Cancer Center

Beth Israel Deaconess Medical Center

HARVARD MEDICAL SCHOOL TEACHING HOSPITAL

# For Your Information

*News and Information about the Cancer Center @ Beth Israel Deaconess Medical Center*

June 2017

Dr. Pier Paolo Pandolfi

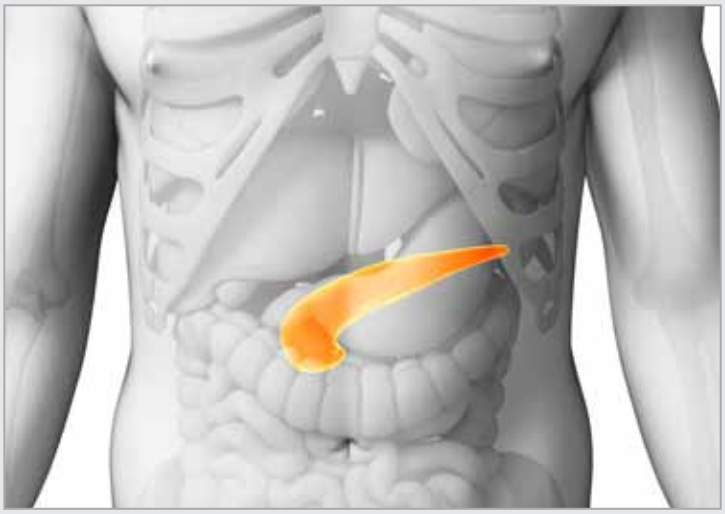
**FROM THE DIRECTOR**

## Moving from Care to Cure

*See page 2*

## IN THIS ISSUE





**RESEARCH**

## Researchers Aim Precision Medicine at Pancreatic Cancer

More than 53,000 Americans were diagnosed with pancreatic cancer last year. Today, fewer than 10 percent are likely to survive five years after diagnosis—nearly the lowest survival rate of any cancer. It's a number that hasn't budged much in years, even as other cancers have yielded to next-generation early detection and targeted therapies.

When Manuel Hidalgo, MD, PhD, arrived at the BIDMC Cancer Center in late 2015, he was already a pioneer in clinical research into the secrets of pancreatic cancer. Along with BIDMC pancreatic cancer researcher and surgeon A. James Moser, MD, he is now Co-Director of the Cancer Research Institute's (CRI) Pancreatic Cancer Research Program, in addition to leading the

*Continued on page 19*

# Moving from Care to Cure

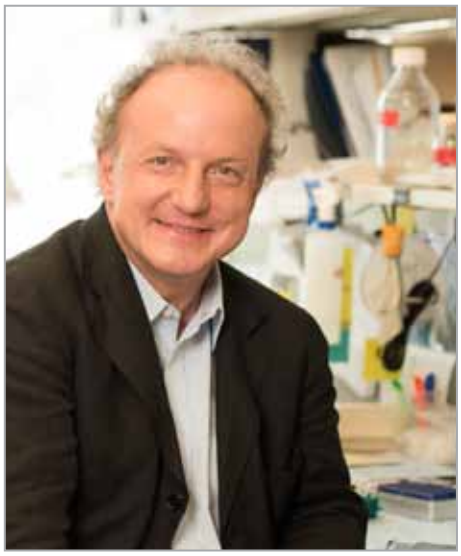
Exciting advances are happening at the BIDMC Cancer Center. Many are chronicled in this issue of *FYI*. I'd like to draw two in particular to your attention.

As you will see, our BreastCare Center is progressing rapidly into the world of truly patient-centered care. Meeting our patients' cancer related needs, whether clinical or personal, has always been a dearly held commitment throughout the BIDMC Cancer Center, and the BreastCare Center is no exception. Now, a surge of new activity by BreastCare Center faculty and staff has resulted in the introduction of novel surgical techniques and the addition of nurse navigators as part of an overall, evidence-based effort to deliver care that shines with humanity.

Next, there is the Institute for RNA Medicine, now known as the HMS Initiative for RNA Medicine. The program continues to be hosted by BIDMC and is still very much a part of our scientific family. At the same time, its embrace by Harvard Medical School shows that this formerly esoteric branch of cancer research is moving into the mainstream where its potential to one day save lives is enormous.

These new developments—one clinical, the other scientific—at first may seem dissimilar. However, together they represent the full spectrum of what it means to be an integrated cancer center. At BIDMC, we are tackling cancer from every direction. Our efforts encompass everything from understanding infinitesimally small molecules of non-coding RNA proteins to offering breast cancer patients a kinder, gentler way to get through their treatments.

This issue of FYI is brimming with good news and the stories included illustrate perfectly the mission of the BIDMC Cancer Center: to move from the standard of care to the standard of cure.



Dr. Pier Paolo Pandolfi

*'Our efforts encompass everything from understanding infinitesimally small molecules of non-coding RNA proteins to offering breast cancer patients a kinder, gentler way to get through their treatments'*

Pier Paolo Pandolfi, MD, PhD,
Director of the Cancer Center at BIDMC

# BreastCare Center Offers New Surgical Techniques

Surgery is the standard of care for treating many breast cancers but it is sometimes accompanied by side effects and aesthetic concerns that cause the patient discomfort and distress. In recent months, the BreastCare Center at BIDMC has introduced a number of new surgical techniques to address these issues.

"We've introduced these surgical innovations as part of our commitment to offering the full range of treatment options," said Chief of Breast Surgery Ted James, MD, who is also Co-Director of the BIDMC BreastCare Center.

## Invisible Incisions

James recently became certified to perform Hidden Scar surgery, although he and BIDMC colleagues have performed similar techniques for some time. The method combines conventional breast surgery with cosmetic techniques so that lumpectomy and mastectomy scars are less noticeable. Many, although not all, breast surgeries can be handled this way.

Dr. Ted James

In contrast to a large scar across the breast, the Hidden Scar technique leaves only subtle reminders of surgery. Typically, the surgeon conceals the scars by placing the incision under the breast line, around the areola or in the fold of the armpit, depending on the location of the tumor.

"Not having an incision that is a visible, daily reminder of the experience you went through has tremendous benefit in terms of well-being, quality of life and feeling like yourself again," said James.

## Oncoplastic Breast Surgery

Most women treated at BIDMC can have their cancer removed while keeping their breast, by choosing a lumpectomy (otherwise known as partial mastectomy or breast conserving surgery). However, due to the features of the particular cancer, preserving the breast may be challenging or even infeasible.

Oncoplastic breast surgery addresses this while making breast-conserving surgery available to more patients. The breast cancer is treated fully through a combination of breast surgery and plastic surgery techniques. During the operation, James said, the surgeon removes the tumor along with enough surrounding tissue to achieve optimal cancer control, and simultaneously performs a plastic surgery procedure to preserve the cosmetic appearance of the natural breast. The result is the complete removal of larger cancers without having to sacrifice the breast. Concurrent reshaping of the healthy breast can also be performed, if needed, to achieve further symmetry.

## Lymphovenous Bypass Surgery

Recently, BIDMC became one of only a few institutions in the United States to offer lymphovenous surgery. Plastic surgeon Dhruv Singhal, MD, brought expertise in this procedure when he arrived at BIDMC in 2016.

Lymphedema is the accumulation of lymph fluid, usually in the arm or leg, that occurs after lymph nodes and associated vessels are removed in cancer surgery or damaged by radiation therapy. Some 10-15 percent of women who have been treated for breast cancer experience this condition. It causes uncomfortable, sometimes painful swelling and affects quality of life.

Dr. Dhruv Singhal

In lymphovenous bypass, the surgeon reroutes disrupted lymph channels so that lymphatic fluid drains properly. Singhal operates in conjunction with a cancer surgeon, so the patient only goes to the operating room once.

If lymphedema has already developed, the surgeon will relocate healthy lymph nodes to the affected area in a procedure called lymph node transfer.

**Appointments**
**Breast Surgery:** 617-667-2900
**Lymphovenous Surgery:** 617-632-7827

# Nurse Navigators Tailor Care to Patient Needs

In the age of precision medicine, doctors often observe that every cancer is unique. Kimberly Maurer, RN, is acutely aware that in addition, every cancer patient is unique. Just a few of the ways in which breast cancer patients are infinitely variable are physical capacity, age, genetics, fertility concerns, treatment choices and the need for one-on-one support.

"Two 60-year-olds are not the same," says Maurer. "The same can be true of two 40-year-olds."

To address this reality, the BreastCare Center introduced a nurse navigator program in September. Maurer and her fellow nurse navigator Ellen Ohrenberger, RN, work with the patients treated at the BIDMC BreastCare Center. The program has already been very successful, and plans call for expanding the number of navigators.

"Navigation is a concept, a philosophy, like multidisciplinary care," said Ted James, MD, Chief of Breast Surgery and Co-Director of the BreastCare Center. "We believe it is a true value-add to our program and an important step toward patient-centered care."

## Meticulous Coordination

The essence of navigation is meticulous coordination of services that meet the needs of the individual patient. As soon as a referral is made, the navigator gets to work determining the appointments needed and whether the patient requires any additional services from the multidisciplinary breast clinic. The navigator works with administrative assistants to assure that all components of the diagnosis are available at the initial appointment, including images, pathology slides, biopsy results and the referring doctor's note. This alleviates the need for patients to track down these records themselves.

In addition to helping patients, the nurse navigators help referring physicians follow the progress of their patients, and welcome their telephone calls.

During the patient's initial appointment, typically after she has met with the surgeon to discuss the treatment plan, the navigator meets with her individually. The navigator provides educational materials and helps the patient understand her treatment options. Because patients still can be in shock about their diagnosis, it is not uncommon to have trouble absorbing information.

Nurse navigators Kimberly Maurer, RN, left, and Ellen Ohrenberger, RN

"There are times I talk to them, Dr. James talks to them and then I talk to them again the next day about the plan," Maurer said. "I assure them I'm here and I'm their point person."

## Wide Range of Resources

Patients may also receive the assistance of (non-nurse) patient navigators Christina Ho and Ana Marin, who work in Chinese and Spanish respectively, as well as English, and provide additional non-clinical support with community and BIDMC resources.

Every patient is touched by a nurse navigator before she even arrives for their first appointment, but not all patients need sustained contact. "When patients have great support networks, they may not need me as much," Maurer said. "I may talk to 'Susie' one time. I may talk to 'Jane' 50 times."

Every situation is different. Side-effect relief, survivorship issues, hospital visits, follow-up phone calls, tips about wigs, get well cards—the opportunities to offer support are endless.

"It's about tailoring our services to what patients need," said Maurer. "It's making sure nothing falls through the cracks."

**More info:** breastreferral@bidmc.harvard.org or Kimberly Maurer, RN, at 617-667-2704

# Gift to Support BRCA Study is Family Affair

Robin Isaacs had already been treated for breast cancer two years previously by oncologist Roger Lange, MD, at BIDMC when, in 1997, her mother was also diagnosed. Nadine Tung, MD, her mother's and now Isaacs' breast oncologist at the BIDMC Cancer Center, suggested testing her mother for BRCA gene mutations associated with hereditary cancers, especially in people of Ashkenazi Jewish heritage.

The test came back positive, and suddenly a family mystery was cleared up.

"I was shocked," said Isaacs, who lives in the western suburbs of Boston and worked in non-profits before retirement. " That's why my aunt died at 35 and her two daughters, my older cousins, got breast cancer before I did."

Isaacs' mother, Barbara Kurson, is doing well at age 92, and Isaacs is now 64. Isaacs chose to undergo a double mastectomy and hysterectomy to prevent the development of a new breast cancer and the possibility of BRCA-related ovarian cancer. She remained in remission for 17 years. In 2012 and again more recently, her initial breast cancer did recur, this time in her sternum.

Fortunately, the knowledge that Isaac's tumor was caused by an inherited defect in the BRCA1 gene allowed Tung to choose a targeted therapy for her. Isaacs is being treated on a protocol using a PARP inhibitor, an oral agent that specifically targets the defect in BRCA-related cancers. With very few side effects, this medication has controlled Isaac's cancer for almost two years now.

## Generous Donation

Along the way, Isaacs developed a deep interest in Tung's research into new methods for identifying genetic syndromes that cause family clusters of breast and other cancers. Tung is Medical Director of the BIDMC Cancer Genetics and Prevention Program, as well as the BreastCare Center's medical oncology section.

Isaacs' admiration for Tung—along with her mother's and her husband's—resulted in a generous donation from the three of them to support an important new study headed by Tung and four colleagues at other institutions.

Ken and Robin Isaacs

The BRCA Founder Outreach Study ("BFOR") will use digital technology and other new tools to increase access to screening for three BRCA mutations. When the pilot study launches later this year, it will recruit 4,000 people of Ashkenazi Jewish heritage (1,000 each in Boston, Los Angeles, New York and Philadelphia). This population has a one in 40 chance of inheriting the BRCA gene alterations—a risk at least 10 times greater than that of the general population.

"This study is unusual in that it is supported entirely by philanthropy," said Tung. "The Isaacs' heartfelt donation will help many people identify their inherited BRCA mutation and take appropriate steps to prevent or detect cancer at an earlier stage. We are extremely grateful to the Isaacs family and others across the country who have given funds to support the study."

Currently, only individuals with cancer or a strong family history of cancer are eligible for BRCA testing. The mutations are so common in the Jewish population, however, that half of the people who have them are unaware of any family history of cancer, according to Tung.

*Continued on next page*

# Gift to Support BRCA Study is Family Affair

*Continued from previous page*

"This represents unrecognized risk," she said. "Genetic testing will be instrumental in identifying risk for cancer and many other diseases in the future, but there is a shortage of genetic experts. We need to think about increasing access to genetic testing, and reserving the genetic expertise for those who test positive."

BFOR is developing a new model for genetic testing that offers the convenience of direct-to-consumer genetic tests under the guidance of a trusted medical care provider.

## Getting the Word Out

As her family's informal historian, Isaacs said, "I have gotten the word out to everybody in California, New York, Kentucky and here, and at least 20 people will get tested as part of the study." Participants must be at least 25 years old and have at least one grandparent of Ashkenazi Jewish heritage. The test will be free.

Barbara Kurson

Isaacs has stressed to her family that if parents are tested first and the results come back negative, their children don't need the test. Fortunately, her own children did not inherit a BRCA mutation. "That's my message to my 13 cousins," she said. "You can save your children a huge emotional burden. You have to have the buck stop somewhere."

Isaacs said she and her husband, Ken Isaacs, an investment advisor, "have been wanting to give for a long time, but we wanted it to go to Nadine for research. Then we heard about this trial and we said we want our gift to go straight to that."

**More info:** Cancer Genetics and Prevention Program
**Appointments:** 617-667-1905 or bidmc.org/cancergenetics




Dr. Marc Garnick accepts his honor

# Prostate Cancer Group Honors Garnick

The Massachusetts Prostate Cancer Coalition (MPCC) honored Dr. Marc Garnick at its 20th Anniversary Prostate Cancer Symposium at the Boston Marriott Copley Place on May 12.

Garnick received the Jack Colbert Memorial Award, which was established in 2008 to honor a founding member of MPCC. The coalition presents the award periodically to a distinguished individual in the medical community who has significantly advanced the fight to conquer and cure prostate cancer through research and/or practice.

Garnick is an internationally known expert in urologic cancer at the Cancer Center at BIDMC and the Gorman Brothers Professor of Medicine at Harvard Medical School. He has dedicated his career to helping his patients and their families and to developing new therapies for prostate cancer.

Garnick founded the Hershey Family Foundation for Prostate Cancer Research, serves as Editor-in-Chief of Harvard Health Publications' Annual Report on Prostate Diseases and has authored numerous scientific articles, reviews and books. In addition, he serves as the Cancer Center's Director of Community Cancer Services.

**More info:** masspcc.org
bidmc.org/prostratecancer

# BIDMC and Harvard Launch Joint RNA Institute at Symposium

Revolution was in the air at the third annual RNA Medicine Symposium, a joint event presented by BIDMC and Harvard Medical School (HMS). In addition to the dozen presentations given by the pioneers in one of biomedicine's most promising fields, the event doubled as an official launch party for the newly minted HMS Initiative for RNA Medicine (HIRM), hosted by the Cancer Center at BIDMC.

"It has only been two or three decades since we recognized the awesome power of RNA," said Frank J. Slack, PhD, Director of the new HMS/BIDMC collaboration, in his welcoming remarks. "Our mission is to make breakthrough medicines for patients by breaking down the barriers to RNA research. Our emphasis on clinical impact is what distinguishes us."

Like its better known counterpart DNA, which contains instructions for building the proteins all life depends on, RNA molecules play an integral role in coding, decoding, regulation and expression of genes. But the vast majority of RNAs — about 98 percent of them — were long considered meaningless "junk." Only in the 1990s did researchers begin to understand these non-coding RNAs' significance in the growth, division, survival and migration of cells. It's RNAs' ubiquity across these critical biological processes that make them such promising new targets for treating a wide swath of diseases including cancer.

"I'm so proud to be one of the founders of this research effort," said Pier Paolo Pandolfi, MD, PhD, Director of the Cancer Center at BIDMC and co-Director of HIRM, who established the Institute for RNA Medicine at BIDMC in 2014 with Slack, oncologist Daniel Tenen, MD, pathologists John Rinn, PhD, and Jeffery E. Saffitz, MD, PhD. "RNA medicine is having a profound impact on every aspect of cell biology and cuts across every disease," said Saffitz, who is Chief of the Department of Pathology at BIDMC and the Mallinckrodt Professor of Pathology at HMS.

Symposium speakers


Dr. Pier Paolo Pandolfi and Dr. Frank Slack celebrate the new HMS Initiative for RNA Medicine

Among the Symposium speakers was Richard I. Gregory, PhD, co-Director of HIRM and a cancer researcher at Boston Children's Hospital. Gregory and colleagues investigate RNAs' role in allowing stem cells to continually renew themselves.

Other symposium presenters included Anna M. Krichevsky, PhD, of Brigham and Women's Hospital and Harvard Medical School; David J. Mooney, PhD, of Harvard's School of Engineering and Applied Sciences and its Wyss Institute for Biologically Inspired Engineering; George A. Calin, MD, PhD, of The University of Texas MD Anderson Cancer Center; Melissa J. Moore, PhD, of Moderna Therapeutics and University of Massachusetts Medical School; Sakari Kauppinen, PhD, of Aalborg University, Copenhagen; Larry Gold, PhD, of SomaLogic and University of Colorado Boulder; Andrew Fire, PhD, of Stanford University School of Medicine; Dalia Cohen, PhD, of The RNA Medicines Company; Craig P. Hunter of Harvard University; Joan A. Steitz, PhD, of Yale University; and Anita G. Seto, PhD, of miRagen Therapeutics Inc.

**More info:** bidmc.org/irm

# Explaining Non-Coding RNA over the Back Fence

*Frank Slack, PhD, is Director of the RNA Medicine research program at BIDMC and the Harvard Medical School Initiative for RNA Medicine. He talked with* FYI *about the challenge of describing complex science in lay language—and why it's important.*

Dr. Frank Slack

***FYI:*** You're talking to your neighbor over the backyard fence. How do you describe RNA medicine?

**Slack:** I'd say it's a little out of the box even for medicine. It's an area that recently became known, where very little information exists, but we feel it would be a sin not to investigate it further.

I'd say it's a new area of our cells — and this is where it starts to get complicated. Over the last 10 years or so, scientists like myself have realized our cells make an abundance of a new class of molecules that we didn't previously know existed. They play an extremely important role in cells and often in disease. The entire world of medicine that currently exists is designed to target less than 1% of the molecules in cells. Now we have an amazing opportunity to design drugs against this new class of things we have discovered in our cells.

At this point I guess I would give the name: non-coding RNA (ncRNA). I'd say we've realized that our cells make only 2% of RNA used for the traditional purpose to code for protein, but the remaining 98% make non-coding RNAs.

We know from research in test tubes and the like that we can inhibit or replace these RNAs in diseased cells. If they are made at too high or too low levels, we can give them back to the cells to stop the cancer from growing or inhibit it by tricks of chemistry that allow us to knock down the abundance. We have discovered these cells are found in our bloodstream so we can measure them quite easily to determine disease or the outcome of disease.

Our goal is to take the new information about non-coding RNAs and design new and better tests for diagnosing cancer and prognostic tests for determining outcomes and response to the therapies. And even more, to design drugs to treat each patient's personal disease.

***FYI:*** How often do you find yourself explaining RNA medicine in this way?

**Slack:** All the time. Especially at children's sports games, when I'm talking to other parents, or at dinner parties.

***FYI:*** In shorthand, how would you say the same thing to another scientist?

**Slack:** The vast majority of human GWAS SNPs associated with human diseases lie in the non-coding portion of the human genome. In addition, ncRNAs are mis-expressed, potentially causally, in every human disease. I propose we set the stage for incorporating this additional information into the patient's electronic health record and providing personalized therapeutics based on RNA medicine.

***FYI:*** Why is it so difficult to talk about RNA medicine?

**Slack:** Because we cannot see RNA. I can take people to my lab and show them RNA and it's essentially some liquid in the bottom of a test tube. I can honestly say I have never seen a molecule of RNA with my eyes. Much of our information comes from esoteric tests which are hard for the layperson to understand. It's like knowing a planet is there because you saw the shadow on another planet, but not the planet itself.

Also, much of this science hasn't even made it into biology text books yet. People can usually comprehend that RNA is a close cousin of DNA, and that where DNA is a double helix, RNA is a single strand. That RNA is a template for copying out the proteins, but that many

# Explaining Non-Coding RNA over the Back Fence

*'RNA is a little out of the box even for medicine...but we feel it would be a sin not to investigate it further'*

Frank Slack, PhD, Director, HMS Initiative in RNA Medicine

RNAs by themselves can do the work. They're not just templates. That's about as far as you get.

***FYI:*** Are metaphors helpful?

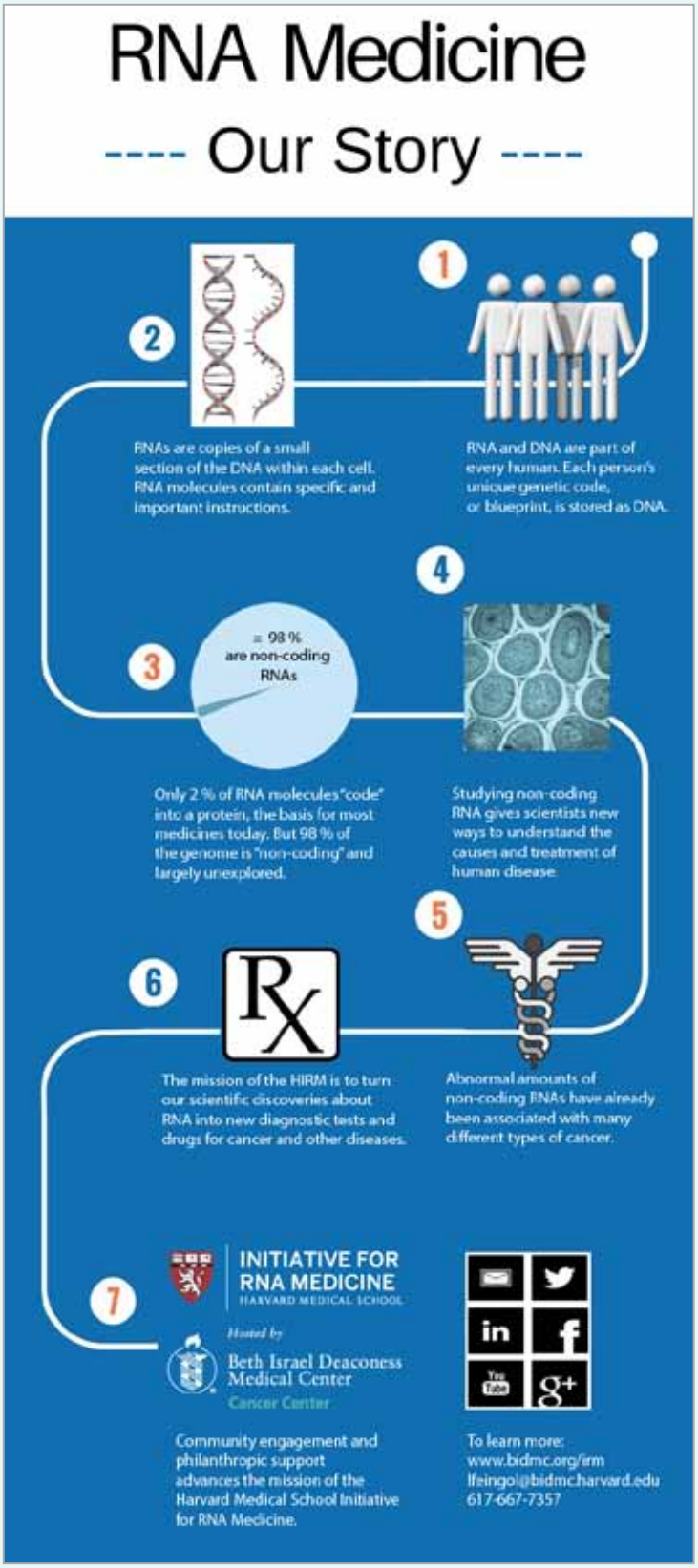
**Slack:** I like to say we're at a time in history where if we turn our eyes toward new types of RNA, it's as if Galileo had the Hubble telescope and looked into the sky and saw more stars than he had ever imagined. That's where we are in our discovery of non-coding RNAs within ourselves.

When I talk to potential donors, I say we see a vast opportunity like Thomas Jefferson did when he made the Louisiana Purchase. It drove the development of the country; the value of the investment (ROI) was immense.

***FYI:*** Why is it important for lay people to understand something about RNA medicine?

**Slack:** When you talk to people, you can never assume they don't know anything or that they might not be interested. You would be mistaken to blow people off.

It is crucial for scientists to impress on friends and colleagues and their families the importance of the research they do. Very little would get done were it not for the fact that government funds most research. It funds innovation. It's very important that voters support government funding for science because it might lead to new cancer drugs—and cures. ■




This infographic was created by Donatella Giacometti of CEO Media Coach in New York City, a member of the Initiative's advisory board. It is designed to help explain RNA Medicine to the lay person.

AFFILIATE PROFILE

# The Cancer Center

## at Beth Israel Deaconess Hospital-Plymouth

The Jordan Hospital Club Cancer Center at BID-Plymouth provides complete cancer care for all kinds of cancer. It offers the full range of community cancer services, from early detection and diagnosis to the latest therapies in medical and radiation oncology, and Phase 3 clinical trials. The Cancer Center was one of only two Massachusetts accredited Comprehensive Community Cancer Programs to earn the Commission on Cancer's Outstanding Achievement Award. Some highlights of the center's approach to cancer care include:

- Integration with the Cancer Center at Beth Israel Deaconess Medical Center provides Plymouth patients with direct, rapid access to bone marrow transplant, Cyberknife, robotic surgery, Phase 2 clinical trials and other advanced services
- Tumor boards of Plymouth and Boston doctors meet regularly to review complicated cases and the latest treatment options
- Specialized nurses, trained nurse navigators and an oncology social worker help patients and families work through decisions and issues

**Med Onc Appointments**
508-746-1088

**Rad Onc Appointments**
508-830-2575

**Breast Center Appointments**
508-830-3000

**Physician Patient Coordination Line**
508-830-2226
mbrightman@bidplymouth.org

### Diagnostic Services

- Magnetic Resonance Imaging (MRI)
- 3-D mammography and high-risk breast assessment
- CT, PET/CT and nuclear medicine
- Ultrasound
- Biopsy and Pathology
- Genetic screening and counseling

### Multidisciplinary Care

- Breast Cancer
- Head and Neck Cancer
- Lung Cancer
- Prostate Cancer

### Support Programs

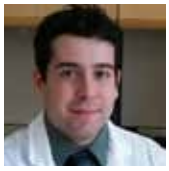
- Nutrition support
- Pain management
- Reiki, yoga and other exercise programs
- Rehabilitation services
- Patient and caregiver support groups
- Survivorship planning
- Diane's Gift Resource Center
- Palliative care team
- Bereavement support
- Cranberry Hospice
- Healing garden

**bidplymouth.org/cancer**

**Matthew Abrams**, MD, Radiation Oncology

**H. Joseph Barthold,** II, MD, Radiation Oncology

**Carolyn Casey,** NP, Nurse Practitioner



**Robert Gaudet**, MD, Medical Oncology

**Irina Gurevich**, MD, Medical Oncology

**Stephan Hochstin**, MD, Medical Oncology

# DID YOU KNOW?

The Cancer Center is named for and supported by the **Jordan Hospital Club**, originally founded in 1906. The club raises funds annually through Plymouth's famous, bone-chilling Polar Plunge

The Cancer Center and Breast Center treats more than **600 new patients** per year ...

... And receives **29,000 patient visits** per year (medical oncology, radiation oncology and Breast Center combined)

**J. Matthew Koomey**, MD, Medical Oncology, Medical Director

**Corissa Pond,** NP, Nurse Practitioner

**Robin Sachs**, MD, Breast Surgery

**Deborah White**, MD, Medical Oncology

## SPOTLIGHT ON BREAST CENTER

**2**
**accreditations**

Nationally accredited by National Accreditation Program for Breast Center

American College of Radiology Breast Center of Excellence

**3D**
**mammography**
and high risk breast assessment of excellence

Most diagnoses within

**5**
**DAYS**

**2**
**convenient locations**

## CALENDAR

### BIDMC Cancer Symposium: Winners in the War on Cancer

**Wednesday, November 8, 2017**
**8:30 am — 5:00 pm**

Joseph B. Martin Center at Harvard Medical School
77 Avenue Louis Pasteur, Boston, MA

Hosted by Pier Paolo Pandolfi, MD, PhD
Director, Cancer Center and Cancer Research Institute at BIDMC

**More info and registration:**
bidmc.org/cancersymposium

### Conversations on Cancer: What You Need to Know about the Changing Landscape

#### An Educational Community Event

**Wednesday, October 25, 2017**
**5:30 pm — 8:00 pm**

Thorny Lea Golf Club
159 Torrey Street, Brockton

Presented by the Cancer Center at Signature Healthcare and the Cancer Center at BIDMC

**More info and registration:**
bidmc.org/conversations

### A Reason to Ride Ride, Walk or Run: Support Cancer Research at BIDMC

**Sunday, September 17, 2017**
**9:00 am — 12:00 Noon**

75 Sylvan Street, Danvers

Hosted by BIDMC Cancer Patient Thomas and Judy DesFosses and Friends

Presented by Fuddruckers

**More info and registration:**
areasontoride.com

### Cancer Immunotherapy Today and Tomorrow:

#### A Continuing Education Event for Clinicians

**Saturday, October 29, 2017**
**9:00 am — 2:00 pm**

Joseph B. Martin Center at Harvard Medical School
77 Avenue Louis Pasteur, Boston, MA

Hosted by BIDMC Oncologists David Avigan, MD, and David McDermott, MD

**More info and registration:**
bidmc.org/cancercenter

## Jain Receives Lymphoma Research Grant

Dr. Slavia Jain

Salvia Jain, MD, an investigator in the lab of David Avigan, MD, in the Division of Hematology/Oncology, has been awarded the inaugural T-cell Leukemia Lymphoma Foundation grant.

The selection committee unanimously chose her application, titled "Targeting DNA Methyltransferases as a novel therapeutic strategy in T-cell lymphoma." Jain, whose focus is on experimental therapeutics in lymphomas, was also invited to be part of the steering committee of the Global T-cell Lymphoma Consortium, an international coalition to advance clinical research on this rare disease.

Jain is also a member of the Department of Medicine's Franklin Epstein Society, which supports junior faculty members who hold a Career Development Award from the National Institutes of Health or are in the process of applying for one.

"Franklin Epstein Society Meetings played a crucial role in helping me refine my grant proposal," Jain said. "I am grateful to you all for leading this committee which assists young investigators such as myself at a vulnerable stage of their academic career."

Dr. George Q. Daley, left, congratulates Dr. Manuel Hidalgo

## Harvard Names Hidalgo Professor

Manuel Hidalgo, MD, PhD, Chief of Hematology/Oncology at BIDMC, was recently named Professor of Medicine by Harvard Medical School. The appointment was formalized at a ceremony in May by George Q. Daley, MD, PhD, Dean of the Faculty of Medicine, shown here with Hidalgo, who is also Director of the Leon V. and Marilyn L. Rosenberg Clinical Cancer Center at BIDMC.

## AAAS Elects Wei Biological Sciences Fellow

Dr. Wenyi Wei

Wenyi Wei, PhD, has been elected as a fellow to the section on biological sciences of the American Association for the Advancement of Sciences (AAAS) for his distinguished contributions to the cell cycle regulation field.

Wei is an associate professor of pathology at BIDMC and Harvard Medical School and Director of the Biochemistry Program in the Cancer Research Institute at BIDMC.

Wei's research specifically illustrates how the misregulated enzyme bonding processes of the molecules phosphate and ubiquitin lead to irregular cell cycles. Such abnormal cell cycles can ultimately lead to the development of cancer.

Wei is one of this year's 347 fellowship recipients, who have been recognized by the AAAS in 24 scientific sections. Fellows are nominated by current AAAS fellows and members, as well as the AAAS chief executive officer.

PEOPLE

# Huberman Reflects on 37 Years of Change

Dr. Mark Huberman and patient

When Mark Huberman, MD, returned to his office at the end of the day to chat about his 37-year career at Beth Israel Deaconess, he had just finished seeing a patient. The gentleman was doing well on erlotinib, one of the newer targeted therapies.

"His advanced lung cancer has been controlled for more than four years," Huberman said with a note of wonder. "That wasn't heard of when I started in oncology."

Huberman—who was named Oncologist of the Year by the Massachusetts Society of Clinical Oncologists in 2014—has seen many changes since he arrived at New England Deaconess Hospital in 1980. He spent just one year at another institution—Tufts—and the rest of his career providing care and performing clinical research in a field and at an institution that evolved dramatically.

## From Generalist to Specialist

For one thing, he said, oncology became increasingly specialized through the arc of his practice. Although he pursued a particular interest in lung cancer during training, for his first 20 years in practice, he was a generalist. Gradually, his Boston focus sharpened to thoracic oncology. At Beth Israel Deaconess Hospital-Needham, where he has worked 1 ½ days a week since 2000, however, he remains a generalist even today.

Huberman has been a witness to the remarkable impact of targeted therapies and immunotherapies on patient outcomes. "A lot of new drugs are prolonging life and relieving symptoms," he said. However, "They aren't curative. More patients survive longer in a number of different cancers, but we still have a long way to go."

Huberman cherishes the relationships formed over many years with patients and their families. To him, there's nothing better than "seeing a picture of a child patients have had after their cancer battle, and learning about life experiences they've had."

## Double Burden

Still, there is much sorrow and loss in the life of an oncologist. Modern communications have only made it worse.

"I was able for a long time to wipe my slate clean at the end of the day," he said. "It's harder now. Because of email, it's harder to escape. You read emails nights and weekends, and you tend to return to it."

After Huberman retires June 30, at age 71, he intends to continue reviewing clinical trials and malpractice cases as a consultant. He will leave the BIDMC Cancer Center with feelings of pride that "The care here is wonderful" and "The Needham Cancer Center is a great facility with great staff and a great future." ■

PEOPLE

# Drews Becomes First Fand Chair Incumbent

Dr. Sally Fand and Dr. Reed Drews *Photo: Joel Haskell*

When Sally B. Fand, MD, enrolled in the University of Chicago Medical School in 1948, she was one of only six women in her class. "There weren't many women, but I always knew I wanted to be a physician," Fand says. She graduated and later completed her residency in internal medicine at the University of North Carolina. Now, after a successful career as a clinical investigator and 20 years as a family physician, Fand is making sure other young clinicians are afforded a similar opportunity of quality medical education.

In response to the outstanding care Fand received as a patient at Beth Israel Deaconess Medical Center, the Fand Family Foundation recently pledged $2 million to establish the David I. and Sally B. Fand Endowed Chair at BIDMC. Reed Drews, MD, director of the Hematology-Oncology Fellowship Program and Fand's physician, will be the first incumbent to the chair named after Fand and her late husband.

For 20 years in his role as director of the division's fellows, Drews has been dedicated to mentoring and training future generations of hematologists and medical oncologists. The support from this endowment will provide him, and future leaders in his role, with the resources to educate young physicians to provide superior care for patients.

The three-year Hematology-Oncology Fellowship Program welcomes six fellows per year and features a robust clinical and research component. ■


Cancer Center

Beth Israel Deaconess Medical Center

HARVARD MEDICAL SCHOOL TEACHING HOSPITAL

***For Your Information***

News and information about the Cancer Center at BIDMC and its affiliates for referring physicians, scientists, colleagues, patients, employees, donors and other members of the BIDMC Cancer Center Community

June 2017
Volume 4, Number 1




***FYI* Editorial Board**

Pier Paolo Pandolfi, MD, PhD, Director, Cancer Center at BIDMC

Manuel Hidalgo, MD, PhD, Director, Leon V. and Marilyn L. Rosenberg Clinical Cancer Center and Chief, Hematology/Oncology

Will Decaneas, MA
Administrative Director, Cancer Center at BIDMC

***FYI* Staff**

Editor
Margaret Pantridge

Contributors
Jennie Green
Allison Knee
Ann MacDonald
Susan Megerman
Jacqueline S. Mitchell
Erika Sloan



*FYI* welcomes comments, story ideas and subscription requests (specify electronic or print edition). Please email cancercenter@bidmc.harvard.edu.

Cancer Center at Beth Israel Deaconess Medical Center
330 Brookline Avenue
Boston, MA 02215
617-667-1900
bidmc.org/cancercenter

# Around the Cancer Center

## CCTO on the Move

The Cancer Clinical Trials Office (CCTO) moved May 8 to the Harvard Vanguard Medical Associates building, near Kenmore Square and Fenway Park, in an ongoing hospital-wide reorganization aimed at expanding space for clinical operations on campus while moving administrative functions to outlying locations.

Previously located in the MASCO building at 375 Longwood Avenue, the CCTO now occupies a larger, dedicated space on the third floor of the HVMA Building at 133 Brookline Avenue.

Interim swing space has been created on Shapiro 1, in the former Souper Salad space, for the convenience of staff when working on the main BIDMC campus. Ongoing design of dedicated clinical research space in the Hematology/Oncology outpatient clinics (Shapiro 7 and 9) will result in much-needed new research and clinical capacity.

"This is a smaller move in a larger plan to enhance cancer clinical research at BIDMC," said Daniel Costa, MD, PhD, Medical Director of the CCTO.

**Address:** 133 Brookline Avenue, 3rd floor, Boston, MA 02215
**Telephone:** 617-975-7420
**Fax:** 617-975-7420

## BIDMC-JAX Team Analyzes Lung Tumors

More often found in patients with lung cancer who never smoked, epidermal growth factor receptor (EGFR) mutated lung cancers account for about 15 percent of lung cancers in the United States. Drugs known as small molecule oral EGFR-inhibitors have been shown to improve response rates and survival compared to traditional chemotherapies; but the degree and duration of response to these inhibitors vary widely among individual patients.

In a study recently published in Lung Cancer, researchers from the Cancer Center and the Jackson Laboratory (JAX) identified and sequenced 20 EGFR mutated tumors. The analysis, led by the Cancer Center's Paul A. Vanderlaan MD, PhD, and Daniel B. Costa, MD, PhD, revealed that concurrent tumor suppressor gene tumor protein P53 (TP53) and others are common in EGFR mutated lung cancer and may alter clinical outcomes.

**More info:** lungcancerjournal.info

## 'Half-Match' Transplants Available

When a patient with blood cancer needs a stem cell transplant, the ideal donor is a close relative with the same human leukocyte antigen (HLA) type. Unfortunately, only 65 percent of patients have a relative with the same HLA. This spring, the BIDMC Cancer Center's Hematologic Malignancy Program adopted a new approach to donor matching that significantly increases the size of the potential donor pool. These haploidentical transplants are now an important option along with HLA-matched sibling transplants (the ideal), HLA-matched unrelated donor transplants and umbilical cord transplants.

"It's a half-match, typically with a sibling or parent," says Denise Cummings, RN, a certified hemopoetic transplant coordinator in the Hematologic Malignancies Program.

Cummings said haploidentical transplants have been in use elsewhere since the early 2000s, but there were problems with graft versus host disease. Treatment regimens have been improved, and today, patients with these transplants usually do well, she said.

**More info:** dacummin@bidmc.harvard.edu or 617-667-3527

# Around the Cancer Center

## Spectroscopy IDs Pancreatic Tumors Early

A team of investigators led by Lev T. Perelman, PhD, Director of the Center for Advanced Biomedical Imaging and Photonics at BIDMC, has developed a promising new tool capable of distinguishing between harmless pancreatic cysts and those with malignant potential with an overall accuracy of 95 percent. The team's preliminary data was published in the journal *Nature Biomedical Engineering*.

The new device uses light scattering spectroscopy (LSS) to detect the structural changes that occur in cancerous or pre-cancerous cells by bouncing light off tissues and analyzing the reflected spectrum. The results could one day help guide physicians' decision making when considering whether the presence of pancreatic cysts requires surgery, a high-risk procedure.

"This tool is a technology that is transformative in the evaluation of pancreatic cysts," said co-lead author Douglas K. Pleskow, MD, Clinical Chief of the Division of Gastroenterology at BIDMC. "It provides a high level of precision in the detection of potential malignant transformation of these cysts."

**More info:** nature.com/natbiomedeng/

## Options for Metastatic Liver Patients

The Cancer Center's Liver Tumor Program treats benign and malignant liver tumors, including cancer that has metastasized to the liver.

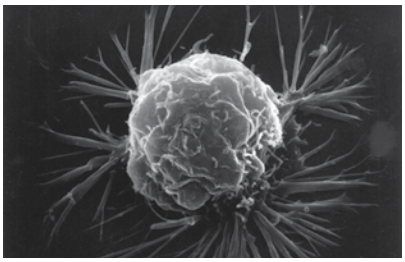
The program offers many therapeutic options that lengthen life and reduce symptoms. These include radio frequency ablation, radioembolization (Y90), CyberKnife steroteactic radiosurgery and transarterial chemoembolization. The program also provides expert diagnosis and multidisciplinary care for the full range of primary liver cancers, including hepatocellular carcinoma (HCC), cholangiocarcinoma, gallbladder carcinoma and hepatoblastoma. Benign tumors treated by the program include hemangiomas, liver cysts, adenoma and focal nodules.

The Liver Tumor Program is a part of the Pancreas and Liver Institute, and is closely associated with the Liver Center at BIDMC, one of the largest liver programs on the East Coast with 10 hepatologists and three advance practice providers. The Liver Tumor and Liver Center programs offer multidisciplinary clinics for patients with liver cancer, fatty liver disease, and those in need of liver transplantation. Both programs participate in clinical trials.

**More info:** liver@bidmc.harvard.edu

**Appointments:** 877-PANCLIV (726-2548)

## Potential Breast Cancer Target Revealed



Investigators have discovered a protein that may enable one of the deadliest forms of breast cancer to grow and spread quickly. The team, led by Antoine Karnoub, PhD, an assistant professor of pathology at BIDMC, hopes the findings published in February in *Science Signaling* will lead to new diagnostics and treatments.

Basal-like breast cancer is diagnosed more frequently in unsuspecting young women and is usually detected after it has reached advanced stages.

Previous work has indicated that certain reactions — known as the phosphoinositide 3-kinase (PI3K) pathway — are overactive in basal-like breast cancer. The PI3K pathway helps regulate a variety of important cellular functions and is often hijacked by cancer cells. However, blocking the pathway hasn't shown a benefit for patients with basal-like breast cancer because the cancer cells can compensate by activating other pathways that feed off of the PI3K pathway. Therefore, identifying molecules that mediate the PI3K pathway may lead to more effective therapeutics for basal-like breast cancer.

**More info:** stke.sciencemag.org

# Around the Cancer Center

## Cancer Center Supports Ellie Fund


Once again this year, the BIDMC Cancer Center supported the Ellie Fund's Red Carpet Gala in appreciation for the support the Ellie Fund gives its patients.

The Cancer Center sponsored the "Fund-A-Family" portion of the gala, Together, the Cancer Center and the Ellie Fund honored Ralph and Christine Cataneo, a wife and husband who were both diagnosed and treated for breast cancer at BIDMC in the same year. During this time, the Ellie Fund provided assistance and support to the Cataneos, who are the parents of four children.

The Cataneos attended the black-tie event—held Feb. 26 in conjunction with the Academy Awards—and were seated at the BIDMC table with members of their care team.

The Ellie Fund is a non-profit organization based in Needham that provides essential support services for breast cancer patients to ease the stresses of everyday life, allowing the focus to be on family, recovery and healing.

**More info:** elliefund.org

## New Bereavement Resource for Patients

BIDMC's Palliative Care Program and Departments of Social Work and Spiritual Care and Education have just developed a new resource to help patients or family members who have recently lost a loved one.

"About Grieving" is a one-page handout for patients and family members developed by social workers, physicians and chaplains. In reassuring and accessible terms, it describes common physical and emotional reactions to losing a loved one, as well as helpful coping strategies and resources.

"About Grieving" can be ordered via the forms ordering system at Allied using part number LC2948 or by contacting Jane Wandel. (Packs of 25 cost $12.) It is also available to read or download (see URL below).

**More info:** bidmc.org/palliative care, choose Bereavement Resources

**Order:** jwandel@bidmc.harvard.edu

## Thyroid Nodule Clinic Offers New Test

The Thyroid Nodule Clinic now offers a genetic test called the Afirma Gene Expression Classifier by Veracyte. The test analyzes the expression level of 142 different genes. If a biopsy is indeterminate, the test can identify the nodule as either benign or suspicious for malignancy. About half of indeterminate nodule biopsies are reclassified as benign, reducing the number of patients who need surgery.

The Thyroid Nodule Clinic offers evaluation and comprehensive treatment of thyroid nodules at BIDMC and Beth Israel Deaconess Hospital-Needham.

During the initial appointment, patients receive a full consultation with an endocrinologist or endocrine surgeon, followed by a thyroid ultrasound and ultrasound-guided fine needle aspiration biopsy, if indicated. Specialized genetic testing is also offered when appropriate. On-site cytopathology is available in the Boston location.

**More info:** Dr. Pamela Hartzband (Boston) at phartzba@bidmc.harvard.edu. Dr. James Hennessey (Needham) at jhenness@bidmc.harvard.edu

**Appointments:** 617-667-9344

RESEARCH

# Researchers Take Aim at Pancreatic Cancer

*Continued from page 1*

Left-right: Dr. Andrea Bullock, Deb Tobojka, RN, and Dr. Manuel Hidalgo

Leon V. & Marilyn L. Rosenberg Clinical Cancer Center and the Division of Hematology-Oncology.

"Today, treatment for pancreatic cancer is palliative, not curative," Hidalgo says of the aggressive and hard-to-treat disease that has been a wily opponent throughout his career. "We are just starting to understand the reasons for pancreatic cancer's lack of response to chemotherapies, but the reality is that is still responds very poorly. We still aren't curing anyone."

## A New Approach

Precision medicine—a young field less than two decades old—is a new approach to biomedicine that uses data about human genetics, physical traits, environments and lifestyles to tailor patient care to individuals. When applied to cancer, the precision medicine paradigm takes tumors' unique characteristics into account. The model requires the discovery of telltale signs of disease—called biomarkers—to serve as diagnostic tools or provide guidance for treatment. Therapies can then be targeted precisely to the unique tumor characteristics.

Some cancers have yielded their vulnerabilities to modern genetic technology, revealing the genetic mutations driving certain malignancies. Armed with that information, researchers have designed drugs to target those mutations, thereby reducing or reversing tumor growth. But pancreatic tumors—which tend to be highly genetically diverse—remain enigmatic.

At BIDMC, Hidalgo joined forces with Dr. Senthil K. Muthuswamy, Director of the Cell Biology Program in the Cancer Research Institute and a pioneer in three-dimensional culture models of cancer. They have developed a robust research program aimed at understanding pancreatic cancer's basic mechanisms, finding druggable targets and developing novel therapies. Activities include developing preclinical models, searching for biomarkers and leading clinical trials.

"Our focus here is applying precision medicine aggressively to pancreatic cancer," Hidalgo says. "Our goal is very simply to improve survival."

## Preclinical Models

Dr. Senthil K. Muthuswamy

A specialist in anticancer drug development, Hidalgo became interested in pancreatic cancer early in his career when he was an investigator at Johns Hopkins. At the time, researchers lacked the preclinical models that serve as testbeds for promising therapies in humans. To solve that problem, Hidalgo and his colleagues developed a research platform called patient-derived xenografts (PDX) or "avatars." The scientists grafted human tumors into live mice, allowing them to test potential therapies quickly and efficiently. PDXs are now in use

*Continued on next page*

# Researchers Take Aim at Pancreatic Cancer

*Continued from previous page*

throughout cancer research, and Hidalgo himself has employed them to in the development of dozens of new cancer drugs.

Using the PDX platform, Hidalgo and colleagues transplanted pancreatic tumor tissues from biopsies in mice. In this way they identified two drugs that showed promise against pancreatic cancer: Nab-paclitaxel is now FDA-approved for treatment of pancreatic cancer and palbociclib is in early clinical trials.

Shortly after Hidalgo came to BIDMC from Spain, where he had served as clinical research director of the Spanish National Cancer Center, a jet flew across the Atlantic with precious frozen cargo. Some 125 pancreatic tumor samples were delivered to Hidalgo at BIDMC, where he and Dr. Muthuswamy are now employing them in preclinical research.

## Organoids

"Because we still understand so little about pancreatic cancer," Hidalgo says, "it's not easy to find druggable targets. We are going around that by using organoids."

Organoids are "mini-tumors" grown in three dimensional culture, a method pioneered by Dr. Muthuswamy, using tissues taken from patients undergoing treatment for pancreatic cancer. Like PDXs, organoids are highly accurate models of the disease. They, too, serve as a platform for developing and testing new treatments for pancreatic cancer, including personalized vaccines against the disease. Today, the pancreatic cancer research team is growing organoids, generated from primary and metastatic tumors alike, as well as from tissues taken both early and late in disease. The process of developing and "reading" an organoid is even quicker than in PDXs, about two months.

"Our method of growing organoids faithfully recreates the tissue organization, differentiation status and other phenotypic traits found in the patient's own malignancy," said Muthuswamy.

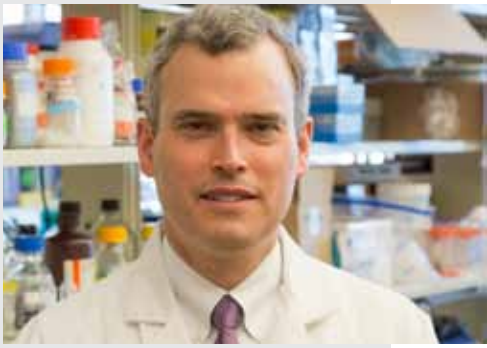
Hidalgo added, "The organoids allow us to do the trial and error against a better, more predictive system. So we are not so worried about what mutations brought the cancer on, but will instead test each tumor against a large set of drugs to see what works."

Organoids will soon touch the clinical side of the BIDMC Cancer Center. The team is developing a clinical trial that is expected to give organoids an experimental role in patient care at the BIDMC Cancer Center within a year.

## Biomarkers for Early Detection

One reason for pancreatic cancer's low survival rate is that it's largely without specific symptoms and often goes undiagnosed for too long. By the time symptoms emerge, many patients already have locally advanced disease, which is inoperable, or metastatic cancer, which responds poorly to cancer therapies.

"A step before this is early diagnosis," says Hidalgo, who lists early diagnosis as one of his primary pancreatic cancer research interests, along with precision therapy and immune therapies for pancreatic cancer.



Dr. A. James Moser

Biomarkers are telltale biological signatures that could tip off physicians to pancreatic cancer's presence long before patients feel sick.

A clinical trial called Project Survival is aimed at identifying biomarkers that can aid in early detection. It was originated in 2016 by Moser, who is Co-National Principle Investigator of the trial. He studies potential biomarkers such as the presence or absence of a gene, protein or other molecule that distinguishes malignant tissues from healthy ones. Success would give physicians like Moser—who in addition to his research role is Co-Director of the Pancreas and Liver Institute at BIDMC—the ability to detect and monitor pancreatic cancer with a test as

# Researchers Take Aim at Pancreatic Cancer

*Continued from previous page*

simple as a blood test, rather than the high-risk invasive diagnostic surgery required today.

## Clinical Trials and Immunotherapies

Another half dozen clinical trials are either under way or opening soon at BIDMC, under the oversight of Hidalgo and Andrea Bullock, MD, Associate Director of gastrointestinal medical oncology. A multidisciplinary panel of BIDMC's Pancreatic Cancer Center doctors considers every pancreatic cancer patient for the potential to participate in these trials.

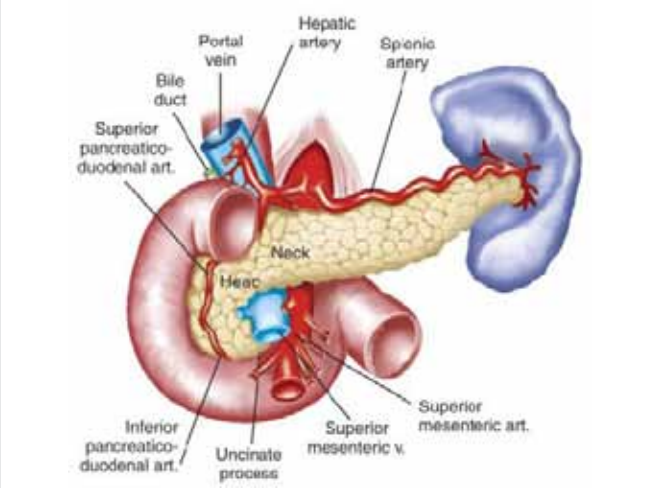
In a phase II clinical trial currently underway at BIDMC, Hidalgo and colleagues are testing a new cancer drug for its efficacy against metastatic pancreatic cancer both alone, and in combination with another therapy. The experimental drug BL-8040 is a molecule that has shown promise in other cancers. Patients will try this drug in combination with Pembrolizumab, an immune agent already approved for use in melanoma.

One of the most exciting new areas of cancer research, immunotherapy seeks to harness the body's own immune system to detect, fight off and kill cancer cells. Already in clinical trials for other forms of cancers, immunotherapy typically involves manipulating patients' own cells to act like a vaccine against cancer.

"We haven't found ways to activate the immune system against pancreatic cancer yet, as we have in other cancers, but we are working on it," says Hidalgo. "The pancreatic research team is currently designing experiments that would use organoids as a testing ground for a potential vaccine."

## Precision Promise

Applying new therapies to pancreatic cancer is a goal of the Pancreatic Cancer Action Network (PanCAN). In 2016, the patient advocacy group announced the launch




of Precision Promise, a multi-site trial designed to test multiple treatment options for pancreatic cancer at once. The four-year, $35 million effort will foster collaboration among the country's top experts in the field and enroll thousands of patients. The unique study design aims to shepherd promising therapies through the research pipeline faster.

The first trials are slated to begin later this year in Boston under the leadership of Hidalgo, a member of Precision Promise's Stromal Disruption Working Group, and a Dana-Farber Cancer Institute colleague. Eleven other sites, including Memorial Sloan Kettering Cancer Center in New York and Cedars-Sinai Medical Center in Los Angeles, will follow suit.

"Our goal is to improve survival from 7-8 percent to 15-20 percent," says Hidalgo, who also sees patients. "It's an optimistic goal, but it's a good goal."

He expects the Pancreatic Cancer Research Group to be deeply engaged in this important precision medicine initiative while sustaining its other programs in the ongoing assault on pancreatic cancer.

"We have a comprehensive program here," he says. "It's all very promising." ■

# Study Investigates CyberKnife Impact

Dr. Irving Kaplan and CyberKnife

When the CyberKnife was introduced as a novel form of radiation therapy in the 1990s, it provided doctors with an innovative way to treat brain cancer. Its pin-point beam of intense radiation adjusted robotically to the patient's breathing and other small movements. Nearby tissue wasn't damaged—making it possible to deliver radiation therapy in larger, fewer doses with minimal side effects.

The benefits of this non-surgical approach were too good to stay focused on just one cancer. Over the years, radiation oncologists began using CyberKnife to deliver radiosurgery, as the new modality was called, to other tumors. The FDA approved its use to treat tumors in any part of the body in 2001.

"After brain tumors came cancer of the spine," says radiation oncologist Irving Kaplan, MD. "Then the abdomen — pelvis, pancreas, liver, prostate—or in general, anywhere in some patients with metastasis. Especially if there's a problem after standard radiation, because CyberKnife allows us to re-radiate."

## Benign Treatment Regimen

Nearly every pancreatic cancer patient is treated with CyberKnife, whether a candidate for surgery or not, because it helps get control of the tumor. Studies have consistently found that CyberKnife is as effective as standard radiation—while offering patients a much more benign treatment regimen.

BIDMC doctors have been active in developing new CyberKnife protocols and in studying their safety and effectiveness. Currently, Kaplan is leading a study that is evaluating the use of CyberKnife for renal cell carcinoma (RCC). In this disease, cancer cells grow in the tiny tubules of the kidneys that clean the blood and make urine.

The RCC trial is a Phase 2, single-site study with an accrual goal of 51 patients. It began in 2013 and thus far has 25 participants.

## Another Treatment Option

Kaplan explains that the standard of care for RCC is surgical removal of the tumor through either a partial or complete nephrectomy. Typically, doctors recommend CyberKnife care for patients who are at too high risk to have surgery. Patients then have a choice between interventional radiology (a freezing technique known as cryotherapy) or radiation oncology (CyberKnife).

By the time these recommendations are made and accepted, the number of patients considering CyberKnife is small despite the considerable benefits: low toxicity and just 3-4 treatments.

Even as Kaplan and others evaluate CyberKnife's for existing uses through clinical trials such as the RCC study, new possibilities for CyberKnife are ready for investigation.

"The frontier is using these treatments with immunotherapy for metastatic disease," Kaplan says. "CyberKnife radiation causes the tumor to release antigens specific to the tumor. So it's a way of giving a vaccine. The theory is that when the newer immunotherapies stimulate the immune system to attack tumor cells with antigens on them—in other parts of the body—radiotherapy will make the immunotherapy more active. There is evidence that it works. We need to figure out why it works in some people and not others."

**More info:** clinicaltrials.gov, search "NCT01890590" or bidmc.org/cyberknife

# 'Help with Everything but the Disease'

*Continued from page 24*

Navigators. Unfortunately, not everyone gets the help they need.

**Is there anything different about the support services offered by the Cancer Center at BIDMC?**

**Schnipper:** We have been fortunate that most of our oncology social workers stay here for their entire careers. We have very senior, skilled people. We've had the blessing of our bosses who recognize that we do good work and have allowed us to see patients treated at other places. All of our support groups are open and free of charge. Our retreats for women and couples with advanced cancer are also quite unique. Then there's the weekly meditation group led by a pairing of a social worker and a Buddhist chaplain. But really what's special is that we have such good people. This hospital has always been thought to be the best hospital in the state to be a social worker.

**How have patient needs changed over the years?**

**Schnipper:** When we started our Patient-to-Patient, Heart-to-Heart (volunteer peer counseling) program in 1986, it was because of direct requests from patients who came to my door and said you do a great job but you don't help us find each other. Cancer was a taboo subject then. No more. When patients need to find peer support, they can find people in their lives. That request doesn't come up often any more.

Many cancer patients are living longer. When I started here, there was one drug to treat metastatic breast cancer, Adriamycin. It worked for a while and then the woman would die. Now because people are living longer, there are a host of issues to be considered: family worries, professional concerns, finances and the very high cost of much cancer care, physical changes and side effects from ongoing treatments, and, of course, the existential challenge of living with a lethal illness.

**You have always been very candid about being a two-time breast cancer survivor. What support services helped you the most?**

**Schnipper:** I didn't seek them. I could never have gone to a support group in the Boston area because I would have known other women there from my professional role. While I was being treated, I continued to facilitate support groups, so I was in a support group by proxy. I always have felt surrounded by a community of support—not only my family, friends, and colleagues but also my patients. I never for a second felt alone because of where I spend my days.

**What do people need to know about the Oncology Social Work program?**

**Schnipper:** Remember we're here and we can usually be helpful. We're here to help someone feel less alone with cancer. We're here to help with everything except the disease itself—and that's a lot.

**More info:** bidmc.org/cancersupport

Members of Hester Hill Schnipper's metastatic cancer support group practice meditation during a retreat in the White Mountains

*Continued from previous page*

CONSULT

# Oncology Social Workers Help with 'Everything but the Disease'

*Hester Hill Schnipper is manager of oncology social work and a noted innovator in the field. She arrived at Beth Israel Hospital in 1979 when the Division of Hematology/Oncology had existed only five years and oncology social work was a new concept being pioneered in the Boston area. Today a team of 11 oncology social workers, community resource specialists and navigators help BIDMC Cancer Center patients deal with the psychosocial aspects of their disease.*

Hester Hill Schnipper, LICSW, OSW-C

**Why do hospitals develop so many more support services for cancer patients than for patients with other diseases?**

**Schnipper:** When I was hired, the field of oncology was maturing, and more and more cancers were being treated with chemotherapy. The physician and nurse in charge agreed that quality care required the presence of a social worker. A cancer diagnosis impacts every single part of a person's and family's life. The problems always include psychosocial issues as well as medical ones.

**Do support services have an impact on outcomes and mortality for cancer patients?**

**Schnipper:** No. I wish they did. They have an impact on the quality of life. David Spiegel at Stanford did a study that showed women with stage 4 breast cancer who attended a support group lived longer, but no one was ever able to replicate those results. We know that people who are partnered and have good social support live longer, but that's not cancer-specific. One thing that does have a straight-line impact is the assistance delivered by navigators and community resource specialists—things like finding people a ride so they can get here for their therapy or identifying a source of financial assistance to help with mounting bills.

**How do you identify whether a patient is in need of psychosocial support?**

**Schnipper:** The general rule is that if someone in the clinic is wondering whether a social worker could be helpful, the answer is yes.

It's standard that all patients be screened for distress, but it really breaks down to someone's instinct or the people asking for help. In 1980, I either saw everybody or at least knew everybody. The numbers were very small. But today, we really have to rely on colleagues. People who have had positive experiences with a social worker or other therapist or who are looking for resources often self-refer. In the bone marrow transplant program, everyone sees a social worker at least once. The donors are also screened. That's a legal requirement.

If a patient or family is in crisis, psychological or emotional, there is a list of red flags that indicate they need help: if the patient has young children, is responsible for taking care of a disabled or elderly family member, has marital or financial or other medical problems or has a professional or job-related issue. In other words, if life is already hard, we can probably be of service.

Today, throughout BIDMC, we have more patients from under-resourced communities and more patients who need help from our Community Resource Specialist and Patient

*Continued on page 23*