

AMERICAN SOCIETY  
of  
PREVENTIVE ONCOLOGY



*American Society of  
Preventive Oncology*

38th ANNUAL MEETING  
PROGRAM & ABSTRACTS

March 8-11, 2014

Hyatt Regency Crystal City, Arlington, VA

# **American Society of Preventive Oncology**

## **38th Annual Meeting**

### **President:**

**Wendy Demark-Wahnefried, PhD**

University of Alabama - Birmingham

### **Program Co-Chairs:**

**Elizabeth A. Platz, ScD, MPH**

Johns Hopkins Bloomberg School of Public Health

**Kathryn Schmitz, PhD, MPH**

University of Pennsylvania

The **American Society of Preventive Oncology** is an active and growing organization that is striving to: 1) promote the exchange and dissemination of information and ideas relating to cancer prevention and control; 2) identify and stimulate research areas in cancer prevention and control; and 3) foster the implementation of programs in cancer prevention and control.

Meetings of the **American Society of Preventive Oncology** are organized for professionals in clinical, educational or research disciplines who appreciate the challenges of a multidisciplinary scientific forum and who are committed to a comprehensive approach to cancer prevention and control.

# Special Acknowledgements

The ASPO Executive Committee offers special thanks to Program Co-Chairs, **Drs. Elizabeth Platz** and **Kathryn Schmitz** for their extraordinary commitment in facilitating the development of the program for this meeting, and to the entire 2014 ASPO Program Committee for sharing their expertise and their valuable contributions to the program.

## 2014 Program Committee

**Elizabeth Platz, ScD, MPH, Co-Chair**  
Johns Hopkins University

**Kathryn Schmitz, PhD, MPH, Co-Chair**  
University of Pennsylvania

**Karen Basen-Engquist, PhD, MPH**  
UT M.D. Anderson Cancer Center

**Dejana Braithwaite, PhD**  
UC – San Francisco

**Wen-Ying Sylvia Chou, PhD, MPH**  
National Cancer Institute

**Wendy Demark-Wahnefried, PhD**  
University of Alabama-Birmingham

**Norma Kanarek, PhD**  
Johns Hopkins University

**Peter Kanetsky, PhD, MPH**  
Moffitt Cancer Center

**Hazel Nichols, PhD**  
University of North Carolina

**Electra Paskett, PhD**  
The Ohio State University

**Mary Beth Terry, PhD**  
Columbia University

**Cheryl Thompson, PhD**  
Case Western Reserve University

**Amy Trentham-Dietz, PhD**  
University of Wisconsin - Madison

# ASPO Executive Committee Members

(parentheses indicates term expiration)

Position	Name
President	Wendy Demark-Wahnefried
President-Elect	Polly Newcomb (2017)
Past President	Peter Shields (2013)
Secretary/Treasurer	Susan Steck (2016)
At-large member	Elena Martinez (2016)
At-large member	Amelie Ramirez (2014)
At-large member	Amy Trentham-Dietz (2015)
Honorary	Al Neugut
Honorary	Melissa Bondy
ACS representative	Susan Gapstur
ASCO representative	Ernest Hawk
Staff	Heidi Sahel
<b><i>Special Interest Groups:</i></b>	
Behavioral Science & Health Communication	Chair: Amy McQueen (2014) Vice-Chair: Wen-Ying Sylvia Chou
Molecular Epi & The Environment	Chair: Peter Kanetsky (2014) Vice-Chair: Roberd Bostick
Lifestyle Behaviors, Energy Balance & Chemoprevention	Chair: Elizabeth Jacobs (2015) Vice-Chair: Carolyn Fang
Survivorship & Health Outcomes/Comparative Effectiveness Research	Chair: K Basen-Engquist (2015) Vice-Chair: Katie Sterba
Cancer Health Disparities	Chair: Electra Paskett (2015) Vice-Chair: Beti Thompson
Early Detection & Risk Prediction of Cancer	Chair: Deb Glueck (2016) Vice-Chair: Mira Katz
Junior Members (Early Career)	Chair: Cheryl Thompson (2014) Vice-Chair: Brian Sprague
International Issues in Cancer	Chair: Dejana Braithwaite (2015) Vice-Chair: Meira Epplen
<b>Task Force Chairs</b>	
Membership	Electra Paskett
Website	Amy Leader
Development	Polly Newcomb
Career Development	Cheryl Thompson
Publications	Melissa Bondy & Amelie Ramirez



## ASPO Awards Through the Years

Year	Distinguished Achievement Awardee	Distinguished Service Awardee	Joseph Cullen Award in Tobacco Research
1983	Michael Shimkin		
1984	Ernst Wynder		
1985	Sam Shapiro		
1986	William Haenszel		
1987	Lester Breslow		
1988	Nicholas Petrakis		
1989	Alfred Knudson		
1990	Saxon Graham	John Weisburger	
1991	Barbara Hulka		
1992	David Schottenfeld		Ellen Gritz
1993	Joseph Fraumeni		Thomas Glynn
1994	Anthony Miller	Richard Love	Tracy Orleans
1995	Pelayo Correa		Donald Shopland
1996	Walter Willett	Al Neugut	Michael Fiore
1997	Barbara Rimer		Edward Lichtenstein
1998	Peter Greenwald		Jack Henningfield
1999	J. Potter/W.Ki Hong		John Pierce
2000	Margaret Spitz		Susan Curry
2001	I.B. Weinstein/Ellen Gritz		David Burns
2002	Robert Hoover		Jonathan Samet
2003	Leslie Bernstein		K. Michael Cummings
2004	Dave Alberts		Caryn Lerman
2005	Graham Colditz		Stanton Glantz
2006	Frank Meyskens	Carolyn Aldige	Gary Giovino
2007	Bernard Levin		Michael Thun
2008	Malcolm C. Pike		David Abrams
2009	Mitchell Gail		Ronald Davis (posthumously)
2010	Paul Engstrom		Jasjit Ahluwalia
2011	Patricia Ganz		Alex Prokhorov
2012	Electra Paskett		Stephen Hecht
2013	Polly Newcomb		Dave Wetter
2014	Bob Croyle		Vish Vishwanath

**Third Annual Calle/Rodriguez Minority Travel Awards for a Top-Ranked Abstract awardees:**

**Traci Bethea, PhD**, Boston University

Neighborhood socioeconomic status in relation to cancer mortality in the Black Women's Health Study, 1995-2011

**Fred Tabung, PhD(c), MSPH**, University of South Carolina

The Dietary Inflammatory Index and Risk of Colorectal Cancer in Women

**Third Annual Electra Paskett Scholarship Travel Award for the Top-Ranked Pre- or Post-doctoral fellow:**

**Jessica Krok, PhD**, The Ohio State University

Clinic type and patient characteristics affecting time to resolution after an abnormal cancer-screening exam

**2014 ASPO Distinguished Achievement Awardee: Robert Croyle, PhD**, National Cancer Institute

**2014 Joseph Cullen Award in Tobacco Research: Kasisomayajula "Vish" Viswanath, PhD**, Dana Farber Cancer Institute

# Support Acknowledgements

The program organizing committee wishes to express appreciation to the following organizations for their commitment to continuing medical education by providing educational grants in support of this conference:

**National Cancer Institute (conference grant R13 CA186680-01)**

**Breast Cancer Research Foundation (BCRF)**

**American Institute for Cancer Research (AICR)**

The American Institute for Cancer Research is a non-profit organization focusing exclusively on diet, nutrition, physical activity, and cancer. Our mission is to fund research and to increase awareness of the role of diet, nutrition and physical activity in cancer prevention, treatment, and survivorship.

**Legacy for Health**

Legacy helps people live longer, healthier lives by building a world where young people reject tobacco and anyone can quit. Legacy's proven-effective and nationally recognized public education programs include truth©, the national youth smoking prevention campaign that has been cited as contributing to significant declines in youth smoking; EX©, an innovative public health program designed to speak to smokers in their own language and change the way they approach quitting; and research initiatives exploring the causes, consequences and approaches to reducing tobacco use. Located in Washington, D.C., the foundation was created as a result of the November 1998 Master Settlement Agreement (MSA) reached between attorneys general from 46 states, five U.S. territories and the tobacco industry. To learn more about Legacy's life-saving programs, visit [www.LegacyForHealth.org](http://www.LegacyForHealth.org).

**American Cancer Society**

In 2012, the American Cancer Society and American Society of Preventive Oncology announced the first annual “Calle/Rodriguez Minority Travel Award for a Top-Ranked Abstract” funded by the American Cancer Society. Drs. Jeanne Calle and Carmen Rodriguez were highly-respected epidemiologists, beloved colleagues and friends to many in the cancer research community. As Vice President of Epidemiology at the American Cancer Society, Dr. Calle was Principal Investigator of the Cancer Prevention Study (CPS)-II, a prospective study of more than one million men and women designed to identify risk factors for cancer. In particular, Dr. Calle was the lead author on widely-cited landmark studies establishing the link between obesity and cancer risk. She also guided the development and initiation of CPS-III, a study that will further our understanding of the causes of cancer and ways to prevent it for the next generation. A physician from Spain, Dr. Rodriguez was the Strategic Director of the CPS-II biospecimen repository. She published more than 100 scientific articles, with a special interest in studying ovarian and prostate cancers. Her work on the associations between hormone replacement therapy and cancer risk earned widespread media attention. Dr. Rodriguez also served as a Spanish-speaking spokesperson for the American Cancer Society. Professionally, Jeanne and Carmen were more than scientists; they were valued colleagues and committed mentors to many. Carmen and Jeanne passed away within months of each other in 2008-2009. While their deaths have been a tremendous loss, their spirits will live on in part due to the generosity of others whose donations allow the American Cancer Society to create this memorial award.

## EXHIBITORS

The conference organizing committee wishes to express appreciation to the following organizations:

### **Breast Cancer Surveillance Consortium (BCSC)**

The Breast Cancer Surveillance Consortium has the nation's largest longitudinal collection of mammography data from breast cancer screening in community practice. Our collaborative network of mammography registries is supported by a Statistical Coordinating Center and funded by the National Cancer Institute. The BCSC is a rich resource for population-based research.

# GENERAL INFORMATION

## Assistance to Participants

The American Society of Preventive Oncology meeting staff is available to provide assistance or information at any time during the meeting. Questions should be addressed to the staff members and volunteers at the Registration Desk.

## Poster Sessions

This year's poster session will be Monday, March 10<sup>th</sup>, in The Independence Center (one floor up from the Ballroom level). The posterboards will be in place by Monday afternoon at Noon. Please have your poster displayed by 4pm for judging purposes. The poster session and reception will be from 5:30pm – 7:30pm. Your poster must be removed by 8pm immediately after the poster reception.

A distinguished panel of senior faculty will select outstanding posters at the poster session. Awards will be announced and presented at the end of the poster session, along with a brief discussion of the winners' merits. *Presenters should be positioned near their posters during the poster session for discussion and judging. All posters not taken down by 8pm on Monday evening will be removed and put in the registration area.*

## PLEASE HELP US PLAN FOR THE FUTURE

Please respond to the on-line survey that will be sent soon after the meeting. This will help future Program Committees and conference staff to better meet your professional and logistical needs.

## NEXT YEAR . . .

The 39th Annual Meeting of the American Society of Preventive Oncology will be:

**March 14-17, 2015**  
**on the campus of the University of Alabama -Birmingham**

## **ASPO At-a-Glance**

### **SATURDAY, MARCH 8, 2014**

3:00 pm – 7:00 pm  
**Washington AB**

**Cancer Prevention & Control Associate Directors/Program Leaders Meeting - Part 1 (Invitation Only)**

### **SUNDAY, MARCH 9, 2014**

8:00 am – 5:00 pm  
**Regency Landing**  
8:00 am – Noon  
**Washington AB**

**Registration**

**Cancer Prevention & Control Associate Directors/Program Leaders Meeting - Part 2 (Invitation Only)**

10:00 am – 1:00 pm  
**Potomac 2**

**New Investigators Workshop (Invited Applicants Only)**

12:30 pm – 3:30 pm  
**Potomac 1**

**Working Lunch Meeting of the ASPO Executive Committee**

1:00 pm – 4:00 pm  
**Washington B**

**ASPO Junior Members Sessions (open to all attendees)**

2:00 pm – 4:00 pm  
**Washington A**

**Meeting of NCI R25T Training Program Principal Investigators**

4:00 pm – 7:00 pm  
**Regency**

**OPENING SESSION OF THE ASPO GENERAL MEETING**

**ASPO Welcome**

**Joseph Cullen Awardee Address**

**Distinguished Achievement Award Address**

**Symposium 1: An Ounce of Prevention is Worth a Pound of Screening... Or is it the Other Way Around?**

7:00 pm – 8:00 pm  
**Washington AB**

**Networking Mixer (Junior/Senior Member Networking Event)**  
(light refreshments, cash bar)

### **MONDAY, MARCH 10, 2014**

8:00 am – 9:30 am

**Concurrent Breakfast Sessions**

**Potomac 5-6**

**Joint Special Interest Group Breakfast: Molecular Epidemiology and the Environment, and International Issues in Cancer**

**Potomac 3-4**

**Special Interest Group Breakfast: Survivorship & Health Outcomes/Comparative Effectiveness Research**

9:30 am – 10:00 am

**Break**

10:00 am – 11:30 am  
**Regency CD**

**Concurrent Paper Session 1: Early Detection & Cancer Health Disparities**

10:00 am – 11:30 am <b>Potomac 5-6</b>	<b>Concurrent Paper Session 2 : Lifestyle Behaviors, Energy Balance &amp; Chemoprevention</b>
11:30 am- Noon Noon – 1:30 pm <b>Regency CD</b>	<b>Break</b> <b>Best Hot Topic Papers: Cancer Epidemiology, Biomarkers and Prevention (CEBP)</b>
2:00 pm – 4:00 pm <b>Regency CD</b>	<b>Symposium 2: Framing Our Population-Based Cancer Research Questions to Make a Difference at Local, National, and Global Levels</b>
4:00 pm – 4:30 pm	<b>Break</b>
4:30 pm – 5:30 pm <b>Regency CD</b>	<b>ASPO Business Meeting</b> (open to all)
5:30 pm - 7:30 pm <b>Independence Center</b>	<b>Poster Session and Reception</b> (dinner on your own – light refreshments, cash bar)

## **TUESDAY, MARCH 11, 2014**

8:00 am – 9:30 am <b>Washington Room</b>	<b>Concurrent Breakfast Sessions</b> <b>Special Interest Group Breakfast: Cancer Health Disparities</b>
8:00 – 9:30 am <b>Potomac 5-6</b>	<b>Special Interest Group Breakfast: Lifestyle Behaviors, Energy Balance, and Chemoprevention</b>
9:30 am – 10:00 am	<b>Break</b>
10:00 am – 11:45 am <b>Regency CD</b>	<b>Symposium 3: Promoting Health Behaviors in the Context of Survivorship Care Coordination for Common Adult Cancers</b>
Noon – 1:30 pm  <b>Washington Room</b>	<b>Concurrent Lunch Programs</b>  <b>ASPO Junior Member Lunch:</b> <b>NCI Session on Career Development for Doctoral Students, Postdoctoral Fellows, and Junior Faculty</b>
Noon – 1:30 pm <b>Potomac 5-6</b>	<b>Mid- and Senior Faculty Development Lunch</b>
2:00 pm – 3:30 pm <b>Regency CD</b>	<b>Concurrent Paper Session 3: Behavioral Science</b>
2:00 pm – 3:30 pm <b>Potomac 5-6</b>	<b>Concurrent Paper Session 4: Survivorship &amp; Health Outcomes/Comparative Effectiveness</b>
3:30 pm	<b>Conference Concludes</b>







**LEGACY<sup>®</sup>**

FOR LONGER HEALTHIER LIVES

**Abramson Cancer Center**



**Penn Medicine**



**JOHNS HOPKINS**

**M E D I C I N E**

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**THE SIDNEY KIMMEL  
COMPREHENSIVE CANCER  
CENTER**



# WELCOME TO BIRMINGHAM

NEXT YEAR

**ASPO 39TH ANNUAL MEETING**  
**MARCH 14<sup>TH</sup>–17<sup>TH</sup>, 2015**

***Mark your calendars and come join us for Springtime in the South!!***

The University of Alabama at Birmingham (UAB) will host the 2015 ASPO Annual Meeting. A flourishing University/Medical Center, UAB is ranked one of the nation's top hospitals by *US News and World Report*. It also is one of the 1st NCI-designated Comprehensive Cancer Centers.

With a pleasant average March temperature of ~60°F, enjoy the Arlington Antebellum Home and the Botanical Gardens in full spring bloom. Then take the magic indoors with world class performances at the Alys Stephens Center and the Alabama Ballet.

The Civil Rights Institute is world-acclaimed and a reception-tour is currently planned for one evening.

Can you spend a bit more time, maybe merge the

ASPO trip with spring break? If so, head for the Gulf and the white sand beaches. On the way, stop at the Rosa Parks or Zelda Fitzgerald Museums in Montgomery. Fans of "To Kill a Mockingbird," Harper Lee and Truman Capote need to see the Monroeville Courthouse. Or if the great outdoors is your pleasure, set-off hiking in the trails that meander through the Appalachian foothills. Take your cell phone and snap a "selfie" beside a hidden waterfall!

The Southern Museum of Flight, Barber Motorsports Park and Vintage Museum and Alabama Sports Hall of Fame, draw ardent sports enthusiasts as does the new, state of the art ballpark, Regions Field located directly across from Birmingham's 'Living

Room,' Railway Park. While in the area, be sure not to miss the boiled peanuts at the Peanut Depot on Morris Avenue. Try one of every kind!

If golf is for you then Birmingham touts several excellent golf courses within 30 minutes of UAB. Two are included in the Robert Trent Golf Trail!

Over 500 restaurants and Craft Breweries ranging from down home cooking to high-end 5-star dining are available to delight any foodie - many within an easy walk of your hotel. Amuse your senses while you experience this revitalized Southern City!

We'll See You there!



THE UNIVERSITY OF  
ALABAMA AT BIRMINGHAM

## Did you know?

- ✦ Birmingham founded Veterans Day
- ✦ Alabama Jazz Hall Of Fame is right here in town
- ✦ The Vulcan is the largest cast-iron statue in the world
- ✦ Regions Field is home to the AA Minor League team the Birmingham Barons
- ✦ Birmingham was Voted The Best City for Bass Fishing
- ✦ Alabama was the 1st state to make Christmas an official holiday
- ✦ It's illegal to operate a vehicle while blindfolded
- ✦ Home to Southern Living Magazine
- ✦ Famous People Born in the Birmingham area: Charles Barkley, Edith Brown Clement, Courtney Cox, Taylor Hicks, Ruben Studdard, Claudette Colvin, Tobias Wolff, Condoleezza Rice

**With over 40 years of continuous research funding which currently exceeds \$433 M, UAB is now recruiting Associate & Assistant Professors in the following areas:**

### **ENERGETICS & CANCER**

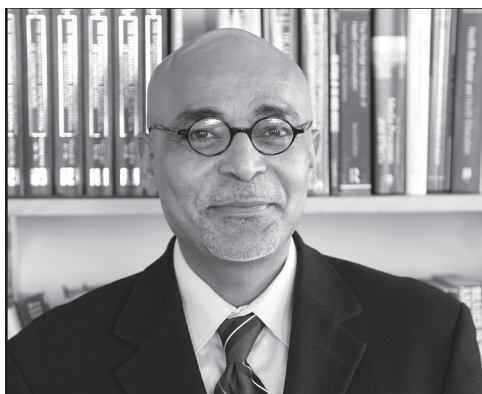
**Contact:** Wendy Demark-Wahnefried, PhD, RD, Professor & Webb Endowed Chair of Nutrition Sciences Email: [demark@uab.edu](mailto:demark@uab.edu)

### **EPIDEMIOLOGY**

**Contact:** Christine Skibola, PhD, Professor & Caldwell Marks Endowed Chair in Molecular Epidemiology Email: [cskibola@uab.edu](mailto:cskibola@uab.edu)

**26 Airlines offer Direct Flights to Birmingham- Shuttlesworth International Airport daily. For a complete list go to :**

<http://www.flybirmingham.com>



# CONGRATULATIONS

## “VISH” VISWANATH, PhD

### Recipient of the 2014 Joseph W. Cullen Memorial Award For Excellence in Tobacco Research

Dr. Viswanath is a visionary leader who has made significant contributions to our understanding of the impact that inequalities in health communications can have on disparities in health, including in tobacco control. His efforts are deepening our understanding of the roles media and social inequalities play in tobacco control.

- He served as co-editor of the National Cancer Institute monograph, *The Role of the Media in Promoting and Reducing Tobacco Use*.

- His research has examined the contributions of exposure to mass media to patterns of tobacco use. In India, for example, he has studied the role of mass media in exposing populations to both pro- and anti-tobacco messages.

- Dr. Viswanath is developing and testing innovative strategies to address tobacco control through the media. His ongoing intervention study, Project IMPACT (Influencing Media and Public Agenda on Cancer and Tobacco Disparities), seeks to increase actionable health information on tobacco use and thereby ultimately reduce tobacco consumption. The focus is on racial/ethnic minorities and low

socioeconomic status populations, where the reductions in cigarette smoking in the last several decades have been relatively small.

- In Project CLEAR, funded by the FDA, he is assessing the impact of graphic health warnings on cigarette packs on tobacco-related attitudes, knowledge and behaviors among people from lower socioeconomic position and ethnic and racial minorities.

#### CURRENT LEADERSHIP POSITIONS INCLUDE:

##### **Dana-Farber Cancer Institute:**

*Professor, Department of Medical Oncology*

##### **Harvard School of Public Health:**

*Professor, Department of Social and Behavioral Sciences*

*Associate Director, Lung Cancer Disparities Center*

*Chair, Health Communication Concentration*

##### **Dana-Farber/Harvard Cancer Center:**

*Leader, Cancer Risk and Disparities Program*

*Director, Health Communications Core*

*Founding director, Enhancing Communications for Health Outcomes (ECHO) Laboratory*



**DANA-FARBER**  
CANCER INSTITUTE



**HARVARD** | **SCHOOL OF PUBLIC HEALTH**  
Powerful ideas for a healthier world

# ASPO congratulates

## **Robert T. Croyle, PhD**

Director of the NCI Division of Cancer Control and Population Sciences  
Recipient of the Distinguished Achievement Award!



### **NCI-FUNDED POST-DOCTORAL TRAINING IN CANCER CONTROL AND PREVENTION**

#### **UNIVERSITY OF ILLINOIS AT CHICAGO**

National Cancer Institute-funded post-doctoral research position is available at the University of Illinois at Chicago Cancer Education and Career Development Program. The Program offers a multi-disciplinary mentored environment integrating behavioral to biological science research focused on understanding and preventing cancer. The traineeship provides preparation for an individual who wishes to pursue an independent academic cancer research career in health disparities and cancer survivorship. The trainee will work with established investigators and will be expected to develop research proposals; produce two to three publications per year; and work with a multidisciplinary team.

This traineeship is up to three years, renewable each year contingent upon satisfactory performance. Individuals with a doctoral degree in public health, epidemiology, community psychology, sociology or related allied health science degrees with a public health focus are encouraged to apply, as are those from underrepresented groups. Search remains open until position is filled. Stipend follows NIH guidelines and fringe benefits are included. More information regarding the program can be found at <http://cecdp.ihrp.uic.edu/>

Applications require a letter, curriculum vitae, three samples of written materials, official transcripts, and three recommendation letters submitted to [cecdp@uic.edu](mailto:cecdp@uic.edu).

*The University of Illinois at Chicago is an Affirmative Action/Equal Opportunity Employer.*

Marian Fitzgibbon PhD  
CECDP Co-Director

Melinda Stolley, PhD  
CECDP Co-Director



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THE OHIO STATE UNIVERSITY  
COMPREHENSIVE CANCER CENTER

## Congratulations Jessica Krok, PhD

Post-doctoral Fellow  
The Ohio State University  
Center for Population Health  
and Health Disparities

For being selected as the  
*2014 ASPO Electra D. Paskett Travel Award  
Recipient Highest Rated Trainee Abstract.*



The James



THE OHIO STATE UNIVERSITY  
COMPREHENSIVE CANCER CENTER

## Congratulations Michelle Kurta, PhD

Post-doctoral Fellow  
The Ohio State University  
Center for Population Health  
and Health Disparities

On your paper being selected for the  
*Best of the Cancer Epidemiology,  
Biomarkers and Prevention (CEBP) Session.*



The University of Alabama at Birmingham (UAB) is home to one of the original eight NCI-designated comprehensive cancer centers. UAB also has one of the nation's oldest and continuously-funded research training programs in cancer prevention and control (NCI R25T). For over a quarter of a century, we have provided interdisciplinary research training to both pre- and post-doctoral fellows, who now have established independent research careers in academic and scholarly organizations. Currently, we are seeking competitive applicants for post-doctoral fellowship positions.

This 1-2 year program prepares fellows for independent research careers in the field of cancer prevention and control. Our program is comprehensive, competitive and provides training in areas that range from primary prevention to cancer survivorship, from the cell to populations, and from basic science to community-based participatory research and interventions.

This successful and interdisciplinary postdoctoral program provides expert and closely-mentored training by a multi-disciplinary team. Senior faculty mentors represent diverse disciplines, including epidemiology, nutrition sciences, cancer survivorship, palliative and supportive care, nursing, informatics, health policy, social & behavioral sciences, cancer biology, and genetics. The program provides didactic and experiential training opportunities, including practical experience in grant preparation, data analysis, project management, professional skills training, and scientific writing.

The program seeks highly qualified and experienced individuals who are passionate about advancing the science of cancer prevention and control, and who are motivated to take full opportunity of the rich, scholarly resources available at UAB. Eligible candidates must be U.S. citizens or permanent residents, and possess a doctoral degree (PhD, DrPH, MD, DO or equivalent) from an accredited university.

The program offers:

\*Up to two years of funding   \*Competitive salary and benefits   \*Tuition  
\*Health insurance   \*Research support   \*Travel allowance

Review of applications for 2014-15 will begin immediately and continue until positions are filled. Applications should include the following: 1) Cover letter including a statement of research interests and how the training grant will further your scholarly career in cancer prevention and control; 2) Curriculum vitae; and 3) 3 letters of recommendation and reprints of first authored papers.

For more information, contact Drs. Wendy Demark-Wahnefried ([demark@uab.edu](mailto:demark@uab.edu)), Karen Meneses ([menesesk@uab.edu](mailto:menesesk@uab.edu)) and/or Michael Brooks (at the ASPO meeting) or visit our website <http://www.uab.edu/cpctp>



# THE NEW JAMES CANCER HOSPITAL AND SOLOVE RESEARCH INSTITUTE

OPENING DECEMBER 2014



The James



THE OHIO STATE UNIVERSITY  
COMPREHENSIVE CANCER CENTER



## **Launching independent population scientists**

**“Fred Hutchinson has an amazing research infrastructure and a vast network of world-renown researchers to learn from and with whom to collaborate. This supportive environment enabled me to successfully transition to being an independent researcher in health disparity cancer research.”**

**—Linda Ko, PhD**

**Cancer Prevention Program  
Division of Public Health Sciences**

**FRED HUTCHINSON  
CANCER RESEARCH CENTER**

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## **Full, Associate, or Assistant Member/Research Professor: Obesity & Cancer**

Full, Associate or Assistant Member, Fred Hutchinson Cancer Research Center; Full, Associate, or Assistant Research Professor, University of Washington.

The Division of Public Health Sciences (PHS) of the Fred Hutchinson Cancer Research Center (FHCRC) invites applications from population science researchers with an interest in obesity and cancer, with a particular focus on developing, testing and implementing population-based interventions to reduce obesity rates and promote energy balance in adults or children. One position is available and open to researchers of any rank, although preference will be given to established investigators (Associate or Full Member equivalent to Associate or Full Professor at a University) with a track record of leadership and independent funding. An appointment in the Department of Health Services at the University of Washington is also anticipated, depending on qualifications and interests. The incumbent will be expected to conduct an active program of independent and collaborative research pertinent to the mission of the FHCRC and the PHS Division, to provide leadership to a multi-disciplinary group of investigators at FHCRC and local sister institutions and to develop a vibrant research collaboration aimed at having a local, national and international impact on obesity and associated chronic diseases.

Candidates must have an MD, PhD, MD/PhD or equivalent degree with a training focus on the behavioral sciences, public health, nutritional sciences, or epidemiology. The position requires a strong track record of scientific research including peer-reviewed publications and extramural funding. Those with interest and expertise in health disparities research are particularly encouraged to apply.

The Fred Hutchinson Cancer Research Center is an equal opportunity employer. The University of Washington is an affirmative action and equal opportunity employer. Both institutions are committed to building culturally diverse academic communities. For more information on the UW School of Public Health diversity program, see the following website: <http://www.washington.edu/diversity/>.

Review of applications begins March 15, 2014 and will continue until the position is filled. Please apply on-line at: [position 3402](#) (link: <http://www.fhcrc.org/phsfacsearch>). Please use the link to upload your curriculum vitae, research statement, and cover letter.

Contact Teri Martinez at [phsfacultysearch@fhcrc.org](mailto:phsfacultysearch@fhcrc.org) for further information.



# Georgetown Lombardi Comprehensive Cancer Center

Working to prevent and cure cancer  
with a local focus and global impact

At Georgetown Lombardi, we are reducing the impact of cancer and diminishing disparities in the Washington, DC, region through

- **DISCOVERY** of environmental, genetic and behavioral risk factors and biomarkers for cancer
- Development of **INTERVENTIONS** to modify risk factors and behaviors, improve screening and enhance quality of life
- Research to inform **CLINICAL PRACTICE** and **POLICY** debates



Georgetown | Lombardi

COMPREHENSIVE CANCER CENTER

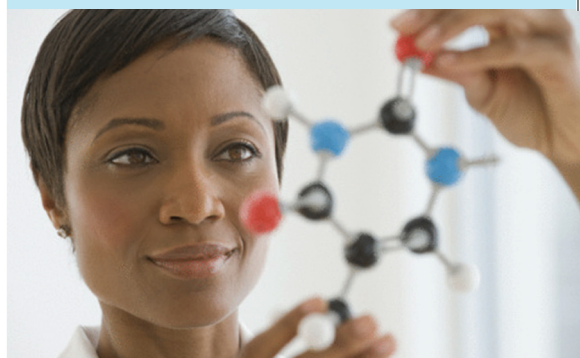


[lombardi.georgetown.edu](http://lombardi.georgetown.edu)

## ABOUT BRP

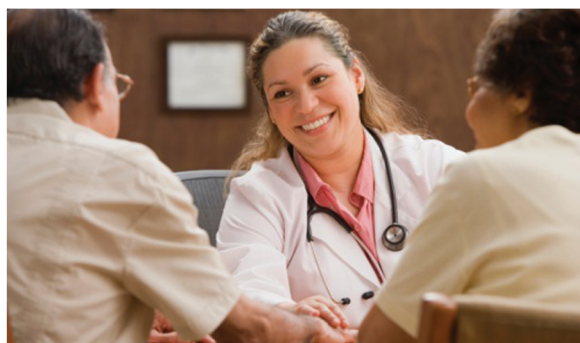
The Behavioral Research Program (BRP) is within the National Cancer Institute's Division of Cancer Control and Population Sciences. BRP initiates, supports, and evaluates a comprehensive program of research ranging from basic behavioral research to the development, testing, and dissemination of interventions in areas such as tobacco use, screening, dietary behavior, and sun protection. Our goal is to increase the breadth, depth, and quality of behavioral research in cancer prevention and control.

[dccps.cancer.gov/brp](http://dccps.cancer.gov/brp)



## AREAS OF RESEARCH

- Basic Biobehavioral and Psychological Sciences
- Health Behaviors
- Health Communication and Informatics
- Process of Care
- Science of Research and Technology
- Tobacco Control



## KEY INITIATIVES, TOOLS, AND RESOURCES

### Health Information National Trends Survey (HINTS)

Nationally representative data on the American public's need for, access to, and use of cancer-related information.

### Grid-Enabled Measures Database (GEM)

A virtual community for researchers to harmonize data and share constructs.

### Smokefree.gov & Women.smokefree.gov

Free, evidence-based information and tools to help smokers quit for good.

### Classification of Laws Association with School Students (CLASS)

Monitors and evaluates state-level school physical education and nutrition policies.

### Team Science Toolkit

An interactive website that consolidates knowledge and facilitates resource sharing.

*More information and a complete list of funding opportunities for BRP and the Division of Cancer Control and Population Sciences can be found at [cancercontrol.cancer.gov/funding\\_apply.html](http://cancercontrol.cancer.gov/funding_apply.html) and [behavioralresearch.cancer.gov](http://behavioralresearch.cancer.gov).*



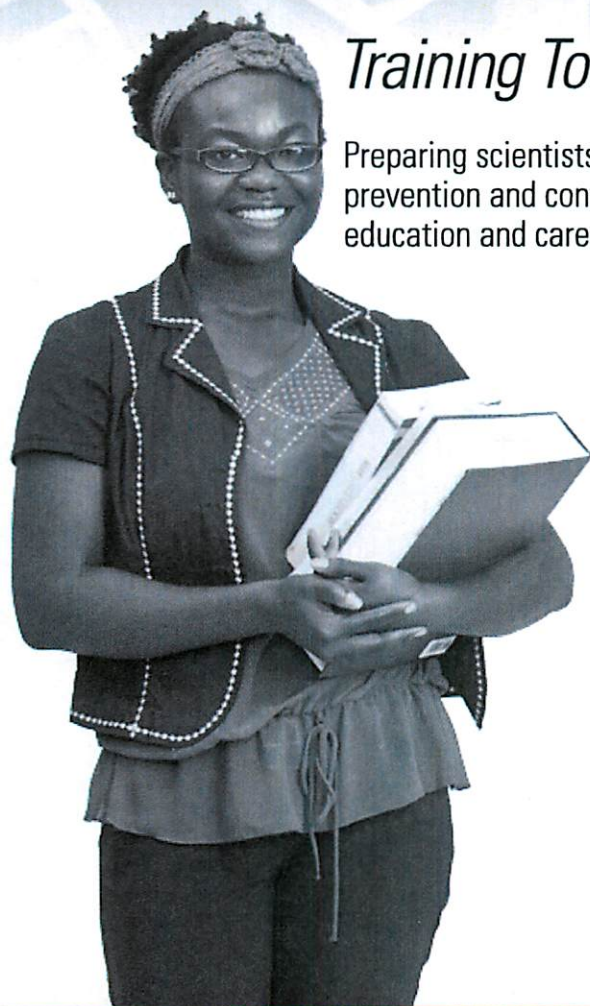




# Cancer Prevention Research Training Program

*Training Tomorrow's Leaders Today*

Preparing scientists to achieve leadership in the field of cancer prevention and control through mentored research experience, education and career development training.



- Multidisciplinary training in all aspects of cancer prevention and population science (e.g., biomedical sciences, public health, behavioral sciences, health disparities research, epidemiology, clinical cancer prevention) with a broad spectrum of faculty mentors
- Three-year fellowships for predoctoral fellows
- Two-year fellowships for postdoctoral fellows
- Short-term research experiences for graduate students, health profession students and qualified upper level undergraduate students

Visit our website for details on eligibility, stipend amounts, and how to apply.

[www.CancerPreventionTraining.org](http://www.CancerPreventionTraining.org)

THE UNIVERSITY OF TEXAS  
**MD Anderson**  
**Cancer Center**  
Making Cancer History

# MD Anderson Cancer Center Recognizes Charles LeMaistre, M.D. for his Role in Tobacco Control



*Charles LeMaistre, M.D.*

The impact of the first U.S. Surgeon General's Report on Smoking and Health left an imprint on the world. The 1964 report definitively linked smoking to lung cancer and other pulmonary diseases. MD Anderson's second president, Charles LeMaistre, M.D., served as the youngest member of its advisory committee and fifty years later, he remains passionately devoted to cancer prevention through tobacco control.

As MD Anderson President (1978-1996), he founded the institution's first division dedicated exclusively to cancer prevention. He served as Chair of both the National Conference on Smoking or Health (1981) and the International Summit of Tobacco Control (1985). As national president of the American Cancer Society (1986), he emphasized the importance of tobacco control in cancer prevention. He is the recipient of numerous awards, including the President's Award from the American Lung Association and the Texas Cancer Council's Gibson D. Lewis Award for Excellence in Cancer Control.

On the 50th Anniversary of the first Surgeon General's Report, MD Anderson expresses its deepest appreciation for Dr. LeMaistre's commitment to cancer prevention through tobacco control. Continuing his legacy, and motivated by the daily suffering of patients and their families, MD Anderson is making tobacco control an institutional public health priority; and renewing, expanding and more intentionally committing itself to cancer control in general as a critical part of its mission.

MD Anderson's new Cancer Prevention and Control Platform is focusing on implementing policy, educational and community-based clinical service interventions in cancer prevention to achieve a measureable reduction in the cancer burden, particularly among the underserved. MD Anderson looks forward to partnering with organizations with similar aspirations to advance tobacco and cancer control.

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THE UNIVERSITY OF TEXAS

**MD Anderson**  
**Cancer Center**

Making Cancer History®

## Tobacco & Cancer Control Programs in Development at MD Anderson

### EndTobacco Program

A commitment to end tobacco use among patients, employees, and their families; and potentially in organizations and communities across the state, the nation, and the world.

### Mexico/Colombia Initiative

MD Anderson tobacco research and control leaders are partnering with sister institutions in Mexico and Colombia to jointly develop tobacco and cancer control programs.

### Project ECHO

A telementoring program created at the University of New Mexico to expand the capacity of health care practitioners in rural and underserved areas to provide best practices in oncology care.

### Healthy Communities

Initiative represents a comprehensive approach towards cancer control, addressing multiple risk factors through interventions targeted to multiple levels and sectors of society.

Moffitt Cancer Center  
supports ASPO  
in its mission to foster the continuing  
development of investigators  
and other professionals involved in  
cancer prevention and control,  
and the exchange and translation  
of scientific information to reduce  
the cancer burden.



**CLOSER TO OUR PATIENTS.  
CLOSER TO A CURE.®**

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**Penn Medicine**

University of Pennsylvania's  
Abramson Cancer Center

Supports

**ASPO**



## *THE Answer for Cancer*

### **Find the answer for cancer.**

Hope for a proper diagnosis, effective treatment, and sustained quality of life lies in the hands of your team of cancer specialists at the CTRC - the only National Cancer Institute (NCI)-designated Cancer Center in Central and South Texas. Here, the highest level of excellence in cancer research and quality of care is the standard of care.

At CTRC, we work hard every day to help you and your family find the answer for cancer.

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HEALTH SCIENCE CENTER SAN ANTONIO



# Seeking Candidates for Cancer Control/Population Scientist

University of New Mexico Cancer Center  
Albuquerque, NM



The Division of Epidemiology, Biostatistics and Prevention in the Department of Internal Medicine and the University of New Mexico Cancer Center are expanding programmatic efforts in cancer control and population science. We are seeking behavioral scientists, epidemiologists and health services researchers, and invite applications for tenure track positions at all academic ranks. Senior candidates will be considered for a leadership role in the Cancer Control and Disparities Research Program. Minimum qualifications are: 1) PhD in the behavioral or public health sciences or a related field, and 2) Must be eligible to work in the United States as this is not a J-1 visa opportunity. **Preferred qualifications are:**

- 1) expertise in any of the following substantive areas: community intervention research that addresses cancer disparities, genetics/genomics/epigenetic issues or mechanisms, molecular epidemiology; and interventions aimed at reducing cancer risk in healthy populations and improving outcomes in cancer survivors and their families and
- 2) expertise in energy balance and genomics-related interventions in underserved populations.

The selected candidate will establish an extramurally funded research program and work collaboratively across disciplines with Cancer Center and University investigators. Individuals holding a doctorate in a public health, behavioral science, or other health-related discipline with additional training or post-doctoral experience in research on cancer disparities with Hispanics, Native Americans, rural dwellers and socioeconomically disadvantaged population subgroups are encouraged to apply. The Division and Cancer Center maintain close ties to many University of New Mexico departments and centers including the NCI SEER, New Mexico Tumor Registry, Center for Native American Health, Clinical and Translational Science Center, NM CARES Health Disparities Center, Molecular Epidemiology lab, and Keck-UNM Genomics Shared Resource. The Cancer Control and Disparities Program also interacts with the Research Involving Outpatient Settings Network (RIOS Net), NM Cancer Care Alliance and Project ECHO which are dedicated to improving the health and health care delivery of traditionally underserved populations in New Mexico. These units involve extensive community partnerships that are comprised of primary care or oncology clinicians practicing in Federally Qualified Community Health Centers, rural community clinics, community oncology settings, Indian Health Service/Tribal facilities, and other settings. These exceptional resources enable cutting-edge cancer prevention and control research.

The University of New Mexico Cancer Center is an NCI-designated cancer center with substantial opportunities for energetic multidisciplinary collaborations in a highly collegial environment with potential for growth.

The position will also offer competitive compensation arrangements commensurate with both experience and achievement. Application review will begin immediately. The position will remain open until filled.

**Complete applications should include a cover letter, curriculum vitae, a statement of research interests and the names of three references with mailing address, phone numbers and email address. Inquiries should be directed to Dr. Anita Kinney: [aykinney@salud.unm.edu](mailto:aykinney@salud.unm.edu).**

This position may be subject to criminal records screening in accordance with New Mexico law.

UNM's confidential policy (Disclosure of Information about Candidates for Employment, UNM Board of Regents Policy Manual 6.7), which includes information about public disclosure of documents submitted by applicants, is located at <http://www.unm.edu/~brpm/r67.htm>.

The University of New Mexico is an Equal Employment Opportunity/Affirmative Action Employer and Educator.



UNM HEALTH SCIENCES CENTER



## **Faculty Position in Cancer Prevention and Control and Health Disparities**

The Comprehensive Cancer Center of Wake Forest University (CCCWFU) and the Division of Public Health Sciences, invite applications for a tenure track faculty position at the Associate or Full Professor level in Cancer Prevention and Control with a focus on health disparities. We are particularly interested in applicants whose research focuses on health disparities related to cancer survivorship or smoking cessation/tobacco control.

Applicants should have a Ph.D., ScD. or M.D. with additional training/experience in behavioral medicine, psychology, cancer epidemiology, cancer survivorship, health services research, or clinical trials. Current extramural funding, experience in collaborative research in a multidisciplinary setting and excellent written and oral communication skills, and a strong publication record are required. Opportunities for teaching exist within our Master's degree program.

Wake Forest is located in Winston-Salem, North Carolina, home of a vibrant arts community and with population of over 500,000 in the Piedmont Triad area. Visit <http://www.wakehealth.edu/> for more information about the medical center and community.

Applicants should send a cover letter, curriculum vitae, and a summary of research interests to Dr. Nancy Avis c/o Monica Kiger, [mkiger@wakehealth.edu](mailto:mkiger@wakehealth.edu)

Wake Forest Baptist Medical Center is an Affirmative Action and Equal Opportunity Employer with a strong commitment to achieving diversity among its faculty and staff.



## Cancer Epidemiologists



GIVING LIFE TO POSSIBLE

The Dan L. Duncan Cancer Center at Baylor College of Medicine in Houston, Texas is seeking cancer/molecular epidemiologists at all academic levels. The Center has considerable resources to expand the program in Cancer Prevention and Population Sciences, and the successful candidates will have an important role in the continued growth of this program. The individuals will have the opportunity to collaborate with other epidemiologists, geneticists, biologists, and clinicians in the Cancer Center and its affiliated hospitals (Texas Children's, the Houston VA Medical Center, St. Luke's Hospital, and Ben Taub General Hospital). Collaborations with faculty in health services research at our Center of Excellence at the VA Medical Center and with MD Anderson Cancer Center are encouraged. Previous research experience, history of successful peer-reviewed grant funding, and a relevant publication record are required. The candidate will be expected to develop an independent research program with peer-reviewed funding.

Baylor College of Medicine is ranked among the top 20 medical schools and is internationally known for its excellence in education, research and patient care. The Cancer Center has strong research programs in the basic, population, clinical, and translational sciences. Faculty in the Cancer Center receive over \$55M in NCI grants and \$142M in total cancer funding annually. The Human Genome Sequencing Center, Human Microbiome Center and the Children's Nutrition Research Center at Baylor provide other important resources for collaboration. The Cancer Center is further supported by a broad array of Shared Resources in support of our cancer research activities. In particular, the Population Sciences Biorepository provides biospecimen collection, processing, and storage coupled with clinical and risk factor data collection for a variety of cancers as part of our growing molecular epidemiology program. A generous naming gift for the Cancer Center of \$100M by the Duncan family provides the Center with the resources to grow and prosper in the future.

Salary and start-up package will be commensurate with qualifications and prior experience. Interested candidates should submit curriculum vitae, a summary of past work, a brief outline of future plans, and the names of at least three individuals who will provide letters of support. Applications will be accepted until the positions are filled.

Applications should be submitted to Melissa Bondy, Ph.D., Associate Director for Cancer Prevention and Population Sciences Program, Baylor College of Medicine, One Baylor Plaza, BCM 600, Houston, Texas 77030 or email to [mbondy@bcm.edu](mailto:mbondy@bcm.edu). Baylor College of Medicine is an Equal Opportunity/Affirmative Action/Equal Access Employer.

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# R25 Training Program in Pediatric Cancer Epidemiology & Control



**Baylor College of Medicine is proud to offer a post-doctoral training program in pediatric cancer epidemiology and control**

**Openings available NOW and Summer 2014.**

In conjunction with the Texas Children's Cancer Center, we offer a fellowship program for both clinical oncology fellows and research fellows with interests in pediatric cancers. Fellows work with leaders in the fields of pediatric oncology and childhood cancer epidemiology. The program provides individually tailored education plans, rich mentored research experiences, and incorporates career development mini-courses, seminars and experimental activities to facilitate the transition from fellow to early stage faculty.

The program offers:

- \* Competitive salary
- \* Health insurance
- \* 3 years of funding with transition to junior faculty in year 3
- \* Tuition support
- \* Travel allowances
- \* Research support



[www.txch.org/education](http://www.txch.org/education)



***All inquiries should be made to Michael Scheurer, Ph.D. at [scheurer@bcm.edu](mailto:scheurer@bcm.edu)***

***Baylor College of Medicine and Texas Children's Hospital are  
Equal Opportunity/Affirmative Action/Equal Access Employers.***



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the American Society of Preventive Oncology**



**Carbone Cancer Center**  
UNIVERSITY OF WISCONSIN  
SCHOOL OF MEDICINE AND PUBLIC HEALTH

**UWHealth**

# FULL PROGRAM

## SATURDAY, March 8, 2014

3:00 pm – 7:00 pm  
**Washington AB**

**Cancer Prevention & Control Associate Directors/Program Leaders Meeting - Part 1** (Invitation Only)

Organizer: Electra Paskett, PhD, The Ohio State University

## SUNDAY, MARCH 9, 2014

8:00 am – 5:00 pm  
**Regency Landing**

**Registration**

8:00 am – Noon  
**Washington AB**

**Cancer Prevention & Control Associate Directors/Program Leaders Meeting - Part 2** (Invitation Only)

10:00 am – 1:00 pm  
**Potomac 2**

**New Investigators Workshop** (Invited Applicants Only)

**Faculty:**

Judith Jacobson, DrPH, Columbia University (organizer)

Lucile Adams-Campbell, PhD, Georgetown University

Deborah Glueck, PhD, University of Colorado – Denver

Michael Scheurer, PhD, Baylor College of Medicine

**New Investigator Workshop Participants:**

**Samuel Antwi, MPH, PhD(c), University of South Carolina**

“Single nucleotide polymorphisms in DNA repair and oxidative stress-related genes, and their interactions with antioxidants on prostate cancer aggressiveness”

**Alicia L. Best, PhD, MPH, CHES, HEALing Community Center, Department of Research and Community Health**

“Examining urban-rural differences in the effectiveness of spiritually-framed breast cancer screening messages among African American women”

**Jessica L. Krok, PhD, The Ohio State University**

“Post-treatment patient navigation for older breast cancer survivors”

**Erin C. Peckham, MPH, PhD(c), UCLA**

“MicroRNA-related Polymorphisms and Non-Hodgkin Lymphoma in an HIV Cohort”

**Kathleen Sturgeon, PhD, University of Pennsylvania**

“The Effects of Exercise on Cardiovascular Outcomes Before, During, and After Treatment for Breast Cancer”

**Carmina G. Valle, PhD, MPH, UNC – Chapel Hill**

“The Use of Smart Scales for Weight Gain Prevention in African American Breast Cancer Survivors”

*Sunday continued*

12:30 pm – 3:30 pm  
**Potomac 1**

**Working Lunch Meeting of the ASPO Executive Committee**  
(open to ASPO Executive Committee members)

1:00 pm – 2:30 pm  
**Washington B**

**ASPO Junior Members Sessions (open to all interested attendees)**

**1) Building a (funded) Research Program in Cancer Health Disparities**

Chair: Heather Ochs-Balcom, PhD, University at Buffalo

This panel discussion will provide insight into career development issues pertinent to studies on cancer health disparities. Speakers with experience in grant writing and conducting research projects will present on how to write winning grants and also how to develop productive partnerships with communities of interest. Speakers will provide their own stories and experience maintaining funding and navigating issues related to the various difficulties unique to cancer health disparities research and provide practical advice

2:30 pm – 4:00 pm  
**Washington B**

**2) Negotiation Skill Development for Junior Investigators in the Academic Environment**

Chair: Allison Burton-Chase, PhD, Albany College of Pharmacy & Health Sciences

This interactive session will include both skill development activities and a panel discussion to provide live experience of how to navigate and develop negotiation skills within the academic environment. Participants will first gain a hands-on experience through a guided negotiation exercise that focuses on both career and research negotiations. The interactive exercise will be followed by discussions from a panel of speakers who are at different levels of academic positions, sharing their experience and perspective of how they negotiated for different positions/career moves. Speakers will end the session by providing practical advice on developing global negotiation skills that can be used in career and research related negotiations.

2:00 pm – 4:00 pm  
**Washington A**

**Meeting of NCI R25T Training Program Principal Investigators**

Organizer: Shine Chang, PhD, MD Anderson Cancer Center

***Sunday continued***

4:00 pm – 7:00 pm  
**Regency CD**

**OPENING SESSION OF THE ASPO GENERAL MEETING**

**ASPO Welcome**

Wendy Demark-Wahnefried, PhD, University of Alabama

**Joseph Cullen Awardee Address:**

Kasisomayajula “Vish” Viswanath, PhD, Dana Farber Cancer Institute

“Reaching the Hardly Reached: Communication, The Poor and Tobacco Control”

*The Joseph Cullen Award is generously supported by Legacy –For Longer Healthier Lives. Dr. Cullen was an active ASPO member and Program Coordinator for the NCI’s Smoking Tobacco Program.*

**Distinguished Achievement Award Address:**

Robert Croyle, PhD, National Cancer Institute

“Reflections on 15 Years Behind the Curtain”

**Symposium 1: An Ounce of Prevention is Worth a Pound of Screening... Or is it the Other Way Around?**

Graham Colditz, MD, DrPH, Washington University in St. Louis, “Health Behavior Interventions Prevent Incidence and Death from Cancer”

Robert Smith, PhD, American Cancer Society, “Screening for Cancer Results in Reduced Burden of Cancer”

Harold Pollack, PhD, University of Chicago, “Where Should Health Systems Put Their Money?”

7:00 pm – 8:00 pm  
**Washington AB**

**Networking Mixer (Junior/Senior Member Networking Event)**

(light refreshments, cash bar)

8:00 pm

**Dinner on your own**



# MONDAY, MARCH 10, 2014

8:00 am – 9:30 am

## Concurrent Breakfast Sessions

### Potomac 5-6

#### 1) Joint Special Interest Group Breakfast: Molecular Epidemiology and the Environment & International Issues in Cancer

“International Molecular Cancer Prevention Research: Challenges and Opportunities”

Organizers: Peter Kanetsky, PhD, Moffitt Cancer Center, and  
Dejana Braithwaite, PhD, UC- San Francisco

- a. Biomarkers in cancer research, Roberd Bostick, MD, MPH, Emory University & Meira Epplein, PhD, Vanderbilt University
- b. Environmental exposures and cancer , Lina Mu, MD, PhD, University at Buffalo
- c. Molecular pathological epidemiology, Shuji Ogino, MD, PhD, Dana-Farber Cancer Institute
- d. The future of international molecular cancer prevention research  
Peter Kanetsky, PhD, Dejana Braithwaite, PhD and Meira Epplein, PhD

### Potomac 3-4

#### 2) Special Interest Group Breakfast: Survivorship & Health Outcomes/Comparative Effectiveness Research

“Cancer Prevention and Integrative Oncology Research: A Handshake with the Society of Integrative Oncology (SIO)”

Organizers: Karen Basen-Engquist, PhD, UT M.D. Anderson Cancer Center;  
Heather Greenlee, ND, PhD, Columbia University;  
Omer Kucuk, MD, Emory University;  
Katie Sterba, PhD, MPH, University of South Carolina

- a. Introduction: Karen Basen-Engquist, PhD
- b. Overview of SIO: Heather Greenlee, ND, PhD
- c. Scientific intersection between cancer prevention and control  
and integrative oncology: Omer Kucuk, MD
- d. Survey results: Katie Sterba, PhD, MPH
- e. Table Discussion

9:30am

## BREAK

*Monday continued*  
10:00 am – 11:30 am  
**Regency CD**

**Concurrent Paper Session 1: Early Detection & Cancer Health Disparities**  
(full abstracts in following pages)

Chair: Cheryl Thompson, PhD, Case Western Reserve University

Anne Cust, PhD, The University of Sydney, Sydney, Australia  
“Accuracy of self-report of nevus and pigmentation phenotype compared to clinical assessment in young Australian adults”

Anne Cust, PhD, The University of Sydney, Sydney Australia  
“Contribution of MC1R genotype and novel common genomic variants to melanoma risk prediction”

Tracy Onega, PhD, Dartmouth Medical School  
“Are Evidence-based Guidelines, Accountability Metrics, and Practice Patterns Aligned in Breast Cancer Screening?”

Deborah Glueck, PhD, University of Colorado – Denver  
“Improving the Diagnostic Accuracy of a Stratified Screening Strategy by Identifying the Optimal Risk Cutoff: Concept, Theory, and Applications for Personalized Breast Cancer Screening”

Jennifer Haas, MD, Brigham and Women’s Hospital  
“Personalized Risk Assessment for Breast Cancer, Discussion of Risk, and Use of Screening”

Kenyon Bolton, MA, University of Vermont  
“Changes in the breast cancer risk distribution among women utilizing screening mammography in Vermont between 2001 and 2012”

10:00 am – 11:30 am  
**Potomac 5-6**

**Concurrent Paper Session 2 : Lifestyle Behaviors, Energy Balance & Chemoprevention** (full abstracts in following pages)

Chair: Anita Y. Kinney, PhD, University of New Mexico

Michael Parks, PhD, Minnesota Department of Health  
“Evidence that an Incentive-Based Intervention Can Inexpensively Harness Natural Social Networks’ Influence on Utilization of Smoking Cessation Helplines”

Ai Kubo, MPH, PhD, Kaiser Permanente Division of Research  
“Maternal gestational diabetes and pre-pregnancy obesity accelerates the timing of adrenarche in female offspring”

Cindy Blair, PhD, University of Minnesota  
“Physical Activity and Quality of Life among Elderly Cancer Survivors Compared to Women without Cancer: The Iowa Women’s Health Study”

Kisha Coa, MPH, Johns Hopkins University  
“Mixed methods exploration of diet among prostate cancer survivors”

Li Li, MD, PhD, Case Western Reserve University  
“Serum Retinol-Binding Protein 4 (RBP4) and Risk of Colon Adenoma”

Polly Newcomb, PhD, Fred Hutchinson Cancer Research Center  
“Smoking History in Relation to Survival after a Breast Cancer Diagnosis”

11:30 am- Noon

**Break**

Noon – 1:30 pm  
**Regency CD**

**Best Hot Topic Papers: Cancer Epidemiology, Biomarkers and Prevention (CEBP)**  
Chair: Timothy Rebbeck, PhD, University of Pennsylvania

Meira Epplein, PhD, Vanderbilt University,  
“Prospective Study of *Helicobacter pylori* Biomarkers for Gastric Cancer Risk among Chinese Men”

Michelle Kurta, PhD, The Ohio State University,  
“Use of Fertility Drugs and Risk of Ovarian Cancer: Results from a US-based Case-Control Study”

Amelie G. Ramirez, DrPH, MPH, (UT Health Sciences Center, San Antonio,  
“Beneficial Effects of a Combined Navigator/Promotora Approach for Hispanic Women Diagnosed with Breast Abnormalities”

*Monday continued*  
2:00 pm – 4:00 pm  
**Regency CD**

## **Symposium 2: Framing Our Population-Based Cancer Research Questions to Make a Difference at Local, National, and Global Levels**

At this time of limited resources and funding, population-based cancer researchers have the imperative to ask and prioritize applied research questions that aim to make a difference for populations at-risk of cancer, newly diagnosed patients and cancer survivors. As knowledge brokers, cancer centers have a unique role in supporting, organizing, and prioritizing these efforts. Addressing the changing burden of cancer must be expanded into the global setting given the rise in cancer risk factors such as tobacco use and obesity that accompany economic development. In countries like the US, we have had success in reducing the burden of infection-associated cancers overall. But, national and local health disparities in access to and the uptake of preventive strategies, screening, and treatment still exist since some of these cancers (e.g., HPV- and HBV-associated) are often still viewed as only an international problem. We have much to learn from global cancer control as we redouble our efforts to solve the problem of cancer disparities in the communities surrounding our institutions, in our states, and in our country. Finally, population scientists may need to reflect on the barriers that we create for ourselves in the funding, conduct, and dissemination of applied cancer research that is aimed at translating new knowledge.

Chair: Elizabeth Platz, PhD, Johns Hopkins University

Thomas A. Sellers, PhD, MPH, Center Director, Moffitt Cancer Center,  
“What Types of Applied Population-based Questions Should we be Addressing?”

Norma Kanarek, PhD, MPH, Associate Professor and Executive Director of the Maryland Cigarette Restitution Fund at Johns Hopkins University,  
“What Can Cancer Centers Do to Make a Difference in At-Risk Populations and in Populations of Cancer Patients and Survivors?”

Simon Sutcliffe, MD, FRCP, FRCPC, FRCR, President, International Cancer Control Congress Association,  
“What Can We Learn from Global Cancer Control Research Efforts to Make a Difference at the Local and National Levels?”

William G. Nelson, MD, PhD, Director, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins University,  
“What Can We Do to Facilitate the Conduct of Applied Population-Based Cancer Research Aimed at Making a Difference?”

4:00 pm – 4:30 pm

**Break**

4:30 pm – 5:30 pm  
**Regency CD**

**ASPO Business Meeting** (open to all)

*Monday continued*  
5:30 pm - 7:30 pm  
**Independence Center**

**Poster Session and Reception** (dinner on your own – light refreshments, cash bar)

**Presentation of the ASPO/BCRF Fellowship**

*This Fellowship is sponsored by the Breast Cancer Research Foundation (BCRF) and the American Society of Preventive Oncology.*

**Presentation of American Cancer Society Travel Awards**

**Presentation of Electra Paskett Scholarship Award**

**Presentation of Best Poster Awards**

7:30 pm

**Dinner on your own**

# TUESDAY, MARCH 11, 2014

8:00 am – 9:30 am

## Concurrent Breakfast Sessions

### Washington Room

#### 1) Special Interest Group Breakfast: Cancer Health Disparities

Organizers: Electra Paskett, PhD, The Ohio State University and  
Beti Thompson, PhD, Fred Hutchinson Cancer Research Center

- a. Defining Health Disparities, Parisa Tehranifar, DrPH, Columbia University
- b. The Delaware Experiment, Electra Paskett, PhD, The Ohio State University
- c. The Affordable Care Act, Cheryl Thompson, PhD, Case Western Reserve University
- d. Disparities in Survivorship, Kathryn Weaver, PhD, MPH, Wake Forest University
- e. Upstream Factors in Disparities, Richard Warnecke, PhD, UI- Chicago and Anita Kinney, PhD, University of New Mexico
- f. Next Generation of Health Disparities Researchers, Cassandra Alcaraz, PhD, MPH, American Cancer Society

8:00 – 9:30 am

### Potomac 5-6

#### 2) Special Interest Group Breakfast: Lifestyle Behaviors, Energy Balance, and Chemoprevention

“Use of novel methodologies for advancing research in risk behaviors”

Organizers: Elizabeth Jacobs, PhD, University of Arizona and  
Carolyn Fang, PhD, Fox Chase Cancer Center

Helen Swede, PhD, University of Connecticut Health Center

“7-Day Actigraph Physical Activity Monitor in NHANES: Analysis of 10,080  
Contiguous Minutes per Person”

Jamie Studts, PhD, University of Kentucky College of Medicine

“A Point-of-Care Tobacco Cessation Tool for Dental Settings”

Kuang-Yi Wen, PhD, Fox Chase Cancer Center

“Text Messaging Interventions in Cancer Research”

Kathryn Schmitz, PhD, University of Pennsylvania

“Online Diet and Exercise Interventions”

***The Lifestyle Behaviors, Energy Balance, and Chemoprevention Special Interest Group Breakfast is generously supported by a grant from the American Institute for Cancer Research***

9:30 am – 10:00 am

## Break

*Tuesday continued*  
10:00 am – 11:45 am  
**Regency CD**

**Symposium 3: Promoting health behaviors in the Context of Survivorship Care Coordination for Common Adult Cancers**

Karen Syrjala, PhD, Fred Hutchinson Cancer Research Center,  
“Opportunities and Challenges to Incorporating Health Behavior Interventions into Survivorship Care Coordination: Current Models”

Karen Basen-Engquist, PhD, MPH, MD Anderson Cancer Center,  
“Living Well with Chronic Illness: What Can Survivorship Care Learn from Models to Manage other Conditions?”

Bernadine Pinto, PhD, Brown University,  
“Bringing Providers on Board: Survivorship Care Provider Advice to Increase Physical Activity”

Discussant: Catherine Alfano, PhD, Office of Cancer Survivorship, National Cancer Institute,  
“Integration of Health Behavior into Survivorship Care: Research needs and Policy Agenda”

Noon – 1:30 pm

**Concurrent Lunch Programs**

**Washington Room**

**1) ASPO Junior Member Lunch:  
NCI Session on Career Development for Doctoral Students, Postdoctoral Fellows, and Junior Faculty**

Ming Lei, PhD, Deputy Director, Center for Cancer Training  
Acting Branch Chief, Cancer Training Branch, NCI  
"Overview of NCI Funding Opportunities for Junior Investigators"

Susan Perkins, PhD, Program Director, Cancer Training Branch, NCI  
"Common Mistakes in K Applications"

Michael Scheurer, PhD, Associate Professor, Baylor College of Medicine  
"Launching an Independent Research Career: My Experience with the K07"

The talks will be followed by a Q/A panel discussion.

Noon – 1:30 pm  
**Potomac 5-6**

**2) Mid- and Senior Faculty Development Lunch**

Chair: Elizabeth Platz, ScD, Johns Hopkins University

Speaker: Robert J. Kleinschmidt, MS, Organization Development Specialist and Leadership Coach, Johns Hopkins University  
“Thriving as a Leader”

*Tuesday continued*  
2:00 pm – 3:30 pm  
**Regency CD**

**Concurrent Paper Session 3: Behavioral Science**

Chair: Wen-Ying Sylvia Chou, PhD, National Cancer Institute

Jessica Krok, PhD, The Ohio State University

“Clinic type and patient characteristics affecting time to resolution after an abnormal cancer-screening exam”

Traci Bethea, PhD, Boston University

“Neighborhood socioeconomic status in relation to cancer mortality in the Black Women’s Health Study, 1995-2011”

Mira Katz, PhD, The Ohio State University

“Adherence to Multiple Cancer Screening Tests among Appalachian Women”

Jesse Plascak, PhD, University of Washington

“Neighborhood and geographic factors associated with diagnostic resolution after an abnormal breast or cervical cancer screening test”

Michelle Kurta, PhD, The Ohio State University

“The association between sexual abuse and adherence to risk-appropriate cervical cancer screening guidelines: a study of women in Appalachian Ohio”

Elisa D. Cook, MD, MS, UT MD Anderson Cancer Center

“Retention of Black and White Participants in the Selenium and Vitamin E Cancer Prevention Trial”

2:00 pm – 3:30 pm  
**Potomac 5-6**

**Concurrent Paper Session 4: Survivorship & Health Outcomes/Comparative Effectiveness Research**

Chair: Katie Schmitz, PhD, University of Pennsylvania

Amy Trentham-Dietz, PhD, University of Wisconsin

“Collagen fiber alignment in relation to prognostic markers for ductal carcinoma in situ of the breast”

Bijal Balasubramanian, PhD, University of Texas School of Public Health

“Cancer and non-cancer follow-up care among vulnerable colorectal cancer survivors with multi-morbidities”

Philip Lupo, PhD, Baylor College of Medicine

“Clinical and Genetic Predictors of Impaired Fertility in Female Survivors of Childhood Cancer”

Anne Kirchhoff, PhD, University of Utah

“Quality of life and comorbidities impact education and employment for survivors of adolescent and young adult cancers”

Nancy Avis, PHD, Wake Forest School of Medicine

“Trajectories of Depressive Symptoms Following Breast Cancer Diagnosis and Treatment”

3:30 pm

**Conference Concludes**



## PAPER SESSION ABSTRACTS -- Monday, March 10, 2014

### Session 1: Early Detection & Cancer Health Disparities

Anne Cust, PhD	Anne Cust, PhD
<p>Accuracy of self-report of nevus and pigmentation phenotype compared to clinical assessment in young Australian adult Cust AE, Pickles KM, Goumas C, Vu T, Australian Melanoma Family Study Investigators</p> <p>Background: There is no formal community-wide melanoma screening program in Australia, but the importance of early detection and regular skin self examination is generally well understood. It is important that individuals are able to identify key melanoma risk factors so that those at high risk can modify their sun-related behaviours and take appropriate preventative actions from a young age. Aims: 1) To evaluate the accuracy of self-reported pigmentation and nevus phenotype compared to clinical assessment, and 2) to examine agreement between clinically-measured whole-body nevus count and clinically-measured nevus count on selected anatomical regions, given that localised mole count is often used as a proxy measure. Methods: The sample included 456 cases with invasive cutaneous melanoma diagnosed between ages 18-39 years and 538 controls from the population-based Australian Melanoma Family Study. Participants completed a questionnaire regarding their pigmentation and nevus phenotype, and attended a clinical skin examination with a dermatologic trainee. Results: There was strong agreement between self-reported and clinical measurement for eye color (weighted kappa, Kw, =0.83, 95% confidence interval (CI) 0.80-0.86); and moderate agreement for hair color (Kw=0.52, 95% CI 0.47-0.56) There was poor agreement for skin color when using spectrophotometer-derived individual typography angle (ITA) scores as the objective measure (Kw=0.18, 95% CI 0.14-0.22). Participants underestimated their nevus counts. The Spearman correlation was 0.43 (95% CI 0.38-0.49) when comparing clinically-measured total body nevus count (<math>\geq 2\text{mm}</math>) with self-reported nevus density categories, and the intraclass correlation was 0.36 (95% CI 0.30-0.41) when comparing nevus counts on the back. There was good agreement between quartile distributions of clinically-measured site-specific nevus counts with total body nevus counts, particularly for the arms (Kw = 0.76 for men and 0.80 for women). Conclusions: Agreement between self-reported pigmentation and nevus phenotype compared to clinical assessment ranges from poor to excellent, depending on the measure. For studies where a full body nevus count is impractical, measuring nevus counts on the arms would be an acceptable alternative.</p>	<p>Contribution of MC1R genotype and novel common genomic variants to melanoma risk prediction Cust AE, Bui M, Goumas C, Jenkins MA, Australian Melanoma Family Study Investigators</p> <p>Background: Genome-wide association studies have identified numerous common genomic variants associated with increased susceptibility to melanoma, but there is limited knowledge about the utility of adding them to risk prediction models for melanoma. Individuals diagnosed at a young age might have an underlying genetic susceptibility to melanoma, and young adulthood is a key age period for targeting primary prevention strategies for melanoma. Aim: To evaluate the contribution of melanocortin-1 receptor (MC1R) gene variants and novel common genomic variants to melanoma risk prediction, among young Australian adults. Methods: The sample included 552 cases with invasive cutaneous melanoma diagnosed between ages 18-39 years and 405 controls from an Australian population-based, case-control-family study. MC1R genotype was sequenced, and through a genome-wide association study we obtained genotype data for single nucleotide polymorphisms from 18 selected gene regions. Measures of discriminatory accuracy included the area under receiver operating characteristic curves (AUC) and net reclassification improvement (NRI), calculated based on predicted probabilities of melanoma from unconditional logistic regression models. We used 10-fold cross-validation and bootstrap methods to assess internal validation. Results: The AUC increased from 0.76 (95% CI 0.73-0.79) for the non-genetic multivariate model containing demographic and self-reported risk factors (UV exposure, phenotype, nevi, etc), to 0.81 (95% CI 0.78-0.84) for the genetic model that additionally included MC1R genotype and novel common genomic variants. The combined contribution to the AUC of the novel common genomic variants identified through genome-wide association studies was similar to that contributed from the known common variants in MC1R and CDKN2A. Inclusion of genomic variants in the multivariate model improved the quartile classification of predicted risk (NRI) by a net 17% (95% CI 9-24) compared to the non-genetic model. Conclusions: Our results suggest that MC1R and other common genomic variants could considerably improve risk prediction models for early-onset melanoma, and may have a role in primary prevention of melanoma.</p>

Traci Onega, PhD	Deborah Glueck, PhD
<p>Are Evidence-based Guidelines, Accountability Metrics, and Practice Patterns Aligned in Breast Cancer Screening?</p> <p>Onega T, Tosteson ANA, Bitton A, Brackett CD, Goodrich ME, Harris KA, Haas JS</p> <p>Purpose: This study examined concordance of breast cancer screening practices with evidence-based guidelines and primary-care based accountability metrics. Methods: This study was conducted in 13 (7 primary care, 3 OB/Gyn, 3 radiology) individual practices within two regional (New Hampshire and Boston Area) integrated health care systems from 2011-2013. We used semi-structured interviews, microsystems process mapping techniques, and regional breast cancer screening registry data to examine facility use of specific breast cancer screening guidelines (e.g. USPSTF or American Cancer Society [ACS]), specific accountability metrics (e.g. Accountable Care Organization [ACO]), and actual patterns of care. We compared age of screening initiation, cessation, and interval for average-risk women to facility-reported use of guidelines and metrics. Results: All of the practices had a policy to begin breast cancer screening at age 40. Nine of the 13 practices had no specified age at which to stop screening, while three specified age 69, and one specified age 72. Three of the 13 practices followed a biennial screening interval, and the other 9 were annual. Four of the 13 practices --all primary care -- did not have a policy to follow a specific national guideline for breast cancer screening. However, those four followed the current ACO metric for breast cancer screening. Common evidence-based national breast cancer screening guidelines include those from the USPSTF and the ACS and American College of Radiology (ACR). The USPSTF calls for screening of women ages 50-74 biennially, with risk-and preference-based screening for 40-49 year old women. The ACS and ACR both recommend annual screening for women age 40+. These guidelines are not concordant with accountability measures, such as the current ACO metric for breast cancer screening, which assesses screening among women ages 40-69 within the past 24 months. Conclusion: Practice patterns inherently may not be able to simultaneously be concordant with both guidelines and accountability metrics. Systems need to be able to move away from the "one size fits all" screening approach to one more tailored to patient risk and preference, without being penalized.</p>	<p>Improving the Diagnostic Accuracy of a Stratified Screening Strategy by Identifying the Optimal Risk Cutoff: Concept, Theory, and Applications for Personalized Breast Cancer Screening</p> <p>Brinton JT, Glueck DH</p> <p>Purpose: We give a novel decision-theoretic approach for finding the optimal risk cutoff for additional breast cancer screening for women who have a high model-predicted risk of breast cancer. Methods: The American Cancer Society (ACS) suggests a stratified screening strategy for breast cancer. The strategy includes assessing women's risk of breast cancer using a risk model, screening women at high risk of breast cancer with both contrast-enhanced breast MRI, and mammography, and screening women at low risk of breast cancer with mammography alone. The ACS used expert consensus opinion to choose the risk cutoff for additional screening. Instead, we suggest a risk cutoff chosen to maximize the full area under the receiver operating characteristic curve for the strategy. We use three inputs to find the cutoff, including: 1) the distribution of five-year breast cancer risk scores, 2) the probability of breast cancer given the risk score, and 3) the diagnostic accuracy of digital mammography, and contrast-enhanced screening breast MRI. No data was publically available for testing the performance of stratified screening strategies based on the ACS suggested risk models. Instead, we used publically available data to seek an optimal risk cutoff for the Breast Cancer Screening Consortium (BCSC) risk model. A previous study suggests that the BCSC risk model has similar predictive accuracy as the Tyrer-Cuzick and Claus models. For comparison, we used a hypothetical risk model with much better predictive accuracy than the BCSC model. Results: For the BCSC risk model, the strategy with the highest diagnostic accuracy for the entire population is to screen almost all women with both digital mammography and contrast-enhanced breast MRI. Under the strategy based on the hypothetical risk model, only women at 18% or higher five-year risk would receive dual modality screening. Conclusion: The results occur because the BCSC risk model does not accurately predict which women will or will not develop breast cancer. However, if there were a more accurate risk model, a stratified screening strategy would offer benefits for the entire population, by balancing the harms of breast cancer screening with the potential for improved breast cancer detection.</p>

Jennifer Haas, MD	Kenyon Bolton, MA
<p>Personalized Risk Assessment for Breast Cancer, Discussion of Risk, and Use of Screening Haas JS, Baer H, Elbensteiner K, Klinger CV, Getty G, Brawarsky P, Harris K, St Hubert S, Colditz GA, Onega T, Tosteson ANA</p> <p>Purpose. National guidelines for breast cancer screening endorse the premise that screening should be “personalized,” based on a woman’s risk of developing cancer. The US Preventive Services Task Force recommends against screening average risk women in their 40’s and the American Cancer Society recommends the addition of screening with magnetic resonance imaging for high risk women. Methods. We conducted a cluster-randomized controlled trial of an electronic health record- integrated risk assessment to generate a 1-page report to promote understanding of personal breast cancer risk and screening. Women ages 30-75 who had a physical exam with their primary care provider (PCP) at one of 12 sites were eligible. Before the visit, intervention women were contacted using an automated phone or internet survey to collect information about risk factors, and received their report. After the visit, women in both arms were asked if their PCP discussed their risk and whether they should have a mammogram this year, and their plans for screening. Control women were also asked about risk factors so that their risk could be calculated, and then received their report after their visit. Results. To date, 344 intervention women and 385 controls without a history of breast cancer have completed both pre- and post-visit surveys. There was a trend towards intervention women being more likely than controls to report discussing their family history (77% vs. 66%, <math>p=0.09</math>) and their risk (50% and 43%, <math>p=0.08</math>) with their PCP. Among the subgroup of women at higher than average risk of developing breast cancer, intervention women were more likely than controls to discuss their family history and risk (<math>p=0.008</math>, 0.06, respectively); among women at lower risk, intervention women were more likely to discuss risk (<math>p=0.02</math>). Conversely, there was a trend towards intervention women being less likely than controls to discuss whether they should receive a mammogram this year (82% vs. 87% <math>p=0.12</math>). Over 94% of women in both arms, including the subset of women in their 40s, reported that they planned to get a mammogram this year. Conclusions. Personalized risk assessment and reporting may increase patient-physician discussion of risk but may not translate into guideline-consistent use of mammography.</p>	<p>Changes in the breast cancer risk distribution among women utilizing screening mammography in Vermont between 2001 and 2012 Bolton KC, Mace JL, Vacek PM, Geller BM, Weaver DL, Sprague BL</p> <p>We previously reported a decline in overall breast cancer screening rates in Vermont following 2009. During this period, there has been debate regarding the role of patient context in decisions about when and how often to get screened, as well as increased interest in risk-based screening to optimize the balance between the potential benefits and harms of screening. The purpose of the current study was to evaluate whether the breast cancer risk distribution of the screened population in Vermont has changed during the observed decline in utilization rates. We examined the distribution of breast cancer risk among the screened population in Vermont from 2001 to 2012 using cross-sectional data from the statewide Vermont Breast Cancer Surveillance System. We employed the Breast Cancer Surveillance Consortium risk model to estimate each individual’s risk of developing breast cancer within 5 years according to age, breast density, race/ethnicity, family history of breast cancer, and biopsy history. Among women ages 40 to 74 who received screening mammograms, the absolute number of visits dropped by 4,257, from 54,415 to 50,158 (-7.3%; 95% CI: -7.5, -7.1) between 2009 and 2012. Concurrently, the number of screened women who were estimated to be at low risk of developing breast cancer decreased by 4,272 (95% CI: 3,950, 4,594), representing the bulk of the overall decrease. There was no significant change in the aggregate number of women estimated to be at higher risk (-15 women; 95% CI: -337, 307). The outsized proportion of the decline attributed to women at low estimated risk held across younger and older age groups: among women ages 40 to 49, the absolute number screened dropped by 3,337, with 2,495 (95% CI: 2,389, 2,601) reflected by declines among women at low risk; among women ages 50 to 74, the absolute number screened dropped by only 913, however this value reflects a decrease of 1,778 (95% CI: 1,544, 2,012) for the low risk category, and gains totaling 858 (95% CI: 624, 1,092) among higher risk categories. We conclude that the observed decline in women screened in Vermont since 2009 is largely attributable to reductions in visits by women who are estimated to be at low risk of developing breast cancer, and that this trend generally holds across age groups.</p>

**PAPER SESSION ABSTRACTS - Monday, March 10, 2014**  
**Session 2 - Lifestyle Behaviors, Energy Balance & Chemoprevention**

Michael Parks, PhD	Ai Kubo, PhD
<p>Evidence that an Incentive-Based Intervention Can Inexpensively Harness Natural Social Networks' Influence on Utilization of Smoking Cessation Helplines  Parks MJ, Slater JS, Nelson CL</p> <p>Purpose: This study examines how incentives relate to use of a smoking cessation helpline in a low-income population. The Minnesota Department of Health sent emotionally evocative direct mail materials coupled with a \$20 incentive designed to increase use of Minnesota's QUITPLAN Helpline. Methods: 1,183 individuals were surveyed after being connected to the Helpline. Primary analysis used logistic regression; the primary outcome was self-reported initial utilization of Helpline services. Results: Of individuals offered services, 66% used the Helpline. Regression models show that the incentive played a role in initial Helpline use--odds of utilization are 1.39 times as high for individuals who report the incentive was important as for those who do not. This relationship becomes non-significant once adjusting for whether the respondent had told others about the incentive. Telling others had a strong, positive relationship with Helpline use. The odds of using the Helpline were 217% higher for individuals who told others about the incentive compared to individuals who did not. An interaction effect was found between telling others and the importance of the incentive--individuals who told others about the incentive were more likely to find it important and more likely to report that they used the Helpline. Conclusions: Increasing use of smoking cessation helpline services is a pressing concern. Recent studies have attempted to elucidate the role of incentives and processes such as social support in smoking cessation. This study shows that a \$20 incentive played a role in utilization of helpline services, but its effect was unexpected. Specifically, telling others about the incentive robustly relates to helpline use, and incentives positively relate to telling others about the program. Put differently, the incentive played a role in the process of individuals telling others about the incentive-based intervention, and this combined effect was positively related to utilization of helpline services. This has implications for social and psychological dynamics related to health-related behavior change and how using incentives can be a relatively inexpensive way to harness the influence of natural social networks in population-level smoking cessation interventions.</p>	<p>Maternal gestational diabetes and pre-pregnancy obesity accelerates the timing of adrenarche in female offspring  Kubo A, Ferrara A, Laurent CA, Mirabedi A, Quesenberry CP, Kushi LH, Greenspan LC, Windham GC, Deardorff J, Hiatt RA</p> <p>Purpose: Early pubertal maturation in girls has been linked to cancer-related outcomes; age at menarche is associated with breast and reproductive cancer risks. In addition, early adrenarche (appearance of pubic hair) is related to subsequent development of the Metabolic Syndrome. Fetal origin of accelerated pubertal development has not been well studied; thus we investigated whether in utero exposure to hyperglycemia is associated with early onset of puberty in a multiethnic population. Method: This study included 421 adolescent girls who participated in the Cohort study of Young Girls' Nutrition, Environment, and Transitions (CYGNET), based in Kaiser Permanente Northern California. Girls aged 6-8 at enrollment were followed longitudinally at yearly intervals through age 13-15. Pubertal onset was assessed using clinic-based pubertal maturation (Tanner) staging, conducted by trained staff. Maternal glucose levels were obtained by medical record linkage. Using an interval-censored survival analytic method, we evaluated the association between pregnancy glucose levels (in quintiles), presence of gestational diabetes (GDM), and time to transition to Tanner breast stage 2 (BR2) and pubic hair stage 2 (PH2). All models were adjusted for girls baseline body mass index (BMI), race/ethnicity, maternal age, and maternal age at menarche. Results: The highest level of pregnancy glucose (Q5, &gt;140mg/dl), in conjunction with pre- pregnancy BMI &gt;25 was significantly associated with daughter's earlier transition to PH2 compared to the referent (Q1-4 &amp; BMI&lt;25)[Hazard ratio (HR)= 2.22 95% confidence interval (CI) 1.49-3.31]. Earliest timing of transition to PH2 was observed among daughters of mothers with GDM and pre-pregnancy BMI&gt;25 [HR=3.46 95%CI 1.82-6.59] vs. no GDM &amp; BMI&lt;25]. No association was found between pregnancy glycemia and breast development. Conclusion: Girls who were exposed to over-nutrition, as defined by maternal hyperglycemia and obesity in-utero, are at higher risk of earlier adrenarche, independent of their own obesity status. These results need to be confirmed, though suggest the importance of monitoring hyperglycemia and obesity among pregnant women to slow down the intergenerational transmission of metabolic dysregulation and its long-term sequelae.</p>

Cindy Blair, PhD	Kisha Coa, MPH
<p>Physical Activity and Quality of Life among Elderly Cancer Survivors Compared to Women without Cancer: The Iowa Women's Health Study Blair C, Robien K, Lazovich D</p> <p>Purpose: Few studies have examined lifestyle factors and health-related quality of life (QOL) in elderly, long-term cancer survivors compared to a cancer-free comparison group. We examined the degree to which physical inactivity is associated with poor QOL among elderly, female cancer survivors compared to similar-aged women without cancer. Methods: Subjects included women enrolled in the Iowa Women's Health Study in 1986 who completed the 2004 questionnaire (at ages 71-89 years) and were alive through 2005. The 2004 questionnaire asked participants about recreational physical activity and included the Medical Outcomes Study Short Form-36 (SF36) QOL assessment. Physical inactivity was defined as moderate or vigorous activity less than once per week. Logistic regression was used to compute the odds of poor QOL for each SF36 subscale (&lt;0.5 SD below the mean score of women without cancer) associated with physical inactivity between 4 groups based on the cross-classification of cancer history (no/yes) and physical inactivity (no/yes) (referent group=No/No). Results: Analyses included 12,067 women without a history of cancer and 1,707 women diagnosed with cancer between 1986 and 2002. Inactive cancer survivors were significantly more likely to report poor QOL for each SF36 subscale compared to the referent group (Odds Ratios (OR) 1.7 to 4.5), independent of age, comorbidity, BMI, and diet quality. Compared with the other 3 groups, inactive cancer survivors had the greatest odds of poor Physical Function (inactive cancer survivors [OR=4.5, 95% CI 3.9-5.3], inactive women without cancer [OR=3.8, 95% CI 3.5-4.2], active cancer survivors [OR=1.0, 95% CI 0.8-1.2]) and poor General Health (inactive cancer survivors [OR=3.2, 95% CI 2.7-3.8], inactive women without cancer [OR=2.8, 95% CI 2.5-3.0], active cancer survivors [OR=1.2, 95% CI 0.98-1.4]). Among physically active women, cancer survivors had similar QOL as women without a cancer history. Conclusions: Physical inactivity was more strongly associated with poor General Health and Physical Function in elderly, long-term cancer survivors compared to women without cancer. These findings support the need for interventions to help older women maintain or regain a physically active lifestyle after a cancer diagnosis.</p>	<p>Mixed methods exploration of diet among prostate cancer survivors Coa KI, Smith KC</p> <p>Purpose: To describe the ways in which cancer influences the dietary behaviors of prostate cancer survivors and explore other determinants of diet Methods: This study employed a mixed methods design. To be eligible, prostate cancer survivors had to be: between the ages of 45 and 74, diagnosed at least 3 years ago, and not currently in active treatment. First, participants participated in an in-depth interview about their cancer experience and current perceptions of the salience of cancer in their lives. Then, they completed three 24-hour dietary recalls using the ASA-24. Finally, participants took part in an in-depth interview about their dietary practices. In-depth interviews were analyzed using thematic analysis, and average nutrient data from the ASA-24 was calculated for each participant and compared to national recommendations. Results: 20 prostate cancer survivors participated in this study. Men who reported making dietary changes primarily did so because they believed there was a relationship between the foods they ate and the chance of cancer recurrence. Changes men reported making included reducing their consumption of red meat, dairy, or other high fat foods, increasing their consumption of fruits and vegetables, and reducing portion sizes. Several men also discussed giving up caffeine as a strategy for managing incontinence. Among men who did not make dietary changes, many reported a desire to make dietary changes to lose weight – often to mitigate other health issues. However, men described several barriers to healthy eating, such as busy work schedules, lack of time to prepare healthy foods, and a preference for 'unhealthy' foods. Furthermore, men often were not the primary food purchasers or preparers in their household. Conclusion: Prostate cancer survivors can benefit from making healthy dietary changes following their diagnosis. A cancer diagnosis is often thought of as a teachable moment when individuals are more motivated to make healthy dietary changes. Cancer is, however, only one potential influence on diet. Behavior change interventions for prostate cancer survivors need to consider other important determinants of diet as well as the role of others as primary household food preparers.</p>

Li Li, MD, PhD	Polly Newcomb, PhD
<p>Serum Retinol-Binding Protein 4 (RBP4) and Risk of Colon Adenoma</p> <p>Abola MV, Thompson CL, Chen Z, Chak A, Berger NA, Kirwan J, Li L</p> <p><b>Abstract Content:</b> Background: Insulin resistance is believed to be the underpinning linking obesity to colon neoplasia. Retinol binding-protein 4 (RBP4), a recently identified adipokine and retinol transporter has been shown, in both in vitro and in vivo models, to play a causative role in insulin resistance. The relationship of RPB4 with cancer, including colon neoplasia is largely unexplored. Methods: We analyzed pre-diagnostic serum levels of RBP4 for 626 patients (196 histologically confirmed colon adenoma cases and 430 negatively-screened controls) who were undergoing screening colonoscopies at the University Hospitals Case Medical Center. We collected extensive lifestyle and behavioral risk information on the participants via computerized personal interview. We used multivariate logistic regression models to assess the risk association between log(RBP4) levels and colon adenomas. Results: The cases have statistically significant higher levels of RBP4 than the control (58.5, SD=8.2 compared to 51.9, SD=32.5, <math>p=0.03</math>). Regression model adjusted for age, gender, race, BMI, NSAID, family history of colon cancer and smoking (packyears) revealed a statistically significant overall association of RBP4 with risk of colon adenoma (<math>\beta=0.33</math>, 95% CI=(0.03 - 0.62), <math>p=0.031</math>). Further adjustment of insulin resistance index (HOMA-R) did not alter the association. Stratified analysis by BMI (BMI &lt;28 vs. BMI <math>\geq</math> 28) revealed that the risk association was largely limited to those with BMI &lt; 28: the OR for the 2nd and 3rd tertile as compared to the 1st tertile are 2.67(1.22 – 5.86), 2.67 (1.21 – 5.88), respectively (<math>p</math>-trend = 0.022), while the corresponding OR estimates for those with BMI<math>\geq</math> 28 were 1.25 (0.66 – 2.37), 1.13(0.57 – 2.22), respectively, (<math>p</math>-trend =0.72). Conclusions: Our study is the first to show that circulating levels of RBP4, a novel biomarker of insulin resistance, is associated with risk of colon adenoma, in particular among those with lower BMI (&lt; 28).</p>	<p>Smoking History in Relation to Survival after a Breast Cancer Diagnosis</p> <p>Newcomb PA, Passarelli MN, Hampton JM, Trentham-Dietz A, Egan KM, Titus LJ</p> <p><b>PURPOSE:</b> Smoking history is associated with increased risk of most cancers, including breast cancer. Given the persistent effects of tobacco carcinogens, smoking history may also influence breast cancer survival. The few previous studies assessing this association were hindered by limited numbers of outcomes. <b>METHODS:</b> We assessed pre-diagnosis tobacco smoking in relation to survival in 22,870 female residents of Wisconsin, Massachusetts, or New Hampshire who were diagnosed with incident, invasive breast cancer between 1988-2008 at ages 20-79. All women reported pre-diagnosis tobacco use, as well as other known and suspected breast cancer risk factors. Information on breast cancer staging was obtained from state cancer registries. Proportional hazards regression with baseline hazard stratified on state of residence and study phase was used to estimate adjusted hazard ratios (HR) and 95% confidence intervals (CI) for cause-specific death according to current smoking (at the time of the breast cancer diagnosis) and long-term (&gt;30 years) smoking (prior to the diagnosis) adjusting for age at diagnosis, stage of disease at diagnosis, family history of breast cancer, age at first birth, menopausal status, hormone therapy use, body mass index, alcohol consumption, education, and mammography. <b>RESULTS:</b> During a median follow-up of 11.3 years from diagnosis, 7,807 deaths occurred, including 3,483 attributed to breast cancer, 328 to lung cancer, 415 to respiratory disease, and 1,553 to cardiovascular disease. Compared to nonsmokers, the HR were 1.2 (1.1-1.3. <math>P</math>=trend =0.0003) for current smokers and 1.2 (1.1-1.3, <math>P</math> trend=0.01) for &gt;30 years of smoking. Current smoking was also associated with increased mortality from lung cancer, HR=14.5 (10.1-20.8), cardiovascular disease, HR=2.2 (1.9-2.5), and respiratory disease HR=6.3 (4.8-8.2). <b>CONCLUSIONS:</b> In this large population-based sample of breast cancer cases, current and long-term smokers at the time of diagnosis were 20% more likely to die from breast cancer than never smokers adjusting for breast cancer stage. The elevated mortality risk observed here for known smoking-related diseases adds confidence to the breast cancer findings.</p>



# PAPER SESSION ABSTRACTS -- Tuesday, March 11, 2014

## Session 3 – Behavioral Science

Jessica Krok, PhD	Traci Bethea, PhD
<p>Clinic type and patient characteristics affecting time to resolution after an abnormal cancer-screening exam Krok JL, Kurta ML, Weier RC, Young GS, Carey AB, Tatum CM, Paskett ED</p> <p>Research shows that multilevel factors influence health care delivery and patient outcomes. The goal of this study was to examine how clinic type (primary care clinic within an academic medical center (AMC) or federally-qualified health center (FQHC)) and patient characteristics influence time to resolution (TTR) among individuals enrolled in a patient navigation (PN) intervention. Data were obtained from the Ohio Patient Navigation Research Project, a group randomized trial in which 862 patients from 18 clinics in Columbus, OH participated. Patient's TTR after an abnormal breast, cervical, or colorectal test and the clinics' patient and provider characteristics were obtained. Descriptive statistics and Cox shared frailty proportional hazards regression models of TTR were used to analyze the data. The mean patient age was 44.8 years and 71% of patients were White. In models adjusted for study arm, the interaction between time and study arm and a clinic random effect, FQHC patients had a 39% lower rate of resolution than AMC patients (HR=0.61, p=0.004); college educated patients had an 87% higher rate of resolution than patients with less than a high school education (HR=1.87, p=0.0007); privately insured patients had a 79% higher rate of resolution than uninsured patients (HR=1.79, p&lt;0.0001); patients with annual incomes ≥ \$50,000 had a 51% higher rate of resolution than patients with annual incomes &lt; \$10,000 (HR=1.51, p=0.02); and there was a 4% increase in the rate of resolution for each five year increase in patient age (HR=1.04, p=0.004). Factors that potentially confound the effect of clinic type on TTR were assessed using forward selection. After adjustment for patient insurance status, education level and age, clinic type was not significantly associated with TTR. Controlling for clinic type, patient insurance status and age were significantly associated with TTR (p=0.005 and p=0.01, respectively) and patient education level was marginally significant (p=0.06). These results suggest that TTR among individuals participating in PN programs is influenced by multiple socioeconomic (SES) patient-level factors rather than clinic type. Consequently, PN interventions should be tailored to address SES factors that influence TTR within patient populations.</p>	<p>Neighborhood socioeconomic status in relation to cancer mortality in the Black Women's Health Study, 1995-2011 Bethea TN, Palmer JR, Rosenberg L, Cozier YC</p> <p>Neighborhood socioeconomic status has been associated with a range of cancer health outcomes, but longitudinal data in African Americans, who tend to live in more deprived neighborhoods, is lacking. We assessed the relation of neighborhood socioeconomic status (SES) to cancer mortality in a prospective cohort of African American women. Participants enrolled in the Black Women's Health Study in 1995 by completing mailed questionnaires. Exposure information and incident diagnoses are updated through biennial questionnaires. Neighborhood SES was measured by a factor score based on census block group data for 6 indicators of income and education – median household income, median housing value, percent of households receiving interest/dividend/rental income, percent of adults who are college graduates, percent of white-collar workers, and percent of households not headed by a single female. Deaths through 2011 and cause of death were identified through linkage to the National Death Index. Cox proportional hazard models were used to estimate hazard ratios (HRs) and 95% confidence intervals (CIs) with control for age, education, marital status, cigarette smoking, physical activity, time spent watching TV, and dietary pattern. Based on 819 cancer deaths that occurred from 1995-2011, neighborhood SES was inversely associated with cancer mortality. The age-adjusted HR for lowest quartile of neighborhood SES relative to highest quartile was 1.63, 95% CI 1.33-2.00; control for covariates reduced the HR to 1.29, 95% CI 1.05-1.60. In analyses restricted to participants with 16 or more years of education, the multivariable HR for lowest relative to highest quartile of neighborhood SES was 1.38 (95% CI 1.01-1.90). Our results suggest that neighborhood SES is associated with an individual's risk of cancer mortality and that the association is mediated in part by diet, physical activity, and sedentary behavior. The finding that this association was present even among college graduates is of particular relevance to African Americans, who are more likely to live in disadvantaged neighborhoods regardless of their individual income or educational attainment.</p>

Mira Katz, PhD	Jesse Plascak, PhD
<p>Adherence to Multiple Cancer Screening Tests among Appalachian Women Katz ML, Young GS, Pennell ML, Reiter PL, Paskett ED</p> <p>Purpose. Appalachian populations suffer from higher rates of cancer incidence and mortality than non-Appalachian populations. Research has documented disparities in the receipt of within guideline cancer screening tests for each test individually (mammography (MA), Pap Test (PT) and colonoscopy, flexible sigmoidoscopy or FOBT (CRC)), however, no study has documented disparities in the receipt of multiple screening tests in this population. Methods. As part of a larger study using community-based participatory research strategies to reach Appalachian community members about the need for CRC screening, we surveyed 643 women aged 51-75, inclusive who agreed to complete a phone survey after being randomly selected from commercially available address lists for 12 Appalachian Ohio counties. The survey included questions about the receipt of screening tests within guidelines: PT (within 3 years), MA (within the past year), and CRC (FOBT: past year; FS: last 5 years; or colonoscopy: last 10 years). The frequencies of each test received within guidelines as well as the number of tests (0,1,2,3) women were adherent to, were calculated. Odds ratios and 95% confidence intervals for being within guidelines were calculated using multivariate logistic regression (by test and by number of tests). Results. Women not screened within guidelines by self-report were 33% for PT, 46% for MA, and 48% for CRC. Only 31% of the women were within guidelines for all 3 tests, with 18% reporting not being within guidelines for any of the 3 tests. Predictors of within screening guidelines for all three tests include having a check-up in the past two years (OR=14.7; 1.94, 111.5; p&lt;0.01) and not being a current or former smoker (OR=0.28; 0.11,0.72; p&lt;0.01 and OR=0.48; 0.25,0.93; p&lt;0.01, respectively). Conclusions. Few women in Appalachia Ohio are adherent to currently recommended cancer screening tests. Only about a third of the women were adherent to all three screening tests and almost a fifth of the women were not adherent to any of the three screening tests. These findings suggest that interventions should focus on improving multiple screening behaviors to reduce the high cancer rates in this underserved population.</p>	<p>Neighborhood and geographic factors associated with diagnostic resolution after an abnormal breast or cervical cancer screening test among women enrolled in a patient navigator program Plascak JJ, Llanos AAM, Pennell M, Weier RC, Paskett ED</p> <p>Purpose: This study's aim was to assess the associations between neighborhood and geographic factors and diagnostic resolution within 12 months following an abnormal screening test for breast or cervical cancer among participants of the Ohio Patient Navigator Research Program Methods: Patient (demographic, psychosocial, and socioeconomic status [SES]) and neighborhood (SES, racial segregation, healthcare access) factors of 776 women attending one of 16 clinics and living in one of 285 census tracts in greater Columbus, Ohio were examined. Women were randomized at the clinic level to determine receipt of the navigation intervention. Multilevel logistic regression was used to estimate associations between these factors and diagnostic resolution while controlling for clinic and neighborhood clustering. Spatial analysis assessed the presence of geographic disparities (i.e., regions of significantly high odds of not resolving). Results: After adjustment for individual-level SES and the receipt of the clinic-level navigation intervention, there was a significant inverse association between neighborhood-level percent of residents without a bachelor's degree and odds of diagnostic resolution (odds ratio = 0.79, 95% confidence interval = 0.63 - 0.98). Adjustment for neighborhood percent of residents without a bachelor's degree accounted for geographic disparities in diagnostic resolution. Racial segregation, home-to-clinic distance and PN were not associated with odds of resolution. Conclusions: Women were more likely to have diagnostically resolved 12 months following an abnormal breast or cervical cancer screening test if they lived in neighborhoods of higher SES. Geographic disparities in diagnostic resolution could be eliminated if there was no variation in neighborhood SES.</p>

Michelle Kurta, PhD	Elise D. Cook, MD, MS
<p>The association between sexual abuse and adherence to risk-appropriate cervical cancer screening guidelines: a study of women in Appalachian Ohio. Kurta ML, Krok JL, Hade EM, Williams J, Nemeth J, Paskett ED</p> <p>Purpose: Our objective was to determine if a history of forced sex influenced the likelihood of meeting risk-appropriate cervical cancer (CC) screening guidelines among women in Appalachian Ohio. Methods: We used data collected from initial recruitment for Community Awareness Resources and Education (CARE) I projects 1 and 2. Women were randomly selected from 14 Ohio Appalachian clinics. Risk-appropriate guidelines were defined as having had a Pap smear within 13 months of study interview among high risk women and within 37 months of interview among low risk women. High risk was defined as meeting any of the following criteria: 5 or more sexual partners during their lifetime; intercourse before 18; a current smoker; diagnosis of an STI; or a sexual partner diagnosed with an STI. Low-risk women did not meet any of these criteria. Associations between meeting guidelines and patient characteristics were evaluated by calculating odds ratios (OR) and corresponding 95% confidence intervals (CI) using logistic mixed model regression, with clinic incorporated as a random effect. Significant factors were included in a multivariable regression model assessing the association between exposure to forced sex and meeting CC screening guidelines. Results: Of the 571 women in this study, 105 (18.4%) reported being forced to have sex, 456 (79.9%) did not report forced sex, and 10 (1.8%) refused to answer or didn't know. We observed significant crude associations between meeting risk-appropriate CC screening guidelines and socioeconomic status (low vs. intermediate: OR=2.46, CI:1.48-4.09; low vs. high: OR=2.78, CI:1.65-4.72), marital status (divorced/widowed/separated vs. married/member of couple: OR=2.03, CI:1.90-6.92; divorced/widowed/separated vs. never married: OR=3.63, CI:1.90-6.92), and smoking status (never vs. former: OR=2.46, CI:0.32-0.84; never vs. current: OR=0.51, CI:0.33-0.78). Adjusted for these factors and current age, women forced to have sex were significantly less likely to be within screening guidelines (OR=0.32, CI:0.20-0.53).</p> <p>Conclusions: Women exposed to forced sex have lower odds of meeting risk-appropriate CC screening guidelines. This population needs additional efforts to ensure adherence to CC screening guidelines.</p>	<p>Retention of Minority Populations in the Selenium and Vitamin E Cancer Prevention Trial Arnold KB, Hermos JA, Anderson KB, Minansian LM, Cook ED</p> <p>Background: Adequate retention of Black (African-American) participants in long-term, randomized trials is important for achieving broadly applicable results. Purpose: To determine the incidence of retention failures and the individual and study site factors associated with retention failure among White and Black participants from the Selenium and Vitamin E Cancer Prevention Trial (SELECT), a phase III study of selenium and vitamin E for prevention of prostate cancer. Methods: SELECT randomized 35,533 participants from 427 study sites. Age eligibility was &gt;55 years for Whites, &gt;50 years for Blacks; race was determined by self-report. The primary analysis included 28,118 (87%) White and 4,322 (13%) Black men. Time to retention failure was defined as days to the earliest of either (1) the second consecutive missed in-person or phone visit or (2) refusal of future contact with study staff. Covariates included participant demographic and clinical characteristics, reasons for participating in SELECT and study site characteristics. Results: In SELECT, Blacks had a higher age-adjusted risk of disengagement than Whites [HR=1.9; 95% CI 1.7-2.0; p-value&lt;.0001]. Younger Black participants, age 50-54, representing 32% of Black participants, were at three times the risk of disengagement than those age 65+ [HR=3.34, 95%CI 2.24,4.94, p&lt;.0001]. Blacks age 65+ had 1.6 times the risk of disengagement than Whites age 65+ [HR=1.58, 95%CI 1.37, 1.83, p&lt;.0001]. By six years post-randomization, 83% of Whites were still retained on the study compared to 68% of Blacks. Among Whites, participant risk factors for disengagement were Hispanic ethnicity, graduate degree, living alone or current smoking; among Blacks, younger age and current smoking were risk factors. The site characteristic associated with disengagement among both racial groups was staff missing SELECT training sessions. Sites with a low staff attendance at training sessions had a high percentage of disengaged participants of either race. Both Whites and Blacks at sites receiving SELECT retention and adherence grants had lower risks for retention failure. Conclusion: These results may be useful in identifying personal and study site characteristics to guide recruitment and enhance retention of both Black and White men in long-term prevention trials.</p>

## PAPER SESSION ABSTRACTS -- Tuesday, March 11, 2014

### Session 4 – Survivorship & Health Outcomes/Comparative Effectiveness Research

Amy Trentham-Dietz, PhD	Bijal Balasubramanian, PhD
<p>Collagen fiber alignment in relation to prognostic markers for ductal carcinoma in situ of the breast Trentham-Dietz A, Sprague BL, Conklin MW</p> <p>Almost 20% of new diagnoses of breast cancer are ductal carcinoma in situ (DCIS). DCIS increases risk for invasive breast cancer, and new prognostic markers of disease-free survival are needed to complement the few that are known. Limited studies have investigated the prognostic value of the tumor microenvironment, which is increasingly recognized as potentially playing a key role in tumor invasion and progression. Collagen is the most abundant component of the stroma surrounding the breast ducts, and laboratory studies suggest that collagen alignment facilitates cancer cell invasion and migration. Here we examined whether collagen alignment patterns in human DCIS specimens correlate with known prognostic markers. We evaluated collagen fiber alignment in 235 Wisconsin women diagnosed with DCIS in 1997-2000 who participated in a clinicopathologic cohort study. Fiber alignment was evaluated from routine H&amp;E tissue slides prepared at the time of diagnosis using second harmonic generation (SHG) microscopy, a label-free multiphoton laser scanning technique that selectively images collagen. Images were evaluated for the presence of collagen fibers arranged in a radial pattern (approximately 75- to 90-degree angles) with respect to the DCIS lesion/stroma boundary, a phenotype termed TACS (Tumor Associated Collagen Signature). Chi-square tests were used to compare presence or absence of TACS with prognostic factors from a central review of pathology reports and slides, and analysis of tissue for ER, PR, Ki-67, and HER2. Overall, slides for about half (49.8%) of DCIS cases showed the TACS phenotype. TACS was not associated with age of the cases (<math>P=0.29</math>), size of the lesion (<math>P=0.76</math>), grade (<math>P=0.61</math>), or margin size (<math>P=0.77</math>). However, results suggested that TACS was more common (63.1%) among DCIS cases detected symptomatically than by mammography (47.3%, <math>P=0.09</math>). TACS was more common among cases that were ER-negative (<math>P=0.002</math>), PR-negative (<math>P=0.02</math>), Ki-67 positive (<math>P=0.06</math>), and HER2-positive (<math>P=0.002</math>). This study underscores the relevance of the tumor microenvironment, in particular the arrangement of the collagen fiber matrix. On-going analysis will examine disease-free survival among DCIS cases according to patterns of collagen fiber alignment.</p>	<p>Cancer and non-cancer follow-up care among vulnerable colorectal cancer survivors with multi-morbidities Balasubramanian BA, Tiro JA, Gupta S, Le</p> <p>Purpose: Nearly 70% of the 14 million cancer survivors in the US have multiple chronic conditions in addition to their cancer. Little is known about the care received by these complex survivors, especially among those who are under- and uninsured and who also have additional social and economic barriers to accessing good quality care. This study characterizes quality of cancer and non-cancer care among such vulnerable colorectal cancer (CRC) survivors receiving care in a safety-net health care system. Methods: Retrospective cohort study of 235 patients diagnosed with Stage I-III CRC during 2008-2010. Data were collected through patients' electronic medical records. Quality of follow-up cancer and non-cancer care was ascertained by calculating proportions of survivors who met recommended guidelines for cancer surveillance, preventive-care, and chronic disease care. Results: The study sample included a significant proportion of vulnerable patients (36% Black, 40% Hispanic; &gt; 50% uninsured, 34% Medicare, and 2% Medicaid). 16% were diagnosed at early stage whereas &gt; 70% were diagnosed with Stage II/ III cancer. On average, survivors had 3 coexisting chronic morbidities (28% had diabetes and 60% had hypertension). Follow-up time ranged from 2 to 4 years after completing initial cancer treatment. After completing initial treatment, 22% received carcinoembryonic antigen testing within 6 months; 43% had a colonoscopy within one year; and 20% had a CT scan within 6 months. Of survivors with diabetes, 43% met guidelines for HbA1c and LDL tests; 46% with hypertension met guidelines for cholesterol testing. There were no differences in cancer surveillance rates between survivors who were followed by oncology alone as compared to those followed by oncology and primary care. However, survivors with diabetes were significantly more likely to meet recommended care guidelines if they were seen by primary care at least once compared with only oncology follow-up. Conclusion: Quality of follow-up care for vulnerable CRC survivors was suboptimal. New models of care that bridge primary and oncology care are needed, especially for vulnerable survivors who have a high chronic disease burden, poor cancer outcomes, and social barriers to accessing health care.</p>

Philip Lupo, PhD	Anne Kirchhoff, PhD
<p>Clinical and Genetic Predictors of Impaired Fertility in Female Survivors of Childhood Cancer Lupo PJ, Chi CH, Danysh HE, Scheurer ME</p> <p>Introduction: An important late effect among female survivors of childhood cancer is treatment-related ovarian damage and impaired fertility. While chemotherapy and radiation therapy are associated with impaired fertility, few other risk factors have been identified. Furthermore, little is known about the role of genetic susceptibility to these late effects. Objective: As Anti-Müllerian Hormone (AMH) is a demonstrated marker of ovarian reserve; our objective was to identify clinical and genetic predictors of AMH levels in female survivors of childhood cancer. Methods: Female childhood cancer survivors (n=181) were recruited from the Texas Children's Cancer Center Long Term Survivor Program (LTSP). AMH (ng/mL) was measured using an enzyme-linked immunosorbent assay. Information on age at diagnosis and enrollment, race, ethnicity, cancer diagnosis, pelvic radiation, and use of alkylating agents was abstracted from medical records. The following single nucleotide polymorphisms (SNPs) were selected based on known or suspected function: AMHR2 rs2002555; CYP2C9*4 rs56165452; CYP2C19*2 rs4244285; and CYP2C19*3 rs4986893. SNPs were genotyped using TaqMan assays. Linear regression was used to determine the association between selected factors and AMH levels. As AMH levels were not normally distributed, the dependent variable was expressed as log10(AMH+1). Results: The mean age at enrollment in the LTSP was 12.4 years. The most common cancer diagnosis was acute lymphoblastic leukemia (47.2%), and a substantial proportion of the population was Hispanic (41.0%). The following variables were significantly associated with lower AMH levels: pelvic radiation (beta=-0.61, P&lt;0.001) and treatment with alkylating agents (beta=-0.09, P=0.04). Age at enrollment was associated with higher AMH levels (beta=0.01, P=0.04). Hispanic ethnicity was marginally associated with lower AMH levels (beta=-0.08, P=0.08). There were no significant genetic associations. Conclusions: In one of the largest studies of its kind, our results confirm previous associations between treatment-related factors and ovarian damage. While the SNPs evaluated were not predictive of AMH levels, more work is needed to explain why some survivors experience impaired fertility, while others do not, despite similar therapy.</p>	<p>Quality of life and comorbidities impact education and employment for survivors of adolescent and young adult cancers Kirchhoff AC, McFadden M, Warner EL, Kinney AY</p> <p>Purpose: Survivors of adolescent and young adult (AYA) cancers have a high risk of chronic conditions such as cardiovascular disease and asthma. These conditions may affect their ability to attend school or to work. We examined the impact of quality of life (QOL) and comorbidities on educational attainment and employment status for survivors of AYA cancers relative to a non-cancer comparison group. Methods: Using data from the 2009 Behavioral Risk Factor Surveillance System (BRFSS), we identified 7,471 individuals who were diagnosed with cancer between ages 15 and 39 and were ≥5 years from diagnosis and 326,821 controls without a history of cancer. Participants were ≥25 years of age. QOL was measured by a general health measure (excellent/very good/good/fair/poor). Comorbidities included self-reported cardiovascular disease, hypertension, asthma, and diabetes. Multivariable regressions using BRFSS survey weights were adjusted for sex, race/ethnicity and age, and compared the effects of QOL and comorbidities on educational attainment (college graduate or more vs. less education) and being employed or unable to work (compared to out of work or not in labor force) among the survivor and control groups. Results: Compared to controls, survivors in fair-poor health were less likely to be college graduates or more (survivors 18.5% vs. controls 37.9%, p&lt;0.01) and less likely to be employed (survivors 31.7% vs. controls 61.6%, p&lt;0.001), whereas survivors in good-excellent health did not differ from controls for either outcome. In addition, survivors in fair-poor health self-reported being unable to work more often than controls (31.4% vs. 5.4%, respectively; p&lt;0.001). For comorbidities, inability to work ranged from 14.9% of survivors with hypertension to 27.9% of survivors with cardiovascular conditions compared to 5.4% of controls (all p&lt;0.001), while survivors with no comorbidities did not differ from controls. Conclusions: AYA cancer survivors with ongoing health problems may face educational or work-related limitations. Early detection and management of health problems could help AYA cancer survivors control health problems before their ability to attend school or employment are disrupted.</p>

Nancy Avis, PhD	
<p>Trajectories of Depressive Symptoms Following Breast Cancer Diagnosis and Treatment Avis NE, Levine B</p> <p>Purpose: To identify, in a large sample of breast cancer survivors, distinct groups of women exhibiting different patterns (trajectories) of depressive symptoms up to 24 months following a breast cancer diagnosis, and to identify characteristics associated with these patterns. Methods: A total of 653 women within 8 months of initial breast cancer diagnosis completed questionnaires at baseline and 6, 12, and 18 months after baseline on contextual/patient characteristics, symptoms, and psychosocial variables. Chart reviews provided cancer and treatment-related data. The primary outcome was depressive symptomatology assessed by the Beck Depression Inventory (BDI). Finite mixture modeling was used to identify trajectories of depressive symptoms. Results: Based on a combination of the Bayesian Information Criterion and observation of trajectory distinctiveness, a 6-trajectory model was chosen. Almost half of the sample had a consistently very low (3.8%) or low (46%) level of depressive symptoms over time that was well below the traditional BDI cut-point of 10 thought to be indicative of clinically significant depression; 29.8% had a consistently borderline BDI score that hovered around 10; 12.1% had initially high BDI (around 18), but showed a decline over time; 7.2% showed an increased BDI (from about 15 to 18) over time; and a small but distinct group (1.2%) reported a chronically high BDI above 25. Several characteristics distinguished among these 6 groups of women. Older women were in lower BDI trajectories. Women with more physical symptoms (fatigue and pain), more rigorous chemotherapy, and greater illness intrusiveness were in trajectories showing correspondingly higher BDI scores. Additional analyses also showed that to some degree, changes in illness intrusiveness and pain paralleled BDI trajectories. Conclusions: Trajectory analysis allowed us to detect heterogeneity among women in reporting depressive symptoms following a breast cancer diagnosis. Such heterogeneity is obscured by analyses focused on stratified means. Further, our larger sample size identified more trajectories than other smaller studies. Mean levels of various characteristics at baseline and over time were identified that were significantly associated with each trajectory.</p>	

# ASPO 2014 POSTER DIRECTORY ( T = Trainee)

## Poster

#	NAME	TITLE
1	McQueen Burnett-	Exploring Stories about Colonoscopy Experiences Online: Comparing CRC “Screeners” with “Survivors”
2	Hartman Burnett-	Short-term Risk of Colorectal Cancer in Colonoscopy Patients with Sessile Serrated Polyps
3	Hartman	The association between American Indian/Alaska Native race and distant stage disease
4	Aigner C	The relation of pain to smoking and quit attempts among cancer patients in smoking cessation treatment
5	Nelson C	Smoking Cessation through a Tobacco Quitline:
6-T	Scherr C	"I Just Feel Like They Keep a Lot of this Information Under Wraps": Info Genetic Counselors Want to Know
7	Perry C	Physical Activity and Food Environments Assessments in Rural Washington Communities
8	Warner E	Barriers and Facilitators to uptake of the HPV vaccine among Latino parents in the Intermountain West
9	Warner E	Caregivers' perceived financial burden of pediatric cancer
10-T	Philip E	Obesity and Hunger: Examining the obesity-hunger paradox among low-income ethnic minority cancer patients
11-T	Khalil G	Special Interest Group Breakfast: Survivorship & Health Outcomes/Comparative Effectiveness Research
12-T	Khalil G	Play toward Cancer Prevention: A Pilot Evaluation of A Video Game Intervention for Cancer Risk Perception
13	Hatcher-Keller	Sisters Educated in Emergency Departments: Results of a pilot mammography promotion project
14	Nodora J	Does Patient Health Literacy Affect Breast Clinic Missed Appointments in a Safety Net Hospital?
15	Wang J	Promoting Chinese-Speaking PCPs' Communication w/ Immigrant Patient about CR CA Screening:
16	Cartmell K	A Statewide Survey to Examine the Availability of Selected Patient-Centered Standards of Cancer Care
17	Taylor K	Low Risk Prostate Cancer and Treatment Decision-Making
18	Tercyak K	Behavioral Aspects of HPV Vaccination in Hereditary Breast/Ovarian Cancer Families
19-T	John K	Confirming the Two Factor Model of Dispositional Cancer Worry
20-T	Krakow M	Psychosocial Predictors of HPV Vaccination Intentions for Unvaccinated College Women:
21-T	Litzelman K	Association between informal caregiving and telomere length in a population-based sample:
22	Dwyer L	The influence of masculinity on male young adults' sun-related behaviors and cognitions
23	Arnold L	African Americans' Perceptions of Genetics and Genetic Research
24	Highfield L	Grounding Evidence-based Approaches to Cancer Prevention in the Community:
25 - T	Swartz M	MyChoice project: An Application of the Three Factor Eating Qx among survivors of CNS tumors
26	Parker M	Dragonboat Paddling Promotes Beneficial Exercise and Lifestyle Changes By Breast Cancer Survivors
27-T	Gilkey M	Recommending HPV vaccine in the face of parental hesitancy: Current practices and future directions
28	Ferguson M	Development of Targeted Newsletters to Promote Cancer Control in African Americans
29	Greenwood N	Measuring Staff Activation and Empowerment for Breast Cancer Screening in Women with Intellectual Disability
30	Greenwood N	Measuring Preparedness for Mammography in Women with Intellectual Disabilities: A Validation Study
31	Greenwood N	Increasing the Rate of Regular Mammography Screening for Women with Intellectual Disabilities:
32	Greenwood N	A DVD-Based Intervention to Increase Preparedness for Mammography in Women with Intellectual Disabilities
33	Greenwood N	Evaluating an educational intervention about br ca screening for women with intellectual disabilities & their families
34	Mbah O	Evaluating Coaches of Older Adults for Cancer Care and Healthy Behaviors (COACH): Characteristics
35	Leadbetter S	Does a family history of male breast cancer increase the likelihood of being referred for genetic counseling
36-T	Darlow S	Don't tread on me: Correlates of attitudes towards smoking bans
37	Flocke S	Primary care residents' knowledge and self efficacy about obesity, nutrition, and physical activity counseling
38-T	Hannum S	Cancer Diagnosis, Decisions, and Outcomes: The Meaning of Illness Experiences
39-T	Sturgeon S	Perineal powder use and risk of ovarian cancer.
40	Vadaparampil S	Using Learner Verification to Evaluate a Mailed Postcard Intervention to Increase Discussion of HPV Vaccination:
41	Vadaparampil S	Prostate Cancer Patients' Preferences for Information Regarding Genetic Risk for Cancer Aggressiveness
42	O'Neill S	Integrating breast density into risk counseling: pilot intervention outcomes
43-T	Crane T	A multi-modal, real-time software platform for behavior-based cancer survivorship interventions:
44-T	Silva A	Assessing the quality of race/ethnicity, tumor, and breast cancer treatment information in a non-SEER registry
45	Best A	Spirituality and self-rated health among African American cancer survivors:
46	Schroen A	Evaluation of a Mobile Mammography Program to Improve Br Ca Screening Access in Rural, Underserved Localities
47	McRee A	Cervical cancer screening and acceptability of HPV self-testing among young adult lesbian and bisexual women
48	Thompson C	Short Sleep Duration – Potential Contributor to Racial Disparities in Breast Cancer Phenotypes and Outcomes?
49	Gwede C	Increasing Access to Colorectal Cancer Testing (I-ACT): Taking I-FOBT screening to the community
50	Kepka D	Low human papillomavirus (HPV) vaccine knowledge among Latino parents in the Intermountain West
51-T	Ochs-Balcom	Sleep Quality & Markers of Br Ca Aggressiveness in the Western New York Exposures and Br Ca (WEB) Study
52	Ochs-Balcom	Putative linkage signals identified for breast cancer phenotype in African American families
53	Swede H	Co-Morbidities, Triple-Negative Breast Cancer, and Survival Disparity
54	Diaz J	Exploration of Barriers and Facilitators to Colorectal Cancer Screening Among Spanish-Speaking Latino Men
55	Arnold L	Colorectal cancer screening in a very low-income population: Traditional factors do not play a role
56	Arnold L	Factors associated with HPV vaccination in adolescent males
57-T	Azrad M	Differences in adiposity and obesity-related diseases among African-American and White breast cancer survivors
58	Greenwood N	Evaluating a Training for Direct Support Workers to Increase Knowledge And Empowerment About Br Ca Screening
59	Tehraniifar	Diabetes, the metabolic syndrome and mammographic breast density in a predominantly Hispanic & immigrant sample
60	Reiter P	HPV Vaccination among Gay and Bisexual Young Adult Males in the United States
61-T	Brown Q	Breast Cancer Screening Among Community Dwelling African American Women 65 Years and Older:
62-T	Antwi	Assoc between dietary antioxidant intake and prostate cancer aggressiveness among African and Euro-American men
63	Pruitt S	Neighborhood Poverty and Colorectal Cancer Screening: Do Neighborhood Definitions Make a Difference?
64-T	Bernard-Davila	Relation of time since last birth and mammographic breast density: a biological marker for breast cancer risk
65	Beaber E	Comparing screening processes within the PROSPR initiative:



66	Clarke Hillyer	Estimation of mean number of adenomas per colonoscopy to assess bowel preparation quality:
67	Elston Lafata	Body Mass Index, Weight Perception and Colorectal Cancer Screening among Community Dwelling Virginians
68-T	Kowalkowski	Cumulative HIV viremia and non-AIDS-defining malignancies among a sample of HIV-infected male veterans
69-T	Singh S	Laser induced breakdown spectroscopy (LIBS) in cervical cancer screening: A proposed tool
70	Santos S	Increasing cancer early detection in African American churches
71	McDade T	Total Number of Chronic Illnesses is Most Strongly Associated with Exocrine Pancreatic Cancer Risk
72-T	Mu L	Raw garlic consumption and risk of lung cancer in a Chinese population
73	Soneji S	US cancer care may be less "worth it" than previously thought
74-T	Trabert B	Metabolic syndrome and endometrial cancer risk in the United States: a study in the SEER-Medicare linked database
75-T	Kitahara C	Class III obesity (BMI of 40-59) and mortality in a pooled analysis of 20 prospective studies
76-T	Hibler E	Self-reported ability to exercise and odds of colorectal adenoma recurrence
77-T	Arem H	Does TV viewing time before or after colorectal cancer diagnosis affect survival?
78-T	Reimers L	Prospective study of benign breast disease, reproductive, lifestyle factors, and risk of subsequent breast cancer
79-T	Nishiha R	Low Plasma ADIPOQ (Adiponectin) Level and KRAS Mutation Status in Colorectal Cancer
80-T	Nishiha R	Molecular pathological epidemiology analysis of alcohol intake and incident colorectal cancer
81-T	Bluethmann S	Time Since Diagnosis, Symptom Burden and Health Behaviors in Breast, Prostate and Colorectal Cancer Survivors
82	BraskyT	Associations of long-chain $\omega$ -3 fatty acids and fish intake with endometrial cancer risk in the VITAL cohort
83	Bekteshi V	Health behaviors among prostate cancer survivors: National Health Interview Survey 2005
84-T	Tabung F	The Dietary Inflammatory Index and Risk of Colorectal Cancer in Women
85	Reeves K	Within-person variability of urinary Bisphenol-A among postmenopausal women
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1	2
<p>Exploring Stories about Colonoscopy Experiences Online: Comparing CRC “Screeners” with “Survivors” McQueen A, Arnold L, Baltes M</p> <p>Colorectal cancer (CRC) is a leading cause of cancer mortality in the US that can be reduced by effective screening; however, screening uptake is suboptimal. Personal stories about experiences with CRC screening (CRCS) are in behavioral interventions and on the Internet, are valued by patients, and may be promising strategies for promoting CRCS, but scant research has compared the influence of different role models. Our research objectives were to: 1) Describe the content of publicly available experiential narratives about colonoscopy, 2) Compare narratives from individuals who had a colonoscopy and either did (“survivors”) or did not (“screeners”) receive a colon cancer diagnosis, and 3) Generate hypotheses for future studies examining effects of different narratives on individuals’ perceptions and intentions regarding CRCS. An Internet search for personal narratives about colonoscopy experiences identified 90 eligible narratives for analysis from 15 websites. More stories were about whites, males, and people undergoing routine (vs. diagnostic) colonoscopy. A higher than expected number of people reported a family history of CRC or polyps (14%) and a diagnosis of CRC after colonoscopy (47%). Some stories (26%) mentioned the correct age to start CRCS for average-risk adults, few (6%) indicated the correct interval between colonoscopies, but all were on websites that contained or were linked to information about CRC and CRCS. A minority of stories described the preparation for colonoscopy (11%), the procedure itself (13%), or healthcare providers (8%), 40% reported barriers to colonoscopy, and a majority explicitly encouraged colonoscopy screening (69%). Compared to “screener” stories, “survivor” stories were longer, more often mentioned symptoms or diagnostic reasons for getting a colonoscopy, and less often described the procedure or referred to colonoscopy as easy or painless. Future studies should test the potentially differential effects of role model characteristics (gender, family history) and test results (CRC, polyps, clear) on reader’s perceptions and intentions to get CRCS. Such research would improve our conceptual models explaining how narratives influence cognitions and behaviors, and change the paradigm of treating all narratives as equal.</p>	<p>Short-term Risk of Colorectal Cancer in Colonoscopy Patients with Sessile Serrated Polyps Burnett-Harman AN, Chubak J, Kamineni A, Ziebell R, Upton MP, Zhu L, Newcomb PA</p> <p>Background: Increasing evidence links sessile serrated polyps (SSP) to a subset of colorectal cancers (CRC) characterized by aberrant methylation and mutant BRAF oncogene. Only one longitudinal study has evaluated CRC risk in patients with SSPs and reported that 5 out of 40 patients with SSPs (12.5%) developed CRC an average of 8 years after colonoscopy. Methods: To determine the short-term risk of CRC in patients with SSPs, we conducted a study of Group Health members, aged 24-79, who received an index colonoscopy between 1998-2007. The study cohort included a systematic sample of those who were diagnosed with serrated polyps or were polyp-free at their index colonoscopy. Patients with proximal serrated polyps were oversampled to increase the number of patients with SSPs. During the index colonoscopy, polyps were biopsied, fixed in paraffin, and H&amp;E slides prepared. All polyps underwent a standard pathology review to confirm the diagnosis and reclassify a subset of polyps as SSPs. All participants were followed-up for incident CRC from the date of colonoscopy to December 31, 2012 through linkage with the Puget Sound Surveillance, Epidemiology, and End Results (SEER) cancer registry. Results: Average age in the study cohort was 60 years old at index colonoscopy, and 44% were men. There was no difference in the age and sex distribution of participants by index colonoscopy findings. Of 837 patients with clinically diagnosed serrated polyps, 193 were classified as having at least one SSP. Patients with SSPs at their index colonoscopy had a median follow-up of 6.7 years during which 1 incident CRC developed (0.5% over 6.7 years, or 0.07% annually). Among 432 patients with only hyperplastic polyps, 0 CRC cases occurred over a median follow-up of 7.0 years. Among 1,019 polyp-free patients with a median follow-up of 7.2 years, there were 2 incident CRC cases (0.2% over 7.2 years, or 0.03% annually). Over the same time period, incidence of CRC in Americans aged &gt;50 years was 0.3% per year (SEER data). Conclusions: Our results suggest that the risk of CRC is low in patients with no colorectal polyps identified at colonoscopy and in patients with SSPs removed at colonoscopy. Additional research is needed to determine the long-term risk of CRC in patients with SSPs.</p>

3	4
<p>The association between American Indian/Alaska Native race and distant stage disease among breast, colorectal, lung, and prostate cancer patients in Medicare Burnett-Hartman AN, McDougall JA, Adams SV, Karnopp A, Shiovitz SA, Bansal A, Berry K, Ramsey SD</p> <p>Purpose: To determine whether American Indian/Alaska Native (AIAN) cancer patients with Medicare insurance are more likely to be diagnosed with distant stage breast, colorectal, lung, or prostate cancer than Non-Hispanic Whites (NHW). Methods: We used Surveillance, Epidemiology, and End Results (SEER) registry data linked to Medicare enrollment files and Indian Health Service records to identify new cases of breast, colorectal, lung, or prostate cancer who were: 1) diagnosed 2001-2007, 2) residing in the SEER catchment areas, 3) enrolled continuously in Medicare from diagnosis to death or <math>\geq 1</math> year post-diagnosis, 4) <math>\geq 65</math> years old, and 5) AIAN or NHW. Stage at diagnosis was based on SEER data and dichotomized into local/regional and distant metastatic disease. We used logistic regression models to estimate adjusted odds ratios (ORs) and 95% confidence intervals (CIs) comparing the odds of distant stage disease between AIAN and NHW patients diagnosed with breast, colorectal, lung, or prostate cancer, stratified by anatomic site. Model covariates were: age, sex, diagnosis year, SEER registry site, rural residence, and Klabunde comorbidity score prior to diagnosis. The colorectal cancer model also included a variable for sub-site, and the lung cancer model included histologic subtype. Results: There were 305,980 NHW and 1,197 AIAN patients diagnosed with breast, colorectal, lung, or prostate cancer over the study period. Compared to NHWs, AIANs were slightly younger at diagnosis (mean age 74 vs. 75) and more likely to live in rural areas (38% vs. 22%). The odds of distant stage disease was significantly higher in AIAN compared to NHW patients diagnosed with breast (OR=2.48, CI: 1.61-3.83), lung (OR=1.31, CI: 1.06-1.64), or prostate (OR=2.33, CI: 1.62-3.33) cancer. For colorectal cancer, there was a 20% increased odds of distant stage disease in AIAN compared to NHW patients, but this increase was not statistically significant (OR=1.20, CI: 0.89-1.63). Conclusions: Our results suggest that despite equal Medicare insurance coverage, older AIANs are more likely to present with distant stage cancers than similarly aged NHWs for 3 out of the 4 most common cancers in the United States. It is unclear if this is due to reduced access to care in AIANs living in rural settings.</p>	<p>The relation of pain to smoking and quit attempts among cancer patients in smoking cessation treatment Aigner CJ, Baum GP, Cinciripini PM, Anderson KO, Lam CY</p> <p>Purpose The purpose of this daily diary study was to examine the relation of pain to smoking and quit attempts among 35 cancer patients with pain enrolled in a smoking cessation program. Methods Participants included 35 cancer patients (average age=53, cancer type: breast [32%], head and neck [32%], thoracic [28%], and lung [8%]). Participants completed daily diary assessments that measured pain and smoking at the end of each day for a 2-week period, beginning on the day they enrolled in a comprehensive smoking cessation program offered at MD Anderson. Pain experienced throughout the day was measured on a scale from 1 to 5, from “no pain” to “pain as bad as you can imagine.” Smoking was defined as the number of cigarettes smoked throughout the day. Results A smoking change score was calculated for each day by subtracting daily cigarettes smoked on the day of enrollment from cigarettes smoked on each daily diary day (negative score indicated a reduction). Days on which participants reported smoking no cigarettes during the 24-hour assessment period were interpreted as quit attempts. Using logistic regression, we found that higher average pain across the 2-week assessment period was associated with lower likelihood of making a quit attempt (Yes/No) during the 2-week period (OR= .26, <math>p=.03</math>). Using multilevel modeling to examine the association between daily pain rating and change in daily smoking from baseline, we found that a one unit increase in daily pain was associated with a .52 increase in cigarettes smoked during the day, from baseline (Estimate = .52, <math>p=.01</math>). Both analyses control for age and sex. Conclusions This study found that greater average pain was associated with less likelihood of making a quit attempt, and higher daily pain was associated with an increase in daily smoking from baseline among smokers trying to quit. These findings add to a growing literature on pain and smoking by providing initial evidence that pain may be associated with smoking and quitting among cancer patients who smoke and have pain. Future research examining the effectiveness of integrated pain and smoking treatment in this population may be warranted.</p>

5	6-T
<p>Smoking Cessation through a Tobacco Quitline: Results from a Direct Mail, Incentive-Based Intervention in a Low-Income Population Nelson CL, Slater JS, Parks MJ</p> <p>Purpose: This study, conducted by the Minnesota Department of Health (MDH), examines the effects of an incentive-based intervention aimed at smoking cessation in a low-income population. Methods: The intervention consisted of emotionally evocative direct mail materials coupled with a \$20 incentive which were designed to encourage the target population to call MDH and then transfer to Minnesota's QUITPLAN Helpline. Analyses include results for 1,183 individuals. The primary outcomes are self-reported initial use of the Helpline services as well as quit attempts and point-prevalence quit status for 7 and 30 days. The majority of participants were surveyed within six to eight months of receiving the incentive offer and being transferred to the Helpline. Primary analyses consist of all individuals who completed surveys regardless of time from transfer, while secondary analyses consist of separate samples that treat individuals surveyed before and after eight months as qualitatively different. Results generally do not change across the primary and secondary analyses, thus primary analyses results are reported. Results: The majority of the sample made at least one quit attempt, as 28% of the analytic sample made no attempt to quit and 50% made at least one quit attempt. In terms of point-prevalence quit status at 7 and 30 days, 22% reported smoking cessation -- 4% for past 7 days and 18% for past 30 days. Regression analyses show that Helpline use was robustly and positively related to self-reported changes in smoking behavior, and this was true for quit attempts as well as point-prevalence quit status. Conclusions: The MDH initiative to reduce smoking had a dramatic effect on smoking behavior change. The point-prevalence quit rates at 7 and 30 days were significantly higher than estimates of national averages. In addition, the majority of individuals made at least one quit attempt, which also surpasses past intervention initiatives and national averages. This demonstrates the effectiveness of an intervention that uses emotionally evocative direct mail materials and a small financial incentive to generate calls to a smoking cessation helpline and provides further evidence that helpline services can influence both the outcome and the process of quitting.</p>	<p>"I Just Feel Like They Keep a Lot of this Information Under Wraps": Information Genetic Counselors Want to Know about BRCA Variants of Uncertain Significance Scherr CL, Malo T, Lindor N, Nam K, Linder R, Couch FJ, Vadaparampil ST.</p> <p>Purpose: We present findings from an examination of comments collected as part of a larger effort to identify genetic counselors' (GC) current practices, attitudes, and information preferences regarding variant of uncertain significance (VUS) results in BRCA testing. Methods: Eligible participants included GCs who: 1) self-identified as practicing cancer genetic counseling, 2) reported patient care as their primary job activity, and 3) had a U.S. mailing address. Eligible participants (n=932) were identified through the National Society of Genetic Counselors and the American Board of Genetic Counseling mailing lists. GCs were asked to complete a 43-item survey, including 3 open-ended questions which asked about: the sufficiency of information on VUS reports, desired VUS information, and any additional comments or concerns regarding VUS. Responses to these three questions were analyzed using inductive content analysis. Results: Of 410 completed surveys, 271 participants provided comments, and 4 primary themes emerged. 1) The majority desired additional information on the VUS laboratory report, including prediction models, references to scientific literature, estimated time until reclassification, and clinical information about other patients with the VUS. 2) Some indicated concern about a lack of transparency on the part of the sole clinical laboratory providing BRCA testing and believed they intentionally withheld information on reports and publicly available mutation databases (e.g., Breast Cancer Information Core [BIC]) to protect proprietary and financial interests. GCs believed these practices negatively impacted their ability to counsel patients. 3) Participants desired educational materials about VUS and medical management for patients and families. 4) Finally, GCs indicated concerns about non-genetics professionals' ability to interpret VUS results. Conclusion: GCs desired greater information on VUS genetic test reports. As a result of a recent Supreme Court ruling, additional laboratories now provide clinical BRCA testing. Our findings identify information to include on VUS reports that are most important to GCs and suggests future research should explore effective educational interventions for patients with a VUS to support GC practice.</p>

7	8
<p>Physical Activity and Food Environments Assessments in Rural Washington Communities Perry CK, Ko LK, Marchello N, Gonzalez NE, Escareno M, Thompson B</p> <p>Purpose: The study purpose was to understand the physical activity and food environments experienced by rural Latino residents in order to inform intervention development aimed at promoting physical activity and healthy eating in rural communities. Methods: Assessments were taken in 2 rural towns which are predominantly Latino. We used the Rural Activity Living Assessment (RALA) to assess the community's physical friendliness. Two raters assessed street segments for features related to walkability. Data were also collected on recreational amenities and programs and policies. Scores were generated for policies and programs and amenities. We used the Nutrition Environment Measures Survey to assess the food environment. Store inventories were assessed for availability of fruits, vegetables, whole grain bread, lean ground beef, baked or low fat chips, and low sugar cereal. Restaurant measures included availability of healthy options on main dishes/entrees, main dish salads, low-fat/fat-free salad dressings, and fresh fruits. Food environment scores were generated for stores, which consisted of a composite score of availability of healthy food, quality, and price. Results: The larger town had more physical activity amenities with a score of 77 (max 100) and favorable policies with a score of 71 (max 100) compared with 47 and 40 respectively for the smaller town. Both towns had playing fields, and a playground within 5 miles of the town center; however; these were rated in fair to poor condition. Close to 70% of street segments were rated as not walkable. Restaurants were mostly fast food or fast casual with limited healthy options on main dishes/entrees. Convenience stores comprised 79% of all food stores with a food environment score of 3.64 compared with 29 for grocery stores (max 62). Conclusions: Towns have available recreational amenities; however, the towns are not walkable. The majority of food stores offer less healthy options.</p>	<p>Barriers and Facilitators to uptake of the HPV vaccine among Latino parents in the Intermountain West Warner EL, Kepka D</p> <p>Purpose: Assess barriers and facilitators of uptake of the Human Papillomavirus (HPV) vaccine for girls and boys among Latino parents. Methods: Five focus groups were conducted, accompanied by a brief mini-survey, from August to October, 2013. Eligible participants (N=53) were Latino parents with a son or daughter between ages 11-17, who was eligible to receive the HPV vaccine. We asked parents if their son(s) or daughter(s) had received the HPV vaccine, their knowledge about the vaccine, barriers and facilitators related to uptake of the vaccine, and preferred methods of receiving health related information. The focus groups were recorded, transcribed, and translated. The data were independently coded and analyzed in NVivo 9.0. Results from the mini-survey were analyzed using Stata 12.1. Results: All participants were Spanish speaking; with 64.6% reporting that they knew little or no English. Overall, few daughters (25%) and sons (10%) had been vaccinated. The main barrier to HPV vaccination included lack of information about the vaccine, concern about side effects, lack of provider recommendation, and concerns about costs or lack of insurance. Though most parents felt the HPV vaccine was important (81%), they indicated they had not received enough information about the vaccine to feel comfortable deciding to have their daughter or son vaccinated (75%). Approximately 30% of parents did not know that boys could receive the vaccine. When asked about receiving more information about the HPV vaccine, Latino parents preferred to receive this information from healthcare providers (94%), the internet (66%), or directly from their son or daughter's school (60%). Conclusions: Latino parents perceive the HPV vaccine as an important tool to prevent cervical cancer and other HPV related diseases, but they have concerns because they lack adequate information about the vaccine. Interventions aimed at improving HPV vaccine uptake among Latino adolescents in the Intermountain West would likely benefit most from providing a culturally appropriate educational component delivered from health care professionals, the Internet, or through their son or daughter's school.</p>

9	10-T
<p>Caregivers' perceived financial burden of pediatric cancer Warner EL, Kirchhoff AC, Fluchel M</p> <p>Purpose: Few studies have investigated the financial impact of pediatric cancer for patients and their families over the duration of treatment. We evaluated the impact of health care access factors and caregiver employment on caregivers' perceived financial burden by time since diagnosis. Methods: A single-site, cross-sectional survey of primary caretakers of childhood cancer patients was performed from July 2010-July 2012. Eligible patients were treated at a pediatric cancer hospital, diagnosed age <math>\leq 21</math> years and were <math>\leq 5</math> years from diagnosis (N=271; response rate 79%). Financial burden from treatment was rated on a visual analog scale of 0=no burden-100=very large burden. Multivariable linear regression models adjusted for patient sex and age at diagnosis were used to examine financial burden by health care access (public vs. private insurance; rural vs. urban residence) and changes in caregiver employment due to cancer. Results: Mean patient age at diagnosis was 6.8 years (SD=5.5) and leukemia (42.2%) was the most common cancer. The median reported financial burden was 73 (range 0-100). Insurance, residence, and employment did not impact financial burden for caregivers whose child was <math>&lt; 1</math> year from diagnosis. Our analyses, however, indicated a threshold effect by time since diagnosis. Caregivers with a child 1-5 years from diagnosis, who had quit work or changed jobs as a direct result of cancer, reported 13 points higher financial burden than those who had not changed their employment (<math>p=0.011</math>). Rural caregivers with a child 1-5 years from diagnosis reported 12 points higher financial burden than urban caregivers (<math>p=0.047</math>). There were no differences by insurance type. Conclusions: After the first year of cancer treatment, families who have had changes in caregiver employment or who live in rural locations may face greater financial burden. Efforts to support caregivers' employment and rural patients may ease the financial burden of pediatric cancer</p>	<p>Obesity and Hunger: Examining the obesity-hunger paradox among low-income ethnic minority cancer patients</p> <p>Philip EJ, Costas R, Ramirez J, Aragonés A, Leng J, Gany F</p> <p>Purpose: The current study examined the relationship between food insecurity (FI: limited or uncertain access to sufficient nutritious food to lead a healthy life) and body weight, and their association with quality of life (QOL) among low-income ethnic minority cancer patients. Method: Ethnic minority cancer patients (N=426) completed a demographic questionnaire and the USDA Household Food Security Survey as part of a larger study. The majority of participants were female (70%), African American/Black (50%) or Latino (35%) and diagnosed with breast (44%) or gastrointestinal (16%) cancer. The average age was 56 years and 80% reported income below the national poverty level. Results: The majority of the sample were overweight (34%) or obese (29%), with an average BMI of 28. Overall, 44% reported FI without hunger and an additional 25% reported FI with moderate or severe hunger. Based on previous research, analysis was stratified by gender. Different weight patterns emerged based on gender: women with FI with moderate hunger had the highest weight (BMI=29.9; ref group), while those who reported food security (BMI=27.2, <math>p=.06</math>) and FI with severe hunger (BMI=26.6, <math>p=NS</math>) had the lowest. Among female patients, both FI and obesity were associated with impairments in QOL, with those possessing the dual burden of both risk factors having the lowest QOL. The BMI of male participants did not vary significantly based on level of food insecurity and was unrelated to QOL. Discussion: This study revealed that 63% of low-income minority cancer patients were overweight or obese and critically, 69% endorsed some degree of FI - significantly higher than national FI estimates. The relationship between weight and FI differed by gender, with women with FI and moderate hunger possessing the highest BMI, suggestive of the obesity-hunger paradox. The combination of obesity and FI was associated with greatest degree of impairment in QOL. These novel findings suggest that a substantial number of low-income minority cancer patients shoulder the burden of obesity and hunger, and that weight may not be reflective of food security. Comprehensive supportive care and health promotion efforts are needed to address these important factors in the context of cancer care.</p>

11-T	12-T
<p>Anytime Soon? A Measure for Perceived Susceptibility to Cancer in the Near Future Khalil GE</p> <p>Little research has been conducted on the psychometrics of a scale for perceived susceptibility to cancer in near future. The purpose of this study is to test the reliability and validity of a scale called perceived temporal susceptibility (PTS) scale (PTSS; 4 items). Methods: In this study, 480 young adults completed a survey to report their PTS, general perceived susceptibility (GPS), and perceived severity (PS) related to cancer. GPS involved comparative and absolute risk items. PTSS involved items of perceived absolute risk, however at different time points in a lifetime. The survey included measures for personal connection to the cancer community, gender, ethnicity, cancer-related information seeking intentions, and self-efficacy for cancer prevention. Psychometrics were examined using principal factor analysis, between-item comparisons, and classical test theory. Results: Factor analysis, scree plot, and principal component analysis suggest the presence of two factors differentiating between GPS and PTS. Canonical correlations were significant for PTSS and GPS, indicating that the measures conceptually agree. Confirmatory factor analysis showed a good model fit with GPS and PTS as two correlated factors (<math>r = 0.54</math>, <math>p &lt; 0.001</math>). PTSS demonstrated adequate internal consistency (Cronbachs <math>\alpha = 0.91</math>). Between-items comparisons for PTSS show that the more the item refers to cancer incidence further in the future, the higher is perceived the susceptibility of contracting cancer. As expected, higher scores for PTSS were associated with connection to the cancer community [<math>F(1, 470) = 18.19</math>, <math>p &lt; 0.01</math>], being white [<math>F(1, 469) = 10.58</math>, <math>p &lt; 0.01</math>], being female [<math>F(1, 475) = 9.44</math>, <math>p &lt; 0.05</math>], higher cancer-related information seeking intentions (<math>r = 0.12</math>, <math>p &lt; 0.01</math>), and lower self-efficacy for cancer prevention (<math>r = -0.36</math>, <math>p &lt; 0.001</math>). Ethnic difference and cancer-related information seeking intentions were not related to GPS. Conclusions: This study provides evidence to support the use of PTSS for the measurement of perceived susceptibility in the near future, as compared with lifetime susceptibility. Future research may investigate differences between</p>	<p>Play toward Cancer Prevention: A Pilot Evaluation of A Video Game Intervention for Cancer Risk Perception and Information Seeking among Young Adults Khalil GE</p> <p>Purpose: This study evaluates a game called "Re-Mission 1.0" among young adults to change their cancer risk perception and encourage them to seek cancer-related information. "Re-Mission" is a game in which players control a nanorobot that goes inside patients' virtual bodies to fight cancer cells. Method: A randomized controlled evaluation was conducted with 218 healthy young adults. Participants were randomly assigned to 1 of 3 conditions: a group playing Re-Mission at low challenge (LC), a group playing at high challenge (HC), and a group presented with pictures of Re-Mission (control group). Participants were followed at post-test, and 10-day follow-up. The outcomes were perceived severity of cancer, perceived susceptibility, information seeking behavior, and cancer knowledge. Repeated-measures analysis of variance was undergone. Results: Results show that perceived severity and perceived susceptibility increased from baseline to post-test for LC and HC. A greater increase in perceived severity was found for LC compared to HC. A greater increase in perceived susceptibility was found for LC compared to HC. No change was observed for the control group in these measures. Information seeking behavior increased from baseline to 10-day follow-up for LC, but not for HC or control. Knowledge increased from baseline to 10-day follow up for HC, but not for LC. Conclusions: Re-Mission is a digital game that can benefit healthy young adults by helping them perceive the risk of cancer, encouraging them to seek health information and ultimately increase their cancer knowledge. With careful alternation between low and high challenge, a new gaming intervention may be designed and implemented to reshape young adults' cancer risk perception and allow them to discover cancer-related information</p>



13	14
<p>Sisters Educated in Emergency Departments: Results of a pilot mammography promotion project Hatcher-Keller J, Rayens MK, Dignan M, Schoenberg N</p> <p>Background: African AMerican women have a higher mortality rate from breast cancer than any other ethnic group in the country. This disparity is partially attributed to irregular mammography screening patterns, which contribute to later stages of diagnosis among this population as compared to others. Targeted interventions are needed to mitigate this disparity. We report the results of a randomized controlled trial assessing the effectiveness of an intervention delivered to African American women as they wait for care in the Emergency Department. This is an especially vulnerable group of this already under served population. Methods: African American women (n=100) who were seated in the E.D. for non urgent care or accompanying a family member were randomly selected to receive one of the following; lay health motivational interview, tailored educational brochures or usual care. The motivational interview was conducted in the E.D. and designed to help navigate common and specific barriers to mammography and the brochures were culturally tailored based on interviews with African American women in the E.D. The outcome measure was receipt of a mammogram, assessed by self report. Results: Mammograms in all three groups increased by an average of 27%. Mammography for women who had never been screened increased by 17%. There was no significant effect of the intervention on receipt of mammography. Conclusion: The intervention was not effective in increasing mammography rates in this setting. Achieving optimal mammography rates for this hard to reach population may require more intensive interventions than the one tested. System level approaches rather than patient centered ones may be warranted. Finally and perhaps most importantly, attention from a lay health worker during the study assessment causes movement in screening status.</p>	<p>Does Patient Health Literacy Affect Breast Clinic Missed Appointments in a Safety Net Hospital? Nodora JN, Bouton ME, Weiss BD, Hsu CH, Komenaka IK</p> <p>Purpose: Individuals with limited health literacy lack skills to function adequately in a health care environment. Missed appointments result in greater health care costs as they waste clinical and administrative resources, increase waiting times for other patients, and are a significant and widespread concern in public hospitals. The current study investigated the relationship between health literacy and the rate of missed appointments in an underinsured and undereducated population. Methods: 1627 consecutive patients receiving care at the Maricopa Medical Center's Breast Clinic, a safety net facility in Maricopa County, Arizona were included in the study. Health literacy was assessed using the Newest Vital Sign (NVS), which has been validated for use in English and Spanish speaking individuals. The EPIC electronic medical record system was queried from January 2009 to January 2012 to identify total appointments and number of missed appointments for each patient. These data were used to calculate the rate of missed appointments. Results: Study participants included 98% female, 68% Hispanics, 20% non-Hispanic whites, and 12% other race; 48% were English speakers. 62% of patients had no insurance and 30% were Medicaid beneficiaries. Only 18% of the study population was classified as having adequate health literacy. Of the 21,712 scheduled appointments in the hospital system, 3638 were missed (16.8%). Patients deemed to have adequate health literacy by the NVS were less likely to miss appointments than those with limited health literacy (14.5% vs. 17.1%; <math>p&lt;0.0001</math>). After adjustment for age, race/ethnicity, language use, insurance, cigarette smoking use, and screening mammography use, patients with adequate health literacy had significantly fewer missed appointments than those with limited literacy (OR=0.85; 95% CI=0.733-0.995). Conclusions: The current study presents evidence that limited health literacy is associated with missed appointments. Interventions aimed at improving health literacy in uninsured and poor individuals are likely to increase adherence to medical appointments.</p>

15	16
<p>Promoting Chinese-Speaking Primary Care Physicians' Communication with Immigrant Patients about Colorectal Cancer Screening: A Cluster Randomized Trial Design</p> <p>Wang JH, Liang W, Ma GX, Gehan E, Wang HE, Ji CS, Tu SP, Vernon SW, Mandelblatt JS</p> <p>Purpose: Chinese Americans' underutilization of colorectal cancer (CRC) screening is related to their cultural views and non-exposure to physician recommendations. This study evaluated a culturally sensitive, physician-based intervention guided by social cognitive theory (SCT) to inform future research design for minority physicians and patients. Minority physicians have low participation in clinical research; therefore, we reported our recruitment strategies. Methods: 25 Chinese-speaking primary care physicians were enrolled by ethnicity-matched staff. They were randomized into one of the two arms: intervention (n=13) or usual care (n=12). All physicians participated in a baseline assessment of SCT constructs (self-efficacy, behavioral capacities, and outcome expectancies). Only physicians in the intervention arm received two 45-minute in-office training sessions after reading a dual-language communication guide detailing strategies in addressing Chinese patients' screening barriers. In each training session, physicians communicated with two Chinese-speaking patients (separately) who were trained to simulate real patients in a mock medical encounter. Physicians' feedback on the intervention materials and their performance data during the training were collected. Qualitative and quantitative analyses of SCT constructs before and after intervention were conducted. Results: Most intervention physicians (~85%) liked the intervention materials but 80% spent less than 20 minutes reading the guide and 58% commented that the in-office training might not be acceptable. Evaluation of the training indicated that 69% of the intervention physicians addressed 80% of patient barriers or more during the mock encounters; these physicians were also more likely to inquire patients' CRC screening history and demonstrate patient-centered communication behaviors. The intervention significantly increased physicians' perceived communication self-efficacy with patients (<math>p&lt;.01</math>). The majority of participating physicians (81.3%) was enrolled by in-person visits and referrals of Chinese physician networks. Conclusion: Our intervention effectively increased physicians' cultural competence in communicating with Chinese immigrants. This study demonstrated the feasibility of enrolling and intervening with minority physicians. Time constraints in primary care practice should be considered in the design and implementation of interventions.</p>	<p>A Statewide Survey to Examine the Availability of Selected Patient-Centered Standards of Cancer Care in South Carolina Cancer Centers</p> <p>Cartmell KB</p> <p>Patients face numerous physical, emotional and practical challenges during the cancer treatment and survivorship period. To help ensure patient access to high-quality support services, the American College of Surgeons Commission on Cancer (ACoS-CoC) will require all cancer centers to provide patients with five key patient-centered services by January 2015 to maintain cancer center accreditation. These services include patient navigation, distress screening, survivor care plans, genetic services and palliative care. However, there are no state-level mechanisms in place to assess baseline availability of these services. To fill this evidence gap, we conducted a statewide survey of South Carolina ACoS-CoC cancer centers in the winter of 2012 to obtain baseline information on the availability of these services. Twenty one ACoS-CoC accredited cancer centers were identified in SC. These 21 cancer centers represented 17 cancer center systems of care. Staff at each cancer center whose role was to support the ACoS-CoC accreditation process were emailed a link to the survey. For those who had not responded, an email reminder was sent at 2 weeks and a personal call reminder was made at 4 weeks. Of the 17 cancer center systems, 94% participated in the survey. Forty four percent of cancer centers reported that patient navigation is regularly available for patients. Thirty one percent of cancer centers reported that distress screening is routinely provided for patients. Cancer centers reported that patients "very often" or "always" receive a written summary of standard survivor care plan topics (e.g. patient diagnosis/treatment information, schedule of follow up tests,) between 40-56% of the time. Thirty eight percent of cancer centers reported systematically providing genetic risk assessment services. Ninety four percent of cancer centers reported having an active palliative care program. These results highlight areas where the availability of patient-centered services can be enhanced. The survey protocol was feasible and inexpensive to implement and may provide a useful method for other states to use to collect statewide data on the availability of support services for cancer patients.</p>

17	18
<p data-bbox="131 163 771 220">Low Risk Prostate Cancer and Treatment Decision-Making</p> <p data-bbox="131 220 771 325">Taylor KL, Van Den Eeden S, Hoffman R, Leimpeter A, Kelly SP, Tomko C, Starosta A, Shan J, Luta G, Davis K, Aaronson D</p> <p data-bbox="131 357 771 1753">Background: Active surveillance (AS) is a disease monitoring strategy for men with low risk prostate cancer (PCa) that offers active treatment (AT) only upon evidence of cancer progression or patient request. Men on AS avoid complications from AT without compromising cancer control. However, AS is not widely utilized. In the first phase of a longitudinal cohort study in which participants are assessed at baseline, six- and 24-months post-diagnosis, we describe participants' baseline self-reported treatment decision making processes. Method: We conducted a baseline telephone interview with 794 (71% participation rate) men with newly-diagnosed (median=24 days), low-risk PCa (PSA &lt; 10, Gleason &lt; 6), prior to the onset of treatment. We assessed sociodemographics, family history of PCa, decision-making processes and preferences, and general and disease-specific quality of life. Results: Men were 61.5 (SD=7.7) years old, 50% had completed college, and 82% were white. At the baseline assessment, 87% had seen a urologist (13% &gt;1 urologist), 18% had seen a radiation oncologist (2% &gt; 1), 10.7% had seen a primary care physician, and 11% had seen another specialty. Over 90% reported that they were involved as much as they wanted in the decision making process. Over two-thirds (68.5%) reported that they had already made a treatment decision, despite several knowledge deficits: 13% were unaware that they had low risk PCa, 29% of the knowledge items were answered incorrectly, and 49% answered one or both numeracy items incorrectly. Importantly, 44% of subjects were uncertain about their treatment decision and 37% expressed anxiety regarding the early detection of changes in their medical condition. Conclusions: Despite a majority making rapid treatment decisions, a substantial proportion of men reported being uncertain about their decision, having knowledge deficits, and anxiety about their future. The treatment decision for low risk PCa is difficult and one that requires the provision of balanced decision-support information very soon after diagnosis. The long- term goal is to determine the information and support that is needed by these patients, and how to quickly deliver this information while the decision making process is ongoing.</p>	<p data-bbox="771 163 1414 220">Behavioral Aspects of HPV Vaccination in Hereditary Breast/Ovarian Cancer Families</p> <p data-bbox="771 220 1414 283">Murphy SE, Mays DM, DeMarco TA, Patenaude AF, Garber JE, Schneider KA, Peterson SK, Tercyak KP</p> <p data-bbox="771 325 1414 1900">Purpose: Mothers undergoing BRCA1/2 genetic counseling and testing for hereditary breast/ovarian cancer (HBOC) often express concerns about excess cancer risks in their offspring, especially their daughters. FDA approval of the human papillomavirus (HPV) vaccine in 2006 adds a new dimension to cancer prevention in high-risk families, but HPV vaccination rates and correlates of vaccination in this special population have not yet been established. To inform this area of research, we investigated HPV-specific knowledge, attitudes, and vaccination behavior among adolescent females from families affected by or at increased risk for HBOC. Methods: Adolescent participants (M age = 17.5, N=140) completed a telephone interview using standard behavioral and epidemiological survey items and scales. Results: Most participants were non-Hispanic white (93%); 79% had mothers with a personal history of breast/ovarian cancer and 14% were daughters of BRCA1/2 mutation carriers. Although 77% of females knew about HPV and 69% recognized HPV as a sexually transmitted infection, only 33% associated HPV with cervical cancer. Greater knowledge about HPV was positively related to greater knowledge about cancer (<math>r = .23</math>, <math>p = .006</math>) and a more open parent-child communication style (<math>r = 0.26</math>, <math>p = .002</math>). The uptake rate of <math>\geq 1</math> HPV vaccination dose was 60% in our sample: unvaccinated females endorsed strong intentions to be vaccinated. Compared with females who had not been vaccinated, vaccinated females were older (<math>t = 4.25</math>, <math>p &lt; .001</math>) and reported greater HPV knowledge (<math>t = 6.92</math>, <math>p &lt; .001</math>). Vaccinated females also tended to hold a less conflicted parent-child communication style than non-vaccinated females (<math>t = 1.68</math>, <math>p = .095</math>). Among vaccinated females, 29% reported lifetime cigarette smoking compared with 13% of non-vaccinated females (<math>p = .02</math>): vaccinated females were also more likely to report lifetime drinking (78% vs. 45%), current drinking (62% vs. 25%), and binge drinking (37% vs. 5%; all <math>p</math>'s &lt; .001). These latter associations could be explained by their older age, and represent modifiable cancer risks. Conclusion: Our data suggest that while members of this population are receptive to HPV vaccination, gaps in knowledge, vaccination behavior, and lifestyle-based cancer prevention persist among cancer-vigilant families. The findings shed light on important health education learning objectives to promote open communication between parents and children about familial cancer, and age-appropriate cancer prevention strategies where warranted.</p>

19-T	20-T
<p>Confirming the Two Factor Model of Dispositional Cancer Worry John KK, Jensen JD, Yale RN, Carcioppolo N, Krakow MM, Weaver J</p> <p>Objective: Dispositional cancer worry is the tendency to experience negative thoughts about cancer independent of cancer-relevant stimulus. Past research has suggested that dispositional cancer worry has two underlying dimensions (severity and frequency) though no study has validated that measurement model. Thus, the purpose of this study was to evaluate the two factor model across multiple studies. Interventions/Methods: Confirmatory factor analysis and paired construct tests were utilized to analyze data from four studies that measured dispositional cancer worry. In study 1, participants (N = 481) were recruited from one of 6 malls in the Midwest. This data was used to compare the one-factor and two-factor models of dispositional cancer worry. Studies 2 – 4 examined whether the optimal model from study 1 replicated across samples. Results: In study 1, a two-factor model of dispositional cancer worry (Model AIC = 92.67) was superior to a one-factor model (Model AIC = 537.27). A paired construct test also supported the discriminant validity of the two-factor model. Consistent with past research, the two factors represented severity (M = 3.55, SD = 1.77, alpha = .9) and frequency (M = 1.71, SD = 1.22, alpha = .85). Cancer worry severity was more acute, a finding that mirrors past work. Studies 2 – 4 replicated the two-factor measurement model. Conclusions: Analysis of data from four studies supported the two-factor model of dispositional cancer worry identified by Jensen et al. This suggests that single-item measures may not fully capture the complex nature of the construct. It also suggests that dispositional cancer worry and dispositional worry may have similar factor structures. From a practice standpoint, the current study provides practitioners and researchers with a validated 8-item measure of dispositional cancer worry. This short measure can be administered to patients so that caregivers better understand their thoughts and feelings. A more nuanced understanding of when, how, and who worries about cancer will provide stakeholders with opportunities to refine cancer prevention, treatment, and care.</p>	<p>Psychosocial Predictors of HPV Vaccination Intentions for Unvaccinated College Women: Religiosity, Morality, Promiscuity, and Cancer Worry Krakow MM, Jensen JD, Carcioppolo N, Weaver J, Liu M, Guntzviller LM</p> <p>Purpose: To determine whether five understudied psychosocial variables –religiosity (participation in organized religion), sexual morality (beliefs about what constitutes moral sexual behavior), promiscuity (concern that vaccination suggests sexual activity), cancer worry severity (how intensely a person worries), and cancer worry frequency (how often a person worries) – predict intentions to receive the HPV vaccination in unvaccinated college women aged 18 – 26. Method: A sample of female undergraduate students (N = 1086) completed an online survey. Questions pertaining to hypothesized predictors were analyzed through hierarchical regression. Regressions controlled for known predictors of HPV vaccination, and examined whether the five psychosocial variables of interest predicted intentions to vaccinate above and beyond controls. Results: Among the variables investigated, cancer worry severity and frequency were the only significant predictors of HPV vaccination intentions. Combined, the two cancer worry measures explained approximately 10% of the variance in intentions such that those with increased worry were more likely to intend to vaccinate. There was also a significant interaction between religiosity and promiscuity. Participants with higher religiosity were less likely to intend to vaccinate because of concerns about damage to their reputation. Conclusions: Both dimensions of cancer worry were positively related to HPV vaccination intentions, a finding that suggests campaigns/interventions targeting college aged women should highlight threat. Accordingly, future research should develop and test message strategies grounded in the tenets of threat-based frameworks such as the fear management model or protection motivation theory. The findings also support the value of campaigns targeting religious groups. Individuals with higher religiosity were less likely to vaccinate because of reputation concerns. Campaigns could position HPV vaccination as an activity that does not convey sexual intentions, and highlight other values that justify the decision to engage in preventive behaviors.</p>

21-T	22
<p>Association between informal caregiving and telomere length in a population-based sample: The role of caregiving characteristics, stress, and strain Litzelman K, Witt WP, Gangnon RE, Nieto FJ, Engelman CD, Malick MR, Skinner HG</p> <p>Caregiving has been associated with adverse health outcomes. Short telomere length, a putative biological marker of cellular aging, has been associated with poor health outcomes and may help elucidate the pathophysiological impact of caregiving. This study sought to determine if and to what extent caregiving, stress, and caregiver strain were associated with shorter relative telomere length (RTL). Caregivers (n=240) and a subset of non-caregivers (n=98) in the 2008-2010 Survey of the Health of Wisconsin, a representative sample of Wisconsin adults aged 21-74 years, self-reported sociodemographic, health, and psychological characteristics. RTL was assayed from peripheral blood or saliva samples. Multivariable generalized additive models assessed the relationships between caregiving factors and RTL, and approximate base pair (bp) differences were estimated for ease of interpretation. Adjusted analyses revealed that RTL did not differ between caregivers and non-caregivers (Beta=-0.03, p=0.64). However, caregivers and non-caregivers with moderate-to-high levels of stress had the longest RTL compared to those with low levels of stress (p=0.01). Among caregivers, those providing more hours per week of care, caring for a young person, or reporting greater caregiver strain had shorter RTL compared to their counterparts (doubling of hours=-82 bp, p&lt;0.01; care recipient age &lt;25 years [versus ≥85 years]=-445 bp, p&lt;0.01; doubling of strain=-128 bp, p=0.03). Interestingly, those caregivers reporting low levels of stress and high levels of strain had the shortest RTL (-410 bp versus low stress/low strain, p=0.02; p[interaction]=0.13), corresponding to 10-15 additional years of aging. The findings suggest that caregivers who provide large amounts of care, care for a child or young adult, or experience high caregiver strain may be at an increased risk for accelerated aging. Lower levels of stress and discordant reports of stress and strain were associated with shorter telomeres, highlighting the complexity of the associations between caregiving, stress, and cellular aging. Future longitudinal work is needed to better understand telomere dynamics over the short and long term, and the impact of perceived stress and strain on such changes.</p>	<p>The influence of masculinity on male young adults' sun-related behaviors and cognitions Dwyer LA, Stock ML</p> <p>Masculinity has been negatively associated with skin cancer preventive behaviors (Mahalik et al., 2006, 2007; Walsh &amp; Stock, 2012). We further investigated the association of masculinity with sun-related behaviors, cognitions, and their inter-correlations. Male young adults (N = 114; M age = 20.26) completed a survey assessing eleven masculinity subscales, as well as sun-related behaviors and cognitions (e.g., sun exposure and sun protection intentions, and prototypes of the typical male who engages in these behaviors). Controlling for skin type, total masculinity correlated with greater sun exposure behavior and intentions (rs &gt; .24, ps &lt; .01) and lower use of sun-protective clothing (r = -.18, p = .05). The masculinity subscales that correlated with greater sun exposure were: winning, risk-taking, violence, power over women, playboy, and disdain for homosexuality (ps &lt; .01). Risk-taking correlated with lower clothing use (r = -.25, p = .01), but no masculinity scales correlated with sunscreen use (ps &gt; .24). Among less masculine men, sun exposure was positively correlated with sunscreen use (r = .32, p = .02) but was not correlated with clothing use (p = .53). However, their sun exposure intentions were negatively correlated with both sunscreen and clothing use intentions (rs &lt; -.48, ps &lt; .001). In contrast, among high masculine men, sun exposure was marginally correlated with greater sunscreen use (r = .25, p = .07) and correlated with less clothing use (r = -.30, p = .03). However, sun exposure intentions were marginally correlated with lower sunscreen use intentions (r = -.25, p = .07) and not correlated with clothing use intentions (p = .21). High masculine men with favorable sun protection prototypes also reported less favorable risk prototypes (r = -.39, p &lt; .01). These findings suggest that interventions should make multiple sun-safe behaviors more aligned with norms about masculinity. Differences in patterns of men's sun-related behaviors and cognitions across masculinity deserve further study given that behaviors vary in effectiveness (Linos et al., 2011). Research should also examine how interventions change both sun-related cognitions and behaviors, since some associations among protective and risk measures vary between behaviors and intentions.</p>

23	24
<p>African Americans' Perceptions of Genetics and Genetic Research Kerkvliet S, Arnold LD, James AS</p> <p>Purpose: To develop survey items about and gain insight on African Americans' genetic knowledge and research receptivity, within the context of biobanking for cancer studies. Methods: Twenty cognitive interviews were conducted with African American adults (n=10 men, 10 women) from a Midwestern city. Eight survey items were tests for understanding, terminology, and wording. Scripted and unscripted probes were used to gain insight into impressions, thoughts, and experiences as they related to the items tested. Interviews were audio-recorded and transcribed. ATLAS.ti was used to identify codes using deductive and inductive approaches. Resulting codes were organized into themes, and supporting quotes identified. Results: Major themes related to genetic knowledge, facilitators of understanding, genetic research, participation, and mistrust. Participants discussed confusion over genetic terminology such as DNA, gene, genetic risk and mutation. Common sources of information related to genetics and risk for cancer came from media, healthcare professionals, and personal experience. Participants' conceptualization of genetic and cancer research included blood work analysis, blood transfusions, and discovery of cures. Many participants expressed confusion regarding the process of genetic and cancer research, especially research where samples were stored in biobanks. The benefit of self and others were cited as reasons for participating in genetic and cancer research or screening, while fear of undesirable test results was noted as a reason against participation. Additional factors that respondents wished to consider included the storage of blood for future studies, fear of needles, and cost. Lastly, mistrust that donated or tested biological specimens would be misused by either the scientific community or the government was discussed by participants. Conclusion: Mistrust and receptivity towards participation in cancer and genetic research are negatively affected by some understandings of genetics and research processes. These findings support the need to better understand lay knowledge and experiences with genetic testing and genetic research in order to promote informed decisions about participation in biobanking for cancer or other diseases.</p>	<p>Grounding Evidence-based Approaches to Cancer Prevention in the Community: A case study to promote mammography adherence in underserved African American women. Highfield L, Hartman M, Bartholomew LK</p> <p>Purpose: A case study of a community and organizational assessment conducted as a foundation for selecting and recommending adaptation of an evidence-based intervention program for improving mammography adherence in underserved African American women. Methods: An inductive sequential exploratory mixed methods design was used to assess barriers and facilitators to appointment adherence. Findings from secondary data analysis, key informant interviews, focus groups, a survey (Phase I) and a systems review (Phase II) informed the search for and selection of an evidence-based intervention to reduce no-shows (Phase III). Programs were identified from the National Cancer Institute Research Tested Intervention Programs (RTIPS) website and evaluated for basic fit via a logic model of the problem, including: priority population, health problems, behaviors, and determinants of behaviors. Availability of materials, ability to implement in the context of the clinical site, and the strength of effect were also considered. Results: Phase I results: Four communities in Harris County, Texas were identified as in need. Common barriers included: fear of outcome; competing demands; logistics including lack of insurance, costs, and transportation; fear of partner abandonment; fear of pain; and faith. Facilitators included: patient navigation, mobile mammography, and reminder phone calls. Phase II results: There was geographic accessibility of mobile screening, but no systematic provision of patient navigation and reminder calls. Phase III results: Four candidate interventions were identified and evaluated. The intervention 'Breast Cancer Screening Among Non-Adherent Women' – telephone counseling for barriers to appointment attendance – was chosen based on the fit criteria. The community and organizational assessment also identified needed adaptations to increase fit to the barriers of African American communities of interest and the clinical system. Conclusions: This study provides a model for formative research grounding evidence-based practice for cancer control planners in community. Future studies that incorporate findings from needs assessment into the adaptation of intervention programs may promote effective dissemination of evidence-based programs.</p>

25-T	26
<p>MyChoice project: An Application of the Three Factor Eating Questionnaire among survivors of central nervous system tumors</p> <p>Swartz MC, Basen-Engquist K, Swank P</p> <p>Purpose: Healthy eating is a modifiable behavior that can mitigate the risk of adverse health outcomes experienced by many survivors of childhood, adolescent, and young adult (AYA) central nervous system tumors (SCNST). In order to intervene on the mechanisms that may be related to unhealthy eating practices, standardized dietary measurements are often used to evaluate eating behaviors. However, many standardized dietary measurements rely on long-term retrospective recalls, which may not be feasible among SCNST who experience neurocognitive post treatment sequelae. Thus, the aim of this study is to validate the shortened Three Factor Eating Questionnaire (TFEQ-R18v2) among a sample of AYA SCNST in the United States. Methods: We conducted a cross-sectional study among SCNST aged 15 to 39 (n=65) using a web questionnaire study. We are actively recruiting from 2 children's cancer hospitals in Texas, social media sites, and childhood cancer related organizations to reach a goal of 200 participants. A preliminary confirmatory factor analysis (CFA) was conducted to evaluate the structure of the TFEQ-R18v2. Linear regression analyses were conducted to examine the relations between TFEQ-R18v2 factors and body mass index (BMI). Results: The mean age is 27 (<math>\pm 7.2</math>) years old, mean BMI is 27.1 (<math>\pm 6.9</math>), and the majority of participants (73.8%) were Non-Hispanic White, with a greater number of female participants (55.4%). Mean uncontrollable eating (UE) score is 17 (<math>\pm 4.4</math>), mean cognitive restraint (CR) score is 6.6 (<math>\pm 2.5</math>), and mean emotional eating (EE) score is 10.23 (<math>\pm 4.9</math>). Preliminary CFA indicated poor model fit with our current sample (<math>X^2</math> of 229.3, 132 df, CFI of 0.86, and RMSEA of 0.107). Regression results indicated UE and CR factors were not associated with BMI. However, the EE factor is approaching significance (regression coefficient 0.003, <math>p=0.077</math>, accounting for an additional 6% of the BMI variance). Conclusion: Preliminary CFA did not validate the structure of TFEQ-R18v2 and only the EE factor showed possible association with BMI. However, the observed poor model fit and null results between the TFEQ-R18v2 factors and BMI may be unreliable due to the small sample size. Therefore, additional participants are needed to re-evaluate current models.</p>	<p>Dragonboat Paddling Promotes Beneficial Exercise and Lifestyle Changes By Breast Cancer Survivors</p> <p>Parker MH</p> <p>PURPOSE: The study was initiated to gather information on the influence of the active upper body exercise involved in dragonboat paddling on the health and well being of breast cancer survivors. METHODS: A 32-question English-language Internet survey was sent by E-mail to Breast Cancer Survivor Dragonboat Teams in Australia, Canada, England, New Zealand, South Africa and the United States. Women on these teams accessed a "url" to retrieve an informed consent document, when this was accepted, the survey opened. A birth date was the only "identifier" data element. 751 women from 94 Dragonboat Teams completed surveys. 46% were aged 60-86. RESULTS: Dragonboats are 40 foot "canoes", seating 20 paddlers. 99 percent of the women surveyed began dragonboat paddling after their cancer diagnosis. Many women reported dragonboating was the "best" thing to result from their cancer. Research suggests that aerobic exercise, such as paddling, is important for symptom control for breast cancer survivors. After beginning to paddle, 67% reported exercising more: walking, 84%; using weights 40%; cardio/aerobic exercise 38%; yoga 20%; pilates 11%; dance, 11%. 52% of the women, who reported no exercise before cancer, now exercise in addition to paddling. In comparison to other women their age, 79% described themselves as "more" fit. When asked if lifestyle changes had resulted from paddling, 89% reported New Friends, 40% Healthier Diet, 34% Set Fitness Goals, 26% Weight Loss and 5% No Changes. When asked: "As a result of paddling my life is..." 62% replied Very Much Better and 34% answered Somewhat Better. When asked if "Paddling has made me feel more in control of my life after cancer": 62% Strongly Agreed, 30% Agreed, 7% Neither Agreed nor Disagreed, and 1 woman Disagreed. (90 %) responded they would continue to paddle to Remain Physically Active, 88% to Have Supportive Friends and Team, 84% To Maintain a Healthy Lifestyle. CONCLUSIONS: The commitment to exercise and a healthy lifestyle in survey responses illustrates the physical and social benefits provided by BCS dragonboat teams, as survivor support programs. The survey data supports paddling as positive active upper body exercise for women after breast cancer, including women aged 60 and over.</p>



27-T	28
<p>Recommending HPV vaccine in the face of parental hesitancy: Current practices and future directions Gilkey MB, McRee AL</p> <p>Purpose: Despite national guidelines for routine administration to preteen boys and girls, human papillomavirus (HPV) vaccine is a persistently underused cancer prevention tool. To better understand suboptimal uptake, we explored healthcare providers' HPV vaccine recommendation practices as well as their perceptions of HPV vaccine hesitancy among parents of 11- to 12-year-old youth. Methods: A statewide sample (n=575) of Minnesota healthcare providers (20% pediatricians, 47% family medicine physicians, 33% nurse practitioners) completed our online survey in April 2013. Results: Only three-quarters of providers (76%) reported routinely recommending HPV vaccine for girls ages 11-12, and far fewer (46%) did so for boys of the same age (<math>p &lt; .001</math>). When delivering recommendations, many providers indicated they prefer to offer HPV vaccine as optional (62% for girls; 69% for boys). In terms of parental hesitancy, half of providers (51%) reported that parents frequently react to HPV vaccine recommendations with requests to delay vaccination. A sizeable minority perceived expressions of concern about HPV vaccine (18%) or vaccine refusal (12%) to be similarly common responses. In the face of hesitancy, most providers reported asking questions to explore parents' concerns (74%), but many felt they lacked time to probe parents' reasons (47%) or that there was not much they could say to change parents' minds (55%). Providers who perceived greater parental hesitancy or who had lower confidence about addressing hesitancy were less likely to recommend HPV vaccine according to guidelines (<math>p &lt; .05</math>). Conclusions: Relatively few healthcare providers report delivering the strong, guideline-driven recommendations needed to raise HPV vaccine coverage among adolescents. Our findings suggest that providers perceive HPV vaccine hesitancy to be widespread among parents of adolescents. Improving providers' self-efficacy to address such hesitancy may be important for increasing adherence to practice guidelines.</p>	<p>Development of Targeted Newsletters to Promote Cancer Control in African Americans Ferguson M, Wilkins L, Black H, Schapira M</p> <p>Purpose: The purpose of this study was to develop and evaluate a series of newsletters designed to 1.) educate African American patients about cancer control and 2.) motivate them to adopt healthy behaviors to decrease cancer risk. Methods: Development - Content areas were identified by literature review of communication strategies used to promote cancer control. Newsletter prototypes were developed in consultation with national experts in the field of communication and using McGuire's steps for persuasive communication. The content was designed to be patient-centered by providing information previously identified as important to this population and specific to the patients' medical practice and community. Content included cancer risks in African Americans, cancer screening guidelines, the link between diet and exercise and cancer, healthy recipes, tips on increasing fruit and vegetable intake, and specific information such as the process for obtaining a colonoscopy and the location of local farmers' markets. Formats used included narratives, short headlines, maps, FAQ, brief articles and bulleted lists. Evaluation – We conducted 4 focus groups to evaluate the newsletter prototypes in our target population (patients of one urban medical practice, age 40-70, African-American, and residents of 5 zip codes). Transcripts from the focus groups were analyzed using NVivo software. Themes that emerged from the coded transcripts were used to finalize the newsletter content and format. Results: The content found to be most engaging was community information and tips to increase healthy behaviors. Formats found to be engaging included narratives, maps, recipes, and lists. The targeted material specific to African Americans was generally not viewed favorably. Conclusion: Applying steps for persuasive communication in conjunction with qualitative methods was effectively used to develop an intervention designed to improve cancer control in our target population. The finalized components and format can serve as a template for medical practices to communicate health information to a similar patient population. We plan to evaluate the effect of this intervention on knowledge and specific behavioral interventions following the distribution of the newsletter series.</p>

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<p>Measuring Staff Activation and Empowerment for Breast Cancer Screening in Women with Intellectual Disability Greenwood NW, Wang CT, White LF, Wilkinson J</p> <p>Context: Women with intellectual disabilities (mental retardation) have high rates of breast cancer mortality and low rates of regular mammography. Approximately half of all women with intellectual disabilities live in residential settings with 24 hour support (group homes). The health literacy and cancer screening behaviors of direct support workers (group home staff) are both poor. We developed a measure called the Staff Empowerment Tool (SET), to assess the capacity, activation and readiness of direct support workers (DSWs) to support disabled women in accessing breast cancer screening. Objective: Pilot test the SET; gather preliminary data about DSW activation; compare DSWs across geographic and practice settings Design: Survey; pilot testing Setting: Community; piloted in three staff groups: residential services vendor near Boston, MA; residential services vendor in Birmingham, AL, and a multidisciplinary residential center in Tennessee that is a national model for care of people with disabilities. Participants: Aged 18+, currently employed as DSW, sufficient English Instrument: The SET was developed through review of patient activation literature and modeled after the Patient Activation Measure Results: 90 direct support workers participated in the pilot. The total mean score on the SET (out of 45) was 33.0 (SD 5.9). Questions regarding mammography were scored a point lower on average (on a scale of 1-5) than questions about general health, indicating decreased confidence on the part of support workers regarding their ability to successfully assist disabled women with mammography. Conclusion: The SET is a new instrument that appears to capture the activation of staff members to assist with cancer screening in disabled patients. Preliminary results indicate that staff members are less confident and activated regarding breast cancer screening when compared with general health</p>	<p>Measuring Preparedness for Mammography in Women with Intellectual Disabilities: A Validation Study Greenwood NW, Wang CT, White LF, Wilkinson J</p> <p>Background: Women with intellectual disabilities have higher rates of breast cancer mortality and lower rates of mammography screening. Our prior mixed methods research identified lack of logistical knowledge and inability to navigate the process as barriers to mammography utilization. Instruments measuring mammography knowledge were inappropriate for use in this population. Objective: Validate a measure we designed to evaluate mammography preparedness in women with ID Design: Test-retest reliability through comparison of preparedness scores one month apart Setting: Community (mostly conducted in participant homes) Participants: Women with ID aged 40+, no personal history of breast cancer, sufficient verbal skills to answer questions Instrument: Story based instrument measuring practical mammography knowledge (ie, will I have to take off my clothes? Where do I go to get a mammogram?) Outcomes: Test-retest reliability (kappa) and percent agreement Results: 50 participants; per question agreement ranged from 71-94%, with an overall kappa of 0.58 Conclusion: The preparedness measure is a reliable instrument for measuring practical mammography knowledge in patients with intellectual disabilities. This measure is a valuable tool for use in future studies of interventions designed to increase mammography rates in a vulnerable population.</p>

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<p>Increasing the Rate of Regular Mammography Screening for Women with Intellectual Disabilities: Family Member Perspectives Greenwood NW, Dreyfus D, Wilkinson J</p> <p>Context: Women with intellectual disabilities contract breast cancer at the same rate as the general population, yet have a higher mortality rate and lower rates of regular mammography screening. This issue is understudied, especially in women who live with their families. Because we know that health care decisions are often made jointly by the adult with ID and her family and supporters, we theorize that understanding family member perspectives on mammography screening will be essential to raising mammography rates for this population. Method: Qualitative semi-structured interviews with family members analyzed using grounded coded theory Results: 16 interviews of 3 sisters and 13 mothers; important themes include importance of understanding mammography, hesitancy to put relative through the procedure, logistical barriers, lack of personal mammography knowledge, importance of communication with physician Conclusions: Family members are instrumental in ensuring access to mammography for women with ID, yet may lack knowledge about the importance of mammography and/or its appropriateness for their relative. Medical mistrust and a sense of knowing their relative better than the doctor are important themes that should be addressed in interventions aimed at raising the mammography rate of women with intellectual disabilities. Educational interventions for this population should target the whole family.</p>	<p>A DVD-Based Intervention to Increase Preparedness for Mammography in Women with Intellectual Disabilities Greenwood NW, Wang CT, Bowen D, Wilkinson J</p> <p>Background: Women with intellectual disabilities (ID) contract breast cancer at the same rate as the general population but have higher breast cancer mortality rates and lower rates of mammography utilization. Our prior qualitative studies identified lack of familiarity and logistical information as a barrier to mammography for women with ID. Story-based health education has been found to be effective in this population. Objective: Evaluate the efficacy of an educational DVD that tells the story a woman with ID getting her first mammogram in increasing mammography preparedness Design: Pre and post DVD preparedness survey completion; post-DVD acceptability questionnaires Setting: Community-based (mostly participant homes) Participants: Women aged 40+ with ID recruited through partner community agencies; sufficiently verbal to participate and to provide consent, no personal history of breast cancer Intervention: DVD produced in response to participant-identified barriers and preferences in prior qualitative study, features an actress with ID who gets her first mammogram and models positive mammography behavior. The story also conveys information about the logistics of getting a mammogram and provides a model for the steps involved (ie checking in to the clinic, changing into a johnny etc) Outcome Measure: Increased mammography preparedness scores post-DVD as measured through pre and post testing using a reliable measure assessing practical (rather than theoretical) mammography knowledge Results: 50 women participated; total mean score increased from 4.24 pre-DVD to 4.75 post DVD; qualitative and quantitative acceptability ratings were high Conclusions: A targeted, story-based DVD intervention was effective and acceptable in increasing mammography preparedness in women with ID, a disparity population.</p>

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<p>Evaluating an educational intervention about breast cancer screening for women with intellectual disabilities and their families Greenwood NW, Wilkinson J</p> <p>Background: Women with ID have similar prevalence rates of breast cancer as women without disabilities, but have much lower rates of regular mammography screening, and higher breast cancer death rates. Of all residential subgroups, women who live with their families have the lowest mammography rates of all women with ID. In our prior qualitative work with women and family members, we identified several unique barriers to regular mammography for women who live with their families, including family members' medical mistrust on behalf of their loved one, misinformation regarding the necessity of breast cancer screening in women with ID, feelings of protectiveness regarding the discomfort of the test and misconceptions about modern cancer treatment. Methods: We developed a DVD using actresses with ID and others that tells the story of 3 families and their breast cancer screening decision making and experiences. The format is accessible and inclusive and provides accurate mammography and breast cancer information. It was designed to address the unique experiences and barriers of women with ID who live with their families. We evaluated the acceptability and feasibility DVD using focus groups of women and family members, key informant interviews and pre and post-DVD testing using the Family Member Mistrust Instrument (FAMMI), a scale we developed. Results: Initial results show that the DVD is acceptable and feasible intervention to raise breast cancer screening empowerment and decrease medical mistrust in women with ID and their family members. Discussion: Adults with intellectual disabilities face significant health disparities and often make health care decisions in the context of their families. While further research is needed to evaluate the efficacy of the DVD in raising mammography rates, accessible health promotion interventions that target adults with ID and their families are a promising strategy for disparity reduction.</p>	<p>Evaluating Coaches of Older Adults for Cancer Care and Healthy Behaviors (COACH): Study Rationale and Baseline Characteristics Mbah O, Bowie J, Bone L, Erby L, Pollack C, Wenzel J, Phelan D, Elmi A, Dobs A, Ford J</p> <p>Purpose of Study: COACH evaluates the effectiveness of trained, participant-designated health coaches vs. standard of care health education on cancer screening among African American older adults. Methods: African American older adults ages 65-74 years living in Baltimore City or Prince George's County, Maryland are enrolled in this trial (target N=550) along with their self-designated support persons (coaches). Participants, who are not up to date on at least one of three cancer screenings (breast, cervical or colorectal), are randomly assigned 1:1 (as dyads) to receiving either printed educational materials only or the addition of specialized training for the coach which entails: 1) one didactic session on the basics of cancer and cancer screening, preparing for a medical visit, discussing cancer screening with a healthcare provider, insurance coverage, and other related healthcare issues, 2) three short cancer screening video skits, and 3) one role play session. All participants are interviewed at baseline followed with 6-month and 1-year interviews. Preliminary baseline data are provided here for 160 older adults enrolled between June 2012 and November 2013. Results: Of the 160 participants (older adults only) enrolled in the study, 91% (n=145) are female. Most (55%) have ≤ high school diploma, and make less than \$30,000 per year (61%). The primary reason participants gave for not getting screened for cancer is that their healthcare provider did not recommend it. Most participants reported they currently receive at least some help with transportation to medical appointments (50%), making medical decisions (44%), following provider's recommendations (37%), and asking questions during medical visits (30%). Most of the enrolled coaches are family members (79%) and female (77%). Conclusion: COACH evaluates a highly sustainable intervention to improve cancer screening among a high-risk population. The intervention is innovative in that it could potentially minimize the effect of mistrust of the medical establishment by mobilizing participants' social support networks. If we find that participant-designated coaches are cost-effective, this intervention could greatly contribute to addressing health care disparities across multiple diseases.</p>

35	36-T
<p>Does a family history of male breast cancer increase the likelihood of being referred for genetic counseling and undergoing genetic testing? Leadbetter SD, Peipins LA, Rodriguez JL, Hawkins NA</p> <p>Having a male relative with breast cancer is one of the many criteria included in published guidelines for identifying persons with a BRCA mutation. The purpose of our analysis is to describe the family cancer history patterns and care-seeking behaviors of families with a male breast cancer history. We identified these families from the pedigrees of 2,524 women from the Henry Ford Health System, randomly- selected in a telephone survey on ovarian cancer risk perception. We asked survey respondents whether they or anyone in their family had been referred for genetic counseling or had undergone genetic testing. We also asked for the results among those tested. Twenty-four respondents reported having either a first-degree (n=10) or a second-degree (n=14) male relative diagnosed with breast cancer, representing 0.26% of the study-eligible population. Among these women, 15 also had a family history of female breast cancer, 8 had a family history of ovarian cancer, and 21 had other cancers in their families, colorectal cancer being the most frequent. For one family, the respondent's personal history of breast cancer was the only other cancer diagnosis. Comparing women with a male breast cancer family history to other women who were at high risk for ovarian cancer, but who did not have a male breast cancer family history, we found that referral patterns were similar. However, 28.6% of women with a male breast history reported having a relative undergo BRCA testing compared to 8.0% of other women at high risk (p-value&lt;0.01). Furthermore, among those tested, families with a history of male breast cancer were twice as likely to be mutation carriers as other families at high risk who did not have a male breast cancer history (66.7% v. 31.3%, p-value&lt;0.05). We found that families with a male breast cancer history were more readily identified, either by themselves or by their medical providers, as candidates for genetic counseling and testing than were individuals with other high-risk family history patterns. Nonetheless, all women at high risk in our study population had low referral rates for genetic counseling and testing, suggesting a need for provider education to identify genetic counseling referral and testing candidates.</p>	<p>Don't tread on me: Correlates of attitudes towards smoking bans Darlow S, Heckman CJ, Munshi T, Collins B</p> <p>Workplace smoking bans are becoming increasingly common, and policies are becoming more restrictive. For example, outdoor smoking is increasingly being banned on hospital properties. Though smoke-free policies are generally accepted, some may view these policies negatively and as infringing on smokers' rights. The purpose of the current study was to examine predictors of attitudes towards smoke-free policies, specifically smoking behavior and attitudes, as well as demographics. Healthcare professionals (N = 210) at a comprehensive cancer center and affiliated general hospital in a northeastern urban area completed online questionnaires. Outcome variables in multivariate logistic and linear regression models were: preferring a stringent workplace smoking policy, believing that smoking bans discriminate against smokers, and believing it is the responsibility of the government to protect citizens from cigarette smoke exposure. Endorsing the belief that smoking affects quality of parenting was positively associated with preferring a more stringent workplace smoking policy and believing it is the government's responsibility to protect citizens from cigarette smoke, and negatively associated with the belief that smoking bans discriminate against smokers. Being a current smoker was negatively associated with preferring a stringent workplace smoking policy, while living with a smoker was positively associated with believing that smoking bans discriminate against smokers. In summary, study results showed a positive association between the belief that smoking negatively impacts parenting and positive attitudes towards smoking bans, though actually being a parent was not significantly associated with attitudes towards smoking bans. Living with a smoker, as well as being a current smoker, was associated with more negative attitudes towards smoking bans, which may indicate that being in close contact with smokers might hinder acceptance of smoking bans. These findings could be considered when investigating how to increase support for smoke-free policies. It is essential to examine healthcare provider perceptions of smoking behaviors and policies, as their attitudes may permeate to their attitudes and advice in practice with patients.</p>

37	38-T
<p>Primary care residents' knowledge and self efficacy about obesity, nutrition, and physical activity counseling Flocke SA, Seeholzer E, Gullett H, Jackson B, Smith S, Antognoli E, Krejci S, Lawson P</p> <p>Purpose: Overweight/obesity is a risk factor for many chronic conditions including several cancers. Primary care trained physicians are in position to provide health behavior change counseling to the majority of US adults, however, most report insufficient training to deliver effective health behavior counseling for obesity. The purpose of this study is to assess the degree to which current primary care residents are prepared to provide physical activity, nutrition and obesity (PANO) counseling. Methods: Using a cross-sectional survey, senior residents from 24 family medicine (FM), internal medicine (IM) and OB/GYN residency programs across Ohio were invited to participate. Surveys assessed general and cancer-specific knowledge, attitudes, and self-efficacy regarding PANO counseling. Training characteristics including specialty, time in ambulatory practice and exposure to elective rotations emphasizing health behavior change counseling were assessed. Summary scores for key domains were examined and regression analyses were used to assess the relationship between key domains and resident demographic and training characteristics. Results: Resident general PANO knowledge and recognition of obesity as a risk factor for cancer scores were <math>\bar{X}</math>=54.9 (<math>\pm</math>12.8) and <math>\bar{X}</math>=70.9 (<math>\pm</math>8.6) respectively, on a 0-100 scale. Training characteristics were not strongly related to knowledge scores. Specialty was associated with self-efficacy to provide counseling; mean scores FM = 51.7, IM= 42.6, OB.GYN= 34.4, <math>p &lt; .003</math>. Residents reporting engaging in an elective rotation had significantly higher attitude and self efficacy scores in the magnitude of +1 standard deviation; however, this association was not observed for knowledge. Conclusions: Primary care residents' knowledge of obesity as a risk factor for specific cancers and obesity assessment and treatment has significant room for improvement. Residents' self efficacy, which traditionally mediates the relationship between knowledge and behavior, is also low and varies by program characteristics. A deeper understanding of program characteristics associated with high levels of knowledge and self efficacy could inform efforts to improve resident PANO counseling preparedness and ultimately, provision of cancer preventive services.</p>	<p>Cancer Diagnosis, Decisions, and Outcomes: The Meaning of Illness Experiences Hannum SM, Rubinstein RL</p> <p>Chronically-ill older adults (age 65+) who receive a new cancer diagnosis face many unique challenges (e.g., medication management, fractioning of care, etc.), yet little is known about how this group understands and attaches meaning to their experiences. This qualitative study thus sought to describe how chronically ill, older individuals experienced a new cancer diagnosis and the effects this had on overall healthcare trajectories and notions of personal health, well-being, and life satisfaction. A series of three, semi-structured interviews was conducted with each of fifteen informants. The interviews asked questions exploring each informant's life history, experiences of chronic disease, and experiences with cancer. Interview transcripts were analyzed thematically to describe how individuals presented and described the personal meaning of cancer and overall illness experiences through descriptions of their diagnosis and events preceding it: stories of illness, its meaning, and its consequences. One of the major themes to arise from this research was the Meaning of Illness. In most cases, cancer was thought of as disruptive to individual biography, indeed more so than any other chronic condition with which the informants had been diagnosed. For several of the informants, however, the diagnosis of cancer was seen as secondary to that of a pre-existing, serious chronic disease. In these cases, illness was "othered" and the necessary biographical reconstruction to account for such permanent and degenerative disease ensued. Such elements of meaning were essential to individual experiences of chronic illness among older adults, with distinct implications for when and how individuals sought care.</p>

39-T	40
<p>Perineal powder use and risk of ovarian cancer. Houghton SC, Reeves KW, Hankinson SE, Lane D, Wactawski-Wende J, Thomson C, Ockene JK</p> <p>Many case-control studies have reported an increased risk of ovarian cancer among talc users, whereas the only prospective study published to date found no overall association between powder use and epithelial ovarian cancer but lacked information on duration of use. They did observe an association among the subset of invasive serous ovarian cancers with ever use of powder. Using the Women's Health Initiative Observational Study Cohort we assessed perineal powder use and the risk of ovarian cancer prospectively among 61,576 post-menopausal women without a history of cancer or bilateral oophorectomy followed an average of 12.4 years. Ever perineal powder use and duration of use was assessed at baseline by self-report regarding application to genitals, sanitary napkins, and/or diaphragm. Ovarian cancer was self-reported and then centrally adjudicated by physicians. Multivariable cox proportional hazard regression was used to estimate hazard ratio estimates where person-time was accrued until diagnosis of ovarian cancer (n=429), death, loss to follow-up, or through 17 September 2012. Among 61,576 participants without a history of cancer or bilateral oophorectomy, 52.6% reported ever using perineal powder. There was no association with ever use of perineal powder and ovarian cancer (HRadj: 1.06; 95% CI: 0.87-1.28) compared to never users. When area of application was assessed individually, ever use of powder on the perineum (HRadj: 1.12; 95% CI: 0.92-1.36), sanitary napkins (HRadj: 0.95; 95% CI: 0.76-1.20), or diaphragms (HRadj: 0.92; 95% CI: 0.68-1.23) was not associated with risk of ovarian cancer compared to never use in the respective area of application. Additionally there were no associations with increasing duration of use. Associations of ever perineal powder use and ovarian cancer did not vary significantly by age or tubal ligation status. Based on our results, perineal powder use does not appear to be associated with ovarian cancer risk.</p>	<p>Using Learner Verification to Evaluate the Acceptability of a Mailed Postcard Intervention to Increase Discussion of HPV Vaccination: Are Four Categories Sufficient? Vadaparampil ST, Staras SAS, Christie J, Christou A, Scherr CL, Nam K, Linder R, Malo T, Giuliano AR, Shenkman E</p> <p>Purpose: This abstract describes the use of Learner Verification (LV) in assessing the acceptability of a series of mailed postcards designed to increase caregiver-initiated discussion of human papillomavirus (HPV) vaccination with their child's health care provider. Methods: Postcards were developed to address barriers to vaccination based on the team's previous work and published literature. Focus group participants were caregivers of adolescents enrolled in Florida's Medicaid or Children's Health Insurance Program. Focus groups were conducted to assess attraction, comprehension, persuasion, and cultural acceptability of the postcards in a three-stage iterative development process. Focus groups were audiotaped, and transcripts were analyzed using qualitative content analysis. A deductive approach was implemented using a categorization matrix based on LV. Results: Thirteen postcards were tested in eight focus groups with caregivers of adolescents (n=26) and revised resulting in two postcards each for females and males. Participants were attracted to the phrase "get the facts" on the front of the postcard and catchy words in bold including "cancer" and "protect." Participants liked images of caregivers and adolescents that mirrored race, ethnicity, and socioeconomic status of their community, and suggested including text in English and Spanish. Participants demonstrated comprehension by restating the postcard's main message in their own words. Some indicated receiving a postcard would encourage them to speak with their adolescent's healthcare provider about HPV vaccination. Caregivers desired more HPV-related information, either printed on the postcard or provided by alternate resources (i.e., a website address and phone number) included on the postcard. This request did not fall into the original LV framework and was established as a new category called information sufficiency. Conclusions: Study findings demonstrate the feasibility of using LV to improve written material for low-income caregivers of adolescents. An interesting finding from this study suggests that in addition to attraction, comprehension, persuasion, and cultural acceptability, researchers and practitioners using LV should consider including questions related to information sufficiency.</p>

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<p>Prostate Cancer Patients' Preferences for Information Regarding Genetic Risk for Cancer Aggressiveness Vadaparampil ST, Malo TL, Scherr CL, Radlein S, Gwede C, Park J</p> <p>Purpose: This study describes prostate cancer patients' preferences for receiving prostate cancer-related genetic risk information before undergoing treatment. Methods: As part of a larger epidemiologic study to identify genes associated with prostate cancer recurrence/aggressiveness, we conducted a pilot sub-study of 48 patients who were surveyed on beliefs and attitudes about genes and genetic testing for aggressiveness of prostate cancer. Men were presented a hypothetical scenario where they have a gene profile that increases their likelihood of having an aggressive type of prostate cancer. Based on this scenario, men reported the importance of their doctor disclosing this information prior to prostate cancer treatment, using a 5-point scale (1="not important at all" to 5="extremely important"). Three questions assessed perceived importance depending on whether the genetic profile conferred a risk of aggressive prostate cancer that is 10%, 30%, or 50% higher than a patient with a normal genetic background. Differences in mean scores for each risk estimate were compared using a repeated measures analysis of variance test. Wilcoxon rank sum tests were used to explore differences in perceived importance at each risk level by sociodemographic and clinical characteristics. Results: Participants' mean age was 61.3 years (standard deviation [SD]=7.1, range=44-85). Most men were White (85%) and 29% had a family history of prostate cancer. Mean scores were 4.27 (SD=0.87) for a 10% risk, 4.60 (SD=0.57) for a 30% risk, and 4.75 (SD=0.48) for a 50% risk. Perceived importance of information significantly increased as the risk estimate increased (<math>p&lt;0.001</math>). Black men were more likely than Whites to perceive information at 10% risk as more important (<math>p=0.03</math>) with no other significant associations by sociodemographic or clinical characteristics at each risk level. Conclusions: On average, men reported that it was very to extremely important to know their risk of aggressive prostate cancer prior to prostate cancer treatment, with increasing perceived importance as the risk increased. These findings suggest that patients desire risk information prior to treatment, even if the risk is low, and have important implications for patient-provider communication.</p>	<p>Integrating breast density into risk counseling: pilot intervention outcomes Evans CN, Wiley SC, Leventahl KG, Makariou E, Pien E, Scarles M, O'Neill SC</p> <p>Background: Several states have recently passed laws requiring disclosure of mammographic breast density status following screening mammography. While disclosure of density status remains controversial, mandatory reporting of density could present opportunities to expand preventive services for women at substantially increased risk for breast cancer. Methods: As part of a larger study, we recruited 14 women who have clinically elevated risk for breast cancer (5 year breast cancer risks <math>&gt;1.66\%</math>; heterogeneously or extremely dense breasts) to participate in a decision support intervention pilot. All women had a recent mammogram with no abnormal findings as part of their routine care. Our intervention integrates communication of density and other risk factors within the context of their 5-year and lifetime breast cancer risks, as well as the benefits and risks of MRI, Tamoxifen, Raloxifene and Exemestane. Results: Women perceived that they would be at significantly higher risk for breast cancer in the next 5 years if they did not take any medication vs. if they took Tamoxifen (<math>t=2.2</math>, <math>p&lt;.05</math>). However, they stated that they would be significantly more worried about the health conditions that come as side effects if they took Tamoxifen vs. no medication (<math>t=2.22</math>, <math>p&lt;.05</math>). When asked what options they thought were best for them, 7 of 14 women stated that screening + Tamoxifen would be best. Two stated MRI + mammography; the remaining stated mammography alone. Women who endorsed Tamoxifen were less concerned about side effects (<math>t=2.26</math>, <math>p&lt;.05</math>) and less likely to say that the benefits of the medications were not worth the risks (<math>t=2.41</math>, <math>p&lt;.05</math>). Many women in our sample stated that they were somewhat or very likely to speak to their provider about MRI (11/14) and Tamoxifen (10/14). These preferences were unrelated to 5-year risks or family history of breast cancer. Conclusions: While our results are preliminary, they suggest that increased uptake of preventive services among women at increased risk is feasible. Future work will further refine our intervention and expand our work to larger samples</p>



43-T	44-T
<p>A multi-modal, real-time software platform for behavior-based cancer survivorship interventions: Development and implementation in Gynecologic Oncology Group trial #0225</p> <p>Crane TE, Alberts DA, Palzek D, Merchant N, Scott-Fleming C, Thomson CA</p> <p>There are an estimated 14 million cancer survivors in the United States, by 2020 that number is expected to exceed 18 million (SEER 2013, Ward, E 2012). Over the past 2 decades there has been expanded interest in evaluating the role of modifiable lifestyle behaviors (e.g. diet and physical activity) in relation to survival and quality of life after cancer. In order to effectively deliver these behavior-based interventions, approaches that capitalize on current technologies are needed to engage and retain survivors, while providing real time data to investigators. To that end the Lifestyle Intervention for Ovarian cancer Enhanced Survival (LIVES) trial set out to develop a multi-modal, web-based coaching program to promote lifestyle behavior change in a national, multi-site study among ovarian cancer survivors. Women are randomized 1:1 to either a high vegetable and fiber, low-fat diet with daily physical activity goals or an attention control general health education group. The study coaching platform integrates variable web-based approaches including telephone, SMS, forums and email, for the delivery of health information to the evolving technologically savvy survivor population. The software digitally captures all technology “touches” to include coaching calls, SMS, and emails as well as all responses from study participants. This allows for immediate evaluation of data quality, as well as tailored feedback to study participants to promote behavior change. This information, in combination with more traditional measures of behavior (i.e. questionnaires), generates a comprehensive, up-to-date view of individual participant performance on trial as well as, real time evaluation of study metrics. Further, the system allows for the delivery of a cost-effective, HIPPA compliant standardized protocol to the target population regardless of geographic location. This is especially useful for rapid accrual of survivors to behavioral interventions, particularly for survivors diagnosed with rarer cancers. The LIVES web-based coaching intervention platform represents a novel product for delivery and case management of a large-scale cancer prevention research project and may be easily adapted for broader use.</p>	<p>Assessing the quality of race/ethnicity, tumor, and breast cancer treatment information in a non-SEER registry</p> <p>Silva A, Rauscher GH, Ferrans CE, Hoskins K, Rao R</p> <p>Introduction: Both Surveillance, Epidemiology and End Results (SEER) cancer registries and non-SEER population-based cancer registries have been regularly used to examine treatment patterns, including disparities. While the quality of treatment data in SEER cancer registries has often been examined and improved, the quality of such data in non- SEER state registries has rarely been assessed. Methods: We used self-reported (SR) and medical record (MR) abstracted data from a population-based breast cancer study for comparison with information contained in the Illinois State Cancer Registry (registry). Using either MR or SR as the gold standard, we estimated concordance, kappa and sensitivity for the presence or absence of surgery and initiation of chemotherapy, radiation and hormone therapy, as well as tumor characteristics, race/ethnicity and insurance status. Results: The accuracy of most of the data elements examined was generally high. For instance, there was almost perfect agreement between SR race/ethnicity and registry documentation (kappa=0.92). However, Hispanic ethnicity tended to be underclassified. MR and registry data on tumor stage, grade, ER/PR status, and node status, had substantial agreement (kappa=0.78-0.88). With regards to treatment, surgery was rarely under-documented in registry data, while radiation and chemotherapy were modestly under-documented (0.08-0.16). On the other hand, per SR or MR, the registry generally failed to document hormonal treatment in a large proportion of cases (0.38 and 0.52, respectively). Health insurance information in the registry was also not well documented. There was only moderate agreement (kappa=0.41) between SR and registry health insurance status; with uninsured patients least likely to be documented as such in the registry (sensitivity=0.37 vs. 0.96 and 0.63 for public and private insurance status, respectively). In addition, 37% of patients who had missing health insurance information in the registry reported having private insurance at the time of their diagnosis. Discussion: Understanding the strengths and limitations of a population-based non- SEER cancer registry data can be useful to researchers who use these data sources to examine population cancer patterns or carry out cancer studies.</p>

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<p>Spirituality and self-rated health among African American cancer survivors: Examining the mediating role of cancer-related problems Best AL, Alcaraz KI, McQueen A, Cooper DL, Stein KD</p> <p>Purpose: Despite consistently higher levels of spirituality, African American (AA) cancer survivors report disproportionately poorer self-rated health (SRH) compared to other racial/ethnic groups. To help explain this paradox, this study examined the potential mediating role of cancer-related problems in the relationship between spirituality and SRH among AA cancer survivors compared to non-African American (non-AA) survivors. Methods: This study conducted a secondary data analysis of the American Cancer Society's cross-sectional Study of Cancer Survivors-II. Of the 9006 adult cancer survivors in our analytic sample, 933 were AA and 8073 were non-AA. Preliminary analyses compared demographic, health-related, and spirituality variables between AAs and non-AAs, and identified significant covariates. We tested our hypothesized path model using structural equation modeling (SEM), and then conducted moderator analyses to test for differences in path estimates across the two groups. Results: Bivariate analyses revealed that, of the three domains of spirituality assessed, AAs had higher levels of peace (<math>p&lt;.001</math>) and faith (<math>p&lt;.001</math>), but not meaning, compared to non-AAs; and of the four domains of cancer-related problems assessed, AAs had a higher proportion of physical distress (<math>p&lt;.001</math>), emotional distress (<math>p&lt;.001</math>), and employment/finance problems (<math>p&lt;.001</math>), but not fear of recurrence. Using multi-group SEM and adjusting for number of comorbidities and income, race moderated the impact of spirituality and cancer-related problems on SRH. Specifically, spirituality had significantly greater effects on cancer-related problems among AAs than among non-AAs. Also, physical and emotional distress negatively influenced SRH for non-AAs, while only physical distress influenced SRH among AAs. Conclusions: Spirituality positively influenced all four domains of cancer-related problems, but only physical distress influenced SRH among AAs. Although AA cancer survivors had higher levels of spirituality, the negative effects of physical distress attenuated the positive effects of spirituality on their SRH. Future studies should consider racial/ethnic differences in the determinants and conceptualization of SRH, which is a known predictor of survival.</p>	<p>Evaluation of a Mobile Mammography Program to Improve Breast Cancer Screening Access in Rural, Underserved Localities in Virginia Schroen A, Sturz V, Deguzman P, Edwards B, Wages N, Wells K, Cohn W</p> <p>Purpose: This evaluation describes the mobile mammography program and services provided to women living in 41 rural, historically tobacco-dependent (HTD) localities in Southwest and Southside Virginia. The study also compares these mobile mammography recipients to women living in other localities in Virginia and using mobile mammography. Methods: A retrospective analysis of service provision by the van and the women receiving mobile digital mammography screening from a central Virginia hospital between July 2006 and December 2012 was performed. Sociodemographic and diagnosis data were abstracted from clinical records. Women were classified by their addresses as living either inside or outside the HTD of Southwest and Southside Virginia. For comparisons between the two geographically defined groups, Pearson's chi-squared test and independent t-test were used. Results: The mobile mammography unit had 995 operational days (85 days in the HTD region) and covered a 288 driving mile radius during the study period providing 10,316 screenings. Nearly 80% of the mammograms within the HTD localities were performed at no cost to the recipient as compared to 8.5% outside. During the study period, 6,992 women had at least one mobile screening mammogram with complete clinical data available for 5,649 women. Among these women, 7.8% lived in the HTD region, 91.6% lived elsewhere in Virginia, and .6% lived out-of-state. 128 women (2.3%) received a new cancer diagnosis, including 2 from HTD localities. Average age of women receiving a screening was 55 years with those in the HTD being significantly younger (52.0 vs 55.5 yrs, <math>p&lt;0.001</math>). Conclusions: Providing mobile mammography in historically tobacco-dependent rural areas may increase access to breast cancer screening, particularly for younger women. The program can provide a means to address both the financial and physical barriers to mammographic screening among rural, underserved localities in VA.</p>

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<p>Cervical cancer screening and acceptability of HPV self-testing among young adult lesbian and bisexual women McRee AL, Katz ML, Paskett ED, Reiter PL</p> <p>BACKGROUND: Human papillomavirus (HPV) infection and associated cervical disease are common among lesbian and bisexual women, yet research suggests that women in this population are less likely than heterosexual women to receive regular Pap tests. We examined the current Pap testing behaviors among lesbian and bisexual women and their willingness to use an HPV self-test at home, an emerging cervical cancer screening strategy. METHODS: A national sample of lesbian and bisexual women ages 21-26 participated in our online survey during Fall 2013 (n=418). Participants mean age was 24.8 (SD=1.7) years. Most participants were non-Hispanic white (69%), self-identified as bisexual (73%), and had at least some college education (83%). We first assessed participants' history of cervical cancer screening and then identified correlates of willingness to do a self-test for HPV at home using multivariate logistic regression. RESULTS: Almost a quarter of participants (24%) reported never having a Pap test and an additional 14% had not had a Pap test within the past 3 years. The most commonly reported barriers for not having a recent Pap test included cost (21%), embarrassment (20%), and lack of time or transportation (15%). About half of participants (51%) were willing to use an HPV self-test at home. Willingness to use a self-test was higher among women who were older (OR=1.17, 95% CI: 1.04-1.32), knew more about HPV (OR=2.82, 95% CI: 1.35-5.92), or who perceived a greater likelihood of getting an HPV-related disease (OR=1.56, 95% CI: 1.01-2.42). Importantly, women who had not had a Pap test in the last 3 years were more willing to use a self-test (OR=2.75, 95% CI: 1.15-6.59) compared to those who had a Pap test within the past year. The most common concerns about using a self-test were not doing the test correctly (70%), the accuracy of the self-test (64%), and not wanting to return the test by mail (23%). CONCLUSION: Many lesbian and bisexual women are not receiving regular Pap tests. HPV self-testing may represent a novel strategy for helping reaching a significant number of these women. Findings highlight beliefs and concerns that should be addressed in future interventions exploring the use of self-testing among this population.</p>	<p>Short Sleep Duration – Potential Contributor to Racial Disparities in Breast Cancer Phenotypes and Outcomes? Willison C, Pitera M, Levin C, Li L, Thompson C</p> <p>Although African Americans (AAs) are less likely to get breast cancer compared to European Americans (EAs), they tend to get more aggressive types, have higher recurrence rates and shorter survival. We have recently shown that short sleep duration prior to diagnosis is associated with higher OncotypeDX recurrence scores as well as higher tumor grade. In this study, we investigate the effect of sleep on racial differences in these markers of tumor aggressiveness. Newly diagnosed breast cancer patients were recruited from University Hospitals Case Medical Center. All participants responded to a survey on their lifestyle, including sleep duration. Medical records were abstracted for clinical characteristics, including tumor grade and OncotypeDX score. Univariate statistics were performed to test for pairwise associations between sleep, race and clinical characteristics. Multivariate ordinal regressions with and without sleep duration (in hours) were done to assess the effect of sleep duration on racial differences in tumor grade, accounting for age and smoking status (current, former, never). Among 145 AA and 998 EA breast cancer patients, AAs reported significantly shorter average sleep prior to diagnosis (mean (SD)=6.57 (1.47)) than EAs (7.11 (1.16); <math>p&lt;0.0001</math>) and were almost twice as likely to report &lt;6 hours of sleep per night (48.0% vs. 25.3%, <math>p&lt;0.0001</math>). AA patients were also almost twice as likely to have grade 3 tumors (52.6% vs. 28.7% of EA patients, <math>p=0.0002</math>). AA patients were more likely to be in the high (score<math>\geq</math>30) OncotypeDX recurrence score category (36.4% vs. 12.6%, <math>p=0.058</math>). In the regression for tumor stage, race was associated with tumor grade (<math>p&lt;0.0001</math>). Upon adding sleep duration, the effect of race was diminished by 7.1%, although remained significant in the regression (<math>p=0.0001</math>). Race was not statistically significantly correlated with OncotypeDX score as a continuous variable. In conclusion, our data suggests that shorter sleep duration contributes to, but, as expected, accounts for only a fraction of the racial differences in breast cancer phenotypes, thus is likely one of many contributing factors. Future work will need to be done to see if sleep interventions can alleviate some of the disparities in breast cancer outcomes.</p>

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<p>Increasing Access to Colorectal Cancer Testing (I-ACT): Taking immunochemical fecal occult blood test (I-FOBT) screening to the community Gwede CK, Davis SN, Govindaraju S, Abdul</p> <p>Disparities in colorectal cancer (CRC) and CRC screening (CRCS) are well documented among medically underserved Blacks. Less invasive and low cost tests, such as the immunochemical fecal occult blood test (I-FOBT) may be an acceptable and feasible alternative to address low CRCS rates. We report preliminary results on an ongoing community-based intervention trial to increase I-FOBT uptake in diverse individuals of African ancestry. Recruitment methods included face-to-face intercept in community settings (churches, barbershops or community events); ethnic print media (newspapers), posted flyers, direct mail, internet postings; or referral by other study participants. To date, 276 individuals have been evaluated for eligibility, 158 enrolled, and 151 analyzed. Using a modified block randomized design, participants aged 50 to 73 years, not up to date on CRCS, and of average CRC risk were assigned (based on geographic unit) to receive either a culturally-targeted photonovella booklet (intervention, n=58; 38%) or a standard CRCS brochure (control, n=93; 62%). Baseline questions addressed cancer fatalism, Preventive Health Model (PHM) constructs, and demographics. All participants received an I-FOBT kit with instructions. Participants were: 93% African American; 7% Foreign-born Black; 45% male; 14% &lt; HS diploma; 33% &lt; \$10,000 annual household income; 44% uninsured; and a median age 55. Statistically significant differences were found between study conditions (control vs intervention) in select PHM constructs, cancer fatalism, gender, and education (<math>p &lt; .05</math>). I-FOBT uptake was 93% overall and comparable between control and intervention groups (94% vs. 91%; <math>p = 0.75</math>). In univariate logistic regression (pooled sample), participants with higher levels of education had higher I-FOBT uptake (OR= 6.46, 1.77, 23.60). Nine participants with abnormal I-FOBT results were referred for colonoscopy. Findings suggest a low cost and non-invasive I-FOBT is acceptable and can be easily delivered in community-based settings. This uptake of I-FOBT exceeds Healthy People 2020 goals, thus is a promising screening strategy and intervention for the medically underserved community.</p>	<p>Low human papillomavirus (HPV) vaccine knowledge among Latino parents in the Intermountain West Kepka DL, Warner E, Kinney A, Spigarelli M, Mooney K</p> <p>Purpose: Latinas have the highest incidence of cervical cancer. Latino parents/guardians' HPV knowledge and willingness to receive the HPV vaccine for their children is unknown. Methods: Latino parents/guardians of children aged 11-17 were recruited from two community organizations (N=67) to complete a survey, including HPV vaccine knowledge, uptake by child, demographic characteristics, and acculturation. Descriptive statistics and correlates of HPV knowledge and uptake by child were calculated using chi-square tests and multivariable logistic regression. Results: Uptake of <math>\geq 1</math> dose was moderate for daughters (49.1%) and low for sons (23.4%). Parents/guardians reported lack of knowledge as the main barrier to vaccine receipt. Among parents/guardians who reported receipt by daughter, 92.6% did not know the vaccine requires 3 doses. Adjusting for income, low-aculturated parents were more likely than high-aculturated parents to report inadequate information (OR: 8.59, 95% CI: 2.11-34.92). Discussion: Interventions addressing low knowledge and children's uptake of the HPV vaccine are needed among Latino parents/guardians.</p>

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<p data-bbox="139 161 758 317">Sleep Quality and Markers of Breast Cancer Aggressiveness in the Western New York Exposures and Breast Cancer (WEB) Study Vaughn CB, Freudenheim JL, Nie J, Trevisan M, Ochs-Balcom HM</p> <p data-bbox="139 354 758 1608">Background: Sleep, possibly through its effects on melatonin, has been hypothesized to affect breast cancer risk. In recent meta-analyses, sleep duration was not associated with higher breast cancer risk, although night shift work was associated with elevated breast cancer risk. We hypothesized that sleep quality, another facet of sleep behavior, is associated with breast cancer, specifically with more aggressive tumor characteristics. Methods: We analyzed these associations in a sample of 1,122 incident, histologically confirmed breast cancer cases from the Western New York Exposures and Breast Cancer (WEB) Study. Sleep quality was assessed using self-administered questionnaires; questions regarding difficulty falling asleep, waking up frequently during the night, having trouble staying asleep, and waking up feeling tired and worn out were used to create a summary score representing sleep quality. Using general linear models with adjustment for covariates, we investigated the following markers of aggressiveness: ER status, PR status, Her2 status, p53 status, tumor size, stage, grade, lymph node involvement and metastasis. Results: We observed the highest mean sleep quality score (representing more sleep disturbance) in cases with ER negative/PR negative tumors, even after adjusting for age, age at menarche, benign breast disease, smoking status, age at first birth, family history of breast cancer, menopausal status and body mass index (p for trend=0.018). When classified according to molecular subtype, the triple negative group (ER, PR and HER2 negative) had the highest mean sleep quality score compared to luminal A, luminal B, and Her2-expressing groups; however sample size was reduced and the trend did not reach statistical significance (p for trend=0.07). We observed no statistically significant associations with sleep quality for the other tumor markers. Conclusion: Our study suggests that poor sleep quality may be associated with more aggressive subtypes of breast cancer; however further studies are needed to confirm these findings.</p>	<p data-bbox="781 161 1396 285">Putative linkage signals identified for breast cancer phenotype in African American families Sun X, Chen Y, Barnholtz-Sloan J, Elston-Lafata J, Jandorf L, Erwin DO, Ochs-Balcom HM</p> <p data-bbox="781 354 1396 1549">Background: Genome-wide association studies have identified several genetic polymorphisms with various breast cancer subtypes and across multiple population subgroups; however, few studies to date have extended linkage analysis methods to other population groups. Herein we present our initial linkage study for breast cancer in African American pedigrees. Methods: Using Affymetrix Axiom African American genome-wide array data, we performed multiple quality control assessments and limited SNPs to those conforming to Hardy Weinberg proportions, with a call rate of 99%, and as much as possible with minor allele frequency (MAF) <math>\geq 0.40</math>. After thinning the SNPs to 0.33 cM apart, we added SNPs with smaller MAF, whenever possible, so that SNPs were not more than 0.67 cM apart. We thus analyzed linkage using 8261 SNPs, nearly 97% of which had MAF <math>\geq 0.40</math>. We performed a genome-wide model-free linkage analysis of sibpairs and all relative pairs in a sample of 106 African American families (comprising 179 affected, and 79 unaffected, members) to search for loci associated with invasive breast cancer. We performed regression-based model-free multi-point linkage analyses of sibpairs using SIBPAL, and two-level Haseman-Elston linkage analyses of all relative pairs using RELPAL, which rely on allele sharing identity by descent, with and without adjustment for birth year and ancestry. Results: We identified <math>-\log_{10}</math> p-values that exceed 4 at three regions on chromosomes 3, 12, and 16. We identified a region of suggestive linkage in the area of BRCA1 on chromosome 17 by both analysis methods. Conclusions: The data suggest that undetected BRCA1 mutations may be segregating in our sample as both linkage methods were suggestive of linkage to this region on chromosome 17. Further, these data suggest novel putative regions harboring risk alleles for breast cancer in African American families that deserve further study via fine mapping in other available datasets.</p>

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<p>Co-Morbidities, Triple-Negative Breast Cancer, and Survival Disparity</p> <p>Swede H, Magge A, Braithwaite D, Jones BA, Gregorio DI, tannenbaum SH, Gonsalves L, Salner A</p> <p>Numerous studies have reported a three-fold prevalence of the adverse Triple-Negative (TN) subtype (HER2- ER- PR-) among African-American/Black (AA/B) breast cancer patients compared to white (W) patients, pointing to its possible role in continued survival disparity. We have found, however, that AA/B patients with regional disease were at increased risk for death compared to whites whether or not tumors expressed the TN phenotype. Given evidence of the prognostic role of co-morbidities in cancer survival, we investigated if pre-existing conditions might account for increased mortality independent of TN status. Using the Connecticut SEER registry, we analyzed survival trends of a random sample of female patients (W=220, AA/B=206) diagnosed with primary, invasive breast cancer in 2000 to 2007. Information on treatment and co-morbidity (e.g., type II diabetes, renal disease), as specified in the Charlson Co-Morbidity Index (CCI), was collected from hospital charts. Hazard Ratios (HR) for all-cause mortality were calculated using Cox Proportional Hazards Survival Analyses. Key predictors of mortality were TN status (yes, no) and race. Multivariate models adjusted for age, tumor size, number of positive axillary lymph nodes, histologic grade, and receipt of systemic chemotherapy (yes, no). The CCI score (0-17) was added to models for comparison. AA/B patients had a higher mean CCI score at diagnosis than did whites (1.37 vs 0.53, respectively, <math>P &lt; .001</math>) and were more likely to have a TN tumor (25.7% vs 16.3%, respectively, <math>P &lt; .01</math>). For those with local disease, having a TN tumor was the strongest predictor of death (HR=2.22, 95% CI 0.9-5.3, <math>P = .07</math>) whereas, for patients with regional cancer, race (AA/B vs W) was the topmost predictor (HR=2.12, 95% CI 0.8-5.6, <math>P = .13</math>). When CCI score was added to models, an increase in one point would be expected to significantly elevate risk of death in both regional (HR=1.28, 95% CI 1.01-1.62) and local disease (HR=1.42, 95% CI 1.16-1.73). TN status and race, however, were no longer suggestive of risk. These findings imply that survival in breast cancer might be more strongly influenced by co-morbidity than from TN status or race alone. Future research is suggested to identify which conditions might heighten risk.</p>	<p>Exploration of Barriers and Facilitators to Colorectal Cancer Screening Among Spanish-Speaking Latino Men</p> <p>Guerrero TA, Subudhi S, Olarte J, Goldman R, Diaz JA</p> <p>Purpose of the study To explore barriers to Colorectal Cancer (CRC) screenings encountered by Spanish-speaking Latino men and identify successful strategies used by these men to overcome these barriers. Methods We conducted 2 series of in-depth interviews with Spanish-speaking Latino men recruited from primary care practices. Phase 1 interviews were conducted with who had not undergone CRC screening. Phase 2 of interviews was done with men who were “successful peers” in that they had undergone CRC screening. Phase 2 interviews focused on participants’ decision-making processes regarding screening and specifically focused on individual barriers to screening and strategies used to overcome barriers identified in the first group of interviews. Results Twenty-one men participated in phase 1 interviews and 29 men participated in phase 2. The mean age of participants was 58.2 years SD + 8.0. Three predominant barriers emerged from phase 1 interviews: machismo/culture, logistical issues (i.e. language barriers, getting time off from work, cost coverage), and CRC risk misperceptions (i.e. belief that constipation or rectal sex increases one’s risk for CRC.) The “successful peers” in phase 2 noted several facilitators/strategies to overcome the barriers identified in phase 1: Countering machismo, many phase 2 participants felt that health is a priority over outside criticism and commented that the machista attitude jeopardized one’s health. A strategy to overcome language barriers was to find an interpreter. Participants stated that they either brought an interpreter (friend or family member) to the appointment or the facility provided one for them. With regards to CRC risk misperceptions as a barrier, phase 2 participants were more likely to hold accurate understandings. Conclusion This study demonstrates that there are sociocultural barriers to screening that impact this population’s screening behaviors. Yet, there are facilitators/strategies employed by “successful peers” to address some of these barriers. Highlighting and sharing the experiences of these “successful peers”, or positive deviants, may help promote CRC screening uptake among this population.</p>

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<p>Colorectal cancer screening in a very low-income population: Traditional factors do not play a role Alvarez C, SImckes M, Bargetto A, Arnold LD, James AS</p> <p>Purpose: To understand factors associated with colorectal cancer (CRC) screening in a very low-income “tail end” population. Methods: Self-reported surveys gathered cancer screening, demographic, and general health information from English-speaking individuals aged 40 years or older who were patients at federally-qualified health centers in a Midwestern city. Outcomes of interest for this analysis were being up-to-date with CRC screening (any accepted modality), as well as a history of ever being screened for CRC. Bivariate analyses and logistic regression were used to assess relationships between these outcomes and individual, environmental, and social factors. Results: Of the 144 individuals completing surveys, 83 were aged 50 years or older (the recommended age for routine CRC screening in average-risk individuals). The sample was 65% male (n=54) and 92% African American (n=76). Among this low-income population, 44% (n=34) earned &lt;\$400/month (including food stamps and disability). Only 52% (n=43) of participants had ever been screened for CRC by any recommended method, and 37% (n=31) were up-to-date with CRC screening. Family history of cancer was the only significant predictor of being up-to-date with CRC screening (OR=0.26, 95% CI: 0.09-0.75) or having ever been screened (OR=0.34, 95% CI: 0.12-0.99). Conclusions: Literature-supported predictors for CRC screening behaviors (e.g. education, income, gender) were not statistically significant in this very low-income population. This may indicate that this “tail-end” population studied differs dramatically from those in which CRC screening has previously been assessed. The factors that influence screening behaviors within this unique population warrant further investigation in the context of interventions to improve CRC screening.</p>	<p>Factors associated with HPV vaccination in adolescent males Wood K, Arnold LD, Nash A</p> <p>Purpose: To assess prevalence of HPV vaccination in adolescent males in the year following ACIP recommendations for routine vaccination and to characterize factors associated with HPV vaccination in this population. Methods: Eligible individuals were males aged 11-17 years old who were patients in one of 18 regional health clinics from October 31, 2011 through December 31, 2012. The outcome of interest was receipt of at least one HPV vaccine during the time period of interest. Information regarding HPV vaccination, other vaccinations, demographics, provider types, and insurance states was abstracted from medical records. Prevalence of initiating HPV vaccination (at least one shot received) and of completion of the vaccine series (three or more shots) was assessed. Bivariate analysis was used to compare demographics and healthcare provider characteristics for male adolescents who did (cases) and did not (controls) receive at least one HPV vaccine. Forced entry logistic regression was used to calculate adjusted odds ratios for HPV vaccination (at least one shot) for covariates of interest. Results: The study population included 1,793 males age 11-17 years, 60.3% (n=995) of whom received at least one HPV vaccine during the 14 month period of interest. Only 3% (n=53) of male adolescents completed the HPV vaccine series during this time. Males who received the HPV vaccine were significantly older than those who were not vaccinated (13.59 years vs. 12.94 years, <math>p &lt; 0.001</math>). Boys who received the HPV vaccine were more frequently reported to be Hispanic, see a non-academic healthcare provider, and have Medicaid for their insurance; however, adjusted odds ratios were only significant for age (OR=1.1, <math>p&lt;0.05</math>), Hispanic ethnicity (OR=5.94, <math>p&lt;0.001</math>), academic providers (OR=0.35, <math>p&lt;0.05</math>), and pediatric providers (vs. family practitioners) (0.08, <math>p&lt;0.001</math>). Conclusions: Compared to females in national samples, prevalence of initiation of HPV vaccination among male adolescents was similar but completion rates were much lower. Indications that provider characteristics are associated with initiation of HPV vaccination in male children warrant further investigation and may have indications for targeting future interventions.</p>

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<p>Differences in adiposity and obesity-related diseases among African-American and White breast cancer survivors Azrad M, Blair C, Sedjo R, Rock C, Demark-Wahnefried D</p> <p>Introduction: Obesity and African-American ethnicity are both associated with poor breast cancer prognosis. The purpose of this study was to assess adiposity and obesity-related diseases in African-American vs. White breast cancer survivors as potential causes for disparities in breast cancer outcomes. Methods: Participants were enrolled in the Exercise and Nutrition to Enhance Recovery and Good health for You (ENERGY) study, a multi-site randomized controlled trial aimed at reducing body weight by 7% in overweight/obese women with early-stage breast cancer. Data included in this study were from the baseline assessment. Participants were dichotomized by self-report into two groups: those who identified their race as Black/African-American (n=73) or White (n=580). Differences in body mass index (BMI: kg/m<sup>2</sup>) and obesity-related diseases (diabetes, hypertension, heart and liver disease and rheumatoid arthritis) were determined using chi square and logistic regression. Results: African-Americans were significantly younger than Whites (age 53.9±1.11 years vs. 56.6±0.04 years, p=0.023) and 78% were obese (BMI ≥30) vs. 56% of Whites (p&lt;.001). In analyses that compared the degree of obesity, 41% of African-Americans had BMI ≥35 vs. 22% of Whites (p&lt;.001). African-Americans were more likely to have hypertension [odds ratio (OR) 95% confidence interval (CI) (OR 2.47 95% CI 1.51-4.09) and diabetes (OR 2.51 95% CI 1.21-4.90) compared to Whites. Increased risk for diabetes and hypertension in African-Americans remained highly significant after adjusting for age and BMI. There were no differences in risk for other obesity-related diseases. Conclusions: African-Americans enrolled in the ENERGY study are significantly heavier and more likely to have obesity-related diseases compared to Whites. Though diet, exercise and weight loss trials have the potential to favorably affect the course of cancer and other diseases, the benefit among African Americans may be even greater given the higher prevalence of obesity and obesity-related diseases.</p>	<p>Evaluating a Training for Direct Support Workers to Increase Knowledge And Empowerment About Breast Cancer Screening in Women with Intellectual Disability Greenwood NW, Wang CT, Wilkinson J</p> <p>Background: Women with intellectual disabilities (ID, formerly mental retardation) have high rates of breast cancer mortality and low rates of regular mammography. Approximately half of all women with intellectual disabilities live in 24 hour supported residential settings (group homes). In our prior qualitative work, women with ID identified their direct support workers as having an important impact on their health behaviors. However, the health literacy and cancer screening behaviors of direct support workers (group home staff) are both poor, and direct support workers are often younger, with no personal mammography experience. In order to capitalize on the important relationship between women with ID and their direct support workers, we developed and pilot tested a staff training module about supporting a client in obtaining a mammogram for direct support workers. Methods: Mixed methods. Direct support workers were recruited. We administered pre and post training surveys measuring staff mammography knowledge and activation, and solicited qualitative comments in a focus group. We also conducted key informant interviews with group home managers regarding acceptability and feasibility of the training. Results: The training was found to improve both staff knowledge and activation, and was judged acceptable and feasible. Further study is needed to evaluate the training's efficacy in raising the mammography rate of women with ID, a disparity population. Discussion: This study provides preliminary data regarding the acceptability, feasibility and limited efficacy of cancer screening disparities experienced by adults with ID by targeting their direct support workers, an innovative approach to disparity reduction.</p>



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<p>Diabetes, the metabolic syndrome and mammographic breast density in a predominantly Hispanic and immigrant sample  Tenranifar P, Schmitt K, Desperito E, Protacio A, Engmann NJ, Oskar Z, Welch ML, Terry MB</p> <p>Diabetes and the metabolic syndrome (clustering of elevated blood pressure, triglycerides, glucose, reduced high-density lipoprotein (HDL) cholesterol, abdominal obesity) have been associated with increased breast cancer risk, but less is known about their associations with mammographic breast density, a strong independent risk factor for breast cancer. As mammographic density can be monitored over time, quantifying associations with potentially modifiable risk factors such as diabetes and/or the metabolic syndrome would help in risk reduction and prevention efforts. We recruited women, aged 40-61 years, from a New York City mammography center in 2012-13, and collected data on epidemiologic risk factors via in-person interview (including doctor diagnosed history of diabetes and hypertension), measurement of body size and blood pressure, and measures of glucose, triglycerides, and HDL from dried blood spots. We used linear regression to examine the associations of diabetes, each metabolic risk factor and the metabolic syndrome (≥ 3 risk factors) with percent density, dense breast area, and nondense breast area (n=172; mean age=50.5; 73% Hispanic, 13% African American; 61% foreign born). About 47% of women met the definition of the metabolic syndrome, with the prevalence of the individual components ranging from 74% for abdominal obesity (waist circumference ≥ 88 cm) to 32% for low HDL (&lt; 50 mg/dL). The prevalence of the metabolic syndrome increased with higher body mass index (BMI) and postmenopausal status, but did not vary substantially by race/ethnicity, birthplace, parity, or age at menarche. In multivariable models adjusting for age, BMI, menopausal status and fasting time, increasing levels of HDL was inversely associated with dense area (<math>\beta = -0.33</math>, 95% CI=-0.60, -0.06), and low level of HDL was associated with higher dense area (<math>\beta = 11.5</math>, 95% CI=2.3, 20.6). These findings suggests that HDL alone may have an influence on dense breast tissue that is independent of BMI and other metabolic risk factors, and is in the same direction as its association with breast cancer risk. If replicated in larger studies, these findings suggest that chronic disease prevention efforts focused on increasing HDL levels may have a favorable impact on breast density.</p>	<p>HPV Vaccination among Gay and Bisexual Young Adult Males in the United States  Reiter PL, McRee AL, Katz ML, Paskett ED</p> <p>BACKGROUND: Gay and bisexual men have high rates of human papillomavirus (HPV) infection and HPV-related diseases, particularly anal cancer. Despite this disease burden, very little is known about HPV vaccination among this high-risk population. METHODS: We conducted an online survey in Fall 2013 with a national sample of gay and bisexual men (n=428) ages 18-26 (within the approved age range for HPV vaccine). Most participants were ages 22-26 (71%), non-Hispanic white (64%), self-identified as gay (72%), and had at least some college education (83%). We identified correlates of HPV vaccination using multivariate logistic regression. RESULTS: Overall, 13% (56/428) of participants had received at least one dose of the HPV vaccine regimen (i.e., vaccine initiation), with 7% (30/428) reporting completion of the three-dose regimen. About 83% of participants who had received a doctor's recommendation for vaccination had initiated the HPV vaccine regimen, compared to only 5% of participants without a recommendation (p&lt;0.001). HPV vaccine initiation was also higher among participants who perceived higher vaccine effectiveness (OR=1.96, 95% CI: 1.06–3.61), while initiation was lower among those who perceived more potential harms of the vaccine (OR=0.54, 95% CI: 0.30–0.95) and more barriers to getting the vaccine (OR=0.42, 95% CI: 0.26–0.69). Among unvaccinated participants, the most common reasons for not being vaccinated were lack of awareness that the vaccine can be given to males (17%) and not being sexually active (15%). About 74% of these unvaccinated participants were willing to get HPV vaccine if it was free, though only about 6% were willing if the vaccine cost \$400 out of pocket (p&lt;0.001). CONCLUSIONS: HPV vaccination is low among gay and bisexual young adult males in the United States. Future efforts to increase HPV vaccination among this high-risk population are needed. Such efforts should focus on increasing doctor's recommendation for vaccination and targeting the modifiable factors identified in this study as important correlates of vaccination.</p>

61-T	62-T
<p>Breast Cancer Screening Among Community Dwelling African American Women 65 Years and Older: The Role of Patient Navigators Brown Q, Mbah O, Ahmed S, Pollack</p> <p>Purpose: Compared to White older women, African American older women are less likely to utilize their Medicare benefits for mammography screening. We investigated the effect of patient navigation on breast cancer screening outcomes among community dwelling African American women 65 years and older. Methods: Participants (n= 1291) from this longitudinal analysis were sampled from the Cancer Prevention and Treatment Demonstration (CPTD) Trial, a 4-year community-based randomized controlled trial that assessed the effect of patient navigation on cancer screening among African American Medicare Beneficiaries in Baltimore, Maryland. A total of 2593 participants recruited into the study between November 2006 and March 2010 were randomly assigned to receiving educational materials only (less intensive group) or educational materials plus patient navigation services (more intensive group). Patient navigators addressed barriers to cancer screening and follow up (e.g., scheduling appointments, transportation), based on each participant's needs. We used a weighted-logistic regression to assess the effect of patient navigation on mammography adherence among the 1291 women who had baseline and exit data. Results: In this sample, the average age was about 73 years (range 65 – 88). A majority of participants (63%) reported an annual income &lt; \$30,000; 47% lived alone; and about 39% had at least some college education. In adjusted models, the odds of receiving breast cancer screening during follow up were 2.5 times higher for participants who received patient navigation services compared to those who did not (aOR 2.50; 95% CI 1.87-3.33). Conclusions: Our results suggest that patient navigation is a promising outreach strategy for improving breast cancer screening compliance among urban African American older adult women.</p>	<p>Associations between dietary antioxidant intake and prostate cancer aggressiveness among African and European American men in the North Carolina-Louisiana Prostate Cancer Project (PCaP) Antwi S, Steck SE, Su LJ, Herbert JR, Zhang H, Fontham ETH, Bensen J, Mohler JL, Arab L</p> <p>Purpose: Antioxidant micronutrients are thought to protect cells from oxidative DNA damage, which has been implicated in prostate tumorigenesis. However, few studies have examined antioxidant associations with highly aggressive prostate cancer (CaP) among a racially diverse population, which was the aim of the current study. Methods: Data were from the North Carolina-Louisiana Prostate Cancer Project, a population-based, incident, case-only, CaP study of African American (AA; n = 1,023) and European American (EA; n = 1,079) men. A case- control design was used to contrast highly aggressive CaP (Gleason sum <math>\geq 8</math> or PSA &gt;20ng/ml or Gleason score <math>\geq 7</math> and clinical stage T3-T4) with less aggressive disease (all other cases). Dietary antioxidant intake in the year prior to diagnosis was assessed using the National Cancer Institute Diet History Questionnaire. Logistic regression was used to estimate odds ratios (ORs) and 95% confidence intervals (95% CIs), adjusting for age, CaP screening history, waist-to-hip ratio, smoking status, education, income, non-steroidal anti-inflammatory drugs use, energy intake and study site, and stratified by race. Results: Odds of being diagnosed with highly aggressive CaP declined by 55% with increased dietary intake of vitamin E (OR= 0.45, 95% CI= 0.22-0.92, highest vs. lowest quartile; P<sub>trend</sub> =0.04) among EAs, but not in AAs (P<sub>trend</sub> =0.76). Lycopene intake was also inversely associated with CaP aggressiveness among EAs, with 47% and 54% risk reductions in the second (OR= 0.53, 95% CI= 0.33- 0.87) and third (OR= 0.46, 95% CI= 0.27-0.77) quartiles, and nearly statistically significant association in the fourth quartile (OR= 0.61, 95% CI= 0.35-1.04), whereas no significant association was observed in AAs. In contrast, among AAs, a statistically significant inverse linear trend was observed between beta-cryptoxanthin intake and CaP aggressiveness (P<sub>trend</sub> = 0.03), but not in EAs (P<sub>trend</sub> =0.48). Conclusions: Vitamin E and lycopene were associated with reduced odds of highly aggressive prostate cancer among EAs, while beta- cryptoxanthin was associated with reduced odds among AAs. These race specific associations may be a reflection of different dietary habits or gene-diet interactions that may vary by race, which warrants further investigation.</p>

63	64-T
<p>Neighborhood Poverty and Colorectal Cancer Screening: Do Neighborhood Definitions Make a Difference? Pruitt SL, Halm EA, Tiro JA, Speer A</p> <p>Introduction Current methods for defining neighborhood poverty may over-simplify and result in flawed effect estimates. For example, studies usually 1) Identify residential neighborhoods at a single point-in-time (e.g. ignoring moves) and 2) Arbitrarily define neighborhoods. We examine impact of varying these methods (using first vs. most recent address and census tract vs. block group) on association of neighborhood poverty and colorectal cancer (CRC) screening. Methods We conducted hierarchical logistic regressions of CRC screening and neighborhood poverty using date-stamped electronic medical record (EMR) data from a large, urban, safety-net health system population. Eligible patients were members of the Parkland-UT Southwestern Population-based Research Optimizing Screening through Personalized Regimens (PROSPR) cohort: aged 50-64, with ≥1 primary-care clinic visit Jan 2010-Sept 2011. Outcomes were completion of: 1) fecal occult blood test (FOBT) in 1 year; or 2) Endoscopy (≥COLO±) within 2 years. We geocoded residential longitudinal address history data between 2006 and 2011 including first and most recent address and linked Census data on census tract and block group poverty rate (in quartiles). Results Among 35,692 patients, median number of unique addresses was 2 (SD: 1.6, range: 1-18). Of these, 28,567 (80%) had ≥2 addresses and comprised the study sample. Neighborhood poverty using 1st address was not associated with FOBT or COLO. However, when using most recent address, findings were mixed based on choice of neighborhood unit; census tract poverty was not associated with FOBT or COLO. Most recent block group poverty was significantly associated with both outcomes such that highest vs. lowest quartile was negatively associated with COLO (OR: 0.82 (95% CI: 0.73-0.92) but positively associated with FOBT (OR: 1.12 95% CI: 1.02-1.24). Discussion More recent and granular (block group) address data provided a more robust representation of neighborhood socioeconomic disparities in CRC screening. Increasing availability of longitudinal EMR data and advances in geographic information systems will facilitate more sophisticated ways of understanding the impact of neighborhoods on cancer screening. The PROSPR consortium is ideally positioned to lead this research.</p>	<p>Relation of time since last birth and mammographic breast density: a biological marker for breast cancer risk Bernard-Davila B, Tehranifar P, Reynolds D, Flom J, Fulton L, Terry MB</p> <p>Background: Timing of pregnancy has been associated with breast cancer risk. As mammographic density is a strong intermediate marker of breast cancer risk, with higher mammographic density associated with higher risk, it is important to know if timing of pregnancy impacts mammographic density. Methods: We collected mammograms and epidemiologic data at the time of the screening mammogram from January 2007 to April 2008 from women (42% African American, 22% African Caribbean, 22% White, 9% Hispanic Caribbean, 5% other) without a history of breast cancer (n = 191, mean age = 50). We categorized women based on their reproductive history and assessed age at first pregnancy, age at last pregnancy and overall parity. We assessed overall dense area and percent breast density using Cumulus software. Using linear regression models, we examined the association between pregnancy history and breast density, adjusting for age at mammogram, age at menarche, body mass index (BMI), and hormonal birth control (HBC) use. Results: Parous women, regardless of timing of last pregnancy, had lower percent breast density relative to nulliparous women. The multivariable adjusted association between time since last pregnancy and percent density was: &lt;10 years, <math>\beta</math> = -5.6% (95%CI = -11.62, 0.48), P = 0.07, 10-20 years: <math>\beta</math> = -2.5% (-7.27, 2.23) P = 0.29 and &gt;20 years: <math>\beta</math> = -4.5% (95%CI = -8.92, -0.11) P = 0.04 all as compared to nulliparous women). Similar results were observed for multivariable adjusted models assessing the association between time since last pregnancy and dense area: &lt;10 years, <math>\beta</math> = -8.2% (95%CI = -16.32, -0.15) P = 0.04, 10-20 years: <math>\beta</math> = -3.9% (-10.26, 2.41) P = 0.22, and &gt;20 years: <math>\beta</math> = -8.6% (-14.47, -2.71) P = 0.04. Conclusions: Parous women had lower mammographic percent density and percent area relative to nulliparous women. There were no differences by number of years since last pregnancy suggesting that breast density may not reflect transient differences observed in breast cancer risk by timing of pregnancy.</p>

65	66
<p>Comparing screening processes within the PROSPR initiative: A conceptual model for breast, cervical, and colorectal cancer screening Beaber EF, Kim JJ, Schapira MM, Tosteson ANA, Zauber AG, Tiro JA</p> <p>General frameworks for the cancer screening process are available, as well as some organ-specific conceptual models, but none of the existing frameworks directly compare screening processes in detail across breast, cervical, and colorectal cancer screening. We used clinical guidelines and protocols to develop a cross-organ conceptual model comparing a single screening episode for breast, cervical, and colorectal cancers. The model covers four types of care within a single episode including risk assessment, initial screening test, diagnostic evaluation following abnormal results, and referral to treatment. Communication between primary and specialty providers was included to capture required transitions between types of care in the screening process. We demonstrate that screening episodes for breast and cervical cancers are more similar than for colorectal cancer. Screening for colorectal cancer differs in part because the only follow-up test is also the diagnostic procedure. When comparing across organ sites, the model depicts that the end of a screening episode is more difficult to determine after an abnormal result for cervical than for breast or colorectal cancers as a result of the complex surveillance guidelines for cervical cancer. Breast and colorectal cancer screening require a greater number of interfaces, where information must be transferred between two different health provider teams, than for cervical cancer screening; these interfaces may be at increased risk for breakdown when delivering the screening process. The model was developed within the Population-based Research Optimizing Screening through Personalized Regimens (PROSPR) initiative by the National Cancer Institute, which aims to improve the screening process for breast, cervical, and colorectal cancer and includes seven research centers and a statistical coordinating center. This cross-organ model will aid researchers evaluating differences and similarities across cancer screening processes and the design of multi-level interventions to improve screening outcomes.</p>	<p>Estimation of mean number of adenomas per colonoscopy to assess bowel preparation quality: A single-center pilot study Clarke-Hillyer G, Lebwohl B, Rosenberg R, Neugut AI, Wolf R, Basch CH, Hernandez E, Mata J, Corley DA, Basch CE</p> <p>Background: The mean number of adenomas per colonoscopy (MNA) was determined and compared with the adenoma detection rate (ADR) as a way to evaluate the impact of bowel preparation quality. Methods: We examined colonoscopy and pathology records at a hospital-based endoscopy suite in New York City during a six-month period. Number, type, size, and location of adenomas were determined. We collected information on patient demographic, procedural factors, and bowel preparation quality. Comparisons between those in whom adenomas were and were not detected were performed using multivariable logistic regression. MNA and ADR by preparation quality were calculated. Results: A total of 2422 colonoscopies were identified; 815 (33.6%) were screening colonoscopies among average risk individuals, aged 50-74 years; 203 (24.9%) with <math>\geq 1</math> adenomas; and 666 (81.7%) had excellent or good preparation quality. Adenomas were more often detected among those <math>&gt;60</math> years (OR 1.69, 95%CI 1.21-2.36) and males (OR 1.61, 95%CI 1.15-2.26). Overall MNA was 0.34 (SD 0.68); 0.44 for those age <math>&gt;60</math> years (<math>p&lt;0.001</math>), and 0.43 for males (<math>p&lt;0.001</math>). Among those with <math>\geq 1</math> adenomas, MNA was 1.48 (SD 1.05) for excellent and 1.00 (SD 0.00) for poor quality preparation (<math>p=0.55</math>). The overall ADR was 25.0%; ranged between 21.7% for excellent and 13.1% for poor preparation. Conclusions: Mean number of adenomas per colonoscopy may be more sensitive to changes in bowel preparation quality than ADR, and it is particularly sensitive when restricted to only those in whom adenomas were seen. Further exploration of MNA as a bowel preparation quality indicator is warranted.</p>

67	68-T
<p>Body Mass Index, Weight Perception and Colorectal Cancer Screening among Community Dwelling Virginians Elston Lafata J, Jones RM, Kennedy MG, Miller CA, Ratliff S</p> <p>We evaluated the association of body mass index (BMI) and weight perception on colorectal cancer (CRC) screening. A mailed survey was sent to a random sample of 2,527 residents in 3 health districts in Virginia in spring 2013. Adjusted and unadjusted logistic regression models were estimated to test the association of BMI (calculated from reported height and weight) and weight perception (very overweight [=5 on 5-point Likert scale] vs. other [=1-4]) on self-reported use of 1) endoscopy or stool card screening or 2) endoscopy screening alone. Adjusted models controlled for patient socio-demographic and health status characteristics; perceived CRC risk, screening benefits, beliefs, and competency; insurance coverage; regular source of care; barriers to screening; and physician trust. N=1547 residents, all aged 50 – 75 years, returned the survey (63.4% response rate). Respondents were on average 62 years old (sd=6.9), 28% African American, 56% female, and 75% married. Mean BMI was 29.9 (sd=6.6) with 34% meeting criteria for overweight and another 43% for obese. Only 17% perceived themselves as very overweight. Seventy-three percent reported being up-to-date with CRC screening, 71% with endoscopy alone. In unadjusted models, individuals who perceived themselves as very overweight were significantly more likely to report being screened (80 vs. 72%, <math>p=0.01</math>). Screening did not differ by BMI (<math>p=0.33</math>). Adjusted model results indicated that likelihood of screening was not associated with BMI (OR=0.98, 95% CI 0.95 – 1.01), but was significantly greater if individual perceived him- or herself to be very overweight (OR=1.82, 1.09 – 3.02). Results did not differ when endoscopy screening alone was considered. Although some prior findings have shown obese individuals less likely to be screened, consistent with a recent systematic review and meta-analysis, we did not find an association between BMI and CRC screening. Instead, we found differences in screening use by weight perception—albeit with those perceiving themselves as very overweight more likely to have been screened. Instead of focusing on the role of actual weight and CRC screening, it may be more insightful to understand barriers and facilitators of screening specific to an individual's weight perception.</p>	<p>Cumulative HIV viremia and non-AIDS-defining malignancies among a sample of HIV-infected male veterans Kowalkowski M, Day RS, Du XL, Chan W, Chiao EY</p> <p>Background: Research suggests cumulative rather than cross-sectional measurement of HIV exposure better predicts mortality, AIDS, and AIDS-defining malignancies. However, the relationship between cumulative HIV and non-AIDS-defining malignancies (NADMs) remains unclear. The aim of this study was to evaluate the effect of different HIV RNA measures on NADM hazard among HIV-infected male veterans. Methods: We performed a retrospective cohort study utilizing Veterans Affairs HIV Clinical Case Registry data from 1985-2010. We analyzed the relationship between HIV exposure (recent HIV RNA, % undetectable HIV RNA, and HIV copy-years viremia) and NADM. To evaluate the effect of HIV, we calculated hazard ratios for three common virally-mediated NADM (i.e., hepatocarcinoma (HCC), Hodgkin lymphoma (HL), anal squamous cell carcinoma (SCCA)) in multivariable Cox regression models. Results: Among 31,576 HIV-infected male veterans, 383 HCC, 211 HL, and 373 SCCA cases were identified. In multivariable regression models, cross-sectional HIV measurement was not associated with NADM. However, compared to &lt;20% undetectable HIV, individuals with <math>\geq 80\%</math> had decreased HL (aHR=0.62; 95%CI=0.67-1.02) and SCCA (aHR=0.64; 95%CI=0.44-0.93). Conversely, each log-10 increase in HIV copy-years viremia was associated with elevated HL (aHR=1.22; 95%CI=1.06-1.40) and SCCA (aHR=1.36; 95%CI=1.21-1.52). Model fit was best with HIV copy-years viremia. Cumulative HIV was not associated with HCC. Conclusion: Cumulative HIV was associated with certain virally-mediated NADM (i.e., HL, SCCA), independent of immune surveillance. Findings underline the importance of early treatment initiation and durable medication adherence to reduce cumulative HIV burden. Future research should prioritize how to best apply cumulative HIV measures in screening for these cancers.</p>

69-T	70
<p>Laser induced breakdown spectroscopy (LIBS) in cervical cancer screening: A proposed tool Singh S, Badaya S</p> <p>Objective: Cervical cancer, one of the few highly preventable cancers through successful screening, is the most common cause of death from cancer in women in the developing world. This brief hypothesis postulates a screening tool aimed to have a real time screening of cervical cancer using LIBS modality. Methods: Laser Induced Breakdown Spectroscopy (LIBS) is a spectrochemical method for determining the elemental composition of various samples present in any phase, by simultaneously vaporizing and exciting the sample and thus it improves the spectrochemical techniques by eliminating the requirement of sample pre-treatment. LIBS system focuses a high peak power laser pulse onto a targeted material to produce a laser spark or microplasma. Elemental line spectra is created, collected and analyzed by a fiber spectrophotometer since nano- to micro-grams of material are ablated in femto- to nano-seconds (depending on the laser pulse duration), the whole process can be considered as minimally destructive and real time. Results: The postulated hypothesis is aimed to use laser induced breakdown spectroscopy (LIBS) in the screening of cervical cancer as trace mineral elements acts as biological signature in tissues like bones, teeth, hair, blood, etc., from the living phase and store information regarding habitat, nutrition, and other environmental conditions. Previous researches have shown significant differences in concentrations of trace elements between normal and cancerous tissue cells. Conclusion: The technique is exemplified by suggested use of LIBS in studying biological samples such as tissues, gall stones, biological aerosols and in vivo cancer detection.</p>	<p>Increasing cancer early detection in African American churches: Feasibility of employing an online system for training peer community health advisors Santos SLZ, Holt CL, Tagai EK, Haider M, Wang M!, Whitehead T, Bowie J, Scheirer MA, Slade J</p> <p>Purpose: This presentation will introduce an online system used to train peer community health advisors (CHAs) and discuss feasibility and process evaluation data from an ongoing implementation trial. Methods: Project HEAL (Health through Early Awareness and Learning) is a community-based implementation trial in 15 African American churches located throughout Prince George's County, MD. Seven churches (14 CHAs) were randomly assigned to complete the online training (versus a traditional in-person training). The online training system provides CHAs with a curriculum consisting of: informed consent, memorandum of understanding, 13 content-specific presentation videos, and a certification after the CHAs pass a knowledge exam. Once certified, the CHAs receive Project HEAL workshop intervention materials and lead a 3-part cancer education workshop series in his/her church. Results: Usability and pilot testing demonstrated feasibility of the online training system. This was further supported by successful training and certification of 14 CHAs from the 7 different churches assigned to this training modality. However, several challenges were experienced including initial dropout of 3 CHAs, greater than anticipated technical support needs, and difficulties relating to technical aspects of the online training system (e.g., implementation of tracking logins). Conclusions: Use of an online approach is a novel way to train peer community health advisors and has implications for wider scalability and reach. We discuss lessons learned and implications for future use of technology in this context. This research is funded by the National Cancer Institute (#R01CA147313).</p>

71	72-T
<p>Total Number of Chronic Illnesses, Rather than Specific Type or Category, is Most Strongly Associated with Exocrine Pancreatic Cancer Risk</p> <p>McDade TP, Anderson FA, Lafemina J, Whalen G</p> <p>Purpose: Chronic conditions (CC) impact quality of life, morbidity, mortality, and health care costs, for millions worldwide. Most adults with one CC have multiple, and potential associations with exocrine pancreatic malignancy (EPM), have not previously been well characterized. Methods: Nationwide Inpatient Sample (NIS) data was used to retrospectively identify adult inpatient records from years 2008-2011. Epidemiologic exposures were defined as: presence of one of 7 leading adult/elderly comorbid CC groups (diabetes, hypertension, arthritis, COPD, cardiac, eye, mental health), or increase in the AHRQ/H-CUP defined total number of comorbid CC's, nchronic. The primary outcome of interest was a principal diagnosis of EPM, by ICD-9 coding. Statistical analyses were performed using SAS 9.2 software (Cary, NC). Chi-squared tests were used to investigate potential associations. Multivariable logistic regression methods were used to confirm associations while controlling for potential confounders, including age, sex, race, obesity, diagnosed alcohol abuse, and increased likelihood of tobacco use history. A sensitivity analysis was performed restricting the EPM outcome to only those including pancreatic resection (PR), to assess the potential effect of rehospitalizations on risk estimation. Results: N=26,766,722 observations, and there were 31,190 (0.12%) with a principal diagnosis of EPM. Among the 7 leading adult/elderly comorbid CC groups, only diabetes is associated with increased risk of EPM (OR 1.21, 95% CI 1.18-1.24). However, nchronic &gt; 2 is strongly associated (unadjusted OR 11.52, 95% CI 10.70-12.41; adjusted OR 4.72, 95% CI 4.34-5.12), and a positive dose-response effect is observed across increasing nchronic percentiles. Magnitudes of association were essentially unchanged with sensitivity analysis. Conclusions: Among the most prevalent chronic illnesses, only diabetes is associated with increased risk of exocrine pancreatic malignancy, and the magnitude is small. Total chronic illness burden, however, is very strongly associated. Further studies of risk stratification for screening, impact of improved chronic illness management, and effects of chronic illness burden on cancer immune surveillance, are warranted to investigate future prevention strategies.</p>	<p>Raw garlic consumption and risk of lung cancer in a Chinese population</p> <p>Myneni AA, Swanson MK, Mu L, Chang SC, Zhang ZF, Niu R, Han X, Liu L, Zhao B, Shi J, Li J, Su J, Yu S</p> <p>Purpose of the study To assess the relationship between raw garlic consumption and lung cancer and examine potential interaction between raw garlic consumption and known risk factors in association with lung cancer. Methods We conducted a population- based case-control study between 2005 and 2007 in Taiyuan, China. A structured questionnaire was used to conduct face-to-face interviews with 399 incident lung cancer cases and 466 healthy control subjects. Crude and adjusted odds ratios (aORs) and 95% confidence intervals (CIs) were estimated using unconditional logistic regression models. Adjusted models controlled for age, average household income 10 years ago, pack years of smoking, alcohol drinking, tea drinking and indoor air pollution level. Results Approximately 57% of our study population consumed raw garlic consumers with 29% of them consuming 2 or more times per week. Raw garlic consumption was associated with lower risk of development of lung cancer with a dose-response pattern (P trend = 0.0002). The association between higher intake of raw garlic and lung cancer was aOR = 0.51, 95% CI: 0.35–0.75. Raw garlic consumption had a significant inverse association with lung cancer among non-smokers (aOR = 0.42, 95% CI: 0.25-0.71) but not among smokers (aOR = 0.65, 95% CI: 0.36-1.16). The association of raw garlic consumption with lung cancer did not differ by age, sex, alcohol drinking, tea drinking or indoor air pollution. We did not find significant multiplicative or additive interaction between garlic consumption and other known risk factors in association with lung cancer. Conclusions We observed raw garlic consumption was associated with a lower risk of lung cancer with a dose-response pattern, substantiating the anti-cancer properties of garlic found in in-vitro and animal studies. These associations should be further verified in larger and different populations.</p>

73	74-T
<p>US cancer care may be less “worth it” than previously thought Soneji S, Yang F, Welch G</p> <p>Philipson et al. concluded that the high cost of US cancer care “may be worth it” based on a comparison of cancer mortality between the US and 10 selected European countries. They reported that the US averted 87,000 breast cancer and 220,000 prostate cancer deaths compared to the European countries between 1982-2005. We could not replicate this result; by our calculations the number of deaths averted was closer to 1,000 and 77,000 for the US. Moreover, we found that the number of deaths averted were highly sensitive to the set of comparator countries. Using the broader benchmark of Western Europe, the number of breast cancer deaths averted reversed (6,000 excess deaths) and the number of prostate cancer deaths further diminished (27,000 deaths averted). Our results call to question previous conclusions that US cancer care led to more lives saved and, consequently, the level of additional value derived from costlier US cancer care.</p>	<p>Metabolic syndrome and endometrial cancer risk in the United States: a study in the SEER-Medicare linked database Trabert B, Wentzensen N, Felix AS, Yang HP, Brinton LA</p> <p>Purpose: To evaluate whether metabolic syndrome and its component factors (obesity, high blood pressure, elevated triglycerides, low HDL cholesterol, elevated fasting glucose) are associated with endometrial cancer overall and by histologic subtype. Methods: We conducted a nested case-control study within the SEER-Medicare linked database. Cases (n=16,323) were women diagnosed with endometrial cancer from 1993-2007. Controls (n=100,751) were a 5% sample of female Medicare enrollees residing in the same SEER-13 registry region as cases during the same time period. Metabolic syndrome was defined, one to three years prior to case diagnosis and a comparable time period in controls, using the revised National Cholesterol Education Program criteria (3 or more of the following: obesity, high blood pressure, elevated triglycerides, low HDL cholesterol, elevated fasting glucose; based on ICD-9-CM codes from inpatient/outpatient diagnoses). Odds ratios (OR) and 95% confidence intervals (CI) were estimated using logistic regression, adjusted for age, race, geographic region, smoking status and dual Medicare/Medicaid enrollment. Histologic subtype-specific ORs were calculated compared to the entire control group. Heterogeneity across subtypes (endometrioid, adenocarcinoma, serous, clear cell, mucinous, carcinosarcoma, sarcoma) was assessed using a case-only analysis. Results: Study participants were on average 77 years old and predominantly white. Increased endometrial cancer risk was associated with metabolic syndrome [OR (95% CI): 1.39 (1.32-1.47)] and its component factors, namely overweight/obesity [1.95 (1.80-2.11)], elevated fasting glucose [1.36 (1.30-1.43)], high blood pressure [1.28 (1.23-1.33)] and high triglycerides [1.11 (1.07-1.16)]. After adjusting for overweight/obesity, the increased risks for elevated fasting glucose [1.38], high blood pressure [1.28] and high triglycerides [1.11] remained. There was no evidence for heterogeneity across the metabolic syndrome-endometrial cancer subtype associations (p-het=0.82). Summary: Our findings, from a large population-based study of older women in the United States, suggest that research is needed to understand the biologic mechanism linking metabolic syndrome and its component factors and endometrial cancer risk.</p>



75-T	76-T
<p>Class III obesity (BMI of 40-59) and mortality in a pooled analysis of 20 prospective studies Kitahara CM, Berrington de Gonzalez AM, Flint AJ, MacInnis RJ, Robien K, Bernstein L</p> <p>The prevalence of class III obesity (body mass index [BMI] <math>\geq 40</math> kg/m<sup>2</sup>) has increased dramatically worldwide and currently affects six percent of adults in the U.S, with uncertain impact on the risks of illness and death. Our objective was to evaluate the risk of death associated with class III obesity, overall and due to specific causes including cancer. In a pooled analysis of 20 prospective studies from the United States, Sweden, and Australia, we estimated sex- and age-adjusted total and cause-specific mortality rates and multivariable-adjusted hazard ratios for adults, aged 19-83 years at baseline, classified as obese class III (BMI 40.0-59.9) compared with those classified as normal-weight (BMI 18.5-24.9). Participants who reported a history of smoking cigarettes or a history of chronic disease (heart disease, cancer, stroke, or emphysema) on baseline questionnaires were excluded. Among 9,564 participants classified as obese class III, we observed mortality rates of 856 per 100,000 per year in men and 663 per 100,000 per year in women. Among 304,011 normal-weight individuals, these rates were 347 per 100,000 per year for men and 281 per 100,000 per year for women. Deaths from heart disease contributed largely to the excess rates in the class III obesity group (47% and 35% of excess deaths among men and women, respectively), while cancer deaths accounted for 7% and 16% of excess deaths among men and women, respectively. Within the class III obesity range, the multivariable-adjusted relative risk of total deaths and deaths from heart disease and cancer increased linearly with increasing BMI (P-trends&lt;0.001). Our results suggest that class III obesity is associated with substantially elevated rates of total mortality, with most of the excess deaths due to heart disease and cancer.</p>	<p>Self-reported ability to exercise and odds of colorectal adenoma recurrence Hibler EA, Sardo Molmenti CL, Jacobs ET</p> <p>Methods for effective measurement of physical activity are constantly evolving and becoming more technologically advanced. However, it is unclear whether more complex methods of monitoring physical activity will improve our ability to understand associations between low rates of physical activity and increased risk of colorectal adenoma recurrence. We evaluated associations between response to a simple, binomial “unable to exercise” question and odds of colorectal adenoma recurrence in participants of the Ursodeoxycholic Acid and Wheat Bran Fiber randomized controlled trials (N = 1,425) conducted at the University of Arizona. The population included primarily white participants with a mean age of 65.5 years and BMI of 28.1 kg/m<sup>2</sup>. Using multivariate logistic regression, we identified significantly reduced odds of adenoma recurrence (OR 0.51 (95% CI 0.32-0.82)) as well as a statistically significant interaction by gender (LRT p-value = 0.04) for those reporting the ability to exercise. Furthermore, we also evaluated associations with adenoma recurrence by anatomical location. The odds for proximal adenoma recurrence were significantly reduced (OR 0.45 (95% CI 0.28- 0.74) for individuals positively reporting their ability to exercise compared to those who could not. The relationship was also significantly modified by gender (LRT p-value = 0.01). There were no significant associations with other characteristics of recurrent adenomas. All analyses controlled for common confounding factors including age, BMI, race, and study population. These results demonstrate the possibility, that for older individuals, a simple variable indicating the ability to exercise may be useful for evaluating overall health and odds of future colorectal adenoma for individuals with a history of prior adenoma removal. The results also identify heterogeneity of effect by gender, supporting the evidence that factors affecting adenoma recurrence by anatomical location vary for men versus women. These results justify the continued evaluation of the role of physical activity in the etiology of colorectal adenoma recurrence.</p>

77-T	78-T
<p>Does TV viewing time before or after colorectal cancer diagnosis affect survival? Arem H, Park Y, Alfano C, Engels E, Matthews CE</p> <p>Purpose Television (TV) viewing, the most prevalent leisure-time sedentary behavior, has been associated with poorer survival. Over 55% of colorectal cancer (CRC) survivors report watching 3+ hr/d of TV, but whether more TV viewing is associated with mortality among CRC survivors is unknown. Methods Using the prospective NIH-AARP Diet and Health Study we identified invasive, non-metastatic CRC cases and followed participants for mortality. TV time was assessed via questionnaires pre-diagnosis (1995) (n=3,784), and post-diagnosis (2004) (n=1,612). We used Cox proportional hazards regression to estimate multivariable adjusted hazard ratios (HRs) and 95% confidence intervals (CIs) for mortality. Follow up time for pre-diagnosis models was calculated from cancer diagnosis to death or censoring at 12/31/2011 and for post-diagnosis models from the 2004 questionnaire to death or censoring. Final models used age as the underlying time metric and adjusted for sex, cancer site, stage, grade, first reported course of treatment (surgery, chemotherapy, radiation), body mass index, smoking status, self-reported health status, and physical activity. Results Compared to those reporting 0-2 TV hr/d pre-diagnosis, those reporting 5+ hr/d pre-diagnosis had a 21% increased risk of all cause mortality (HR=1.21, 95% CI 1.05-1.39), a non-significant increased risk of CRC mortality (1.15, 0.94-1.40), and a 57% increased risk of cardiovascular disease (CVD) mortality (1.57, 1.10-2.26). After diagnosis, those who reported &gt;4 hr/d of TV appeared to be at increased mortality risk from all causes (1.25, 0.97-1.62) and CRC (1.57, 0.98-2.51), but not from CVD (0.85, 0.46-1.59) compared to those reporting watching 0-2 hr/d. Conclusions In our study of CRC survivors, it appeared that more TV viewing both pre- and post-diagnosis was associated with an approximate 20% higher risk of death. Future studies are needed to confirm this association and test interventions to reduce TV viewing in this survivor population.</p>	<p>Prospective study of benign breast disease, reproductive, lifestyle factors, and risk of subsequent breast cancer Reimers LL, Crew KD, Terry MB</p> <p>Introduction: Although family history and age are consistently associated with risk of breast cancer after a diagnosis of benign breast disease (BBD), less is known about other risk factors. We investigated the associations between reproductive, lifestyle factors and BBD and risk of invasive breast cancer (BC). Methods: We examined the association of BBD and reproductive, hormonal and other lifestyle factors with risk of subsequent BC using information from in 1,240 women with BBD and 1,322 women without BBD enrolled in the Women At Risk (WAR) registry from 1991 to 2011 at Columbia University Medical Center. Hazard ratios for invasive BC were estimated using Cox regression, adjusting for age, race, first degree family history of BC, age at first birth, number of live births, age at last birth and current alcohol consumption. Results: Over 22,078.47 person-years of observation and an average follow-up of 8.62 years, there were 121 incident breast cancers, 74 in women with BBD and 47 in women without BBD. Women with BBD had 2.63 higher risk of BC compared to women without BBD (HR: 2.63, 95% CI: 1.79-3.86). Among nulliparous women, women with BBD had 5.3 higher risk of BC than women without BBD, this risk decreases with increasing parity (BBD vs. No BBD: HR: 5.30, 95% CI: 2.64-10.1). Later age at last live birth showed a decreased risk of BC among women with BBD, whereas women without BBD had an increased risk of BC (<math>\geq 35</math> years vs. <math>&lt; 25</math> years, BBD: HR: 0.64, 95% CI: 0.16-2.51; <math>\geq 35</math> years vs. <math>&lt; 25</math> years, no BBD: HR: 1.23, 95% CI: 0.14-10.96). In women with BBD, BC risk increased with increasing frequency of alcohol consumption, whereas for women without BBD we saw a decreased risk of BC, regardless of frequency of consumption (Alcohol use, Yes vs. No, BBD: HR: 1.69, 95% CI: 0.99-2.88, no BBD: HR: 0.56, 95% CI: 0.31-1.01). In women with BBD, women who drank daily had a 2-fold increased risk of BC compared to never drinkers (Daily vs. None, BBD: HR: 2.07, 95% CI: 0.96-4.42. Conclusions: We observed differences in selected established BC risk factors (age at pregnancy and alcohol consumption) by whether women were also diagnosed with BBD. However, associations between age at menarche, oral contraceptive use, and smoking status were similar regardless of BBD status.</p>

79-T	80-T
<p data-bbox="131 163 773 289">Low Plasma ADIPOQ (Adiponectin) Level and KRAS Mutation Status in Colorectal Cancer Nishihara R, Inamura K, Jung S, Yamauchi M, Kim SA, Fuchs CS, Chan AT, Cho E, Wu K, Ogino S</p> <p data-bbox="131 359 773 1612">Purpose: Emerging evidence suggests that a low level of plasma ADIPOQ (adiponectin) is considered as a measure of excess energy balance status and associated with colorectal cancer (CRC) risk. As KRAS-mutant cells are sensitive to energy balance changes, we hypothesized that a low prediagnostic level of plasma ADIPOQ might be associated with a higher risk of KRAS-mutant CRC. Methods: In a nested case-control study (with 311 incident CRC cases and 597 matched controls) within the Nurses' Health Study and the Health Professionals Follow-up Study, we examined the association of plasma ADIPOQ level measured before CRC diagnosis with CRC according to status of KRAS, BRAF, or PIK3CA mutation in tumors. Conditional logistic regression models were used to compute odds ratios (ORs), adjusting for potential confounders. Results: In combined cohort of women and men, compared to controls, a low level of plasma ADIPOQ was associated with KRAS-mutant CRC [for the lowest (T1) vs. highest tertile (T3): multivariate OR=2.84, 95% confidence interval (CI)=1.51-5.37, P<sub>trend</sub>=0.0020 across tertiles], but not with KRAS-wild-type CRC (for T1 vs. T3: multivariate OR=0.82, 95% CI=0.48-1.41, P<sub>trend</sub>=0.45 across tertiles) (P<sub>heterogeneity</sub>=0.0035, between KRAS-mutant and KRAS-wild-type CRCs). The association between low-level plasma ADIPOQ and BRAF-wild-type CRC (for T1 vs. T3: multivariate OR=1.73, 95% CI=1.11-2.69, P<sub>trend</sub>=0.018 across tertiles) appeared to be due to enrichment of KRAS-mutant CRCs within BRAF-wild-type CRC. Plasma ADIPOQ level was not associated with BRAF-mutant (P<sub>trend</sub>=0.15 across tertiles), PIK3CA-wild-type (P<sub>trend</sub>=0.15 across tertiles), or PIK3CA-mutant CRC (P<sub>trend</sub>=0.28 across tertiles). Conclusions: Low prediagnostic level of plasma ADIPOQ is associated with higher risk of KRAS-mutant CRC, but not with KRAS-wild-type CRC risk. Our data suggest that plasma ADIPOQ may be a novel marker for risk of KRAS-mutant CRC. Further investigations are required to determine clinical implications of our findings.</p>	<p data-bbox="773 163 1414 321">Molecular pathological epidemiology analysis of alcohol intake and incident colorectal cancer according to methylation level of the IGF2 differentially methylated region (DMR) Nishihara R, Schernhammer E, Ogino S</p> <p data-bbox="773 359 1414 1612">Purpose: High consumption of alcohol, an antagonist of methyl-group metabolism, is associated with colorectal cancer risk. We hypothesized that excess alcohol might increase a risk of colorectal cancer with hypomethylation of the IGF2 (insulin-like growth factor 2) differentially methylated region (DMR)-0, which has been associated with worse prognosis. Methods: We examined the association between alcohol intake and incident colorectal cancer cases with varying level of IGF2 DMR0, utilizing two prospective cohort studies, the Nurses' Health Study and the Health Professionals Follow-up Study. Duplication-method Cox proportional cause-specific hazards regression for competing risks data was used to compute hazard ratio (HR) and 95% confidence interval (CI) for colorectal cancer incidence according to the methylation level of IGF2 DMR0. Models were adjusted for body mass index, physical activity, intake of calcium, red meat, vitamin B6, vitamin B12, folate and methionine, current smoking status, current multivitamin use, and regular aspirin use. Results: During 3,216,215 person-years of follow-up, we identified 1,000 incident colorectal cancer cases. Compared with participants reporting no alcohol consumption, those with consumption of more than 15 g alcohol per day tended to develop colorectal cancer with hypomethylated IGF2 DMR0 (first quartile of IGF2 DMR0 methylation level) (HR=1.34, 95% CI=0.93 to 1.92). By contrast, high alcohol consumption was not associated with a high risk of colorectal cancer with fourth quartile of IGF2 DMR0 methylation level (HR=0.76, 95% CI=0.51 to 1.13). The association between alcohol consumption and colorectal cancer risk differed significantly by IGF2 DMR0 methylation level (P for heterogeneity=0.02). Conclusions: Higher alcohol consumption was associated with a high risk of colorectal cancer with hypomethylation of IGF2 DMR0. The association of alcohol consumption with colorectal cancer risk differed significantly according to tumor IGF2 DMR0 methylation level.</p>

81-T	82
<p>Time Since Diagnosis, Symptom Burden and Health Behaviors in Breast, Prostate and Colorectal Cancer Survivors Bluethmann S, Basen-Engquist K, Vernon S, Stansberry S, Carmack C, Demark-Wahnefried D</p> <p>Purpose: To better understand potentially ‘teachable moments’ in survivorship research, we examined the role of time since diagnosis (TDx) and symptom burden on adherence to health behavior recommendations (diet, physical activity and smoking) in a diverse group of post-treatment cancer survivors. Methods: We analyzed cross-sectional data collected from 1053 survivors treated at MD Anderson Cancer Center. Individual hierarchical regression models were fitted for each behavior of interest. Additionally, we assessed TDx as a moderator between symptoms and behaviors and explored the role of symptom burden as a mediator between TDx and behaviors using both causal steps and bootstrapping methods. Results: We observed that longer-term survivors (5 yrs+) reported less physical activity (mean= 94 min/week) and lower consumption of fruits and vegetables (mean=4.88 daily servings) than other survivors. In regression models, TDx was a significant predictor for dietary habits (B=- 0.053, p=0.016) and smoking behavior (B=0.075, p=0.01). Symptom burden was a significant negative predictor for physical activity (B=-10.8, p&lt;.001). Overall, however, the regression models poorly predicted behaviors, explaining between 3 and 8% of shared variance with the outcomes. Model fit for each behavior improved slightly with the addition of TDx and symptom covariates (R<sup>2</sup> change between 0.006 and 0.026). The TDx and symptom burden interaction term was not significant for any model. Additionally, symptom burden was not significant in preliminary mediation testing with TDx and behaviors. Conclusion: The survivorship experience is complex. This exploratory study sought to frame adherence to multiple behaviors in the context of other challenges that survivors realistically face. Although the intersection of TDx, symptom burden and behaviors is still unclear, our results suggest that time since diagnosis may be promising in finding teachable moments and understanding health behaviors, especially diet and smoking. Additionally, the role of symptom burden may be especially relevant for future research on physical activity performance.</p>	<p>Associations of long-chain <math>\omega</math>-3 fatty acids and fish intake with endometrial cancer risk in the VITamins And Lifestyle (VITAL) cohort Brasky TM, Neuhouser ML, Cohn DE, White E</p> <p>Background: Inflammation plays an important role in endometrial cancer etiology. Long-chain <math>\omega</math>-3 polyunsaturated fatty acids (LC<math>\omega</math>-3PUFA), derived from marine sources, are thought to be anti-inflammatory; however several studies of fish consumption are suggestive of an increase in risk. This study examines whether intakes of LC<math>\omega</math>-3PUFA, including eicosapentaenoic acid (EPA; 20:5<math>\omega</math>3) and docosahexaenoic acid (DHA; 22:6<math>\omega</math>3), from diet and supplements, as well as intake of fish are associated with endometrial cancer risk. Methods: Between 2000 to 2002, 22,494 women, ages 50 to 76 years, living in western Washington State, were recruited to the VITamins And Lifestyle (VITAL) cohort study. Incident endometrial cancers (n=263) were identified through the Surveillance, Epidemiology, and End Results cancer registry after 9 years of follow-up. Multivariable-adjusted hazard ratios (HR) and 95% confidence intervals (CI) for the association of intakes of individual LC<math>\omega</math>-3PUFA and fish with endometrial cancer risk were estimated using Cox proportional hazards. Results: Women in the highest versus the lowest quintile of dietary EPA+DHA had 79% increased risk of endometrial cancer (95% CI: 16% to 175%; P-trend=0.026). Results were similar for EPA and DHA measured individually, as well as fish intake. When data were stratified on body mass index (&lt;25/<math>\geq</math>25 kg/m<sup>2</sup>) increases in risk for LC<math>\omega</math>-3PUFA were restricted to overweight and obese women and statistically significant reductions in risk were observed for normal-weight women. Conclusions: The overall increased risk, which we report here, confirms several prior studies of fish intake that observed similar increases in risk. Their replication lends added motivation for further study.</p>

83	84-T
<p>Health behaviors among prostate cancer survivors: National Health Interview Survey 2005 Bekteshi V, Yaghjyan L, Su-Hsin C, Drake B, Colditz G</p> <p>Objective: The purpose of this analysis is to compare health behaviors among prostate cancer survivors and respondents without a history of prostate cancer. Methods: Based on the cross-sectional data from the National Health Interview Survey (NHIS), we investigated the association between prostate cancer survivorship status and health behaviors including Body Mass Index (BMI), smoking status, alcohol use, physical activity, fruit/vegetable consumption, sunscreen use, and compliance with recommended screening among 286 prostate cancer survivors and 7,567 respondents without cancer (reference group). We used multivariate logistic regression to describe associations of health behaviors with prostate cancer status while controlling for age, gender, race/ethnicity, marital status, employment, education, and insurance. Results: In multivariate analysis, cancer survivors were less likely to use multivitamins below recommended daily intake (no multivitamin: OR=0.54; 95%CI=0.39-0.75; 1-6 times per week: OR=0.32; 95%CI=0.13-0.82). Compared to respondents without cancer, cancer survivors were more likely to be overweight or obese (BMI 25.0-29.9: OR=1.48; 95%CI=1.03-2.03; BMI 30.0- 34.9: OR=2.02; 95%CI=1.34-3.05; BMI&gt;35.0: OR=2.31; 95%CI=1.27-4.21). When adjusted for all behavioral factors, the risk estimates remained essentially unchanged indicating that associations of behaviors with survivorship status were independent. Conclusion: Prostate cancer survivors differ from respondents without cancer with respect to BMI, sunscreen and vitamin use. This study adds to the limited knowledge on healthy behaviors among prostate cancer survivors by describing a broader range of health behaviors that have been shown to be implicated in a wider variety of health challenges associated with older age. Future research should examine healthy behaviors among specific prostate cancer survivor subgroups by age, race, immigration status and education and other groups which could benefit the most from health behaviors interventions.</p>	<p>The Dietary Inflammatory Index and Risk of Colorectal Cancer in Women Tabung FK, Steck SE, Caan B, Hou L, Johnson KC, Liese AD, Ma Y, Mossavar-Tahmani Y, Ockene JK, Shivappa N, Wactawski-Wende J, Zhang, Hebert JR</p> <p>Purpose: Inflammation is a process central to carcinogenesis and in particular to colorectal cancer (CRC). Previously, we developed a dietary inflammatory index (DII) from extensive literature review to assess the inflammatory potential of diet, and utilized this novel index in the Women's Health Initiative (WHI) to evaluate its associations with risk of CRC in postmenopausal women. Methods: The DII was calculated from a baseline food frequency questionnaire administered to 152,536 women aged 50-79 years in the WHI followed from 1999 to 2010 or until incident cancer. Colon and rectal cancer cases were ascertained through a central physician adjudication process. Cox proportional hazards models were used to estimate hazard ratios (HR) and associated 95% confidence intervals (95%CI) for colorectal, colon, and rectal cancer incidence, by DII quintiles, with adjustment for multiple covariates. Results: During an average 11.3 years of follow-up, a total of 1140 cases of CRC (907 colon and 223 rectal) were identified. The lowest DII quintile (representing the most anti-inflammatory diet) was the referent for all models. The association between DII and CRC was significantly modified (P interaction=0.01) by baseline special diet status (including any of low-calorie, low-fat/cholesterol, high-fiber or low-sodium diets). Among women who reported not being on a special diet, a higher risk of CRC was observed in the 5th DII quintile (HR, 1.43; 95%CI, 1.15, 1.78) compared to the lowest DII quintile. For colon cancer, significant HRs were observed in the 4th and 5th quintiles (HR, 1.34; 95%CI, 1.06, 1.70 and HR, 1.51; 95%CI, 1.17, 1.93, respectively), while there was no significant association with rectal cancer. In contrast, there was no significant association between the DII and CRC among women who reported being on a special diet. Results did not change after excluding CRC cases that developed within 3 years of baseline. Conclusion: Consumption of pro-inflammatory diets increases the risk of CRC, especially colon cancer, and suggests reduction in the inflammatory potential of the diet as a means of CRC prevention. The WHI was funded by the NHLBI. This study was supported by a Prevent Cancer Foundation grant and Dr. Hebert by the NCI (K05 CA136975).</p>

85	86-T
<p>Within-person variability of urinary Bisphenol-A among postmenopausal women Reeves KW, Luo J, Hankinson SE, Margolis K, Manson J</p> <p>Purpose Bisphenol-A (BPA) is an endocrine-disrupting chemical that is ubiquitous in our environment and may have carcinogenic effects. Exposure to BPA occurs primarily through leaching of BPA from plastic containers and cans into foods that are then ingested. BPA is metabolized quickly, with 50% excreted after 6 hours. We sought to evaluate the distribution and within-person variability of urinary BPA levels over repeated samples collected 1-3 years apart. Methods Within each of three Women's Health Initiative (WHI) sites with stored urine samples, we randomly selected 15 women from the observational study (OS) and 15 women from the clinical trial (CT) who were free of incident cancer, stroke, or coronary heart disease through year 3 of follow-up. Total BPA was measured in samples collected at baseline, year 1 (CT participants only), and year 3 using high performance liquid chromatography with tandem mass spectrometry. We calculated the median and interquartile range for BPA measures at each time point separately by cohort. We also calculated the intra-class correlation coefficient and the within-person concordance of BPA quartile at each time point. Results The median (25th-75th percentile) of total BPA at baseline was 3.5 (2.4-5.4) ng/mg creatinine for the OS and 3.15 (2.4-4.4) ng/mg creatinine for the CT. Median total BPA was variable across years for the OS (4.3 ng/mg creatinine, 3.1-6.3 at year 3; <math>p=0.05</math> vs. baseline) but not the CT (2.9 ng/mg creatinine, 1.9-4.3 at year 1 and 2.6 ng/mg creatinine, 2.0-4.4 at year 3; <math>p=0.74</math> baseline vs. year 1; <math>p=0.13</math> baseline vs. year 3; <math>p=0.46</math> year 1 vs. year 3). The intra-class correlation coefficients was 0.09 (95% CI 0.01-0.44) for the combined sample. Concordance of total BPA quartile was 24.4% for the OS between baseline and year 3 and 37.8%, 24.4%, and 37.8% among the CT between baseline and year 1, year 1 and year 3, and baseline and year 3, respectively. Conclusions Total BPA levels in this cohort of postmenopausal women were similar to those found in other cohorts and suggest a range of exposure both within and across participants. Urinary BPA levels for an individual may vary substantially over time, suggesting that a single measurement of BPA may not adequately capture true exposure in epidemiological studies.</p>	<p>Polymorphisms in DNA repair and oxidative stress may modify the body size-breast cancer association McCullough LE, Eng SM, Bradshaw PT, Cleveland RJ, Steck SE, Terry MB, Shen J, Crew KD, Rossner P, Ahn J, Ambrosone CB, Teitelbaum SL, Neugut AI, Santella RM, Gammon MD</p> <p>Purpose. Biological mechanisms underlying the relationship between obesity and postmenopausal breast cancer are not well understood. Obesity is positively associated with several pro-inflammatory markers while inversely associated with certain anti-inflammatory markers. The imbalance can cause oxidative stress and DNA damage that, if unrepaired, may lead to breast carcinogenesis. We hypothesized that genetic variations in oxidative stress and DNA repair pathways may modify the obesity-postmenopausal breast cancer association. Methods. Resources from a population-based case-control study (1053 cases/1102 controls) were used to construct logistic regression models. Body mass index (BMI, weight kg/height m<sup>2</sup>) at reference date was used as the measure of body size. We focused on characterizing interactions between BMI and 29 genetic polymorphisms representing 20 genes in oxidative stress and DNA repair pathways. Results. Age-adjusted odds ratios (95% confidence intervals) for postmenopausal breast cancer were 1.24 (1.00, 1.52) and 1.35 (1.09, 1.71) for overweight (25&lt;BMI&lt;30) and obese (BMI≥30) women, respectively. We observed interaction on the multiplicative scale (<math>p&lt;0.05</math>) for eight gene polymorphisms in oxidative stress and DNA repair pathways. Stratified estimates were in accordance with our a priori hypothesis for seven. For example, among MPO variant allele carriers, obesity was associated with a more than two-fold increased risk of postmenopausal breast cancer (2.13 (1.35-3.36)); however in MPO wild-type homozygotes, the relationship between obesity and postmenopausal breast cancer was less pronounced (1.33 (0.93-1.89)). Conclusions. Obesity may be particularly deleterious for postmenopausal breast cancer development in the presence of biologically plausible oxidative stress or DNA repair genotypes. Our findings merit further investigation.</p>

87-T	88
<p>Development of a Database of Dietary Nitrate and Nitrite for the National Institutes of Health-AARP Diet and Health Study Virk-Baker MK, Aschebrook-Kilfoy BA, Cross AJ, Sinha R, Ward MH</p> <p>Nitrate and nitrite are considered probable human carcinogens when ingested under conditions that increase the formation of N-nitroso compounds (NOC), potent animal carcinogens. We developed a database of nitrate and nitrite for the NCI-Diet History Questionnaire (DHQ), a 124-item food frequency questionnaire that was used in the NIH- AARP Diet and Health prospective study. A total of 567,169 participants completed the baseline questionnaire in 1995-1996. Nitrate and nitrite contents of foods were determined from 27 U.S. and European studies published between 1967 and 2008. For each food, we calculated the mean of the published measurements weighted by the study sample size. Nitrate and nitrite levels were assigned to each DHQ line item after computing weighted averages of the line item foods where weights were sex-specific intakes determined from national consumption data (1994-1996 CSFII). Daily intakes of nitrate/nitrite were calculated by multiplying the frequency of consumption of each line item by the nitrate/nitrite content and summing across all line items. Among a subgroup of 1,953 participants, we compared nitrate/nitrite intakes from the DHQ to intakes based on two 24-hour dietary recalls using a measurement error model. Median (interquartile range) daily nitrate intakes were 69.0 (42.4 - 107.4) mg/day (men), and 74.3 (47.1 - 116.2) mg/day (women); median daily nitrite intakes were 1.3 (0.9 - 1.7) mg/day (men), and 1.0 (0.7 - 1.3) mg/day (women). The energy-adjusted correlations were 0.59 (men) and 0.57 (women) for nitrate and 0.59 (men) and 0.58 (women) for nitrite. The database we created may be applied to similar epidemiological studies to further evaluate the role of nitrate and nitrite in disease risk. Future validation studies should incorporate comprehensive measurements of nitrite and nitrite in foods and biomarkers of intake.</p>	<p>Cytokine and Chemokine Levels among HPV-Responsive and Non-Responsive Lung Cancer Cases Amrian ES, Porter P, Corry D, Scheurer ME</p> <p>Purpose: Human papillomavirus (HPV), the causative agent for anogenital and certain head and neck cancers, has been detected in lung tumors, but its role as an etiologic agent for lung cancer remains controversial. The lung is often subjected to exogenous inflammatory insults, and patients with chronic lung inflammation have an increased risk for cancer. In addition to the genomic instability that can be caused by HPV oncoproteins, the immunomodulatory impacts of HPV infection may foster a pro- inflammatory state that increases lung cancer risk. We sought to identify such immunomodulatory effects by examining the differences in lymphocyte and cytokine/chemokine profiles between lung cancer cases and HPV-vaccinated healthy controls. Methods: Peripheral blood mononuclear cells were isolated from 22 newly diagnosed lung cancer cases and 11 healthy controls who had prior exposure to HPV antigens (immunized with Gardasil). Cells were enumerated via a hemacytometer, and were exposed to media alone or to 3 doses of Gardasil for 20 hours as an HPV challenge. Interleukin (IL-) 4, IFN-g, and IL-17A secreting cells were then quantified using enzyme linked immunocell spot (ELISpot) analysis. Individuals were categorized as HPV-responsive if the HPV challenge resulted in an increase in at least 2 types of secreting cells, compared to media-exposed cells. The Milliplex human cytokine detection kit was used to assess circulating levels of 38 key cytokines in the plasma of cases and controls. Cytokine levels among HPV-responsive and HPV-non-responsive cases were compared. Survival analysis was also conducted. Results: All 11 HPV-vaccinated controls demonstrated an increase in cells secreting IFN-g and IL-4. Of the 22 cases, 13 (59%) were classified as HPV-responsive, with 2 cases displaying an increase in IFN-g and IL-4 secreting cells upon HPV challenge. Levels of TGF-<math>\alpha</math>, IL-10, IL-3, IL-5, and IL-7 were significantly higher among HPV-responsive compared to non-responsive cases. Significant survival differences were also observed by HPV-responsiveness and cytokine levels. Conclusions: HPV clearly has substantial effects on the host's systemic immune response. Our study may explain whether and how the pathogenic process differs between HPV-infected and – uninfected lung tumors.</p>

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<p>Research Opportunities from SELECT, a Long Term Prevention Study: Biospecimens, Data and Participants Yee MY, Goodman PJ, Anderson KB, Hartline JA, Crowley JJ, Klein EA</p> <p>Purpose: Describe research opportunities from the Selenium and Vitamin E Cancer Prevention Trial's (SELECT) biologic specimens, data and participants. Methods: SELECT recruited over 35,500 healthy men, age 55 and over (50 if African-American) from the US, Canada and Puerto Rico to evaluate if selenium (200 mcg/ day) or vitamin E (400 IU/day) alone or in combination would prevent prostate cancer (PCa). PCa detection was based on community standards and confirmed by central pathology review. An assessment of diet and supplement use was collected at baseline and supplement use was updated annually. The intervention stopped in 2008 due to lack of benefit of the study supplements on PCa incidence. An updated analysis showed a 17% increase in risk of PCa in the vitamin E alone arm. Over 17,300 participants agreed to annual Centralized Follow-up by mail, phone and secure web access. Biospecimens were collected and stored on all participants. Specimens included baseline toenail and plasma and Year 5 plasma; serial plasma samples were collected on a 7% adherence cohort. PCa tissue was collected from men with a diagnosis and submitted to a central laboratory for disease confirmation and storage. Imbedded within SELECT was a case-cohort study to investigate hypotheses related to biomarkers. Results: Over 100,000 biologic specimens are available to the research community to answer questions about cancer and other chronic diseases. A cohort of 3404 men, including 1856 men (of the 2494 diagnosed) with PCa have had their baseline plasma nutrient levels (α-tocopherol, β-tocopherol, cholesterol, selenium (in process), vitamin D, carotenoids) and toenail selenium measured, as well as DNA extracted. The types of cancers reported and number and type of specimens available in the biorepository will be presented. Data generated from SELECT are also available to conduct other analyses. It may be possible to approach participants being followed for permission to complete surveys or to recruit them for other research. Conclusions: SELECT has a robust repository of biologic specimens, data and a large number of dedicated participants. Visit <a href="http://swog.org/Visitors/select/">http://swog.org/Visitors/select/</a> for information on how to access the SELECT biospecimens and data.</p>	<p>Prostate Cancer Prevention Trial: Access to a Biorepository and the Associated Clinical Data Goodman PJ, Tangen CM, Thompson IM</p> <p>The Prostate Cancer Prevention Trial (PCPT) provides an opportunity to access a biorepository with a large number of serum and DNA samples and a rich tissue bank. PCPT randomized 18,882 men to determine whether finasteride could reduce the prevalence of prostate cancer among healthy men aged 55 and older during a 7-year period. Men underwent annual DREs and PSA measurements. Prostate biopsies were recommended during the trial for men with either an elevated PSA (&gt; 4.0 ng/ml adjusted) or DRE suspicious for cancer. All men were recommended to have an end of study biopsy at their 7-year anniversary regardless of their PSA level or DRE result. The primary result showed a 24.8% relative risk reduction in prostate cancer with finasteride (24.4% placebo versus 18.4% finasteride). However, Gleason grade 7-10 cancers were more common in the finasteride group (280 versus 237). Clinical data include an extensive diet questionnaire, medical events, medications and serial PSA measures. Survival status from the Social Security Death Index was updated in 2011; a National Death Index search is planned for 2014. The biorepository contains serum from baseline and post-baseline visits, a mid-study draw for harvesting of DNA, and tissue from all positive and negative biopsies. There are 2401 prostate cancers including cases outside of the definition for the primary endpoint. Of these, 94% have a baseline sample and 88% have at least 3 additional pre-diagnostic serum samples. WBC or DNA is available on 60% with the potential to extract DNA from serum on those without WBC. Over 13,000 men have tissue stored. Studies on the genetic, metabolic and environmental factors associated with the risks of prostate cancer, have been done including analysis of sex steroids, IGFs, nutrients and oxidized proteins and tissue markers of inflammation. A panel of genotyping has also been completed. Over 1300 other primary cancers were also documented. Of these, 93% have a baseline serum sample and 58% have 3 or more pre-diagnostic samples. Information about the available clinical data and biorepository will be presented. Investigators wanting access to the biorepository and the associated data are encouraged to apply. Visit <a href="http://swog.org/Visitors/pcpt">http://swog.org/Visitors/pcpt</a> for more information.</p>



91	92-T
<p>Assessing Needs of Cancer Patients (Survivors) in Providing Follow-Up Cancer Information Lackey EM, Anderson K, Klemp J, Gottlieb A, Krouse R, Fabian C</p> <p>Purpose: To describe results of an ongoing online survey of cancer survivors. Questions focused on: 1) Information on treatment and follow up care; 2) Current access to health information; 3) Features for an interactive website for participants of clinical trials; 4) Identity with the term “survivor.” Method: In 2013, the SWOG Patient Advocate Committee launched a 13 question online survey via members and supportive care organizations to better understand needs of cancer survivors. To date, over 1300 surveys worldwide have been returned. Results: Respondents were adults and most surveys were completed by those age 56-65 (38%). The most common diagnoses were: Prostate (34 %), Myeloma (24%), Breast (18%), and Bladder (14%). Although only 382 people said they were not provided a written follow up care plan, 56% stated their health provider or someone else spoke with them about lifestyle modification. The internet is the primary place for information gathering (72%). The majority of responders wanted websites that provide: facts about their cancer (70%), study results in lay language (53.9%), information on care plans (53%), and learning more about clinical trials for which they might be eligible (53%). Many respondents did not identify with the term cancer “survivor”, but did not provide a clear alternative. Some resent any label; others did not view themselves as “having survived” cancer since it is not in their past, but always in their present and clouds their future. Conclusion: With a growing number of cancer survivors there is a need to seek methods to provide ongoing education, longitudinal data collection and access to future clinical trials. In this online survey, we found that survivors are interested in evidence-based data to learn about their own cancers and how to manage late effects. They want access to information on clinical trials they participated in and in future survivorship trials. Lastly, many do not identify with the term “survivor.” Most accept this term, but need clarification on how it is used and why a label is necessary. A need exists for collaboration to build useful survivorship tools, resources, access to clinical trial information, and future studies suitable for a range of institutions and providers.</p>	<p>Physical activity predictors and preferences among gynecological cancer survivors Cust AE, Farrokhzadi L, Young J, Goumas C, Dhillon H</p> <p>Aim: To examine physical activity predictors and preferences among gynecological cancer survivors, at different stages of the cancer care journey. Methods: A self-administered questionnaire was completed by 101 women diagnosed with gynecological cancer within the previous two years, and whose clinical care was managed at the Royal Prince Alfred Hospital or the Royal Hospital for Women, Sydney. Physical activity in the last 7 days using the Active Australia questionnaire, and classified participants as ‘sufficiently active’ (<math>\geq 150</math> mins/week from walking, moderate and vigorous activities, with the latter double-counted), ‘insufficiently active’ (1-149 mins/week) and sedentary (0 mins/week). Odds ratios (OR) for being sufficiently active and 95% confidence intervals (CI) were estimated using multivariate logistic regression. Results: About half (53%) of the women reported ‘sufficient’ physical activity, 35% were ‘insufficiently active’ and 12% were sedentary. Predictors associated with ‘sufficient’ physical activity were being in the ‘follow-up’ stage of cancer care (OR 9.9, 95% CI 1.6-63.5 compared with pre-treatment, during treatment and advanced disease stages), a healthy weight (OR 0.2, 95% CI 0.0-0.8 for a body mass index <math>\geq 25</math> versus <math>&lt; 25</math> kg/m<sup>2</sup>) and higher pre-diagnosis total physical activity (OR 18.2, 95% CI 2.8-119.0 for the highest versus lowest tertile). There was a weak association with employment status (OR 4.5, 95% CI 0.9-23.5 for ‘not working’ versus ‘working’). Age, marital status, education, cancer type, and treatment were not significantly associated with being sufficiently active. Most participants 70% indicated some interest in participating in a physical activity program, and the preferred time to start was 3-6 months after treatment (26%) or during treatment (23%). Walking was the preferred activity (40%), followed by resistance exercises (17%) and swimming (16%). Conclusions: A suitable physical activity intervention for women with gynecological cancer could include walking-based activity during or soon after treatment. The results from this study will help identify gynecological cancer survivors who need assistance with improving their physical activity levels, and will assist the development of physical activity programs.</p>

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<p>Identification and predictors of physical activity barriers among gynecological cancer survivors, and association with physical activity levels Cust AE, Farrokhzadi L, Young J, Goumas C, Dhillon H</p> <p>Aim: To identify perceived barriers of physical activity, and their predictors, among gynecological cancer survivors, and to determine if the reported barriers were associated with physical activity levels. Methods: A self-administered questionnaire was completed by 101 women diagnosed with gynecological cancer within the previous two years, and whose clinical care was managed at the Royal Prince Alfred Hospital or the Royal Hospital for Women, Sydney. We included questions on 13 individual potential barriers, scored on a 5-point scale. These barriers were also grouped into four subscales: physical environment, social environment, personal attributes and disease-specific. Associations between barriers and last 7-days physical activity (total mins/week) were assessed using Spearman correlations (<math>\rho</math>). Odds ratios (OR) and 95% confidence intervals (CI) were estimated using multivariate logistic regression. Results: Disease-specific barriers were perceived as the greatest obstacles to being more physically active, and these barriers were associated with lower post-diagnosis physical activity levels (<math>\rho = -0.21</math>, <math>p=0.03</math>). Other individual barriers that were significantly inversely correlated with physical activity included 'lack of interest' (<math>\rho = -0.26</math>, <math>p=0.01</math>), and 'never been active' (<math>\rho = -0.23</math>, <math>p=0.03</math>). In a multivariate model, personal attribute barriers and physical environment barriers were weakly inversely associated with 'sufficient' physical activity (<math>\geq 150</math> mins/week): OR 0.93 (95% CI 0.85-1.01) and 0.87 (95% CI 0.73-1.03), respectively. Predictors of physical environment barrier scores were 'not working' (OR 0.11, <math>p=0.03</math>) and 'overweight' (OR 7.0, <math>p=0.02</math>). Ovarian cancer survivors had greater personal attribute barriers (OR 3.9, <math>p=0.05</math>) and disease-specific barriers (OR 6.5, <math>p=0.03</math>) compared with other gynecological cancers, and chemotherapy and radiation treatment were also strongly associated with greater disease-specific barriers (OR 13.5, <math>p=0.005</math>). Conclusion: These findings will assist in developing strategies for reducing barriers to physical activity among gynecological cancer survivors.</p>	<p>Changes in Body Composition and Adipokine Levels During Aerobic and Resistance Training: A Pilot Study of Cancer Survivors in Los Angeles County Tarleton HP, Almstedt H, Grote S, Shoepe TC, Strand SL</p> <p>Obesity may contribute to a higher risk of secondary cancer among cancer survivors. This pilot study assessed the impact of aerobic and resistance training on body composition and adipokine levels among cancer survivors. Cancer survivors (<math>n=24</math>, 75% female) were identified between May-July 2013 by convenience sampling in Los Angeles County. Eleven survivors consented to 13-weeks of supervised aerobic and resistance training (1 hour, 3 times/week). Baseline assessment in August 2013 included body composition, bone density, cardiovascular endurance, strength, balance, and heart rate variability. Ten participants volunteered fasting blood samples. Target heart rates were calculated for each participant and measured during sessions with individual heart rate monitors. Cancer types included lung (<math>n=1</math>), breast (<math>n=5</math>), ovarian (<math>n=3</math>), and colon (<math>n=1</math>) cancers, and Hodgkin's lymphoma (<math>n=1</math>). The cohort was 91% female and 54.5% were African-American or Hispanic. The average age of participants was 57.8 years (SD 10.5) with 5 participants classified as overweight (BMI<math>&gt;25</math> kg/m<sup>2</sup>) and 3 classified as obese (BMI<math>&gt;30</math> kg/m<sup>2</sup>). Nine participants continued beyond Week 7. Remaining participants were all female, 55.5% were African-American or Hispanic, and the average age was 57.2 years (SD 11.1). At week 8, the average weight loss among participants was negligible (0.04 kg, SD 1.37). However, 4 of 9 participants experienced a <math>&gt;4</math> cm decrease in waist circumference with an average decrease in waist circumference of 2.74 cm (SD 2.19) for the cohort. Participants experienced, on average, a 35.6% decrease in adiponectin (SD 5.2), a 39.5% decrease in leptin (SD 14.2), and a 37.9% decrease in cortisol (SD 18.2) levels. There was no noticeable change in levels of IGF-1; however a 60.7% (SD 18.1) decrease in IGFBP-3 was observed. Decreases in waist circumference and adipokine levels are indicative of a decrease in central adiposity. The absence of weight loss in this cohort, despite a decrease in waist circumference, suggests an increase in lean muscle mass. These preliminary findings suggest that cancer survivors can improve their body composition and survival prognosis within a short period of time by engaging weekly in at least 180 minutes of combined aerobic and resistance training.</p>

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<p>Pilot test of web- and telephone-based strategies for weight loss in cancer survivors</p> <p>Basen-Engquist K, Carmack C, Blalock J, Li Y, Murray J, Pisters L, Rodriguez-Bigas M, Song J, Demark-Wahnefried W</p> <p>Purpose: Obesity in cancer survivors may increase risk of cancer recurrence and other chronic diseases. There are limited data on best weight management approaches for cancer survivors. This pilot study explored web-based (W) and telephone coaching (T) weight management interventions for early stage breast, prostate, endometrial, and colorectal cancer survivors, examining effects adiposity, diet, physical activity, and physical performance. Methods: Cancer survivors were randomized in a 2:1 ratio to the 6-month W or T intervention. We assessed changes from baseline to 6 months in weight, waist circumference, % body fat, servings of fruits and vegetables (F&amp;V), % energy from saturated fat (%SFAT), Godin physical activity (PA) score and weekly minutes of moderate-vigorous physical activity (MVPA), and physical performance tasks. Within group change was tested using a paired t- test. Between group differences in change were assessed with a two-group t-test. Results: Thirty-seven survivors (22 breast, 7 endometrial, 2 colon, 6 prostate) were randomized (24 W, 13 T). The T group reduced weight by 4.5 kg (SD=5.6, p=.04) while the W group lost .3 kg (SD=2.69; p=.64). The T group had a significant decrease in waist circumference and improvement in the 8 foot up and go test (0.037), and a marginally significant decrease in %SFAT (p=.073) and improvement in PA score (p=.129), 30 second bicep curl test (p=.099), and 30 second sit-to-stand test (p=.169). The W group had a significant increase in % body fat (.004), and improvement in the bicep curl (p=.020) and sit- to-stand test (p=.017), but no other significant changes. Differences between groups favored the T group, with significant differences in change in waist circumference (p=.031), and marginally significant differences in change in weight (p=.060), % body fat (p=.089); PA score (p=.148), and 6-minute walk (p=.115). Dropout rates were 23% in the T group and 33% in W group (p=.51). Conclusions: Telephone coaching for cancer survivors was associated with reduced adiposity and diet change, with marginal associations with physical activity and functioning, while the internet group had few changes. The personal contact of telephone coaching may be important to intervention success, although a larger trial is needed.</p>	<p>Health-related quality of life in head and neck cancer patients and their primary caregivers</p> <p>SterB, Zapka J, Alberg A, Armeson K, Shirai K, Buchanan A, Day T</p> <p>Head and neck cancers (HNC) and their treatments can critically affect quality of life in patients but little research has focused on the experiences of HNC patient-caregiver dyads. In this study, we describe and compare health-related quality of life in HNC dyads at diagnosis and examine whether physical and mental quality of life in patients and caregivers vary by demographic, health and behavioral factors. Newly diagnosed patients with stage I-IV HNC (N=73, 73% male, average age=61) and their primary caregivers (55% partners, 23% male, average age=58) were recruited at a South Carolina cancer center. Patients and caregivers each completed separate questionnaires by telephone or mail assessing health-related quality of life using the SF-12 and a variety of demographic, health and behavioral factors. We calculated physical and mental component summary scores (PCS and MCS, respectively) and used t-tests and ANOVA to examine relationships among quality of life and other factors. In patients, PCS scores were worse in African Americans (p=.001). In both patients and caregivers, PCS scores were worse in those with more co-morbid health conditions and a smoking history (p's &lt;.02). MCS scores were worse in younger patients and caregivers (p's&lt;.05) and in patients who were male and current smokers (p's&lt;.03). Compared to their caregivers, patients reported worse PCS scores (average difference=10.5, p&lt;.0001) but similar MCS scores (average difference=1.5, p=.47). Patient and caregiver MCS scores were positively associated (r=0.31, p=.02) but caregiver MCS was not associated with patient health factors (PCS, co-morbid health conditions or smoking status). This research assessed demographic and health characteristics in relation to HNC patient and caregiver quality of life. The findings highlight subgroups that may need additional resources at diagnosis, such as patients and caregivers who are younger and those who have competing health concerns. Future studies should explore quality of life over time in dyads and consider the development of interventions for higher risk dyads to prevent further declines in quality of life during treatment.</p>

97-T	98-T
<p>Patients are interested in baseline and follow up measurements of lymphedema Sturgeon KM, Fisher CS, Sataloff DM, Schmitz KH</p> <p>Purpose: Early identification of lymphedema is believed to yield better patient outcomes and, a key component of early identification is pre-treatment baseline measurement. Methods: A research assistant reviewed electronic medical records and 89 new patients were seen over 24 clinic days. Of the 46 patients that were scheduled for a sentinel lymph node biopsy, 37 were interested in the research study, and 32 were consented. Baseline measurements using bioelectrical spectroscopy (BIS) (SFB7; Impedimed) were completed immediately following acquisition of informed consent. Final measurements occurred at a post-surgical follow up visit to the surgeon. A change of <math>\pm 10</math> L-Dex units from baseline is indicative of early lymphedema. Results: On clinic days, 80.4% of eligible patients were interested in the study and 69.6% of eligible patients were enrolled. Women were <math>55.8 \pm 11.2</math> years old with an average BMI of <math>28.9 \pm 6.1</math> (kg/m<sup>2</sup>). Follow up occurred <math>4.0 \pm 3.5</math> wks after surgery, and on average <math>4.8 \pm 3.9</math> lymph nodes were removed. BIS did not identify any patients with early lymphedema as the average absolute change in L-Dex score was <math>3.8 \pm 2.70</math> (range: 0.11 to 7.98). Conclusion: In this cohort of women there were no changes in incident lymphedema, as detected through BIS. However, we did observe significant desire among breast cancer patients for pre-treatment metrics as 80.4% of eligible patients were interested in this study. Given the strong interest in pre/post measurements of lymphedema, selecting optimal measurement modalities for reproducible results will be instrumental for clinical implementation.</p>	<p>Breast cancer patient perspectives on exercise pre-habilitation before chemotherapy treatment Sturgeon KM, Fisher CS, Sataloff DM, Schmitz KH</p> <p>Purpose: The American College of Sports Medicine, American Cancer Society, and National Comprehensive Cancer Network, recommend exercise at all points after cancer diagnosis. We investigated patient perspectives regarding a hypothetical pre-habilitative exercise program before treatment initiation. Methods: Thirty-three breast cancer patients undergoing at minimum a sentinel node dissection were asked to participate in a questionnaire based study. Data were gathered on general interest in exercise programming related to cancer treatment, delivery of information regarding exercise programming, Godin Leisure-Time Exercise Questionnaire, and Exercise Stage of Change short form. Results: Most women aged <math>54.4 \pm 11.7</math> years are interested/absolutely want to participate in an exercise program before treatment (78.8%). Fewer women were willing to put off their treatment unless the program was recommended and approved by their doctors (45.5% would not put off treatment vs. 45.5% would put off treatment or would put off treatment with physician referral). Further, they would like to hear this information from a physician (54.5%) as opposed to an exercise specialist (33.3%). Women felt they would like to hear information about an exercise program for cancer patients when they are first diagnosed (60.6%). Activity levels were low in this population as 66.6% of women were below recommended levels of physical activity, and their average Godin Leisure Time score was <math>30.4 \pm 30.4</math> units. Yet, 42% of women perceived themselves as exercising regularly over the last six or more months. We did not observe current activity patterns or behavioral stage of change to be predictive of interest in an exercise program or willingness to put off treatment. Conclusion: Based on responses, a reasonable next step to promote adherence to clinical recommendations for exercise could be to explore ways to integrate exercise into breast cancer care models.</p>

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<p>Rural-Urban Differences in General, but not Cancer-Specific Quality of Life Following Breast Cancer Treatment</p> <p>Weaver KE, Lawrence JA, Hauser SP, Talton J, Case LD, Geiger AM</p> <p>Purpose: To examine rural-urban differences in general and cancer-specific quality of life (QOL) among women with breast cancer during the early post-treatment period. Methods: We surveyed women identified from an institutional cancer registry who were diagnosed with non-metastatic breast cancer and completed treatment 6-24 months previously (65.1% participation rate). Rural-urban status was categorized using zip-code approximation Rural-Urban Commuting Area codes (iY4.0 categorized as rural). We assessed general QOL using the PROMIS Global 10 and cancer-specific QOL with the Functional Assessment of Cancer Therapy-Breast (FACT-B). Chi-square tests and logistic regression analyses were conducted to model the relationship between rural- urban residence and QOL. Covariates included age at diagnosis, race/ethnicity, marital status, education, stage at diagnosis, time since diagnosis, and time since last in-person follow-up care visit. Results: The majority of survivors (N=202) were &lt;60 years of age at diagnosis (54.5%), white (82.7%), married or partnered (67.9%), reported at least some college education (77.2%), and resided in urban areas (63.4%). Most had early stage disease (66.8% AJCC 0/1), with 53.5% receiving adjuvant radiation and 36.6% receiving chemotherapy. Urban survivors (n=128) reported better QOL for all measures, with statistically significant differences in excellent/very good general QOL (64.2% vs 48.6%, p=.03) and ability to carry out social roles (61.0% vs 43.1%, p=.02). There were no significant differences in other QOL indicators. In multivariate models, rural/urban status remained significant for general QOL (OR=2.64, 95% CI = 1.31-5.30) and ability to carry out social roles (OR= 3.03, 95% CI =1.50-6.12). Mental health (OR= 1.97, 95% CI = 1.02-3.82) and satisfaction with social role (OR=2.37, 95% CI = 1.19-4.74) emerged as significant. Rural/urban status remained non-significant for overall health status, physical health, and the FACT-B. Conclusion: Rural and urban women report similar cancer-specific QOL, but breast cancer treatment appears to have lingering effect on general QOL among rural women. Differences may be due to greater burdens during treatment, difficulty accessing supportive services, and social constraint regarding cancer.</p>	<p>Ultraviolet radiation-related behaviors among young people after a diagnosis of melanoma or basal cell carcinoma</p> <p>Ferrucci LM, Cartmel B, Kershaw T, Leffell DJ, Mayne ST</p> <p>Purpose: Due to changing incidence patterns, the number of young skin cancer survivors, a group at high risk for multiple skin cancers, is growing. Ultraviolet (UV) radiation exposure after a first skin cancer may be related to subsequent skin cancer risk. Data on older skin cancer survivors suggest UV protection behaviors are inadequate; little is known about these behaviors in younger survivors. Thus, we characterized UV-related behaviors among 234 young skin cancer survivors in Connecticut. Methods: Skin cancer survivors with a pathology verified cancer (99 with basal cell carcinoma (BCC), 135 with Stage I or II melanoma) &lt; age 50 completed an online survey on UV-related behaviors after diagnosis (68% response). We calculated the prevalence of UV-related behaviors, and identified predictors of engaging in the behaviors with stepwise selection in logistic regression models. Results: 26.9% of these skin cancer survivors, who were on average 3.7±1.2 years post-diagnosis, sunbathed after diagnosis. Sunburns (6.0%) and indoor tanning (5.6%) were rarer. Melanoma survivors were less likely than BCC survivors to sunbathe (odds ratio (OR)=0.12; 95% confidence interval (CI)=0.05-0.26), tan indoors (OR=0.20; 95% CI=0.05-0.76), and report a sunburn (OR=0.26; 95% CI=0.07-0.98). Younger age (OR=0.93; 95% CI=0.88-0.99) and not worrying about skin cancer (often/always vs. never/rarely OR=0.34; 95% CI=0.21-0.56) were related to sunbathing. Tanning ability was a predictor for sunburn (moderate/very tan vs. no/mild tan OR=6.18, 95% CI=1.63-23.37). Sunscreen use was the most common protection behavior; 82.1% did this always or most of the time. Staying in the shade (49.1%) and wearing a wide-brimmed hat (30.8%), pants (15.0%), or long sleeves (12.0%) were less prevalent. Only 28.3% of survivors regularly practiced three or more of these behaviors; older age (OR=1.10, 95% CI=1.05-1.16) and worrying about skin cancer (OR=3.15, 95% CI=1.67-5.95) were predictors of practicing these behaviors. Conclusions: Skin cancer survivors, particularly those diagnosed at an early age or with non- melanoma skin cancer, may benefit from interventions targeting UV-related behaviors. Increasing awareness of future skin cancer risk could improve protection and exposure habits in these individuals.</p>

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<p data-bbox="139 161 758 254">Risk factors for second breast cancer events following DCIS diagnosis in Vermont Shulman LM, Sprague BL</p> <p data-bbox="139 291 758 1677">Ductal carcinoma in situ (DCIS) makes up over 20% of all new breast cancer diagnoses. Overtreatment of this non-invasive form of breast cancer is a widespread concern but few prognostic markers have been identified to guide personalized treatment strategies. We used data from the Vermont Breast Cancer Surveillance System to determine which patient and tumor factors were associated with risk of second ipsilateral breast cancer events after DCIS. The study population consisted of 1114 women diagnosed with DCIS during 1994-2010 in Vermont with known course of surgical treatment. The median follow up time was 5.3 years. Ninety subjects had a second ipsilateral breast cancer event, 52 invasive and 40 in situ. Three Cox regression survival models were developed to explore risk of 1) any ipsilateral event; 2) an invasive ipsilateral event; and 3) an in situ ipsilateral event. A stepwise procedure was used to identify predictors of disease-free survival, with many variables examined including: age, menopausal status, family history of breast cancer, body mass index, prior breast biopsy, tumor histology and grade. All models were adjusted for type of initial surgery and radiation therapy. The final model for any ipsilateral second event identified tumor grade as the most predictive variable. Compared to cases with grade II DCIS, cases with grade I DCIS were 42% less likely (95% CI: 0.26, 1.30) to have a second ipsilateral event whereas cases with grade III DCIS were 1.8 times (95% CI: 0.95, 3.57) more likely to have a second ipsilateral event. The final model for invasive second ipsilateral events included comedo histology and lack of first degree family history of breast cancer as modest, non-significant predictors of disease-free survival. Finally, the risk of in situ second ipsilateral events was elevated among cases with higher tumor grade, younger age, and postmenopausal status (after adjusting for age). This study provides evidence for the importance of tumor grade in determining risk of ipsilateral recurrence, yet this association was largely driven by risk of in situ events. Further study is needed to identify stronger predictors of second breast cancer events after DCIS, with particular attention to predictors of invasive disease.</p>	<p data-bbox="781 161 1399 254">Renal Cell Cancer: A Shift in Approaches for Treatment of Advanced Disease in the United States Banegas MP, Harlan LC, Mann B, Yabroff KR</p> <p data-bbox="781 291 1399 1388">PURPOSE: Available treatments for renal cell cancer (RCC) have increased in recent years, though evidence on the diffusion of novel systemic therapies in the United States (U.S.) is limited. We examined recent trends in RCC treatment in U.S. community practices. PATIENTS AND METHODS: Data from the population-based National Cancer Institute's Patterns of Care studies were used to evaluate treatment of RCC patients newly diagnosed in 2004 and 2009 (n=2,357). Descriptive statistics, logistic and Cox proportional hazards regression analyses were used to assess treatment patterns and the associations between demographic, clinical and hospital characteristics, with receipt of systemic therapy and time-to-treatment. RESULTS: Between 2004 and 2009, systemic therapy use increased among stage III and IV RCC patients, from 3.8% to 15.7% and from 35.2% to 57.4%, respectively (p&lt;0.05). The most common therapy used changed from interleukin-2 (16.3%) and interferon (16.6%) in 2004, to sunitinib (39.2%) and temsirolimus (15.2%) in 2009. Among stage IV patients, there were significant decreases in use of surgery (p&lt;0.01) and time-to-treatment with systemic therapy (p&lt;0.01) during this period. Patients who were older, living in areas with lower educational attainment and diagnosed in 2004 were significantly less likely to receive systemic therapy (p&lt;0.05) and had longer time-to-treatment (p&lt;0.01). CONCLUSION: Our findings underscore a shift in management approaches to patients with advanced RCC in the U.S., reflecting an increased use of systemic treatments with greater efficacy and improved tolerability. As the diffusion of systemic therapy agents for RCC increases, future research of their impact on health outcomes will be warranted.</p>

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<p>Quality of life by treatment choice after DCIS breast cancer Hart V, Trentham-Dietz A, Hampton JM, Newcomb PA, Sprague BL</p> <p>Purpose: Choice of surgical treatment and adjuvant therapy has been associated with physical and psychological quality of life (QoL) after invasive breast cancer; however less research has been performed in survivors of non-invasive disease. Treatment for non-invasive ductal carcinoma in situ (DCIS) differs from that for invasive breast cancer, most notably in the absence of chemotherapy. Research on QoL after DCIS breast cancer is necessary to inform women making treatment decisions and to provide realistic expectations for DCIS survivors. Methods: We investigated QoL over time since diagnosis in a population-based cohort of 1,925 DCIS survivors. QoL was measured at baseline and at three biennial follow-up interviews using the validated SF-36 questionnaire. Treatment was self-reported at baseline and confirmed via medical report. Trends in age-adjusted measures of QoL by time since diagnosis were examined. General linear regression models were used to determine the association between treatment choice and QoL after adjusting for confounders including drug therapy, demographics, and comorbid conditions. Results: Of the 1,725 DCIS survivors with known treatment, most elected breast conserving surgery (BCS) (with radiation: 48%, without radiation: 10%), 34% elected ipsilateral mastectomy, 5% elected bilateral mastectomy, and 3% elected no treatment beyond biopsy. For all treatments combined, age-adjusted measures of physical QoL declined significantly over time since diagnosis (ptrend &lt; 0.001), while measures of psychological QoL were less affected (ptrend = 0.16). Multivariable analysis of treatment choice and QoL at baseline did not demonstrate a significant difference by treatment. However, analysis of treatment choice and QoL at 5-10 years and &gt;10 years since diagnosis suggests that women treated with BCS may have improved QoL in physical domains over those treated with ipsilateral mastectomy (p&lt;0.10). Conclusions: Preliminary results indicate that physical QoL may decline with time since DCIS diagnosis, independent of the effects of aging. However, over the long-term women treated with BCS may have better QoL in physical domains than those treated with ipsilateral mastectomy.</p>	<p>Economic Evaluation alongside a Clinical Trial of Telephone vs. In-person Remote Genetic Counseling for BRCA1/2 Mutations in Geographically Underserved Areas Chang Y, Near A, Huang A, Butler KM, Edwards SL, Kohlmann WK, Schwartz MD, Hoeffken AH, Peshkin BN, Kinney AY, Mandelblatt J</p> <p>Background: BRCA 1/2 mutation testing of high- risk women has been shown to save lives at reasonable costs, especially if positive tests are followed by prophylactic surgery. Accordingly, various genetic counseling interventions have been developed to provide women with knowledge to make informed decisions about risk and whether to obtain testing. Recent data indicate that telephone genetic counseling is equivalent to in-person delivery and has lower costs. We extended this research by conducting an economic evaluation alongside a randomized trial comparing telephone counseling to an alternative delivery model wherein counselors traveled to deliver in-person counseling at rural primary care locations. Methods: Cost-effectiveness analysis was conducted from the societal perspective over a one-year time horizon. All cost and effect data were collected within the trial. Costs included fixed overhead and variable staff and patient time costs; research costs were excluded. The analysis considered intermediate outcomes of average undiscounted costs (2013 dollars) per counseled participant and per positive BRCA1/2 mutation detected. Sensitivity analyses assessed the impact of key variables on results. Results: The trial enrolled 988 women. Counselors traveled an average of 285 miles (4.75 hours) round-trip for remote in-person counseling of ~3 patients per trip. Given these time costs, the average cost of remote in- person delivery was higher than telephone counseling (\$340 vs. \$144). While there was a higher rate of test uptake for the in-person arm, there were no significant differences by arm in rates of mutations detected (10.1% vs. 9.9%; p- value=0.97). Therefore, we did not calculate costs per mutation tested. Varying patient travel times or other variables did not change the results. Conclusion: In geographically underserved areas, having genetic counselors travel to provide in-person counseling may be a reasonable option to reach women with information about BRCA1/2 testing, but it is more expensive than telephone counseling. The economic efficiency of different counseling delivery models should be re-evaluated when there are mature data on whether test price reductions affect the risk-mix and yield of those choosing mutation testing post-counseling.</p>