Tuesday, October 16

12:00 p.m.-1:30 p.m. **Professional Advancement Session**

Chairperson: Steven M. Dubinett, Pacific Ballroom B, p. 21

1:30 p.m.-3:00 p.m. **Educational Sessions 1-2**

Design and Execution of Cancer Prevention Studies
Chairperson: J. Jack Lee, Pacific Ballroom A, p. 22

How Can We Use Mouse Models for Prevention Research?
Session Chairperson: Leisa Johnson, Pacific Ballroom C, p. 22

3:10 p.m.-4:40 p.m. **Educational Sessions 3-4**

New Approaches for Biomarker Discovery
Chairperson: Nancy H. Colburn, Pacific Ballroom A, p. 23

Characterizing and Monitoring the Microbiome as a Modifiable Disease Factor
Chairperson: Jonathan Braun, Pacific Ballroom C, p. 23

4:50 p.m.-6:20 p.m. **Educational Sessions 5-6**

How to Establish Transdisciplinary Research Teams
Chairperson: Stephen D. Hursting, Pacific Ballroom A, p. 24

Noncoding RNAs: New Players in the Cancer Prevention Field
Chairperson: Dimitrios Iliopoulos, Pacific Ballroom C, p. 24

6:30 p.m.-8:30 p.m. **Opening Plenary Session**
Pacific Ballroom C, p. 25

Welcome and Opening Remarks

Cory Abate-Shen, Columbia University Herbert Irving Comprehensive Cancer Center
New York, NY, Scientific Program Committee Chairperson

Opening Remarks

Margaret Foti, American Association for Cancer Research, Philadelphia, PA

Keynote Lecture

Global Initiatives in Prevention Research
William G. Nelson, Johns Hopkins Kimmel Comprehensive Cancer Center, Baltimore, MD

Keynote Lecture

Accelerating Cancer Prevention Through Individual Behavior and Public Health Approaches
Graham A. Colditz, Washington University, St. Louis, MO

Distinguished Lecture on Targets for Cancer Prevention

PI3-Kinase, AMPK, and Cancer
Lewis C. Cantley, Beth Israel Deaconess Medical Center, Boston, MA

8:30 p.m.-10:30 p.m. **Opening Reception**
Pacific Ballroom D, p. 25

Wednesday, October 17

7:00 a.m.-8:00 a.m. **Forum 1**

Overscreening, Overdiagnosis, and Overtreatment in Cancer: The Prostate Example
Chairperson: Ernest T. Hawk, Pacific Ballroom C, p. 26

8:00 a.m.-10:00 a.m. **Plenary Session 1**

Prevention Across the Lifecourse
Chairperson: Cheryl Lyn Walker, Pacific Ballroom C, p. 27

10:15 a.m.-12:00 p.m. **Concurrent Sessions 1-2**

Intersection Between Cancer and Other Diseases: COPD, HIV, and Autoimmune Diseases
Chairperson: Phillip A. Dennis, Pacific Ballroom A, p. 28

Risk Assessment
Chairperson: Xifeng Wu, Pacific Ballroom C, p. 28

12:00 p.m.-2:30 p.m. **Poster Session A/Lunch**
Pacific Ballroom D, p. 29

2:30 p.m.-3:30 p.m. **Special Session**

Cancer Prevention Trials
Chairperson: Eva Szabo, Pacific Ballroom C, p. 36

3:30 p.m.-5:30 p.m. **Plenary Session 2**

Inflammation and Cancer
Chairperson: Andrew J. Dannenberg, Pacific Ballroom C, p. 37

5:30 p.m.-6:30 p.m. **AACR-Prevent Cancer Foundation Award Lecture**
Pacific Ballroom C, p. 38

Thursday, October 18

7:00 a.m.-8:00 a.m. **Forum 2**

Cancer Prevention: Lessons Learned and Prospects for Future Drug Development
Co-Chairpersons: Victoria M. Richon and **Jaye L. Viner,** Pacific Ballroom C, p. 39

8:00 a.m.-10:00 a.m. **Plenary Session 3**

Obesity, Diabetes, and Metabolic Syndrome
Chairperson: Reuben J. Shaw, Pacific Ballroom C, p. 40

10:15 a.m.-12:00 p.m. **Concurrent Sessions 3-4**

Current Controversies in Cancer Screening
Chairperson: Electra D. Paskett, Pacific Ballroom A, p. 41

NSAIDs and Beyond
Chairperson: Ernest T. Hawk, Pacific Ballroom C, p. 41

Schedule at a Glance

12:00 p.m.-2:30 p.m. **Poster Session B/Lunch**
Pacific Ballroom D, p. 42

2:30 p.m.-4:15 p.m. **Concurrent Sessions 5-6**

Global Challenges: Environmental Changes
Chairperson: Thomas W. Kensler, Pacific Ballroom A, p. 50

Recent Results on Mechanisms and Prevention of Tobacco-Induced Cancers
Chairperson: Stephen S. Hecht, Pacific Ballroom C, p. 50

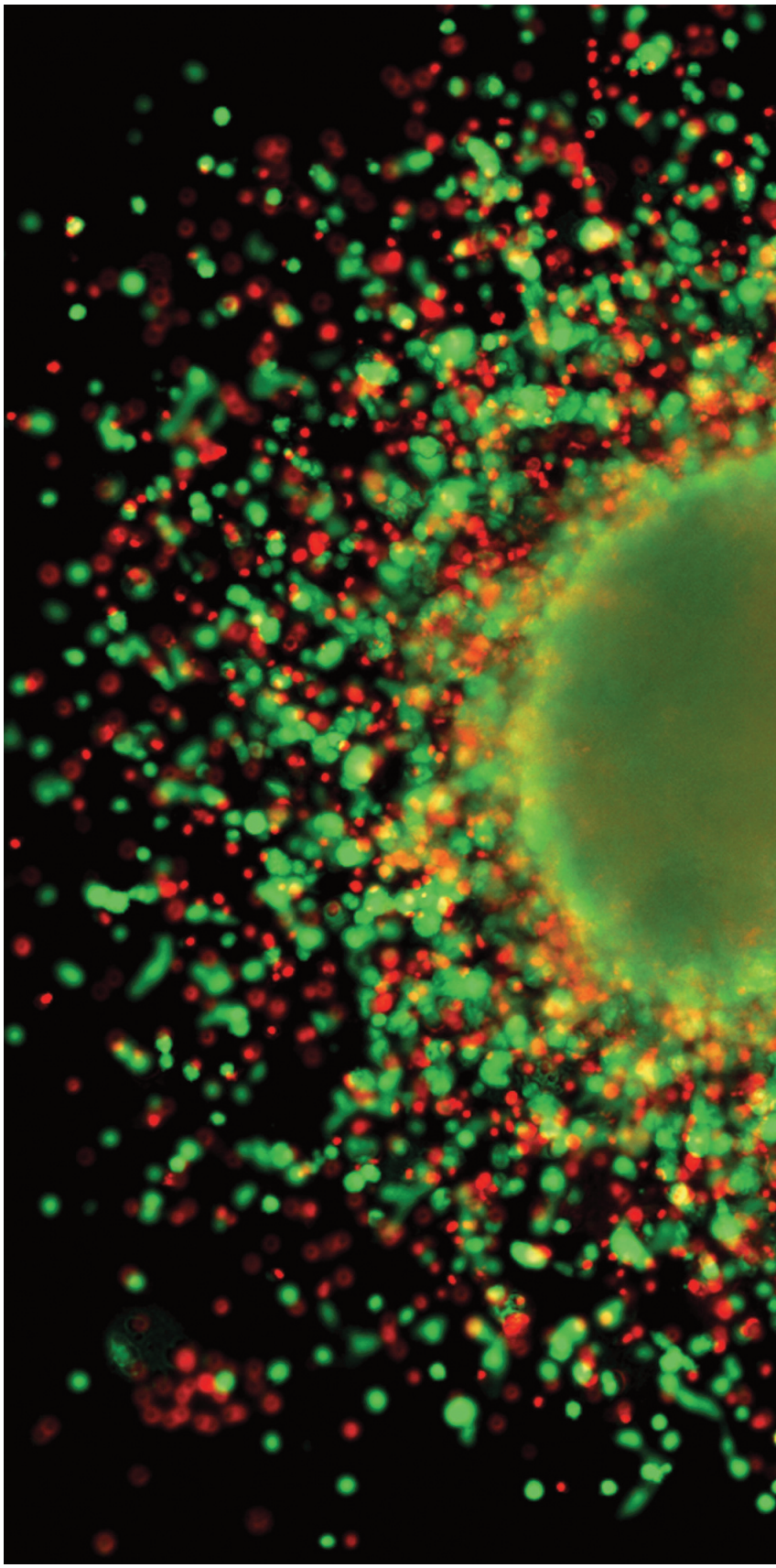
4:15 p.m.-6:15 p.m. **Plenary Session 4**

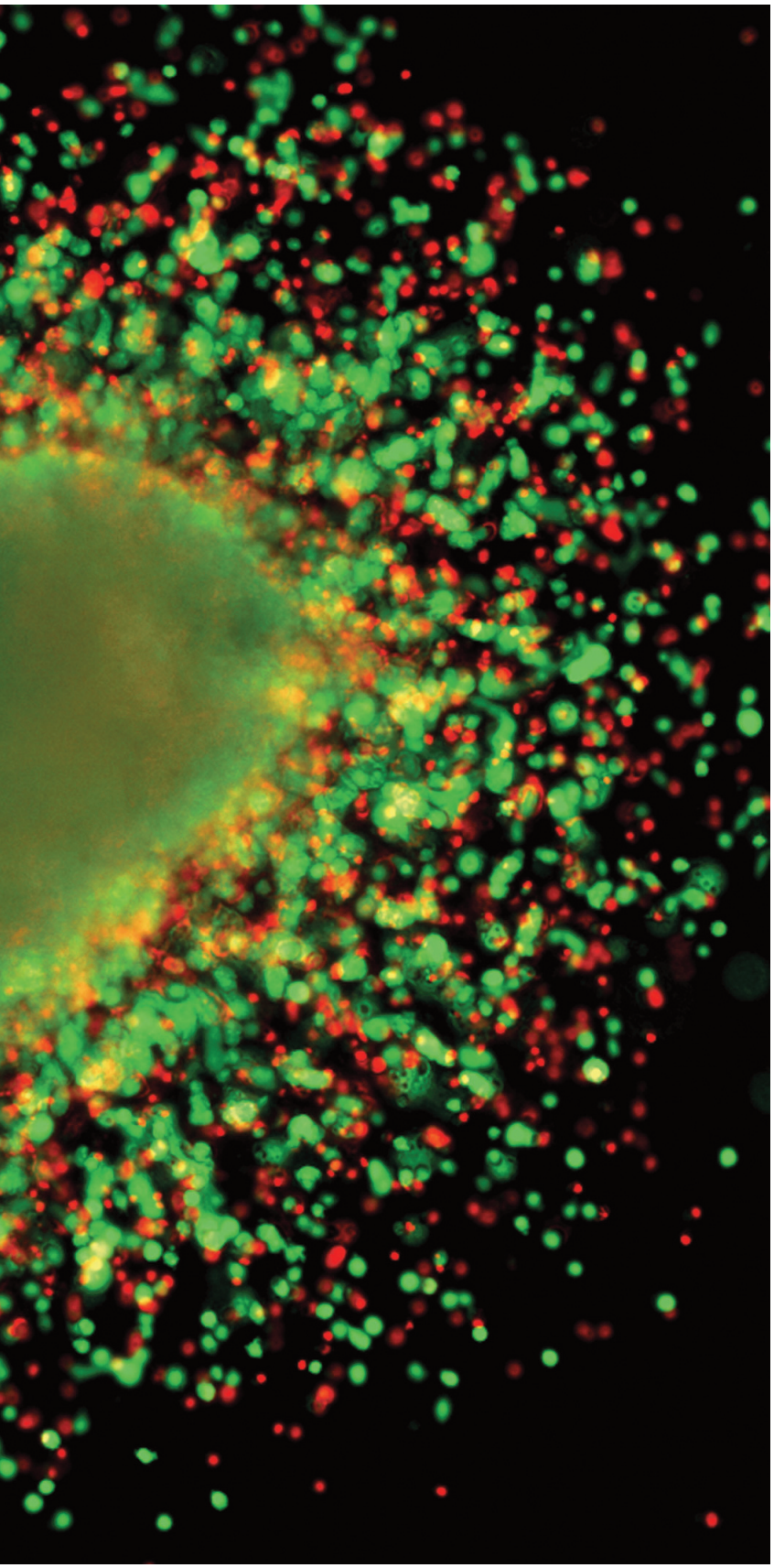
Genomics and Prevention: Will Genomics Lead to Optimized Cancer Prevention?
Chairperson: Timothy R. Rebbeck, Pacific Ballroom C, p. 51

6:30 p.m.-8:00 p.m. **Town Meetings/ Networking Events**

Molecular Epidemiology Working Group Town Meeting and Reception
Pacific Ballroom B, p. 52

Behavioral Science in Cancer Research Working Group Networking Event
California Ballroom B, p. 52





Friday, October 19

7:00 a.m.-8:00 a.m. **Forum 3**

How to Gain Access to Worldwide Cohorts
Chairperson: Mary Beth Terry, Pacific Ballroom C, p. 53

8:00 a.m.-10:00 a.m. **Plenary Session 5**

Risk Assessment and Early Detection
Chairperson: Samir M. Hanash, Pacific Ballroom C, p. 54

10:15 a.m.-12:00 p.m. **Concurrent Sessions 7-8**

Targeting Tumor-Initiating Cells
Chairperson: Robert Benezra, Pacific Ballroom C, p. 55

Molecular Targets for Cancer Prevention
Chairperson: Zigang Dong, Pacific Ballroom A, p. 55

12:00 p.m.-12:15 p.m. **Closing Remarks**
Pacific Ballroom C

About Image:

Fluorescence image (courtesy of Drs. Xiaoqi Xie and Eileen White) of a representative melanoma (UACC903) spheroid (a colony of cells growing in three dimensions in vitro and simulating tumor growth) after treatment with the mammalian target of rapamycin (mTOR) inhibitor and autophagy stimulator CCI-779 (temsirolimus) and with the autophagy inhibitor hydroxychloroquine. Can Prev Res, July 2011 4 (7).

2012-2013 Upcoming Conferences

Fifth AACR Conference on
The Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved
Co-Chairpersons: William G. Nelson and Christopher I. Li
October 27-30, 2012 • San Diego, CA

AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics
Scientific Committee Co-Chairpersons: Stefan Sleijfer, James H. Doroshow, and Kenneth C. Anderson
November 6-9, 2012 • Dublin, Ireland

Post-GWAS Horizons in Molecular Epidemiology: Digging Deeper into the Environment
Co-Chairpersons: Shelley S. Tworoger and Cornelia M. Ulrich
November 11-14, 2012 • Hollywood, FL

Tumor Immunology: Multidisciplinary Science Driving Basic and Clinical Advances
Co-Chairpersons: Glenn Dranoff, Elizabeth M. Jaffee, and Stanley Riddell
December 2-5, 2012 • Miami, FL

Tumor Invasion and Metastasis
Co-Chairpersons: Bruce R. Zetter and Zena Werb
January 20-23, 2013 • San Diego, CA

Ninth AACR-JCA Joint Conference: Breakthroughs in Basic and Translational Cancer Research
Co-Chairpersons: Tyler Jacks and Kohei Miyazono
February 21-25, 2013 • Maui, HI

AACR-SNMMI Joint Conference on State-of-the-Art Molecular Imaging in Cancer Biology
Co-Chairpersons: David Piwnica-Worms and Carolyn Anderson
February 27-March 2, 2013 • San Diego, CA

AACR Annual Meeting 2013
Program Committee Chairperson: José Baselga
April 6-10, 2013 • Washington, DC

Synthetic Lethal Approaches to Cancer Vulnerabilities
Co-Chairpersons: William C. Hahn, Louis Staudt, and Sebastian Nijman
May 17-20, 2013 • Bellevue, WA

Chromatin and Epigenetics in Cancer
Co-Chairpersons: Suzanne J. Baker and Charles W. M. Roberts
June 19-22, 2013 • Atlanta, GA

Frontiers in Basic Cancer Research
Co-Chairpersons: Scott W. Lowe, Hans Clevers, Joan Brugge, and David Ruggero
September 18-22, 2013 • National Harbor, MD

Advances in Ovarian Cancer Research: From Concept to Clinic
Co-Chairpersons: Douglas A. Levine, David G. Huntsman, and Sandra Orsulic
September 18-21, 2013 • Miami, FL

Advances in Breast Cancer Research
Co-Chairpersons: Carlos L. Arteaga, Jeffrey M. Rosen, Jane E. Visvader, and Douglas Yee
October 3-6, 2013 • San Diego, CA

AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics
Scientific Committee Co-Chairpersons: Jeffrey A. Engleman, James H. Doroshow, and Sabine Tejpar
October 19-23, 2013 • Boston, MA

Twelfth Annual International Conference on Frontiers in Cancer Prevention Research
Chairperson: Paul Limburg
October 27-30, 2013 • National Harbor, MD

Pediatric Cancer
Co-Chairpersons: John M. Maris, Lee J. Helman, Michael B. Kastan, James R. Downing, and Stella M. Davies
November 3-6, 2013 • San Diego, CA

Animal Models of Cancer
Co-Chairpersons: A. Thomas Look, Cory Abate-Shen, and Terry A. van Dyke
November 5-8, 2013 • San Diego, CA

Please visit www.aacr.org/meetingcalendar for additional conferences and program updates.

Professional Advancement Session

Tuesday, October 16 • 12:00 p.m.-1:30 p.m.

Pacific Ballroom B

Chairperson: Steven M. Dubinett, David Geffen School of Medicine at UCLA, Los Angeles, CA

This networking and career development session typically draws 75-100 junior investigators (although it is open to all conference attendees) who are eager to meet leading prevention researchers in a small, less formal atmosphere. The session will begin with brief comments from Dr. Steven M. Dubinett followed by short talks from Drs. Ernest T. Hawk and Scott M. Lippman (all previous Chairpersons of this conference). The last hour of the session will be devoted to roundtable discussions where discussants will lead discussion and answer questions on various aspects of career development such as work-life balance; social media/how social media affects us; grant writing rejection – now what; grant writing in today's environment and getting funded; how to be a good mentor; and prevention career paths.

Attendees are free to ask questions and move tables to meet other leaders in the prevention field, but should keep their questions "nonscientific" as the session is geared toward professional development topics such as those above. The room will be set-up as a series of roundtables, with one discussant/mentor and seating for nine junior investigators.

Invited Talks:

C^3 = Success
Ernest T. Hawk, The University of Texas MD Anderson Cancer Center, Houston, TX

Finessing the review process: Success in getting published
Scott M. Lippman, Moores Cancer Center, University of California, La Jolla, CA

Discussants:

Jonathan Braun, UCLA Medical Center, Los Angeles, CA

Nancy H. Colburn, National Cancer Institute, Bethesda, MD

Andrew J. Dannenberg, Weill Medical College of Cornell University, New York, NY

Phillip A. Dennis, Johns Hopkins University, Baltimore, MD

Steven M. Dubinett

Ernest T. Hawk

Dimitrios Iliopoulos, David Geffen School of Medicine at UCLA, Los Angeles, CA

Scott M. Lippman

Educational Sessions 1-2

Tuesday, October 16 • 1:30 p.m.-3:00 p.m.

Educational Session 1

Design and Execution of Cancer Prevention Studies

Pacific Ballroom A

Chairperson: J. Jack Lee, The University of Texas MD Anderson Cancer Center, Houston, TX

Prevention and early detection are preferable means for fighting cancer compared to treating the disease in a late stage. Prevention studies, however, can be more challenging than treatment trials due to the unique features of enrolling, screening, and treating individuals without active disease, many of whom may not develop cancer in their lifetime. Special considerations need to be addressed in identifying high-risk individuals, recruiting participants, using and validating surrogate endpoints for cancer development, and conducting interim analyses and long-term follow-up surveillance, as well as in the areas of compliance, toxicity-efficacy tradeoff, risk-benefit ratio, and early stopping rules, etc.

In this session, we will discuss the unique features of cancer prevention studies and their implications on study design, conduct, and analysis. A report card of chemoprevention trials conducted during the past three decades will be presented. Complex study designs, cost-effectiveness considerations, study implementation, data analysis, modeling, and intriguing findings will be illustrated by reviewing the Women's Health Initiative (WHI) study and the National Lung Screening Trial (NLST). More effective future prevention studies can be designed and implemented through the lessons learned.

Report card for chemoprevention trials: The good, the bad, and the ugly – How can we do better?
J. Jack Lee

Methodologic considerations for large-scale prevention trials: Lessons from the Women's Health Initiative
Garnet L. Anderson, Fred Hutchinson Cancer Research Center, Seattle, WA

Planning, design, and execution of cancer screening and early detection trials: Application to the National Lung Screening Trial (NLST)
Ping Hu, National Cancer Institute, Bethesda, MD

Educational Session 2

How Can We Use Mouse Models for Prevention Research?

Pacific Ballroom C

Session Chairperson: Leisa Johnson, Genentech, Inc., South San Francisco, CA

This session will cover recent and innovative advances that demonstrate how genetically engineered mouse models (GEMMs) can be applied to facilitate cancer prevention research, from novel model generation and target discovery to therapeutic intervention. Dr. Dinulescu will describe a novel mutant *Brca*-driven GEMM of serous ovarian cancer, its application to elucidate the tumor cell of origin within the fallopian tube, and the potential impacts this finding may have on preserving fertility as well as delaying or preventing *BRCA*-positive patients from experiencing premature menopause. Dr. Jackson will share her findings interrogating tumor-initiating cells in a mutant *Kras*-driven GEMM of non-small cell lung cancer, and how they can be exploited to identify and validate new chemopreventative targets/pathways. Dr. Rao will discuss the pros and cons of various pancreatic cancer mouse models, the application of whole pancreatic transcriptome approaches to identify druggable targets relevant to early-stage pancreatic lesions (PanINs) and cancer prevention, and finally, nutritional approaches to pancreatic cancer prevention exploring mutant *Kras; Fat1* transgenic mice. Dr. Liby will close the session describing their use of both breast and pancreatic GEMMs to develop new drugs and therapeutic combinations/strategies, with insights into anti-inflammatory agents and PARP inhibitors.

Introduction
Leisa Johnson

Defining the site of origin and precursor lesions for high-grade serous ovarian cancer
Daniela M. Dinulescu, Brigham and Women's Hospital, Boston, MA

Notch defines the tumor-initiating cell in non-small cell lung cancer
Erica L. Jackson, Genentech, Inc., South San Francisco, CA

Animal models for human pancreatic cancer prevention
Chinthalapally V. Rao, University of Oklahoma Health Sciences Center, Oklahoma City, OK

Using mouse models to develop new drugs and strategies for prevention
Karen T. Liby, Geisel School of Medicine at Dartmouth, Hanover, NH

Educational Session 3

New Approaches for Biomarker Discovery

Pacific Ballroom A

Chairperson: Nancy H. Colburn, National Cancer Institute, Frederick, MD

Progress in cancer prevention calls for identifying predictive biomarkers. Instead of waiting for cancer endpoints that require months in mouse models and years in humans, we need short-term reliable indicators of efficacy. Also needed are indicators of compliance (uptake) for both drug and dietary interventions as humans are not always compliant and information from dietary questionnaires has limited accuracy. Finally, risk indicators are important. In some cases, but not always, indicators of efficacy are also risk indicators. Particularly valuable are biomarkers that can be followed in both mice and humans. These biomarkers may be serum proteins, serum metabolites, or molecules from tissue obtained noninvasively. This session will focus on methods for discovering and validating biomarkers and for appropriate statistical analysis. Pitfalls and how to avoid them will be discussed. Applications will be drawn from actual intervention studies in mice and humans.

Introduction: How to identify biomarkers that predict compliance and efficacy
Nancy H. Colburn

Biomarker statistical designs
Ziding Feng, Fred Hutchinson Cancer Research Center, Seattle, WA

Dietary interventions to prevent colon cancer and discover biomarkers in mice and humans
Nancy H. Colburn

Educational Session 4

Characterizing and Monitoring the Microbiome as a Modifiable Disease Factor

Pacific Ballroom C

Chairperson: Jonathan Braun, UCLA Medical Center, Los Angeles, CA

The composition and function of the microbiome is emerging as a major factor in local and systemic physiology, and as a susceptibility factor to a range of diseases including cancer. This session is designed to provide a state-of-art update on the microbiome and cancer, new concepts on microbial ecology and pathogenesis, and practical methods to characterize and monitor the microbiome. These concepts and methods illuminate how the microbiome can mediate environmental factors in cancer risk, and to develop and monitor microbiome-targeted interventions in cancer prevention and therapy.

Defining and monitoring microbial networks
Jonathan Braun

Diet and the gut microbiome: Who's feeding who?
Johanna W. Lampe, Fred Hutchinson Cancer Research Center, Seattle, WA

Genomic profiles of infection-related cancers in Asia
Patrick B. Tan, Duke-NUS Graduate Medical School, Cancer Science Institute of Singapore, Genome Institute of Singapore, Singapore

Educational Session 5

How to Establish Transdisciplinary Research Teams

Pacific Ballroom A

Chairperson: Stephen D. Hursting, University of Texas, Austin, TX

Cancer can be characterized as a complex set of diseases, each with multifactorial etiologies and each requiring alterations in individual and population-level behaviors for their prevention. Despite tremendous progress over the past several decades in our understanding of the biological, clinical, epidemiological, environmental, behavioral, and societal aspects of many types of cancer, the human and economic burden of cancer continues to rise in the U.S. and throughout the world. An estimated 50% of cancers occurring today are thought to be preventable if we could significantly accelerate the translation of our current knowledge regarding smoking, nutrition, obesity, and physical inactivity, genetics, health disparities, and other known cancer risk factors through transdisciplinary, multilevel research and practice.

The purpose of this session is to examine and discuss three approaches to building transdisciplinary research teams to accelerate progress in cancer prevention. The first approach involves bridging animal model and molecular studies with clinical trials for the prevention of obesity-related breast cancers; the second involves building clinical translational chemoprevention research teams and infrastructure, including a focus on training the next generation of transdisciplinary researchers; and the third will explore the development of transdisciplinary research teams investigating multilevel factors related to disparate health outcomes and using community-based participatory research to address cancer health disparities.

Diet, physical activity, and the prevention of obesity-related breast cancer: Lessons learned from transdisciplinary research
Stephen D. Hursting

The Clinical and Translational Science Award Program: Transdisciplinary teams in cancer prevention research
Steven M. Dubinett, David Geffen School of Medicine at UCLA, Los Angeles, CA

Building transdisciplinary teams to address cancer health disparities: The Centers for Population Health and Health Disparities experience
Electra D. Paskett, The Ohio State University Comprehensive Cancer Center, Columbus, OH

Educational Session 6

Noncoding RNAs: New Players in the Cancer Prevention Field

Pacific Ballroom C

Chairperson: Dimitrios Iliopoulos, David Geffen School of Medicine at UCLA, Los Angeles, CA

This session will cover recent advances in the role of noncoding RNAs in the cancer prevention field. microRNAs are noncoding RNAs that have been involved in the pathogenesis of different cancer types and have been identified to correlate with clinicopathological parameters and treatment responses. Here, we will describe how microRNAs contribute to cellular transformation and oncogenesis through activation of feedback loop circuits. Furthermore, evidence will be provided regarding the use of microRNAs as preventive agents in cancer mouse models. Finally, we will discuss circulating microRNAs (e.g., cell-free microRNAs present in plasma or serum) as a promising new class of blood-based biomarkers for cancer. Data will be reviewed describing the discovery of circulating microRNAs and mechanisms responsible for their unexpected stability in the ribonuclease-rich environment of plasma, as well as challenges and opportunities in this area for application to clinical use.

Noncoding RNA feedback loop circuits in oncogenesis
Dimitrios Iliopoulos

microRNAs and cancer progression
Carlo M. Croce, The Ohio State University Comprehensive Cancer Center, Columbus, OH

Circulating microRNAs as cancer biomarkers
Muneesh Tewari, Fred Hutchinson Cancer Research Center, Seattle, WA

Opening Plenary Session

Tuesday, October 16 • 6:30 p.m.-8:30 p.m.

Pacific Ballroom C

Welcome and Opening Remarks

Cory Abate-Shen, Columbia University Herbert Irving Comprehensive Cancer Center, New York, NY, Scientific Program Committee Chairperson

Margaret Foti, American Association for Cancer Research, Philadelphia, PA

Keynote Lecture

Global Initiatives in Prevention Research

William G. Nelson, Johns Hopkins Kimmel Comprehensive Cancer Center, Baltimore, MD

Keynote Lecture

Accelerating Cancer Prevention Through Individual Behavior and Public Health Approaches

Graham A. Colditz, Siteman Cancer Center, Washington University in St. Louis, St. Louis, MO

Distinguished Lecture on Targets for Cancer Prevention

PI3-Kinase, AMPK, and Cancer

Lewis C. Cantley, Beth Israel Deaconess Medical Center, Boston, MA

Opening Reception

Tuesday, October 16 • 8:30 p.m.-10:30 p.m.

Pacific Ballroom D

Forum 1

Wednesday, October 17 • 7:00 a.m.-8:00 a.m.

Overscreening, Overdiagnosis, and Overtreatment in Cancer: The Prostate Example

Pacific Ballroom C

Chairperson: Ernest T. Hawk, The University of Texas MD Anderson Cancer Center, Houston, TX

Technological advances in screening and prevention are essential for progress, but incorporation of such advances into useful clinical practice is often challenging and requires careful consideration of all potential risks and benefits. Nowhere has this become more evident than around use of the PSA test for prostate cancer screening, where enthusiasm for the PSA in reducing cancer mortality may have exceeded that allowed for by the actual data. In any situation in which there is a screenable disease that is prevalent but potentially indolent, there is the potential for overscreening, overdiagnosis, and overtreatment, resulting in a range of personal and social costs that may ultimately outweigh the intended benefits.

In this session, we will explore the case of prostate cancer screening, focusing on data from recent screening randomized controlled trials and recent guideline panel recommendations, as well as their implications from the perspective of two leading authorities in the field. Issues discussed will revolve around the best application of the data to benefit and avoid harming people at risk. Additionally, we will explore remaining questions that ongoing or future research efforts might address to improve our understanding and practice.

Estimating how many prostate cancers are overdiagnosed: Overcoming challenges and avoiding mistakes
Ruth Etzioni, Fred Hutchinson Cancer Center, Seattle, WA

Finding common ground on the prostate cancer screening controversy
E. David Crawford, University of Colorado, Denver, CO

Discussion/Q & A

Plenary Session 1

Wednesday, October 17 • 8:00 a.m.-10:00 a.m.

Prevention Across the Lifecourse

Pacific Ballroom C

Chairperson: Cheryl Lyn Walker, Texas A&M University Health Science Center, Houston, TX

The role of telomeres and telomerase in aging and cancer
Jerry W. Shay, University of Texas Southwestern Medical Center, Dallas, TX

Early life environmental exposures, sentinel reproductive events, and cancer risk in women
Michele R. Forman, University of Texas, Austin, TX

Developmental reprogramming of cancer susceptibility
Cheryl Lyn Walker

Stress and the social environment: Impact on cancer risk
Suzanne D. Conzen, University of Chicago, Chicago, IL

Concurrent Sessions 1-2

Wednesday, October 17 • 10:15 a.m.-12:00 p.m.

Concurrent Session 1

Intersection Between Cancer and Other Diseases: COPD, HIV, and Autoimmune Diseases

Pacific Ballroom A

Chairperson: Phillip A. Dennis, Johns Hopkins University, Baltimore, MD

Cancer often develops in the presence of other chronic diseases such as COPD, HIV infection, and autoimmune diseases. Patients who have these illnesses have an increased incidence of cancer. This session will explore clinical features and molecular mechanisms that may underlie the development of cancer, and may provide insight into new approaches for cancer prevention.

Inflammation links COPD/emphysema and lung cancer
A. McGarry Houghton, Fred Hutchinson Cancer Research Center, Seattle, WA

Epidemiology and pathogenesis of cancer in the setting of HIV infection
Corey Casper, Fred Hutchinson Cancer Research Center, Seattle, WA

Autoimmune rheumatic diseases and cancer: Not just chance?
Antony Rosen, Johns Hopkins University, Baltimore, MD

Systemic inhibition of receptor tyrosine kinase signaling by metformin*
Brendan J. Quinn, Johns Hopkins University, Baltimore, MD

Concurrent Session 2

Risk Assessment

Pacific Ballroom C

Chairperson: Xifeng Wu, The University of Texas MD Anderson Cancer Center, Houston, TX

With the increasing global burden of cancer and the ever-mounting costs of contemporary therapies and prolonged medical care, it is essential that we effectively implement proactive strategies to minimize risk of cancer and malignant progression. This session will highlight innovative and ongoing approaches in translational population studies and public health genomics that address global issues in cancer risk assessment and early detection. Instrumental to these efforts is the construction of improved integrative risk prediction models that better enable triage of individuals to appropriate risk-reduction programs and/or stratification to personalized preventive and therapeutic interventions. Empowering development of such clinically applicable tools is the establishment of prospective and well-characterized high-risk cohorts coupled with advances in "omics" technologies. Importantly, as robust risk-prediction models emerge, it becomes crucial to engage the public in appreciation of fundamental risks, exposures, and modifiable lifestyle factors that impact the cancer continuum and canvas for appropriate changes in public health policy.

Health screening cohort: A new avenue for risk prediction, prevention, and early detection research
Xifeng Wu

Malignant risk prediction for patients with oral premalignant lesions
Miriam P. Rosin, BC Cancer Agency, Vancouver, BC, Canada

Genomic-targeted approach to PSA screening and chemoprevention of prostate cancer
Jianfeng Xu, Wake Forest University School of Medicine, Winston-Salem, NC

Breast cancer risk assessment: Genetic and nongenetic risk factors contributing to differential model performance*
Mary Beth Terry, Columbia University, New York, NY

*Short talks from proffered papers

Poster Session A

Wednesday, October 17 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D

Behavioral and Social Science

Diet, Physical Activity, and Energy Balance

A01 Independent and combined effects of dietary weight loss and aerobic exercise on leukocyte telomere length in overweight and obese postmenopausal women. Caitlin Mason, Catherine M. Alfano, George L. Blackburn, Peter S. Rabinovitch, Anne McTiernan, Rosa-Ana Risques, Liren Xiao, Catherine R. Duggan, Ikuyo Imayama, Kristin L. Campbell, Angela Kong, Karen E. Foster-Schubert, Ching-Yun Wang.

Diffusion and Dissemination

A02 Meta-analyses of MPO, EGFR, and GSTM1 genes as risk factors for lung cancer prevention. Nick DeVries, S. Pamela Shiao, Melissa J. LaBonte, Ching-Yi Chiu, Linda H. Chiang, Rose Sakamoto.

Health Disparities

A03 Understanding cervical cancer screening among lesbians: A national survey. J. Kathleen Tracy.

A04 The California Breast Cancer Survivorship Consortium (CBCSC): Prognostic factors associated with racial/ethnic differences in breast cancer survival. Cheryl L.P. Vigen, Allison W. Kurian, Iona Cheng, Bette J. Caan, Valerie S. Lee, Janise M. Roh, Jane Sullivan-Halley, Leslie Bernstein, Anna H. Wu, Scarlett Lin Gomez, Richard Sposto, Yani Lu, Marilyn L. Kwan, Esther M. John, Kristine R. Monroe, Theresa H.M. Keegan, Salma Shariff-Marco.

Health Economics, Policy, and Outcomes

A05 Economic benefit of *Helicobacter pylori* screening and eradication treatment for the prevention of gastric cancer. Nobuo Koinuma.

Prevention Behaviors

A06 Effects of integrated risk counseling on cancer prevention behaviors. Melanie S. Jefferson, Benita Weathers, Scarlett Bellamy, Ernestine Delmoor, Vanessa Briggs, Jerry Johnson, Rodney Rogers, Joseph Purnell, Chanita Hughes-Halbert.

A07 Lifestyle modifications and use of complementary and alternative medicine in relation to perceived and model-based breast cancer risk among women at high risk of developing breast cancer. Cristina Valdovinos, Mary Beth Terry, Yuyan Liao, Ann Johnston, Heather Greenlee.

Quality of Life/Late Effects/Survivorship

A08 Weight, inflammation, cancer-related symptoms and health-related quality of life among breast cancer survivors. Ikuyo Imayama, Anne McTiernan, Catherine M. Alfano, Marian L. Neuhouser, Stephanie M. George, Ashley Wilder Smith, Richard N. Baumgartner, Kathy B. Baumgartner, Leslie Bernstein, Rachel Ballard-Barbash.

A09 Adherence to the WCRF/AICR recommendations for cancer prevention is associated with all-cause and cancer mortality among elderly female cancer survivors. Maki Inoue-Choi, DeAnn Lazovich, Kim Robien.

A10 Risk factors for self-reported arm lymphedema among female breast cancer survivors in Health, Eating, Activity, and Lifestyle (HEAL) Study. Kayo Togawa, Jane Sullivan-Halley, Leslie Bernstein, Yani Lu, Ashley Wilder Smith, Catherine Alfano, Ikuyo Imayama, Anne McTiernan, Marian L. Neuhouser, Huiyan Ma, Rachel Ballard-Barbash.

Recruitment/Retention/Adherence Research

A11 Recruitment monitoring report of a pan-Canadian multicenter study, the COOLS Trial. Yi Ping Kelly Liu, Shane X. Duan, Alisa Kami, Sylvia F. Lam, Catherine F. Poh.

Biomarkers and Early Detection Research

Bioinformatics and Omics

A12 Web-based tools for visualization of the human papillomavirus genome dynamics: A computational approach to cancer prevention and control. Rafael Guerrero-Preston, Michael McClelland, David Sidransky, Liliana Florea.

A13 Applied the proteomics characteristics to detect the inherited colorectal adenomas. Yu Jiekai, Huang Yanqin, Lin Chen, Yuan Ying, Zheng Shu.

Pacific Ballroom D

Biomarkers of Cancer Susceptibility

A14 Quantitative two-dimensional correlated spectroscopy in gliomas with IDH gene mutation. Hyeon-Man Baek, Isaac Marin-Valencia, Tomoyuki Mashimo, Robert Bachoo, Craig Malloy, Elizabeth Maher.

A15 Single-strand breaks in normal breast DNA are associated with measures of breast cancer risk, deficiencies in repair mechanisms, and diminished protection against oxidative processes. Robert Treat Chatterton, Seema A. Khan, Mathavi Sahadevan, Oukseub Lee, Hu Hong, Wang Jun, Irene Helenowski, Saraswati Sukumar, Vered Stearns, Mary J. Fackler.

A16 Genetic polymorphisms in the carcinogen metabolism pathway and lung cancer risk. Nejat Dalay, Nur Buyru, Zubeyde Yalniz.

A18 Prediagnostic serum antioxidant levels and prediction of TMPRSS2:ERG fusion status in prostate cancer. Gregory Judson, Andreas Pettersson, Allison Meisner, Lorelei Mucci.

A19 miR-19a modulates chemoradiotherapy resistance in human cervical cancer. Mei Liu, Lingying Wu, Ningzhi Xu, Jusheng An, Jinlong Hu, Manni Huang, Binbin Tu, Chenfei Hu, Zaozao Wang, Hongxia Zhu.

A20 Predictive value of plasma hepatocyte growth factor levels in gastric cancer risk: A nested case-control study within the Korean Multicenter Cancer Cohort. Seung Hyun Ma, Jae Jeong Yang, Ko Kwang-Pil , Aesun Shin, Hai-Rim Shin, Daehee Kang, Keun-Young Yoo, Sue K. Park.

A22 Associations between dietary intake and novel genotoxic estrogen biomarkers implicated in breast cancer risk. Kerryn W. Reding, Muhammed Zahid, Ercole Cavalieri, Eleanor G. Rogan, Charlotte Atkinson, Mellissa Yong, Katherine Newton, Johanna Lampe.

A23 Gene set enrichment analysis of renal cell carcinoma genome-wide association data identifies the JAK-STAT pathway mediating susceptibility. Xiang Shu, Meng Chen, Yuanqing Ye, Maosheng Huang, Jian Gu, Christopher G. Wood, Xifeng Wu.

A24 IGF2/H19 and PEG1/MEST DNA methylation in CIN1, CIN2, CIN3, and cervical cancer in Tanzanian women: In search of disease progression biomarkers. Adriana C. Vidal, Jennifer S. Smith, Brenda Hernandez, Cathrine Hoyo, Monica Nye, Susan K. Murphy, Francine Overcash, Olola Oneko, John A. Bartlett, Zhiqing Huang, Pendo Mlay, Joseph Obure.

A25 Genetic variants in 15q25.1 and age onset of pancreatic cancer. Chongjuan Wei, Yu-jing Huang, Jane Chen, Mala Pande, Chris Amos, Marsha Frazier.

A26 Dietary intake and C-peptide levels in adolescent girls: Results from the Dietary Intervention Study in Children (DISC). Zhenzhen Zhang, Jean M. Kerver, Joseph C. Gardiner, Joanne F. Dorgan, Ellen M. Velie.

Biomarkers of Premalignant Lesions

A27 Airway molecular alterations associated with premalignant lesion progression and lung cancer development. Jennifer Ebel Beane, Kahkeshan Hijazi, Katrina Steiling, Gang Liu, Sherry Zhang, Stephen Lam, Marc Lenburg.

A28 Brahma-related gene 1 (BRG1) as a putative tumor suppressor gene in colorectal cancer: Gender-specific implications. Mart Angelo P. Dela Cruz, Amir C. Patel, Amanda M. Ilag, Priya Roy, Ramesh K. Wali, Dhananjay P. Kunte, Hemant K. Roy.

A29 Ductal carcinoma in situ lesions commonly exhibit heterogeneity within individuals. Zhengyu Jiang, Dana Pape-Zambito, Hong Wu, Karthik Devarajan, Carolyn M. Slater, Kathy Q. Cai, Arthur Patchefsky, Mary B. Daly, Xiaowei Chen.

A30 DNA methylation field defects in colorectal cancer patients. Ling Li, Yulan Cheng, saliat ibrahim, Stephen Meltzer, Yuriko Mori.

Carcinogenesis

Animal Models of Carcinogenesis and Chemoprevention

A31 Targeting oncogenic Ras activation for cancer prevention. Ji Baoan, Huang Haojie, Liu Yan, Daniluk Jaroslaw, Logsdon Craig.

A32 Chemopreventive potential of grape seed extract in azoxymethane-induced colon tumorigenesis in the A/J mouse model: Interlinking miRNA expression and inflammatory and cytokine signaling. Molly M. Derry, Komal Raina, Velmurugan Balaiya, Anil Jain, Sangeeta Shrotriya, Rajesh Agarwal, Chapla Agarwal.

Poster Session A

Wednesday, October 17 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D

A35 Resistant starch inhibition of azoxymethane-induced preneoplastic lesions with and without antibiotic treatment. Bridget Nelson, Yongfeng Ai, Carter Roberts, Peng Liu, Jay-lin Jane, Diane Birt.

A36 Resveratrol decreases DNMTs in a human-relevant animal model of breast cancer. Wenyi Qin, Weizhu Zhu, Ke Zhang, Kaitlin Clarke, Edward R. Sauter.

A37 Beta-cryptoxanthin restores nicotine-reduced lung SIRT1 to normal levels and inhibits nicotine-promoted lung tumorigenesis and emphysema in A/J mice. Anita Iskandar, Chun Liu, Donald Smith, Kang-Quan Hu, Sang-Woon Choi, Lynne Ausman, Xiang-Dong Wang.

A38 Aberrant expression of cell growth-critical genes in 4-nitroquinoline 1-oxide-induced mouse tumors and in human esophageal cancer tissues. Zhengduo Yang, Baoxiang Guan, Taoyan Men, Junya Fujimoto, Xiaochun Xu.

A39 Dietary supplementation with curcumin enhances metastatic growth of Lewis lung carcinoma in mice. Lin Yan.

A40 Inhibition of 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (PhIP)-induced prostate and colon carcinogenesis in hCYP1A mice by tocopherols. Guangxun Li, Yu-Kuo Chen, Hong Wang, Anna B. Liu, Chen X. Chen, Xiangyi Guo, Xi Zheng, Nanjoo Suh, Chung S. Yang.

Tumor Promotion and Progression

A41 Butyl benzyl phthalate induces metastasis and angiogenesis of hepatocellular carcinoma through a nongenomic AhR/G protein signaling. Eing-Mei Tsai, Cheng-Fang Tsai.

A42 Estradiol induced prostaglandin E2 expression to regulate cell proliferation through MAPK/PI3K/COX2 signal pathway in Her2/neu breast cancer cell. Eing-Mei Tsai, Tsung-Hua Hsieh.

Cell, Molecular, and Tumor Biology

Angiogenesis and Invasion

A45 Overexpression of miR-145 blocks glioma cell malignant phenotype. Yong Lu, Michael Chopp, Xuguang Zheng, Mark Katakowski, Benjamin Buller, Feng Jiang.

A46 Role of the endocytic adaptor Epsin in cancer cell migration. Kayalvizhi Madhivanan, R. Claudio Aguilar.

A47 MiR-15b and miR-152 reduce glioma cells invasion and angiogenesis via NRP-2 and MMP-3. Xuguang Zheng, Michael Chopp, Yong Lu, Ben Buller, Feng Jiang.

Cancer Genetics/Gene Expression

A48 Mevalonate pathway inhibitors as chemopreventive agents on lung cancer cell lines: p53 might be a potent regulator. Hwa Young Lee, In Kyoung Kim, Hye In Lee, Hye Sun Kang, Chan Kwon Park, Jick Hwan Ha, Seung Joon Kim, Sang Haak Lee.

A49 Chemoprevention of esophageal cancer using PCA, a metabolite of black raspberry-derived anthocyanins. Dan Peiffer, Jibran H. Siddiqui, Chieh-Ti Kuo, Yi-Wen Huang, Noah P. Zimmerman, Li-Shu Wang, Gary D. Stoner, Steven G. Carmella, Ben Ransom, Stephen S. Hecht.

Cell Death

A50 PAR-4 (prostate apoptosis response-4) modulates cell survival and chemosensitivity to docetaxel in MCF-7 breast cancer cells. Michelly C. Pereira, Simone A. de Bessa-Garcia, Maria A. Nagai.

A52 Tyrosine kinase activity of c-Abl is essential for p53 dependent transactivation of p21Waf1/Cip1. S. M. Nashir Udden, Masanobu Satake, Shuntaro Ikawa.

Pacific Ballroom D

Cell Growth Signaling Pathways

A53 Crosstalk between IGFR and MET in prostate cancer. Andreas S. Varkaris, Sanchaika Gaur, Nila Parikh, Christopher Logothetis, Gary E. Gallick.

DNA Methylation/Epigenetics and Chromatin Regulation

A54 Can clinical criteria reliably distinguish between sporadic and Lynch syndrome-associated endometrial carcinomas with immunohistochemical loss of MLH1? Amanda S. Bruegl, Bojana Djordjevic, Diana Urbauer, Shannon N. Westin, Pamela T. Soliman, Karen H. Lu, Rajyalakshmi Luthra, Russell R. Broaddus.

A55 Genome-wide methylation profile in thyroid carcinoma. Farzana Jasmine, Mosiur Rahman, Shantanu Roy, Mohammed Kamal, Habibul Ahsan, Muhammad G. Kibriya.

A57 DNA methylation-based biomarkers in serum of patients with breast cancer and association with molecular phenotypes. Joaquina Martinez-Galan, Juan Ramon Delgado, Blanca Torres-Torres, Sandra Rios, M. Isabel Nuñez.

Chemoprevention and Biological Therapies

Combination Chemoprevention

A58 High-throughput search for a combination cancer preventive treatment. Ivan P. Uray, Powel H. Brown.

A59 Combination of quercetin and tannic acid as a potential proteasome inhibitor for cancer chemoprevention. Tsui-Ling Chang, Chi-Hsien Wang .

A60 Late-stage intestinal polyps in ApcMin/+ mice are resistant to treatment with retinoids and TRAIL due to upregulation of pro-survival proteins. Jennifer S. Davis, Shaoyi Huang, Xiaoyang Ren, Zhengming Xu, Ernest Hawk, Xiangwei Wu.

A61 Ischemic preconditioning agents sensitize cancer cells to oxidative stress. Shailaja Kesaraju, Arunodoy Sur, Kasirajan Ayyanathan, Herbert Weissbach.

A62 Combination of BXL-0124, a vitamin D analog, and LG100268 for the prevention of ER-negative breast cancer. Abhijit Mazumdar, Yun Zhang, Jamal Hill, Nanjoo Suh, Powel Brown.

A63 Combination aspirin and/or calcium chemoprevention with colonoscopy in colorectal cancer prevention: Cost-effectiveness analyses. Barbara C. Pence, Eric J. Belasco, Conrad P. Lyford.

A65 Activation of ERK1/2 using combination of aspirin, curcumin, and sulforaphane regimen leads to NF-κB inhibition and apoptosis in pancreatic cancer cells. Arvind Thakkar, Dhruvitkumar Sutaria, Karthik Grandhi, Ying Huang, Jeffrey Wang, Sunil Prabhu.

Differentiation Therapy

A66 A comparison of helical tomotherapy with standard radiotherapy treatment planning (AP/PA) in patients with Wilms' tumor and Ewing's sarcoma. Kofi Sarfo-Kantanka, Richard Crilly, Logan Moll.

Drug Design and Optimization

A67 Syntheses and antitumor activities on NCI-60 human tumor cell line protocol of novel N-hydroxyethyl-4-aza-didehyropodophyllotoxin derivatives with halo substitutions on ring-E. Ajay Kumar, Vineet Kumar, Antonio E. Alegria, Malhotra V. Sanjay.

A68 Design, synthesis, and antiproliferative evaluations of 3-phenylquinolinylchalcone derivatives against non-small cell lung cancers and breast cancers. Cherng-Chyi Tzeng, Chih-Hua Tseng, Yeh-Long Chen.

Foods and Their Bioactive Components

A69 Pilot study of the effects of indole-3-carbinol on deuterated phenanthrene metabolism in smokers. Naomi Fujioka, Yan Zhong, J. Bradley Holchalter, Diane Rauch, Joni J. Jensen, Chap T. Le, Dorothy K. Hatsukami, Stephen S. Hecht.

A70 Ginger phytochemicals exhibit robust synergy to inhibit prostate cancer cell proliferation. Sushma Reddy Gundala, Meera Brahmbhatt, Ritu Aneja.

A71 Curcubitacin B exhibits cytotoxic effects by inhibiting Integrin-HER2 signaling in breast cancer cells. Parul Gupta Gupta, Sanjay K. Srivastava.

Pacific Ballroom D

A72 Efficacy and safety of multiple doses of polyphenon E in prostate cancer using TRAMP mice. Jick Hwan Ha, Seung Joon Kim, Hea Yon Lee, Chang Dong Yeo, Chan Kwon Park, Sang Haak Lee, Jong Y. Park.

A73 Evaluating tissue biomarker effects of an oral green tea extract, Polyphenon E, using reverse phase protein array in women with operable breast cancer. Kimberly A. Ho, Davida Kornreich, Susan F. Refice, Katherine D. Crew, James A. Cardelli, Jerry McLarty, Dawn L. Hershman, Matthew Maurer, Kevin Kalinsky, Bret Taback, Hanina Hibshoosh, Tao Su.

A74 Grape seed extract induces antiproliferative and apoptotic effects on human non-small cell lung cancer and bronchial premalignant cell lines: The role of microRNA. Jenny T. Mao, Bingye Xue, Jane Smoake, Kenneth J. Serio.

A75 Metabolites of ginger component [6]-shogaol remain bioactive in cancer cells and have low toxicity in normal cells: Biotransformation, chemical synthesis, and biological evaluation. Huadong Chen, Yingdong Zhu, Dominique Soroka, Renaud Warin, Shengmin Sang.

A76 Diet versus drug paradigm for the prevention of colorectal cancer: Isorhamnetin and resveratrol versus sulindac and DFMO. Shakir Saud, Young Kim, Gerd Bobe, Nancy H. Colburn, Matthew R. Young.

A77 Tanshinone I attenuates lung tumorigenesis in VEGF-overexpressing transgenic mice via inhibition of tumor-activated cell cycle pathway. Yu-Tang Tung, Hsiao-Ling Chen, Chuan-Mu Chen.

A78 Broccoli-derived compounds downregulate C-C chemokine ligand 2 expression and monocyte attraction through androgen-dependent pathway in LNCaP prostate cancer cells. Thomas Wang, Eun-Kyung Kim, John Milner, Young Kim.

Mechanisms of Chemoprevention

A81 Chemopreventive mechanisms of action of 2'-hydroxyflavanone in renal cell carcinoma. Lokesh Prasad Gowda Dalasanur Nagaprashantha, Jyotsana Singhal, Sanjay Awasthi, Sharad S. Singhal.

A82 Aspirin-mediated downregulation of Warburg kinase AKT1 in patients with Barrett's esophagus: Implications in neoplastic transformation. Navtej S. Buttar, Gary W. Falk, Norman E. Marcon, Thomas Schnell, Douglas A. Corley, Prateek Sharma, Marcia R. Cruz-Correa, Chin Hur, David E. Fleischer, Amitabh Chak, Kenneth R. DeVault, David S. Weinberg, Cathrine J. DeMars, Gary Della'Zanna, Ellen Richmond, Thomas C. Smyrk, Sumithra Mandrekar, Paul J. Limburg, Sonia Chowdhury, Ahmed Elebiary, Anamay Sharma, Sidhartha Chaudhry, Nathan R. Foster, Katie L. Allen Ziegler, Yvonne Romero.

A83 Inhibition of hypoxia-inducible factor alpha and astrocyte elevated gene-1 mediates cryptotanshionone-induced antitumor activity in hypoxic PC-3 cells. Sung Hoon Kim, Hyojeong Lee, Hanna Hyun Kim, Deok Beom Jung, Eunjung Sohn.

A84 ω3 rich diet protects against Kras-induced metaplasia via repression of NF-κB. Daniel R. Principe, Windel Emman T. Mascarinas, Chintan Chheda, Kevin Adrian, Riley Mangan, Lindsay C. Boven, Paul J. Grippo.

A85 Silibinin exerts its protective effects against UVB-induced photodamage and skin carcinogenesis through p53. Cynthia Tilley, Srirupa Roy, Gagan Deep, Chapla Agarwal, Rajesh Agarwal.

A86 Silibinin inhibits prostate cancer and stromal cells interaction through targeting TGFβ and α-smooth muscle actin. Harold J. Ting, Gagan Deep, Chapla Agarwal, Scott D. Cramer, Lina M. Romero, Rajesh Agarwal.

Epidemiology/Lifestyle Factors

Behavioral Epidemiology

A88 Depression and short telomere length increased mortality in bladder cancer patients. Meng Chen, Jie Lin, Jan Blalock, Lorenzo Cohen, Paul M. Cinciripini, Xifeng Wu.

A89 Prediagnostic lifestyle factors and five-year survival after colon and rectal cancer diagnosis in the NIH-AARP Diet and Health Study. Colleen Pelser, Hannah Arem, Pfeiffer Ruth, Joanne Elena, Catherine Alfano, Albert Hollenbeck, Yikyung Park.

A90 The attribution of lifestyle-related risk factors in middle age on breast cancer incidence in The Netherlands: Preliminary results. W.A.M. van Gemert, S.G. Elias, P.H.M. Peeters, R.A. Bausch-Goldbohm, P.A. van den Brandt, H.G. Grooters, E. Kampman, L.A.L.M. Kiemeney, F.E. van Leeuwen, E.M. Monninkhof, E. De Vries.

Poster Session A

Wednesday, October 17 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D

Cancer in Aging Populations

A91 Gallstones and digestive tract cancers. Leticia M Nogueira, Neal Freedman, Eric Engels, Joan Warren, Felipe Catro.

A92 Oral bisphosphonate use and colorectal cancer incidence in the Women's Health Initiative. Michael N. Passarelli, Polly A. Newcomb, Andrea Z. LaCroix, Dorothy S. Lane, Gloria Y.F. Ho, Rowan T. Chlebowski.

A93 Genetic variations in aging-related genes/pathways and colorectal cancer risk. Fanmao Zhang, Cathy Eng, Moubin Lin, Michelle A.T. Hildebrandt, Yonggang He, Jie Lin, Maosheng Huang, Jian Gu, Xifeng Wu.

Cancer in Minority and Medically Underserved Populations

A94 Missed opportunities: Racial and socioeconomic disparities in emergency presentation of colorectal cancer. Sandi L. Pruitt, Nicholas O. Davidson, Samir Gupta, Yan Yan, Mario Schootman.

Diet and Cancer

A95 Prostatic alpha-linolenic acid (ALA) is positively associated with aggressive prostate cancer: A relationship which may depend on genetic variation in ALA metabolism. Maria Azrad, Robert W. Hardy, Wendy Demark-Wahnefried, Kui Zhang, Robin T. Vollmer, John Madden, Thomas Polascik, Denise C. Snyder, Mack T. Ruffin, Judd Moul, Dean Brenner.

A96 Plasma antioxidants and the risk of breast cancer in the European Prospective Investigation into Cancer and Nutrition (EPIC). Marije Bakker, Carla van Gils, Veronique Klaasen, Bas Bueno-de-Mesquita, Eugène Jansen, Martine Ros, Elio Riboli, Petra Peeters.

A97 Dietary nitrosamines, genetic variation in DNA repair and metabolism genes, and bladder cancer risk in the Los Angeles Bladder Cancer Study. Chelsea E. Catsburg, Roman Corral, Juan Pablo Lewinger, Amit D. Joshi, Manuela Gago-Dominguez, Jian-Min Yuan, Victoria K. Cortessis, Malcolm C. Pike, Mariana C. Stern.

A98 Short-term changes in dietary carbohydrate intake and prognosis among postmenopausal breast cancer survivors. Jennifer A. Emond, Ruth E. Patterson, Loki Natarajan, John P. Pierce.

A99 Dietary N-nitroso compounds, endogenous nitrosation, and the risk of esophageal and gastric cancer subtypes in the Netherlands Cohort Study. András P. Keszei, R. Alexandra Goldbohm, Leo J. Schouten, Paula Jakszyn, Piet A. van den Brandt.

A100 Adherence to the WHO's Healthy Diet Indicator and overall cancer risk in the Dutch part of the European Prospective Investigation into Cancer and Nutrition (EPIC-NL) cohort. Anne M. May, Nina E. Berentzen, Joline W.J. Beulens, Marieke P. Hoevenaar-Blom, Ellen Kampman, H.B. Bueno-de-Mesquita, Dora Romaguera, Petra H.M. Peeters.

A101 Urinary isothiocyanate excretion profiles in response to acute feeding of various cruciferous vegetables in humans. Sandi L. Navarro, Hannah Frenkel, Wendy K. Thomas, Karen Makar, C.Y. Wang, Johanna W. Lampe.

A102 Longer formula feeding and later age at introduction of solids increase the odds ratio of pediatric acute lymphoblastic leukemia. Jeremy Schraw, Yong Q. Dong, Michael E. Scheurer, Steven Hirschfeld, M. Fatih Okcu, Michele R. Forman.

A103 Flavonoid intake and prostate cancer aggressiveness among African Americans and European Americans in PCaP. Rebecca R. George, Susan E. Steck, L. Joseph Su, James L. Mohler, Elizabeth T.H. Fontham, Jeannette T. Bensen, James R. Hebert, Hongmei Zhang, Lenore Arab.

A104 Adherence to the Dutch guidelines for a healthy diet and overall cancer risk in the EPIC-NL study. Ellen A. Struijk, Anne M. May, Petra H.M. Peeters, Joline W.J. Beulens, Heidi P. Fransen, G. Ardine de Wit, Boer M.A. Jolanda, N. Charlotte Onland-Moret, Yvonne T. van der Schouw, Jeljer Hoekstra, H. Bas Bueno-de-Mesquita.

A105 Intakes of folate, methionine, and vitamin B6 and B12 and risk of esophageal and gastric cancer in a large cohort study. Qian Xiao, Jiansong Ren, Christian Abnet, Yikyung Park.

Poster Session A

Wednesday, October 17 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D

Familial and Genetic Epidemiology

A106 Optimal strategies for selecting samples for sequencing families with a common cancer: The Genetic Epidemiology of Lung Cancer Consortium. Christopher Amos, Joan Bailey-Wilson, Susan Pinney, Maria de Andrada, Colette Gaba, Diptasri Mandal, Ming You, Margaret Spitz, Marshall Anderson.

A107 Variation in the prolactin and prolactin receptor genes and familial breast cancer. Shehnaz K. Hussain, Mary Sehl, Daniel Conn, Janet S. Sinsheimer, Uma Dandekar, Jeanette Papp, Zuo-Feng Zhang, Patricia A. Ganz.

A108 Cell cycle-related genes as modifiers of age of onset of colorectal cancer in Lynch syndrome: A large-scale study in non-Hispanic white patients. Mala Pande, Patrick M. Lynch, Rodney J. Scott, Marsha L. Frazier, Jinyun Chen, Yu-Jing Huang, Chongjuan Wei, Christopher I. Amos, Bente A. Talseth-Palmer, Cliff J. Meldrum, Wei V. Chen, Ivan P. Gorlov.

A109 Breast cancer risk assessment: Genetic and nongenetic risk factors contributing to differential model performance. Anne S. Quante, Alice S. Whittemore, Mary Beth Terry.

A110 Associations between genetic variations in inflammation and innate immunity pathways and colorectal cancer. Hansong Wang, Darin Taverna, Cornelia M. Ulrich, Loic Le Marchand, Daniel O. Stram, Iona Cheng, Lynne R. Wilkens, Terrilea Burnett, Polly A. Newcomb, Laurence N. Kolonel, Brian E. Henderson, David Duggan.

General Epidemiology and Biostatistics

A111 The awareness of loop electrosurgical excision procedure as a strategy for reducing the incidence and mortality of cervical cancer among Nigerian market women. Olubunmi Olabisi Adetule.

A112 Time trend and spatial pattern in the use of hormone replacement therapy in Taiwan before and after WHI trial report. Po-Huang Chiang, Eng-Mei Tsai, Yen-Chen Chang.

A113 Regional variations in esophageal cancer incidence rates by census region in the United States, 1999-2008. Jennifer Drahos, Manxia Wu, William F. Anderson, Katrina F. Trivers, Jessica King, Philip S. Rosenberg, Christie R. Eheman, Michael B. Cook.

A114 The etiology of uterine sarcomas: A pooled analysis of the epidemiology of endometrial cancer consortium (E2C2). Ashley S. Felix, Linda S. Cook, Mia M. Gaudet, Thomas E. Rohan, Leo J. Schouten, Veronica W. Setiawan, Lauren A. Wise, Louise A. Brinton.

Other Risk Factors

A116 Inter-scan reproducibility of mammographic density measurements. Mariëtte Lokate, Marleen Emaus, Michiel Kallenberg, Marije Bakker, Nico Karssemeijer, Wouter Veldhuis, Petra Peeters, Carla van Gils.

Special Session
Wednesday, October 17 • 2:30 p.m.-3:30 p.m.

Cancer Prevention Trials

Pacific Ballroom C

Chairperson: Eva Szabo, National Cancer Institute, Bethesda, MD

The translation of promising mechanistic, epidemiologic, and preclinical data into strategies that prevent cancer in human beings requires the performance of clinical trials that carefully assess the utility of specific approaches in well-defined participant cohorts. A multidisease approach to prevention, with the aim of preventing multiple chronic diseases (both cancer and non-cancer), is particularly appealing. This session will report the primary and/or secondary endpoint results of recently completed innovative phase II and III trials that employed interventions targeting multiple health concerns.

Metformin effects on breast preneoplasia
Andrea DeCensi, E.O. Ospedali Galliera, Genoa, Italy

The Costa Rica HPV Vaccine Trial: Vaccine efficacy against oral HPV infection and other novel findings
Aimée R. Kreimer, National Cancer Institute, Rockville, MD

A randomized trial of a multivitamin in the prevention of cancer in men: The Physicians' Health Study II
J. Michael Gaziano, Brigham and Women's Hospital, Boston, MA

Plenary Session 2

Wednesday, October 17 • 3:30 p.m.-5:30 p.m.

Inflammation and Cancer

Pacific Ballroom C

Chairperson: Andrew J. Dannenberg, Weill Medical College of Cornell University, New York, NY

Chronic inflammation is well recognized to increase the risk of multiple malignancies. Numerous factors including infection, tobacco smoke exposure, and obesity cause chronic inflammation. The identification of the causes of chronic inflammation has been associated with the successful development of risk reduction interventions such as the hepatitis B vaccine. Use of medications that target inflammation, including aspirin and selective COX-2 inhibitors, reduce the risk of some types of neoplasia. This session will include talks focused on cancers of the stomach, colon, and breast. Evidence linking inflammation, stem cells, and cancer will be reviewed. Different mechanisms underlying the inflammation-cancer connection will be discussed highlighting the opportunity to develop evidence-based risk reduction strategies.

Inflammation, stem cells, and cancer
Timothy C. Wang, Columbia University Medical Center, New York, NY

Helicobacter gastritis, metaplasia, and gastric cancer
Juanita L. Merchant, University of Michigan, Ann Arbor, MI

Inflammatory mediators, NSAIDs, and colorectal cancer
Raymond N. DuBois, The University of Texas MD Anderson Cancer Center, Houston, TX

The obesity-inflammation connection: Implications for breast carcinogenesis
Andrew J. Dannenberg

AACR-Prevent Cancer Foundation Award Lecture

Wednesday, October 17 • 5:30 p.m.-6:30 p.m.

The Eleventh Annual AACR-Prevent Cancer Foundation Award for Excellence in Cancer Prevention Research

Pacific Ballroom C

The Eleventh Annual AACR-Prevent Cancer Foundation Award for Excellence in Cancer Prevention Research is given to a scientist residing in any country in the world for his or her seminal contributions to the field of cancer prevention. Such investigations must have been conducted in basic, translational, clinical, epidemiological, or behavioral science in cancer prevention research. Further, these studies must have had not only a major impact on the field, but must also have stimulated new directions in this important area. The 2012 recipient was not available at the time of this publication printing.

Previous Recipients:

2011	Andrew J. Dannenberg
2010	John D. Groopman
2009	Mark W. Schiffman
2008	Frank L. Meyskens
2007	Leslie Bernstein
2006	Stephen S. Hecht
2005	Scott M. Lippman
2004	David S. Alberts
2003	Waun Ki Hong
2002	Michael B. Sporn

If you would like to nominate a colleague for an AACR Scientific Achievement Award, please e-mail awards@aacr.org for more details.

Forum 2

Thursday, October 18 • 7:00 a.m.-8:00 a.m.

Cancer Prevention: Lessons Learned and Prospects for Future Drug Development

Pacific Ballroom C

Co-Chairpersons: Victoria M. Richon, Epizyme, Inc,. Cambridge, MA, and **Jaye L. Viner,** Millennium Pharmaceuticals, Cambridge, MA

To date, a vaccine against an infectious agent, hepatitis B virus, is the only chemopreventive intervention that has broadly translated into improvements in public health. By contrast, use of tamoxifen and raloxifene by women at high risk for breast cancer has remained uniformly low. Given increasingly high research costs, the therapeutic impact of promising agents must not only outweigh potential toxicities but also assure patient and payer acceptability, otherwise the developmental risks may be too great. This session will highlight lessons learned from studies that have led to regulatory approval and present a critical evaluation of our current drug development pathway for chemoprevention agents

Lessons learned from 20 years of chemoprevention research
Victor G. Vogel, Geisinger Health Systems, Danville, PA

What are the hurdles for moving approved drugs into the prevention setting?
Pamela M. Munster, University of California, San Francisco, CA

Discussion/Q & A

Plenary Session 3

Thursday, October 18 • 8:00 a.m.-10:00 a.m.

Obesity, Diabetes, and Metabolic Syndrome

Pacific Ballroom C

Chairperson: Reuben J. Shaw, Salk Institute for Biological Studies, La Jolla, CA

Studies across the past decade have led to a reemergence of our understanding of how oncogene and tumor suppressor mutations lead to changes in cellular metabolism during tumorigenesis. Importantly, the field is still in the early years of defining the critical metabolic enzymes and metabolic pathways that contribute to tumor biology in different cancers. Here we explore four central pathways involved in metabolic control that are deregulated in cancer: the mTOR pathway, the AMPK pathway, mitochondrial sirtuin pathway, and the autophagy pathway.

The nutrient-sensing mTOR pathway in cancer initiation and progression
Brendan D. Manning, Harvard School of Public Health, Boston, MA

Regulation of tumor metabolism by sirtuins
Marcia Haigis, Harvard Medical School, Boston, MA

The LKB1-AMPK pathway coordinates metabolic reprogramming with growth control
Reuben J. Shaw

Role of autophagy in cancer
Eileen P. White, UMDNJ-The Cancer Institute of New Jersey, New Brunswick, NJ

Concurrent Session 3

Current Controversies in Cancer Screening

Pacific Ballroom A

Chairperson: Electra D. Paskett, The Ohio State University Comprehensive Cancer Center, Columbus, OH

Cancer screening examinations have been, for the most part, shown to reduce mortality; however, there exists a lot of controversy over the optimal screening test intervals for some cancers, whether to screen for other cancers, and how to increase utilization of those tests that truly reduce death. This session will explore some of these controversies as well as discuss how advances in technology—genetic, imaging, and media—can be used to promote uptake of screening. Lastly, the impact of changes to screening test guidelines has had on uptake will examine the effects of health policy on cancer care.

Introduction
Electra D. Paskett

Predictors of change in colorectal cancer screening decision stage among participants in a randomly controlled trial of genetic and environmental risk assessment
Ronald E. Myers, Thomas Jefferson University, Philadelphia, PA

Is newer better? Use of technology to encourage cancer screening among various populations
Celette Skinner, University of Texas Southwestern Medical Center, Dallas, TX

Cost-effectiveness of lung cancer screening
James L. Mulshine, Rush Medical College, Rush University, Chicago, IL

The effect of the new screening guidelines on uptake of screening tests
Stephen H. Taplin, National Cancer Institute, Rockville, MD

Concurrent Session 4

NSAIDs and Beyond

Pacific Ballroom C

Chairperson: Ernest T. Hawk, The University of Texas MD Anderson Cancer Center, Houston, TX

NSAIDs are one of the most powerful and broadly applicable classes of drugs available and are already in broad clinical use for a variety of conditions. They have proven efficacy in cancer chemoprevention for colorectal and skin cancers, and preclinical and observational data suggest they may also confer reduced risks for lung, breast, prostate, bladder, and esophageal cancers. However, in addition to their long-established gastrointestinal and renal toxicities, at least some members of this class may confer increased risk of cardiovascular events. Therefore, various attempts to improve the risk:benefit balance of NSAIDs are ongoing.

This session will explore important remaining questions around the use of NSAIDs in cancer chemoprevention by highlighting the work of investigators actively engaged in addressing these questions through more careful selection of agents, more comprehensive considerations of risks and benefits for these agents, novel imaging strategies that allow for more specific targeting of pathways or populations, and agent combinations.

Aspirin for cancer prevention: Are we ready?
Andrew T. Chan, Harvard Medical School/Massachusetts General Hospital, Boston, MA

A novel approach to biomolecular imaging of COX-2
Jashim Uddin, Vanderbilt University School of Medicine, Nashville, TN

Development of NSAID eflornithine combinations for treating cancer risk factors
Eugene W. Gerner, University of Arizona Cancer Center, Oro Valley, AZ

Aspirin-mediated downregulation of Warburg kinase AKT1 in patients with Barrett's esophagus: Implications in neoplastic transformation*
Catherine J. DeMars, Mayo Clinic, Rochester, MN

*Short talk from proffered paper

Poster Session B

Thursday, October 18 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D

Behavioral and Social Science

Diffusion and Dissemination

B01 Meta-analyses of MTHFR and UGT1A1 genes as risk factors for colorectal cancer prevention. Amanda Lie, S. Pamela Shiao, Melissa J. LaBonte, Ching-Yi Chiu, Linda H. Chiang, Rose Sakamoto.

Screening and Early Detection

B02 Modeling the natural history and detection of lung cancer. Xing Chen, Millennia Foy, Marek Kimmel, Olga Y. Gorlova.

B03 Perceived causality of cancer and screening behaviors. François Eisinger, Jean-François Morère, Chantal Touboul, Xavier Pivot, Yvan Coscas, Jean-Yves Blay, Christine Lhomel, Jérôme Viguier.

B05 Influence of fluorescence on screening decisions for oral lesions in community dental practices. Denise M Laronde, P. Michele Williams, T. Greg Hislop, Catherine Poh, Samson Ng, Chris Badjik, Lewei Zhang, Calum MacAuley, Miriam Rsoin.

B06 Screening patterns within organized programs of Italian women with invasive cervical cancer. Antonella Zucchetto, Guglielmo Ronco, Zambon Paola, Federico Massimo, Diego Serraino, Working Group Impatto Cervice, Paolo Giorgi Rossi, Stefano Ferretti, Marco Zappa, Franzo Antonella, Falcini Fabio, Zanetti Roberto, Biavati Patrizia, Stracci Fabrizio.

Tobacco

B07 Nasal epithelial gene expression profiles reflect dynamic biological response to smoking cessation. Kahkeshan Hijazi, Dorothy K. Hatsukami, Stephen S. Hecht, Daniel R. Brooks, George O'Connor, Marc Lenburg, Katrina Steiling, Avrum Spira, Bozena Malyszko, Xiaohui Zhang, Gang Liu, Yuriy Alekseyev, Yves-Martine Dumas, Louise Hertsgaard, Joni Jenson, Cindy Rohde.

B08 Effectiveness of team-based financial incentives for smoking cessation in the workplace. Lee Sang Haak, Yeo Chang Dong, Kim In Kyoung, Kang Hye Sun, Lee Hwa Young, Park Chan Kwon, Kim Myung Sook.

Biomarkers and Early Detection Research

Biomarkers of Premalignant Lesions

B09 Promoter CPG island methylation during progression of atypical hyperplasia to breast cancer. Joaquina Martinez-Galan, Juan Ramon Delgado, Rosario Del Moral, Blanca Torres-Torres.

Cancer Surveillance and Screening

B10 Design of the DENSE trial: MRI as an additional screening modality to detect breast cancer in women aged 50-75 years with extremely dense breasts. Marleen Emaus, Wouter Veldhuis, Marije Bakker, Evelyn Monninkhof, Nico Karssemeijer, Maurice van den Bosch, Petra Peeters, Willem Mali, Carla van Gils.

B11 Level of circulating miRNAs in patients before and after surgical removal of colorectal tumors: A pilot study. Nina Habermann, Karen W. Makar, Barbara Burwinkel, Cornelia M. Ulrich, Jonas Ristau, Katharina Buck, Jürgen Staffa, Petra Schrotz-King, Dominique Scherer, Stephanie Tosic, Verena Widmer, Clare Abbenhardt.

B12 An optimized molecular stool test for colorectal cancer screening: Evaluation of an automated analytic platform and logistic algorithm. Graham P. Lidgard, Julie A. Simonson, Mary Devens, Russell I. Heigh, David A. Ahlquist, Barry M. Berger, Michael J. Domanico, Janelle J. Bruinsma, James Light, Zubin D. Gagrat, Rebecca L. Oldham-Haltom, Keith D. Fourrier, Hatim Allawi, Tracy C. Yab.

B13 High-risk patients found affected with breast cancer during a multimodality screening program: Triple negative versus non-triple negative breast cancers. Franca Podo, Filippo Santoro, Siranoush Manoukian, Clelia de Giacomi, Laura Cortesi, Lorenzo Preda, Stefano Corcione, Francesco Sardanelli.

B14 Predicting prostate cancer: A novel, noninvasive approach. Matthew J. Roberts, Horst J. Schirra, Martin F. Lavin, Robert A. Gardiner.

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Intervention Studies

B17 Phase I prevention study of atorvastatin in women at increased risk for breast cancer. Banu Arun, Terri Cornelison, Gabriel N. Hortobagyi, Scott Lippman, Powel H. Brown, nour Sneige, Yun Gong, Diane Liu, Jennifer Litton, Angelica Gutierrez-Barrera, Blessy Sajan, Jack J. Lee, Lana A. Vornik.

B18 Curcumin is an effective chemopreventive substance for betel quid chewer's oral precancer in Sri Lanka. Itsuo Chiba, Maiko Takeshima, Yoshihiro Abiko, Hiroshi Kobayashi, Malsantha Muthumala, Chihiro Sugiura, Makiko Onodera, Shibata Toshiyuki, Hirofumi Matsuoka, Naoki Kakudate, Shunichi Fukuhara, Toshio Takiguchi.

Molecular Diagnostics

B20 Secreted protein acidic and rich in cysteines-like 1 suppresses aggressiveness and predicts better survival in colorectal cancers. Hu Hanguang, Zhang Hang, Ge Weiting, Liu Xiyong, Peng Jiaping, Yu Shujing, Yen Yun, Zheng Shu.

B21 Comparative analysis of peptide nucleic acid (PNA)-mediated real-time PCR clamping and DNA direct sequencing for KRAS mutation detection in malignant effusion. Chan Kwon Park, Chang Dong Yeo, Sang Haak Lee, Hyoung Kyu Yoon, Seung Joon Kim.

Cell, Molecular, and Tumor Biology

Gene Regulation and Transcriptional Control

B22 Molecular oncogenesis of NANOG in castration-resistant prostate cancer. Collene R. Jeter, Yue Lu, Bigang Liu, Sally Gaddis, Shoudan Liang, Dean G. Tang.

B23 Sulfotransferase isoform 1A1 (SULT1A1) gene expression is regulated by transcription factor NF1 in human breast cancer cell lines. Aiwei Yao-Borengassar, Lora Rogers, Vinay Raj, Susan Kadlubar.

B24 A p19Arf-Egr-C/EBPβ axis underlying oncogene-induced senescence and tumor suppression. Jacqueline Salotti, Krisada Sakchaisri, Peter Johnson.

Inflammation and Cancer Initiation and Promotion

B25 Inflammation and cancer: Standardizing biomarkers criteria (data elements) as foundation of a database. M-CSF used as prototype to test data elements. Mahin Khatami.

B26 The anti-inflammatory effects of black raspberries and the anthocyanin metabolite protocatechuic acid in N-nitrosomethylbenzylamine-induced esophageal cancer in rats. Dan Peiffer, Jibran H. Siddiqui, Chieh-Ti Kuo, Yi-Wen Huang, Noah P. Zimmerman, Li-Shu Wang, Gary D. Stoner, Steven G. Carmella, Ben Ransom, Stephen S. Hecht.

Microenvironment

B27 Osteoprotegerin's key role in inflammatory breast cancer: Bane or boon. Sudeshna Goswami, Neelam Sharma-Walia.

B28 Evidence for the antagonistic form of CXCL10 in high-grade serous epithelial ovarian tumors. Andrew N. Stephens, Jyothsna R. Rao, Santanu Deb-Choudhury, Adam Rainczuk.

Oncogenes/Tumor Suppressor Genes

B29 Characterizing candidate breast cancer tumor suppressors: MTUS2 and LHX8. Diane Fru, Victoria Ruhl, Michael R. Green.

Pacific Ballroom D

Stem Cell Biology

B29 Targeting breast cancer stem cells using cancer preventive rexinoids. Jing Zhao, Yun Zhang, Jamal L. Hill, Abhijit Mazumdar, Ivan Uray, Reid P. Bissonnette, Powel H. Brown.

B31 Sonic hedgehog signaling inhibition provides opportunities for targeted therapy by sulforaphane in regulating pancreatic cancer stem cell self-renewal. Rakesh Srivastava, Sharmila Shankar.

Other

B32 Role of megalin in uptake of 1α,25(OH)2D in colon cancer cells. Elizabeth A. Hibler, Elizabeth T. Jacobs, Peter W. Jurutka.

Chemoprevention and Biological Therapies

Anti-inflammatory Therapy

B33 Anti-inflammatory effect of lactoferrin on hyperoxia-induced systemic inflammatory responses using NF-κB/luciferase transgenic mice. Wen-Hui Chang, Hsiao-Ling Chen, Chuan-Mu Chen.

B34 NOSH-aspirin (NBS-1120), a dual nitric oxide and hydrogen-sulfide-releasing hybrid for treatment of cancer. Mitali Chattopadhyay, Ravinder Kodela, Diana H. Lee, Thuy-Tien C. Le, Khosrow Kashfi.

B35 COX-2 inhibitors target multiple protumorigenic pathways involved in metastasis of postpartum breast cancers. Pepper Schedin, Traci Lyons, Tanya Russell, Holly Martinson, Sonali Jindal, Eryn Callihan, Virginia Borges.

Biological Agents

B36 Transcriptional targeting of tumor cells with AAV vectors carrying diphtheria toxin A fragment. Haifeng Chen.

B37 Antiproliferative effects of pomegranate are associated with downregulation of homologous recombination pathway: Potential use in cancer prevention. Prasad Kovvuru, Amit Shirode, Ramune Reliene.

Natural Product-Based Agents

B38 Iodine supplement exerts antineoplastic adjuvancy, chemoresistance inhibition, and cardioprotection in mammary cancer treatment with anthracyclines. Carmen Aceves, Yunuen Alfaro-Hernandez, Guadalupe Delgado.

B39 Farnesol blocks STAT3 signaling, proliferation, and survival of multiple myeloma through the protein tyrosine phosphatase SHP-2. Jonghyun Lee, Chulwon Kim, Dongwoo Nam, Hyeung-Jin Jang, Seok-Geun Lee, Won-Seok Chung, Kwang Seok Ahn.

B41 A nutrigenomic agent induces breast cancer prevention in BALBc mice. Eliana Noelia Alonso, Diego Javier Obiol, Gabriela Andrea Balogh.

B42 Estrogenic activities of Chinese medicinal formula Si-Wu-Tang on breast cancer cells. Jeffery Fan, Mandy Liu, Zhijun Wang, Zhong Zuo, Moses Chow, Ying Huang.

B43 Dose-response on the chemopreventive effects of sarcophine-diol on UVB-induced skin tumor development in SKH-1 hairless mice. Ruth F. Guillermo, Xiaoying Zhang, Radhey S. Kaushik, David Zeman, Safwat A. Ahmed, Sherief Khalifa, Hesham Fahmy, Chandradhar Dwivedi.

B45 Carnosic acid from rosemary induces degradation of androgen receptor and is critically regulated by the ER stress protein CHOP. Sakina M. Petiwala , Gongbo Li, Jeremy J. Johnson.

B46 The synthesis and evaluation of quinol-containing natural products as cancer chemopreventive agents. Gavin Jones, Geoff Wells.

B47 Structural and functional analysis of the natural JNK1 inhibitor quercetagetin. Nam Joo Kang, Robert Huber, Zigang Dong, Ki Won Lee, Sohee Baek, Grzegorz M Popowicz, Marcelino Arciniega, Bo Yeon Kim, Hyong Joo Lee, Tad A. Holak, Martin Augustin, Ann M. Bode.

B48 Anticancer effect of guava leaves (*Psidium guajava L.*) in prostate cancer cells. Woong Mo Yang, Mi Hye Kim, Sang-Yoon Park, Kwang Seok Ahn, Seok-Geun Lee.

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B49 Oral administration of ethanol extract of Descurainia sophia (KIOM-CRC#5) attenuates A549 xenograft lung cancer growth in murine orthotopic lung cancer model through blocking Stat3 signaling. Jinhee Kim, Jong-Shik Park, Myung-Gi Baek, Haejin Kim, You Jin Lee, Jun Lee, No Soo Kim, Ok-Sun Bang.

B50 Evaluation of cancer preventive activity of Chinese medicinal formula Si-Wu-Tang. Mandy Mei Liu, Jeffery Fan, Zhijun Wang, Zhong Zuo, Moses Chow, Ying Huang.

B51 Brassinin suppresses growth and induces apoptosis of prostate cancer through the suppression of PI3K/Akt/mTOR/S6K1 signaling cascades. Min-Ho Nam, Sung-Moo Kim, Dongwoo Nam, Hyeung-Jin Jang, Seok-Geun Lee, Kwang Seok Ahn.

B52 Hydroxychavicol, a major Piper betel constituent, significantly inhibits prostate tumor growth in in vitro and in vivo models. Rutugandha Deepak Paranjpe, Sushma Reddy Gundala, Ritu Aneja.

B53 Triterpene fraction of *Cucumis trigonus*, a novel microtubule inhibitor and antitumor agent, induces cell death in cancer cells. Viralkumar Laxmanbhai Patel, Ashish D. Wadhwani, P. Vijayan.

New Molecular Targets/Mechanisms of Drug Action

B55 Involvement of RSK2 in human skin cancer. Cheol-Jung Lee, Mee Hyun Lee, Ke Yao, Hye Suk Lee, Ann M. Bode, Zigang Dong, Yong Yeon Cho.

B56 Activation of Chk1 by Piperine causes cell cycle arrest and apoptosis in melanoma cells. Neel Fofaria, Sanjay K. Srivastava.

B57 STAT3 as a cancer prevention target in colorectal cancer cells. Li Lin, Wenying Yu, Hui Xiao, Wenlong Wang, Chongqiang Zhao, Jiagao Lu, Chenglong Li, Jiayuh Lin.

B58 Dehydroepiandrosterone inhibits the proliferation and migration of cell lines derived from cervical cancer. Yasmin Nansi Ortega Calderon, Piedad del Carmen Gomez Contreras, Rebeca Lopez-Marure.

B59 Cyclic GMP phosphodiesterase: A molecular target for cancer chemoprevention. Gary A Piazza, Nan Li, Sara Sigler, Kevin Lee, Claire Cawthon, Evrim Gurpinar, Maya A. Brownby, Heather N. Tinsely, Ashraf Abadi, William Grizzle, Gary D. Bernard, Xi Chen, Adam B. Keeton, Yaguang Xi, Bing Zhu, Wei Zhang, Alexandra Fajardo, Veronica Ramirez.

B60 Systemic inhibition of receptor tyrosine kinase signaling by metformin. Brendan J. Quinn, Matthew Dallos, Hiroshi Kitagawa, Ajaikumar B. Kunnumakkara, Regan M. Memmott, Joell J. Gills, M. Christine Hollander, Phillip A. Dennis.

B61 Paving the way to personalized medicine: Diagnosis, prevention, and treatment of early-stage bone metastatic disease in prostate cancer patients with theranostic radiopharmaceuticals. Suresh C. Srivastava.

B62 microRNAs involve inhibition of tumor progression by nonsteroidal anti-inflammatory drugs. Xiaobo Li, Elizabeth Ezell, Mary M. Fontenot, Gary A. Piazza, Yaguang Xi.

B63 Developing novel STAT3 inhibitors for the treatment and prevention of cancer. Zhengduo Yang, Haijun Chen, Lili Chu, Yusong Zhang, Chunyong Ding, Kristin Terry, Jia Zhou, Qiang Shen.

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Clinical Prevention Trials

Breast Cancer

B65 Biomarker effects of an oral green tea extract, Polyphenon E, in women with a history of hormone receptor-negative breast cancer. Katherine D. Crew, Mothaffar Rimawi, Lana Vornik, Terri L. Cornelison, James Cardelli, Regina M. Santella, Antai Wang, Scott M. Lippman, Dawn L. Hershman, Kimberly A. Ho, Powel Brown, Heather Greenlee, Therese B. Bevers, Banu Arun, Clifford Hudis, Heather L. McArthur, Jenny Chang.

Colon and Other Gastrointestinal Cancers

B66 Spectral markers for chemoprevention of colon cancer: A randomized placebo-controlled phase 2b trial. Hemant K. Roy, Tat-Kit Tsang, Ramesh Wali, Irene Helenowski, Gary della Zanna, Yuliya Shklovskaya, Silvia Skripkauskas, Vadim Backman, Vladimir Turzhitsky, Luz Rodriguez, Raymond Bergan, Assad Umar, Borko Janovic, Michael Goldberg, Laura Bianchi, Mart DelaCruz.

Prostate and Other Genitourinary Tract Cancers

B67 Inhibition of NFκB and proapoptotic effect of green tea in prostate tumor tissue: A phase II clinical trial in men with prostate cancer. Susanne M. Henning, Piwen Wang, William J. Aronson, Catherine L. Carpenter, David Heber.

B68 Antioxidant activity of green tea: A phase II clinical trial in men with prostate cancer. Piwen Wang, William Aronson, Narine Abgaryan, Catherine L. Carpenter, Jaydutt V. Vadgama, David Heber, Susanne M. Henning.

Trials in Progress: Clinical Intervention Trials

B69 Trial in progress: The impact of atorvastatin on prostate cancer – A randomized, presurgical clinical trial. Teemu J. Murtola, Terho Lehtimaki, Teuvo L.J. Tammela, Jarno Riikonen, Juha Koskimaki, Antti Kaipia, Paula Kujala, Teemu Tolonen, Heimo Syvala, Seppo Auriola, Emma Raitoharju.

B70 Design of the SHAPE-2 trial: Effects of equivalent weight loss, with and without exercise, on postmenopausal breast cancer risk. Willemijn A.M. van Gemert, Petra H.M. Peeters, Jantine A. Schuit, Evelyn M. Monninkhof.

Epidemiology/Lifestyle Factors

General Epidemiology and Biostatistics

B71 Does hormone replacement therapy or mammography screening affect breast cancer incidence rates in Taiwan? A nationwide cohort study. Eng-Mei Tsai, Po-Huang Chiang, Yen-Chen Chang.

Obesity, Metabolism, and Cancer

B72 Metformin use and risk of biochemical recurrence following radical prostatectomy: Results from the SEARCH database. Emma H. Allott, Stephen J Freedland, Michael R. Abern, Leah Gerber, Christopher J. Keto, William J. Aronson, Martha K. Terris, Joseph C. Presti, Christopher J. Kane, Christopher L. Amling.

B73 Caloric restriction reverses obesity-induced mammary gland inflammation in mice. Priya Bhardwaj, Andrew J. Dannenberg, Baoheng Du, Xi Kathy Zhou, Erika Sue, Michael D. Harbus, Dilip Giri, Clifford A. Hudis, Kotha Subbaramaiah.

B74 Raising healthy youth: Using the Manitoba Youth Health Survey to identify predictive factors of childhood obesity. Jane Griffith, Tannis Erickson, Katherine Fradette, Oliver Bucher, Carly Leggett, Kate McGarry, Elizabeth Harland.

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B75 Pregnancy hormones and maternal risk of hormone receptor-defined breast cancer. Annekatrin Lukanova, Eva Lundin, Egle Tolockiene, Helena Schock, Kjell Grankvist, Hans Ake Lakso, Helja Marja Surcel, Goran Wadell, Anne Zelenuich-Jacquotte, Paolo Toniolo.

B76 Evidence of a causal association between fasting insulin concentrations and endometrial cancer: A Mendelian randomization analysis. Kevin T. Nead, Robert A. Scott, Nick J. Wareham, Stephen A. Sharp, Adam S. Butterworth, Deborah J. Thompson, Toby Johnson, Amanda B. Spurdle, Paul D. Pharoah, Claudia Langenberg, Douglas F. Easton.

B77 Short-term weight change and colon and rectal cancer risk in the EPIC cohort. Charlotte Noelle Steins Bisschop, Carla H. van Gils, Anne M. May, Marleen J. Emaus, Bas Bueno de Mesquita, Krasimira Aleksandrova, Heiner Boeing, Mazda Jenab, Elio Riboli, Teresa Norat, Petra H.M. Peeters.

B78 Adiposity and the IGF-axis in girls during pubertal development. Ellen M. Velie, Zhenzhen Zhang, Jean M. Kerver, Joseph C. Gardiner, Clifford J. Rosen, Joanne F. Dorgan.

Tobacco and Cancer

B79 Tobacco smoking, polymorphisms in xenobiotic metabolism enzyme genes, and prostate cancer risk and survival. Ahva Shahabi, Roman Corral, Chelsea Catsburg, Amit D. Joshi, Jocelyn Koo, Esther M. John, Sue A. Ingles, Mariana C. Stern.

B81 Risk assessment of tobacco types and oral cancer. Madhuri Taranikanti, Bablu Das.

B82 Tobacco control in comprehensive cancer control plans: A 5-year update. Katherine Dunne, Susan Henderson, Sherri Stewart, J. Michael Underwood.

B83 Exposure to tobacco smoke from husband and breast cancer risk in Japanese women. Keiko Wada, Kozue Nakamura, Yuya Tamai, Michiko Tsuji, Toshiaki Kawachi, Chisato Nagata.

Other Molecular Epidemiology

B84 The association between germline genetic variants in the PI3K pathway and PI3K mutations in breast tumors. Abenaa M. Brewster, Melissa Bondy, Kim-anh Do, Aysegul Sahin, Katherine Hale, Caimiao Wei, Gordon Mills, Patricia Thompson.

B85 Genetic variation in the base excision repair pathway, environmental risk factors, and colorectal adenoma risk. Roman Corral, Juan Pablo Lewinger, Amit D. Joshi, A. Joan Levine, David Van Den Berg, Robert W. Haile, Mariana C. Stern.

B86 Estrogen metabolism and postmenopausal breast cancer risk in the B~FIT cohort. Cher M. Dallal, Ruth Pfeiffer, Barbara J. Fuhrman, Timothy D. Veenstra, Xia Xu, Louise A. Brinton, Jeffrey A. Tice, Diana S.M. Buist, Douglas C. Bauer, James V. Lacey, Jane A. Cauley, Trisha F. Hue, Andrea LaCroix, Roni Falk.

B87 Acute-phase proteins (C-reactive protein and Serum Amyloid A) and post-diagnosis mammographic density in breast cancer survivors. Anne Dee, Roberta McKean-Cowdin, Anne McTiernan, Richard N. Baumgartner, Kathy B. Baumgartner, Rachel Ballard-Barbash, Leslie Bernstein.

B88 Common, germline genetic variants in the Wnt/beta-catenin signaling pathway and colorectal cancer susceptibility. Michelle A.T. Hildebrandt, Moubin Lin, Cathy Eng, Scott Kopetz, Yonggang He, Sonny Nguyen, Wenjie Sun, Jie Lin, Ernest Hawk, Xifeng Wu.

B89 Endogenous hormone levels and lobular involution of the breast among healthy, postmenopausal women in the Komen Tissue Bank Study. Zeina G. Khodr, Daniel Visscher, Carolyn Mies, Stephen Hewitt, Anna Maria Storniolo, Jonine D. Figueroa, Mark E. Sherman, Ruth M. Pfeiffer, Gretchen L. Gierach, Louise A. Brinton, Roni T. Falk, Deesha Patel, Laura Linville, Susan E. Clare.

B90 Variation in circadian rhythm genes and risk of prostate cancer in the AGES-Reykjavik cohort. Sarah Coseo Markt, Unnur A. Valdimarsdottir, Albert Vernon Smith, Vilmundur Gudnason, Lorelei A. Mucci, Lara G. Sigurdardottir, Irene M. Shui, Jennifer R. Rider, Julie L. Kasperzyk, Steven W. Lockley, Charles A. Czeisler, Meir J. Stampfer, Thor Aspelund.

Pacific Ballroom D

B91 Genetic variations in the JAK-STAT pathway are associated with postoperative pulmonary complications after lobectomy in lung cancer patients. Xia Pu, Michelle A.T. Hildebrandt, Jae Y. Kim, Yuanqing Ye, Ara A. Vaporciyan, Arlene M. Correa, Stephen G. Swisher, Jack A. Roth, Xifeng Wu.

B92 Molecular characterization of colorectal cancer in Ghana. Leon Raskin, Jonathan C.B. Dakubo, Nicole Palaski, Joel Greenson, Stephen Gruber.

Other Risk Factors

B93 Nonsteroidal anti-inflammatory drugs and all-cause mortality, cancer mortality, and cardiovascular mortality in the Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial. Sarah E. Daugherty, Sonja I. Berndt, Mark Purdue, Wen-yi Huang.

B94 Hay fever and asthma as markers of atopic immune response and risk of colorectal cancer in three large cohort studies. Eric J. Jacobs, Susan M. Gapstur, Christina C. Newton, Michelle C. Turner, Peter T. Campbell.

B95 Higher breast density is positively associated with larger tumor size and lymph node metastasis: A cross-sectional study of 910 Korean breast cancer patients. Jong won Lee, Ja Young Cho, Sei-hyun Ahn.

B96 Age-related changes in mammographic density and breast cancer risk. Mariette Lokate, Rebecca Stellato, Wouter Veldhuis, Petra Peeters, Carla van Gils.

B97 Vitamin D and mammographic density in postmenopausal women: A cohort study nested within the NCIC CTG MAP.3 chemoprevention trial. Melanie Walker, Harriet Richardson, Susan Ellard, Amanda Hey, Andrew Cooke, Andrea Eisen, Shailendra Verma, Lavina Lickley, Dongsheng Tu, Karen Gelmon, Ralph Meyer, Will King, Paul Goss, Doris Jabs, Glenville Jones, Martin Kaufmann, Jean Wactawski-Wende, Angela Cheung, Eric Winquist, Silvana Spadafora.

B98 Parity, breastfeeding, and oral contraceptive use and risk of estrogen- and progesterone-negative breast cancer in the Breast Cancer Family Registry. Meghan E. Work, Esther M. John, John L. Hopper, Irene L. Andrulis, Mary Beth Terry.

Other

B99 Colon cancer treatment: Are there racial disparities in an equal-access healthcare system? Abegail Andaya, Lindsey Enewold, Shelia H. Zahm, Craig D. Shriver, Joan Warren, Alexander Stojadinovic, Katherine McGlynn, Kangmin Zhu.

B100 Association between ambient ultraviolet radiation and risk of esophageal cancer. Bich Tran, Robyn Lucas, Michael Kimlin, David Whiteman, Neale Rachel.

Preclinical and Translational Prevention Studies

Breast Cancer

B101 Breast cancer chemoprevention by a novel oleanane triterpenoid: Preclinical evidence. Anupam Bishayee, Roslin J. Thoppil, Animesh Mandal, Altaf S. Darvesh, Deepak Bhatia.

B102 A comparison of metformin treatment and moderate calorie restriction on mammary tumor development in obese mice. Michael E. Grossmann, Nancy K. Mizuno, Margot P. Cleary.

B103 Expression of n-3 fatty acid desaturase suppresses tamoxifen-resistant breast cancer in vitro and in fat-1 transgenic mice. Raghunatha Reddy, Ian Bayles, Qiuhong He.

B104 Expressions of PCNA in triple negative breast cancers and their clinical significance. Peng Jiaping, Meng Qun.

B105 Postmenopausal plasma sex hormone levels and subsequent risk of breast cancer over 20 years of follow-up. Xuehong Zhang, Shelley S. Tworoger, A. Heather Eliassen, Susan E. Hankinson.

Colon and Other Gastrointestinal Cancers

B106 Targeting colorectal cancers by zebularine involves ribosome stress and early induction of p53/ER stress. Pei-Ming Yang, Ching-Chow Chen.

B107 The preclinical effects of purified mollusk extracts in a short term mouse model for early-stage colon cancer. Babak Esmaeelian, Kirsten Benkendorff , Richard Le Leu, Catherine Abbott.

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B108 Metabolomic analysis for discovery of serum and fecal molecular indicators of dietary intervention for colon cancer. Matthew R. Young, Nancy H. Colburn, Gerd Bobe, Roycelynn Mentor-Marcel, Shakir Saud, Christopher R. Dextras, Terry Hartman, Elaine Lanza, John Milner, Young Kim.

Head and Neck Cancers

B109 Assessment of quantitative optical measurements of mucosal lesions as a surrogate biomarker in patients participating in an oral cancer chemoprevention trial. Jana M Howe, Rebecca Richards-Kortum, Ann M. Gillenwater, Sharon Mondrik, Richard Schwarz, Tim Quang, Vijayashree Bhattar, Sohini Dhar, Mary K. Quinn, William William, Michelle D. Williams.

B110 Chemoprevention of rat oral carcinogenesis by licofelone, a dual cyclooxygenase/lipoxygenase inhibitor. David L. McCormick, Thomas L. Horn, William D. Johnson, Ronald A. Lubet, Vernon E. Steele.

Lung Cancer

B111 Early and delayed rapamycin prevents NNK-induced lung adenocarcinoma in A/J mice. Jagan Mohan Reddy Patlolla, Levy Kopelovich, Li Qian, Laura Biddick, Yuting Zhang, Dhimant Desai, Shantu Amin, Stan Lightfoot, Chinthalapally V. Rao.

B112 Differential diagnosis of benign and malignant pulmonary disease importance of protein redox regulation levels. Gulcan Guntas, Asuman Kara, Mediha Ortakoylu, Volkan Sozer, Hayriye Erman, Remisa Gelisgen, Emel Caglar, Hafize Uzun.

Pancreatic Cancer

B113 High-fat diet accelerates development of precancerous lesions and fibrosis in mice expressing mutant K-Ras in pancreatic acinar cells. Zobeida Cruz-Monserrate, Bincy Philips, Baoan Ji, Jaroslaw Daniluk, Craig D. Logsdon.

B114 Next-generation whole-genome transcriptome SOLiD sequencing analysis of pancreatic ductal adenocarcinoma in LSL-KrasG12D/+ mice. Naveena B. Janakiram, Altaf Mohammed, Misty F. Brewer, Allison Gillaspy, Stan Lightfoot, Vernon E. Steele, Chinthalapally V. Rao.

B115 Eflornithine (DFMO) prevents progression of pancreatic intraepithelial neoplasia to ductal adenocarcinoma in LSL-KrasG12D/+ mice. Altaf Mohammed, Naveena B. Janakiram, Misty Brewer, Rebekah L. Ritchie, Anuj Marya, Stan Lightfoot, Vernon E. Steele, Chinthalapally V. Rao.

B116 EGCG inhibits growth of human pancreatic tumors orthotopically implanted in Balb C Nude mice through modulation of FKHRL1/FOXO3a. Sharmila Shankar, Luke Marsh, Rakesh K. Srivastava.

Concurrent Session 5

Global Challenges: Environmental Changes

Pacific Ballroom A

Chairperson: Thomas W. Kensler, University of Pittsburgh, Pittsburgh, PA

It is predicted that cancers across the world will increase from about 13 million cases per year now to over 22 million cases per year by 2030. Most of these cancers will occur in Asia and Africa. This rising number of cases is attributable in part to environmental exposures, changing dietary and lifestyle factors, and increasing overall life expectancy. Moreover, patterns of cancer types are changing rapidly in Asia, especially among younger birth cohorts, providing opportunities to better understand their etiologies and approaches for prevention.

This session will bring together experts utilizing population-based cohorts to probe the roles of hepatitis B virus infection and dietary aflatoxin exposure in changing rates of primary liver cancer in the endemic region of Qidong, China; metabolic syndrome, inflammation, and gene-environment interactions in biliary tract cancers in Shanghai, China; and factors influencing the association between chronic arsenic exposure in drinking water and increased incidence of precancerous skin lesions in Bangladesh. Pathways to prevention of these diseases will be highlighted.

Viral and dietary factors in declining liver cancer mortality in Qidong, China
Thomas W. Kensler

Arsenic carcinogenesis
Maria Argos, University of Chicago, Chicago, IL

Lifestyle, infection, and genetic factors in relation to biliary tract cancer
Ann W. Hsing, Cancer Prevention Institute of California, Fremont, CA

Curcumin is an effective chemopreventive substance for betel quid chewer's oral precancer in Sri Lanka*
Itsuo Chiba, Health Sciences University of Hokkaido, Sapporo, Japan

Concurrent Session 6

Recent Results on Mechanisms and Prevention of Tobacco-Induced Cancer

Pacific Ballroom C

Chairperson: Stephen S. Hecht, University of Minnesota Masonic Cancer Center, Minneapolis, MN

This session will summarize some important new data that could have significant implications in approaches to prevention of cancers caused by tobacco products. Dr. Hecht will present results of a study in rats that demonstrate the strong oral cavity carcinogenicity of (*S*)-*N'*-nitrosonornicotine, a component of smokeless tobacco products, widely used in many parts of the world and significantly penetrating the U.S. market. Dr. Belinsky will discuss epigenetic deregulation of microRNAs during tobacco carcinogen-induced transformation of bronchial epithelial cells, work that provides new insights on mechanisms of lung cancer induction by cigarette smoking. Dr. Spira will present recent results on the effects of cigarette smoking on gene expression in cells of the upper airways, a cutting edge approach to defining interindividual responses to tobacco carcinogens.

Induction of oral cavity cancer in rats by (S)-N'-Nitrosonornicotine, a constituent of smokeless tobacco
Stephen S. Hecht

Epigenetic deregulation of microRNAs during tobacco carcinogen-induced transformation of bronchial epithelial cells
Steven A. Belinsky, Lovelace Respiratory Research Institute, Albuquerque, NM

Translating airway gene-expression into biomarkers of smoking and lung cancer
Avrum E. Spira, Boston University School of Medicine, Boston, MA

Exposure to tobacco smoke from husband and breast cancer risk in Japanese women*
Keiko Wada, Gifu University Graduate School of Medicine, Gifu, Japan

*Short talks from proffered papers

Plenary Session 4

Thursday, October 18 • 4:15 p.m.-6:15 p.m.

Genomics and Prevention: Will Genomics Lead to Optimized Cancer Prevention?

Pacific Ballroom C

Chairperson: Timothy R. Rebbeck, University of Pennsylvania School of Medicine, Philadelphia, PA

Enormous progress has been made using leaps in genomic technology, multicenter collaborative research, and knowledge of human genomic variation. Hundreds of validated cancer risk loci have been identified using genome-wide association studies; these data have revealed novel etiological pathways for many cancers. Genomics research has also identified biomarkers that could be used to inform cancer etiology, prognosis, and treatment. Despite this success, there has been concern that genomic information may have limited clinical utility.

In this session, we will explore the potential for genomic information to inform cancer prevention strategies, and identify approaches that may be best suited to optimize the public health impact of genomic information.

The promise of GWAS studies to assess cancer prevention
Stephen J. Chanock, National Cancer Institute, Bethesda, MD

Insights on cancer risk from normal breast tissue gene expression
Melissa Troester, University of North Carolina Lineberger Comprehensive Cancer Center, Chapel Hill, NC

SERM breast cancer prevention pharmacogenomics: Beyond biomarkers
Richard M. Weinshilboum, Mayo Clinic College of Medicine, Rochester, MN

How will genomic information be useful to limit cancer risk behaviors?
Christopher I. Amos, Geisel School of Medicine, Dartmouth College, Lebanon, NH

MEG Town Meeting and Reception

Thursday, October 18 • 6:30 p.m.-8:00 p.m.

Molecular Epidemiology Working Group (MEG) Town Meeting and Reception

Pacific Ballroom B

Chairperson: James R. Cerhan, Mayo Clinic College of Medicine, Rochester, MN

This is an opportunity for all conference attendees to learn how to become involved in consortia and other large-scale projects, as well as to be updated on the current funding situation for epidemiological studies. Stephen J. Chanock, M.D., Director, Cancer Genomics Research Laboratory, National Cancer Institute, National Institutes of Health, will discuss Involvement in Consortia and Major Projects, particularly for junior professionals. Deborah M. Winn, Ph.D., Deputy Director, Division of Cancer Control and Population Sciences, National Cancer Institute, National Institutes of Health, will provide an update on Funding Opportunities for New and Early-Stage Investigators. Come learn about these and other important MEG initiatives, meet members of the working group and steering committee, in addition to taking advantage of the opportunity to join the MEG Working Group. A networking reception will follow the discussion period.

Speakers:
Stephen J. Chanock, National Cancer Institute, Bethesda, MD
Deborah M. Winn, National Cancer Institute, Rockville, MD

About the AACR's Molecular Epidemiology Working Group (MEG):
The MEG Working Group is composed of epidemiologists, molecular biologists and geneticists, biochemists, toxicologists, nutritionists, clinical and translational researchers, pathologists, biostatisticians, ethicists, and researchers from any other relevant scientific discipline who are interested in a multidisciplinary approach to the study of cancer and chronic disease etiology, thereby promoting the cure and prevention of cancer and the improvement of public health. The working group promotes the incorporation of molecular and biochemical concepts and techniques into well-designed epidemiologic studies by providing an ongoing forum for the scholarly discussion and development of sound approaches to the conduct and interpretation of molecular epidemiologic studies; by sponsoring scientific and educational programs and activities that will advance the field; and by fostering partnerships and collaborations among scientists in a variety of disciplines encompassed in and related to molecular epidemiology.

BSCR Networking Event

Thursday, October 18 • 6:30 p.m.-8:00 p.m.

Behavioral Science in Cancer Research Working Group Networking Event

California Ballroom B

Members of the Behavioral Science in Cancer Research Working Group (BSCR) and those interested in the field are invited to attend this networking event. Attendees can learn about membership in BSCR and network with colleagues.

About BSCR:
The Behavioral Science in Cancer Research Working Group (BSCR) promotes the scholarly discussion of the role of behavioral science research and the importance of interdisciplinary collaborations in cancer control by bringing together scientists from behavioral science and all cancer research disciplines. Membership in BSCR is open to individuals from any scientific discipline who are interested in working together to increase knowledge about behavioral science as it relates to cancer.

Forum 3

Friday, October 19 • 7:00 a.m.-8:00 a.m.

How to Gain Access to Worldwide Cohorts

Pacific Ballroom C

Chairperson: Mary Beth Terry, Columbia University School of Public Health, New York, NY

Ever want to replicate your exciting finding in 50 people prospectively in 500,000 people? This session will provide an overview on existing cohorts throughout the world for epidemiologic research in cancer. The panel represents and will provide perspectives from the National Cancer Institute and research foundations, as well as users' perspectives. The scientists will highlight ways to gain access and enhance collaborations with cohorts funded through the National Cancer Institute, initiating studies within existing registries, and accessing resources and cohorts outside of the United States.

Cancer epidemiology consortia and international cohorts: Challenges and opportunities
Daniela Seminara, National Cancer Institute, Bethesda, MD

Worldwide collaborations: The experience of EPIC
Timothy Key, Oxford University, Oxford, United Kingdom

An efficient resource to accelerate research into the cause and prevention of breast cancer: The Love/Avon Army of Women
Leah Wilcox Eshraghi, Dr. Susan Love Research Foundation, Santa Monica, CA

Discussion/Q & A

Plenary Session 5

Friday, October 19 • 8:00 a.m.-10:00 a.m.

Risk Assessment and Early Detection

Pacific Ballroom C

Chairperson: Samir M. Hanash, Fred Hutchinson Cancer Research Center, Seattle, WA

Major inroads to reduce cancer mortality will require a better ability to identify subjects at increased risk of developing cancer, leading to preventive interventions and to the application of effective screening modalities for early detection. Innovations in risk assessment and early detection research through integration of subjects' characteristics with molecular profiles will be addressed in this session.

A mouse-to-human search for early detection markers
Samir M. Hanash

Translational epidemiology: Towards personalized cancer risk assessment, prevention, and therapy
Xifeng Wu, The University of Texas MD Anderson Cancer Center, Houston, TX

Phenotypic stochasticity and implications for prevention and therapy
Thea TIsty, UCSF School of Medicine, San Francisco, CA

Pancreatic cancer: The future of risk assessment and early detection
Gloria M. Petersen, Mayo Clinic College of Medicine, Rochester, MN

Concurrent Sessions 7-8
Friday, October 19 • 10:15 a.m.-12:00 p.m.

Concurrent Session 7
Targeting Tumor-Initiating Cells

Pacific Ballroom C

Chairperson: Robert Benezra, Memorial Sloan-Kettering Cancer Center, New York, NY

Cancer heterogeneity has been shown in a number of different tumor types to produce a subset of cells capable of reinitiating disease and recapitulating the original tumor cell diversity, properties which have been likened to *bone fide* stem cells. In some cases these tumor initiating cells have been shown to be resistant to various modes of therapeutic intervention and therefore represent important targets in the search for more effective treatments.

In this session we will examine and contrast the nature of this tumor cell hierarchy in three different tumor types (glioma, medulloblastoma, and breast) and outline strategies to utilize this information in new drug development schemes.

Understanding the role of stem-like tumor cells in proneural glioma
Robert Benezra

Targeting tumor-initiating cells in medulloblastoma
Robert J. Wechsler-Reya, Sanford-Burnham Medical Research Institute, La Jolla, CA

Chemical-genetic dissection of cancer stem cell biology
Piyush Gupta, Whitehead Institute, Cambridge, MA

Targeting breast cancer stem cells using cancer preventive rexinoids*
Powel H. Brown, The University of Texas MD Anderson Cancer Center, Houston, TX

*Short talk from proffered paper

Concurrent Session 8
Molecular Targets for Cancer Prevention

Pacific Ballroom A

Chairperson: Zigang Dong, University of Minnesota Hormel Institute, Austin, MN

Although successful for a limited number of tumor types, the efficacy of cancer therapies remains poor overall. Many believe that this could be avoided by focusing on cancer prevention. During the process of identifying preventive agents, dietary phytochemicals, which are thought to be safe for human use, have emerged as modulators of key cellular signaling pathways. This session will focus on understanding how these chemicals perturb these pathways by modeling their interactions with their target proteins.

Computerized approaches to molecularly-designed drugs and target identification for cancer prevention
Zigang Dong

New strategies for cancer chemoprevention
Vernon E. Steele, National Cancer Institute, Bethesda, MD

Targeting molecular pathways in the tumor microenvironment: A holistic approach for cancer chemotherapy
Rajesh Agarwal, University of Colorado Denver, Aurora, CO

Novel Gemini vitamin D compounds for prevention of breast cancer by targeting stem cells
Nanjoo Suh, Rutgers University Laboratory for Cancer Research, Piscataway, NJ

Closing Remarks
Friday, October 19 • 12:00 p.m.-12:15 p.m.

Pacific Ballroom C