Recent Advances in Breast and Ovarian Cancer Genetics

Keynote Speaker and Basser Global Prize Awardee: Mary-Claire King, PhD

Monday May 11, 2015
Smilow Center for Translational Research Auditorium/Commons
(enter through Perelman Center for Advanced Medicine)

Tuesday May 12, 2015
Biomedical Research Building

The Basser Research Center for BRCA focuses exclusively on BRCA1 and BRCA2 research. Our mission is to deliver cutting edge research in basic and clinical sciences to advance the care of individuals who carry BRCA mutations.

For more information, contact Basserinfo@uphs.upenn.edu or call 215.662.4348.
Program Overview

This symposium is designed to educate health care providers in cancer genetics by presenting cutting-edge data from renowned BRCA1/2 researchers. This symposium will provide information on new strategies in genetic testing, cancer screening and prevention and ongoing work in targeted therapy for BRCA1/2 mutation carriers through a series of lectures and panel discussions and give attendees the opportunity to network with colleagues working in the field.

PROGRAM OBJECTIVES

At the completion of this symposium, attendees should be able to:

- Discuss new research on the basic biology of BRCA1 and BRCA2 as well as new sequencing strategies which may aid in developing targeted treatment.
- Discuss the current understanding of variants of uncertain significance.
- Describe the current clinical management strategies for individuals with genetic risk of breast, ovarian and pancreatic cancer.
- Identify ethical and social implication of genetic testing specifically with regard to communication to children.
- Discuss new advances in cancer treatment for BRCA1/2 mutation carriers.

WHO SHOULD ATTEND

Healthcare providers including medical oncology, surgical oncology, gynecology oncology, ob-gyn, genetic counselors, primary care physicians and nurses/nurse practitioners who are interested in the genetics of BRCA1/2 related cancers.
KEYNOTE SPEAKER AND
BASSER GLOBAL PRIZE Awardee

Mary-Claire King, PhD
University of Washington in Seattle

Mary-Claire King, PhD, is American Cancer Society Research Professor of Genetics and Medicine (Medical Genetics) at the University of Washington in Seattle. Dr. King was elected to serve as 2012 President of the American Society of Human Genetics (ASHG), after having been a member of the ASHG Board of Directors. She has also served on the Editorial Board of ASHG’s scientific journal, *The American Journal of Human Genetics (AJHG)*.

In 1990, Mary-Claire King demonstrated that a single gene on chromosome 17q21 (which she named *BRCA1*) was responsible for breast and ovarian cancer in many families. Her discovery of *BRCA1* revolutionized the study of numerous other common inherited diseases. The approach that King developed to identify *BRCA1* has since proven valuable in the study of many other genetic diseases and conditions.

Her research focuses on identifying and characterizing critical genes—and their interaction with environmental influences—that play a role in the development of conditions such as breast and ovarian cancer, schizophrenia, and hearing loss.

She has held numerous advisory positions including those at the National Commission on Breast Cancer of the Presidents Cancer Panel and the NIH office of Research on Women’s Health.

SYMPOSIUM CHAIR

Susan M. Domchek, MD

*Executive Director, Basser Research Center for BRCA*

*Director, Mariann and Robert MacDonald Women’s Cancer Risk Evaluation Center*

Susan Domchek is Professor of Medicine and the Basser Professor in Oncology at the Perelman School of Medicine of the University of Pennsylvania in Philadelphia. She also serves as Executive Director of the Basser Research Center for BRCA at the Abramson Cancer Center at the University of Pennsylvania, and Director of the Mariann and Robert MacDonald Women’s Cancer Risk Evaluation Center at the Abramson Cancer Center, which focuses on genetic evaluation and medical management of patients and individuals with *BRCA1/2* mutations and other inherited risk factors for cancer. She is a Senior Fellow at the Leonard Davis Institute of Health Economics.

An elected member of the American Society of Clinical Investigation, Dr. Domchek is also a member of the American Society of Clinical Oncology. A significant contributor to the oncology literature, she has authored/co-authored more than 150 articles appearing in scholarly journals, and serves on a number of editorial review boards, including the *Journal of Clinical Oncology*. 
SYMPOSIUM CO-ORGANIZERS

Roger Greenberg, MD, PhD
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Manager of Basic Science, Basser Research Center for BRCA

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Abrahamson Cancer Center

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Abrahamson Cancer Center

Lin Zhang, MD
Research Associate Professor
Department of Obstetrics and Gynecology
Perelman School of Medicine

GUEST SPEAKERS

Antonis Antoniou, PhD
Senior Cancer Research Fellow
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University of Cambridge
Cancer Research, UK

Junjie Chen, PhD
Professor and Chair
Department of Experimental Radiation Oncology
Division of Radiation Oncology
The University of Texas MD Anderson Cancer Center
Basser Research Center for BRCA
3rd ANNUAL SCIENTIFIC SYMPOSIUM AGENDA

MONDAY MAY 11, 2015

Smilow Center for Translational Research (SCTR)
Rubenstein Auditorium and Commons area

8:00-8:30  Registration
8:30-8:45  Welcome/Introductions

Morning Session: Mechanisms of Sensitivity and Resistance for BRCA1/2 Therapeutics

8:45-9:15  Mouse Models of BRCA Mutant Cancer
Jos Jonkers, PhD

9:15-9:45  Mammalian Polymerase Theta Promotes Alternative-NHEJ and Suppresses Recombination
Agnel Sfeir, PhD

9:45-10:15 DNA Repair Therapies for Ovarian Cancer
Alan D’Andrea, MD

10:15-10:45 Break

10:45-11:15 Balance of BRCA1 and 53BP1 in DNA Repair
Junjie Chen, PhD

11:15-11:45 Analyses of the Genetic Interaction Between PARP2 and the BRCA1/BRCA2 Tumor Suppressors: Towards Selective PARP Inhibitors
Sonia Franco, MD, PhD

11:45-12:15 BRCA1 Exon Splicing and PARP Inhibitor Resistance
Neil Johnson, PhD

12:15-1:15 Lunch
Afternoon Session: Novel Approaches to Prevention and Therapy

1:15-1:45  Long Non-coding RNAs (IncRNAs) in PARPi/platinum Resistance of BRCA Mutant Cancer
           Lin Zhang, MD

1:45-2:15  Clinical Experience with PARP in Ovarian Cancer and the New Path to Regulatory Approval
           Robert Coleman, MD

2:15-2:45  Prospect of a Vaccine to Prevent BRCA1/2 Cancers
           Robert Vonderheide, MD, DPhil

2:45-3:00  Break

3:00-4:15  Global Prize Presentation and Keynote
           BRCA1 and BRCA2 and Inherited Breast and Ovarian Cancer: From Gene Discovery to Public Health
           Mary-Claire King, PhD

4:15-5:00  Poster Session/Reception
8:00-8:30    Registration
8:30-8:45    Welcome/Introductions

**Morning Session: Clinical Application of Germline and Somatic Genetics**

8:45-9:15    Massively Parallel Sequencing Brings Together the Somatic and Inherited Genome
             Katherine Nathanson, MD

9:15-9:45    Defining the Actionable Genome
             David Solit, MD

9:45-10:15   Cyclin-dependent Kinase Inhibition: A Novel Strategy for Overcoming PARP Inhibitor Resistance
             Geoff Shapiro, MD

10:15-10:45  Break

10:45-11:15  New Approaches to the Integration of Cancer Susceptibility Testing into Clinical Practice
             Mark Robson, MD

11:15-11:45  Breast Cancer Susceptibility Genes: Yes, No, Maybe So
             William Foulkes, MB, PhD

11:45-12:15  Modeling the Genetic Susceptibility to Breast and Ovarian Cancer: Incorporating Cancer Risks Conferred by BRCA1, BRCA2 and Others into Risk Prediction Models
             Antonis Antoniou, PhD
Afternoon Session: Counseling Issues and Panel Discussion

1:15-1:45  Decision Support for BRCA Genetic Testing in the Primary Care and Community Settings
           Katherine Crew, MD, MS

1:45-2:15  The Promise and Peril of Panel Testing for Inherited Cancer Susceptibility
           Jill Stopfer, MS, CGC

2:15-3:15  Panel discussion moderated by Susan Domchek, MD

3:15-3:30  Wrap up/Evaluations
Registration Information

This event is FREE but we strongly recommend registration, as space is limited.

ACCREDITATION AND CREDIT INFORMATION

Physicians: The Perelman School of Medicine at the University of Pennsylvania is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Perelman School of Medicine at the University of Pennsylvania designates this live activity for a maximum of 11.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nurses: Program application has been submitted for contact hours. The Hospital of the University of Pennsylvania, Department of Nursing Education, Innovation, and Professional Development is an approved provider of nursing continuing education by the PA State Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.

NSGC: This event has been submitted to the National Society of Genetic Counselors (NSGC) for approval of Category 1 CEUs. The American Board of Genetic Counseling (ABGC) accepts CEUs approved by NSGC for purposes of recertification. Approval for the requested CEUs and Contact Hours is currently pending.

DISCLOSURES

Perelman School of Medicine at the University of Pennsylvania, Office of Continuing Medical Education, adheres to the ACCME Standards for Commercial Support. Faculty disclosure information will be made available in the conference materials and syllabi. Faculty members are also expected to disclose to participants any discussion of off-label and/or investigational use of pharmaceutical products or devices within their presentations.

CANCELLATION POLICY

The Perelman School of Medicine at the University of Pennsylvania reserves the right to cancel or postpone any activity due to unforeseen circumstances. In the event of cancellation or postponement, the University will not be responsible for related costs or expenses to participants, including cancellation fees assessed by hotels, airlines, or travel agencies.

SERVICES FOR THE DISABLED

If special arrangements are required for an individual with a disability to attend this meeting, please contact basserinfo@uphs.upenn.edu

NONDISCRIMINATION STATEMENT

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HOTEL

A block of rooms has been reserved at the Sheraton Hotel – Philadelphia/University City at a special group rate of $175 per night.

Rooms must be reserved by Friday, April 10, 2015 to take advantage of the group rate.

RESERVE YOUR ROOM

For more information, contact Basserinfo@uphs.upenn.edu or call 215.662.4348.
Visiting Information

PARKING
Parking will not be available on the medical campus, but public self-pay parking lots available in the University City vicinity can be found at:

- Drexel University Parking Lot – 34th and Market Streets
- University of Pennsylvania Parking Lot – 34th and Chestnut Streets
- University of Pennsylvania Parking Lot - 38th and Walnut Streets

For more information, visit [http://cms.business-services.upenn.edu/parking/](http://cms.business-services.upenn.edu/parking/)

PUBLIC TRANSPORTATION
The SEPTA University City train station is within walking distance of the medical campus. For more information, visit [www.Septa.org](http://www.Septa.org)

For more information, contact Bassерinfo@uphs.upenn.edu or call 215.662.4348.