

# Forward

Broadening the Conversation About Cancer

SPRING/SUMMER 2015

## A STEP AHEAD

Clinical Trials Give Patients an Advantage in Cancer Care

CLINICAL

TRIALS

ALSO

NEW FEATURE STORY TBD

MEET WOMEN TRAILBLAZERS  
IN CANCER RESEARCH

CANCER SURVIVORS CELEBRATE  
WITH ART MAKING

 **FOX CHASE**  
CANCER CENTER

TEMPLE HEALTH

OPENING DOORS

Options. Whether at first diagnosis or following a recurrence, patients want the best options for care that modern medicine can offer. Strengthening the options at every stage, for every cancer, is what Fox Chase is all about, and it is why we are particularly encouraged by the 60-percent increase in patients who enrolled in Fox Chase clinical trials over the past year.

Much of that increase can be attributed to the success of our *Be the Breakthrough* campaign, which encourages patients and their families to learn about the options available to them through the Center's extensive program of clinical trials. As you will read in our cover story, on page 12, some of these patients were surprised to learn that all participants in clinical trials, including those in control groups, receive the highest standard of care existing today. Many of the participants also gain access to potentially more effective treatments. These patients expand their own options, while they help us develop better care for

others. In fact, their participation is the only way forward.

Other positive developments at Fox Chase are also contributing to new options for patients. In 2014, the number of NIH grants awarded to our investigators grew 50 percent from the prior year (from 18 to 27), allowing us to pursue exciting possibilities in basic and translational research. Under the direction of Wafik El-Deiry, MD, PhD, FACP, an internationally renowned scientist and innovator, an invigorated division of translational research is helping us move research from bench to bedside efficiently.

El-Deiry is one of 17 physicians and researchers who have joined the Fox Chase faculty over the last year. Aggressive faculty recruitment and the addition of innovative technologies will sustain this momentum. On page 5, you can read about one new technology, 3-D tomosynthesis mammography, which will become available at Fox Chase this summer. While improving cancer detection, breast tomosynthesis reduces the number of women who



must experience the anxiety of unclear results on a mammogram.

Finally, we hope you enjoy reading about a Fox Chase program that is expanding options in a different way. The Postdoctoral Fellowship program, featured on page XX, provides hands-on research experience for recent PhD-trained scientists. The program, which offers mentorship and financial support, is a critical milestone for the scientists who will strengthen cancer care for generations to come.

Richard I. Fisher, MD  
PRESIDENT AND CEO

ED CUNICELLI

MENU

FEATURES

6 A Step Ahead

Clinical trials offer patients the promise of better outcomes. They expand treatment options for the future, just as earlier trials led to improvements in today's standards of care. As a national and global leader in clinical trials, Fox Chase is advancing the entire field, while providing a high-level of care for its patients.

12 TK New Feature Story

TK Clinical trials offer patients the of better outcomes. They expand treatment options for the future, just as earlier trials led to improvements in today's standards of care. As a national and global

DEPARTMENTS

2 ADVANCE: Research Highlights

How a new target for anti-cancer drugs could advance lung tumor treatment | Improving criteria for breast cancer staging to better reflect survival rates | New findings on the relationship of asbestos, genetics, and mesothelioma | A better option for detecting breast cancer



COUPLE: ADAM MURPHY

18

16 FOCUS: Trailblazers

Three female pioneers in cancer research discuss their own careers and what the future holds for young researchers in science and medicine

18 CLOSE-UP: Finding a Family at Fox Chase

When Oklahoman Denise Coldwater is diagnosed with kidney cancer for the second time, she goes the distance to get treatment

20 MAKING A DIFFERENCE: A Day of Celebration

Cancer survivors, their caregivers, and the community paint a mural that brightens Fox Chase

22 REVIEW: News of Note

Laurel Society dinner honors important donors | Fox Chase hosts educational sessions on lung and gynecologic cancers | A traveling fellowship supports an oncologist abroad | Honoring the Legacy of John P. Hoffman

24 REWIND: Moments in Fox Chase History

The Dorrance family's passion for advancing cancer care had helped make Fox Chase the distinguished place it is today

TK

FORWARD magazine is published twice a year for friends of Fox Chase Cancer Center by the communications department of Fox Chase. One of the leading cancer research and treatment centers in the United States, Fox Chase was founded in 1904 as one of the nation's first cancer hospitals, and was among the first institutions to be designated a National Cancer Institute Comprehensive Cancer Center in 1974. Fox Chase joined Temple University Health System in 2012.

Temple Health refers to the health, education and research activities carried out by the affiliates of Temple University Health System (TUHS) and by Temple University School of Medicine. TUHS neither provides nor controls the provision of health care. All health care is provided by its member organizations or independent health care providers affiliated with TUHS member organizations. Each TUHS member organization is owned and operated pursuant to its governing documents.

333 Cottman Avenue, Philadelphia, PA 19111-2497  
foxchase.org • 1-888-FOX-CHASE

EDITORS

Meredith Ripa  
Madeline Weber

CREATIVE SERVICES

SteegeThomson  
Communications

Design by  
B&G Design Studios

Cover by  
C.J. Burton

Inquiries:  
editor@fcc.edu

EDITORIAL ADVISORY BOARD

J. Robert Beck, MD  
Chief Academic and Administrative Officer

Carolyn Y. Fang, PhD  
Co-leader, Cancer Prevention and Control

Wafik El-Deiry, MD, PhD, FACP  
Deputy Cancer Center Director for  
Translational Research

Nestor F. Esnaola, MD,  
MPH, MBA, FACS  
Attending Surgeon, Gastrointestinal  
Oncology, Melanoma, Sarcoma

Erica A. Golemis, PhD  
Deputy Chief Scientific Officer

Anne Jadwin, RN, MSN, AOCN, NE-BC  
Chief Nursing Officer

Michael H. Levy, MD, PhD  
Director, Pain & Palliative Care Program

Ranee Mehra, MD  
Attending Physician, Medical Oncology

Joshua E. Meyer, MD  
Attending Physician, Radiation Oncology

Glenn F. Rall, PhD  
Associate Chief Academic Officer

John A. Ridge, MD, PhD  
Vice Chair, Surgical Oncology

Rich Santoro  
Senior Director, Major and Planned Gifts

LEADERSHIP

Dr. Richard I. Fisher, MD  
President and  
Chief Executive Officer

Jeremy Moore  
Senior Director of  
Communications

Lisa Bailey  
Director of Public Affairs

Meredith Ripa  
Publications Editor



## A NEW TARGET FOR ANTI-CANCER DRUGS

Transporter membrane proteins, which are located on the cell surface and act as a pump that moves drugs out of the cell, have long been a focus of cancer research because of their ability to increase drug resistance and affect biological processes involved in cancer's

progression. Because of these proteins' complex role in cancer progression, the search for an inhibitor to halt their contribution to drug resistance has thus far proved challenging. Now, however, preliminary studies by researchers at Fox Chase Cancer Center have revealed a specific transporter

membrane protein, called ABCC10, as a potentially viable target for anti-cancer drugs.

A study by molecular biophysicist Elizabeth Hopper-Borge and colleagues, published in the *British Journal of Cancer*, examined whether inhibiting ABCC10 would make mice with mammary tumors more responsive to docetaxel, a drug commonly used to treat breast cancer. They found that the loss of ABCC10 affected multiple aspects of the mice's tumors and increased their chance of survival. Hopper-Borge believes ABCC10

**They found that the loss of ABCC10 affected multiple aspects of the mice's tumors and increased their survival.**

will prove to be an even better target in treating lung tumors, and her team is preparing to explore this theory.

"Our ultimate goal is to move this research into a clinical trial, once we find an optimized ABCC10 inhibitor compound," Hopper-Borge says. She and Temple organic chemist Rodrigo Andrade are testing candidate drugs, and have teamed up with Fox Chase molecular modeling specialist Roland Dunbrack to develop predictive models to understand how the ABCC10 inhibitor would work and how to strengthen it.

PAUL GARLAND



## SETTING SURVIVAL RATES

In breast cancer, tumors that grow into the skin are automatically classified by the AJCC (TNM) staging system as stage III, suggesting that they are relatively serious cases with potentially poor survival rates. Although the TNM system is based on standardized criteria and used widely in the U.S. and internationally, Fox Chase scientists cast doubt on this standard classification by showing that women with breast cancers involving the skin have widely varied survival rates. In the study, published in the *Journal of the American College of Surgeons*, the researchers examined data from the SEER-Medicare Linked Database and found that a patient's survival depends more on the tumor's size and whether it has infiltrated the lymph nodes than on whether it has spread to the skin.

"Classifying all tumors with skin involvement as stage III belies the purpose of staging, which is to group tumors with a similar prognosis," says surgical oncologist Richard J. Bleicher, leader of the breast cancer treatment program at Fox Chase. "Women with tumors that happen to have spread to the skin may be given an inaccurately dire prognosis—along with, perhaps, some un-

**"Women with tumors that happen to have spread to the skin may be given an inaccurately dire prognosis—along with, perhaps, some unnecessary treatment."**

— RICHARD J. BLEICHER, BREAST CANCER TREATMENT DIRECTOR



Surgical oncologist Richard J. Bleicher

necessary treatment. We need to update our staging criteria to more accurately reflect a woman's true chances of surviving her cancer."

Bleicher and his colleagues recommend adding a new staging category for tumors with skin involvement, and giving more weight to other criteria—such as a tumor's size and whether it has spread to the lymph nodes—when determining cancer stage. These recommendations are just one example of how Fox Chase doctors are moving the standard of cancer care forward, helping patients to better understand their survival chances and determine the best treatment options.

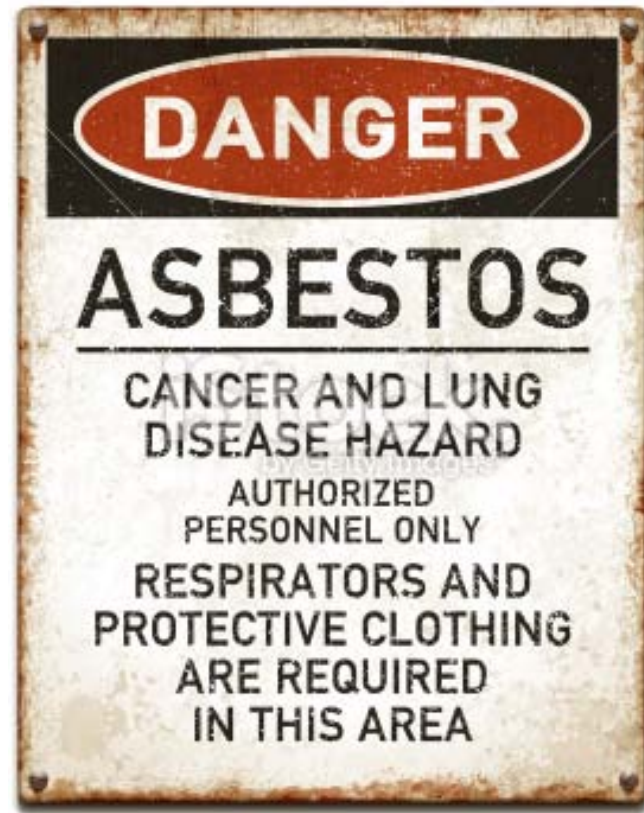
## ASBESTOS, GENETICS, AND CANCER

New findings by Fox Chase geneticist Joseph R. Testa and colleagues are illuminating the relationship between asbestos exposure, genetic factors, and cancer.

Exposure to asbestos, a thread-like mineral used in building and manufacturing, puts people at risk of developing the highly fatal cancer mesothelioma, which affects the membranes lining the chest and abdominal cavities as well as those around the lungs and other organs. In previous studies, Testa and

By the end of the study, 73 percent of BAP1-mutant mice exposed to asbestos had developed mesothelioma, compared to only 32 percent of mice without a BAP1 mutation.

colleagues found that a small number of people are also predisposed to getting mesothelioma because of mutations in the BAP1 gene. While BAP1 suppresses tumor activity, the mutations cause it to stop working, leading to more aggressive cancers. But can people develop mesothelioma simply because they have a BAP1 mutation, or do they also need to be exposed to at least small amounts of asbestos to trigger it?



In a study published in *Cancer Research*, Testa's team exposed mice with and without BAP1 mutations to asbestos. They also followed a group of mice with BAP1 mutations who were not exposed to asbestos to see if they developed any cancers. By the end of the study, 73 percent of BAP1-mutant mice exposed to asbestos had developed mesothelioma, compared to only 32 percent of mice without a

BAP1 mutation. Mesotheliomas in BAP1-mutant mice also appeared sooner and were more aggressive. However, the mutant mice that were *not* exposed to asbestos remained mesothelioma-free for the length of the experiment. "To get mesothelioma, having a BAP1 mutation does not appear to be enough," says Testa. "Our studies suggest that you generally need to be exposed to asbestos as well."

### Asbestos | as-BES-tous |

A group of minerals that naturally occur as bundles of fibers that can be separated into thin, durable threads. Often put in buildings as insulation against fire and heat, asbestos has been heavily used in construction since the late 1800s. The occupational risks of asbestos exposure were widely recognized starting in the 1920s following several studies by pathologist W. E. Cooke. However, the first connection between asbestos and mesothelioma is often considered to be made in a 1943 paper by German doctor H.W. Wedler.

Source: National Cancer Institute and The Mesothelioma Center

ISTOCK

## A BETTER MAMMOGRAM

Mammograms can be life-saving. An annual mammogram can reduce mortality rates of breast cancer by 15 to 50 percent for a population. Despite the benefits, as many as 20 percent of cases are missed by traditional mammograms. Ten percent of women are brought back for additional diagnostic work, yet many are found to have no abnormalities—often this cancer scare is a result of equipment limitations, yet the anxiety and inconvenience it may cause are real. The good news is that Fox Chase now offers a better option for detecting breast cancers: tomosynthesis.

A traditional mammogram takes a 2-D image in which breast tissues are superimposed on one another. A tumor can hide behind other tissues, or healthy tissues can combine to look like a tumor. With tomosyn-

thesis, the physician takes a traditional 2-D scan, then compiles a 3-D image using multiple X-rays taken at different angles.

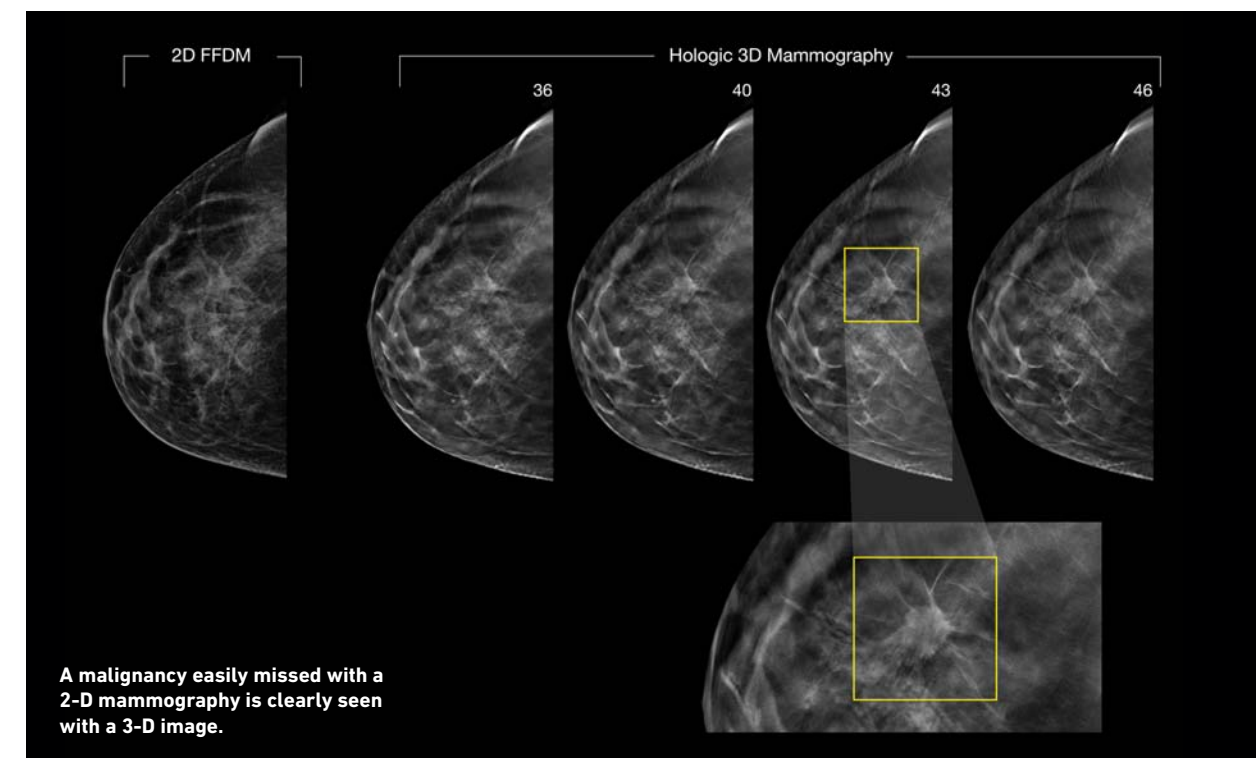
One study, published in the June 25, 2014 issue of *The Journal of the American Medical Association*, combined data from more than 170,000 examinations and found that using breast tomosynthesis increased cancer detection rates and decreased call-backs. "Reducing the call-back rate for mammography means reducing a major source of stress and anxiety for our patients," says radiologist Kathryn Evers, director of mammography. Tomosynthesis may also require less compression, causing less discomfort for patients, and X-ray dosage is similar to a regular mammogram.

"With this technology," says Evers, "we will be able to participate in planned clinical trials

"Reducing the call-back rate for mammography means reducing a major source of stress and anxiety for our patients."

— KATHRYN EVERS  
DIRECTOR OF MAMMOGRAPHY

regarding tomosynthesis, breast ultrasound, and breast MRI for evaluation in various patient groups including women with dense breasts." Breast tomosynthesis will be available at Fox Chase starting in early summer 2015.



A malignancy easily missed with a 2-D mammography is clearly seen with a 3-D image.

COURTESY OF HOLOGIC, INC.

CLINICAL TRIALS GIVE PATIENTS AN ADVANTAGE IN CANCER CARE

# A Step Ahead

B. Mark Wilson values innovation. It is a conviction Wilson and his father, brother, and son have applied to the family business, Wilson-Legacy Farms in Smyrna, Delaware, where technology and conservation practices have kept their farm—founded in 1956 by the father, George—a leader in seed and cereal grain cultivation. It is no surprise, then, that when Wilson was diagnosed with Stage IV throat cancer, he sought out the most innovative treatment option available. >>

BY TOGO TRAVALIA | PHOTOGRAPHY BY C.J. BURTON



1

2

4

### CLINICAL TRIALS OFFER THE PROMISE OF BETTER OUTCOMES

**O**n May 6, 2014, Wilson walked into Fox Chase Cancer Center accompanying his father, who was on a follow-up visit for the kidney cancer he had overcome less than a year earlier.

Tucked under the younger Wilson's arm was paperwork from another hospital and a CT scan of his neck. He was scheduled for a tonsillectomy and either a laryngectomy or a tracheostomy at another facility in three days. Before going through with the operation, he wanted to know if there was another way to fight the cancer threatening his life—and his quality of life.

Fortunately, one of the nation's top oncologists specializing in head and neck cancers was on duty. In fact, surgical oncologist John A. Ridge, the Louis Della Penna Family Chair in Head and Neck Oncology, was in the midst of leading a clinical trial for patients just like Wilson. The trial, for patients with tumors of more than four centimeters in at least one dimension, involves substituting a protein antibody, Cetuximab, for a chemotherapy agent.

"The trial is examining whether this new approach can be less toxic to the patient, with fewer side effects. Like every clinical trial, we are trying to cure as many patients as possible with the best quality of life," says Ridge, who has spent much of his 35-year career seeking better outcomes for patients through trials. "It is never certain a given trial will create a better outcome, but it is unlikely to produce a less effective one."

Wilson's father had also enrolled in a Fox Chase clinical trial seeking to prevent a recurrence of kidney cancer and his margins were still clear. Wilson seized the opportunity. He

canceled his surgery and enrolled. Best of all, by undergoing this treatment—only available to patients at Fox Chase and other specific cancer centers conducting this research—he could avoid the possibility of losing the ability to speak naturally, a common outcome of surgery in cases such as his.

Wilson felt lucky from day one. "I was at the best possible place, and the preparation you get at Fox Chase is impeccable. My physicians and nurses put me at ease and put everything into terms I could understand." He singles out each team member: medical oncologist Ranee Mehra, radiation oncologist Thomas Galloway, nurse practitioner Kristen Kreamer, and physical therapist Jeannie Kozempel.

Indeed, clinical trials are a team endeavor at Fox Chase, where research nurses are at the nexus, attending to patient safety and well-being while ensuring that clinical trial protocols are being met and the trial's sponsors are kept informed.

"I'm the first point of contact for the patient after the physician presents the trial," says Lois Malizzia, a clinical research nurse who coordinates clinical trials for patients with genitourinary (GU) cancers. She says the GU team meets biweekly to share information, and the team approach benefits patients. "Everybody on the team is kept up to date, and there's a lot of communication. If there's new information to share, everyone is aware. It's very rewarding and exciting to see the work you are doing affect the standard of care for patients."

Wilson's tumor responded to the chemotherapy regimen including Cetuximab and today he is cancer-free. "Even when my family doctor thought there might not be a glimmer of hope, I believed there still was," he says. "It teaches you not to settle for the first opinion and not to be scared of a clinical trial. It might offer the best option of all. I think it saved my life. Plus it offers the chance to be the breakthrough for others."

### TODAY'S CLINICAL TRIALS ARE TOMORROW'S TREATMENTS

**M**ore options. Newer options. Better options. Ask people with advanced cancers what matters most, and "options" is going to be a likely answer.

Clinical trials expand treatment options for the future, just as clinical trials years ago led to improvements in today's standards of care. Simply put, trials translate the results of basic scientific research into more effective clinical strategies for screening, preventing, diagnosing, and treating cancer. For new drugs, trials are the necessary step between experimentation and FDA approval.

Fox Chase is a national and global leader in cancer clinical trials, with more than 150 trials underway at any given time and an enrollment rate that increased by 60 percent over the last year. Leadership requires a special commitment across the entire institution and a shared appreciation for the value that clinical trials bring to cancer care.

## Phases of a Clinical Trial

The FDA requires that new medications undergo a series of three phases of testing to ensure safety and efficacy in order to be approved. Fox Chase offers all three phases and is particularly strong in Phase I studies. On average, it takes nearly 15 years for cancer drugs to go through all three phases of a clinical trial and receive approval.

**PHASE 1** (15–30 participants) aims to find a safe dose of a new drug and explore how best to administer the drug

**PHASE 2** (>100 participants), using a now-standard dose, gathers more information about how a drug affects cancer and how it affects the body

**PHASE 3** (100–1,000 participants) compares a new option with the current standard of care, often by means of a randomized study



**"Even when my family doctor thought there might not be a glimmer of hope, I believed there still was...I think [a clinical trial] saved my life. Plus it offers the chance to be the breakthrough for others."**

— MARK WILSON

"Trials are expensive to execute," explains Ridge. "They entail costs and time commitment that are not part of everyday practice for most hospitals. It's also hard to undertake clinical trials outside of specialized environments, which is particularly true of trials not supported by industry."

Patients who qualify for a clinical trial, because of the specific circumstances of their cancer and on the recommendation of their oncologists, are invited to enroll. There is no financial incentive. As for costs, Fox Chase works with each patient in the pre-certification process to assess coverage options by the patient's insurance company and the trial sponsor (often a pharmaceutical company). Rarely do insurance com-

panies not allow coverage for clinical trial-related costs. Some costs may be borne by the patient, but for the majority of patients, the financial arrangement is not a barrier to entry.

With a detailed plan of care in place, enrolled patients receive either the existing high standard of care available to all Fox Chase patients, or are among the first to benefit from a potentially more effective treatment. In the case of clinical trials that are demonstrating clear benefits, trials are often halted midway so that the medications under review can be made available to all patients on a uniform basis.

### "WE ALL NEED TO DO OUR PART"

**E**very patient has his or her own reasons for joining a clinical trial. Having good information was key for Lael Swank, who, despite having no history of the disease in her family, discovered breast cancer in a self-examination days after she turned 39. "I enrolled in a trial with the drug Avastin," says Swank, who traveled two hours from her Mountain Top, Pennsylvania home to Fox Chase for chemotherapy treatment following a bilateral mastectomy. "My decision was basically made because I was well informed about the trial—and scared. I would've tried anything to fight this cancer and save my life."

Swank, who recently celebrated her five-year "cancer-free," also saw a benefit she wanted to share with others.

“When I signed up for the trial, I thought: I will do this trial in the hopes that a cure for breast cancer will be found. One in eight women diagnosed is far too many. We all need to do our part.”

Clinical trial participation can extend to patients post-treatment as well.

Charlette Gray, of Princeton Junction, New Jersey, who was treated for breast cancer at Fox Chase, has been declared cancer-free since 2011 but participates in a clinical trial in which Metformin, a drug used for diabetes, is being tested to see if it can prevent the recurrence of breast cancer. As in many clinical trials, Gray does not know if she is receiving the therapeutic or a placebo, but either way, she hopes her participation will advance cancer treatment. She meets regularly with a clinical trial nurse to review medications and manage symptoms.

“I am the daughter of a mother who waged a long and valiant fight against cancer before it overcame her,” Gray says, adding that she is also the mother of a daughter “who I pray will never have to face this fight. For these reasons alone, I want to do what I can to further cancer research. For me, that includes participation in clinical trials.”

#### UNFOUNDED FEARS STAND IN THE WAY OF BETTER OUTCOMES

Not everyone who is eligible for a clinical trial participates. Every year, there are 1.5 million new cancer diagnoses in the United States. Of these new patients, about 200,000 (13%) are typically eligible for clinical trials that can deliver a high-standard care.

However, only about one-third of the potential patients enroll in cancer clinical trials. Why? Reasons range from patients and their families not knowing about the opportunity, to mistaken fears about the process, to the inability to get to a clinical trial. Whatever the reason, the result is that the pa-

### Find a Trial Online

For information about trials underway at Fox Chase, patients can browse studies or search by disease site at [fccc.edu/cancer/clinicaltrials/](http://fccc.edu/cancer/clinicaltrials/)

The National Cancer Institute maintains a searchable database at [cancer.gov/clinicaltrials](http://cancer.gov/clinicaltrials). Last year, this clearinghouse, which aggregates research at 3,100 institutions, provided information about more than 12,000 ongoing trials, as well as trials just launching.

The National Institutes of Health, which maintains [cancer.org](http://cancer.org), tracks all medical clinical trials—more than 180,000—taking place in all 50 states and in 187 countries. This larger database, which includes interventional studies around cancer, can be found at [ClinicalTrials.gov](http://ClinicalTrials.gov).

“What makes Fox Chase special has been a resolute commitment to designing clinical trials and carrying out studies that offer its faculty intellectual and professional growth.”

— JOHN A. RIDGE

tient has fewer options for his or her care, and the answers that move cancer treatment forward are delayed.

“One of the most common misconceptions is that by participating, you’re being experimented on,” says medical oncologist Margaret von Mehren, director of Fox Chase’s sarcoma program and associate director of clinical research. “Every study is being conducted with lots of information and is done in the safest possible way. Patients are followed not only by their care team of doctors but also by their research team. They are getting better care by having that second set of eyes. Plus the possible benefit is tremendous. It may allow patients access to a drug they wouldn’t have any other way.”

Another misconception revolves around randomized trials, which compare a control group against one receiving the new treatment. Some trial candidates think the control group will receive a placebo instead of treatment. Nothing could be further from the truth.

“Yes, they are being assigned therapy in a random fashion. But the control group will receive the same high standard of care everyone receives,” says von Mehren. “If they are in the group receiving the new treatment, their outcomes may be the same or better than with the standard treatment.”

The difference can advance care and outcomes for clinical trial patients—and eventually, for everyone.

#### A MORE VIBRANT FUTURE FOR CANCER RESEARCH

The positive impact of having a robust clinical trial program extends throughout the institution.

“What makes Fox Chase special has been a resolute commitment to designing clinical trials and carrying out studies that offer its faculty intellectual and professional growth,” says oncologist Ridge. “Clinical trials are part of the academic advancement process. Investigators and faculty are tenured through clinical research so there are clear benefits to researching and practicing medicine at Fox Chase and Temple Health.”

For young oncologists and researchers, Ridge sees an almost limitless future. “Our understanding of biology has grown tremendously in the last decades. The same advances



#### EXPANDING ACCESS FOR EVERYONE

Fox Chase and Temple Health continue to make concerted efforts to ensure that all patients have access to cancer clinical trials. The “Be the Breakthrough” campaign launched in July 2014 was specifically designed to raise awareness about cancer clinical trials and encourage discussion between patients and their care team. With brochures, posters in patient rooms and doctors sporting buttons that say, “Ask Me About Clinical Trials,” the highly visible campaign has led to a 60 percent increase in the number of patients participating in clinical trials compared with the previous year.

Also on the uptick are phone calls to the patient resource education center. Staffed by three clinical trial educators, medical interpreters are available, and literature is in plain language. “We make sure patients are using evidence-based information to make decisions,” says Evelyn González, Senior Director of Fox Chase’s Office of Health Communica-

tion and Health Disparities. She adds that the campaign is gaining momentum with its multi-modal approach. “As an NCI cancer center, we’re charged with helping to find those answers and that’s what we contribute to,” González says. “Our patients are the ones that can help us get there.”

Further success will require ongoing targeted efforts to serve populations which, historically, have been harder to reach and engage. “Unfortunately, underserved populations are sometimes less informed about clinical trials and, not surprisingly, less willing to participate,” says surgical oncologist Nestor Esnaola, Associate Director of Cancer Health Disparities and Community Engagement at Fox Chase.

#### GROWING NATIONAL SUPPORT FOR CLINICAL TRIALS

Growing infrastructure, information and support for clinical trials is happening at the national level, too, with the establishment in 2014 of the National Clinical Trials Network. The NCTN was formed by the National Cancer Institute (NCI), where cancer clinical trials began six decades ago with studies of chemotherapy treatment for acute leukemia.

“The new network represents an unmatched effort to integrate and streamline the process of cancer clinical trials research,” says James Doroshov, deputy director for clinical and translational research at NCI. “The conduct of NCI-supported trials, which are publicly funded, involves a complex system of designing, reviewing, and initiating studies. The new NCTN replaces a structure that was more than 55 years old.”

Former NCI Director Harold Varmus adds, “We must work together to adapt swiftly and effectively to achieve the goals of the new system—namely, to take advantage of recent advances in our understanding of cancer and to bring new knowledge into clinical trials conducted in the community. Our patients deserve nothing less.”

To address the disparity, the NCI has provided funding for lay ambassadors from Fox Chase to reach out to local churches, community centers, and federally qualified health centers with programming about the importance of participating in research, says González. “Without participation by ethnic minorities, we don’t have a complete picture. It’s really important, especially in the age of personalized medicine.”

“When you look at our catchment area, you realize that we have a unique opportunity,” Esnaola says. “We are poised to become a national model for minority clinical trial accrual. We can show hospitals and medical centers everywhere that patients from all walks of life who are better informed about clinical trials are far more willing to participate.” ♦

For more information on clinical trials at Fox Chase Cancer Center or to find a current Fox Chase study, please visit [www.fccc.edu/cancer/clinicalTrials](http://www.fccc.edu/cancer/clinicalTrials) or call 1-888-FOX-CHASE.

## TRAILBLAZERS

In the 1960s, says clinical geneticist Mary Daly, going to medical school seemed out of reach. “The thinking was that women couldn’t have both families and careers in research or medicine.” Fox Chase was an exception in its support for female scientists. Even in 1946, the Institute for Cancer Research, as Fox Chase’s scientific enterprise was called, had women in four of the 10 laboratory head positions. Today women comprise more than 40 percent of the research positions. *Forward* talked with Daly and two other Fox Chase women, chemist Jenny Glusker and virologist Ann Skalka—all considered pioneers in their fields.

### How did you become interested in science?

**Mary Daly:** As a child, I spent a lot of time by myself drawing, mainly animals, which got me interested in the physical properties of living things. In high school, I had a fabulous young biology teacher, and by the end of the year knew I wanted to pursue biology. I was fascinated with how living things worked.

**Jenny Glusker:** Both my parents were medical doctors, and I had a general love of wildlife. Then in high school I had an excellent chemistry teacher. I viewed medicine as a service to people and science as trying to find out what really happens. They’re both challenging, but I liked how in chemistry you could figure out what was happening and why.

**Ann Skalka:** In college I majored in art and biology. I spent two summers in a lab studying plants to screen for drug toxicities and was taken under the wing of a wonderful senior technician. Then I took a course in biological chemistry and learned how to prepare DNA. I thought, “Wow, this is marvelous stuff. I want to learn more.”

### What challenges did you face when starting your career?

**Glusker:** I had some excellent scientific mentors, but my greatest challenge was running a lab while raising three children in the days before daycare.

**Skalka:** Initially I had to choose research or teaching because I felt I couldn’t do both and be a wife and mother. When I started interviewing, I found some places weren’t interested if a woman was already on staff. I was perplexed and discouraged, but finally found a welcoming environment at the Roche Institute of Molecular Biology.

### How did Fox Chase contribute to your career?

**Daly:** Fox Chase has a strong tradition of population science—cancer prevention and control. I fit into an established niche with a lot of professional support. Fox Chase was small enough that you could meet people

in other departments easily. I think that’s still true today.

**Glusker:** Fox Chase let me decide which scientific problems I wanted to research. It provided an interesting, supportive, and highly regarded community.

**Skalka:** As I was beginning my career, I needed to focus on research. When I came to Fox Chase in 1987, my children were grown and I was already running a laboratory and chairing a department. Fox Chase gave me that opportunity to take on a larger leadership role; I served as director of basic science for 22 years.

### What advice do you have for young people, especially women, interested in science?

**Daly:** Even though women have come very far in professional life there are still a lot of barriers, particularly for younger women. We can’t assume that we have achieved equity. We have to constantly be aware of helping women promote their careers.

**Glusker:** Find a subject that really interests you, and immerse yourself in learning and trying to solve questions that still need to be answered.

**Skalka:** If scientific research is your vocation and you’re excited about it, pursue that career. In addition to laboratory research, there are other ways a scientific education and training can be useful, such as industry or law. Keep your eyes open: you will find your way.

### How has technology changed healthcare and research since you began your career?

**Daly:** Technologies today let us learn things we never could. Genetic sequencing is new. I could go on about the technology that enables us to learn about and prevent cancer. We have a lot of opportunities to make progress.

**Skalka:** We still haven’t found a way to make the public better appreciate and support scientific scholarship. The good news is technology is improving exponentially. The kind of questions you can ask and the chances for scientific collaboration are mind boggling.

JIM GRAHAM



## THE PIONEERS (CLOCKWISE)

### Mary Daly

**POSITION:** Chair of clinical genetics, Timothy R. Talbot Jr. Chair in Cancer Research

**NOTABLE CAREER ACHIEVEMENT:** Established Fox Chase’s first family risk-assessment program in 1991, one of the first of its kind in the country.

**FUN FACTS:** Spent six years in the Air Force Medical Corps before coming to Fox Chase. She also makes art through lithography, a type of printmaking.

### Jenny Glusker

**POSITION:** Professor emerita

**NOTABLE CAREER ACHIEVEMENT:** Contributed to discovery of chemical formula for Vitamin B12, an important milestone in chemistry. Also studied three-dimensional aspects of cancer and enzyme mechanisms.

**FUN FACT:** Keynote speaker on advances in crystallography at the opening ceremony for the UNESCO 2014 International Year of Crystallography in Paris, France.

### Ann Skalka

**POSITION:** William Wikoff Smith Chair in Cancer Research, Basic Research Director Emerita and senior advisor to the president

**NOTABLE CAREER ACHIEVEMENT:** Contributed to our understanding of the biochemical mechanism by which retroviruses (including the AIDS virus) replicate and insert their genetic material into the host genome.

**FUN FACT:** Co-author of the widely acclaimed textbook *Principles of Virology* and a leader on state, national, and international advisory groups concerned with the broader societal implications of scientific research.



# FINDING A FAMILY AT FOX CHASE

BY LIZ PACHECO

When Denise Coldwater, her husband Mike, and their three sons moved to Enid, Oklahoma 15 years ago, they had planned to settle in a rural part of town to run a cattle ranch. But when Coldwater—who at the time was also dean of students for Enid's Northern Oklahoma College—was diagnosed with kidney cancer, their plans were interrupted.

"It was a surprise discovery," says Coldwater. "The doctors were examining a tumor on the other side of my body that was benign and not even related, when they found cancer in my kidney." Based on her condition and the technologies available at the time, her best choice was to have the kidney removed at a hospital in the area. The surgery was successful and the couple started a 900-acre cattle ranch nearby, but chose to live in town where Coldwater could be better accommodated while recuperating.

Fast forward to 2014, and Coldwater, now 60 years old, again found herself facing cancer. This time it was a large tumor on her only remaining kidney, and removal and a life of dialysis wasn't an option.

"I figured I was in trouble," says Coldwater, who had completely lost renal function. Her doctors presented a few options: one was Robert Uzzo, chair of surgical oncology at Fox Chase. Uzzo, one of the country's best known urologic oncology surgeons, specializes in organ

"I never felt like I was left in the dark on what my options were or what was going to happen during surgery."

— DENISE COLDWATER

preservation. After reviewing Coldwater's files, he agreed to see her.

In mid-July, Denise and Mike left the ranch in the care of their sons and drove the 1,500 miles to Philadelphia. By then, Coldwater was becoming concerned about how the distance prevented a personal connection with Uzzo and his

team. Upon arriving at Fox Chase, this worry disappeared. "Dr. Uzzo and the Fox Chase team were wonderful. They looked at my situation as if it was their own family member," says Coldwater. "I never felt like I was left in the dark on what my options were or what was going to happen during surgery."

ADAM MURPHY

While Uzzo was performing a partial nephrectomy, he discovered a tumorous clot extending into Coldwater's renal vein, the blood vessel that connects the kidney to the rest of the body. Luckily, Uzzo is part of a select group of urologic surgeons skilled at the complex procedure required to remove such

complex tumors, clear out the vein, and reconstruct the kidney. Coldwater came out of surgery with her kidney fully functioning.

After two weeks in Philadelphia, Denise and Mike made the drive back to Oklahoma. The recovery process was quick. By fall, Coldwater was back working on their

ranch and was able to take a trip to the Rocky Mountains with her grandchildren.

"Fifteen years ago, this kind of surgery wasn't an option," says Coldwater. "Dr. Uzzo had promised to send me home pain-free and with a functioning kidney. And that's exactly what he did."



Denise Coldwater on her cattle ranch in Enid, Oklahoma.

# A DAY OF CELEBRATION

The Hope Murals Project Brightens the Fox Chase Cancer Community

Fox Chase's annual celebration of cancer survivors, their caregivers, and families is always a special day, but 2014's event was enhanced by *Lilly Oncology On Canvas*, an annual art competition that invites those touched by cancer to express—through art and narrative—their journeys. To recognize *Lilly Oncology On Canvas*' 10th anniversary, Lilly Oncology and the National Coalition for Cancer Survivorship launched The Hope Murals Project. This year-long project brought 10 murals to 10 different cities—including Fox Chase in Philadelphia. Cancer survivors, their caregivers, and the community worked together to create each mural.

On September 18, the Fox Chase community gathered to paint the mural "Awakening," designed by artist and Fox Chase cancer survivor Susan Schaffer. "The hands depict the gray days of cancer," she explains, "and the butterfly represents the soul's chrysalis during a cancer journey, how it emerges intensely stronger." The mural, painted on movable pieces, was later installed in the community on Oxford Avenue, near the Fox Chase train station.

The celebratory afternoon also featured live music by singer, songwriter and cancer survivor Charlie Lustman, as well as presentations of the CHASE Awards, which are given annually to an organization and an

individual who demonstrates an outstanding commitment to improving the lives of cancer survivors. This year's organizational recipient was For Pete's Sake, a nonprofit that provides respite vacations for cancer patients and their families. It was founded by Marci Schankweiler in honor of her late

"While painting during the gray days of my cancer journey, I realized that if color gave me energy, why couldn't it do the same for others? September 18th was one day shy of my 10th anniversary being cancer-free. Celebrating it with the Hope Mural will always be unforgettable."

— SUSAN SCHAFFER,  
MURAL ARTIST, FOX CHASE  
CANCER SURVIVOR

husband Pete. The Fox Chase Head and Neck Cancer Support Group Team received the award given to individuals. The team includes social worker Florence Bender, nurse Linda Schiech, and speech pathologists Kathleen Moran and Liane McCarroll, who together have hosted a patient support group each month for the past 10 years.



Susan Schaffer



PAUL REITANO (left and bottom right); JOE HURLEY (top right)



## CELEBRATING THE “FOX CHASE WAY”

Laurel Society Dinner Honors Important Donors

Fox Chase friends and supporters looked to the Center’s future and reflected on its past during the annual celebration of the Laurel Society on October 9. “What I saw in 1996 still holds true today,” remarked keynote speaker Eric Horowitz, chair of radiation oncology. “At Fox Chase we have a special combination of clinical talent, research talent, scientists, and nurses—people who care! This is the Fox Chase way.”

The Laurel Society, whose members make gifts of \$1,000 or more each year, includes friends of Fox Chase as well as staff members.

Lewis F. Gould, Jr., chair of the Board of Trustees, echoed Horowitz’s passion for Fox Chase and spoke about its growth since partnering with Temple University Health System: “Patients are drawn here for our extraordinarily talented and skilled physicians, and more recently for the strong affiliation and coordination between Temple and Fox Chase.”

Gould—who has been a leader of



Eric Horowitz, chair of radiation oncology and keynote speaker

“At Fox Chase we have a special combination of clinical talent, research talent, scientists, and nurses—people who care! This is the Fox Chase way.”

Temple University, his alma mater, for many years—was presented the 2014 Laurel Society Award for his work advancing the Temple–Fox Chase partnership and for securing new resources that position the Center for still greater success.

## FOX CHASE ABROAD

Surgical oncologist receives travel fellowship

Even on the other side of the world, Fox Chase doctors are advancing cancer care.

Last fall, surgical oncologist Jeffrey Farma was invited to Germany as the 2014 American College of Surgeons (ACS) Traveling Fellow. The fellowship provided Farma with a better understanding of German surgical training, multidisciplinary cancer care, and clinical trial procedures.

“Building international relationships is paramount for advancing surgery,” says Farma. “I learned that surgeons all speak the same language, despite subtle differences in techniques and culture.”

Farma attended the 131st Congress of the German Surgical Society in Berlin, where he presented in the session “Changing the Treatment Paradigm for Locally Advanced Rectal Cancer.” He also talked about being an ACS scholar and participated in a discussion on building relationships between GSS and ACS, an activity Farma plans to continue at Fox Chase.



Hossein Borghaei, chief of thoracic medical oncology, talks with patients during the Shine a Light event.

## BUILDING A CANCER COMMUNITY

The cancer journey is challenging for both patients and caregivers. To provide resources and support to patients, survivors, and their loved ones, Fox Chase hosted two educational sessions in November focused on lung and gynecologic cancers.

### SHINE A LIGHT ON LUNG CANCER November 6

Part of a national program sponsored by the Lung Cancer Alliance, Shine a Light connected all those in the lung cancer community, from newly diagnosed patients to survivors, caregivers, and health care professionals, to share experiences and information. 6ABC consumer reporter and Action News co-anchor Nydia Han joined Fox Chase doctors, a patient, and a nurse navigator to lead a discussion on treatment and the importance of building a support system.

### TOGETHER, FACING GYNECOLOGIC CANCER November 15

This all-day event, hosted by CBS3 anchor Pat Ciarrocchi and featuring Fox Chase clinicians, researchers, and nurses and even a yogi, covered aspects of gynecologic cancer related to body and mind. Breakout sessions gave people opportunities to talk more intimately and ask questions about palliative care, survivorship, stress management, clinical trials, and hereditary risk assessment, among others.

## HONORING A LEGACY

After 30 years providing upper abdomen care at Fox Chase, surgical oncologist John P. Hoffman is retiring in June, leaving behind a strong legacy as a physician and teacher. To honor his contributions, the *John P. Hoffman Fellowship in Surgical Oncology* is being established. The fellowship, funded by colleagues, friends, family, and patients, will ensure that Fox Chase continues to provide the best surgical training program possible.

To contribute to the fund, visit [www.foxchase.org/donate/HoffmanFund](http://www.foxchase.org/donate/HoffmanFund).

## HONORS & AWARDS



C.M. Charlie Ma, Fox Chase professor, vice chair of radiation oncology, and director of radiation physics, was named a Fellow of the American Society for Radiation Oncology (ASTRO) at the organization’s 56th Annual Meeting. The Fellows Program honors leaders in radiation oncology who have contributed at least 10 years of service to ASTRO and had a substantial impact on the field through their research, leadership, patient care, and contributions to education.



Fox Chase senior scientist Alfred G. Knudson, Jr., was honored as an Oncology Luminary by the American Society of Clinical Oncology during its

50th anniversary celebration. The honor recognizes exceptional individuals who have helped shape the field of oncology and advanced progress against cancer. Knudson’s “two-hit” theory of cancer causation provided a unifying model for understanding the relationship between hereditary and non-hereditary forms of cancer. Knudson also predicted the discovery of tumor suppressor genes.



Hilton Klein, director of the Laboratory Animal Health Facility, has received the 2014 Joseph J. Garvey Management Award from the American

Association for Laboratory Animal Science (AALAS). The award recognizes an AALAS member for outstanding administration, management, or support of programs relating to the care, quality, or humane treatment of animals used in biomedical research.

## PAWS FOR THE CAUSE

The one-mile charity dog walk supports efforts to prevail over cancer and has raised more than \$225,000 to date. Paws for the Cause hostess, Dawn Timmeney, FOX29 anchor and her dog, Bodhi, joined Fox Chase President and CEO, Richard Fisher, his wife Susan, and their dogs, Bailey and Clancy, to lead the walk.

Save the date: October 18, 2015



DOGS: PAUL REITANO

BORGHAEI: PAUL REITANO

# A FAMILY AFFAIR

BY LIZ PACHECO

Probe any successful institution's history, and you will naturally find remarkable individuals. Rarer is finding remarkable leadership that comes from an entire family. Such was the case with the Dorrances, whose passion for advancing cancer care helped make Fox Chase Cancer Center into the distinguished place it is today.

The story starts with George M. Dorrance, who set a high bar for medical excellence when he became the first medical director of the American Oncologic Hospital (AOH), one of the founding institutions of Fox Chase, in 1929. An exceptional physician and pioneering plastic surgeon, Dorrance was known for his innovations in head and neck surgery. At the AOH, he encouraged the close dialogue between researchers and clinicians that today continues to characterize Fox Chase. In 1954, five years after Dorrance's death, the AOH honored his contributions by naming an addition to its campus the George Morris Dorrance Clinic.

The next Dorrance to strengthen the AOH was George M. Dorrance's son G. Morris "Morrie" Dorrance Jr., who joined the Board of Trustees in 1957. The hospital had been a part of his life for many years prior, as he would go on rounds with his father as a boy. An accomplished banker—he would later become chairman and chief executive of Philadelphia National Bank—he brought with him a keen business sense. "He wanted to continue his father's legacy," says med-

ical oncologist Paul Engstrom, who served as faculty representative on the Board when Dorrance Jr. was chair, and today serves as acting chair of medical oncology. "But he was a banker by background, so he took a great interest in the hospital's financial success."

With Dorrance Jr.'s business skills came a leadership style characterized by the personal touch. "He was a focused businessman, but very kindly," says Engstrom.

"Morrie was always very interested in how people felt and if they were getting what they wanted from their hospital."

"He was always very interested in how people felt and if they were getting what they wanted from their hospital."

Dorrance Jr. advocated for the AOH's growth and improvement on all levels. "He played a very important role in recruiting some of the more significant physicians for the hospital," says former AOH president Edward J. Roach, who still serves as a member of the Fox Chase Foundation Board of Directors.

What's more, Dorrance Jr. was instrumental in bringing about the formation of the institution we today know as Fox Chase Cancer Center. In 1968, he worked with Roach to champion the AOH's move from West Philadelphia to Northeast Philadelphia's Fox Chase neighborhood, where it settled alongside the Institute for Cancer

Research (ICR). Six years later, Dorrance Jr. and Roach worked with ICR leadership to cement the merger of the two entities in order to gain new federal funding designated for a then-new type of healthcare facility: the cancer center, which performs both patient care and research—a legacy that Fox Chase embodies to this day.

Dorrance Jr.'s wife, Mary Carter, also contributed to the hospital's work. Beginning in the 1950s, she

volunteered for the women's auxiliary of the ICR, now known as the Board of Associates, and later chaired the Women's Board of Managers at AOH. Her involvement is a testament to the important role women played in the success of hospitals at the time by serving as fundraisers and volunteers.

Despite Dorrance Jr.'s 2011 death, the Dorrance name is still part of the Fox Chase firmament. In 2002, friends, family, and Board members established the G. Morris Dorrance Jr. Chair in Medical Oncology, one of 18 endowed chairs created at Fox Chase to recruit and retain excellent faculty—a principle Dorrance Jr. so vigorously supported. "It was more than just an interest," says Engstrom. "It was his passion to see Fox Chase succeed, grow, and become what it is today."

PHOTO COURTESY FOX CHASE CANCER CENTER

*The Dorrance Memorial Clinic at the American Oncologic Hospital, built 1954*



*George M. Dorrance*



*G. Morris "Morrie" Dorrance Jr.*



*Morrie Dorrance, Edward J. Roach, Timothy R. Talbot, Jr., and G. Willing Pepper led the formation of Fox Chase Cancer Center in 1974*