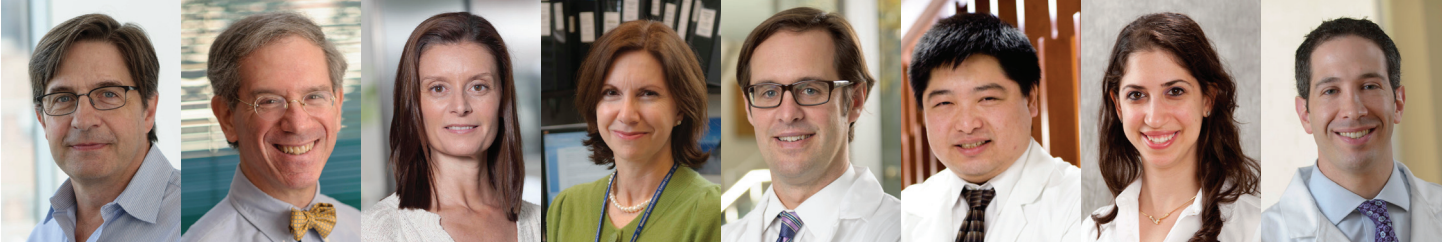




## Newsletter of the Survivorship, Outcomes And Risk Program at MSK

### Transdisciplinary Population Science Grants Awarded

Funds Support Collaboration Between SOAR Investigators and Clinical or Laboratory Researchers



From left to right: John Petrini (Molecular Biology), Kenneth Offit (Medicine), Denise Correa (Neurology), Irene Orlow (Medicine), T. Peter Kingham (Surgery), Timothy Chan (Radiology), Allison Lipitz-Snyderman (Health Outcomes), Andrew Epstein (Medicine)

The first round of MSK Transdisciplinary Population Science awards were announced in May. The goal of this new, intramural funding opportunity is to stimulate multidisciplinary research on topics in population science, including epidemiological investigations, studies of cancer screening and clinical or lifestyle strategies that affect cancer risk. It also encompasses research on the delivery of cancer care and the well-being of individuals following a cancer diagnosis. A unique feature of this funding mechanism is the requirement of co-leadership by a population scientist and an expert in a complementary discipline. Four projects were funded in the inaugural cycle.

John Petrini (Molecular Biology) and **Kenneth Offit** (Medicine) were funded for their study *RTEL1 and Idiopathic Bone Marrow Failure*. This proposal builds on an earlier finding of a founder mutation in *RTEL1* that leads to Hoyeraal/Hreidarsson Syndrome (HHS), a severe immunodeficiency syndrome, and that the allele may be relatively common in Ashkenazi Jews. The investigators will extend this work by genotyping patients and families with idiopathic bone marrow failure with a view to finding more *RTEL1* mutations and additional germ-line mutations in genes related to telomere maintenance, and by performing functional studies on the cells of these patients to better understand the cellular phenotypes of the affected individuals and explore the biochemical and functional properties of *RTEL1* and other genes involved with these syndromes.

Denise Correa (Neurology) and **Irene Orlow** (Epidemiology) were funded for their study *Age-Related Genes, Cognitive Function and Amyloid Imaging in Brain Tumor Patients*, which will build upon an earlier collaboration studying cognitive functioning in brain cancer survivors after treatment. They will study the *APOE E4* allele, already known to predict brain function, along with 47 other single nucleotide polymorphisms in candidate genes that have been iden-

tified as predictors of Alzheimer's disease in previous genome-wide association studies. The aims of this study are to correlate these variants with cognitive function in brain cancer survivors and to compare regional brain function using PET scan in survivors with and without the *APOE E4* allele to identify regions and possible mechanisms associated with the allele. Co-investigators include Wolfgang Weber (Radiology), Joseph Osborne (Radiology), John Humm (Medical Physics) and **Jaya Satagopan** (Biostatistics).

**T. Peter Kingham** (Surgery) and Timothy Chan (Radiation Oncology) were funded for their study *Differences in Colorectal Cancer in West Africa Versus the USA*. This project builds on Dr. Kingham's prior research on the differences in clinical presentation and outcomes of colorectal cancer in West Africa and the US. The investigators will examine and compare microsatellite instability and methylation signatures of tumor samples, with a long-term goal of developing distinct screening and treatment approaches for colorectal cancer in these two regions.

**Allison Lipitz-Snyderman** (Health Outcomes) and Andrew Epstein (Medicine) were funded for *Diagnosis-Related Errors in Cancer*, a feasibility study aiming to initiate a program of research on medical errors. Physicians in the Gastrointestinal Oncology service at MSK will be asked to identify patients who may have experienced diagnostic or treatment errors. These cases will be further investigated via patient interviews and medical record review with the aim of creating a standardized scheme for error classification. Co-investigators include **Camelia Sima** (Biostatistics), Aileen Killen (Nursing) and Tara Bishop (Weill Cornell).

The Transdisciplinary Population Science awards are funded through MSK's NCI Cancer Center Core grant, a goal of which is to stimulate collaboration across disciplines within a center. The awards will be offered annually. Applications for the next cycle are due on October 17th.

### New MSK Survivorship Center Established

Expands Institution's Commitment to Survivorship Care, Research, Training and Education

In July, Physician-in-Chief Jose Baselga announced the establishment of the Cancer Survivorship Center. This center represents an expansion of MSK's Survivorship Initiative, which began in 2003. **Mary McCabe**, director of the Survivorship Initiative, said that the center designation is "a formal acknowledgement of the extensive work that's been done" at MSK in cancer survivorship. **Kevin Oeffinger** (Medicine) is the new center's inaugural director.

Survivorship care and research involve professionals with a range of skills and expertise working in different departments and services across the institution. Within its three areas of focus – clinical care, research, and education and training – the Survivorship Center's goal is to connect colleagues and create partnerships to improve survivorship care and outcomes. In the tradition of other centers at MSK, the new Survivorship Center is a virtual entity which will unite researchers with similar interests, facilitate their collaborations, and expand opportunities for research funding.

In the past decade, research by MSK investigators has identified long-term health risks faced by childhood cancer survivors, advanced the evaluation and dissemination of survivorship care plans for adult survivors, and spurred development and testing of interventions to promote survivors' health and quality of life. Reflecting on these achievements, survivorship researcher **Talya Salz** (Health Outcomes) said, "We have come a long way in understanding the challenges that survivors confront, but there is a surprising amount still to be learned, not just about what people experience, but how we can address these problems best in a clinical context."

The Survivorship Center's leadership includes several SOAR investigators in addition to Oeffinger. **Mary McCabe** (Survivorship) is Director of Clinical Programs. **Lee Jones** (Medicine) and **Tim Ahles** (Psychiatry and Behavioral Sciences) are Co-Directors of Research. **Chuck Sklar** (Pediatrics) will serve as Director of Training and Education.

## SOAR Grants

**Jonine Bernstein** (Epidemiology) was awarded an R01 from the NCI for her study, "MRI Background Parenchymal Enhancement as a Risk Factor for Breast Cancer."

**Jennifer Hay** (Psychiatry & Behavioral Sciences) received an R01 grant from the NCI for "Personalized Genomic Testing for Melanoma: Maximizing Personal Utility and Reach."

**Kenneth Offit** (Medicine) is co-PI on an NCI R01 awarded to the Mayo Clinic Rochester for the study "Identifying and Validating Novel Susceptibility Genes for Breast Cancer."

**Emily Tonorezos** (Medicine) received an R01 from the NCI for "Exercise and Quality Diet After Leukemia: The EQUAL Study."

**Andrew Vickers** (Health Outcomes) was awarded an R01 grant from the NCI for his study "Dynamic, Multi-Cohort Prediction Modeling of Prostate Biopsy Outcome."

**Zsofia Stadler** (Medicine) was awarded an R21 grant from the NCI for her study "Germline Susceptibility in Double Primary Cancers via Next-Generation Sequencing."

**William Breitbart** (Psychiatry & Behavioral Sciences) received an NCI administrative supplement for his study "Adapting Meaning-Centered Psychotherapy for Chinese Immigrant Cancer Patients."

**Jack Burkhalter** (Psychiatry & Behavioral Sciences) received a grant from the National LGBT Cancer Network/New York State Department of Health for his study "Health & Human Services for Lesbian, Gay, Bisexual and Transgender Individuals, Families and Communities."

**Francesca Gany** (Immigrant Health and Cancer Disparities) was awarded a grant from the New York City Council for her study "The FOOD Program: Food to Overcome Outcomes Disparities."

**Helena Furberg-Barnes** (Epidemiology) was awarded a grant from the MSK Translational Kidney Cancer Research Program for her study "Immunohistochemical Study of Estrogen Receptor Protein Expression in ccRCC."

**Tari King** (Surgery) was awarded a grant from the Center for Molecular Oncology for "A Pilot Study to Determine the Role of Circulating Tumor DNA as a Surrogate for Response to Neoadjuvant Therapy in Locally Advanced Breast Cancer."

**T. Peter Kingham** (Surgery) was awarded a grant from the Center for Molecular Oncology for his study "Circulating Colorectal Cancer Tumor DNA Pilot: Developing a Prognostic Test to Determine Candidates for Resection, Regional Chemotherapy, and Systemic Chemotherapy."

*Cycle for Survival* grants were awarded to thirteen MSK researchers studying rare cancers, including three SOAR investigators: **Douglas Levine** (Surgery) for "SMARCA4 Therapeutic Targeting for Small Cell Carcinoma of the Ovary, Hypercalcemic Type"; **Darren Feldman** (Medicine) for "Dissecting the Mechanism of Cisplatin-Sensitivity and Resistance among Patients with High-risk Advanced Germ Cell Tumors"; and **Helena Furberg-Barnes** (Epidemiology) for "Pharmacogenetics of Advanced Bladder Cancer Treatment Response and Vascular Toxicity."

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## Screen All Women for Breast Cancer Genes? Geneticists Propose Universal Testing

Mary-Claire King, the University of Washington geneticist credited with discovering the *BRCA1* gene, recently suggested universal screening for the genetic mutations associated with increased risks of breast and ovarian cancer. King's proposal was published online in the *Journal of the American Medical Association* on September 8th, the same day King received a prestigious Achievement Award in Medical Science from the Albert and Mary Lasker Foundation. In the article, King and her colleagues wrote, "Based on our 20 years' experience working with families with cancer-predisposing mutations in *BRCA1* and *BRCA2*, it is time to offer genetic screening of these genes to every woman, at about age 30, in the course of routine medical care."

King's proposal represents a substantial departure from current recommendations. The US Preventive Services Task Force recommends against routine *BRCA1/2* testing for women whose family history is not associated with an increased risk of cancer-related genetic mutations. King and her colleagues suggested that population-based genetic screening is justified because family history may not sufficiently indicate risk, especially in women with few female relatives.

Women with a cancer-predisposing mutation may have more intensive breast cancer screening than women at average risk. Some mutation carriers may opt for risk-reducing surgery, including bilateral mastectomy and oophorectomy. Breast oncologist **Victoria Blinder** (Health Outcomes) said that King's proposal "makes a strong case for universal testing for *BRCA1/2* in an ideal world of infinite medical resources." However, Blinder said, the health care system would need the resources to handle the follow-up testing and risk-reducing procedures that would result from widespread screening. Blinder also emphasized the importance of genetic counseling, saying "patients with a mutation could be given a false sense of security by clinicians not equipped to counsel them appropriately." **Andrew Vickers** (Health Outcomes), who studies the benefits and harms of cancer screening, noted the wide individual variation in cancer risk even among mutation carriers and said, "I don't think it is at all clear that prophylactic surgery is appropriate for all or even most women with *BRCA* mutations."

## SOAR Honors

- ★ **Francesca Gany** (Immigrant Health and Cancer Disparities) received the 2014 MSKCC Excellence in Mentoring Award. **Kenneth Offit** (Medicine) was also honored with a nomination.
- ★ **Jonine Bernstein** (Epidemiology) was elected President of the American College of Epidemiology (ACE) for the 2015-2016 term.

## SOAR Seminars

**David Harrington**, Harvard School of Public Health, presented *Design of the Cancer Care Outcomes and Surveillance Consortium (CanCORS): Methodologic Challenges* on June 10<sup>th</sup>.



Photos by Rick Dewitt

**Karoline Kuchenbaecker**, University of Cambridge, presented *Moving from Single SNP Analyses to Association Patterns and Polygenic Scores: Insights into the Genetic Architecture of Breast Risk in BRCA1/2 Mutation Carriers and their Value for Risk Prediction* on July 8<sup>th</sup>.

## Mark your calendar

### September 25

1:00 PM  
M-107

### SOAR Seminar

Thomas Burke, MD  
Massachusetts General Hospital

### October 6-7

### NCI Data Harmonization Workshop

Rockville, MD  
Oct 6-7

### October 16

8:00 AM  
M-107

### SOAR Seminar

David Golgar, PhD  
University of Utah

### October 17-18

### ASCO Quality Care Symposium

Boston, MA

### October 18-22

### Society for Medical Decision Making North American Meeting

Miami, FL

### November 11

4:00 PM  
M-107

### SOAR Seminar

Romana Hasnain-Wynia, PhD  
PCORI