

American Society of Preventive Oncology



1976-2007

31st ANNUAL MEETING PROGRAM & ABSTRACTS

March 2-4, 2007

The University of Texas M.D. Anderson Cancer Center

THE UNIVERSITY OF TEXAS
MD ANDERSON
CANCER CENTER

American Society of Preventive Oncology

31st Annual Meeting

Program Co-Chairs:

Bernard Levin, MD

University of Texas M.D. Anderson Cancer Center

Thomas Sellers, PhD

H. Lee Moffitt Cancer Center & Research Institute

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. Bernard Levin and Thomas Sellers**, for their extraordinary commitment in facilitating the development of the program for this meeting, and to the entire 2007 ASPO Program Committee for their hard work on the program.

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(front of program booklet, small print)*

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The University of Texas M. D. Anderson Cancer Center

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- Disclosure of:
 - Relevant financial relationships planners, teachers, and authors have with commercial interests related to the content of the activity; and
 - commercial support (funding or in-kind resources) of the activity.

Support Acknowledgements

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

National Cancer Institute (conference grant R13 CA094927)

Glaxo Smith Kline

Cancer Research and Prevention Foundation

American Cancer Society

American Association for Cancer Research

Illumina

Roswell Park Cancer Institute

University of Wisconsin Paul P. Carbone Comprehensive Cancer Center

Exhibitors

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

Epidemiology and Genetics Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute

The Epidemiology and Genetics Research Program (EGRP) is in the Division of Cancer Control and Population Sciences (DCCPS) at the National Cancer Institute (NCI). EGRP manages a comprehensive program of grant-supported, population-based research to increase our understanding of cancer etiology and prevention. EGRP supports epidemiologic research on the determinants of cancer, including lifestyle factors (for example, tobacco, alcohol, energy balance, diet, and nutrition), medications, environmental and occupational exposures, infectious agents, personal susceptibility factors (for example, reproductive characteristics), and acquired and inherited genetic factors. Other equally important areas of investigation include clinical epidemiology, epidemiologic methods, epigenetics, and geographic information systems.

University of Texas M.D. Anderson Cancer Center

The University of Texas M. D. Anderson Cancer Center will provide materials and answer questions on cancer prevention and control programs. Our world-renowned programs include the Clinical Cancer Prevention Center and behavioral science, epidemiology and health disparities research.



GlaxoSmithKline Consumer Healthcare, marketers of the Nicorette[®], NicoDerm[®] CQ[®] and Commit[®] stop-smoking aids, is proud to help support the American Society of Preventive Oncology Annual Meeting

you&i

SNP genotyping.
Gene expression.
And now Solexa[®] sequencing.
Let's find the answers together.

It's your research. Your question. Your test.
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Illumina has the tools that address the core applications in modern genetic analysis—SNP genotyping, gene expression, and now sequencing. Working alongside you, Illumina strives to make it as easy as possible to find the answers that move your research forward. By continually replicating the cycle of listening, anticipating, and innovating, we are pioneering new applications like CNV analysis and DNA methylation.

Together we are the Illumina Community. We collaborate to deliver easy-to-use tools with the highest quality and best value that enable all of us to help understand, cure, and ultimately prevent disease.

Is it time for you to join the Illumina Community?
Let's find the answers together.



*American Association
for **Cancer Research***



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At the H. Lee Moffitt Cancer Center & Research Institute

we seek to ease the burden of cancer for residents of Florida and improve quality of life through the acceleration of evidence-based preventive measures. Our mission, "to contribute to the prevention and cure of cancer," speaks to that commitment. For twenty years we have been developing, implementing and promoting effective cancer prevention and control programs including health outcomes and behavior; risk assessment; detection and early intervention.



H. Lee Moffitt Cancer Center & Research Institute 813-745-4673 www.moffitt.org

CAREER DEVELOPMENT OPPORTUNITY

POPULATION-BASED CANCER PREVENTION and CONTROL RESEARCH

The Division of Cancer Prevention and Control Research, of the School of Public Health and Jonsson Comprehensive Cancer Center at UCLA, is accepting applications for a post-doctoral career development program in population-based, multi-disciplinary cancer prevention and control research. The program is funded by the NCI/NIH, and features:

- ❖ Tailored coursework including the option of completing a MPH or MSPH degree
- ❖ Research in collaboration with nationally-recognized senior faculty mentors
- ❖ Independent translational research leading to scientific publications and grant applications.

Traineeships can be for one to three years. Applicants must hold a doctoral degree (eg, PhD, MD, EdD). Applications are accepted throughout the year. For admission into the program in Summer/Fall 2008, priority is given to applicants who apply by December 17, 2007. Compensation is \$55,000 annually, plus benefits. Additional funds provided for tuition, travel and research expenses.

FOR MORE INFORMATION, CONTACT:

Barbara Berman, PhD, Program Co-Director
UCLA DCPCR
A2-125 CHS, Box 956900
Los Angeles, CA 90095-6900
Phone: (310) 794-9283
E-mail: bberman@ucla.edu

Qualified candidates must be U.S. citizens or permanent resident aliens. UCLA is an Equal Opportunity Employer. Minority candidates are especially encouraged to apply.

UCLA

www.ph.ucla.edu/cancerpreventiontraining

POSTDOCTORAL FELLOWSHIPS CANCER PREVENTION AND CONTROL

Three Unique NCI-funded R25 Training Programs

- Behavioral Cancer Prevention and Control
Led by Julia Rose, Ph.D., M.A.
- Practice-Based Research Network Cancer Control Research,
Led by Kurt Stange, M.D., Ph.D. and James Werner, Ph.D.
- Computational Genomic Epidemiology of Cancer
Led by Robert Elston, Ph.D. and Li Li, M.D., Ph.D.

Program Features

- Personal research project mentored by nationally recognized faculty
- Career development toward independent funding
- Competitive salaries and research seed money NCI funded
- Outstanding research facilities at Case Western Reserve University, University Hospitals Case Medical Center, and Cleveland Clinic

To apply and for more information visit
<http://cancer.case.edu/training/>,
call 216.844.5375,
or email:
margy.weinberg@case.edu.

Applications from women and underrepresented minorities are encouraged.

Case Comprehensive Cancer Center



CASE
CASE WESTERN RESERVE UNIVERSITY
Cleveland, Ohio

Cancer Prevention and Control Postdoctoral Research Fellowship Program

ARIZONA CANCER CENTER

The objective the Cancer Prevention and Control Postdoctoral Fellowship Program is to train qualified candidates in a diverse experiential environment within the University of Arizona Cancer Prevention and Control Program at the Arizona Cancer Center. The Fellowship Program is directed by David S. Alberts, M.D., Iman Hakim M.D., Ph.D., and Elena Martinez, Ph.D.

Fellows, selected from a range of primary disciplines that are relevant to cancer prevention, will be grounded in a multidisciplinary approach to cancer prevention and control through formal coursework, seminar series, conferences, interactions with scientific mentors, and research projects. The training program includes clear primary and secondary scientific and academic goals, constructive scientific criticism from top-level mentors, and support for presentation and publication of results.

At completion of the program, fellows should be prepared to proceed to successful and productive academic research careers contributing to decreases in morbidity of and mortality from cancer.

http://www.azcc.arizona.edu/R_M/fellowship1.htm

The University of Arizona is an EEO/AA-M/W/D/V Employer

Post Doctoral Fellowship in Cancer Prevention and Control

The University of Illinois at Chicago Cancer Education and Career Development Program (CECDP) is seeking candidates for a two- to three-year postdoctoral fellowship in cancer prevention and control research. Qualified individuals must have completed a PhD or MD and must be a US citizen or have permanent status.

The position will be available beginning July 1, 2007. Applications are being accepted until March 30, 2007 or until the position is filled.

For further information on the program and the application process, please visit the CECDP website <http://cecdp.hrpc.uic.edu> or contact:

Clara Manfredi, PhD
University of Illinois at Chicago
Cancer Education and Career Development Program
1747 West Roosevelt Rd, M/C 275
Chicago, Illinois 60608
Telephone: 312-996-2428 or e-mail: clara@uic.edu

**Look for the CECDP Brochures
at the 31st Annual ASPO Meeting!**

HOWDY FOLKS!

THE UNIVERSITY OF TEXAS
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*Training Tomorrow's
Leaders Today*

Cancer Prevention Research Training Program

Applications being accepted NOW

Letter of Intent Due: Monday, March 19, 2007

Full Proposal and Application Due: Monday, June 11, 2007

This program prepares health scientists and clinicians to assume leadership roles as research investigators in the multidisciplinary field of cancer prevention and control.

Pre-Doctoral Fellowships

- Support for up to three years
- \$23,000 annual stipend

Post-Doctoral Fellowships

- Support up to two years
- Stipend \$48,000 - \$60,00

Short-term Research Experience

- 3-month training
- \$1917/monthly stipend

Donor-supported Post-Doctoral Fellowships

- Open to U.S. Citizens, Permanent Residents, and Foreign Nationals Holding Visas
- Support up to two years
- Stipend \$48,000 - \$50,000

For further information contact:

Robert M. Chamberlain, Ph.D.

Shine Chang, Ph.D.

Dee Tello

Dtello@mdanderson.org

- (713) 745-2495

www.cancerpreventiontraining.org

Funded in part by the National Cancer Institute R25

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Cancer Control and Population Sciences

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Your source for

- Cancer control RFAs and other funding opportunities
- Information about NCI and NIH research policies, such as data sharing and human subjects reporting
- Survey instruments and public use data for many topic areas, such as cancer information seeking, diet, physical activity, tobacco use, and cancer survivorship
- Cancer statistics from the SEER and State Cancer Profiles Web sites, among others
- Reports, including the *Cancer Trends Progress Report* and the *Annual Report to the Nation on the Status of Cancer*
- Monographs about tobacco control, diet and physical activity, cancer incidence, mortality, and survival
- Intervention products for health communication, nutrition, cancer screening, and smoking prevention and cessation
- Information concerning current NCI-funded research initiatives, consortia, grants, and workshops



POSTDOCTORAL FELLOWSHIP IN CANCER EPIDEMIOLOGY AND PREVENTION RESEARCH:

The Robert H. Lurie Comprehensive Cancer Center and the Department of Preventive Medicine of Northwestern University Feinberg School of Medicine invite applications for the multidisciplinary Postdoctoral Training Program in Cancer Epidemiology and Prevention, an R25 Cancer Education and Career Development program directed by Susan M. Gapstur, Ph.D., MPH. The two-year program offers the option to complete a Masters of Public Health or M.S. in Clinical Investigation; it is organized around four thematic areas: 1) epidemiology and biomarkers; 2) screening and early detection; 3) chemoprevention; and 4) behavioral prevention. In collaboration with faculty, fellows design an individualized didactic and research program emphasizing one of these four themes. Stipend is at least \$50,000 annually plus benefits, with additional funds provided for tuition, travel, and supplies. Applicants must hold a doctoral level degree (Ph.D., MD, Ed.D.) and be a U.S. citizen or permanent resident at time of application. Candidates interested in entering the Program in Summer/Fall 2006 should refer to our web site for complete instructions:

<http://www.preventivemedicine.northwestern.edu/r25.htm>.

Send all materials to: Paula Feldman, Program Coordinator; Department of Preventive Medicine; Feinberg School of Medicine, Northwestern University; 680 North Lake Shore Drive, Suite 1102; Chicago, IL 60611 **by April 27, 2007**. Women and minorities are encouraged to apply. Northwestern university is an Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL FELLOW POSITIONS. Washington University School of Medicine and the Alvin J. Siteman Cancer Center, a National Cancer Institute-designated Comprehensive Cancer Center, are seeking applications for postdoctoral fellowships in epidemiology. They will have the opportunity to work on studies within the area of cancer prevention and control. Applicants should have training in epidemiology and interest in developing new studies that bridge from biomarker-based epidemiologic investigations to broader clinical and population level applications. Investigators committed to further understanding of cancer disparities and identifying and implementing strategies to eliminate disparities will be given highest priority. Candidates must have a strong record or outstanding promise of scholarly achievement.

Salary is competitive and commensurate with experience. Washington University offers excellent benefits. The position offers the opportunity to collaborate with clinicians, pathologists, geneticists, imaging scientists, epidemiologists, social and behavioral scientists, and other faculty members on the academic and medical campuses of Washington University and the St. Louis University School of Public Health.

The Prevention and Control program is one of eight research programs of the rapidly growing Siteman Cancer Center. This program brings together more than 30 investigators who are studying the relations among biological, genetic, psychological, and epidemiological factors. Studies range from genetic investigations to clinical outcomes and community-based research. The Saint Louis University School of Public Health is an integral part of the Prevention and Control program. This creates an environment rich in exciting opportunities to develop multidisciplinary collaborations. The Health Behavior and Outreach Core, a shared resource at the Siteman Cancer Center, is designed to address a wide range of research needs related to cancer prevention and control.

To apply, send cover letter, curriculum vitae and professional reference list by email to: leightonc@wudosis.wustl.edu or mail documents to: Graham A. Colditz MD, DrPH, Associate Director, Prevention and Control, Alvin J. Siteman Cancer Center, 660 S. Euclid Avenue, Campus Box 8109, St. Louis, MO 63110. Applications will be accepted until the position is filled.

More information about the Prevention and Control Program of the Siteman Cancer Center can be found on the Internet at www.siteman.wustl.edu.

TENURE-TRACK FACULTY POSITION. Washington University School of Medicine and the Alvin J. Siteman Cancer Center, a National Cancer Institute-designated Comprehensive Cancer Center, are seeking applications for an assistant or associate professor to lead epidemiologic studies within the area of cancer prevention and control. This position will be based in the Department of Surgery. Applicants should have training in epidemiology and interest in developing new studies that bridge from biomarker-based epidemiologic investigations to broader clinical and population level applications. Investigators committed to further understanding of cancer disparities and identifying and implementing strategies to eliminate disparities will be given highest priority. Candidates must have a strong record or outstanding promise of scholarly achievement and extramural funding.

Salary is competitive and commensurate with experience. Washington University offers excellent benefits. A start-up package accompanies this position, with value depending on the rank of the appointment. The position offers the opportunity to collaborate with clinicians, pathologists, geneticists, imaging scientists, epidemiologists, social and behavioral scientists, and other faculty members on the academic and medical campuses of Washington University and the St. Louis University School of Public Health. The successful candidate will develop his or her own externally funded research and participate in teaching.

The Prevention and Control program is one of eight research programs of the rapidly growing Siteman Cancer Center. This program brings together more than 30 investigators who are studying the relations among biological, genetic, psychological, and epidemiological factors. Studies range from genetic investigations to clinical outcomes and community-based research. The Saint Louis University School of Public Health is an integral part of the Prevention and Control program. This creates an environment rich in exciting opportunities to develop multidisciplinary collaborations. The Health Behavior and Outreach Core, a shared resource at the Siteman Cancer Center, is designed to address a wide range of research needs related to cancer prevention and control.

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More information about the Prevention and Control Program of the Siteman Cancer Center can be found on the Internet at www.siteman.wustl.edu.

***Washington University School of Medicine and Siteman Cancer Center are Equal Opportunity affirmative action employers.*

ASPO – 2007

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Diana Buist, PhD, MPH

Group Health Cooperative
Center for Health Studies
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Executive Committee, cont'd.

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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 located on the 8th Floor of the Cancer Prevention Building.

Tickets to the Houston Livestock Show and Rodeo, Friday, March 2, 2007 at 6pm

Tickets are still available for purchase at the Registration table. They are \$50 each and include a dinner buffet and open bar. A shuttle bus to the rodeo will leave the Marriott Medical Center at 6pm and return at approximately 10:30pm.

Poster Session

This year almost 100 posters will be on display on the 8th floor of the Cancer Prevention Building. Posters can be displayed beginning Friday afternoon. There will be a Poster Session and Reception on Saturday evening from 6pm – 8pm. Distinguished panels of senior faculty will select an outstanding poster at this session. Awards will be announced and presented at the close of each 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 10am Sunday morning will be taken down and put in the registration area. Additional security will not be provided for the poster area.

PLEASE HELP US PLAN FOR THE FUTURE. . .

At the close of the meeting please take a few minutes to complete the questionnaire at the back of this program. This will help future Program Committees and conference staff to better meet your professional and logistical needs.

2007 Program Committee

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Baylor College of Medicine

NEXT YEAR . . .

The 32nd Annual Meeting of the American Society of Preventive Oncology will be held:
March 16-18, 2008 at the Hyatt Regency-Bethesda, Bethesda, Maryland

*Please note this is a Sunday through Tuesday meeting format

THANK YOU TO OUR VOLUNTEERS

Georgina Armstrong
Rosalinda Deavers
Sandra Guerra
Rebecca McGaha
Kalli Schendel

Stephanie Barrera
Carissa Eastham
Karen Howard
Joseph Nichols
Yuko Yamamura

ASPO Condensed Meeting Program

Thursday, March 1, 2007	
6:00pm to 8:00pm 8pm	ASPO Concurrent Educational Workshops (registration required) 1) Practical approaches to successful high-throughput genotyping 2) Models of Risk Communication Mixer for those enrolled in Educational Workshops
Friday, March 2, 2007	
7:00am to 5:00pm	Meeting Registration (8 th floor Cancer Prevention Building at MDACC) Continental breakfast provided
8:00am to 12:00pm	17 th Annual National Cancer Institute Special Meeting of Grantees, Trainees and Fellows in Cancer Prevention, Control, Behavioral, and Population Sciences
9:00am to 11:00am	Concurrent ASPO Educational Workshops (registration required) 1) Practical Approaches to using haplotypes in association studies 2) Changing Public Policy
11:00 am to 1:00 pm	CaBIG – Strengthening population Science through Informatics (open to all ASPO attendees)
11:30am – 2:00pm	Working Lunch for ASPO Executive Committee
12:00pm to 4:00pm	New Investigators Workshop (open to selected applicants)
12:30pm to 4:30pm	4 th Annual NCI Meeting for R25T Investigators
1:00pm to 3:00pm	Career Development for Junior Faculty, Junior Researchers & Trainees “Transitioning into the First Faculty Job: Tips for Success”
1:30pm to 3:00pm	Associate Directors for Cancer Prevention & Control Meeting
3:30pm to 5:00pm	Symposium I: Inflammation and Cancer
6:00pm to 10:30pm	Houston Livestock Show and Rodeo (bus leaves Marriott Medical Center Hotel at 6pm)
Saturday, March 3, 2007	
7:00am to 5:00pm	Registration (8 th floor Cancer Prevention Building at MDACC) Continental Breakfast
8:00 m to 9:15am	Breakfast Session I: Challenges & Opportunities in International Prevention Research

8:00am to 9:15am	Breakfast Session II: Behavioral Oncology and Cancer Communication Interest Group
9:35am to 10:00am	Welcoming Remarks by President, UT M.D. Anderson Cancer Center Welcoming Remarks by ASPO President
10:00am to 10:30am	Distinguished Achievement Award Address Break
10:45am to 12:15pm	Symposium II – Global Tobacco Use
10:45am to 12:15pm	Symposium III – Translating Genetics to Cancer Prevention
12:15pm – 1:30pm	Lunch: Career Development for Junior Faculty, Junior Researchers and Trainees
12:15pm – 1:30pm	Lunch for meeting attendees
1:30pm – 3:00pm	Symposium IV – Survivorship: From Molecular Epidemiology to Symptom Management
3:15pm – 4:45pm	Concurrent Paper Sessions
4:45pm – 5:00pm	ASPO Business Meeting (open to all attendees)
5:00pm – 6:00pm	NCI Listens Session
6:00pm – 8:00pm	Poster Session & Reception (dinner on your own)
Sunday, March 4, 2007	
7:00 am	Registration Continental Breakfast
7:30am to 8:45am	Breakfast Session I: Molecular Epidemiology Interest Group
7:30am to 8:45am	Breakfast Session II: Cancer Survivorship
9:00am to 10:30am	Symposium V: Lessons Learned from Large Scale Trials: Is Energy Balance the Answer?
10:45am – 12:15pm	Cullen Award Presentation Box Lunches provided
12:15 pm	Meeting concludes

ASPO 2007 - Program Details

(all meetings take place on the 8th floor of the Cancer Prevention Building of M.D. Anderson Cancer Center)

Thursday, March 1

6:00 pm -- 8:00 pm **ASPO Educational Workshops (Concurrent Sessions)**

6:00 pm – 8:00 pm **Course E1**
Practical Approaches to High-Throughput Genotyping
Instructor: Stephen Chanock, MD

6:00 pm – 8:00 pm **Course E2**
Models of Risk Communication
Instructors: Isaac Lipkus, PhD and Suzanne Miller, PhD

Friday, March 2

7:00 am -- 5:00 pm **Registration**

9:00 am -- 11:00 am **ASPO Educational Workshops (Concurrent Sessions)**

9:00 am – 11:00 am **Course M1**
Practical Approaches to Using Haplotypes in Association Studies
Instructor: Ellen L. Goode, PhD

9:00 am – 11:00 am **Course M2**
Changing Public Policy
Instructor: Paula Lantz, PhD, MS

8:00 am – 12:00 pm **17th Annual National Cancer Institute Special Meeting of Grantees, Trainees, and Fellows in Cancer Prevention, Control, Behavioral and Population Sciences (by invitation only)**

11:00am-1:00pm **CaBIG: Strengthening Population Science through Informatics**
(open to all ASPO attendees – located on 4th floor of the CPB)

This session will describe the opportunities and barriers for strengthening population science through informatics. It will describe fundamental principles of interoperability for enabling the collection, management, and integration of population health data. It will discuss approaches to protecting privacy and intellectual property to enable the appropriate and secure sharing of population health data. It will also include an analysis of specific informatics resources and tools currently available through the NCI cancer Biomedical Informatics Grid (caBIG™) that can aid population scientists, including a repository of standard data elements that can be reused to develop questionnaires, a translational research system, and a tool enabling the retrieval and transformation of biospecimen repositories. The session will end with a panel discussion of the next steps in integrating the population sciences and bioinformatics.

11:30pm – 2:00 pm **ASPO Executive Committee Working Lunch**

12:00 pm - 4:00 pm **New Investigators Workshop** -- (Open only to accepted applicants)
 Organizers: **Alfred I. Neugut, MD, PhD**
 Columbia University Mailman School of Public Health &
 Judith Jacobson, DrPH
 Columbia University Mailman School of Public Health

Workshop Faculty: **Chanita Hughes Halbert, PhD**
 Department of Psychiatry, University of Pennsylvania
 J. Jack Lee, DDS, PhD
 Department of Biostatistics, M.D. Anderson Cancer Center
 Leslie Robison, PhD
 Department of Epidemiology, St. Jude Children's Research Hospital
 Xifeng Wu, MD, PhD
 Department of Epidemiology, M.D. Anderson Cancer Center

NIW Workshop Participants:

Dejana Braithwaite, PhD UC – San Francisco	Mary Coolbaugh-Murphy, PhD M.D. Anderson Cancer Center
Shu-Chun Chuang, MS UC – Los Angeles	Carrie Nielson, PhD, MPH University of Arizona
Bettina Drake, PhD, MPH Harvard School of Public Health	Lorraine Reitzel, PhD M.D. Anderson Cancer Center
Sadhna Kohli, PhD University of Rochester	Ritesh Mistry, PhD UC – Los Angeles

12:30 pm – 4:30 pm **4th Annual NCI Meeting for R25T Investigators**

1:00 pm – 3:00 pm **Career Development for Junior Faculty, Junior Researchers & Trainees**
“Transitioning into the First Faculty Job: Tips for Success”
 A special panel of junior, mid-career and senior scientists will discuss topics related to successful transition into a faculty or other first job including (but not limited to): 1) balancing time between teaching, research, and service; 2) starting a research lab; 3) managing study staff; and 4) managing start-up resources. Panelists are:
Randa El-Zein, MD, PhD, M.D. Anderson Cancer Center
Margaret Spitz, MD, M.D. Anderson Cancer Center
Ken Tercyak, PhD, Lombardi Cancer Center, Georgetown University
Luis Velez, MPH, PhD, Baylor College of Medicine

(Friday cont)

1:30 pm - 3:00 pm

Associate Directors for Cancer Prevention & Control Meeting

Chair/Discussant: **James Marshall, PhD**, Roswell Park Cancer Institute

Organizers: **Mary Daly, MD, PhD**, Fox Chase Cancer Center
Graham Colditz, MD, DrPH, Washington University

Topics: Prevention Cores
CCSG Review Procedures and Criteria

3:30 – 5:00 pm

Symposium I: Inflammation and Cancer

Chair/Discussant: Elizabeth Holly, PhD, MPH, UC- San Francisco

Speaker: **Andrew Dannenberg, MD**, Cornell University
Topic: Prostaglandins, Inflammatory Bowel Disease and Colon Cancer:
What is Nature Teaching Us?

Speaker: **Thea Tlsty, PhD**, UC – San Francisco
Topic: Genetic and Epigenetic Changes in Early Cancer

Speaker: **Allan Hildesheim, PhD**, National Cancer Institute
Topic: Human Papillomaviruses and Cervical Cancer: From
Etiologic Understanding to Preventive Strategies

(Friday cont.)

6:00pm – 10:30pm

Excitement and Fun – **Trip to the Houston Livestock Show and RODEO!**

Bus will leave from the Marriott Medical Center Hotel at 6pm.
(tickets available for purchase – see the registration table)



ASPO 2007 – Saturday March 3, 2007

7:00 am – 5:00 pm **Registration**

8:00 - 9:15 am **Hot Topics Breakfast Sessions** (two sessions)

8:00 – 9:15 am ***I. Breakfast Session: International Cancer Prevention***

Organizer: **Richard R. Love, MD, MS**, The Ohio State University

Speaker: **Dr. Adriano Laudico**, University of the Philippines
General Hospital, Manila

Topic: Challenges & Opportunities in International Prevention

Research: Some Real World Experience

Addressing challenges: For US investigators the biggest challenges are those of imagination and perceived infeasibility of high quality science foreign studies. Otherwise: 1) IRB - Get US institutional review and approval first and propose a consent form. Foreign IRBs and institutions need registrations and Federal Wide Assurances. Recognize principles that local, in-country IRBs have final word on consent procedures and content, and there are not “global” standards but local standards only. US IRB cultural education likely required; 2). Research staff: Because salaries are lower, research funds can “buy” a lot of assistance; 3). Attention to quality of any laboratory-developed data essential; 4). Subjects: Culturally appropriate educational efforts critical. Economic issues likely to be major; 5). Follow up: more research staff and GPS can make this in fact less an issue than in the US; 6). Data management: detailed operational and data collection and organization plans are necessary.

Opportunities: Science: Genotypes (host and tumor), nutritional patterns, and environmental exposures are all profoundly different in various foreign settings providing more power to study associations and impact of interventions.

Countries and investigators: The author has a network of institutions and investigators in Philippines, Vietnam, Bangladesh, Morocco, China, Nigeria, Malaysia, and Indonesia. Citizenship: Collaboration with foreign colleagues provides a means to be global citizens, and to be part of better connectedness with fellow travelers on this planet and a “positive foreign policy” to “repair the world” (From the Jewish “Tikkun Olam”: social action in the pursuit of social justice)

8:00 - 9:15am ***II. Behavioral Oncology & Cancer Communication***
Interest Group Breakfast:

Chairs: Suzanne Miller, PhD, Isaac Lipkus, PhD, Deborah Bowen, PhD

Title: *Challenges for Biobehavioral Sciences in the Burgeoning Genomics Era*

Presenter: **Colleen McBride, PhD**, National Human Genome Research Inst.

“Multiplex Genetic Susceptibility Testing: A Prototype for Applied Research to Inform Personalized Medicine”

Discussant: **Robert Hiatt, MD, PhD**

9:15 am Break

(Saturday cont)

9:35 – 10:00 am

Welcoming Remarks

Margaret Kripke, PhD, Senior Vice-President for Academic Affairs,
M.D. Anderson Cancer Center

Melissa Bondy, PhD

M.D. Anderson Cancer Center, ASPO President

Presentation of ASPO/CRPF Fellowship

Carolyn Aldige, President, Cancer Research & Prevention Foundation

**This Fellowship is sponsored by the Cancer Research and Prevention Foundation
and the American Society of Preventive Oncology, and is funded by the Cancer Research and
Prevention Foundation.**

10:00-10:30 am

Distinguished Achievement Award Remarks

Bernard Levin, MD, M.D. Anderson Cancer Center

The Distinguished Achievement Award is sponsored by the American Cancer Society

10:30 am

Break

10:15 am- 11:45 am

Symposium II: Global Tobacco Use

Co-Chairs: **Gary Giovino, PhD**, SUNY at Buffalo

& Frank L. Meyskens, Jr, MD, UC - Irvine

Speaker:

Paolo Boffetta, MD, International Agency for Research on Cancer, Lyon, France

Topic:

Framing the Issue – Global Tobacco Use in Perspective

Speaker:

Nathan Jones, PhD, Centers for Disease Control & Prevention

Topic:

Global Tobacco Surveillance (youth, school policies, medical students)

Speaker:

Geoff T. Fong, PhD, University of Waterloo, Waterloo, Ontario, CANADA

Topic:

International Tobacco Control (ITC) Policy Evaluation Project: Evaluating the
Policies of the Framework Convention on Tobacco Control

Speaker:

David Ashley, PhD, Centers for Disease Control & Prevention

Topic:

Overview of the International Tobacco Control (ITC) Policy Evaluation Project –
Product Surveillance and Biomarkers

Discussant:

Ellen R. Gritz, PhD, M.D. Anderson Cancer Center

(Saturday continued)

10:45 am- 12:15 am

Symposium III: Translating Genetics to Cancer Prevention & Control

Chair: **Thomas Sellers, PhD**, H. Lee Moffitt Cancer Center & Research Institute

Speaker: **Lynn Hartmann, MD**, Mayo Clinic, Rochester, MN
Topic: Cancer Prevention in the Face of Strong Inherited Risks

Speaker: **Rebecca Sutphen, MD**, H. Lee Moffitt Cancer Center & Research Institute
Topic: Genetics and Early Detection

Speaker: **Cornelia Ulrich, PhD**, Fred Hutchinson Cancer Research Center, Seattle, WA
Topic: Tailored Treatment: When Genetics Matter

Discussant: **Margaret Spitz, MD**, M.D. Anderson Cancer Center

12:15 – 1:30 pm

Lunch on your own (Box lunches will be available)

12:15 – 1:30 pm

Career Development for Junior Faculty, Junior Researchers and Trainees

“Getting Manuscripts Off your Desk and into a Journal: Increasing your Productivity”

Learn tips from the experts on increasing your paper productivity starting from planning your analysis through revising and responding to reviewers’ comments. Speakers are:

Susan Gapstur, PhD, MPH, Northwestern University

Thomas Sellers, PhD, H. Lee Moffitt Cancer Center & Research Institute

Gary Morrow, PhD, MS, University of Rochester Medical Center

Sponsored by the Cancer Research and Prevention Foundation

(Box lunches will be available)

1:30 – 3:00 pm

Symposium IV: Survivorship: From Molecular Epidemiology to Symptom Management

Co-Chairs: **Suzanne Miller, PhD**, Fox Chase Cancer Center and

Karen Mustian, PhD, University of Rochester James P. Wilmot Cancer Center

Speaker: **Leslie Robison, PhD**, St. Jude Children’s Research Hospital
Topic: Issues in Childhood Cancer Survivors

Speaker: **Barbara Andersen, PhD**, and **Brittany Brothers, M.A.**, The Ohio State University, Department of Psychology, Columbus, OH
Topic: Survivorship Trajectories in Coping with Breast Cancer

Speaker: **Michael Feuerstein, PhD, MPH**, Uniformed Services University of the Health Sciences, Bethesda, MD
Topic: Work and Cancer Survivors

Speaker: **Gary Morrow, PhD**, University of Rochester James P. Wilmot Cancer Center
Topic: The Persistence of Cancer-Related Symptoms in Cancer Survivors

Discussant: **Suzanne Miller, PhD**, Fox Chase Cancer Center

3:00 pm

Break

(Saturday continued)

3:15 – 4:45 pm **Concurrent Plenary Paper Sessions**

Session I: Breast Cancer

Chair: Abenaa Brewster, **PhD**, M.D. Anderson Cancer Center

- 3:15pm **Diana Buist, PhD**
Group Health Cooperative
“Undertreatment of Breast Cancer in Older Women Increases Risk of Death from Breast Cancer”
- 3:30 pm **Polly Newcomb, PhD**
Fred Hutchinson Cancer Research Center
“Postmenopausal Hormone Use and Mortality After Breast Cancer”
- 3:45 pm **Lisa Richardson, MD, MPH**
Centers for Disease Control and Prevention
“Time to Breast Cancer Diagnosis and Treatment in the National Breast and Cervical Cancer Early Detection Program (NBCCEDP)”
- 4:00 pm **Aditya Bardia, MD, MPH**
Mayo Clinic
“Relative Weight at Age 12 and Risk of Postmenopausal Breast Cancer”
- 4:15 pm **Deborah H. Glueck, PhD**
University of Colorado - Denver
“Two-Modality Mammography May Confer an Advantage over Either Full-Field Digital Mammography or Screen-Film Mammography”
- 4:30 pm **Kenneth P. Tercyak, PhD**
Lombardi Cancer Center, Georgetown University
“Long-Term Follow-Up of Women’s Decisions to Share BRCA1/2 Test Results with First-Degree Relatives”

(See abstracts on following pages)

Diana Buist, PhD 3:15 pm	Polly Newcomb, PhD 3:30 pm
<p>Undertreatment of breast cancer in older women increases risk of death from breast cancer. Ulcickas Yood M, Owusu C, Buist D, Geiger A, Field T, Silliman RA for BOW Investigators</p> <p>Background: Older women with breast cancer (65+) are underrepresented in clinical trials and bear the breast cancer mortality burden. We compared survival in older women receiving mastectomy, and breast conserving surgery (BCS) with/without radiation therapy (RT) and the effect of tamoxifen exposure duration. Methods: 6 Cancer Research Network sites participated: Group Health, Kaiser Permanente (Southern California), Lovelace, Henry Ford, HealthPartners and Fallon. Sites identified women 65+ years receiving mastectomy or BCS for stage I/II breast cancer 1990-1994, used medical record review to obtain clinical data, and National Death Index for mortality (10 years follow-up). Cox proportional hazards models estimated hazard ratios (HR) and 95% confidence intervals (CI) comparing the effect of treatment on mortality. Results: Among 1,837 women, 20% were 80+ years; 12% received BCS only, 35% BCS + RT, 53% mastectomy. Adjusting for site, age, race, baseline Charlson comorbidity, tumor size, nodes, receptor status and grade, compared to mastectomy, chance of breast cancer death was 2 times greater in women receiving BCS only (HR 2.23, 95% CI 1.54, 3.24) and equivalent to mastectomy in those receiving BCS + RT (HR 1.10, 95% CI 0.80, 1.51). RT patients did not have elevated all-cause or other cause mortality. In tamoxifen-eligible women, decreasing exposure duration had increased chance of death, with greatest risk for breast cancer mortality in those treated <2 years (HR=6.70, 95% CI 3.27, 13.72 for <1 year and 4.34, 1.98, 9.51 for 1-2 years). Conclusions: BCS without RT and < 2 years tamoxifen were associated with an increased risk of breast cancer mortality. Provision of standard therapies to older women may reduce disproportionate burden of breast cancer mortality.</p>	<p>Postmenopausal Hormone Use and Mortality After Breast Cancer. PA Newcomb, KM Egan, A Trentham Dietz, L Titus Ernststoff, JA Baron, JM Hampton, EY Wong, MJ Stampfer, WC Willett</p> <p>Some prior small studies have observed reduced breast cancer mortality in women who used postmenopausal hormones (PMH) prior to diagnosis. To evaluate the influence of PMH use on breast cancer mortality, we analyzed data from a prospective cohort of 12,269 women with incident invasive breast cancer at least 50 years of age and residents of Wisconsin, Massachusetts, or New Hampshire. Women were enrolled in 3 phases between 1988-2001 and followed for death until December 31, 2004 using the National Death Index. A total of 1614 deaths from breast cancer were documented during an average 9.6 years of followup. Hazard rate ratios (HRR) and 95% confidence intervals (CI) were estimated using Cox proportional hazards regression. Breast cancer survival varied by duration of hormone use prior to diagnosis, with the lowest cumulative mortality among PMH users. Compared with women who had never used PMH, we observed a reduced risk of death from breast cancer among users of estrogen-progestin preparations at the time of diagnosis (adjusted HRR 0.65, 95% CI 0.51-0.84) and among users for ≥5 years (0.54, 95% CI 0.38-0.76). No association was observed for women who had formerly used these preparations or for former or current users of estrogen-only preparations. However, among women with lobular breast cancer, those who were using estrogen-only preparations at diagnosis experienced a halving in breast cancer mortality (0.50; 95% CI 0.27-0.94). In this large population-based cohort of women with breast cancer, recent use of PMH was associated with decreased breast cancer specific mortality compared to never users of these preparations. Survival was best among current and long-term users of combined estrogen-progestin therapy.</p>

Lisa Richardson, MD, MPH 3:45 pm	Aditya Bardia, MD, MPH 4:00 pm
<p>Time to breast cancer diagnosis and treatment in the National Breast and Cervical Cancer Early Detection Program (NBCCEDP). Richardson LC, Royalty J, Howe W, Helsel W, Kammerer W, Benard VB. Purpose: To examine intervals between breast cancer screening, diagnosis, and treatment initiation among low income and uninsured women screened in the NBCCEDP during two time periods. Methods: We examined diagnostic and treatment intervals for the time periods 1996-2000 and 2001-2005. The intervals were defined as: (1) time between mammography and final diagnosis for all women receiving an abnormal mammogram result (including suspicious abnormality (SA), highly suspicious for malignancy (HSM) and assessment is incomplete (AI)) or abnormal clinical breast exam result and; (2) time between diagnosis and treatment initiation among those diagnosed with cancer. Results: For the study period, 369,557 women screened for breast cancer through the NBCCEDP had abnormal screen results. For 1995-2000 and 2001-2005, the median interval to diagnosis after screening was 25 days and 23 days respectively. For 22,302 women found to have cancer, the median interval from diagnosis to treatment increased from 12 days to 14 days in the later time period. Overall, time to diagnosis improved in 2001-2005 compared to 1995-2000. In the second time period, 92% of women were treated within 120 days. Summary: The goal of the NBCCEDP is to assure that women receive quality breast cancer screening and diagnostic services and initiate treatment. Our data show that the program is meeting this goal. Disparities in breast cancer outcomes should diminish once all women have timely work-up and treatment of breast problems.</p>	<p>Relative Weight at Age 12 and Risk of Postmenopausal Breast Cancer. Authors: Bardia A, Vierkant RA, Hartmann LC, Vachon CM, Wang AH, Olson JE, Sellers TA, Cerhan JR. Background: Early adolescent weight may impact the risk of postmenopausal breast cancer, however has not been well studied. Methods: Iowa Women's Health Study, is a prospective cohort study of postmenopausal women. Relative weight at age 12 (above, below, or average weight compared to female peers)& family history of cancer were ascertained using a mailed questionnaire (1986). Breast cancer incidence were identified using the Iowa SEER Cancer Registry. Relative risks (RR)& 95% CI, were estimated using Cox proportional hazards regression. Results: Through 2003, 1942 breast cancers were identified among 35,941 women. Compared to women with average weight at age 12, there was no association of below average weight with breast cancer risk RR=1.02, 95% CI: 0.92, 1.13), while women with above average weight had lower risk (RR=0.85, 95% CI: 0.74, 0.98). The latter association was observed for all ER and PR subtypes, but was strongest for PR- tumors (RR=0.62; 95% CI 0.43, 0.89. There was no evidence of an interaction between weight at age 12 and family history (p=0.44). Conclusion: Above average weight at age 12 was inversely associated with risk of postmenopausal breast cancer, and was similar in subtype analyses defined by ER/PR status, and family history. The study facilitates mechanistic understanding of the impact of early adolescent weight on breast cancer risk and may help identify new prevention strategies.</p>

Deborah H. Glueck, PhD 4:15 pm	Kenneth P. Tercyak, PhD 4:30 pm
<p>Two-Modality Mammography May Confer an Advantage over Either Full-Field Digital Mammography or Screen-Film Mammography. D.H. Glueck, M.M. Lamb, J.M. Lewin, and E.D. Pisano. Purpose: To compare the cancer detection rate and ROC area under the curve of full-field digital mammography, screen-film mammography, and a combined technique that allowed diagnosis if a finding was suspicious on film, on digital, or on both. Methods: We used the data originally analyzed in Lewin et al. (2002). In that trial, 6,736 paired full-field and digital mammograms were performed in 4,489 women. We used parametric and nonparametric tests to compare the area under the curve for ROC scores of film-screen only, digital mammography only, and the combined test. We used McNemar's test for paired proportions to compare the cancer detection rates. Results: With the parametric test, neither the difference in AUC between the film and combined, nor the difference between the digital and combined ROC curves was significant at the Bonferroni-corrected 0.025 alpha level (film vs. combined difference = 0.06, $p = 0.07$; digital vs. combined difference = 0.09, $p = 0.05$). The nonparametric test showed that there was a significant difference between both film and combined (difference = 0.07, $p = 0.01$) and digital vs. combined ROC curves (difference = 0.12, $p = 0.001$). The continuity corrected McNemar's test showed a significant increase in the proportion of cancers detected by the combined modality over film ($\chi^2 = 7.1$, $df = 1$, $p = 0.01$), and over digital ($\chi^2 = 12.07$, $df = 1$, $p = 0.001$). Conclusions: Using two mammograms, one film and one digital, significantly increases the detection of breast cancer.</p>	<p>Long-Term Follow-Up of Women's Decisions to Share BRCA1/2 Test Results with First-Degree Relatives. Tercyak KP, Graves KD, Peshkin BN, Gell CE, Hecker, SL, & Schwartz MD. Purpose: We investigated the prevalence of disclosure of genetic test results to first-degree relatives among women who had participated in BRCA1/2 testing 4-5+ years previously. We also assessed women's closeness to each of these relatives at the time they underwent testing, and examined disclosure-closeness relationships. Methods: Interviews were conducted by telephone with 265 women--all of whom were the first members of their families to be tested for BRCA1/2 mutations. Respondents were asked if they had disclosed (yes/no) to their mothers, fathers, sisters, brothers, spouses, and children (as applicable). Results: (Reported as a percentage of those who disclosed/presence of that relative category in the family.) The frequency of disclosure was 94.4% to mothers, 87.1% to fathers, 97.1% to sisters, 84.2% to brothers, 98.1% to spouses, and 82.0% to children. After controlling for the effect of positive genetic test results, women who felt more personally connected to their adult relatives were more likely to have disclosed to their mothers ($r = .30$, $p = .007$), fathers ($r = .41$, $p = .00$), brothers ($r = .38$, $p = .001$), and spouses ($r = .22$, $p = .001$); closeness was unrelated to disclosure to sisters and children, though older children ($> age 18$) were more likely to be informed than younger children ($r = .49$, $p = .00$). Summary: These data suggest that the majority of first-degree relatives have been informed of women's test results. In addition to age and gender, family dynamics appear related to disclosure decisions. To promote cascade testing, open communication, and social support, novel counseling strategies may be warranted.</p>

(Saturday continued)

3:15 – 4:45 pm **Concurrent Plenary Paper Sessions**

Session II: Mixed Category

Chair: Michele Forman, PhD, M.D. Anderson Cancer Center

- 3:15pm **Jessie A. Satia, PhD, MPH**
University of North Carolina – Chapel Hill
“Choice of Survey Completion Method Differs by Participant Characteristics in African Americans”
- 3:30 pm **Joanne L. Watters, MPH**
University of North Carolina – Chapel Hill
“Antioxidant Nutrients and Oxidative DNA Damage in Healthy African American and White Adults”
- 3:45 pm **Lucia A. Leone, BA**
University of North Carolina – Chapel Hill
“Obesity Predicts Differential Response to a Cancer Prevention Intervention among African Americans”
- 4:00 pm **Elizabeth Ryan, PhD**
University of Rochester
“Cyclooxygenase-2 inhibition attenuates antibody responses against human papillomavirus-like particles”
- 4:15 pm **Cielito Reyes-Gibby, DrPH**
M. D. Anderson Cancer Center
“Cytokine Polymorphisms and Pain in Lung Cancer”
- 4:30 pm **Michael E. Scheurer, PhD, MPH**
M. D. Anderson Cancer Center
“Familial Aggregation of Cancer Among First Degree Relatives of Brain Tumor Patients”

(See abstracts on following pages)

- 4:45 pm – 5:00 pm **ASPO Business Meeting**
All registered meeting attendees are encouraged to attend.
- 5:00 pm – 6:00 pm **NCI Listens Session** – Let the NCI know your concerns
- 6:00 pm – 8:00 pm **Poster Session & Reception**
- 7:45 pm **Presentation of “Best Poster” Award**

Jessie A. Satia, PhD, MPH 3:15 pm	Joanne L. Watters, MPH 3:30 pm
<p>Choice of Survey Completion Method Differs by Participant Characteristics in African Americans. Satia J, Galanko J OBJECTIVE: To describe participant characteristics associated with choice of completion method of a 101-item cancer risk behavior survey in Afr. Americans. METHODS: Afr. Americans in N. Carolina (n=5000), 18-70y, were randomly selected from Dept. of Motor Vehicle rosters and given the choice of completing the survey by one of three methods: mail, Internet, or telephone. Everyone received the mailed survey and information on how to participate via Web or phone. RESULTS: Among 658 eligible respondents, completion rates were 86.3% by mail, 12.6% by Internet, and 1.1% by phone ($p<0.0001$). The respondent mean age was 43.9y, 41% were male, and 37% were college graduates. Choice of method differed by age, education, marital status, and Internet access ($p<0.0001$). Respondents who completed mailed surveys were more often high school graduates and married, while Internet responders were younger, college graduates, and 99% had easy Web access; there were no differences by sex, body mass index, physical activity, or rural vs. urban residence. The median number of missing items was highest for telephone (6.0) relative to mail (3.0) and Web (2.0) surveys ($p<0.05$), and for older compared to younger respondents ($p<0.0006$). CONCLUSIONS: Choice of completion method differed by participant characteristics, and telephone surveys had the highest number of missing responses. This information can be applied in the design of population-based cancer risk behavior surveillance for African Americans.</p>	<p>Antioxidant Nutrients and Oxidative DNA Damage in Healthy African American and White Adults. Watters JL, Satia JA Purpose: To examine potential racial differences in: 1) dietary intakes and plasma concentrations of vitamin C, vitamin E, and carotenoids and oxidative DNA damage (ODD) levels, and 2) associations between plasma antioxidants and ODD. Methods: Data were from the DIet, Supplements, and Health (DISH) Study, a cross-sectional study of 164 generally healthy non-smoking African Americans and Whites in North Carolina ages 20 to 45. Participants completed a demographic and health questionnaire, a newly-developed antioxidant food frequency questionnaire, four 24-hour dietary recalls, and a dietary supplement inventory; had height and weight measured; and provided a semi-fasting blood sample. Results: African Americans had statistically significantly lower plasma concentrations of vitamin A, vitamin E, alpha- and beta-carotene, and lutein+zeaxanthin than Whites, as well as lower self-reported intake of most antioxidants. Levels of ODD, measured using the alkaline Comet assay, were lower in African Americans than Whites. An inverse association between lycopene and ODD (Pearson's $r=-0.20$, $p=0.03$) was found in the combined study population after controlling for sex, age, BMI, passive smoke exposure, physical activity, education, income, and alcohol intake. There was also a significant positive association of alpha-tocopherol with ODD in the total population ($r=0.21$, $p=0.02$) and in African American men ($r=0.63$, $p=0.01$) after adjusting for covariates. Conclusions: This study is among the first to examine associations of antioxidants and ODD in a sample of healthy adults with an adequate representation of African Americans. Given the higher cancer burden among African Americans, identifying modifiable factors, such as diet, and possible mechanisms of carcinogenesis are critical components of cancer prevention initiatives.</p>

Lucia A. Leone, BA 3:45 pm	Elizabeth Ryan, PhD 4:00 pm
<p>Obesity Predicts Differential Response to a Cancer Prevention Intervention among African Americans. Leone L, James A, Hudson M, Campbell M. Purpose: The purpose of this analysis was to determine if the effectiveness of a Colorectal Cancer (CRC) prevention intervention promoting screening and physical activity was affected by weight group (normal weight, overweight, obese I, obese II) and if certain weight groups responded better to certain interventions. Methods: The WATCH project, a RCT in 12 African American churches, tested the effects of a tailored print and video (TPV) and/or a lay health advisor (LHA) intervention to promote multiple behavior changes for CRC prevention. A telephone survey was given at baseline and 12 months. Recreational Physical Activity (RPA) was calculated as metabolic equivalent task (MET) hours per week. The CRC screening outcome was test completion (FOBT, flexible sigmoidoscopy, double contrast barium enema or colonoscopy) within the past year and was limited to participants age 50 and older. Analyses controlled for baseline levels of screening/RPA, age, education, gender and church cluster. Results: Analyses revealed a significant interaction effect ($p=.02$) of weight group and intervention condition on RPA METS at follow-up, but not for weight or condition alone. Normal and overweight individuals receiving the LHA intervention increased RPA more, whereas Obese I and II responded more to the TPV intervention. For CRC screening, the interaction was not significant; only weight remained related to past year screening at follow-up ($n= 266$, $p=.08$) with obese individuals reporting less CRC screening. Conclusion: Results suggest that, at least for physical activity, interventions may be differentially effective based on obesity status. Targeting and tailoring of cancer prevention interventions based on weight may be a promising strategy for reaching at risk groups.</p>	<p>Cyclooxygenase-2 inhibition attenuates antibody responses against human papillomavirus-like particles. Ryan EP, Malboeuf CM, Rose RC, Phipps RP. Millions of people worldwide now routinely use non-steroidal anti-inflammatory drugs (NSAIDs) or a selective inhibitor of cyclooxygenase-2 (Cox-2) to alleviate pain from a variety of sources, including vaccination. We recently found that Cox-2 is expressed by activated normal human B lymphocytes, and that inhibitors of this enzyme can attenuate antibody production. These findings prompted us to examine whether Cox-2 expression may be required for efficient generation of antibody responses following vaccination with human papillomavirus (HPV) virus-like particles (VLPs). Here we examined VLP antibody production in Cox-2 deficient vs. control mice, and we also evaluated the effects, if any, of Cox-2 selective inhibition on human memory B cell responses in VLP vaccinees. Our results indicate that Cox-2 expression appears to be required for optimal antibody production, as VLP-immunized Cox-2 deficient mice were found to produce ~70% less VLP-specific IgG, with 50% fewer antibody-secreting cells and approximately 10-fold lower neutralizing antibody titers, compared with wildtype control mice. Consistent with these observations, we found that treatment of human memory B cells obtained from VLP vaccinees with SC-58125, a Cox-2 selective inhibitor and a close analogue of Celebrex™, was associated with ~70% reduction in differentiation of such cells to VLP IgG-secreting cells. Our data support the need for future clinical studies to investigate the potential relevance of widespread NSAID use to VLP vaccine efficacy in humans. This research was supported by DE011390, ES01247, T32-ES07026, and T32-AI007169. Presentation supported by R25CA102618.</p>

Cielito Reyes-Gibby, DrPH 4:15 pm	Michael E. Scheurer, PhD, MPH 4:30 pm
<p>Cytokine Polymorphisms and Pain in Lung Cancer. Reyes-Gibby C, Spitz M, Wu X, Merriman K, Etzel C, Kurzrock R, Shete S. PURPOSE: Cytokines, aberrantly produced by cancer cells, have recently been implicated in the severity of cancer-related pain. We hypothesize that functional variations in cytokine genes could explain variability in cancer-related pain. METHODS: Pain, clinical and demographic variables were assessed at presentation, and prior to initiating any cancer treatment in 514 patients with non-small cell lung cancer (NSCLC). Using the TaqMan method, we genotyped single nucleotide polymorphisms in interleukin (IL) -6 (-174 G C), IL-8 (-251 T A), and tumor necrosis factor-alpha (TNF- ; -308 G A), and determined their associations with pain severity in newly diagnosed early and advanced stage lung cancer. RESULTS: White Caucasians with early (n=252) and advanced stage (n=262) NSCLC comprised the sample. Pain severity predictably varied by stage of disease, sex, depressed mood, age and genotype groups. Linear regression analyses showed TNF- -308 G A (coeff=.16;p=0.008); sex(coeff=0.19;p=0.001) and age (coeff=-.16;p=0.002) as significant predictors for pain severity in early stage lung cancer. Among those with advanced stage lung cancer, we observed statistically significant main effects for IL8-251 T A (coeff=0.221; p<0.001) and significant joint effects of IL8-251 T A and age (coeff=-0.0256;p<0.001) and TNF- -308 G A and age (coeff=0.160; p<.016) on pain severity. Classification and Regression Tree analyses showed the same distinct patterns for early and advanced stage lung cancer. CONCLUSION: Variations in individual inflammatory responses could partly explain the variability in cancer-related pain among patients with early and advanced stage lung cancer.</p>	<p>Familial Aggregation of Cancer Among First Degree Relatives of Brain Tumor Patients. Scheurer ME, Etzel CJ, Lu M, El-Zein R, Bondy ML Purpose: Brain tumors affect members of the same family, but the specific cancer risk for relatives of brain tumor patients has been inconclusive. Methods: We obtained family history information on 8,858 first-degree relatives (FDRs) from 1,492 white glioma patients registered at M. D. Anderson Cancer Center between June 1992 and June 2006. Standardized incidence ratios (SIRs) were computed using the age-, sex-, and time-period specific rates from the Surveillance, Epidemiology, and End Results program. Results: The mean age of the probands was 43.8 years, and 58% were male. Fifteen percent of probands had 2 or more FDRs with cancer, and 3% had 1 or more FDRs with a brain tumor. The SIR was significantly elevated for all malignancies (SIR=1.22) and was higher for siblings (SIR=1.31) and offspring (SIR=1.42). SIRs were significantly higher for brain (SIR=2.10) and bone (SIR=3.69) cancer and melanoma (SIR=2.63) among FDRs of male probands. SIRs were significantly higher for brain (SIR=2.12) and bone (SIR=4.24) cancer among FDRs of female probands. There was a trend of decreasing SIRs with increasing age of the proband. There was an increase in the SIR among FDRs who were less than 45 years old at diagnosis, suggesting a genetic component for cancer in these families. Conclusions: We found a two-fold increase in brain tumors and a 22% increase in expected cases of all cancers among the FDRs of glioma probands. The excess of brain tumor and melanoma cases supports previous reports; however, an increase in bone cancer has not been previously reported. We also found a borderline increase in pancreatic cancer, likely due to p16 mutations among these families.</p>

ASPO 2007 – Sunday March 4, 2007

7:30 – 8:45 am **Hot Topics Breakfast Sessions** (two sessions)

7:30 – 8:45 am ***I. Molecular Epidemiology Interest Group***
“Genetics and Cancer Risk Studies: Moving Results to the Clinic”
Moderator: **Shannon Lemrow**, National Cancer Institute

Conduct of successful genomic association studies
Chris Amos, PhD, M.D. Anderson Cancer Center

Identifying high risk subjects from genetic and environmental data
Carol Etzel, PhD, M.D. Anderson Cancer Center

Where are we today with biomarkers for sporadic breast cancer risk?
Peter Shields, MD, Georgetown University Medical Center

7:30- 8:45 am ***II. Proposed Interest Group - Cancer Survivorship***
“Charting ASPO’s Leadership Role”
Co-Moderators: **Amy Trentham-Dietz, PhD**, University of Wisconsin
Diana Buist, PhD, Group Health Cooperative

8:45 am Break

9:00 am- 10:30 am **Symposium V: Lessons Learned from Large Scale Trials: Is Energy Balance the Answer?**
Chair: **Maria Elena Martinez, PhD**, University of Arizona

Speaker: **James Marshall, PhD**, Roswell Park Cancer Institute, Buffalo, NY
Topic: Diet & Cancer: We Must Be Missing Something

Speaker: **Stephen Hursting, PhD**, The University of Texas - Austin
Topic: Calories and Cancer: Trends, Targets & Transgenics

Speaker: **Walter Willett, MD, DrPH**, Harvard University
Topic: Diet & Cancer Prevention: The Pursuit of Veritas

10:45am – 12:15 pm **Joseph W. Cullen Memorial Award Lecture**
Michael J. Thun, MD, MS
American Cancer Society
“Can This Marriage Be Saved? Strengthening the Partnership Between Tobacco Research and Advocacy”

The Joseph W. Cullen Award is given annually to memorialize the many contributions of Joe Cullen. Dr. Cullen was an active ASPO member and Program Coordinator for the NCI’s Smoking Tobacco and Cancer Program.

(box lunches available)

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<p>Defensive processing of GSTM1 test results O'Neill SC, Lipkus I, Bepler G, Bastian L, McBride CM Purpose: Findings regarding smokers' accuracy of GSTM1 lung cancer susceptibility test results and their significance are mixed. Biased defensive processing, indicated by higher risk individuals discounting, forgetting, or selectively processing relevant information, offers one explanation for these results. We predicted that smokers receiving results indicative of higher susceptibility would demonstrate greater defensive processing than others. Methods: 39 smokers (mean age=40, range 23-53) whose family members were recently diagnosed with lung cancer received GSTM1 genotype testing and risk feedback via two web-based sessions. Each completed measures of perceived lung cancer risk before and after testing; after testing, they completed measures of comprehension, smoking-related anxiety, and ratings of the test result's believability and trustworthiness. Results: 21 participants received low risk results; 18 received high risk results. Most participants were White (96%), female (59%), married (67%), and had a post-secondary education (65%). All high risk participants accurately recalled their test result and understood the associated risks. High risk participants perceived significant pretest/posttest increases in risk, while low risk participants' perceived risk remained unchanged ($F=5.88, p<.05$). High risk participants rated their test result as less believable ($t=-2.22, p<.05$) and trustworthy ($t=-2.03, p<.05$) and were significantly less anxious about the consequences of their smoking behavior ($t=2.52, p<.02$) when compared to lower risk participants. Discussion: While high risk participants were accurate with regard to their memory and interpretation of results, their low reported affective responses to and reluctance to accept the validity of test results suggests they might have engaged in defensive processing, potentially undermining the motivation to quit smoking.</p>	<p>HPV knowledge, cervical cancer screening, and cervical cancer mortality in the United States Jill Koshiol, Brad Hesse, Lila Finney-Rutten, Richard P. Moser Purpose: Given the increased media coverage of human papillomavirus (HPV)-related topics, this study visually compared the distribution of women's knowledge of HPV to the distribution of cervical screening and mortality outcomes. Methods: The 2005 Health Information National Trends Survey (HINTS 2005) was used to generate Geographic Information System (GIS) Maps to visually represent the proportion of women in the US who had heard of HPV in a "weather-map" fashion. The HPV knowledge map was compared to a cervical cancer screening map from the National Cancer Institute State Cancer Profiles website and to a cervical cancer mortality map from the Centers for Disease Control Behavioral Risk Factor Surveillance System maps website in order to visually evaluate possible geographic relations. Results: Of 3,564 eligible women who answered questions about HPV, 38.3% (weighted to the US population) reported hearing of HPV. The northeastern corner was one of the regions with the highest proportion of women aged 18+ who had a Pap test within the past three years ($\geq 88\%$) and the lowest cervical cancer death rates (1.6-2.0 deaths per 100,000). Consistent trends were not as clear for other areas of the country. Maps will be presented. Conclusions: Public knowledge of HPV is likely to increase with continued media reports and informational campaigns about HPV. HINTS 2005 was conducted prior to the major increase in media attention and thus provides baseline data on HPV knowledge. Although these data do not show consistent trends between HPV knowledge and cervical cancer screening and mortality at the ecologic level, these patterns may change as people become more aware of HPV.</p>
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<p>Are patient education messages being created and updated to reflect innovations in cervical cancer screening guidelines? A review of current education materials Roland K, Benard V, Saraiya M, Hawkins N Purpose: There have been several recent developments in the area of cervical cancer control including improved understanding of the natural history of HPV, the development of vaccines that address both the low and high risk types of HPV, and the approved use of the HPV DNA test. Health education materials that address the documented concerns of the patient, as well as present the most current screening guidelines are vital if new innovations in cervical cancer control are to be efficaciously adopted by the public. However, there is a lack of knowledge among the patient population regarding HPV and cervical cancer risk factors, disease transmission, and evidence-based guidelines for routine screening and patient management. This project examines the need for the development of accessible and current patient education regarding HPV and cervical cancer screening. Methods: A review of HPV and cervical cancer screening printed educational materials written for the patient, published from 2001-2006 was conducted. Educational materials were identified and selected through web-based searches, and an abstraction form was created from recommended patient education messages cited in peer-reviewed literature, with an emphasis on the national guidelines for cervical cancer screening and follow-up. Each material source was examined based on HPV content including natural history, testing and follow-up, risk factors, cure, and treatment. Results: This review found multiple sources of patient education that address HPV and cervical cancer. However, many of the educational materials lacked information on the recommended screening and follow-up management based on national cervical cancer screening guidelines.</p>	<p>Physical Activity (PA) Levels Among The Amish and Non-Amish Living In Ohio Appalachia ML Katz, A Ferketich, ED Paskett, A Harley, S Lemeshow, S Clinton, Bloomfield CD PURPOSE: We hypothesize that a lower cancer incidence among Amish adults is possibly due to diet and lifestyle factors. This study examines the PA level between Amish and non-Amish adults living in Ohio Appalachia. METHODS: Amish (n=134) and non-Amish (n=154) adults completed interviews as part of a lifestyle study. Self-report of PA level was measured by the International Physical Activity Questionnaire (IPAQ) and by a diary of steps/day (pedometer: Digi-Walker SW-200). Total metabolic equivalent tasks (MET) minutes was calculated from the IPAQ and average number of steps/day from the pedometer diary. RESULTS: The Amish men walked more steps/day (11,447+611 vs. 7,605+643; $p<0.001$) and had a higher IPAQ score (MET min/week) (8,354+701 vs. 5,547+ 690; $p=0.006$) than non-Amish men. In addition, Amish farmers walked more steps/day than Amish non-farmers (15,278 +1,297 vs. 10,742+671; $p=0.0026$). Amish women walked more steps/day (7,750+477 vs. 6,547+437; $p=0.066$) and had higher IPAQ scores (4,966+503 vs. 3,702+450; $p=0.064$) compared to non-Amish women. CONCLUSIONS: Two measures of PA demonstrated a higher PA level among Amish men, especially farmers, and a trend for higher PA level among Amish women. Higher levels of PA warrants further investigation as one factor contributing to reduced cancer incidence rates among the Amish.</p>

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<p>How can we reach them? Preferences for a Cancer Family History Day campaign in five lower income communities. Kelly K, Sturm A, Ferketich A, et al. Ohio State University PURPOSE: Family history is an important risk factor for cancer. The Jameslink is a web-based familial cancer risk assessment tool with tailored recommendations based on risk level. In anticipation of a campaign to promote the Jameslink in 5 lower-income communities in Columbus, OH, preferences for a potential campaign were sought, guided by McGuire's Input-Output Persuasion Model. METHOD: A randomized telephone survey was administered to assess potential campaign messages, channels, sources, receivers, and destinations (n=20 per community). Information sources sought for familial cancers and their predictors also were assessed. RESULTS: Nearly half of the sample was African American and had incomes below \$25,000. Most (59%) had access to a computer at home. Grocery (92%) and department stores (82%) were commonly visited locations. A local academic African American physician was preferred over the local pre-eminent athletic figure as messenger ($p<.001$). The Internet was the most common (42%) 1st source chosen for familial cancer information, followed by physicians (23%). In univariate models, race, age, education, and family history of cancer were associated with where people would seek information. Education ($p<.01$) remained significant in the multiple logistic regression model, with a trend for family history cancer ($p<.09$). Those with a high school education or more and those with greater family history were more likely than those without to choose the Internet as their first source of information over physicians. CONCLUSION: Our survey provided a wealth of information for understanding how to best launch our campaign. Education level affected information-seeking, and efforts are under way to modify the Jameslink to lessen this potential barrier.</p>	<p>Optimistic Bias in Assessment of Breast Cancer Risk Peipins LA, Hawkins NA, Shapiro JA, Hall IJ. Purpose: We examined the correlates of perceived risk of breast cancer among enrollees from four states in a national breast cancer screening program. Methods: Telephone interviews and medical records data were collected from 1,685 women at least 30 months after they had a negative/benign mammogram. In addition to demographics, family history of breast cancer, breast cancer knowledge, and cancer-related worries, women were asked whether they thought their risk of having breast cancer someday was much greater, somewhat greater, the same, somewhat less or much less than an average woman their age. Adjusted proportions of women in each perceived risk category for demographic, health, worry, and knowledge characteristics were calculated. Summary: The overall response rate was 88.9%. Excluding women who reported having had breast cancer left 1,621 women for analysis. The percentage of women who perceived themselves as being at somewhat or much lower risk was most prevalent among African American women (61.3%), women who don't worry about their health (59.4%), and women who incorrectly believed one mammogram is enough for a lifetime (57.8%). In a model including all variables noted above, reporting good or excellent health was positively associated with lower perceived risk. A family history of breast cancer, Hispanic or white race/ethnicity, and a history of breast problems were positively associated with a higher perceived risk.</p>
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<p>Cervical Cancer Screening in the Time of the HPV Vaccine. Sheinfeld Gorin S, Franco R, Hajiani F, Westhoff C., NYPAC Study Group. Despite the effectiveness of the Pap smear, testing for HPV-DNA, and the approval of the HPV vaccine, cervical cancer remains a major cause of mortality among black and Hispanic women both in the U.S. and worldwide. Physician recommendation is key to the uptake of screening. No studies have yet examined physician cervical cancer screening in urban minority communities, alongside new screening protocols and the HPV vaccine. With the baseline findings from 235 primary care physicians who were enrolled in a 3-arm RCT of an educational intervention, we used multi-level structural equation modeling (SEM) to identify screening predictors and mediators, including access, medical practice barriers, patient and provider socio-demographics, attitudes and beliefs toward screening (measured as Pap smear and appropriate HPV-DNA testing). The model fit the data well [$X^2(97)=107.46$, $p=.220$, CFI=0.972, and RMSEA=0.020]. SEM confirmed that practice barriers ($b=-0.17$) had a significant direct negative effect on screening. Practice barriers also had a strong positive effect ($b=0.21$) on perceived behavioral control over uncertainty in patient care and a strong negative effect on counseling self-efficacy ($b=-0.18$) although neither had significant direct effects on screening. Stage of change ($b=0.10$) showed a trend toward direct effects on screening. Mutable office practice barriers, such as limited systems for tracking and reminding patients, and provider attitudes and beliefs may contribute to less effective cervical cancer screening, increasing morbidity and mortality.</p>	<p>Clinician-Patient Communication About Physical Activity in an Underserved Population. Carroll J, Epstein R, Fiscella K, Jean-Pierre P, Figueroa-Moseley C and Morrow G Introduction: Promoting physical activity may reduce incidence of several cancers. The 5A model, used to promote other patient behavior changes in primary care, may be applicable to physical activity. Purpose: To determine primary care physicians' use of the 5A (Ask, Advise, Agree, Assist, Arrange) guidelines when communicating about physical activity with underserved populations. Methods: Analysis of 37 audiotaped transcribed office visits with adult patients and their clinicians in two community health centers in Rochester, NY. We conducted post-visit interviews to assess patient recall of communication about physical activity. Results: Patients were predominantly female (70%) and African American (67%). In the 37 encounters, there were five (14%) Ask, eight (22%) Advise, four (11%) Assist, two (5%) Agree, and one (3%) Arrange statement. Physical activity conversations were physician-initiated, with the exception of one patient-initiated conversation which included all 5As. Patients recalling the most communication about physical activity reported that it was contextualized to their specific health needs, included support and encouragement, and communicated clear, simple advice. Conclusion: Communication about physical activity incorporating the Agree and Arrange steps of the 5As was infrequent. Cancer prevention interventions should target these steps and prompt the patient to initiate communication to improve physical activity in underserved populations.</p>

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<p>Disparities in Health Beliefs and Cancer Knowledge Vasudevan V, Wilkinson AV, Spitz MR, Chamberlain RM Purpose: Our first goal was to examine socio-demographic differences in general health beliefs and cancer knowledge. Our second goal was to examine differences in the accuracy of the cancer knowledge based on the general health belief. Methods: Participants (N=2,227) included 1,124 men (mean age=60.39; SD=9.78) who were healthy cancer-free controls in a molecular epidemiological case-control study designed to evaluate genetic susceptibility markers for lung cancer risk. The majority of participants were non-Hispanic White (78%), 14% were African American, and 8% were Hispanic. Most had completed college or some college (72.9%) and reported annual household incomes of \$50,000 or more (51.1%). Overall 45% were former smokers, 37% were current smokers and 17% never smoked. Data were collected on six items assessing general health beliefs and 10 items assessing cancer knowledge. Results: We found differences in general health beliefs across the socio-demographic characteristics and smoking status. However, after controlling for the other sociodemographic characteristics, higher levels of educational attainment and household income were associated with more accurate knowledge about cancer ($p<0.01$ for both). Women and never smokers answered more of the knowledge items correctly than men or ever smokers ($p<0.01$ for both). Also, using t-tests, we found differences in the accuracy of cancer knowledge based on the general health beliefs. For example, participants who believed that changing health habits is worthwhile had more accurate cancer knowledge than participants who believed otherwise ($p<0.01$). Summary: Results emphasize the need to develop health education programs that foster positive health beliefs and enhance cancer knowledge among individuals of lower socioeconomic status.</p>	<p>COLORECTAL CANCER SCREENING IN THE SAFETY NET: PATIENT PERSPECTIVES AS James, PhD, MPH; KA Greiner, MD, MPH. University of Kansas Medical Center. Lower income and ethnic minority patients have lower rates of CRC screening. We conducted five focus groups with African American patients (n=18) at a safety-net clinic serving mostly Medicaid and uninsured adults. Groups were audio-taped and transcribed verbatim. Transcripts were reviewed for content themes. We will continue focus groups to achieve data saturation, and conduct semi-structured interviews to collect in-depth individual information. Several early themes have emerged. There was a belief that early detection was important, despite low awareness of CRC tests. The perceived norm was that most people did not discuss it and did not get tested. Many participants agreed that “there is nothing you can do” if you have cancer, though many qualified this by saying that this applied mostly if you were poor or without insurance. Nearly all participants had heard that exposing cancer to the air would cause it to worsen, and several expressed that they felt this was true. Participants described how most people they knew with cancer had suffered and died. Those who currently did not have health insurance expressed frustration and discouragement at trying to access care, trouble receiving follow-up. Our early data suggest that perceptions about early detection and treatment efficacy are influenced by health insurance and access to care, and “myths” are supported by personal experience. We will continue to conduct focus groups until our data are saturated.</p>
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<p>BEHAVIORAL AND COMMUNICATION SEQUELAE OF A COLON POLYP DIAGNOSIS Lisa Madlensky, PhD, UC San Diego. PURPOSE: To examine self-reported communication patterns, behavioral changes, and psychosocial sequelae following a polyp diagnosis. METHODS: Using an online consumer marketing panel, surveys were administered to individuals aged 51-61 who had a single, recent colonoscopy with (n=203) or without (n=206) a polyp. RESULTS: Polyp patients experienced an increase in perceived colorectal cancer (CRC) risk following their colonoscopy while non-polyp pts had a decrease in perceived CRC risk ($p<0.05$). Polyp pts. rated the efficacy of colonoscopy higher than non-polyp pts ($p<0.001$) and were more likely to report that their physician discussed future CRC risk ($p<0.01$) and future polyp risk ($p<0.001$). More polyp pts than non-polyp pts reported increasing their fiber intake after colonoscopy ($p<0.05$) but no other differences in health behaviors (e.g. exercise, fruit & veg., red meat, supplement use) were found. Despite guidelines recommending that relatives of young (age <60) polyp pts be considered increased risk and screened aggressively, polyp pts reported that only 29% of their siblings knew of their polyp diagnosis. Only 6% of polyp pts were told of the increased CRC risk for their relatives by their physician. CONCLUSIONS: A polyp diagnosis increases perceived CRC risk and perceived efficacy of colonoscopy, but does not stimulate health behavior changes. There is much room for improvement regarding the communication of increased familial CRC risk in young polyp patients.</p>	<p>Long-Term Prophylactic Surgery Outcomes following BRCA1/2 Genetic Testing. Graves KD, Gell CE, Hecker SL, Peshkin BN, Taylor KL, Schwartz MD. Purpose: Women with a BRCA1/2 mutation may choose to reduce their breast and ovarian cancer risk through prophylactic mastectomy (PM) and/or prophylactic oophorectomy (PO). We assessed the long-term rates and predictors of PM and PO. Methods: Participants were women with greater than or equal to 10% probability of carrying a BRCA1/2 mutation who received genetic testing 4-8 years earlier. For PM analyses, women (n=307) had no history of breast cancer or had unilateral breast cancer. For PO analyses, women (N=342) had no history of ovarian cancer. Women completed assessments before and 4-8 years (M=5.3 yrs) after testing. Results: Among women without PM before testing (14% had prior PM), 35% with positive test results ultimately had PM. Among women without oophorectomy before testing (29% had prior PO), 46% of positives ultimately had PO. Most women opting for PM did so within one year of testing (72%), while only 39% of those with PO had it within a year. PM was predicted by positive test result (OR=6.6, 95%CI=2.8-15.7) and being affected with unilateral breast cancer (OR=4.4, 95%CI=1.5-12.6). PO was predicted by age greater than or equal to 40 (OR=6.8, 95%CI=2.0-23.1), positive test result (OR=18.1, 95%CI=7.8-41.9) and having PM (OR=7.8, 95%CI=2.8-21.6). At follow-up, women with prophylactic surgery did not differ from women without surgery on quality of life or distress. Summary: Prophylactic surgery is being appropriately utilized by women at the highest risk of HBOC and does not appear to adversely impact long-term psychological outcomes.</p>

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<p>What is a family? Communication opportunities with Melanoma Families.</p> <p>Bowen DJ, Hay J, Harris J, Mayer JA., Meischke H, Press NA, Shoveller JA, Asgari M, Burke W, Edwards M. Purpose: Melanoma is a relatively common cancer, with stable or rising rates in the United States. Recent studies have identified genetics as an important contributor to risk, in addition to the well-established environmental risk factor of sun exposure. Methods: We provide data on 300 families, composed of melanoma patients, first degree relatives and parents of children 0-17. Results: The average number of people in each category identified to contact by each case: 3.3 FDR's, 2.2 parents, and 1.7 relatives that qualified as either. The actual number of living relatives of each type was over double these averages. Family members identified multiple and diverse others as being "part of my family", including biological and nonbiological relatives, and first, second, and third degree relatives. The concordance among family members about issues such as "who in the family has the health information?" was relatively low, an indicator of lack of agreement about roles in family settings. The recruitment yield for identifying family members was approximately 40% for FDR's and 50% for parents. Conclusions: These findings indicate diverse definitions of family within and across biological family units that likely confound uptake of "family" interventions based on genetic susceptibilities.</p>	<p>CANCER RISK MANAGEMENT BEHAVIOURS OF FRENCH CANADIAN WOMEN FOLLOWING BRCA1/2 GENETIC TESTING Dorval M, Power T, Maunsell E, Patenaude AF, Simard J This study assessed how BRCA1/2 test results influenced cancer screening and risk-reduction behaviours of 449 French-Canadian women, from 182 families, who underwent BRCA1/2 testing between 08/1998 and 07/2004. Questionnaires completed at pre-test genetic counselling and 12 months post-disclosure were used to assess frequency of breast screening behaviours, intention concerning and uptake of prophylactic surgeries. Age at pre-test varied between 20 and 79 years (mean=51 years). Ninety-six women were found to be carriers of the familial mutation, 128 non-carriers, and 225 had an inconclusive result. The majority of women who had previously had cancer performed surveillance in the year prior to genetic testing (mammogram (85%), clinical breast exam (92%), breast self-exam (61%)) and continued one year post-disclosure (mammogram (91%), clinical breast exam (95%), breast self-exam (72%)), irrespective of their test result. Among carriers without cancer history, the frequency of all screening behaviours increased significantly in the year after disclosure ($p<0.05$). Uptake of prophylactic surgeries was low; among carriers without cancer history ($n=34$), only one (3%) had undergone prophylactic mastectomy and two (6%) had oophorectomy at one year; three (9%) and four (12%) women had made the decision to have prophylactic mastectomy and oophorectomy, respectively. Our findings suggest that high-risk French Canadian women place more value on cancer screening than risk-reduction interventions to manage their risk of breast cancer. Longer-term follow-up will provide a better estimate of maintenance of cancer screening behaviours and prophylactic surgery uptake in this population.</p>
15	16
<p>Multiple Behavioral Risk Factors for Colorectal Cancer and Colorectal Cancer Screening Status Coups EJ, Manne SL, Meropol NJ, Weinberg DS Background: We examined the prevalence, patterns, and correlates of multiple behavioral risk factors for colorectal cancer (CRC) according to individuals' CRC screening status. Methods: 11,090 adults aged 50 and older (drawn from the 2000 National Health Interview Survey) completed survey questions and were categorized as being adherent (39.7%) or not adherent (60.3%) to CRC screening. They were also denoted as having or not having each of seven risk factors for CRC: smoking, low physical activity, low fruit and vegetable intake, high caloric intake from fat, obesity, high alcohol intake, and low intake of multivitamins. Results: Individuals who were not adherent to CRC screening had more behavioral risk factors ($M=2.64$) than adherent individuals ($M=2.21$), $t=14.44$, $p<.0001$. There was a high prevalence of having low physical activity, low fruit and vegetable intake, and low intake of multivitamins for each screening group (not adherent, 27.7%; adherent, 19.3%). In both groups, more risk factors were found among those who were younger, less educated, not married, and who reported poorer overall health ($F_s>7.19$, $ps<.01$). In the non-adherent group, Blacks ($F=7.57$, $p<.001$) and individuals with a higher risk of CRC based on a family history ($F=4.64$, $p<.05$) also had more risk factors. Conclusions: There is a need to develop interventions to modify the multiple behavioral risk factors for CRC that are prevalent among screening-adherent and non-adherent individuals.</p>	<p>Correlates of Physical Activity Among Lung Cancer Survivors Coups EJ, Ostroff JS, Steingart RM, Feinstein MB, Wilson D, Logue A, Park B Background: Engaging in regular physical activity may offer considerable benefits to lung cancer survivors. However, little is known about the correlates of physical activity in this population. Knowledge of such correlates will inform the design of interventions to promote physical activity among lung cancer survivors. Methods: 127 individuals (M age = 68.6 years, 62% female) who were 1-6 years post-treatment for stage I non-small cell lung cancer completed a one-time telephone survey that included questions regarding their current physical activity and health-related (comorbid medical conditions, dyspnea, fatigue, pain) and social cognitive factors (self-efficacy, outcome expectations, perceived barriers, social support from friends and family) that may be associated with physical activity. Results: The health-related and social cognitive factors were entered as predictors in a single linear multiple regression analysis (adjusted R squared = .33). None of the health-related factors were associated with physical activity ($B_s < .08$, $ps > .47$). Self-efficacy ($B = .40$, $p < .0001$), outcome expectations ($B = .24$, $p = .007$), and social support from friends ($B = .18$, $p = .04$) were each significantly associated with physical activity, but perceived barriers ($B = .08$, $p = .42$) and social support from family ($B = -.04$, $p = .18$) were not. Conclusions: Social cognitive theory provides a useful framework for future physical activity interventions for lung cancer survivors. Such interventions should focus on enhancing physical activity self-efficacy, promoting positive expectations for activity, and encouraging social support for activity from friends.</p>

17 - T	18
<p>Nutrition-Related Cancer Prevention Attitudes and Behavioral Intentions: Testing the Risk Perception Attitude Framework. Sullivan HW, et al. Theory-driven research is critical to understanding the psychological constructs that influence attitudes and behavioral intentions regarding cancer prevention. The Risk Perception Attitude Framework provides a useful conceptual model for examining how perceived risk and efficacy impact nutrition-related cancer prevention attitudes and behavioral intentions. Data from the 2003 Health Information National Trends Survey (HINTS) were analyzed to assess respondents' reported likelihood of developing cancer (risk) and perceptions of whether they could lower their chances of getting cancer (efficacy). We operationalized attitudes as whether respondents did (n = 3443) or did not (n = 2922) report that good nutrition could prevent cancer and the number of dietary changes they reported people could make to prevent cancer. We operationalized behavioral intentions as whether respondents did (n = 1296) or did not (n = 5063) report that they planned to prevent cancer through good nutrition and the number of dietary changes they planned to make to prevent cancer. Respondents with higher efficacy were more likely to report that good nutrition can prevent cancer and reported more preventive dietary changes compared to respondents with lower efficacy. Respondents with higher efficacy or higher risk were more likely to report intentions to change their diets to prevent cancer, and respondents with a combination of higher efficacy and higher risk reported more planned preventive dietary changes compared to all other respondents. These results suggest that to increase peoples' agreement that good nutrition can prevent cancer, interventions should target cancer prevention efficacy beliefs; however, to increase intentions to change nutrition behaviors, interventions should target efficacy and risk perceptions.</p>	<p>Promoting Colorectal Cancer Screening. Bartholomew LK, Bettencourt, J, McQueen A, Greisinger A, Vernon SW Objective: The reported study is a part of a randomized controlled trial to test an intervention to promote colorectal cancer screening (CRCS) in a clinic setting. We describe the systematic development of a patient-focused, tailored health promotion program to increase rates of CRCS and the evaluation of the implementation process. Methods: Intervention Mapping (IM), a framework for systematic health promotion program planning, implementation, and evaluation, was used to design an interactive, multimedia educational program promoting CRCS. Through IM, planning matrices, flowcharts, and storyboards were developed, to ensure systematic application of the Transtheoretical Model of behavior change throughout the design of the program. Process evaluation indicators were reach, dose-delivered, and dose-received. Results: The interactive computer program was tailored to a participant's gender and intention to get CRCS. The program is 20-30 minutes long and consists of: role model videos, audio narration, tailored text, CRC risk information, and interactive decisional balance exercises. Reach was measure by calculating the percentage of participants who saw the program out of all participants who were randomized to the intervention group, 256/285 (91%). Dose-received was measured as the average time spent viewing the tailored program, which was 23.8 minutes. Dose-delivered was measured with an 11 question survey completed immediately after the program and with 3 questions two week later. The participants reported moderate to good engagement with the program, satisfaction, and understanding. Conclusion: The use of IM provided a useful framework to guide the systematic selection of determinants and development of a theoretically based program.</p>
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<p>Attitudes and Lifestyle Behaviors by Personal and Family Cancer Experience among Participants in an Online Cancer Risk Reduction Program. Alexander G, Divine G, McClure J, Mouchawar J, Hinchman J, Rolnick C, Strecher V, and Cole Johnson C Purpose: Lifestyle behaviors have been linked with cancer risk reduction. Our study explored lifestyle behaviors and attitudes, by cancer experience, of those enrolling in an online cancer risk reduction program. Methods: In 2005, 2540 randomly selected adults, aged 21 – 65 and members of five geographically dispersed HMOs, completed an online enrollment survey. Data included self and family disease history, previous behavior change attempts, beliefs, motivations, and daily servings of fruit and vegetables (F&V), and reported physical activity levels. Kruskal-Wallis and Wilcoxin tests were compared subgroups, based on cancer experience. Results: Mean age was 46.3 years (st. dev. = 10.7) and 69% were women. At enrollment, those with self cancer history only (n=71) were statistically significantly different from three other subgroups (no cancer history (n=1541), family cancer history only (n=859), and self plus family history (n=69)) in stage of change for eating recommended servings of vegetables (p = .004), higher daily servings of vegetables (p < .001), and reported better health (p = .01). A trend was found for those with self cancer history only to be more physically activity and report more previous attempts to increase intake of F&V compared to other subgroups. No group differences were found in self-efficacy or motivation to eat the recommended servings of F&V or in eating daily servings of fruit. Conclusions: Lifestyle behaviors upon enrollment in an online behavior change program vary by cancer experience. Those with personal cancer history may be especially motivated to seek further improvements and support for lifestyle changes.</p>	<p>Microsatellite instability (MSI) quantified in Hereditary Non Polyposis Colon Cancer (HNPCC) patients, including those previously thought stable. Coolbaugh-Murphy M, Xu J, Simien C, Ramagli L, Lindor N, Gallinger S, Lynch P, Frazier M, Siciliano M. Purpose: Severe inherited defects of mismatch repair genes (MMR) account for high levels of MSI (MSI-H) in tumors of 50%-60% HNPCC families. Low penetrant MMR defects may be present in the remaining families (Familial Colon Cancer type X or FCCX) making MSI undetectable by standard PCR. We use a more sensitive approach, small pool PCR (SPPCR) to determine the true MSI levels in HNPCC and FCCX. Methods: Paired peripheral blood lymphocyte (PBL) and tumor DNAs from 7 HNPCC MSI-H patients with null mutations in major MMR genes, from 10 FCCX patients and PBLs from 7 sporadic colorectal cancer (CRC) patients along with PBLs from age matched normal controls were studied. D2S123, D5S356, and D17S518 loci were amplified using hemi-nested PCR in >112 replicates of ~0.75 genome equivalents per locus/per tissue/per patient to determine mutant frequencies (f) and 95% confidence intervals (CI). Summary: Normal control and sporadic CRC PBL DNA had f = 0.012-0.011, CI +/- 0.012. MSI-H PBL and tumor showed f = 0.107, CI +/- 0.052 and f = 0.236, CI +/- 0.133, respectively. Syndrome X PBL and tumor had f = 0.016, CI +/- 0.011 and f = 0.090, CI +/- 0.029, respectively. These precise MSI levels suggest: (1) Syndrome X might be due to mutations in MMR pathways that are less severe than seen in the MSI-H patients; (2) SPPCR analysis of tumors identifies patients carrying such mutations. Therefore a new approach to identifying individuals at risk for colon cancer is presented.</p>

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<p>Using Tree-model to Identify Genetic Determinant of Early Onset of Hereditary Nonpolyposis Colorectal Cancer. Jinyun Chen, Carol J. Etzel, Marsha L. Frazier Purpose: We determine the role that genetic variants in 10 candidate cell cycle genes have on risk for development of Hereditary Nonpolyposis Colorectal Cancer (HNPCC) at an early age. Method: we applied a novel statistical approach (Classification and Regression Tree, CRT) to HNPCC patients to identify individuals with a higher probability of developing HNPCC at an early age and explore the gene-gene interactions between polymorphisms of cell cycle genes. We found individuals who are P16-WW, with ≥ 19 IGF CA repeats, E2F2-WW and AURKA-WM/MM have the latest median time to onset (Med=70 years) while individuals who are P16-WW, with ≥ 19 IGF CA repeats, E2F2-WM/MM, AURKA-WW and CYCLIN D1-WM/MM have the earliest median age of onset (Med=45 years). In this tree, we observe a possible interaction between E2F2 and AURKA, where individuals who are E2F2-WW and AURKA-WM/MM have a later median age at onset compared to individuals who are E2F2 WM/MM and AURKA-WM/MM (70 years versus 46 years). Summary: Our data suggest that tree modeling enable investigation of genetic and other cancer risk factors and risk-factor interactions to identify subgroups with high probability of cancer occurrence at younger ages of onset. Having a panel of risk factors identified by the tree modeling would contribute to the earlier detection and development of preventive strategies for these cancers.</p>	<p>ERCC1 as a potentially useful marker of cancer susceptibility related to DNA repair deficiency. Larkins TL, Reed E. DNA repair defects have been historically associated with cancer prone conditions. Xeroderma pigmentosum and similar diseases demonstrate the profound impact that DNA repair deficiency can have on the human host. There exists the possibility that more subtle defects in DNA repair capability may be associated with a grossly normal human phenotype, but associated with predisposition to developing cancer in multiple different organs. Nucleotide excision repair (NER) is responsible for the repair of DNA damage induced by ultraviolet light, and polycyclic aromatic hydrocarbons (PAHs). We have reviewed the relevant recent (last ten years) literature to develop an overview of the possible relationship between selected defects in NER, and cancer predisposition. Understanding this relationship may lead to more effective targeting of cancer prevention strategies, in persons who have a molecular profile suggesting increased risk. Collectively, the literature shows that persons with subtle defects in genes involved in NER are at increased risk for the following cancers: lung, head and neck, basal cell ca of the skin, gliomas of the brain, breast, colorectal, endometrial, bladder, renal cell, ALL, AML, and myelodysplastic syndromes. Most but not all of these tumors have a strong well-established epidemiologic relationship with smoking (exposure to PAHs). Subtle defects in NER are suggested in each of these malignancies by the demonstration of relevant polymorphisms of genes that are important in the NER pathway, with a predominance of abnormalities seen in the gene ERCC1. This review forms the foundation for ongoing work to assess the potential role of ERCC1, and other NER genes, as molecular tools in developing genomic strategies for cancer prevention and control.</p>
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<p>Black-White Disparities in Breast Cancer Incidence, Mortality, Survival Rates and Histology. Baquet CR, Mishra SI, Commiskey P, Ellison E, DeShields M. Purpose: Investigate black-white disparities in female invasive breast cancer epidemiology. Methods: Used data from the National Cancer Institute (NCI) Surveillance, Epidemiology and End Results (SEER) program (nine registries) for the time period 1994-2003. Examined invasive breast cancer statistics (age-adjusted incidence, mortality, relative survival rates), prognostic indicators (tumor grade, histology, and receptor status), and treatment patterns for all ages and for age groups under 40 and 40 and over. Results: Invasive breast cancer age-adjusted incidence for black women under age 40 is significantly higher than that for white women (14.8 vs. 12.5/100,000, $p < 0.0001$). The black-white difference in age-adjusted mortality rates is much higher for black women under age 40 than those 40 and older. Black women had a higher likelihood of being diagnosed with tumors with poorer prognosis and have poorer relative five-year survival rate. Black women were less likely to receive breast cancer surgery and more likely to have surgery contraindicated as part of the treatment plan. Conclusions: These data support the need for innovative research on biologic, social, and cultural determinants of the differential epidemiology of breast cancer. Equally importantly, there is a need to eliminate barriers to health care access and treatment to improve prognosis and survivability of black women with breast cancer.</p>	<p>Racial differences in the survival of prostate cancer treatment Drake BF, Hebert JR, Laditka JN. Purpose: Racial differences have been observed in prostate cancer treatment (PrCA), with African-American (AA) men receiving less aggressive therapy than European-American (EA) men even after controlling for grade and stage of disease, however, we do not know if this variation exists in the survival of men receiving various PrCA treatments. The objective of this investigation was to determine whether survival probabilities differ by treatment and race. Methods: Data for a sample of 14,040 men diagnosed between 1996 and 2002 were obtained from the South Carolina Central Cancer Registry. Clinical and socioeconomic variables were included in analyses. Both Kaplan-Meier and Cox proportional hazards methods were used to assess survival probabilities by race for PrCA treatments. The origin of time was age at diagnosis and the event was death from all-causes, and a second analysis assessed the event as death from PrCA-related causes. Results: The proportion of AA men who received surgery (52.3%) was slightly lower than the proportion of EA men (59.6%) who received surgery. However, a larger proportion of AA men (12.0%) received radiation therapy compared to EA men (6.6%). Among men who chose surgery as their initial treatment, EA men had significantly higher survival probability compared to AA men. EA men who received hormonal therapy had a significantly higher survival from PrCA-related death than AA men ($p = 0.02$). Men who received hormonal therapy (HRall-cause=1.5 $p < 0.0001$; HRPrCA related=1.5 $p < 0.0001$) did have significantly greater all-cause and PrCA-related death rates. Conclusions: A greater proportion of AA men received hormonal therapy, which has lower survival probabilities and a higher hazard for death compared to other treatment options.</p>

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<p>Genetic Variants in the Promoter Region of H2AX are Associated with Risk of Sporadic Breast Cancer in non-Hispanic White Women Aged ≤ 55 Years Jiachun Lu, Qingyi Wei, Melissa L. Bondy, Abenaa M. Brewster, Therese B. Bevers, Tse-Kuan Yu, Thomas A. Buchholz, Funda Meric-Bernstam, Kelly K. Hunt, S. Eva Singletary, and Li-E Wang In this case-control study, we genotyped four common single nucleotide polymorphisms (i.e., -1654A>G, -1420G>A, and -1187T>C in the promoter and 1057C>T in the 3' untranslated regions) in 421 non-Hispanic white patients with sporadic breast cancer and 423 cancer-free controls, all of whom were ≤ 55 years old and frequency-matched by age (± 5 years). In the individual SNP analysis, only -1654A>G was significantly associated with increased risk of breast cancer (adjusted odds ratio [OR] = 1.50, 95% confidence interval [CI] = 1.12-2.02 for -1654AG; and OR = 2.29, 95% CI = 1.48-3.55 for -1654GG compared with the -1654AA genotype); however, the number of variant (risk) alleles of -1654G, -1420A, and -1187C were associated with increased risk of breast cancer in a dose-response manner (Ptrend = 0.001). There was evidence of an interaction between the number of variants and age (Pinteraction = 0.007) and alcohol use (Pinteraction = 0.021). Haplotypes derived from the observed genotypes were also significantly associated with risk in an allele dose-response manner compared with haplotypes with no variant allele (OR = 4.04, 95% CI = 2.11-7.74 for one variant allele; OR = 4.66, 95% CI = 2.55-8.51 for two variant alleles; and OR = 10.87, 95% CI = 1.51-78.44 for three variant alleles; Ptrend = 0.0001). These findings suggest that H2AX promoter polymorphisms contribute to the etiology of sporadic breast cancer in young non-Hispanic white women. Larger studies are warranted to confirm these findings.</p>	<p>Obesity and risk of non-Hodgkin lymphoma. Chiu BC-H, Soni L, Gapstur SM, Fought AJ, Evens AM, Weisenburger DD. Purpose: Few studies have explored the potential association between body mass index (BMI) and non-Hodgkin lymphoma (NHL) according to histologic subtypes, or have evaluated BMI at different periods in the subject's life, and the results of these studies have been inconsistent. Subjects: A population-based, case-control study of 387 patients with NHL and 535 controls conducted in Nebraska between 1999 and 2002. Information on usual adult weight, weight at the ages 20-29, 40-49, and 60-69 years, height, physical activity, and other lifestyle factors was collected by telephone interview. A self-administered, semi-quantitative, food frequency questionnaire was used to collect dietary intake. Risk was estimated by odds ratios (ORs) and 95% confidence intervals (CIs), adjusting for age, total energy intake, physical activity, and other confounding factors. Results: Higher adult BMI was associated with risk of NHL (OR=1.4; 95% CI=0.9-2.0) comparing the obese group (BMI\geq30.0 kg/m²) with the normal weight group (BMI=18.5-24.9 kg/m²). The risk was higher for those who were class 2 obese (OR=1.7; 95% CI=1.0-2.9). The positive association was similar among men and women. An excess risk of NHL was associated with high BMI at ages 40-49 years (OR=1.6; 95% CI=1.0-2.5), and to a lesser extent, at ages 20-29 years (OR=1.4; 95% CI=0.8-2.5). Obesity at ages 40-49 years was also associated with a higher risk of small lymphocytic lymphoma (OR=4.5; 95% CI=1.5-13.3), diffuse large B-cell NHL (OR=1.8; 95% CI=0.9-3.5) and follicular NHL (OR=1.8; 95% CI=0.9-3.9). Conclusion: Obesity is associated with risk of NHL overall. Obesity at ages 40-49 years is also associated with a higher risk of NHL overall, and particularly small lymphocytic, follicular, and diffuse large B-cell NHL.</p>
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<p>A Longitudinal Study of Depression, Pain, and Stress as Predictors of Sleep Disturbance among Women with Metastatic Breast Cancer. Palesh O Objective: Sleep disturbances are common among women with breast cancer and can have serious consequences. The present study examined depression, pain, life stress, and participation in group therapy in relation to sleep disturbances in a sample of women with metastatic breast cancer. Methods: Ninety-three women with metastatic breast cancer participated in a large intervention trial examining the effect of the group therapy on their symptoms. They completed measures of depression, pain, life stress, and sleep disturbance at baseline, 4, 8 and 12 months. Results: The results showed that higher initial levels of depression at baseline predicted problems associated with getting up in the morning, waking up during the night, and daytime sleepiness. Increases in depression over the course of 12 months were associated with fewer hours of sleep, more problems with waking up during the night and more daytime sleepiness. Higher levels of pain at baseline predicted more problems getting to sleep. Increases in pain predicted more difficulty getting to sleep and more problems waking up during the night. Greater life stress at baseline predicted more problems getting to sleep and more daytime sleepiness. Conclusions: Depression, pain, and life stress scores were each associated with different types of negative change in self-reported sleep disturbances. Depression, especially worsening depression, was associated with the greatest number of types of negative change. The relationships found between sleep disturbance and depression, pain, and life stress suggest specific ways to address the problem of sleep disturbance for women with metastatic breast cancer and show how different types of disturbed sleep may be clinical markers for depression, pain, or life stress in this population.</p>	<p>Aspirin May Be More Effective in Preventing Colorectal Adenomas in Patients with Higher BMI. Kim S, Baron JA, Mott LA, et al. Obesity is a risk factor for colon cancer, possibly due to elevated levels of circulating cytokines derived from adipose tissue. Aspirin, which may affect the levels of these cytokines, has been shown in randomized controlled trials to decrease the risk of colorectal adenomas. We hypothesized that the chemopreventive effect of aspirin might be greater in individuals with higher body mass index (BMI). Data were available from the Aspirin/Folate Polyp Prevention Study, a randomized controlled trial of aspirin and folic acid to prevent recurrent colorectal adenomas. Obesity was defined as BMI ≥ 30 (kg/m²), overweight as BMI of 25-29 (kg/m²) and normal weight as BMI < 25 (kg/m²). For the analysis of the effect of aspirin on the recurrence of colorectal adenoma by BMI, we computed risk ratios for aspirin versus placebo within the three BMI strata using a modified Poisson model. Overall the risk reduction of adenomas with a daily dose of 325 mg aspirin was greater among subjects with higher BMI. Among obese subjects the risk ratio (RR) for advanced adenomas compared with placebo was 0.44 (95% CI 0.17-1.10), versus RR = 1.23 (95% CI 0.55-2.77) among those with normal weight. However, 81 mg aspirin daily did not interact with BMI to modify the risk of adenomas in such a fashion. The more pronounced effect of 325 mg aspirin in individuals with higher BMI suggests a possible protective role of anti-inflammatory aspirin against increased adipose-driven cytokines among obese subjects.</p>

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<p>Association of NBS1 Polymorphisms and Lung Cancer. Park SL, Morgenstern H, Greenland S, Tashkin D, Lee YA, Papp J, Cozen W, Mack TM, Zhang ZF Purpose: We explored possible associations between three polymorphisms of the NBS1 gene: Ex16+1785 T>C (rs9995), Ex 16+572C>G (rs2735383), and Pro672Pro (rs1061302), its reconstructed haplotypes, and lung cancer. Methods: Data was obtained from this population based case-control study in Los Angeles County of 611 lung cancer cases and 1040 cancer-free controls. Cases were identified using rapid ascertainment system from the Cancer Surveillance Program for Los Angeles County. Population based controls were identified using a formal algorithm providing a list of households within the neighborhood of each individual case. Subject information was collected using standardized questionnaires during interviews and buccal swabs were collected for DNA extraction. The NBS1 polymorphisms were identified using the SNPlex method from Applied Biosystems. We used unconditional logistic regression to analyze possible associations. Results: Our results show a negative association between the heterozygote Pro672Pro and lung cancer (OR=0.71, 95% CL=0.55, 0.90). We also observed weak positive associations between the homozygous recessive variant of each polymorphism and lung cancer among nonsmokers (OR=2.05, 95% CL=0.86, 4.87; OR 1.82, 95% CL=0.83, 3.99; OR=1.71, 95% CL=0.80, 3.65, respectively). These results were also replicated in the haplotype analysis, among nonsmokers a positive association seen in all recessive haplotype of CGG and lung cancer (OR=1.47 CL=0.95, 2.27). Conclusion: The data suggests that the heterozygous variant of Pro672Pro may have a protective effect; and among non-smokers there are possible associations between these NBS1 polymorphisms and lung cancer that warrant further investigation.</p>	<p>Oral Contraceptive Use and Risk of Breast Carcinoma In Situ. H.B. Nichols*, A. Trentham-Dietz, K.M. Egan, L. Titus-Ernstoff, J.M. Hampton, P.A. Newcomb (*University of Wisconsin Paul P. Carbone Comprehensive Cancer Center) We investigated oral contraceptive use and risk of breast carcinoma in situ (BCIS) in a large population-based case-control study. Female residents of Wisconsin, western Massachusetts and New Hampshire aged 20-74 years with a new diagnosis of BCIS (N=1,878) were enrolled based upon reports to statewide tumor registries in 1997-2001. Age-matched female controls (N=8,041) were randomly selected from population lists. Oral contraceptive use and other risk factor information were collected through structured telephone interviews. Odds ratios (ORs) and 95% confidence intervals (CI) were estimated using unconditional logistic regression. Risk of BCIS decreased with younger age at first birth, increasing parity, younger age at menopause, lower body mass index, and never use of postmenopausal hormones. In multivariate models, ever use of oral contraceptives was associated with a small increase in risk of BCIS (OR=1.12; 95% CI: 1.00-1.27). Women using oral contraceptives (OC) at earlier ages appeared to be at greater risk: when compared to never users, odds ratios were significantly increased in women who initiated OC use before age 20 (OR: 1.31; 95% CI 1.07-1.62) or at ages 20-23 (OR: 1.20; 95% CI 1.01-1.38) but not at older ages (OR: 1.08 for age 24-28, and OR: 1.03 for age 29 and older). No differences were observed according to histology (lobular vs. non-lobular carcinoma in situ) though power in subgroup analyses was limited. Similar to invasive breast cancer, these findings suggest that oral contraceptive use is only modestly related to risk of BCIS.</p>
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<p>Vitamin D and breast cancer: Results from the Iowa Women's Health Study. Lazovich, D, Robien K, Cutler G. Purpose: To examine the association of vitamin D from diet and/or supplements and breast cancer risk among participants in the Iowa Women's Health Study. Methods: 34,393 women, ages 55-69, who completed a questionnaire in 1986 that included diet and supplement use were followed for breast cancer occurrence through 2004. Women were grouped according to daily vitamin D intake recommendations (< 400 IU, 400-799 IU, 800+ IU). Adjusted relative risks (RR) for breast cancer were calculated for vitamin D from diet, from supplements and total intake among all women, and for total vitamin D among subgroups according to BMI, physical activity and farm residence, breast cancer stage and ER/PR hormone receptor status. Results: 64% of women were non-supplement users; in the highest group of total vitamin D, 97.5% used supplements. The adjusted RR for women in the highest vs. the lowest total vitamin D groups was 0.88 (95% CI 0.76-1.02; p trend 0.08); results were similar for vitamin D from supplements. The RR for high vs low dietary intake of Vitamin D was 0.53 (95%CI 0.24-1.19), based on just 6 cases in the high intake group. No effect modification by BMI, physical activity or farm residence was observed. RRs were stronger among women with negative or unknown than positive receptor status breast cancer. Summary: The strength of the association is consistent with two other cohort studies, although the association was limited to premenopausal women in one and to post-menopausal women with receptor positive tumors in the other. The weakness of all three studies is the small proportion of women consuming higher amounts of vitamin D and the lack of information on sun exposure, which could result in much higher exposure to vitamin D than diet. Studies that consider all sources of vitamin D are needed to understand the effect of vitamin D on breast cancer risk.</p>	<p>Cervical Cancer Incidence in the United States by area of residence, 1998-2001. Bernard V. Objectives. To examine differences in cervical cancer incidence rates among women in rural, suburban, and metropolitan areas of the United States, including differences in incidence by age, race, ethnicity, stage at diagnosis, and poverty. Methods. We examined cervical cancer incidence among women in United States counties classified as rural, suburban, and metropolitan for the period 1998-2001. We examined these differences in incidence by age, race, ethnicity, stage at diagnosis, and percent of the total county population living below the poverty level using data from the CDC's National Program of Cancer Registries, the NCI's Surveillance, Epidemiology, and End Results Program, and the 2000 U.S. Census. Results. There were 39,946 newly diagnosed cases of cervical cancer included in this analysis. Overall, the rates increased with advancing age and peaked at ages 40-44. The cervical cancer incidence rates were lower among those who resided in metropolitan areas compared to those who resided in rural; this difference was noted overall and across groups defined by race, ethnicity, (localized) stage and (under 20%) poverty level. White, Asian/Pacific Islander and Alaskan Native/American Indian women in metropolitan areas had lower incidence compared to rural areas adjusting for the other characteristics. Women less than 45 years old in metro areas had a lower incidence compared to rural adjusting for the other characteristics. However, incidence was higher in metro areas compared to rural for women over 85 years of age. Conclusion. The areas in which women live may be related to cervical cancer incidence through several mechanisms including screening utilization, access to health care, and other factors not measured in this study. Additional analyses are needed to determine the reasons for differences in incidence rates by geographic residence, age, race, and other factors.</p>

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<p>Risk Factors for Inflammatory Breast Cancer. Trentham-Dietz A for the Collaborative Breast Cancer Studies Investigators (University of Wisconsin-Madison). Although inflammatory breast cancer (IBC) is rare, the poor prognosis of women with this breast cancer subtype is motivation for studies of whether risk factors are different from those for breast cancer overall. Data collected in 3 states during 1988-2004 from four sequential population-based case-control studies were combined. A total of 90 IBC cases were identified among the 20,292 invasive breast cancer cases that participated in the case-control studies. Two comparison groups were randomly selected: non-IBC cases (N=447) matched 5:1 to IBC cases based on study period, age, and state, and a group of similarly matched community controls without breast cancer (N=450). All women completed interviews on known and suspected risk factors. Odds ratios (OR) and 95% confidence intervals (CI) were calculated using conditional logistic regression. A family history of breast cancer was reported less often by IBC cases when compared to non-IBC cases (OR 0.47, CI 0.24-0.91); however the reverse was true in the comparison with disease-free controls (OR 1.51, CI 0.75-3.02). IBC cases were more likely to report adult weight gain compared with non-IBC cases (OR 2.30, CI 1.13-4.67 for 15+ vs <5 kg gain) and controls (OR 1.41, CI 0.73-2.76). Older age at menopause was associated with IBC risk in comparison with non-IBC cases (OR 1.05, CI 0.99-1.11 per 1-year increase) and non-cancer controls (OR 1.07, CI 1.01-1.13). Although risk estimates were in the expected directions, no significant associations were found with age at menarche and first birth, or with parity and lactation. The availability of these dual comparisons demonstrate that IBC risk factors, particularly family history and weight gain, may differ from those for non-inflammatory breast cancer.</p>	<p>Clinical Features and Hormone Receptor Status of Breast Cancer among Hispanic and non-Hispanic Women in Arizona Martínez ME, Nielson C, Thompson P Purpose: We assessed differences in tumor marker characteristics between Hispanic and non-Hispanic white (NHW) women in Arizona. Methods: 31,867 cases of breast cancer (2,283 Hispanic and 29,584 NHW) reported to the Arizona Cancer Registry from 1995 to 2003 were used in the analyses. Results: Compared to NHWs, Hispanics were significantly more likely to be younger (56.5 vs. 63.3 years), to present with stage III/IV disease (12.2% vs. 8.0%), have a higher proportion of poorly differentiated tumors (31.8% vs. 24.5%), and tumors 2 cm or larger (50.8% vs. 39.1%). Hispanic women were significantly less likely to have estrogen receptor positive (ER+) and progesterone receptor positive (PR+) tumors than NHWs, with differences being more pronounced among younger women. When we assessed the independent effects of age and tumor characteristics in a multivariate model, compared to NHWs, Hispanic women were found to be younger (odds ratio [OR]=0.97; 95% confidence interval [CI]=0.97-0.98), have less PR+ tumors (OR=0.85; 95% CI=0.74-0.98), have more poorly differentiated (OR=1.56; 95% CI=1.23-1.96) and larger (OR=1.05; 95% CI=1.02-1.08) tumors. Conclusions: Our results indicate that breast cancer in Hispanic women presents with a more aggressive disease profile and less favorable prognosis relative to NHWs. These data suggest a potential differential influence of breast cancer risk factors on the disease profile in Hispanic women.</p>
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<p>Chronic Stress and Early Menarche: Is Central Fat the Missing Link? The NHLBI Growth and Health Study Braithwaite D, Epel ES, Moore D, Ritchie L, Wang M, Deardorff J, Miller SM, Crawford P, and Hiatt RA Background: Early age at menarche is a well established risk factor for breast cancer. Chronic stressors like low socioeconomic status (SES) and adverse family circumstances have been linked to early menarche but the mechanisms that mediate this relationship remain an enigma. We hypothesized that central fat would mediate the effects of chronic stress on the timing of menarche. Methods: Using the NHLBI Growth and Health observational study data on 2,379 girls (aged 9-10 years at baseline and followed through adolescence with annual exams), we performed logistic regression analyses to estimate odds ratios for the association between chronic stress, central fat, and risk of early menarche (defined as age < 12 y). We also used bootstrap sampling to test whether the association between chronic stress and early menarche was mediated by central fat accumulation. Results: Low SES and stepfather presence were two features of an adverse psychosocial environment that emerged as the strongest predictors of early menarche (OR=1.27, 95%CI 1.09 to 1.46, and OR=1.61, 95%CI 1.19 to 2.08 respectively). Central fat mediated the association between menarche timing and low SES (95%CI for the mediating effect was 22.50% to 72.83%) as well as stepfather presence (95%CI 9.53% to 49.99%). Conclusions: Chronic stress exposures, low SES and stepfather presence (a marker of adverse family circumstances), are associated with a greater risk of early menarche. Furthermore, as predicted, our longitudinal findings support the hypothesis that this association is mediated by central fat accumulation.</p>	<p>Association Between Birthplace, Years of US Residence and Alcohol Consumption with Metabolic Syndrome in Mexican-Americans: the Mano A Mano Mexican-American Cohort Study. Lopez DS, Barcenas C, Bondy M, and Strom S We assessed the association between acculturation, lifestyle factors and metabolic syndrome (MetS) in Mexican-Americans (MA's) from the Mano a Mano Mexican American Cohort Study. Following a nested case-control approach and using four components of the World Health Organization (WHO) criteria (type 2 diabetes, high blood pressure (HBP), body mass index (BMI) > 30kg/m2, Hypercholesterolemia), we identified 480 cases of MetS using self-reported information. We randomly selected a control group of 2450 individuals frequency-matched by age. Logistic regression was used to measure the association between multiple emographic, acculturation and lifestyle variables with MetS. We also performed the following subset analyses: 1- cases that met 3 of the WHO criteria (diabetes, HBP, BMI); 2- adjusting for medical insurance; 3-Mexican-born individuals. US-born individuals had a 61% increased risk of having MetS compared to Mexican-born participants (odds ratio (OR) 1.61; 95%CI: 1.21–2.15). There was a reduced risk of MetS for alcohol consumption (ever vs. never, OR 0.74; 95%CI: 0.57–0.95). The models were adjusted for gender, age, education, physical activity, smoking and acculturation. Both associations held in the first and second subset analyses. In the last subset analysis there was a significant increase in the risk of MetS for increments of years of US residence. Using '<5 years' of US residence as the reference category, those who had lived in the US for 15+ years had an OR of 2.45 (95%CI: 1.37–4.37). Birthplace, years of US residence and alcohol consumption seem to be associated with the MetS in MA's. Targeting ethnic-specific groups and modifiable lifestyle factors can be beneficial for the development of cancer prevention studies.</p>

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<p>Comparison of Current Lung Cancer Risk Models Anthony M. D'Amelio Jr., Qiong Dong, Margaret R. Spitz, Carol J. Etzel Background: Since only a fraction of long-term smokers will develop lung cancer (LC), there is a need for risk prediction models to identify high-risk subgroups. Two LC models have been proposed by Bach et al. (based on a cohort of patients recruited for the Carotene and Retinol Efficacy Trial) and Colditz et al. (developed from a group consensus of the Harvard Cancer Risk Group members). The purpose of this analysis is to compare the discriminatory performance of these models. Methods: We used data from ongoing case-control study of LC involving 1374 Caucasian lung cancer cases recruited at MDACC and 1526 Caucasian controls recruited from a local multi-specialty physician practice in Houston. We calculated 10-year LC risk and compared the discriminatory power, as measured by the area under the curve of the receiver-operator characteristic curve, among the three models. Results: The discriminatory power of the Colditz [0.56 (95% CI = 0.54 to 0.58)] was slightly higher, but comparable to the Bach [0.53 (95% CI = 0.51 to 0.55)] model. Upon stratification by gender and age (<50 vs. ≥ 50 years), these two models had comparable discriminatory ability. Conclusion: The discriminatory power of these two LC risk models were below 70%, which highlights the difficulty in developing effective risk models for LC, using only well established epidemiologic data. Further research is needed to improve model performance by incorporating other risk factors including comorbidities and genetic risk factors.</p>	<p>CANCER MORTALITY IN THE U.S. WORKFORCE: IDENTIFICATION OF OCCUPATIONS IN NEED OF SCREENING INTERVENTIONS Lee D, Fleming LE, Chung Bridges K, McCollister K, LeBlanc A, Caban A, Christ SL Introduction: The objective of this study was to assess the risk of cancer mortality in a nationally representative sample of US workers to identify occupational groups which should be targeted for screening interventions. Methods: National Death Index linkage identified 864 colon cancer, 739 breast cancer, 90 cervical cancer, and 398 prostate cancer deaths among 444,916 workers who participated in the 1986-1994 National Health Interview Surveys (NHIS). Gender-specific Cox regression analyses were completed with adjustment for survey design, age, race, education, and body mass index. Results: Female workers employed in farming, fishing, and forestry occupations had a significantly elevated risk for colon cancer mortality relative to all other workers (hazard ratio= 2.21 [95% confidence interval=1.09-4.48]). Other occupational groups with elevated, but non-significant site-specific cancer mortality risk included: female machine operators, assemblers, and inspectors (cervical cancer: 1.58 [0.81-3.07]), and male handlers, equipment cleaners, helpers, and laborers (prostate cancer: 1.54 [0.88-2.68]). Conclusions: Select blue collar workers are at increased risk of mortality due to colon, cervical, and prostate cancer. Worksite-based cancer screening programs are currently underutilized, especially in blue-collar occupational groups. The development of targeted screening programs may help to reduce the cancer mortality disparity in these high risk worker groups.</p>
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<p>Red meat consumption and the risk of lung cancer: a systematic review Edward Hammond, Kristina Boyd, Anthony Alberg, for the JHU Diet Review Team. Johns Hopkins School of Public Health, Baltimore, MD Objective: To systematically review the epidemiologic evidence that red meat intake, including beef and pork, may be associated with lung cancer risk. This work was funded by WCRF/AICR for their report on nutrition and cancer, and their conclusions may differ from ours as WCRF includes other data and uses different criteria for judgment. Methods: Several bibliographic databases were searched to identify epidemiologic studies published between 1966 and 2005 that examined the association between red meat intake and lung cancer. After duplicate review, 4 cohort studies and 14 case-control studies were included. Results: In case-control studies, the highest-versus-lowest categories of total red meat consumption were associated with increased lung cancer risk overall (summary OR (sOR) =1.53, 95% CI: 1.28-1.81). Associations in the direction of increased risk were observed in analyses limited to nonsmokers (sOR 1.65) and current smokers (sOR 1.36). Associations of similar magnitude, but not statistically significant, were observed for beef, and processed meats such as bacon, ham, and sausage. In cohort studies, the association between processed meat intake and lung cancer was weaker (sRR 1.20, 95% CI: 0.86-1.66). Conclusions: The evidence hints that people with the highest intakes of total red meat and processed meat may have a slightly higher lung cancer risk than those with the lowest intakes. Additional cohort studies will help to clarify this question.</p>	<p>Delays in diagnosis: who receives timely follow-up after an abnormal mammogram? Aiello E, Buist D, Haneuse S, Elmore JG Background: Delays in diagnostic work-up can result in sleepless nights for women with an abnormal mammogram. We examined characteristics of women related follow-up time after an abnormal mammogram. Methods: We followed 27,060 screening and 6,513 diagnostic mammograms done at Group Health from 1996-2003. We included women who had a biopsy, surgical evaluation, fine needle aspiration or ultrasound/diagnostic imaging within 180 days of their mammogram. We evaluated follow-up within 7 days (vs. >7), ≤14 days (vs. >14), and ≤21 days (vs. >21). Using logistic regression, we determined whether the odds of follow-up were associated with breast cancer risk factors (age, body mass index, family history, biopsy history, or breast symptoms). Results: Adjusting for all risk factors, women were more likely to return for follow-up within 7 days of a screening mammogram if they had breast symptoms vs. none (odds ratio, 95% confidence interval: 1.64, 1.48-1.83) or 2+ previous biopsies vs. none (1.52, 1.36-1.69); results were similar at 14 and 21 days. Women were more likely to have follow-up within 7 days of a diagnostic mammogram if they had breast symptoms vs. none (2.16, 1.87-2.49), with similar results at 14 and 21 days. Conclusions: Women with risk factors for breast cancer were more likely to return for follow-up sooner than women without risk factors. Ensuring that all women return for follow-up in a timely manner should be a priority of breast clinics regardless of risk factors.</p>

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<p>Methylenetetrahydrofolate reductase C677T is associated with an earlier age at colorectal cancer onset in Lynch syndrome. M. Pande, C. I. Amos, P. M. Lynch, M. L. Frazier Purpose: To investigate the role of the MTHFR C677T polymorphism as a modifier of the age of colorectal cancer (CRC) onset in Lynch syndrome. Background: Individuals with Lynch syndrome carry an inherited germline mutation in DNA mismatch repair (MMR) genes predisposing them to early onset CRC. The median age of CRC onset is ~45 years but there is large variation in onset age. The C677T single nucleotide polymorphism (SNP) in MTHFR, an enzyme regulating folate metabolism (which affects DNA synthesis and methylation) has been found to influence risk for sporadic CRC. Methods: DNA from 235 confirmed MMR gene mutation carriers with and without CRC, was genotyped for the C677T SNP. Results: Kaplan Meier survival curves comparing the variant genotypes CT and TT with the referent CC for age at CRC onset were significantly different by genotype (Log rank test $p=0.017$ and trend test $p=0.027$) The median age of CRC onset was 3.5 years later for CT+TT genotypes than for CC. Hazard ratio for the CT+TT genotypes versus the CC was 0.66 (95% CI: 0.46 – 0.93). Conclusion: These data suggest that the MTHFR C677T polymorphism modifies the age of CRC onset in Lynch syndrome and the variant 677T allele has a protective effect for later onset age. This knowledge, combined with information on other genetic and environmental risk factors could help to provide better risk assessment and customized screening.</p>	<p>Florida Bladder Cancer Trends 1981-2003: a Population Still at Risk Nieder AM, MacKinnon JA, Lee DJ, Huang Y, Fleming LE, Koniaris LG INTRODUCTION: Bladder cancer (BC) continues to affect nearly 60,000 Americans each year with tobacco use identified as the most important modifiable risk factor. We sought to identify stage-specific trends BC rates in a large state registry with smoking rates similar to national averages. METHODS: Florida's cancer registry was utilized to compare BC incidence rates (per 100,000). Age-adjusted incidence trends were expressed as annual percent change (APC) for years 1981-2003. RESULTS: Overall rates declined from 24.3 in 1981 to 20.6 in 2003. Insitu cases rose from 1.0 to 8.7 [8.3-9.1] (APC=9.5 [$p<0.05$]). Locally-staged BC declined from 17.6 to 8.4 (APC= -2.7 [$p<0.05$]); regional/distant incidence declined, but less so (2.6 to 1.7; APC= -1.0 [$p<0.05$]). In 2003 blacks had much lower rates of locally-staged cancer relative to whites (4.2 vs. 8.7); rates of regional/ distant cancer were more similar (1.5 vs. 1.7). CONCLUSIONS: Against a background of declining overall incidence, rates of Insitu BC have increased dramatically, possibly reflecting advances in early diagnosis. Blacks in Florida have much lower rates of locally-staged bladder cancer, possibly reflecting lower historical tobacco use relative to whites. However, differences in regional/distant rates were not nearly as large. Continued reductions in BC incidence are likely to occur as long as smoking rates continue to decline. Advances in early detection of BC are needed to reduce the burden of late-stage disease. Blacks may be an important population for targeted screening programs.</p>
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<p>Examining the Characteristics of Unstaged Colorectal Cancer Cases. Worthington J, Koroukian SM, Cooper G. Purpose: Population-based data that characterize unstaged cancer in colorectal cancer patients is dearth. Methods: Data on unstaged colorectal cancer cases diagnosed between 1991 and 2003 were identified from the SEER data. The study consisted only of cases < 65 years old to limit comorbidity. Factors examined included demographics, SEER location, and details on stage, including tumor size (T), number of lymph nodes (N) and metastases (M). We determined which of the T, N, and/or M were missing. Characteristics of unstaged cases were compared to staged cases using chi-square and logistic regression. Results: Colorectal cases < 65 years of age, 104,138 (96.3%) staged and 3,968 (3.7%) unstaged, were identified from the SEER data. Compared to cases whose stage was known, unstaged colorectal cancer cases were more likely to be younger, African American, and male (all $p<0.001$). SEER sites with the highest percentage of unstaged colorectal cases were Louisiana (16.9%), New Jersey (10.4%), and Connecticut (9.9%). 83.7% of unstaged cases were missing T, 84.7% were missing N, and 97% were missing M. Demographics and SEER sites were statistically significant in the multivariate model ($p<0.05$). Conclusion: Unstaged and staged colorectal cancer cases differed significantly by demographics and geography. The main factor which prevented deriving stage was M. Studies including stage should acknowledge that patients who are excluded due to missing stage may differ from those patients included in the analysis.</p>	<p>Burden of Human Papillomavirus (HPV) Related Anogenital Cancers in U.S. Women Authors: Margaret Watson, MPH; Mona Saraiya, MD, MPH; Stephanie Foster, MPH, MA; Faruque Ahmed, MD, PhD Human Papillomavirus (HPV) is responsible for 100% of cervical cancers, 90% of anal cancers, and 40% of vulvar and vaginal cancers. Recent licensure of an HPV vaccine protecting against HPV 16 and 18, the two types that cause the majority of cervical and other anogenital cancers as well as cervical precancerous lesions, prompted this assessment of the burden of these cancers. Using data from 39 registries in CDC's National Program of Cancer Registries and/or NCI's SEER Program for cases diagnosed from 1998-2003, covering 83% of the U.S. population, we assessed the epidemiology of invasive anogenital cancers among females. Incidence rates were age-adjusted to the 2000 U.S. standard population and are expressed per 100,000 females. The average annual incidence rates during 1998-2003 are: cervical, 9.23; vulvar, 2.31; anal, 1.54; and vaginal, 0.71. Whites have the highest incidence rate of vulvar and anal cancers (2.40 and 1.59, respectively); Hispanics have the highest rate of cervical cancers (14.73), and Blacks have the highest rate of vaginal cancers (1.10). Varying rates of HPV-related cancers between anogenital sites suggest that the HPV vaccine will have a differential effect on the rates of these cancers. Additionally, variations in rates by race and geographic regions may suggest the need to develop HPV vaccination promotion strategies that are regionally and culturally specific.</p>

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<p>Associations among P16, MGMT, and GSTP1 hypermethylation, dietary folate intake and MTHFR C677T polymorphism on the risks of Head and Neck Cancers. Chuang S-C, Cao W, Cui Y, Rao J-Y, Morgenstern H, Greenland Sander, Tashkin DP, Cozen W, Mack TM, Zhang Z-F One carbon metabolism may affect DNA methylation and is associated with head and neck cancer. This study was aimed to evaluate the association among MTHFR C677T polymorphism, folate intake, and p16, MGMT, and GSTP1 hypermethylation and their joint effect on the head and neck cancer risks. This population-based case-control study comprised of 601 new head and neck cancer cases (303 oral, 100 pharyngeal, 90 laryngeal, and 108 esophageal cancers) and 1,040 population controls. MSP was used to measure the hypermethylation of p16, MGMT, and GSTP1. The MTHFR677 was assayed by PCR-RFLP. Folate intake was calculated from the FFQ. Unconditional logistic regression models were fitted to assess the main effects and the effect modifications for the p16, MGMT, and GSTP1 hypermethylation, MTHFR677, and folate intake. With the adjustment to potential confounders, MGMT hypermethylation was associated with pharyngeal cancer (OR=2.13, 95% CI=1.24-3.64) and MTHFR677 T allele was associated with esophageal cancer (OR=1.61, 95% CI=1.00-2.58). Low folate intake was marginally associated with p16 hypermethylation. The associations were stronger in people with MTHFR677 T allele. In conclusion, our study suggested an association between MTHFR677 and esophageal cancer and between MGMT hypermethylation and pharyngeal cancer. The association between p16 hypermethylation and low folate intake was stronger in people with MTHFR677 T allele.</p>	<p>Predictors of Risk Reducing Surgeries in BRCA Carriers. Beattie MS, Crawford B, Chen LM, Vittinghoff E, Lin F, Ziegler J. Purpose: To determine the variables and time course associated with Risk Reducing Mastectomy (RRM) and Risk Reducing Salpingo-Oophrectomy (RRSO) in BRCA carriers. Methods: Within the UCSF Cancer Risk Program cohort, we identified BRCA carriers who were candidates for RRM and RRSO. Before BRCA testing, demographic variables, family history, and personal cancer history were carefully collected. Dates of BRCA blood draw, results disclosure, and (if chosen) RRM and RRSO were recorded. Multiple logistic regression was used to determine variables independently associated with RRM and RRSO. Results: 263 female BRCA carriers were candidates for RRM and/or RRSO. Median age at testing was 47 (range 22-78), and median follow up time was 3.7 yrs (range 6 mos-10 yrs). 32% chose RRM and 54% chose RRSO. For those who chose surgeries, median time to RRM was 5 months and median time to RRSO was 4 months. Table 1 below lists the odds ratios and 95% CI for predictors of surgery, where age below 40 is referent. Predictor RRM OR RRSO OR Age 40-49 1.5 (0.6-4.0) 3.1 (1.3-7.2) Age 50-59 1.2 (0.4-3.4) 4.4 (1.8-10) Age over 59 0.7 (0.2-1.8) 0.7 (0.3-1.9) Breast Cancer 2.8 (1.5-5.2) 2.6 (1.5-5) Conclusions: Age predicts RRSO, and personal history of breast cancer predicts RRM and RRSO in BRCA carriers. Most BRCA carriers who choose RRM and/or RRSO do so within 6 months of testing. BRCA carriers over 59 have a relatively low uptake of RRM and RRSO.</p>
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<p>Single Nucleotide Polymorphisms in Inflammation Genes Effect Survival of Patients with Brain Tumors. Scheurer ME, Cao Y, El-Zein R, Bondy ML Purpose: Adult glioma, while one of the rarest forms of solid tumors, is also one of the most lethal. Recent literature suggests that inflammatory process likely contribute to gliomagenesis and also differences in survival. We examined the effects on survival of polymorphisms in key anti-inflammation genes: Interleukin (IL)-6, IL-8, Tumor Necrosis Factor (TNF)-alpha, and Nuclear Factor-kappa B (NF-kappaB). Methods: From the Harris County Adult Glioma Study, we included here 668 glioma cases of various histologies grouped into three main subtypes: low-grade, anaplastic, and high-grade. Kaplan-Mier Curves were constructed to assess differences in survival based on SNPs in IL-6, TNF-alpha, IL-8, and NF-kappaB pro-inflammation genes. Curves were also examined by histologic subtype and by administration of radiation therapy for anaplastic tumors. Statistical tests for differences in survival curves were performed using the Log-rank test. Results: High producers of IL-6 and low producers of TNF-alpha have significantly better survival, and combinations of these SNPs along with those in IL-8 support the existence of gene-gene interaction. We also found significant differences in survival by histology (low-grade, anaplastic, and high-grade) and in response to radiation therapy (among patients with anaplastic tumors) with the different polymorphisms indicating a gene-environment interaction. Conclusions: These data provide rationale for the careful evaluation of the role of polymorphisms in inflammation genes in glioma risk and outcome. The pooled analysis of an expanded set of inflammation genes is planned and will include cases and controls from two large population-based studies. From these analyses, we hope to be able to better classify these tumors and understand ways to intervene in their carcinogenesis.</p>	<p>Neighborhood change, and stage of diagnosis of breast cancer among non-Hispanic white, non-Hispanic African American, Hispanic women in Cook County, Illinois. Warnecke R, et al. Purpose: We examined the differential effects of neighborhood change on stage at diagnosis of breast cancer among non-Hispanic white, non-Hispanic African American and Hispanic women using breast cancer data from the Illinois State Cancer Registry for Cook County, Illinois between 1994 and 2000 and 1990 and 2000 Census data. Methods: We examined the differential effects of neighborhood change on stage at diagnosis of breast cancer among non-Hispanic white, non-Hispanic African American and Hispanic women. All census tracts within Cook County, Illinois were classified based on 1990 census data as either affluent or non-affluent using variables from the Harvard School of Public Health Project Human Development in Chicago Neighborhoods. The results of a two-level hierarchical statistical model indicated that women who lived in changed areas between 1990 and 2000 had an 11% greater likelihood of presenting with distant metastatic breast cancer than women in stable neighborhoods (OR 1.110, CI 0.096,1.248, p>.0425, one tailed). Change between 1990 and 2000 in four variables: percent change owner-occupied housing value; percent change in median household income; percent change in managerial or professional occupations; and percent change in college graduates interacted with poverty. Women who lived in changed non-affluent areas were 14% more likely than women in non-affluent stable neighborhoods to present with breast cancers that were stage 3 or 4 (OR 1.14, CI 0.979,1.33, p>.045,1-tailed).Summary: Contextual change in neighborhoods appears to be related among women living there to greater risk for late stage diagnosis of breast cancer. The effect is strongest among women in tracts defined as non-affluent where women have fewer options for response to change.</p>

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<p>Interleukin (IL)-10 and interferon gamma receptor 1 (IFNGR1) polymorphisms and lung cancer (LC) in a population-based case-control study. Oh SS, Morgenstern H, Greenland S, Tashkin DP, Papp J, Lee YC, Cozen W, Mack TM, Zhang ZF. Purpose: Although the inflammation pathway may be associated with development of LC, few epidemiologic studies have explored the relationship between IL-10, IFNGR1, and LC. We investigated the association of LC with single nucleotide polymorphisms (SNPs) of these genes in a population-based case-control study in Los Angeles, California. Methods: Two SNPs were assayed for IL-10: 7334T>C (IL-10-819) and -6653A>C (IL-10-592). A third SNP in the IFNGR gene was measured (IFNGR1-01): Ex7+189T→G. We examined associations of these SNPs with LC using 611 cases and 1,040 controls. Buccal cells were collected for DNA, and epidemiologic data were obtained from standardized in-person interviews. An unconditional logistic regression model was used to estimate odds ratios, adjusting for age, gender, ethnicity, educational level, and tobacco smoking. Results: LC was positively associated with IL-10-819 (adjusted odds ratio [ORa] = 1.73, 95% confidence limits [CI] = 1.07, 2.78) and IFNGR1-01 (ORa = 2.17, 95% CI = 0.87, 5.39). The LC association for IL-10-819 was greater for women, African-Americans, and adenocarcinomas. Tobacco smoking modified the SNP-LC association the most for IFNGR1-01 (ORa for joint effect = 10.15, 95% CI = 3.88, 26.56). Conclusion: Our results support the hypothesis that the inflammation pathway markers for IL-10 and IFNGR1 are involved in lung carcinogenesis, and that tobacco smoking appears to modify the associations of these SNPs with LC. Given the increasing connection between inflammation and cancer, systematic identification of susceptibility markers in the inflammation pathway may be of importance in risk and gene-environmental interaction assessment.</p>	<p>An Empirical Evaluation of the Random Forests Classifier Models for Variable Selection in a Large-scale Lung Cancer Case-control Study Qing Zhang Random Forests is a machine learning-based classification algorithm developed by Leo Breiman and Adele Cutler for complex data analysis. Previous research has indicated that it has excellent statistical properties when predictors are noisy and the number of variables is much larger than the number of observations. This study conducted an empirical evaluation of the method of Random Forests for variable selection using data from a large-scale lung cancer case-control study. A novel way of variable selection was proposed to automatically select prognostic factors without being adversely affected by multiple collinearities. This empirical study demonstrated that Random Forests can deal effectively and accurately with a large number of predictors simultaneously without overfitting. Variable selection and ranking was found to be robust with respect to permutations in the input variable set, sample size, collinearities, and interactions. Synthetic positive controls were used to validate the Random Forests method. The potential use of Random Forests as an adjunct to logistic regression was also examined.</p>
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<p>Duration and Type of Postmenopausal Hormone Use and Ovarian Cancer KJ Wernli, PA Newcomb, A Trentham Dietz, JM Hampton, EY Wong, KM Egan While long-term use of oral contraceptives is well established to reduce ovarian cancer risk, the influence of postmenopausal hormones (PMH) is less clear. Long-term use or PMH preparation type may be of importance. We explored this association in a population-based case-control study of ovarian cancer conducted in Massachusetts and Wisconsin during 1993-1995 and 1998-2001. Information on PMH use and other potential risk factors for ovarian cancer was obtained via telephone interview. Exposures histories were compared in a total of 552 incident invasive epithelial ovarian cancers identified from state-wide cancer registries and 4337 similarly-aged population controls randomly selected from lists of licensed drivers and Medicare beneficiaries. The relative risk (RR) and 95% confidence intervals (CI) for PMH use was estimated using multivariable logistic regression. Women that ever used PMH had a 1.39-fold increase in risk (95% CI: 1.14-1.70) when compared to never users of PMH. These elevated risk estimates were observed with use of estrogen-only preparations (1.94; 95% CI: 1.52-2.47) but not with combined estrogen-progestin preparations (0.78; 95% CI: 0.57-1.06), with evidence of significant heterogeneity by PMH type ($p < 0.0001$). Long-term users of estrogen-only preparations also experienced elevations in risk. These data suggest that use of estrogen-only PMH preparations may modestly increase ovarian cancer risk.</p>	<p>Family History and Colorectal Cancer Survival in Women. Kirchhoff AC, Newcomb PA, Trentham-Dietz A, Hampton JM, Nichols HB Family history of colorectal cancer (CRC) can be a phenotype for several genetic mutations. This history may increase CRC risk and may also be related to survival. We investigated self-reported family history of CRC associated with colorectal cancer survival in Wisconsin women diagnosed with CRC using data from two case-control studies conducted during 1990-92 and 1999-2001. Additionally, we analyzed CRC survival for cases with 2 or more relatives diagnosed with CRC, which may indicate an inherited mutation. CRC cases (N=1,391) were telephone interviewed one-year after diagnosis during 1990-92 (N=691) and 1999-2001 (N=700). Average diagnosis age was 63.3 years (SD=9.1). Death information through December 31, 2004 came from the Wisconsin Office of Vital Records and the National Death Index; follow-up averaged 7.9 years. Of 1,391 cases, 491 were deceased due to any cause and 268 due to CRC. Cox proportional hazards estimates for risk of CRC death showed a statistically non-significant trend towards better survival among women with any CRC family history (N=260; 19%) after multivariate adjustment that included disease extent (Hazard Ratio (HR)=0.84, 95% Confidence Interval (CI): 0.60-1.18). Women with only 1 family member diagnosed with CRC (N=214; 16%) had survival similar to women with no CRC family history (HR 1.02, 95% CI 0.72-1.46) while women with 2 or more family members with CRC (N=46; 3%) showed significantly better survival when compared to no family history (HR 0.30, 95% CI 0.11-0.83). Although individuals with a CRC family history are diagnosed with the disease more often than the general population, these data suggest better survival after diagnosis for some women with CRC family history.</p>

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<p>Adherence to Physician Recommendations for Cancer Screening in Obese Women. Ferrante JM, Chen P, Crabtree BF, Wartenberg DE Purpose: Reasons obese women are less likely to obtain mammograms and Pap smears are poorly understood. This study evaluated associations between body mass index (BMI) and receipt of and adherence to physician recommendations for mammography and Pap smear. Methods: Data from the 2000 National Health Interview Survey (8289 women aged 40-74 years) were analyzed using logistic regression. Women with prior hysterectomy were excluded for Pap smear analyses (N=5521). Outcome measures were being up-to-date with screening, receipt of physician recommendations, and women's adherence to physician recommendations for mammography and Pap smear. Results: After adjusting for sociodemographic variables, health care access, health habits, and comorbidity, severely obese women (BMI > 40 kg/m²) were less likely to have mammography within 2 years (OR 0.50; 95% CI 0.37, 0.68) and Pap smear within 3 years (OR, 0.43; 95% CI, 0.27,0.70). Obese women were as likely as normal weight women to receive physician recommendations for mammography and Pap smear. Severely obese women were less likely to adhere to physician recommendation for mammography (OR 0.49; 95% CI, 0.32-0.76). Women in all obese categories (BMI > 30 kg/m²) were less likely to adhere to physician recommendation for Pap smear (OR's ranged 0.17-0.28; p<0.001). Conclusions: Obese women are less likely to adhere to physician recommendations for breast and cervical cancer screening. Interventions focusing solely on increasing physician recommendations for mammography and Pap smears will probably be insufficient for obese women. Alternative strategies are needed to make cancer screening more comfortable and acceptable for this high-risk group.</p>	<p>Do Computerized Clinical Reminders Hinder Cancer Prevention in Patients with Chronic Disease? Litaker DG Purpose: We examined completion of cancer prevention-related computerized clinical reminders (CCRs) as the total number and completion rates of all active CCRs increased in a large sample of individuals with diabetes mellitus. Methods: A random sample of diabetic patients seen at each of the VAs 138 hospital facilities in 2003-4 provided data on CCR completion for colorectal cancer screening, prostate cancer counseling, and tobacco use assessment. Predictor variables included the number of active CCRs for each patient and the facility-averaged proportion of all CCRs completed for eligible individuals. Multilevel models assessed their association with the probability of completing each cancer prevention reminder, accounting for clustering effects by facility. Results: Data on 28,244 veterans with diabetes were available. The grand mean of all CCRs per patient was 31.2±10.7; the grand mean proportion of all CCRs completed was 67.9±10.1%. A greater total number of active CCRs was associated with a lower odds ratio for completing colorectal cancer screening (0.97 [0.96, 0.98]) or prostate cancer counseling (0.97 [0.95, 0.99]), but had no association with tobacco use assessment (1.02 [0.99, 1.05]). In contrast, individuals seen at facilities with higher overall reminder completion rates had uniformly higher probabilities of cancer prevention-related CCRs completion (OR range 1.17-1.37). Conclusions: Despite an increasing number of CCRs, higher overall CCR completion rates are an attribute of VA facilities at which cancer prevention is performed more often. Studies examining the organizational features of these facilities are needed to identify systems that facilitate delivery of cancer prevention services, while successfully managing the competing demands of chronic disease care.</p>
55	56 - T
<p>Correlates of Colorectal Cancer Screening in Rural Maryland. Mishra SI, Baquet CR, Bramble J, Ellison G. Purpose: We examined the prevalence and predictors of receipt of colorectal cancer screening in rural geographies of Maryland. Methods: We conducted a random digit dial telephone survey of 251 adults in the three counties comprising the lower Eastern Shore of Maryland. Primary outcome measures included self-reported utilization (ever had and recency of exam) of age-appropriate screening exams such as fecal occult blood test (FOBT), sigmoidoscopy, and colonoscopy. Results: Overall, in terms of ever obtaining a screening exam, 62.2% of adults reported obtaining a FOBT, and 28.7% and 54.6%, respectively, reported obtaining a sigmoidoscopy or colonoscopy exam. Multivariate predictors for self-reported ever obtaining a non-endoscopic (FOBT) and an endoscopic exam were quite different. Self-reported utilization of both non-endoscopic and endoscopic screening exams were predicted by having insurance coverage (all outcomes), discussions of screening exams with family and friends (FOBT and colonoscopy), and a health professional recommending the exam (FOBT and sigmoidoscopy). In addition, being male and belief in the efficacy of cancer being cured if detected early significantly increased the likelihood of self-reporting ever having had a sigmoidoscopy. Furthermore, being aware that Medicare provided coverage for Medicare covered adults to obtain a colonoscopy and the lack of need for informational social support (i.e., not needing help to decide whether a colonoscopy was needed) significantly increased the likelihood of self-reporting ever having had a colonoscopy to screen for colorectal cancer. Conclusions: Tailored and targeted educational interventions aimed at the community and health care professionals to enhance knowledge about colorectal cancer screening exams and their availability through federal and/or state programs are likely to improve receipt and utilization of these cancer screening exams.</p>	<p>Does travel distance matter? Breast cancer stage and its risk factors in Kentucky. B. Huang, O Johnson, M. Dignan, University of Kentucky, Lexington, KY. Purpose: The aim of this study was to examine distance from the residences of women diagnosed with breast cancer to the nearest mammography facility as a risk factor for advanced stage (TNM stage III and IV) at diagnosis of breast cancer in Kentucky. Methods & Results: 1999-2003 Kentucky Cancer Registry data were used for this study. A total of 12,324 women, age 40 and older at diagnosis with no previous history of cancer were included for the analysis. Travel distance to the nearest mammogram facility was calculated by utilizing the ArcGIS version 9.1 Network Analyst. The average travel distance for women with advanced stage diagnosis was 6.64 miles (N=1405) while it was 5.94 miles (N=10919) for women with early stage diagnosis (In Situ, TNM I and II). After controlling for age at diagnosis, insurance, race and county education level, the odds of having breast cancer diagnosed at advanced stage were 34% greater for women residing at least 15 miles from a mammography facility compared to women who reside within 15 miles of a mammography facility (odds ratio=1.34, p-value = 0.002). Conclusion: Longer travel distance may adversely affect early cancer diagnosis for the population living in this rural state. Using the ArcGIS technique to measure travel distance facilitates the process of identifying and characterizing at risk groups.</p>

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<p>Predictors of Colorectal Cancer Screening in a Multiethnic Primary Care Population. Shokar NK, Carlson CA, Weller SC Purpose: To describe factors predicting colorectal cancer (CRC) screening in a multiethnic primary care population. Methods: A cross-sectional survey of subjects aged 50-80 and average CRC risk, were recruited from a primary care clinic during 2004-2005. The sample was stratified by race/ethnicity, gender, and age. Scales were developed around the health belief model, knowledge and fatalism. Up-to-date CRC screening was the outcome variable. Bivariate and multivariate analyses were used to see how well the constructs predicted screening. Results: The sample comprised Whites 36.4% (n= 204), African-Americans 34.6% (n=194) and Hispanics 28.9% (n= 162). Mean age: 64.3 years, males: 47.5%, health insurance: 96.8%. Up-to-date CRC screening was lower in minorities (69.6% Whites, 56.7% African Americans, 48.8% Hispanics, $p<0.001$) and in patients under 65 (50.5% in <65 years, and 68.8% in 65-80 years, $p<0.001$). Up-to-date CRC screening was associated with benefits ($p<0.05$), barriers ($p<0.001$), fatalism ($p<0.001$) & 2 cues to action: doctor recommendation ($p<0.001$) & gastrointestinal diagnoses ($p<0.001$). When these factors were considered together in a logistic regression analysis, the strongest predictors of screening were older age, fewer barriers, prior history of gastrointestinal diagnoses and a doctor's recommendation. Conclusion: Targeting patient barriers and doctor recommendation for screening in younger patients could increase CRC screening.</p>	<p>An Epidemiological Analysis of Breast Cancer Screening Among American Indian and Alaska Native Women: Results for the 2003 California Health Interview Survey. McCallum Jm, Rene AA, Huber JC, Green BL. Breast cancer is a leading cause of cancer death in all races and ethnicities. Although breast cancer incidence and mortality are low among American Indian and Alaska Native (AI/AN) women, rates have been increasing. Interest in this phenomenon has produced literature detailing breast cancer screening rates and its associated factors among AI/AN women. This paper utilized the 2003 California Health Interview Survey (CHIS) to investigate 1) the breast cancer screening practices of AI/AN women compared to other racial/ethnic groups and 2) the significance of several factors thought to influence breast cancer screening among AI/AN women. Descriptive statistics and binary logistic regression were employed to make comparisons across groups and to explore factors associated with AI/AN women's breast cancer screening practices. Findings from this report indicate that 1) breast cancer screening disparities do exist among Native populations, and 2) multiple factors (level of education, age, health insurance, and doctor visits) contribute to AI/AN women's breast cancer screening practices. Integrating these findings into effective policy and practice will require additional applied research initiatives.</p>
59	60 - T
<p>National Trends and Predictors for PSA Screening. Saigal CS. Introduction: The public health benefit of prostate cancer screening remains a topic of debate. Screening advocates recommend testing all men over 50 years old with a life expectancy of at least 10 years. However, conflicting evidence on screening benefits may lead its use to vary in response to non-clinical factors, including physician specialty and race. We tested this hypothesis and described national trends in PSA screening. Methods: Survey data National Ambulatory Medical Care Survey (NAMCS) was analyzed. NAMCS contains data on patient demographics and use of interventions such as PSA testing. Visits with a record of a PSA test and no diagnosis of prostate cancer were tabulated. We created a multivariable model for use of PSA testing; demographic factors, insurance status, and physician specialty were among the covariates. Results: National use of PSA screening during office visits rose by 70% from 1996 to 2000. On multivariable modeling, odds of screening were higher for those seen in 1998 and 2000, ages 50-59, and those seen in the Midwest. PSA testing was 6.4 times more likely in visits to Urologists than to Family Practice physicians. PSA testing was 50% more likely in urban regions. PSA testing was 50% less likely to occur during visits by Hispanic men than Caucasian men. Conclusions: Despite a lack of consensus as to its benefit, national use of PSA testing is rising. Men over age 80 are less likely to receive PSA tests, consistent with recommendations from PSA screening advocates. Use in men in their 70s is not different from use in men in their 50s, which may be inconsistent with a screening benefit. Non-clinical factors predict use of PSA testing. Further work is indicated into reasons Hispanic men are less likely to receive PSA tests than similar Caucasian men.</p>	<p>Factors Associated with Participation in Cancer Control Studies Among Rural Appalachian Women. Leach CR and Hatcher J Rural Appalachian women bear a disproportionate burden from many types of cancer. In addition to having fewer economic and educational sources and being medically underserved, they are also underrepresented in cancer control research. Most research on cancer prevention and control focuses on easier to reach populations such as middle to upper middle class and urban individuals. Fewer studies include underserved populations, such as women from rural Appalachia, partially due to the difficult nature of participant recruitment and retention. This paper uses two projects as case studies to illustrate barriers and facilitators to study participation among rural, underserved women. The first study examines how health and cancer beliefs developed across the life course influence cancer screening behavior among older Appalachian women. The second study is a community based participatory project where lay health advisors administer a tailored, culturally appropriate, faith-based intervention to increase the use of pap smears and appropriate follow up among rural Appalachian women. The most salient challenges to recruiting women from rural Appalachia include the stigma of cancer, competing demands, modesty, being skeptical of community "outsiders," and concerns about community benefit from academic research. On the other hand, many women were willing to participate if they felt the community would benefit from their "help" or involvement in the study or someone in the community recommended the study directly to them. Obtaining a better understanding of the issues surrounding recruitment of women from underrepresented populations into cancer control studies will enhance the ability of future researchers to more effectively recruit and retain such individuals in research studies.</p>

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<p>Racial/Ethnic Differences in Prostate Cancer Screening before Prostate Cancer Diagnosis. Hosain GM, Sanderson M, Du X, Chan W, Strom S Background: While substantial racial/ethnic disparities have been documented in prostate cancer screening, most of the studies included African Americans (AAs) and Caucasians. Although Hispanics are the largest minority group in the USA, very little has been published on their prostate cancer screening practices. Methods: This research was conducted on an existing UT MDACC dataset that included 935 prostate cancer patients who were recruited between 1995 and 2004. We compared the screening practices of Hispanics, AAs and Caucasians. Results: Screening rate was highest among the Caucasians (66.1%) and lowest (44.2%) among the Hispanics. Bivariate analysis shows that both AAs and Hispanics were significantly less (OR=.69, 95%CI=.50-.92 and OR=.41, 95%CI=.29-.57 respectively) likely to undergo screening test compared to Caucasians. Furthermore Hispanics were also significantly less (OR=.59, 95%CI=.42-.83) likely than AAs to have had screening test. After controlling for education, annual income, marital status, annual check-up and family history of prostate cancer, the difference disappeared between AAs and Caucasians (OR=.90, 95%CI=.64-1.26), whereas for Hispanics, the difference remained significant with Caucasians (OR=.60, 95%CI=.41-.88) and AAs (OR=.67, 95% CI=.46-.97). Conclusions: In this study population, Hispanics race by itself remained as a significant risk factor for low screening rates. Special attention should be given to the Hispanic ethnic group to reduce cancer health disparities.</p>	<p>African American women and breast cancer educational resources: Is there a match between reading ability and written materials? Finnie RK, Powe BD Purpose: To evaluate the match between written breast cancer materials and the ability of women to read them. Methods: The Patient / Provider / System Model guided this exploratory pilot study that assessed the readability of two widely available breast cancer pamphlets describing screening and the women's ability to comprehend the content. Data were collected using the breast cancer test of functional health literacy (BC-TOFHLA) and a demographic questionnaire. Results: A non-random sample of African American women (N = 34, mean age = 31 years, mean education = 13 years), was recruited during a visit to their primary care provider. The mean score on the BC -TOFHLA was 13 out of 40 points. Literacy level of the pamphlets was assessed at the 10th grade level using the SMOG readability formula. These finding suggests that the reading level of the pamphlets may be too high which may influence the women's ability to understand the information. Despite the ongoing reliance on the written word for patient education, health literacy remains an underexamined aspect of breast cancer control efforts. Intervention at the organizational level is needed to identify more sustainable ways to target materials to specific populations.</p>
63	64
<p>Optimizing a Risk Prediction Model for Individual Colorectal Cancer Risk Assessment. Johnson C, Ensor J, Vogelaar I, Amos C, Spitz M, Peterson S, Zauber A, Levin B, Berry D. We built a colorectal cancer (CRC) risk prediction model based on a systematic review of epidemiologic and clinical factors. Statistical aspects were challenging because of the need to combine different types of studies, measurements and categories of risk, as well as the consideration of competing diseases. Methods: We performed a meta-analysis of the estimated risks abstracted from a systematic review of the literature. Microsimulation modeling determined the assessment of risk after colonoscopy and fecal occult blood testing. Results: We included a total of 13 protective and risk factors, excluding age, race, and sex in the model. Evidence was abstracted from 99 different cohort studies, population-based case-control studies, nested case-control studies, and clinical trials. For dichotomous risk factors, case-weighted averages of the published risks were developed. For multiple level factors, segmented case-weighted least squares regression estimated the parameters and change-points of each risk factor model. Two levels of adjustments were made to the published findings. First, to permit combining the published findings, we represented the different category ranges with averages from USA national survey data. Second, we adjusted each model for the prevalence of the risk factor within the general population. Ten-year and lifetime age-conditional probabilities of developing CRC were determined using SEER cancer incident rates and the risk factor models. Summary: Our work provides an innovative approach to the building of cancer risk prediction models as it uses objective and systematic approaches for combining data from multiple studies and integrating them with national survey data indicating prevalence of exposures. A website hosts the model giving clinicians and consumers widespread access to the model.</p>	<p>Screening Among Patients in a Large Multi-specialty Practice: Preferences for Colorectal Cancer. Hawley, ST, McQueen A, Bartholomew K, Greisinger A, Bettencourt J, Vernon SW Purpose: To evaluate preferences for colorectal cancer (CRC) screening modalities among primary care patients within a large, urban, multi-specialty practice. Methods: Survey respondents were 813 primary care patients between the ages of 50-64 due for CRC screening from an ongoing behavioral intervention trial. We asked patients to choose their preferred test after hearing a description of fecal occult blood test (FOBT), colonoscopy (COL), sigmoidoscopy (SIG) and double contrast barium enema (DCBE). For multinomial logistic regression, the dependent variable was categorized as preference for FOBT, COL, or SIG/DCBE. Independent variables included: demographics and family history, perceived self-efficacy related decision-making, barriers to getting tested, and baseline stage of readiness to get tested. Results: One-third of respondents indicated a preference for FOBT, 42% for COL, and 23% for SIG or DCBE. African Americans were more likely than whites to prefer COL vs. FOBT. Those with a family history preferred COL over other tests. Respondents with a high self efficacy for making CRC screening decisions more often preferred COL, and those who felt that avoiding pain was important were more likely to prefer FOBT over COL. Individuals who were pre-contemplators more often preferred FOBT vs. COL, and those who were in maintenance were more likely to prefer COL vs. FOBT. Conclusions: Our results confirm that there are variations in preferences for CRC screening options. The findings suggest that interventions tailored to stage and test preference may be effective for increasing screening adherence.</p>

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<p>Screening for Occupational Bladder Cancer in a Pensioned Population. Mason TJ Cigarette smoking causes approximately on half of all bladder cancers. However, 21 – 25 % of cases among U.S. white males are attributable to occupational exposures. Several plants of the DuPont Company produced chemicals now known or suspected to cause bladder cancer. In 1931 the DuPont Company began requiring cystoscopic exam as part of the annual physical. In 1954 urinary cytology replaced cystoscopic exam. In 1989 the Fox Chase Cancer Center began the At-Home Screening Program for early detection of bladder cancer at the Chambers Works site. The program was administered by Fox Chase Cancer Center until the spring of 1991. Recommendations were made and acted upon by DuPont to continue screening active employees. During the summer of 1991, a program was initiated for employees of Ciba-Geigy and Nor-Am Companies. This screening was specifically designed to allow participation of employees who did not have access to plant medical personnel. It utilized: 1) a special urine collection system; 2) a 24-hour informational hotline; and 3) the participant's personal physician in the screening process. Both of these studies maintained an approximate participation rate of 85 percent. These unique features made the program very transportable. In July 2000, work began on a new program enrolling the pensioned population of DuPont plant sites where individuals had potential exposure to known or suspect bladder carcinogens. Incorporating features of our previous work, this initiative allows pensioners dispersed throughout the U.S. to participate in this annual screening program. To date, participants are being enrolled from four DuPont Sites. The study has maintained an approximate participation rate of 85%. The program is designed and administered by the University of South Florida and the DuPont Company.</p>	<p>Disparity in Cervical Cancer Screening between White and Asian women. Wang JH., Sheppard V., Liang W., Schwartz, MD., Mandelblatt, JS. Introduction: Asian-American women have lower cervical cancer screening rates than White women. We examined whether screening differences between Asian and White women are associated with access to medical care and culturally-related beliefs. Method: We analyze data from the 2001 Commonwealth Fund survey to test if there are differences between White (n = 2571) and Asian women (including Chinese, Vietnamese, Korean, and Filipino, n = 418) in barriers to Pap screening. Predictors included insurance, having a regular provider, perceived access (having a choice of medical care and confidence in obtaining medical care) and beliefs about the role of luck and self-care. The outcome was receipt of a recent Pap test (< 2 years vs. >2 years or never). Results: Compared to White women (81%), Asian women had a lower rate of obtaining recent Pap tests (70%, P< .0001). Asians perceived greater access barriers to care than Whites (p< .0001). Asians also believed in the role of luck (39%) and self-care (vs. medical care, 68%) more often than Whites (27% and 43%, respectively, p < .0001). Presence of medical choices, insurance, and providers independently predicted the receipt of a recent Pap test, controlling for cultural beliefs and covariates. There were substantial differences in screening rates and beliefs within the Asian groups. For example, 81% of Philippians had a recent Pap, but only 55% of Vietnamese had a recent test. Vietnamese believed the role of self-care (75%) more often than Philippians (64%). Conclusion: Disparities in access to care are associated with lower use of Pap screening in Asian women, but there was substantial variation within Asian sub-groups. Targeting group-specific barriers within Asian groups is likely to improve their overall participation in cancer screening.</p>
67	68
<p>Continuing Medical Education Seminars Increase Knowledge of Colorectal Cancer Screening Among Vietnamese American Physicians. Nguyen BH, Pham JT, Chew RA, et al. Purpose: Vietnamese Americans have lower colorectal cancer (CRC) screening rates than the US population. Research has shown that patient-physician relationships have a significant impact on patient screening behaviors and physician recommendation is the main facilitator of CRC screening in Vietnamese American populations. We used continuing medical education (CME) seminars for Vietnamese physicians to increase their knowledge regarding CRC screening. Methods: We conducted 2 CME sessions (n1=42, n2=35) and administered pre-CME and post-CME questionnaires to evaluate each session. The questionnaires included items about characteristics of Vietnamese physicians' practices and their knowledge regarding CRC burden, risk factors, screening practices and guidelines. We used per-item McNemar's tests to assess the physicians' change in knowledge. Results: Physicians reported low proportions of their patients requesting Fecal Occult Blood Test, sigmoidoscopy, or colonoscopy always or most of the time (8-28%), but higher proportions of physicians offered these screening tests always or most of the time (48-76%). Physician knowledge regarding CRC burden showed significant increases between pre- and post-CME (p < 0.01). Questions related to screening practices and guidelines (e.g. colonoscopy every 10 years) also revealed some significant increases in participants' knowledge (p < 0.05). Slight increases in knowledge were observed for questions related to CRC risk factors, though not all were statistically significant. For questionnaire items that did not show significant increases, knowledge level was often already high at baseline. Summary: Our findings suggest that CME seminars are effective in increasing knowledge about CRC screening among Vietnamese American physicians. This may lead to higher levels of physician recommendation of colorectal screening tests to their patients.</p>	<p>The Prevalence of Family History of Breast and Ovarian cancer in the U.S.: Implications for Genetic testing. Hall IJ, Mosby-Hall AL, Coughlin SS. The U.S. Preventive Services Task Force (USPSTF) recommends that women whose family history is associated with an increased risk for deleterious mutations in BRCA1 or BRCA2 genes be referred for genetic counseling and evaluation. The specific family history patterns defined by the USPSTF include having two first-degree relatives with breast cancer, 1 of whom received the diagnosis at age 50 years or younger; a combination of 3 or more first- or second-degree relatives with breast cancer regardless of age at diagnosis; a combination of both breast and ovarian cancer among first- and second-degree relatives; a first-degree relative with bilateral breast cancer; a combination of 2 or more first- or second-degree relatives with ovarian cancer regardless of age at diagnosis; a first- or second-degree relative with both breast and ovarian cancer at any age. Using data from the 2005 National Health Interview Survey, we examined the percentage of respondents in the U.S. who report these specific family history patterns and the percentage who reported they had received testing services. Persons with a self-reported history of breast or ovarian cancer were excluded, leaving 30,915 respondents. Overall, less than 1% reported a family history of breast and ovarian cancers that would be appropriate for referral for genetic counseling and possible genetic testing for cancer susceptibility. The uptake rate for genetic testing among those eligible was 4/219 or 1.8%.</p>

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<p>Racial and Ethnic Differences in Mammography Utilization Among Women Under 40.</p> <p>Krygiel Kapp JM, Ryerson AB, Coughlin SS Purpose: Recommendations for routine screening call for mammography to begin at age 40 but some women may receive a mammogram prior to that age. We examined racial and ethnic differences in mammography utilization among a national population-based sample of women aged 30-39. Methods: Our sample consisted of 3,098 women from the 2005 National Health Interview Survey Cancer Module (18% Hispanic, 13% non-Hispanic [NH] black, 69% NH white), 29% of whom reported having ever had a mammogram. NH black women were significantly more likely to report having ever had a mammogram (34%) than NH white (30%) or Hispanic women (22%) (p-value <0.0001). Having a problem was reported as the reason for the most recent mammogram among 14% of Hispanics, 18% of NH blacks, and 31% of NH whites (p-value <0.0001). NH whites were more likely to have ever had an abnormal mammogram (24% NH white, 14% Hispanic, 15% NH black [p-value <0.0001]) and to report having a family history of breast or ovarian cancer (8% NH white, 4% Hispanic, 6% NH black [p-value <0.0001]). Summary: Findings indicate differential utilization of mammograms among women outside current screening recommendations. The variation in mammography utilization by race and ethnicity among these younger women may be accounted for by factors other than family history or breast problems. Future studies should examine the role of practice patterns and patient-provider communication.</p>	<p>Factors related to mammography referrals in US primary care practices. Sabatino S, Thompson T, Coughlin S, Schappert S. Many factors influence mammography screening. Less is known about provider or healthcare environment factors. Using the 2001-2003 National Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey, we identified visits to office (n=7268) and outpatient (n=14492) primary care physicians (PCP) by women 40+ years with no breast symptoms or breast cancer. We examined mammography referrals by predisposing (patient age, ethnicity, race, zip code-level education, chronic illness), enabling (number visits in 12 months, zip code-level income, expected payment source), and reinforcing factors (PCP sex, specialty, PCP status, region, MSA, solo vs group practice). Specialty, sex, and solo/ group were available only for office PCPs. We stratified by office vs outpatient setting and fitted logistic regression models adjusted for all factors and survey year in SUDAAN. Office-based referrals were more likely during visits for preventive (OR 16.9[10.9,26.0]) or chronic(2.5[1.6,3.9]) vs acute care; to one's own PCP vs another PCP; to female PCPs vs males. Visits by new patients or women with>2 visits in 12 months less likely included referral vs no visit. Outpatient referrals were more likely in visits by Hispanic vs non-Hispanic women; for preventive or chronic vs acute care; in lower income areas; to one's own PCP vs another PCP; in the Northeast or Midwest vs West. Referrals are influenced by predisposing enabling, and reinforcing factors, and factors vary by setting. Studies should examine reinforcing as well as patient and access factors.</p>
71	72
<p>State Response Rates and Cancer Screening Prevalence Estimates in the BRFSS. Rakowski W, Schneider K, and Clark M National-level data are commonly used to obtain prevalence estimates and track trends in utilization of cancer screening tests. The Behavioral Risk Factor Surveillance System (BRFSS) is a major source of such data, but has been experiencing declines in total and state-by-state response rates. The objective of this study was to examine the association between state-level response rates and prevalence estimates for mammography and for PSA testing.</p> <p>Data for recent mammography (past 2 years) were for women aged 45-75, from the 1998, 1999, 2000, 2002, and 2004 BRFSS. Data for recent PSA testing (past 2 years) were for men aged 52 and older, from the 2001, 2002, and 2004 BRFSS. Questions were the same for each procedure in the respective surveys, but were not asked in all years of the BRFSS. Response rates varied widely across states (e.g., for 2004, the range was 32.2% to 66.6%; for 1998, the range was 32.5% to 75.7%). GEE analyses were used, using state as the levels variable. Results showed that response rate was significantly and negatively, associated with both dependent variables. The adjusted association of response rate with mammography was -.11 (95%CI= -.15,-.06), and of response rate with PSA testing was -.10 (95%CI= -.17, -.04). Therefore, lower response rates tended to be associated with higher prevalence estimates for mammography and PSA, and vice versa.</p> <p>Trends in response rates may be a consideration for interpreting trends in mammography and PSA utilization. Participation bias may result in prevalence estimates that are higher than actual rates, if persons who complete interviews tend to have higher rates of screening.</p>	<p>Colonoscopy Screening for Colorectal Cancer: Knowledge Gaps. Walker RL, Hilsden RJ, McGregor SE, Verhoef MJ. University of Calgary, Alberta Cancer Board. Objective: To identify potential knowledge gaps and information needs of patients undergoing screening colonoscopy. Methods: Self-administered questionnaires were completed by 630 people aged 40 to 74 who underwent screening colonoscopy in Alberta, Canada. Questionnaires were mailed one week post-colonoscopy and participants were asked questions regarding what type of information they received from health professionals throughout screening and what additional information they would have liked to receive. Results: When referred for screening, 48% of participants reported receiving no information from their family physician and 12% reported receiving information on different colorectal cancer screening tests. Prior to colonoscopy, 42% of participants did not recall receiving information on the risks of colonoscopy. Of the 93% of participants who received screening test results, 72% reported negative results and 23% positive. The majority of patients (79%) were told when to have their next colonoscopy. Among those patients, 48% with negative test results and no family history of CRC, repeat colonoscopy in 3 to 5 years was recommended. Common additional information patients requested included written copy of test results (42%), preventive measures (40%) and information on different CRC screening tests (24%). Conclusion: This study identified important knowledge gaps among patients undergoing screening colonoscopy. Educational strategies to ensure patients undergoing screening are informed of the risks of colonoscopy and proper follow-up screening intervals are needed.</p>

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<p>Do Cancer Screening Hotlines Promote Informed Decision Making for Prostate Cancer Screening? McKinley G, Kneuper S, Pruitt S, Wuelling S, Askew R Purpose: The U.S. Preventive Services Task Force's current prostate cancer screening guidelines recommend that men should make an informed decision about whether or not to screen. We analyzed the content of prostate cancer screening information from the American Cancer Society (ACS) and the National Cancer Institute (NCI) hotlines, and rated the extent to which the hotlines promoted informed decision making (IDM). Methods: Trained university staff (n=8) placed 46 calls (English and Spanish) to the two hotlines. Male callers inquired about screening for themselves, while female callers inquired about screening options for their fathers or husbands. If the operator suggested talking with a doctor to make a screening decision, then the message was deemed consistent with IDM. If the operator promoted a screening decision, then the message was deemed inconsistent with IDM. Results: Due to the limited hours of the NCI hotline, the research team was able to place more calls to the ACS hotline (n= 30) than to the NCI hotline (n=16). Of calls to the ACS hotline, 37% (n=11) offered an IDM consistent message whereas 63% (n=19) concluded that the man in question should be screened. Of calls to the NCI hotline, 81% (n=13) offered an IDM consistent message while 19% (n=3) recommended screening. None of the calls recommended against screening. The operator inquired about colorectal cancer screening in 48% (n=14) of the ACS calls and 25% (n=4) of the NCI calls. 73% (n=22) of ACS calls and 69% (n=11) of NCI calls offered additional print or web-based information. Conclusion: The messages provided in the ACS and NCI hotlines do not consistently support IDM.</p>	<p>Men's Perceptions of Prostate Cancer Screening Materials McKinley G, Kneuper S, Wuelling S Purpose: We conducted cognitive interviews to provide insight into men's perceptions of the content of a prostate cancer screening decision aid. Participants included men age 40 and over who had not been diagnosed with prostate cancer. Methods: One hour interviews were conducted with 7 men. Interview questions were grouped into four sections: cancer worry, regret, side effects, and maintenance. A series of quotes (n=19) were intended to reflect men's thoughts about prostate cancer screening. Men were asked if the quote sounded like something a man would say, if they would change the wording, and if the quote was for or against testing. All interviews were audio recorded. Men were compensated \$25 for their time. The protocol was reviewed and approved by the IRB at the UT Health Science Center (HSC-SPH-04-115). Results: Men were able to describe in their own words what each quote meant, but did not all agree that the quotes sounded like something a man would say. Men would change the quotes to be brief and to the point and use conversational speech with "a little more testosterone." Men were able to correctly distinguish between quotes that were for or against testing most of the time. However, when a quote was identified as being against screening, it was frequently followed a disclaimer that it was not something they themselves would say. They noted that it would be "irresponsible," "stupid", or "an ego thing" not to get tested. Conclusion: Materials on prostate cancer screening must be clear in informing men that: 1) there is a decision to be made about whether or not to be screened for prostate cancer and, 2) choosing to be screened or not to be screened are both responsible decisions.</p>
75	76 - T
<p>Barriers to Colorectal Cancer Screening: Stage-specific Knowledge, Attitudes and Practices based on the Precaution Adoption Process Model. McGregor SE,¹ Hilsden RJ,² Murray A2, Bryant HE¹, Alberta Cancer Board 1 and Departments of Medicine², and Community Health Sciences,¹ University of Calgary, Calgary, Alberta PURPOSE: To determine stage-specific barriers to colorectal cancer (CRC) screening using the Precaution Adoption Process (PAP) model to identify strategies to increase CRC screening uptake. METHODS: A population-based random digit dial telephone survey (n=1808) of adults aged 50 to 74 years (response rate=45%) in Alberta, Canada. Information on awareness of fecal occult blood tests (FOBT), perceived risk of developing CRC, plans for FOBT in the next year, and recent history of a screening FOBT was used to classify subjects into PAP stages for screening FOBT. Exploratory in-depth interviews to examine attitudes towards CRC screening were conducted with a sub-sample of survey participants purposively selected to include a range of FOBT experiences. RESULTS: Among average risk subjects (n=1476), the most common stages were unaware (42.9%) and aware but not personally engaged (30.2%). Awareness of screening recommendations, information needs, and talking to the doctor about CRC screening varied by PAP stage. More positive attitudes towards screening were evident as PAP stage increased among the 157 at average risk subject who were interviewed about attitudes towards FOBT screening. CONCLUSION: The PAP model provides a useful way to identify barriers to CRC screening.</p>	<p>Factors influencing the use of mammography among Houston Chinese women. Beverly Gor, Hui Zhao, Son Hoang, Lovell A Jones Chinese women have among the lowest breast cancer screening rates in the US. This may be due to a lack of cancer knowledge, lack of health insurance or cultural differences. In order to understand this phenomenon, we need to identify factors that influence mammography use among Chinese women. This study used data collected from a project known as the Asian American Health Needs Assessment (AsANA). Data were collected through telephone interviews in the Houston metropolitan area using a health questionnaire. The outcome variable of this study was whether Chinese women, age 40 years and older, ever had a mammogram. Statistical analysis was performed using t-test or chi-square test. A total of 175 Chinese women over 40 years old were in the AsANA dataset. Eighty percent reported having a mammogram, while 20% had not had a mammogram. The mean age of women who never had a mammogram was greater (58 years) than those who had had a mammogram (53 years). About 82% of those with mammograms had health insurance compared with 74% of those who had never had a mammogram. Education was positively related to mammography screening. Individuals with high school or higher education were 5 times more likely to have had a mammogram than those with less than a high school education. Women with at least one close friend or family member were 2.6 times more likely to use mammography than women with no social support. Proficiency in either English or Chinese increased the use of mammography. These results provide baseline information on mammography use among Chinese women in Houston. Future breast cancer screening projects in this population should focus on the elderly and individuals with less education and social support.</p>

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<p>What Are We Afraid Of? Contrasting Effects for Prostate Cancer Worry and Screening Fear in Predicting Male Screening. Consedine, NS, Adjei, BA, Ramirez, PM, Magai, C, McKiernan, JM, & Neugut, AI. Purpose: Empirically determine whether general prostate cancer worry and fear of screening procedures have independent (and opposite) effects on male screening. Methods: This report examined the utility of cancer worry and screening fear in predicting DRE and PSA frequency in a stratified cluster-sample selected sample (N = 533) of US-born African American, US-born European American, immigrant Jamaican, and immigrant men from Trinidad and Tobago aged between 45 and 70 years. Men completed survey measures of background factors, prostate cancer attitudes, and rates of DRE and PSA frequency. Two-step multiple regressions, controlling for demographics, health insurance, physician recommendation, and barriers, showed unique effects for both fear variables. For DRE frequency, both prostate worry ($\beta = .09$, $p < .05$) and screening fear ($\beta = -.15$, $p < .01$ for DRE model) were significant predictors and added 2% predicted variance above background factors ($\Delta R^2 = .02$, $p < .01$). In contrast, however, while prostate worry ($\beta = .12$, $p < .01$) predicted PSA frequency and added variance above background factors ($\Delta R^2 = .01$, $p < .05$), screening fear was not significant in this model. Summary: Overall, this report provides an empirical demonstration of the distinction between general cancer worry and fear of screening. It suggests that the source of men's fears and the anticipated emotional consequences of different prostate cancer screens exert important – and separate – influences on male screening behavior. Work on this presentation was supported by grants 1P20 CA91372 & 1U54 CA101388</p>	<p>Differentiating among predictors of PSA and DRE screening among a multiethnic sample of men. Adjei BA, Consedine NS, Magai C, Ramirez PM, and McKiernan J Purpose: Although the two available screening tests for prostate cancer, DRE and PSA are often examined in concert, they place different demands on men and the degree to which rates of each test are predicted by the same structural and psychological variables is unclear. This study sought to provide descriptive data on PSA and DRE screening behaviors among ethnic subpopulations of African American men, as well as compare structural and psychological predictors as they relate to rates of PSA and DRE screening. Method: A community dwelling sample (N=533) of US born African American and European American, and immigrant men born in Jamaica and Trinidad provided data regarding structural (demographic and physician-related factors), prostate cancer screening history, and psychological (screening-related embarrassment) variables. Results: Descriptive analyses indicated low rates of screening over the past ten years for all ethnic groups, as well as ethnic differences for PSA ($F(3,529) = 4.77$, $p < .01$) and DRE screening ($F(3,529) = 5.72$, $p < .01$). Comparison of the final DRE and PSA regression models indicated differences in the relevance of these structural and psychological variables to each screening test. In particular, screening related embarrassment was a negative predictor only in the DRE model ($\beta = -.12$, $p < .01$), while demographic predictors such as marital status, education and income were positive predictors only in the PSA model. Summary: The results indicate low rates of PSA and DRE screening frequency and also identify demographic and psychological factors that place populations at high risk for low screening. The findings also suggest that DRE or PSA screening may require contrasting utilization of structural and psychological resources.</p>
79	80 - T
<p>Surveillance Mammography Among Older Breast Cancer Survivors. Field TS and the BOW investigators. Methods: Subjects were 1,859 elderly women diagnosed with early stage breast cancer between 1990-1994 while enrolled in one of six integrated healthcare delivery systems, followed for mammographic surveillance to 1995-2000. We assessed mammography use during each of 4 years of follow-up, using generalized estimating equations to account for repeated measurements. Results: 79% of survivors had mammograms during the first year; the percentage declined to 67% in the fourth year of follow-up. Women aged 80 or older and those with multiple comorbid conditions were less likely to have yearly mammograms. Controlling for these factors in multivariate analysis, women who were at high risk of recurrence were less likely to have yearly mammograms, including those diagnosed at stage IIA (odds ratio (OR) 0.72, 95% confidence interval (CI) 0.59, 0.87), diagnosed at stage IIB (OR 0.75, CI 0.57, 1.0) or receiving breast conserving therapy without radiation (OR 0.58, CI 0.43-0.78). Women with visits to a breast cancer surgeon or oncologist during the year were more likely to receive mammograms (OR 6.0, CI 4.8,7.4 for surgeon visits and OR 7.4, CI 6.1, 9.0 for oncologist visits). Elimination from the analysis of women dying in the next year had little impact on these results. Conclusions: Two findings from this analysis are of particular concern. 1) Women at higher risk of recurrence were less likely to receive surveillance mammography. This finding was not explained by comorbidity up-dated through the follow-up period or the omission of women from assessment of mammography during a year preceding the year in which they died. 2) Women who did not have a visit to a breast cancer surgeon or oncologist during a year had low rates of surveillance mammography during that year. (39.4% to 46.0%).</p>	<p>Structural and Reliability Analyses of a Brief Patient Report Measure of Memory Problems Related to Cancer Treatment. Jean-Pierre P, Morrow G, Stevenson J, Roscoe J, Kohli S, Vinciguerra V, Moore DF, Huber J. Introduction: Memory can be deleteriously affected by cancer treatment. It is important to understand these effects, be able to assess efforts to ameliorate them, and be able to monitor their severity clinically. This study involves the psychometric development and validation of a brief measure of cancer treatment-related memory problem to facilitate quick and reliable initial assessments in oncology research and practice. Method: Patients (N = 821) included in this analysis were part of a larger study on cancer-related fatigue. These patients completed the Fatigue Symptom Checklist (FSCL) at four time points. Five items from the FSCL that assess memory problems were aggregated into a self-report memory problem measure (SRMP). Results: Reliability assessment of the SRMP revealed a Cronbach coefficient alpha of 0.90. The data was found suitable for latent structure analysis using various criteria: Kaiser-Myer-Olkin, Bartlett's Test of sphericity, Kaiser's (1959) simplest criterion test of $\lambda > 1$, and the presence of item-correlation coefficients of $r \geq .30$. Principal components analysis showed one component with eigenvalue (λ) exceeding 1, that explained 72% of the variance. Subsequent reliability assessments of the SRMP revealed Cronbach coefficients alpha of 0.90 and above, all with a single component explaining 71.36% to 73.36% of the variances. Conclusion: The results supported the use of the SRMP as a unidimensional measure of cancer treatment-related memory problem. The SRMP could be used as an initial indicator of underlying memory problems that need further examination. Studies to establish construct validity of the SRMP are underway. Supported by NCI grant R25CA102618</p>

<p style="text-align: center;">81</p> <p>The Breast Cancer Surveillance Consortium – a platform for collaborative research stemming from breast cancer risk through survivorship research. Buist D, Ballard-Barbash R, Carney P, Geller B, Kerlikowske K, Miglioretti D, Rosenberg R, Taplin S, Yankaskas B for the Breast Cancer Surveillance Consortium. Background: Locating population-based samples of women to study for breast cancer research can be challenging. Methods: The National Cancer Institute supports the Breast Cancer Surveillance Consortium (BCSC), currently 5 mammography registries across the nation with data on ethnically and racially representative women from 1994 to present. The BCSC, which represents 5% of women in the US, collects self-reported demographics, breast cancer risk factors, specifics about each breast cancer diagnosis, and outcomes (e.g., mortality, 2nd breast cancer diagnosis), all of which enables identification of women along the breast cancer survivorship continuum. Advantages of using the BCSC for breast cancer research are: 1) longitudinal data collection since 1994; 2) registry-specific permission to invite women to participate in ancillary studies (e.g., prevention, randomized trials, or survivorship); 3) breast imaging and pathology/cancer data, and 4) possible access to benign and malignant tissue. Results: We currently have information on almost 7 million surveillance examinations from nearly 2 million women diagnosed with 62,306 invasive and 11,472 in situ breast cancers. There have been over 250 peer-reviewed publications using BCSC data addressing important clinical and public health issues ranging from factors influencing breast cancer surveillance performance through survivorship research and women's health. Conclusions: We invite researchers apply to use BCSC data and/or to collaborate with 1 or more site to develop new studies. Visit: http://breastscreening.cancer.gov.</p>	<p style="text-align: center;">82</p> <p>Characteristics of women who fail to receive follow-up after an abnormal screening or diagnostic mammogram Buist DSM; Aiello EJ, Haneuse S, Elmore JG Background: Delays in the diagnostic process after an abnormal mammogram can result in sleepless nights for women and delayed diagnosis. Methods: We identified 7,341 diagnostic and 28,816 screening mammograms done at Group Health between 1996-2003 with a recommendation for follow-up for biopsy, surgical evaluation, fine needle aspiration or ultrasound/diagnostic imaging. This analysis focused on identifying characteristics of women who received no follow-up procedures within 180 days of the recommendation (2.7% screening, 9.2% diagnostic). Using multivariable logistic regression, we examined whether breast cancer risk factors (age, body mass index, family history, breast biopsy history, or breast symptoms) were associated with returning for follow-up adjusted for year. Results: There were no predictors of follow-up failure following a diagnostic mammogram. In the multivariable model, the women who were least likely to come back in for follow-up after a screening mammogram were women who had reported breast symptoms at the time of the mammogram (odds ratio (OR), 95% confidence interval; 1.7, 1.3-2.2 vs. no symptom), women with 1 previous breast biopsy (1.2, 1.0-1.5 vs. no previous breast biopsy) and women with less education (1.4, 1.1-1.7 ≤high school vs. post-college education). Conclusions: Failure to receive follow-up is more common in women who receive a recommendation for additional follow-up following a diagnostic mammogram. We found no women-level predictors of failure to receive follow-up care for diagnostic mammograms. Women with less education, with breast symptoms and who have had a previous breast biopsy may need additional encouragement after an abnormal screening mammogram to ensure appropriate follow-up.</p>
<p style="text-align: center;">83</p> <p>Side Effects Among Cancer Survivors Karen M. Mustian, Oxana Palesh, Pascal Jean-Pierre, Jennifer Carroll, Julie Ryan, Sahdna Kohli, Colmar Figueroa-Moseley, Gary R. Morrow, Suffering associated with side effects from cancer and its treatments is burdensome for survivors. 596 Cancer survivors receiving chemotherapy and/or radiation (mean age=61; 398 = female) from 17 NCI CCOPs reported whether they experienced any of 12 side effects (pain, fatigue, nausea, sleep problems, depression, shortness of breath, memory problems, weight loss, hair loss, concentration problems, hot flashes, skin problems) using an 11-point Likert Scale (0 = "Not present" to 10 = "As bad as you can imagine") prior to treatments (T1), during treatments (T2), and 6 months after finishing treatments (T3). The mean Total Number of Side Effects (TNSE) reported was 4.6 (+3.0) at T1, 7.9 (+3.3) at T2 and 5.8 (+3.3) at T3. Repeated-measures ANOVAs revealed statistically significant treatment group (chemotherapy, radiation, or both), diagnosis (hematologic, head and neck, lung, alimentary, genitourinary, gynecological, breast), age (< 60 or > 60 yrs), and gender by time interactions. The TNSE was significantly higher among survivors in the two groups receiving chemotherapy, younger survivors, and women. Genitourinary survivors reported the lowest TNSE (p<.05). The TNSE increased from T1 to T2, decreased from T2 to T3, and remained higher at T3 compared to T1 (all p<.05). Cancer survivors receiving chemotherapy, with diagnoses other than genitourinary, younger than 61 yrs and women reported the highest TNSE. The TNSE reported by survivors at 6 months post-treatment remained higher than pre-treatment levels. Funded by NCI Grant U10 CA37420 and a supplement from NCI CCPS.</p>	<p style="text-align: center;">84</p> <p>Survival Analysis of Kentucky's Colorectal Cancer Patients Receiving Chemotherapy Compared to Patients Not Receiving Chemotherapy from 1995-2002. Johnson O. Purpose: To compare the survival rates of Kentuckians who were diagnosed with Colorectal Cancer and received chemotherapy as a form of adjuvant treatment compared to the survival rates of those not receiving chemotherapy. Objective: The objective of the study was to ascertain if those patients receiving chemotherapy had a significant survival advantage over those who did not receive chemotherapy. Method: This study is a population survival analysis of stage II and III colorectal cancer patients from 1995 - 2002 in Kentucky. The population was categorized into patients receiving chemotherapy versus patients who did not. Their cumulative survival hazard ratio was estimated using the Cox Proportional Hazard Model. This procedure evaluated the effect of chemotherapy on patients' survival over the 7 year period. The multivariate analysis controlled for demographic factors (age, gender and race) and tumor characteristics (tumor site, size, grade and stage). Results: 4940 patients (63%) did not received chemotherapy, (2847 or 37%, received chemotherapy). Patient receiving chemotherapy had a 25% survival advantage over those who did not receive chemotherapy. The descriptive statistics reflected these results that showed patients receiving chemotherapy 1752 (62%) were still alive with a mean survival time of 4 years compared to 2415 (49%) of those who did not receive chemotherapy, (mean survival time of 3 years). The death rate for those who did not receive chemotherapy was 51% (2525) compared to a death rate of 38% (1095) among those who did receive chemotherapy.</p>

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<p>Survivors' Beliefs about Breast Cancer Causes: Concurrence with Medically Established Causes and Input from Physicians. Kaiser K Objectives: Prior research indicates that breast cancer survivors are more likely to implement healthy behaviors when they believe that these behaviors are linked to the development of their cancer or its recurrence. Because of the importance of beliefs for health behaviors, this research examines 1) survivors' full range of beliefs about the causes of breast cancer, and 2) one important source of survivors' beliefs—interactions with physicians. Method: Data come from thirty-two in-depth interviews with breast cancer survivors who finished treatment three to eighteen months prior to the study. All interviews were taped, transcribed, and analyzed using ATLAS.ti. Interviews covered women's experiences with breast cancer, including their beliefs about the causes of breast cancer and their recollections of conversations with their physicians about cancer causes and risk factors. Results: Breast cancer survivors link a wide range of factors to the development of breast cancer; they most frequently mentioned family history/genetics (N=14), diet (N=10), and environmental factors (N=7). In contrast, they reported that their physicians most frequently said the cause of breast cancer is unknown (N=12) or is due to family history/genetics (N=7). A number of women (N=8) reported that their physician did not discuss the causes of cancer with them. Conclusion: These findings suggest a mismatch between patient beliefs and information conveyed by physicians. Moreover, despite a growing acceptance of links between diet, body weight, alcohol, and breast cancer, physicians may not be discussing physical activity and healthy weight with cancer patients. These findings highlight a need for future research into survivors' understandings of cancer and doctor-patient communication about healthy behaviors and cancer prevention.</p>	<p>Barriers of Prostate Cancer Screening in West Virginian Veterans. Miller L, Pawar V, Coffindaffer J, and Keresztury J. BACKGROUND: This study examined barriers to prostate cancer (PC) screening in West Virginia (WV) veterans, a relatively unexplored area in rural Appalachian men, who are disproportionately affected. METHODS: 8 focus groups were conducted throughout the State. A brief survey assessed demographic information, baseline knowledge, and screening status. Focus group scripts included questions regarding: understanding prostate cancer; communication with health care providers (HCPs) about PC; barriers to PC screening; and strategies to help get men screened. Descriptive analysis was performed on survey data. Qualitative data was analyzed with an ethnographical retrieval program (QSR NUD*IST – N6). RESULTS: 66 veterans participated in the study. 80% of the men were 55 to 64 years old. 94% of the study population was Caucasian. 85% of the men were combat veterans; 70% were married; only 6% were college graduates. Survey results showed that 57.6% reported knowing nothing, or only a small amount about PC. 66.2% considered HCPs the most helpful information source. Focus group analysis showed major barriers to PC screening were: lack of trust for the health care system, poor HCP-patient communication, fear of PC, lack of knowledge about the need for screening, and belief that screening was not necessary if they had no symptoms. CONCLUSION: Barriers to screening can be modified through educational interventions for veterans. Recognizing risk factors for PC, and encouraging men aged 50 and older to discuss screening with their HCP could also increase PC screening.</p>
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<p>EXPLORING THE NEEDS OF MEN IN BRCA1/2 FAMILIES. Mary Daly Male carriers of deleterious BRCA1/2 mutations have a 6% lifetime risk of male breast cancer, and a 6-14% lifetime risk of prostate cancer. Despite these health implications, we have found a lack of understanding of genetic test results among the men in these families. As part of a larger study to explore family communication patterns of genetic risk, we identified 24 male first-degree relatives whose proband received a true positive test result and reported telling the result to her male relative. Six (25%) of these male relatives reported that they hadn't received the results or forgot it. Of the remaining 18 (75%) who did report receiving the result, two (11%) reported that it was a negative result. Only two (11%) reported any level of difficulty in understanding the test results, or indicated that they would like more information. However, only five (28%) could correctly identify their chance of being a mutation carrier. Seven (40%) did not believe that the test results increased their own risk for cancer, reflected in a relatively low level (33%) of interest in genetic testing. Of the 6 men who did express interest, half expressed interest primarily for their children's sake. And finally, of the 14 men who expressed any level of concern about the meaning of the test result, 11 (79%) directed their concern toward other family members, primarily daughters and sisters. This limited experience tends to confirm a level of cognitive and emotional distance that men experience from the genetic testing process as it applies to them.</p>	<p>Prevalence of Vitamin Supplement Use by Diet and Physical Activity Factors in a Representative Sample of 8th Grade School Children in Texas, 2004-2005 George GC, Hoelscher DM, Forman MR, Springer AE, Kelder SH. Purpose: Low energy-dense diets and physical activity (PA) are protective against cancer. The purpose of this study was to examine the prevalence of vitamin supplement use by diet and PA factors among eighth grade schoolchildren. Methods: Data were from the 2004-2005 School Physical Activity and Nutrition study, a multiethnic, multistage, probability-based sample of 8th (n=8,827, mean age = 13.7y) grade students in Texas. Vitamin supplement use, dietary patterns and PA were self-reported using a validated survey instrument. Healthful food choices were calculated using a composite score based on foods recommended in current dietary guidance, including fruits, vegetables and whole grain foods. Statistical analyses included chi-square tests and multiple logistic regression analyses stratified by gender and adjusted for race/ethnicity. Results: Prevalence of vitamin supplement use was 21.3% in boys and 28.7% in girls. Vitamin supplement use was associated with higher healthful food choice composite scores (boys: OR=1.71, p<.002; girls: OR=1.33, p<.019). Supplement use was linked to moderate-intensity PA in boys (OR=1.51, p<.039) and vigorous-intensity PA in girls (OR=2.60, p<.001). Conclusion: Cancer-protective factors, such as healthful diets and PA, are associated with vitamin supplement use among eighth grade students.</p>

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<p>Association of dietary magnesium and DNA repair capacity with lung cancer risk Mahabir S, Wei Q, Spitz MR, Forman M Magnesium is an essential nutrient for humans because it is required for the maintenance of genomic stability and DNA repair. Because the associations between dietary magnesium (Mg) intake and lung cancer risk has not been reported, we examined the relationship of Mg intake and DNA repair capacity (DRC) on lung cancer risk in an ongoing case control study. A total of 1139 incident lung cancer cases and 1210 matched healthy controls with data on DRC were used to achieve our objective. A modified NCI-Block FFQ and a lifestyle questionnaire were interviewer-administered to each participant. Cellular DRC was assessed by the host-cell reactivation assay that measured nucleotide-excision repair capacity in peripheral blood lymphocyte culture. Mg intake in our control population was comparable to Mg intake in NHANES (1999-2000). After adjustment for recognized confounding factors, the odds ratios (OR) and 95% confidence intervals (CI) of lung cancer by increasing quartiles of dietary magnesium intake for all subjects were: 1.0, 0.8 (0.7-1.1), 0.6 (0.5-0.8), 0.5 (0.4-0.6), respectively (P-trend<0.0001). Similar OR and trends were observed in men and women. In stratified analysis, using those with high dietary Mg and proficient DRC as the referent group, the OR for all subjects were: 1.0, 1.4 (1.0-1.8) for high dietary Mg and suboptimal DRC, 1.5 (1.2-2.0) for low dietary Mg and proficient DRC, and 2.4 (1.8-3.0) for low dietary Mg and suboptimal DRC, respectively (P-trend<0.0001). These associations were generally similar in men and women. Our results suggest that low dietary Mg intake is associated with increased risk of lung cancer, and there may be joint effects between Mg intake and DRC on lung cancer risk.</p>	<p>Dietary Intake of Gamma- and Alpha-Tocopherol Reduces Lung Cancer Risk Schendel K, Mahabir S, Swartz M, Barrera S, Spitz MR, Forman MR Because epidemiological data on vitamin E and lung cancer risk is controversial and limited in terms of gamma-tocopherol, we investigated the association between dietary intake of alpha- and gamma-tocopherol and lung cancer risk in a case-control study. Cases were newly diagnosed, previously untreated, histologically confirmed lung cancer patients recruited from The University of Texas M. D. Anderson Cancer Center; controls were healthy HMO patients. Alpha- and gamma-tocopherol values were updated using release 16 of the USDA National Nutrient Database for Standard Reference. Compared to those in the lowest quartile of intake for alpha-tocopherol, the OR for lung cancer decreased in a monotonic fashion (OR [Q2] = 0.87, 95% CI 0.71–1.08, OR [Q3] = 0.74, 95% CI 0.60–0.91, and OR [Q4] = 0.55, 95% CI 0.44–0.69). The trend was significant (P < 0.0001) with limited variation by gender. Compared to those in the lowest quartile of intake for gamma-tocopherol, individuals in the two highest quartiles had significantly reduced odds of lung cancer (OR [Q3] = 0.70, 95% CI 0.56–0.87, and OR [Q4] = 0.73, 95% CI 0.59–0.91, P-trend = 0.004). Similar associations appeared in women, but not men. We present for the first time an association of dietary intake of gamma-tocopherol and lung cancer in the United States. Given the antioxidant and immune functions of tocopherols and the limitations of our study design, further research in the chemopreventive potential of both tocopherol metabolites is warranted.</p>
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<p>Ethnic Group and Gender- Differences in USDA Pyramid Servings of Fruits and Vegetables Using a Modified Block FFQ. Swartz, MD, Barrera, SL, Mahabir, S, Spitz, MR, Forman, MR Purpose: To apply USDA pyramid servings to the NCI Block Food Frequency Questionnaire (FFQ) to compare fruit and vegetable (F&V) servings by gender and ethnicity. Methods: We calculated USDA pyramid servings from responses to the NCI Block FFQ by healthy controls (N=1798) recruited from an HMO population in Texas. Using responses to 52 FFQ items about F&V intake and the Pyramid Servings Database of the 1994-1996 Continuing Survey of Food Intakes by Individuals (CSFII), we calculated F&V servings. We tested ethnic and gender differences in intake using the nonparametric Wilcoxon Rank Sum and Kruskal-Wallis tests. Results: Compared to men, women had higher median pyramid servings of vegetables (men (M) = 2.39, women (W) = 2.56, p-value (P) = 0.04) and of fruits (M=2.21, W=2.75, P<0.0001). Compared to non-Hispanic Whites (Wh), Mexican Americans (MA) had the highest median servings of vegetables, followed by African Americans (AA). [Wh=2.45, MA=3.11, AA=2.86]. Ethnic group differences remained within gender-specific servings of fruits, (MWh=2.09, MMA=3.08, MAA=2.27, P=0.0002; WWh=2.56, WMA=3.28, WAA=2.32, P=0.0005) but not vegetables. Summary: Findings in our sample were unexpected - MA and AA had higher servings of vegetables than Wh - while gender-specific findings concur with prior research, implicating a need for further research in multi-ethnic groups.</p>	<p>Obesity and Breast Cancer: Impact of Dairy Versus Supplemental Calcium. De Angel R, Nunez NP, Perkins SN, Hursting SD. Purpose: The initial phase of this study was designed to investigate the effects of different calcium sources on body composition and hormones in ovariectomized C57BL/6 mice. The second phase (currently in progress) will assess tumor development under the same conditions. Methods: High-fat (HF, 45 kcal% fat) or low-fat (LF, 10 kcal% fat) diet regimens varying in calcium amount and source: ~0.6% (by weight) calcium carbonate (control), ~2% calcium carbonate (supplement), or dairy providing ~2% calcium phosphate through the use of non-fat dry milk and TruCal® D50, were generated. Mice were randomized (18/group) to the following diet treatment groups: 1) LF control; 2) LF supplement; 3) LF dairy; 4) HF control; 5) HF supplement; or 6) HF dairy. The HF dairy group displayed, decreased body weight compared to controls (p<0.001). Both calcium groups, relative to controls, showed increased bone mineral density (p<0.001) independent of diet effects on body mass. Mice on the HF dairy diet, relative to the other HF groups, consumed more food (p<0.005), suggesting that weight gain/kcal food intake was less in that group. Insulin-like growth factor (IGF)-1 levels at weeks 10 and 20 on the diets, were increased, relative to controls, only in the HF supplement group (p<0.005). In the second study we will test whether calcium source influences tumor growth and/or metastases by injecting mice, after 20 weeks on diets, with mammary tumor cells in the mammary fat pad and monitoring tumor growth. We hypothesize that a reduction of postmenopausal body weight through calcium will affect mammary tumor progression. Summary: Preliminary results support the hypothesis that high calcium intake impacts body weight; successful completion of our studies should provide important mechanistic insights into the obesity-calcium-breast cancer connection.</p>

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<p>Predictors of Serum 25(OH)D Vary by Race/Ethnicity ET Jacobs, DS Alberts, BW Hollis, ME Martínez Vitamin D has been the subject of recent interest in relation to its role in cancer risk and prevention. Determinants of vitamin D exposure have been used to construct a predictive model of blood 25(OH)D levels, which in turn was used to assess the association between vitamin D and cancer. We were unable to replicate this predictive model in our population of southern Arizona residents. We therefore investigated whether there were inherent characteristics of our population that prevented us from building a predictive model. We analyzed 25(OH)D in blood samples from 605 participants (539 Caucasians, 48 Hispanics, and 18 African Americans) in an adenoma recurrence study and compared these measurements to several potentially predictive variables. We found that BMI, season, dietary vitamin D, and sun exposure were significantly related to serum 25(OH)D levels among the Caucasian participants, with an R-squared value for the model of 0.14. In contrast, among Hispanic and African American participants, BMI, gender, and season were strongly associated with serum 25(OH)D levels, but dietary vitamin D and sun exposure were not; the R-squared value for the final model was 0.53. Our results suggest that prediction models of serum 25(OH)D are different for Caucasian and non-Caucasian populations, indicating that there may be biological differences in the association between vitamin D and cancer.</p>	<p>Effect of Low-carbohydrate Diet on Insulin-Like Growth Factor-1 and Cancer Risk in C56BL/6 Mice. Wheatley K. Objective: To determine if decreased insulin like growth factor-1 levels suppress colon cancer progression in obese mice on a low-carbohydrate diet. Research Methods and Materials: One hundred male C57BL/6 mice were randomized into five groups. For 14 weeks, one group consumed a high-carbohydrate (HC) diet ad libitum and another group consumed a high-fat diet (HF) ad libitum. Following a 7 week period of diet-induced obesity, sixty mice were switched to either: a) low-carbohydrate diet (LC) consumed ad libitum; b) a high-carbohydrate diet (HC) pair-fed (PF) to match the energy intake of the LC group; or c) a high-carbohydrate dietary energy restriction (DER) regimen providing 70% of the energy intake consumed by the HF group for another 7 weeks. At week fifteen, mice were injected with MC-38 cells. Mice were palpated and tumors measured twice a week. Results: Although the LC mice had significantly lower IGF-1 levels compared to the HF mice (320 ± 39.9 versus 604 ± 44.2 ng/ml, $P < .001$), LC mice did not have a shorter time to palpable tumor (11.2 ± 0.6 versus 11.4 ± 0.5 days, $P = .83$), and there was no difference in final tumor burden (351 ± 29 versus 397 ± 32 cm², $P = .23$). Discussion: Reductions in IGF-1 levels in LC mice most likely did not confer protection against colon risk because of other pro-cancer states observed in obese C57BL/6 mice on an LC diet such as hyperinsulinemia and hyperleptinemia.</p>
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<p>Weighty Matters: Preliminary Results from a Women's Health Initiative (WHI) Ancillary Study. Chang S, Hays-Grudo J, Touillaud M, Hursting SD, Vitolins M, Berger, V, Paskett E. Strategies for preventing weight-related cancer include identifying those at risk for significant weight gain. In an ancillary study to the WHI Observational Arm in Texas and North Carolina, we assessed changes in body composition measured at baseline and annual visit three (AV3) among 825 postmenopausal women ages 50-79 years (baseline) to identify subgroups vulnerable to gain. Overall, except for expected height loss (-1.2 cm, $P = 0.02$), women increased in body mass index (BMI, +2.2 kg/m², $P = 0.01$), weight (+1.2 kg, $P = 0.20$), and waist and hip circumferences (+0.3 & +0.7 cm, $P = 0.67$ & 0.29, respectively). BMI and height changes (not weight) were significant among Caucasians ($n = 668$), but not among African Americans ($n = 157$). At baseline, Caucasians were slimmer than African Americans, but by AV3, were less so. Stratifying by hormone replacement therapy (HRT) use showed that current users relative to former and never users no longer had significantly lower BMI by AV3, as attributable entirely to weight gain, and had smaller waists and hips at both times. In contrast to the group's aggregate experience, not everyone gained; at AV3, 31% had lost ≥ 1 kg and 19% reported changes of < 1 kg. This contrasts with self-reports from 68% of women at AV3 of "losing ≥ 2.27 kg within the past 2 years." Moreover, with each larger baseline BMI category of six, the proportion that had lost weight by AV3 increased and the proportion that maintained their weight within 1 kg from baseline weight decreased. To understand weight change better, analyses combining race, purposeful weight loss, HRT use, and other factors are underway. This first step will help us model weight gain and excess bodyweight, which can help in developing interventions.</p>	<p>ACI.COP-Ept2 rat model of breast cancer Ruhlen RL, Sauter ER When using animal models of human disease, the question of relevance is vital. How well does the animal model human disease conditions? Does it model disease initiation or disease progression? The link between life time estrogen exposure and breast cancer risk in humans is well established. Estrogen receptor positive (ER+) breast cancers, 95% of human breast cancers, have a good prognosis, because the growth of these tumors is dependent on estrogen and can be inhibited by preventing estrogen action chemically or surgically. Therefore, estrogen-sensitive tumors which are induced by estrogens would be desirable characteristics of a rodent model of ER+ breast cancer. Most existing models are not ER+ and/or are not induced by estrogen. The ACI rat is unique in that mammary tumors can be induced by estrogen alone, without chemical carcinogens or irradiation. These E2-induced tumors express estrogen receptor (ER) α, are prevented by tamoxifen. The major drawback to the ACI rat resulting in its underuse as a model of breast cancer is its propensity to develop pituitary tumors, which can cause morbidity and mortality. Dr. James Shull at the University of Nebraska Medical Center has developed a strain, ACI.COP-Ept2, that develops mammary tumors like the ACI rat, but has a reduced incidence of pituitary hyperplasia. We are investigating whether ACI.COP-Ept2 mammary tumors are ER+ and respond to tamoxifen, as ACI mammary tumors do, and the dose and timing of estrogen necessary to induce tumors. Once fully characterized, this model will be valuable for picking out which of the myriad of lifestyle and diet choices purportedly protecting women from breast cancer actually reduce cancer incidence.</p>

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<p>Susceptibility to Smoking and Experimentation in Mexican Origin Youth. Spelman A, Wilkinson A, Bondy M, Prokhorov A, Spitz M. Purpose: To identify risk factors that distinguish Mexican origin youth aged 11 to 13 who are susceptible to smoking from their peers who have experimented with cigarettes. Methods: Participants included 1,087 age-eligible Mexican origin youth identified from a population-based cohort of more than 12,000 individuals assembled in Houston, Texas. Adolescents identified from the cohort were enrolled after obtaining parental consent and child assent. We used PDAs to obtain data on smoking and susceptibility status, peer and family influence, school and neighborhood characteristics and attitudes towards smoking. We conducted bivariate analyses to determine which factors were associated with susceptibility to smoking as opposed to experimentation. All variables demonstrating a significant association were used to form a predictive multinomial logistic model for smoking status. Results: The multinomial analysis revealed that when compared to their non-susceptible peers, both susceptibles and experimenters were more likely to be 13 years old, male, have one or more friends who currently smoke, have a brother who currently smokes, and have positive expectations of smoking. In addition, susceptibles were more likely to have peers who strongly approve of their smoking, report lower subjective social status and perceive more temptations to smoke, while experimenters were more likely to be 12 years old, live with someone (other than a parent or sibling) who currently smokes, and do not believe that "kids think smoking is stupid." Summary: Distinct risk factors should be incorporated into culturally appropriate prevention and outreach programs to youth in their transition from non-susceptibility to experimentation</p>	<p>Susceptibility to smoking in Mexican origin youth in Houston, TX. Wilkinson A, Spelman A, Prokhorov A, Bondy M, Spitz M. Purpose: To examine the relationship between cognitive susceptibility to smoking and well-known risk factors for smoking initiation among 11 to 13 year old Mexican origin youth. Methods: Participants in this study were drawn from an infrastructure of population-based households created by the Department of Epidemiology at MDACC. Households with age-eligible participants were identified from the cohort database; over 90% of all parents who were contacted agreed to enroll their child in the study. After obtaining informed consent, survey data were collected on smoking susceptibility and smoking status, acculturation, demographics, peer & family influences, school & neighborhood characteristics, and attitudes towards smoking. Results: Bivariate associations between susceptibility and risk factors were predominantly significant and in the expected direction. Significant predictors were included in stepwise and additive effects logistic regression models. The stepwise model revealed that each additional positive smoking expectation was associated with a five-fold increased chance of being susceptible. Susceptibles were more likely to report that most friends smoke, have a mother who smokes, believe that peer norms strongly support smoking, be 13 years olds, be male, perceive more temptations to smoke, have more acculturated parents and report lower subjective social status than their non-susceptible peers. The additive effects model noted increasing risk of susceptibility with increasing numbers of risk factors (ptrend < 0.01). Participants reporting 3 risk factors were 2.58 and those with 6 or more were 22.12 times more likely to be susceptible to smoking, compared to participants reporting one or no risk factors. Summary: Our findings suggest a need to develop both family- and school-based primary prevention programs.</p>
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<p>Down in the Dumps, Up in Smoke: Pathways and Disparities in the Relation Between Teen Depressiveness and Smoking Mistry R. OBJECTIVE: We tested 3 hypotheses: teen depressiveness is associated with smoking; the effect varies with race/ethnicity; and it is mediated by smoking refusal self-efficacy (SE), and smoking knowledge and attitudes (KA). METHODS: Cross-sectional 2003-04 survey data on 20,573 California 6-12 graders. Questions included: "experimental use" (30-day use and less than 100 cigarettes ever smoked); "current use" (30-day use); "daily use" (at least one cigarette smoked everyday for 30 days); smoking refusal SE; a 12-item smoking KA scale (alpha=0.71); and an YBRS depressiveness question. RESULTS: Prevalence rates were: depressiveness, 28%; experimental use, 7%; current use, 10%; and daily use, 5%. Depressiveness was associated with experimental (OR=1.6, 95%CI=1.4, 1.9), current (OR=1.7, 95%CI=1.5, 2.0) and daily (OR=2.0, 95%CI=1.6, 2.5) use, after controlling for demographics, grades and perceived smoking norms. The effect of depressiveness on daily use varied with race/ethnicity: Latinos (OR=2.9, 95%CI=2.1, 4.0), American Indians (OR=2.1, 95%CI=1.8, 2.6), Asians (OR=2.1, 95%CI=1.1, 3.9), whites (OR=2.0, 95%CI=1.4, 2.8), and African Americans (OR=1.3, 95%CI=0.6, 2.8). Odds ratios of smoking comparing depressive versus non-depressive teens were attenuated by 12-22%, with the inclusion of refusal SE and smoking KA. CONCLUSIONS: Teen smoking prevention programs should address depressiveness, because it appears to be common and independently associated with smoking, and because refusal SE and smoking KA seem to mediate the relationship. Racial/ethnic variations suggest that culturally tailored strategies are needed.</p>	

Notes

Notes

The Commons Trevisos (Top Flr)

Moursund St

Parking Garage 10

M. D. Anderson Cancer Center Main Building

M. D. Anderson Blvd

Bates St

J. V. Johnson Ave

Bertner Ave

Holcombe Blvd

Pressler St

Marriott Medical Center

Hilton Medical Center

Main St

Fannin St

Texas Childrens

Mays Clinic MD Anderson

CPB

Faculty Center

Marriott Rotary House

M. D. Anderson Conference Location

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ASPO 2007
Attendee Questionnaire for Feedback

We are eager to get your feedback regarding this program so we may continue to make the Annual ASPO Meeting suit your professional needs. Please take a moment to fill out this questionnaire and leave it at the registration table, or mail it to the ASPO National Office, 330 WARF Building, 610 Walnut Street, Madison, WI 53726.

What were the most interesting parts of the meeting?

What were the weak points?

What subjects would you like to have covered in future meetings?

What should be covered in greater detail?

Do you have any suggestions for format changes?

Were you able to see and hear adequately?	YES	NO	
Should ASPO have more/fewer presented papers?	MORE	FEWER	AS IS
Should ASPO continue providing concurrent sessions?	YES	NO	
General suggestions (format, speakers, food, etc...)			

Thank you for your time!
Melissa Bondy, President