox Chase balance sheet."

That's partly because Fox Chase had entered into a "hedged total return swap" in 2007 to lower borrowing costs on a \$124 million bond issue that had funded building projects. Essentially, the swap would lower costs if interest rates went up but become a liability if they went down. Rates had been historically low at the time—4.5 percent—but instead of rising as predicted, they sank in the wake of the collapse.

"I think many financial forensic experts would have predicted it would be a lethal event to the institution," Seiden says. The effect of the swap, coupled with operational losses and a marked decrease in the value of the endowment, took a toll on the institution's fiscal health. Scrambling to shore up its finances, Fox Chase began negotiating with its lenders and laid off staff across the Center.

"That led to a very different leadership experience over the next three years than I'd anticipated," Seiden says. "I'd thought I'd be on the fundraising trail and trying to decide, Do I build this building next or that building next, and do I need 12 more cardiologists next or 14 surgeons or both? Instead, my attention focused first on making sure Fox Chase would survive."

Faculty members—some of whom had departed in the wake of the leadership change—once again were at risk, with the Center ill-equipped, financially, to retain them.

Seiden worried: Could he bring the cherished organization what it needed in a time of crisis? "There were definitely some dark days," he says, "when it wasn't clear that the institution would survive."

Circumstances forced him to refocus his vision for the Center.

"I came to Fox Chase with a plan of, Wouldn't it be cool if I doubled the size of the campus?" he says. "In 2008, it became clear that my legacy was going to be, Can I save Fox Chase from becoming either irrelevant or bankrupt?

"Then the next chapter was, OK, we're surviving, but we've got a 50-year-old hospital and we're landlocked. Can I come up

"I HAVE A FAIR AMOUNT OF RESILIENCE AND CAPACITY FOR ADVERSITY."

with a strategy that will provide the opportunity to grow the institution? Can I provide it a path forward, and what would that look like?"

Eventually, that path materialized in the form of an historic affiliation with the Temple University Health System. *(See story on page 15)*. Finalized in July, the relationship promises opportunities for growth, especially as Temple-affiliated Jeanes Hospital adjoins the Fox Chase campus.

"We're just entering this chapter, so it's hard to know exactly how it's going to play out," Seiden notes, "but we at least have the first page of what promises to be a secure future for Fox Chase as it pursues its cancer mission."

Practice, personal and professional

Seiden sums up his presidency to date with what may be an understatement: "It's been interesting. A lot's happened in five years."

He underplays the significance of his accomplishments; however, David G. Marshall, chairman of the Fox Chase board of directors for most of those years, spells it out.

"Fox Chase has had the benefit of terrific leadership over its history," he says, "but none better than Michael Seiden." Calling the Center's aging facilities, the loss of the parkland, and the 2008 financial crash "the perfect storm," Marshall notes that "due to these and other factors, other institutions attempted to attract our best scientists and doctors. Michael had to try to convince this talent to stay without the benefit of appropriate raises or a definitive plan that we would have a new hospital.

"At no time did I see Michael dejected. He focused on keeping Fox Chase a premier cancer facility. At the same time, using our stellar reputation as currency, we turned over every stone to find the best solution to our problems. With Michael's leadership, that was accomplished. We are now part of Temple Health, we are successfully recruiting great scientific and medical talent, and our future has never looked better. I don't know where we would be without Michael."

To be sure, Seiden has overseen triumphs as well as trials. In July 2009, the Center opened a satellite radiation therapy facility, Fox Chase Cancer Center Buckingham, 20 miles north of its main campus. The following spring, the Women's Cancer Center opened in the newly expanded Robert C. Young, M.D., Pavilion. And in June 2011, Fox Chase established a collaboration with Life Technologies that underpins the Cancer Genome Institute, a

FIVE YEARS AT FOX CHASE

JUNE 2007 Michael V. Seiden becomes president and CEO of Fox Chase following the departure of longtime president Robert C. Young.

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MARCH 2008

The City of Philadelphia agrees to lease a portion of Burholme Park, which adjoins Fox Chase, to the Center to enable campus expansion. Citizens sue in Orphan's Court, alleging breach of the will that created the park. SPRING 2008 The global economic crisis and collapse of the stock market catalyzes a financial crisis for Fox Chase. DECEMBER 2008 The Philadelphia Orphan's Court denies Fox Chase's bid to lease parkland.



JULY 2009 The Center opens Fox Chase Cancer Center Buckingham, a satellite radiation therapy facility, 20 miles north of its main campus.



DECEMBER 2009

The Pennsylvania Commonwealth Court upholds the Orphan's Court decision to block the parkland lease.



program that will provide individualized genomic analysis.

During the rocky patches, Seiden says, caring for patients—something he makes time for each Friday afternoon—helps keep things in perspective: "Taking care of women who are dealing with ovarian cancer... Even if the banks are picking on you, relatively speaking ... you're not facing ovarian cancer. It serves as a sort of useful counterbalance."

On the personal side, Seiden remarried in October 2009 to medical oncologist Paula Ryan, who now practices at Fox Chase. He draws on both personal and professional experience when it comes to dealing with difficult situations.

"Even my first wife's death, knowing I got through that, my family got through that, we landed on our feet... I have an inherent understanding that I have a fair amount of resilience and capacity for adversity," he says. "So if I have something difficult to do, if I have a message that isn't going to be popular that has to be delivered, if I have a lot of long hours in front of me to get something done, I've had a lot of practice, partly because of my personal situation and partly because of my experience as a clinician, having a lot of very difficult conversations."

He credits his attitude with helping him cope.

"I don't take myself terribly seriously, at least most of the time," he says. "Even though I work pretty hard, I still try to have fun. I enjoy getting to the gym, although not as often as I should. I enjoy a good bottle of wine. I am a foodie, (as you can tell by my body type). I never turn down the opportunity to have a great meal. But I'm not conceited; one of my favorite restaurants is McDonald's."

When he encounters conflict, he says, he doesn't take it personally. Instead, he figures, "It's not about me. It's about the institution and the mission and my job is to make sure the mission is as successful as possible. Whether you're popular or liked for all the decisions you make is secondary.

"You can't be hated; if you're hated, it's hard to get anything done. But I've usually taken the strategy during difficult times that if you don't have tons of great news to pass out, at least if you try to be honest, forthright, and thoughtful, you're more likely to keep people focused on the mission."

A unified vision

Today, Fox Chase is once again operating in the black as it begins a promising new era as part of Temple Health. As for Seiden, he looks forward to guiding the Center in "becoming part of a bigger family and making that work for everybody in the family."

He's not likely to get bored anytime soon—not with a list of new goals in front of him. "I'd like to build a unified vision for the campus; I'd like to build a vision as to how Temple adds value to Fox Chase and how Fox Chase adds value to Temple.... And understanding what the various stakeholders need is going to be important to my success and the success of the enterprise, so I think these are going to be an important couple of years."

And he'll get a chance to focus on answering emerging questions in cancer medicine. As Seiden puts it, "There are plenty of new challenges."

SPRING 2010

The Women's Cancer Center opens in the newly expanded Robert C. Young, M.D., Pavilion.



JUNE 2011

Fox Chase enters into a collaboration with Life Technologies, establishing the foundation for the Cancer Genome Institute, a program that will provide individualized genomic analysis. DECEMBER 2011 The Center announces the signing of an affiliation agreement with Temple University Health System.



Fox Chase becomes a Temple Health affiliate—a plan that allows for the Center's long-term growth and expansion.

JULY 2012



OUT&ABOUT

A N **I** N T E R V I E W W I T H L I N D A F L E I S H E R , Assistant Vice President, Office of Health Communications and Health Disparities

Ever since she was a young social worker helping at-risk youth, LINDA FLEISHER has dedicated herself to helping underserved populations. Now head of the Fox Chase office charged with outreach to surrounding communities, she brings education, screening, and treatment to the people who need it most.

What are the goals of your office?

We like to think of ourselves as the bridge between Fox Chase and the community—we educate people about cancer and how they can best take care of themselves, including the importance of screening. We also lead research to explore ways to educate, empower, and change behavior in concert with the perspectives of those we serve.

What does your work consist of?

For most of our outreach, we partner with local organizations to identify the needs of the community, such as a lack of awareness of the importance of healthy eating. Then we bring in a program to address those issues; and, when people need testing and treatment, we connect them to those resources at Fox Chase. We also provide community screening, such as through our mammography van. We provide something more comprehensive than just information about cancer prevention and treatment.

We also have resource education centers dedicated to teaching people about cancer. Staff members help patients and their families identify the information they need, answer questions, and access helpful websites and Fox Chase services.

Who are you primarily trying to reach?

Although we are concerned with everyone in our service area, we emphasize people who are "underserved"—meaning that, for whatever reason, they have less access to cancer resources, including education, screening, and treatment. Often, this includes people in minority racial and ethnic groups, including non-native English speakers, but also those with low incomes or who live in rural areas. This year, our program has helped nearly 20,000 people in southeast Pennsylvania and New Jersey.

How do you reach these underserved populations?

So much of our work is about partnership, particularly with organizations that are already working with the communities we're trying to reach. It would be impossible to do our work without them. Often this means working with local churches, volunteer organizations, and city and state health departments. educate and inform patients and the public. We can't know how best to serve a community until we identify the issues it's facing. At any given time, our office is participating in a number of projects investigating factors that prevent underserved populations, such as those living in rural Appalachia, from getting the help they need, and the best way to remove those barriers.

Can you describe an outreach project that has had a positive impact?

I'm really proud of Body and Soul, a faithbased initiative that involves working with more than 70 African-American churches

"WHEN I SEE PEOPLE BECOME EMPOWERED to ask questions of their physicians, make informed decisions, and take steps to protect themselves, it makes my job so incredibly rewarding."

What challenges do you face in reaching those who are most at risk?

Sadly, at least 90 million Americans have limited health literacy—meaning, they have trouble understanding prescriptions or other health-related materials. This includes many more people than those considered to be "underserved." Our job is to provide everybody with information that is completely accessible to them.

What role does research play in your work?

We conduct research to better understand how to decrease health disparities and in Pennsylvania to help their congregations eat healthily. We surveyed pastors before starting to identify the challenges we'd face in their communities, then tailored the program to those issues. The initiative helps create changes such as removing soda from vending machines at the churches and ensuring fruits and vegetables are present at events, as well as training congregation members to provide peer counseling as people make life changes.

We try to help communities to keep programs going on their own, so we're now training the churches to write grants and find new funding sources.

focus

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What are the most pressing problems you encounter?

The biggest problem I see is that some people experience more of a burden from cancer than others. For instance, African-American men are more likely to develop lung and prostate cancer than other groups. African-American women, on the other hand, are less likely to develop breast cancer than Caucasians, but when they do they are more likely to die from it. We're still not sure why these inequities exist, and the reasons are likely complex-perhaps it's due partly to unequal access to care, knowledge about screening, or lack of insurance. Whatever the reasons, it's a problem that impacts everyone. (See sidebar.)

What is the most rewarding aspect of your work?

The most rewarding moments occur when someone comes up to us and says, "Thank you" because they attended an event or learned something from us that led them to get screened, which detected a tumor in its early stages, and they are now doing well. When I see people become empowered to ask questions of their physicians, make informed decisions, and take steps to protect themselves,

RIPPLE EFFECT 'Inequality' affects all

Some ethnic and racial minorities are more likely to develop or die from certain forms of cancer, but that fact shouldn't be of concern only to those groups, says health disparities expert Linda Fleisher.

"These inequalities affect all of us," she says. "As long as society contains such imbalances, we are all impacted."

When it comes to cancer, it's not just the patient who is affected, she says. Anyone who has been diagnosed with cancer or loves someone who has can understand the "ripple effect" of that diagnosis. "The death of one person from cancer changes everything for the people who love them, forever," Fleisher says.

The scientist is only too familiar with that phenomenon, as her mother died of leukemia when she was a toddler. "That experience showed me how much of an impact every cancer patient has on those who love them, and how important it is to teach every single person about the importance of prevention. You're not just helping those individuals; you're helping everyone who knows them."



Linda Fleisher of the Office of Health Communications and Health disparities consults with community outreach partner Joan Jenkins at her coffee shop, Café Internet on the Avenue, in Philadelphia.

it makes my job so incredibly rewarding.

Recently, a woman brought her elderly father to one of our prostate cancer community education and screening events. He was African-American, placing him at higher risk of the disease. Years ago, he'd had an elevated PSA test, indicating a possible issue with his prostate, but he did not know how to follow up on those results. At our event, he received free screening, which determined he did, in fact, have prostate cancer. Our community navigator helped connect him to treatment covered by his insurance. Without our program, he might not have learned of his tumor until it was much more advanced.

What is your ultimate goal?

I won't feel satisfied until every person is educated about their risk of cancer and how best to prevent it and has access to the resources, screening, and treatment they need.

Interview by Alison McCook

Treatment Choices Influenced by Income

indings from Fox Chase suggest that patients' income influences the treatments they choose, even causing them to select less effective therapies out of cost concerns. Health plans with higher deductibles and copays may exacerbate these differences, as patients of lower socioeconomic status may be more likely to avoid costly treatment.

The study results could help to explain ongoing disparities in cancer outcomes, in which some ethnic and racial minorities fare worse after a diagnosis, likely due in part to differences in socioeconomic status.

During the study, presented in June at the American Society of Clinical Oncology annual meeting, medical oncologist Yu-Ning Wong and her colleagues asked 400 people with varying income levels to choose between two hypothetical cancer treatments with different levels of efficacy, toxicity, and cost.

People who had an income of more than \$60,000 were more likely to choose the most effective therapy, while those with an income

Cost limits access to genetic testing

More than one-fifth of people who have received referrals to be tested for cancer-causing genes say they will undergo testing only if their medical insurance covers the cost—suggesting high costs could limit some patients' access to potentially life-saving technology.

These findings, presented by Fox Chase scientists at the annual meeting of the American Society of Clinical Oncology in June, suggest that some patients give up the long-term benefits of genetic testing because of short-term costs. Although some genetic tests may cost thousands of dollars, if patients learn they carry mutations that put them at risk of other cancers in the future, that money would be well-spent, says Jennifer M. Matro, an oncology postdoctoral fellow at Fox Chase. Patients who find out that they are at heightened risk of certain cancers would know to schedule regular screening and check-ups so they could catch tumors at their earliest stages, when treatment is easier—and less expensive, she notes. "The goal of genetic testing is to give patients the best opportunity to detect their cancers earlier, which can save costs in the long run," she says.

Matro and her colleagues reviewed data from 406 people whose doctors suspected they had cancer-causing genetic mutations, based on their personal and/or family history. The researchers found that 82 people, or 21 percent, said they would undergo genetic testing only if it was paid for by their insurance.

Additional research should investigate which patients are most at risk and therefore most need testing and eliminate those who don't carry enough compelling risk factors to jusify testing, Matro suggests. "We need to discover more risk factors for genetic mutations, so we can spare those patients who really don't need to pay for genetic testing," she says. of less than \$60,000 were more likely to choose the most affordable therapy, regardless of whether the alternative treatment was associated with better survival and fewer side effects. Conversely, par"Clinicians need to become more comfortable with the fact that cost affects patients' decisions."

advance

RESEARCH HIGHLIGHT

ticipants with higher incomes were more likely to choose treatments that offered higher survival even if the alternatives were less expensive. Education and employment status also affected treatment choice.

"It is possible that patients of higher socioeconomic status were more likely to have greater resources to focus on survival and tolerate more side effects, such as the ability to miss work," Wong explains. "On the other hand, patients of lower socioeconomic status are likely much more cost-sensitive.

"Clinicians need to become more comfortable with the fact that cost affects patients' decisions," she adds. "As greater focus is placed on 'patient-centered' care and 'preference-sensitive' decisions, patient sensitivity to costs should be integrated into decision making."

Shorter Round of Chemo Okay Before Bladder Surgery

Patients who receive six weeks of chemotherapy before surgery to remove bladder cancer fare just as well as those who take the drugs for the standard 12 weeks, new findings suggest.

"Accelerated chemotherapy is an excellent option in terms of efficiency, quick time to surgery, tolerability, and complete response rate," says Elizabeth R. Plimack, a medical oncologist at Fox Chase. "It means less time off work for the patient, and less time elapses between their diagnosis and surgery."

All 33 of the patients studied underwent an "accelerated" course of methotrexate, vinblastine, doxorubicin, and cisplatin before having surgery to remove muscle-invasive bladder cancer. Plimack and her team found that 13 patients, or 39 percent, had a pathologic complete response at the time of surgery—meaning, the portion of bladder removed during surgery contained no cancerous cells. The tumors of an additional three patients, or 9 percent, were downstaged during the pathology evaluation, suggesting that the shorter course of chemotherapy was somewhat effective in those patients as well.

The response rate is comparable to those reported in patients who receive chemotherapy for the standard 12 weeks before surgery, the authors reported in June at the American Society of Clinical Oncology annual meeting. "Our goal is to improve the chance of cure for patients going to surgery," Plimack says.

Gene Tied to Recurrence of Head and Neck Cancer

ox Chase researchers have identified a gene that predicts disease recurrence in individuals with squamous cell carcinoma of the head and neck.

The sixth most common type of cancer worldwide, the disease has a relatively low five-year survival rate and a high degree of recurrence.

In the study, the researchers focused on a gene that encodes the cytochrome P450, or CYP1B1 protein, which is abundant in tumor tissue and produces carcinogens by metabo-

lizing tobacco smoke and alcohol—substances that increase the risk of squamous cell carcinoma of the head and neck.

Examining DNA samples from 155 patients diagnosed with the disease at Fox Chase between 2001 and 2008, the researchers found that patients with one common variant of the CYP1B1 gene are likely to have a longer time-to-recurrence than those with the more typical form of the gene. Moreover, only 16 percent of patients with the variant had a recurrence, compared

to 33 percent of patients with the normal version.

The results could have important implications for the treatment of patients with squamous cell carcinoma of the head and neck, by enabling doctors to identify individuals who are at risk for faster recurrence. That subset of patients could receive "a treatment regimen that is tailored to be more aggressive," says cell biologist Margie Clapper, co-leader of the Cancer Prevention and Control Program.

Research Points to Boost for Pancreatic Cancer Therapy

Scientists are developing a new way to treat pancreatic cancer by boosting the effects of the drug gemcitabine (known by the trade name Gemzar®). Although gemcitabine is the first line of defense against pancreatic cancer, many cells find ways to evade the treatment. The research, presented at the American Association for Cancer Research annual meeting in April, found several compounds that appear to improve the drug's cancer-killing effects.

Only 5 percent of people diagnosed with pancreatic cancer live beyond five years, so any technique that boosts the effects of the current regimen could have a major impact on survival. "I think finding this 'X factor' is really going to enhance our ability to treat patients," says Neil Beeharry, a Fox Chase postdoctoral fellow in the lab of molecular cell biologist Tim J. Yen.

During the study, the researchers exposed a pancreatic cell line to gemcitabine, then 160 additional compounds. Most either didn't do anything or killed cells that hadn't been exposed to the treatment and therefore had no resistance to it, suggesting the compounds might harm normal cells. However, about 5 percent of the compounds did not kill untreated cells but did kill the cancer cells treated with gemcitabine. The findings suggest the compounds were targeting only those cells affected by the drug.

Working with Fox Chase oncologists, Beeharry, Yen, and their colleagues are testing the response of cells from pancreatic cancer patients to the compounds. They hope to use the results to develop personalized treatments customized to each patient.

Researchers could use a similar approach to improve the effects of other drugs for particularly deadly cancers, such as platinum-based treatments for ovarian cancer, Yen says.

Study Yields Clues to Origins of Blood Cancers, Other Cancers

Researchers have uncovered details of how certain mutations can lead to blood and other cancers.

"These findings help explain how mutations in one class of proteins can trigger the development of cancer," says Shuyun Rao, a Fox Chase postdoctoral fellow working in

the lab of immunologist David L. Wiest. "If we find a way to block the pathway activated by these mutations, this may cause tumors to regress."

Presented in April at the American Asso-



ciation for Cancer Research annual meeting, the research focused on ribosomal proteins. Previous research has linked mutations in ribosomal proteins to cancers such as leukemia and lymphoma. To investigate further how an individual ribosomal protein might trigger cancer, Rao, Wiest, and their col-

leagues focused on a protein known as L22. To begin, they looked at blood samples from about 50 leukemia patients—and found that in 9 percent, L22 was either mutated or deleted entirely. The finding suggests that problems in L22 may have played a role in the development of the patients' cancers.

Next, they deleted L22 in mice bred to be prone to develop lymphomas and found that their tumors developed faster and the mice died more quickly than those who had intact forms of L22—further evidence of the protein's important role in the disease.

Finally, the researchers inactivated L22 in a sample of cells in the lab and saw that the cells experienced changes signaling the early stages of lymphoma. "In theory, if we could find a way to block this pathway, we could add to existing therapies to help treat the tumors it triggers," Rao says.

New Tool Detects Traces of Ovarian Cancer

S cientists have developed a technique to more precisely visualize ovarian tumors in mice—and even measure their activity. Led by Denise Connolly, a member of the

developmental therapeutics program at Fox Chase, the team developed molecular-sized tools that emit fluorescent light, pinpointing both the location of tumors and their biological activity.

"You're not just detecting tumor size, you're seeing if the tumor is active," Connolly explains. That factor is important in ovarian cancer, she adds, where medications may not cause tumors to shrink—but if tumors show less of a tendency

to break down nearby tissues and spread, that indicates the drug is working. She and her colleagues reported their findings in the June issue of *Neoplasia*.

Although the research was performed on mice, the findings have important implications for humans, Connolly says, as such tools make it easier for researchers to observe the effects of new compounds in animal models before deciding whether to test them in people.



The new tool uses fluorescence to make tumors easier to spot. Researchers hope to use the principles behind the technology in humans, she adds. Currently, when doctors use laparoscopes to find tumors inside the body, they shine a white light and rely on what the naked eye can see. The new tools use fluorescence to make the tumors easier to spot—in one case, binding to tumors and emitting a fluorescent glow, and in another case, mimicking the molecules that tumor proteins break down, triggering those

molecules to glow as well and revealing that the tumor is active in that location. Doctors hope to develop laparoscopes one day that incorporate these fluorescent tools. "You might be able to detect something that you'd never be able to see with the naked eye," Connolly says.

Therapy Shows Promise for Some Forms of Lung Cancer

new compound that targets a key gene implicated in different types of cancer is well-tolerated by patients with non-small cell lung cancer and is showing early signs of efficacy.

"These results are encouraging," says Ranee Mehra, a medical oncologist at Fox Chase.

The compound LDK378, developed by Novartis, targets anaplastic lymphoma kinase, or ALK—a key gene in a subset of lung cancer, lymphoma, and the childhood cancer neuroblastoma that may also be associated with other cancers, including breast and colorectal. The study's authors looked at patients with ALK-positive lung cancer, as well as other ALKpositive solid tumors. Early data from the Phase I study show that the majority of patients treated with LDK378 responded, including those who appeared to no longer respond to treatment with crizotinib, the only ALK inhibitor on the market.

In this initial test, Mehra and her colleagues gave 56 people with various types of ALK-positive solid tumors (primarily lung cancer) doses between 50 and 750 milligrams per day. The compound was well-tolerated in most patients up to 750 milligrams per day—the dose that early research suggests would have therapeutic effects. The most common side effects were nausea, vomiting, and diarrhea.

The results, presented in June at the American Society of Clinical Oncology annual meeting, "offer hope to patients who have tumors with alterations involving ALK, even if they have relapsed from previous treatments," Mehra says.

The next phase of the study will test the maximum tolerated dose of the compound.

science

VACCINE AIMS TO TREAT PROSTATE CANCER

Scientists at Fox Chase are launching a study to investigate ProstAtak[™], a vaccine designed to treat prostate cancer. The treatment works with radiotherapy to kill tumor cells in the prostate and helps trigger a process to kill cancer cells throughout the body. As part of the Phase III clinical trial, patients will be randomly assigned to receive either ProstAtak or a placebo. "We are hopeful that this new treatment will result in fewer men having the cancer come back," says radiation oncologist Mark K. Buyyounouski, director of clinical research.

STUDY PROVIDES INSIGHTS INTO HARD-TO-TREAT BREAST CANCER

A pair of proteins appears to play a key role in breast cancers that have become resistant to treatment with tamoxifen and similar drugs, which deprive tumors of the estrogen they need to grow. Led by Joan Lewis-Wambi, a tumor biologist at Fox Chase, the researchers hope the findings will lead to new treatments for the resistant cells. During the study, presented at the American Association of Cancer Research annual meeting in April, the researchers found that the two proteins were significantly more abundant in resistant cancer cells. Interestingly, those cells died when exposed to estrogen, pointing towards a potential new therapy.

UNUSUAL INHERITANCE SEEN IN IMMUNE DISORDER

Researchers have identified the first child with a severe form of immune deficiency—known as SCID—known to have inherited both copies of a disordered gene from his mother. In fact, the child inherited two entire copies of the same chromosome, made up of thousands of genes, from his mother alone. That fact puts him at risk of other problems, since any mutations on that chromosome are not counterbalanced by normal copies of those genes from the father, explains David L. Wiest, an immunologist at Fox Chase. Clinicians may not realize SCID can be inherited in this way, he says: "Even if such a patient's SCID is under control, he or she will require greater surveillance, as future complications may arise due to alterations in other genes."



ARTISTIC EXPRESSION can provide a unique means of understanding, communicating, and even healing from the experience of illness. *Forward* thanks the many contributors who generously shared their work for "Channels," a forum intended to honor and showcase visual and written art inspired by experiences with cancer.

> TO SEE ADDITIONAL SELECTIONS OR SUBMIT WORK to be considered for future issues, visit Forward online at forward.foxchase.org.

Wormfood

BY VERNITA HALL, Philadelphia

The worm of doubt now tunnels deep within a metastatic burrow. There begins a metronomic timer, ticking loud. (I visualize a bomb and mushroom cloud.)

.....

A cat that dragged her rump on two front paws has crossed my path; a mirror cracked. Because I failed to throw the salt, there tolls for me a candled choral chant; the key, Big "C."

The pen may trounce the sword and prove the hero, but with poetic prayer, give me the chemo. I'll trust my care into the surgeon's skill; buy new hair—and tits, in larger sizes! Still,

if the dirge must be, no second chancing, whatever else be done—let there be dancing

Men in Spikes

BY GLENN R. MCLAUGHLIN, Pottstown, Pennsylvania

"Is the dress really sparkly?"

"Yes, as a matter of fact it is" as I fingered the five-inch Steve Madden spike heel in my right hand, standing in the shoe line at Nordstrom Rack, her



behind me and two other women in front. "My wife and I bought it off the deep discount large size rack the other night."

"For your daughter?"

"No, for me."

"Really?" I concurred with a nod and she opened again, "Okay, I'll bite."

I told her about Men in Spikes, the charity drag race, that I was defending champion, about wanting to win again, that I was

absolutely going to win again.

"Why?" she asked.

"Because then I get to choose which charity gets the money and I want it to go to the Lymphoma Society because my daughter was diagnosed with a form of Non-Hodgkin lymphoma a few years ago, a type that normally presents at 60 but she was only 27. It's slow acting but always wins."

"My sister"—serious, much quieter now— "was diagnosed with Non-Hodgkin seven years ago. She's been through chemo twice. How's your daughter doing?"

* * *

To read full essay, visit foxchase.org/forward-art.



Looking At It

BY ADRIENNE M. JENNESS, Philadelphia

I look at a naked me in the mirror and what do I see? A not bad face, still attractive I'm told. A body somewhat crumpled by the aging process and decorated, excoriated by surgeons' knives.

One way to look at it.

On my leg blooms a large pink peony of scars. On my abdomen what look like embroidered leaves, Needlework done stitch by stitch threaded through my skin; a walking work of art.

Another way to look at it.

They have threaded me together like Frankenstein or his bride with so called baseball stitches. A serpentine slashed with smaller lines forms a diamond shape, so there is even a playing field. To put others at ease, I laugh and joke that the scar on my leg is the dugout.

But I am not at ease. I look at what they've done to me and wonder if there will ever be someone who might see the me within and not worry about what there is without.

Yet another way to see it.

I am still alive. I am still alive!



MARKED FOR RECOVERY

BY KATHY CHAPMAN, Cheltenham, Pennsylvania Chapman created this linocut as part of a handmade book, Forgiving the Anger of a Cancer Chick, designed to help her voice her anger and heal emotionally following a mastectomy. The print is a portrait of a fellow survivor. To see more of Chapman's work, visit foxchase.org/forward-art.

Deathwatch 4

BY ARLENE BERNSTEIN, The Villages, Florida

I thought while you lay dying

we'd whisper love

you'd kiss my hand

Surprise surprise You've thrust me from you

Mine's the voice you cannot stand

To read additional poems in the "Deathwatch" series, visit foxchase.org/forward-art.



LIFE-GIVING SURGERY

Determined Mother Defies 'Standard of Care'

By Jenni Laidman



he test had to be wrong. Anna Sadbeck called the hospital and told them she did not have cancer, could not have cancer. There must be some confusion, some mistake.

The whole thing was weird. First there had been an abnormal Pap test result showing misbehaving cells called high-grade cervical dysplasia. Every year previous, Sadbeck had sailed through her test without a whisper of a problem. Dysplasia, which could turn into cancer, was not great news, but it wasn't dreadful. The 26-year-old went in for a procedure to zap those bad cells in June 2008. No problem.

Then her obstetrician-gynecologist called on July 3. Sadbeck assumed the doctor was just checking in. Pleased with how she was feeling, she did not hide her upbeat mood.

That mood vanished abruptly. "I have some bad news," the doctor said. "Anna, you have cancer." It was an invasive cervical squamous cell carcinoma, stage 1b1. Sadbeck, stunned, managed just a few confused questions. But the doctor had no answers, just names of oncologists. That's when Sadbeck called the hospital and told them they must have mixed up her results with someone else's. But it wasn't possible. There were no similar biopsies to mix up.

STANDARD OF CARE

Sadbeck spent the Fourth of July wondering if she would live to see her 7-year-old son, Christopher, grow up. "I was contemplating things like, I didn't know if I wanted to buried or cremated," she says.

The oncologists she saw after that grim holiday were stern. The cancer is probably already in your lymph nodes, they told her. It is probably spreading, fast. The way to save her life, they said, was to sacrifice her plan to get pregnant again. They told her and her husband, Phillip, that she needed a radical hysterectomy and have her pelvic lymph nodes removed. Everything had to go. It was standard of care, each oncologist said, standard of care. She grew to hate that phrase.

"I actually had one nurse tell me, 'You have to get mentally ready for the fact that we will remove everything, and we might not find any cancer left in the cervix. But be prepared to forgive yourself' for having the procedure." And Sadbeck thought, Wait, there's a chance there won't be cancer?

"I don't think we ever prayed so hard in our lives," she said.

Just as Sadbeck thought she was out of options, a family friend recommended Mark Morgan, chief of gynecologic oncology at Fox Chase.

ANOTHER OPTION

Morgan told Sadbeck there was an alternative to hysterectomy, a reasonable way to preserve her fertility and save her life. She was almost too stunned to react. He would perform a procedure called a vaginal radical trachelectomy, which would remove most of the cervix and surrounding tissue but leave the uterus intact. He also would remove lymph nodes by a minimally invasive robotic technique. It would take up to four hours and when it was over—hopefully—Sadbeck would be capable of carrying a pregnancy to term. *(For more information on fertility preservation, see page 12.)*

The prospect was scary. Four hours seemed like a long time to be in surgery. But with her family cheering her on, Sadbeck arranged to undergo the procedure August 4.

As soon as the operation was over, Morgan told Sadbeck's husband and mother that the procedure had been a success. Both sprang from their seats and hugged the doctor. The next day, Sadbeck walked out of the hospital with only small wounds where the instruments from minimally invasive robotic surgery had pierced her belly.

Best of all, the doctor had found no cancer hiding in her lymph nodes or anywhere else.

INTERRUPTIONS AND SURPRISES

Sadbeck has an expressive voice. She manages to talk quickly yet still allow each word its own space—the perfect storyteller's voice. But during her interview for *Forward*, she was interrupted by a highpitched squeal. That was Paul Nicholas. Her youngest son turned 1 in August. "He's a bit of a handful," Sadbeck says. And by the way, she is pregnant again, and eager for another "handful."

It took three years and a couple of failed in vitro fertilization treatments before Sadbeck was finally pregnant via a simple artificial insemination. She had Paul by cesarean section August 7, 2011.

"I WAS DRIVING. I ALMOST CRASHED THE CAR!"

In April she went back to the fertility specialist for testing in preparation for another insemination procedure. The clinic called her the next day: "There's going to be a problem with your insemination," they said. "We can't inseminate you if you're already pregnant."

"I was driving," Sadbeck recalls. "I almost crashed the car!"

In her regular checkups following surgery, there has never been the slightest blip of cancer recurrence. But there is one more outcome she longs to see from this procedure. She hopes to help other young women in her circumstance.

"Dr. Morgan said if enough of us tested this procedure, they could try to change that standard of care," she said. "I hope they change it soon."

Cervical Cancer: Under the Microscope

C ervical cancer is a disease in which cancerous cells form in the tissues of the cervix, the organ connecting the uterus and vagina. Usually a slow-growing cancer that may not cause symptoms, it can nonetheless be detected through regular Pap tests, in which cells from the cervix are examined under a microscope. An estimated 12,000 U.S. women will be diagnosed with cervical cancer this year, and 4,000 will die of the disease.

Cervical cancer is nearly always caused by infection with human papillomavirus, or HPV. While almost all women will have an HPV infection at some point, very few develop cervical cancer. Vaccines are now available to prevent HPV infection.

Other risk factors for cervical cancer include:

- Smoking
- Chlamydia infection
- A diet low in fruits and vegetables, or obesity
- Long-term use of oral contraceptives
- Multiple full-term pregnancies
- A family history of cervical cancer

When the disease is detected early, Fox Chase experts usually treat cervical cancer with surgery, which may be followed by radiation therapy and sometimes chemotherapy.

For women like Anna Sadbeck who want to retain their ability to have children, surgeons may use advanced laparoscopic and vaginal surgical techniques that leave the uterus intact.



FOX CHASE BORN OF MERGER

BECOMING 'COMPREHENSIVE' MEANT MELDING OF CULTURES

By Maddy Weber

ust 40 years ago, the Fox Chase Cancer Center of today—a place known for providing top-level patient care and conducting cutting-edge research—was merely an idea. As Fox Chase transitions into its role as a member of Temple University Health System *(see story on page 15)*, it's worth remembering that the Center was formed by a similar integration not so long ago.

The concept of the comprehensive cancer center—a facility where treatment and research are united under one roof came into being when Richard Nixon signed the National Cancer Act in 1971. Widely known as the launch of the "War on Cancer," the act included funding for a series of such centers.

At the time, prominent cancer research institutions the country over, including Philadelphia's own Institute for Cancer Research, began to scout for suitable clinical partners. Once merged with a hospital, they would be eligible to receive federal funds.

For the Institute for Cancer Research, the natural choice for a collaborator was the American Oncologic Hospital—one of the oldest cancer hospitals in the country, having been founded in 1904. After decades of struggling to find larger quarters, the organization had moved to the Fox Chase section of northeast Philadelphia—right next to the institute—in 1968.

After several years of planning, the two institutions merged in late 1974 and became one of the country's first National **BREAKING GROUND** in December 1975 for the structure now called the Center Building are, from left, American Oncologic Hospital board chairman G.M. Dorrance, Jeanes Hospital president Roger W. Hallowell, American Oncologic Hospital president Edward J. Roach, and Institute for Cancer Research board chairman G. Willing Pepper. Plans for construction of the building, which linked the hospital and the institute, were part of Fox Chase's designation as a National Cancer Institute comprehensive cancer center in October 1974.



Cancer Institute-designated comprehensive cancer centers—and received a chunk of the coveted financial support.

"I welcomed the measure when I found out that we were going to join with the hospital," says Jenny Glusker, a chemist who came to the institute in 1956 and continues to conduct research on the structures of chemical carcinogens and cancer treatments at the Center.

Glusker and her colleagues were no strangers to collaboration. The researchers often had attended seminars at the hospital and shared ideas with the hospital staff in the years leading up to the merger. Glusker also had collaborated with hospital radiologists to use computers to generate three-dimensional images of the human body and create models of crystal structures—work aimed at shedding light on the biological processes that underpin many cancers.

But the move was less welcome for some other staff members, who found themselves facing a variety of compromises—of space, of resources, and perhaps most importantly, of culture.

"It was clear to me that many of the scientists considered the hospital to not be sufficiently staffed or credentialed," says Paul Engstrom, a physician-researcher who came to the hospital as director of medical oncology in 1970.

"When you juxtapose the institute with the hospital, there were some rough spots," Engstrom adds. "We had three full-time medical oncologists and no full-time surgical oncologists. Stack that up against the institute, which had already been in Fox Chase for 30 years and had a very well-known group of scientists."

Beyond staffing concerns, there were intangible differences that needed to be weighed.

"It was a clash of cultures," Engstrom

"PHYSICIANS ARE USED TO TREATING PATIENTS AND WANT RESULTS RIGHT AWAY. SCIENTISTS, BY AND LARGE, ARE LOOKING AT THE LONG TERM."

says. "Physicians are used to treating patients and want results right away. Scientists, by and large, are looking at the long term. It might take years to get results."

Chief operating officer Gary Weyhmuller, who came to Fox Chase in 1977 as human resources director, recalls the discordance. "There were two sets of dynamics going on. From a cultural perspective, the staff at the institute was more independent and, being driven by the scientific method, more apt to question and challenge new things. Hospital staff members were more regimented. They were used to answering to regulatory agencies and were more willing to accept changes they were told were necessary."

A transformation was germinating, however, and Weyhmuller says that eventually the hospital and the institute began to feel less like distinct organizations and more like what they had become—a single comprehensive cancer center.

What's more, the merging of treatment and research in one facility paved the way for the current scientific era, in which, as Engstrom says, "the emphasis is on collaboration and clinically relevant research."

In the wake of the merger, collaborations between physicians and scientists began to increase. Today, the Center is known for turning out a high level of cancer research, both "basic," or undertaken to increase the understanding of fundamental principles, and "translational," or more immediately applicable to medicine.

As Fox Chase faces a future as part of Temple University Health System, Weyhmuller says that the principles of dealing with change that applied in the 1970s still hold true: "People's tendency is to say, 'No, we've always done it this way," he says. "I've always kept an open mind and said yes when someone asks, 'Can you take this on?' And when I look

THE INSTITUTE FOR CANCER RESEARCH joined forces with American Oncologic Hospital in 1974 to form Fox Chase Cancer Center. Employees watch the groundbreaking, below right, for the Center Building, which would physically connect the two entities.





TEMPLE HEALTH

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SAVING LIFE, GIVING LIFE

Fertility-preserving surgery allowed cervical cancer patient Anna Sadbeck to give birth to "miracle baby" Paul. Fox Chase is helping patients like Sadbeck plan for the future—and children—after cancer. See stories on pages 12 and 30.