

YOUR PHILANTHROPY in ACTION 2014

The Abramson Cancer Center's Annual Progress and Impact Report

TOP RANKED
 CANCER CENTER

in the PA, NJ, and DE region by U.S. News & World Report



5TH LARGEST RECIPIENT



of National Institutes of Health (NIH) funding

1,426

faculty papers published

535

CLINICAL TRIALS and counting

90,000

Outpatient Visits within the University of Pennsylvania Health System

11,800

Inpatient Discharges



66,000+
 Radiation treatments



37,000
 Chemotherapy treatments

7,500+

Patients given reiki treatments



540

RIDERS AND CREW



pedaling in the StructureTone Ride to Conquer Cancer, cycling over 150-miles

Events organized by thoughtful members of the community to bring awareness, raise funds, and provide hope

150

19 HOSPITALS in the Penn Cancer Network

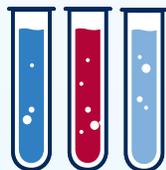
11,664

DONORS to the Abramson Cancer Center

6,712

gifts made to advance and support care, totaling

\$35,800,000



400+

Basic translational, and clinical scientists

500+ MEMBERS of the Abramson Cancer Center



140

PRESENTATIONS delivered at 2014 American Society of Hematology Conference.



ACC at PAH Physicians and Staff

Pennsylvania Hospital (PAH) joined Penn Presbyterian Medical Center and Chester County Hospital to become a part of Penn's Abramson Cancer Center, and is fully equipped with an updated Infusion Department and the **Joan Karnell Supportive Care Program** where patients, families, and caregivers receive excellent supportive care services to help them cope with the physical and emotional distress a cancer diagnosis and treatment brings.



Far Left: Immunotherapy Team
Left: Emily Whitehead, cancer survivor

Immunotherapy's Journey FROM SCIENTIFIC DISCOVERY TO LIFE-SAVING TREATMENT

Penn Medicine's Abramson Cancer Center is home to the largest group in the world dedicated to cancer immunotherapy. Our scientific and medical community is supported by an active and dedicated fellowship of patients, family, and generous, visionary donors whose championship of cancer immunotherapy has changed the landscape of cancer care.

Our Immunotherapy Team led by Carl H. June, MD, designed chimeric antigen receptor (CAR) therapy, known as CTL019 which uses genetically modified T cells to harness and program the immune system to kill cancer. This personalized immunotherapy technique has provided sustained remissions in patients with chronic lymphocytic leukemia and acute lymphoblastic leukemia, and has recently demonstrated promising results in the first lymphoma trials—making Penn Medicine a pioneering, international epicenter for promising advances in cancer immunotherapy.

To date, 125 patients have been treated in cutting-edge Penn immunotherapy trials. As we unlock the full capacity of CAR therapy, clinical trials are being developed and conducted for melanoma, glioblastomas, and mesothelioma, as well as, pancreatic, ovarian, lung, and prostate cancers. Philanthropy is key to moving this promising research quickly forward.

*"Sorafenib's approval does not represent a transition, but rather a **major breakthrough** and the first significant progress this terrible disease has experienced in 30 years. **This would not have been possible without the generous support of grateful patients—who's giving helped secure the DECISION Trial grant.**"*

—Marcia S. Brose, MD, PhD, Director of the Center for Rare Cancers and Personalized Therapy, and Associate Professor of Otorhinolaryngology: Head and Neck Surgery

"Dr. Marcia Brose and the Abramson Cancer Center gave me back my life—my family and I have taken advantage of every minute of it. When I first met Dr. Brose back in November 2009 I thought my life was over. Because of her care, and of the generosity exhibited by her loyal donors, the past four and a half years have been amazing."

—Bruce Malone, Thyroid Cancer Survivor

PHILANTHROPY PROPELS GAME-CHANGING ADVANCEMENTS IN Thyroid Cancer Treatment

For the first time ever, thyroid cancer patients who fail to respond to standard treatments have an FDA approved therapy available: Sorafenib. The research that led to this new drug option was started and championed at Penn Medicine through the philanthropy-funded DECISION Trial, and led by Penn globally.



Bruce Malone, center, with wife Sina, son Robert on left, and son Ryan on right.

Translational Centers of Excellence (TCE) are flagship multidisciplinary, disease-specific medical programs that bring together experts from diverse fields to solve the cancer community's most complex challenges. Philanthropic support is critical to rapidly translating discovery at:

- **2-PREVENT TCE:** Putting an end to recurrent breast cancer
- **Hematologic Malignancies TCE:** Finding the keys to defeating blood cancers
- **Pancreatic Cancer TCE:** Innovative pathways in tackling pancreatic cancer
- **Thoracic Oncology TCE:** An interdisciplinary attack on lung cancer and other thoracic malignancies



• **And more to come** in 2015



The **Timothy J. Wilmott and Dr. Nancy Barna Center for Endoscopic Innovation, Research, and Training** is dedicated to both training future gastroenterologists and promoting excellence in endoscopic research. By working closely with radiation oncologists, interventional radiologists, and GI surgeons, the Center's team is able to more effectively coordinate patient care and many support services for GI cancer patients.

From left to right: Michael Kochman, Director of the Wilmott-Barna Center, Nancy Barna, and Timothy Wilmott.

Penn Medicine's **Center for Personalized Diagnostics (CPD)** represents the next generation of precision medicine. With continued support, the team will be able to test the tumors of all ACC cancer patients—empowering clinical oncologists by giving them the tools to redefine diagnosis, provide better prognostication, adjust chemotherapy plans according to the genetic makeup of the cancer, and identify a more personalized selection of targeted therapies.



"The CPD's successes demonstrate the ACC's influence in changing the landscape of personalized diagnostics. Making genetic testing a part of routine use for our clinical oncologists has only been possible because of the vision and leadership of our philanthropic community."

—David B. Roth, MD, PhD, Chair of the Penn Medicine's Department of Pathology and Laboratory Medicine and Simon Flexner Professor of Pathology and Laboratory Medicine

Philanthropy FUELS HOPE

1997 Transformative \$100 million gift from Madlyn and Leonard Abramson establishes the Abramson Family Cancer Research Institute, and recruits Carl June, MD, and his lab, including Bruce Levine, MD.

2004 Barbara and the late Edward Netter propelled discovery through the Alliance for Cancer Gene Therapy, providing key funding in the earliest days of immunotherapy research.

2005 Establishment of the first Cell and Vaccine Production facility, a key component for future research breakthroughs in cancer, including CART 19 immunotherapy.

2011 Carl H. June, MD, and his team publish findings from groundbreaking immunotherapy research using genetically modified T cells to provide sustained remission for patients with chronic lymphocytic leukemia (CLL).

AUGUST 2012 Alliance formed with Novartis to expand the development of personalized T Cell therapy.

DECEMBER 2012 CTL019 eradicates acute lymphoblastic leukemia (ALL) in 9 of 12 patients, including two children.

SEPTEMBER 2013 Establishment of the Center for Advanced Cellular Therapeutics to rise on Penn's campus.

DECEMBER 2013 89% of the first 59 adult and pediatric with ALL patients who received CTL019 had a complete response.

JULY 2014 University of Pennsylvania's personalized immunotherapy treatment CTL019 receives FDA's **Breakthrough Therapy Designation**

OCTOBER 2014 90% of ALL patients who received CTL019 have achieved complete remission, including 5 adults and 25 children.

DECEMBER 2014 The first lymphoma CTL019 trials testing had a 100% response rate among follicular lymphoma patients and 45% response rate among those with diffuse large B-cell lymphoma.

SUPPORTING PENN MEDICINE'S Collaborative Spirit

By teaming up with Penn's School of Veterinary Medicine (Penn VET), the Abramson Cancer Center has developed a revolutionary surgical technique for lung cancer-treatment—which is currently in clinical trials for other types of cancer—and novel immunotherapeutic approaches to combat osteosarcoma.

SHINING A LIGHT ON Lung Cancer

Inspired by the synthetic glow of his daughter's ceiling star decals, **Sunil Singhal, MD**, Assistant Professor of Thoracic Surgery and Director of the Thoracic Surgery Research Laboratory collaborated with surgeons at Penn VET to develop a new technique that uses a contrast dye indocyanine green (ICG) and near-infrared imaging (NIR) to make tumors glow. The increased visibility helps surgeons identify the margins of a tumor and extract it in its entirety—reducing the chance of recurrence.



The team is the first group to successfully adapt the approach from a mouse to a large animal model, all the way to human clinical trials. Dr. Singhal and his team have performed this visionary surgical technique on over 100 patients with tremendous success.

Osteosarcoma IMMUNOTHERAPY

A groundbreaking collaborative effort is underway to unlock and translate immunotherapy advancements for canine osteosarcoma—a highly aggressive and unrelenting bone cancer—into treatments for humans.



Penn VET enrolled 23 canine patients with bone cancer for the pilot study of immunotherapeutic target Lm-HuHER-2. Encouraging trial results have led to a conditional license application for its use in veterinary medicine and ongoing discussions to design a similar clinical trial in children with osteosarcoma. Philanthropic support will ensure the rapid development of these potentially life-saving trials.

State-of-the-Art Facilities PROVIDE THE FOUNDATION FOR ABRAMSON CANCER CENTER CULTURE OF TEAM-BASED SCIENCE

Capital projects build collaborative successes—by supporting the integrated medical facilities where researchers work alongside dedicated and compassionate clinicians, your giving allows the translation of science from the bench to bedside and back to the lab.

The Abramson Cancer Center's newly announced **South Tower** will be a revolutionary space, fully integrated with the Perelman Center for Advanced Medicine, the Roberts Proton Therapy Center, Smilow Center for Translational Research, and Henry Jordan Medical Education Center. A physical manifestation of the ACC's unique translational infrastructure, the South Tower will expand and seamlessly unify cancer research, patient care, and education—making the ACC truly the only major, comprehensive cancer center of its kind.



Endowed Chairs AT THE ABRAMSON CANCER CENTER

Groundbreaking work in cancer flourishes here because donors and leaders of the Abramson Cancer Center share a vision of unsurpassed research and care. Generous philanthropy allows the Center to grow stronger every year, and endowed professorships are a powerful way to support further progress and innovation. We are extremely grateful to the donors who established new chairs at the Abramson Cancer Center:



Carl H. June, MD, is the **Richard W. Vague Professor in Immunotherapy** and Director of Translational Research at Penn's Abramson Cancer Center. Dr. June's lab developed a personalized immunotherapy technique that has provided sustained remissions in blood cancer patients. Mirroring the visionary philanthropy of the Abramson family that recruited Dr. June, **Richard Vague** is one of our strongest philanthropic partners, friends, and advocates—as well as the incoming chair of the Abramson Cancer Center Director's Leadership Council.

Bruce L. Levine, PhD, is the inaugural **Barbara and Edward Netter Associate Professor in Cancer Gene Therapy**. A collaborator of Dr. June, he directs the Clinical Cell and Vaccine Production Facility. **Barbara Netter** and her late husband **Edward** were early champions of immunotherapy efforts through their foundation, Alliance for Cancer Care Therapy.



Robert H. Vonderheide, MD, DPhil, is the inaugural **Hanna Wise Professor in Cancer Research**. Also a collaborator of Dr. June, Dr. Vonderheide is Associate Director for Translational Research at ACC. The professorship was established by **Allen Wise**, his sons **Marc** and **Brian**, and their wives **Laurel** and **Nastaran**, to honor wife and mother **Hanna Wise**, who died from breast cancer.



David L. Porter, MD, is the **Jodi Fisher Horowitz Professor in Leukemia Care Excellence**. As the Director of Blood and Marrow Transplantation at the Hospital of the University of Pennsylvania, Dr. Porter works directly with patients undergoing clinical trials as part of the immunotherapy team. Loyal Penn alumnus **Jerome Fisher** and his wife **Anne** created the professorship in memory of Jerome's daughter.



Longtime champions of the Cancer Center, **Madlyn** and **Leonard Abramson** and their family established the **Abramson Family Professorship in Sarcoma Care Excellence** to recruit **Kristy L. Weber, MD**, from Johns Hopkins Medicine. Dr. Weber is Vice Chair of Faculty Affairs, Professor of Orthopaedic Surgery, Director of the Sarcoma Program at the Abramson Cancer Center, and Chief of Orthopaedic Oncology.



In honor of her 25th anniversary of breast cancer survivorship, **Jill and Alan Miller** established the **Jill and Alan Miller Associate Professorship in Breast Cancer Excellence**. **Angela M. DeMichele, MD, MSCE**, the inaugural holder, is co-leader of ACC's Breast Cancer Research Program and the 2-PREVENT Recurrent Breast Cancer TCE.



David J. Vaughn, MD, Director of the Clinical Research Unit at the Abramson Cancer Center is the first **Genitourinary Medical Oncology Professor**, established by **Allison and Richard Prezelski, Ruth and Bennett Nathanson**, and many grateful and generous donors.



Joseph Carver, MD, was appointed the inaugural chair holder of the **Bernard Fishman Professorship** honoring the late **Jane Fishman** and named for **Bernard Fishman**, a dedicated community leader and philanthropist who focused on improving the lives of others. Created by his surviving family, including his widow **Annabelle** and son **Mark**, the Fishman chair is a unique opportunity to define the innovative field cardio-oncology research and care.



And more celebrations to come in 2015!

Jon Morris, MD, is the inaugural chair-holder of the **Ernest F. Rosato–William Maul Measey Professorship in Surgical Education**, created to honor the late Dr. Rosato a brilliant surgeon, visionary leader, gifted educator, and researcher of great courage, passion, and perseverance. Dr. Morris who is Admissions Medical Director and Program Director of General Surgery at the Hospital of the University of Pennsylvania specializes in Gastrointestinal Surgery. The celebration of Dr Morris appointment to this esteemed chair will take place on Wednesday, February 11, 2015.



Penn Medicine

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ABRAMSON CANCER CENTER



Translating Individual Giving

INTO TRANSFORMATIVE GRANTS

In this era of decreased government funding, personal philanthropy has been instrumental in the Abramson Cancer Center's ability to secure competitive grants. Your support provides a strong foundation of seed funding that allows our dedicated, interdisciplinary teams to have focused, protected time to translate scientific discoveries into clinical therapies. Individual giving bolsters our ability to provide novel treatments, administered through exemplary and compassionate care.

STAND UP TO CANCER Dream Team Grants WILL TRANSFORM PANCREATIC CANCER TREATMENT

Today, people diagnosed with pancreatic cancer face a grim prognosis—survival rates are poor with more than 90% of patients often succumbing to their disease within a year of diagnosis. With the help of philanthropy, Penn Medicine has been leading the charge to discover better treatment options for these patients.

When **Stand Up to Cancer (SU2C)** was created in 2008, Penn was selected to lead the **SU2C Pancreatic Cancer Dream Team**. The promise of their discoveries were so significant that in April 2014, **Robert Vonderheide, MD, DPhil**, the Abramson Cancer Center's Hanna Wise Professor in Cancer Research, was chosen as co-leader of the newly formed **SU2C-Lustgarten Foundation Pancreatic Cancer Convergence Dream Team**. Armed with \$8 million in funding over three years, this innovative multidisciplinary team unites experts in immunotherapy, genetics, and pathology from Penn's Abramson Cancer Center and several other institutions. Their goal: to conduct combination clinical trials and preclinical studies that will quickly develop new therapies that harness patients' own immune cells to treat pancreatic cancer.



"Now is the time to bring new discoveries in immune therapy for leukemia and melanoma to our patients with pancreatic cancer. We have made great strides in better understanding pancreatic tumor immunology in the last few years, and a grant of this magnitude will help propel that research further. Discoveries will lead to newly-improved immunotherapies that we hope will have profound changes to the way we treat and deliver care to these patients."

—Robert H. Vonderheide, MD, DPhil, Hanna Wise Professor of Cancer Research and Associate Director for Translational Research

The project started in July 2014, with innovative clinical trials scheduled to open within its first year.

Melanoma RESEARCH

As a result of our rich history of donor-supported research and care advances, Penn Medicine and The Wistar Institute were awarded a prestigious five-year, \$12.1 million Specialized Programs of Research Excellence (SPORE) grant from the National Cancer Institute. Receiving this competitive and distinguished grant is a testament to the power that comes from the partnership between our innovative physician-scientists and generous, devoted friends.

The grant will fund four new melanoma research projects that aim to quickly bring translational basic research from laboratories into the clinical setting.

Targeted Combination Therapy for Melanoma will look at the effects of combining drugs that target mutant BRAF and PI3K proteins—potent drivers of melanoma tumors that can overwhelm the ability of the tumor to develop resistance.

Autophagy Modulation for Melanoma Therapy is designed to test the idea that inhibiting autophagy, a phenomenon that cancer cells cannibalize in order to survive, will have a synergistic effect when used with BRAF inhibitors.

Association of Inherited Variation in Immune Mediated Adverse Events and Response to Ipilimumab will identify which patients may be able to use Ipilimumab—an FDA-approved drug that targets CTLA4, a protein that can slow the immune response to cancer—by finding the genetic markers that predict which patients do poorly on the drug.

Engineered T Cell Therapy for Melanoma builds on the successes of immunotherapy's use in blood cancer patients to target c-MET, a protein found in melanoma tumors.



The National Cancer Institute funds projects ranging from targeted therapy and photodynamic light therapy to immunotherapy at the Abramson Cancer Center



"With the help of our philanthropic partners, the Melanoma Research Program's team has ushered in a new chapter in the story of cancer treatment—one that is exploding with discoveries of new genes and therapeutic targets. The SPORE grant marks an especially exciting time for our melanoma patients, who have new hope for treatments that seemed impossible only a few years ago."

—Lynn Schuchter, MD, Program Leader of the Melanoma Research Program Abramson Cancer Center and Chief of the Division of Hematology/Oncology



Photodynamic Light Therapy RESEARCH

Penn Medicine's Mesothelioma and Pleural Program—a world leader in the research and treatment of mesothelioma—in collaboration with the Roswell Park Cancer Institute, has received an \$8 million grant to study the effects of photodynamic light therapy (PDT) in patients with malignant pleural mesothelioma. This rare, aggressive, and deadly cancer most often manifests itself in the lining of the lungs and is caused almost exclusively by exposure to asbestos.

Researchers seek to understand the patient's immune response, the tumor microenvironment, and the blood vessels in and surrounding the tumor in four studies funded under the grant.

The initial study, which expects to enroll 102 patients over four years, will administer Photofrin, a photosensitizing agent that makes cancer cells more sensitive to dying from light therapy, to trial participants 24 hours prior to surgery.

The second project will examine the process by which PDT destroys tumor cells and look at whether there is an agent—a drug or other therapy—that can boost its effects.

The third project will look at whether certain pathways roused during surgery may play a key role in inflammation and cell growth that may contribute to treatment failure, and whether inhibiting these pathways will improve the efficacy of intraoperative PDT.

The fourth project will study the vasculature of the tumor in patients following PDT, evaluating any changes in the vascular environment as a result of intraoperative PDT and the potential for modulation to improve the efficacy of the treatment.



"PDT has been a part of our treatment regimen along with a lung-sparing surgery for many years, but a randomized clinical trial such as this remains necessary to prove its efficacy. This trial will help us understand how PDT works in the body and what we may be able to do in the future to improve the body's response to the therapy."

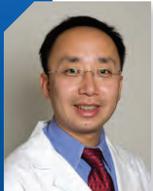
—Eli Glatstein, MD, Vice Chairman and Professor of Radiation Oncology at the Abramson Cancer Center of the University of Pennsylvania

Integrative Medicine and Wellness (IMW) Program AWARDED FIRST OF ITS KIND GRANT

Jun J. Mao, MD, Director of Integrative Oncology Program at the Abramson Cancer Center, led the Penn Team to receive a \$1.8 million award from the Patient Centered Outcomes Research Institute (PCORI) for a clinical trial to evaluate the benefits of acupuncture and Cognitive Behavioral Therapy for insomnia symptoms in cancer survivors.



The **Integrative Medicine and Wellness (IMW) Program** strives to treat the whole person by providing not only the most innovative and targeted cancer treatments, but also an overall experience of healing. Therapies like acupuncture, reiki, mindfulness-based stress reduction, and yoga complement traditional cancer treatments—promoting healing and recovery. Philanthropic supported research and volunteer programs are vital to better understanding the role of these therapies for patients and their families.



"The CHOICE study is the first integrative oncology trial to be funded by PCORI. It represents an important shift in research to be patient-centered and patient-driven and will provide relevant and actionable information for patients and health care providers to choose treatments for cancer patients with insomnia. This study has the potential to improve symptom burden and well-being for millions of individuals whose lives are affected by cancer."

—Jun J. Mao, MD, Director of Integrative Oncology Program

Basser Research Center for BRCA ANNOUNCES NEW GRANTS TO FURTHER BRCA1 AND BRCA2 MUTATION RESEARCH

Dedicated to delivering cutting-edge research in basic and clinical science, the Basser Center has awarded \$6.9 million in grants that will advance our knowledge and care of individuals and families with BRCA mutations. In addition to a new infusion of funding for Penn-led research through three **Breakthrough Science Team Awards** and an **Outreach and Implementation Science Award**, **Mindy and Jon Gray's** visionary gift also launched the **External Grants Program**, a unique funding mechanism for high-impact translational BRCA-related research projects with the potential to advance rapidly into clinical practice.

To date, five external recipients have received close to \$1.4 million in funding—including a multi-institutional team led by Junjie Chen, PhD, Chair of the Department of Experimental Radiation Oncology at the University of Texas MD Anderson Cancer Center in Houston. The group received the first **Basser Team Science Award** to fund a project focusing on developing new forms of chemotherapy for BRCA1/2-related cancers, and overcoming resistance to these medications.



Jon and Mindy Gray



"The projects funded this year are at the forefront of BRCA-related cancer research, and will help bring targeted therapies to a new level. BRCA research has come so far since the initial discovery twenty years ago, and working in collaboration with colleagues across the nation, we are making strides every day toward providing better care for these high-risk individuals."

—Susan Domchek, MD, Executive Director of the Basser Research Center for BRCA and the Basser Professor in Oncology at the Abramson Cancer Center



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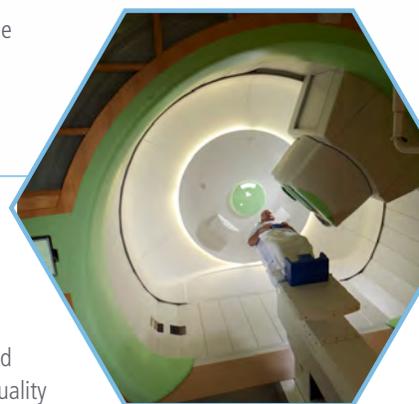
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ABRAMSON CANCER CENTER

Philanthropy Empowering Global Engagement:

ABRAMSON CANCER CENTER IS TRULY INFORMING THE WORLD

The Abramson Cancer Center is dedicated to translating advancements to the benefit of not only our patients, but also patients around the nation and globe. Philanthropic support for cancer research, education, and outreach programs make this possible.

Penn's **Department of Radiation Oncology** and **Roberts Proton Therapy Center** organized and hosted the **Inaugural Course on Proton Therapy**, a 3-day program that brought together nearly 100 radiation oncology practitioners and administrators representing multiple centers from around the world. Attendees learned about the applications of proton therapy to help assess the potential of proton therapy for their institution.



Penn's **Department of Otolaryngology (OTO): Head and Neck Surgery** hosted over 200 members of the OTO community, representing 33 countries and 25 states during the **1st International TransOral Robot Surgery (TORS) Conference**. TORS is a revolutionary, minimally invasive surgery invented and developed at Penn that allows removal of previously un-reachable tumors in head and neck patients, reduces healing time, and significantly improves patients' quality of life. Penn is home to the world's first TransOral Robotic Surgery (TORS) Program and now the international hub for skull-based surgery education.

TORS Pioneers, Bert W. O'Malley Jr, MD (left) and Gregory S. Weinstein, MD (right) with the Da Vinci® robot.



To further enhance the Basser Center's mission, the **Basser Global Prize** was established by **Shari Basser Potter** and **Leonard Potter** to honor a visionary scientist who has conceptually advanced BRCA1/2 related research that has led to improvements in clinical care. The prize considers a broad range of basic, translational, and clinical BRCA1/2 cancer researchers worldwide and provides \$200,000 in unrestricted support, and a \$10,000 personal prize.

The winner of the inaugural Basser Global Prize in 2013 was **Professor Alan Ashworth, FRS**, from the Institute for Cancer Research (ICR) in the United Kingdom. Professor Ashworth's laboratory focuses on using genetic principles to understand cancer biology and then uses this information to change the way patients are treated.

The winner of the 2014 Basser Global Prize is **Mary-Claire King, PhD**, American Cancer Society Research Professor of Medicine and Genome Sciences at the University of Washington in Seattle. Dr. King is known worldwide for her major accomplishments in human genetics research, with her most noteworthy achievement being the identification of the *BRCA1* gene. This year marks the 20th anniversary of the identification of the gene.



From left to right, Abramson Cancer Center Director Chi V. Dang, MD, PhD, 2013 Global Prize winner Alan Ashworth, FRS, Leonard Potter and Shari Basser Potter



"I am honored to be recognized with this award from the Basser Research Center for BRCA. The advances stemming from the discovery of BRCA1 twenty years ago have provided both the possibility of prevention for women with inherited mutations in BRCA1 or BRCA2 and hope of new treatment options for patients diagnosed with inherited breast and ovarian cancer. With support from organizations like the Basser Center, we will continue to see huge improvements in the prevention and treatment of breast and ovarian cancer."

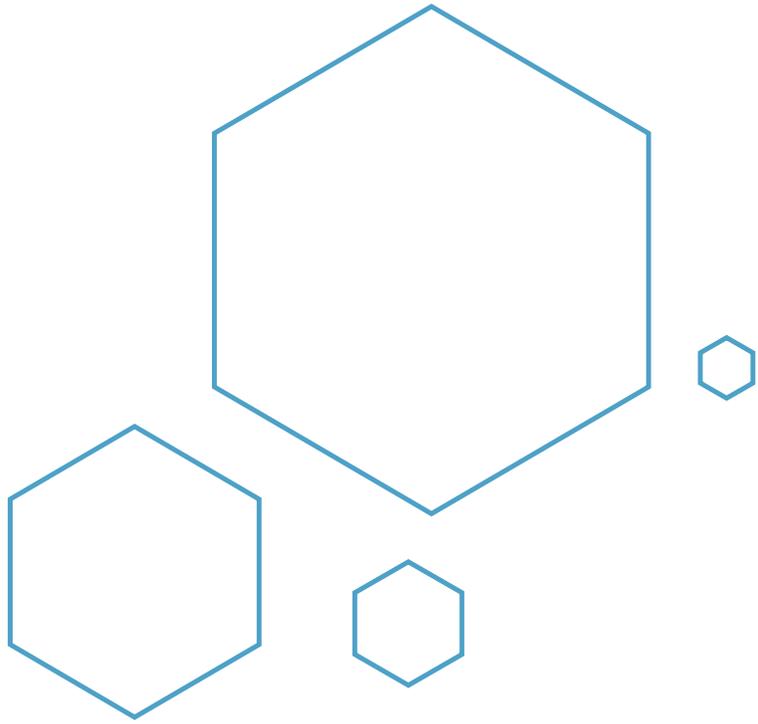
—Mary-Claire King, PhD, 2014 Basser Global Prize recipient

To learn more about the Abramson Cancer Center, please visit PennMedicine.org/Abramson.



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