

# Contents

## Cancer Epidemiology, Biomarkers & Prevention

Translating Science to Populations

April 2013 • Volume 22 • Number 4

### Highlights of This Issue 479

#### CEBP SERIES: EPIDEMIOLOGY IN THE 21ST CENTURY

- 481 **Cultivating Cohort Studies for Observational Translational Research**  
David F. Ransohoff
- 485 **Bridging the Gap between Biologic, Individual, and Macroenvironmental Factors in Cancer: A Multilevel Approach**  
Shannon M. Lynch and Timothy R. Rebbeck
- 496 **Provocative Questions in Cancer Epidemiology in a Time of Scientific Innovation and Budgetary Constraints**  
Tram Kim Lam, Sheri D. Schully, Scott D. Rogers, Rachel Benkeser, Britt Reid, and Muin J. Khoury
- 501 **A Review of NCI's Extramural Grant Portfolio: Identifying Opportunities for Future Research in Genes and Environment in Cancer**  
Armen A. Ghazarian, Naoko I. Simonds, Kelly Bennett, Camilla B. Pimentel, Gary L. Ellison, Elizabeth M. Gillanders, Sheri D. Schully, and Leah E. Mechanic
- 508 **Transforming Epidemiology for 21st Century Medicine and Public Health**  
Muin J. Khoury, Tram Kim Lam, John P.A. Ioannidis, Patricia Hartge, Margaret R. Spitz, Julie E. Buring, Stephen J. Chanock, Robert T. Croyle, Katrina A. Goddard, Geoffrey S. Ginsburg, Zdenko Herceg, Robert A. Hiatt, Robert N. Hoover, David J. Hunter, Barnett S. Kramer, Michael S. Lauer, Jeffrey A. Meyerhardt, Olufunmilayo I. Olopade, Julie R. Palmer, Thomas A. Sellers, Daniela Seminara, David F. Ransohoff, Timothy R. Rebbeck, Georgia Tourassi, Deborah M. Winn, Ann Zauber, and Sheri D. Schully

#### CEBP FOCUS: CANCER PRECURSOR LESIONS

- 518 **Why Precursors Matter**  
Neil E. Caporaso

- 521 **Precursors in Cancer Epidemiology: Aligning Definition and Function**  
Sholom Wacholder
- 528 **Dysplastic Nevi and Melanoma**  
Alisa M. Goldstein and Margaret A. Tucker
- 533 **Precursors to Lymphoproliferative Malignancies**  
Lynn R. Goldin, Mary L. McMaster, and Neil E. Caporaso
- 540 **Squamous Dysplasia—The Precursor Lesion for Esophageal Squamous Cell Carcinoma**  
Philip R. Taylor, Christian C. Abnet, and Sanford M. Dawsey
- 553 **Human Papillomavirus Infection and the Multistage Carcinogenesis of Cervical Cancer**  
Mark Schiffman and Nicolas Wentzensen

#### CEBP ANNUAL REPORT

- 561 **Cancer Survivors in the United States: Prevalence across the Survivorship Trajectory and Implications for Care**  
Janet S. de Moor, Angela B. Mariotto, Carla Parry, Catherine M. Alfano, Lynne Padgett, Erin E. Kent, Laura Forsythe, Steve Scoppa, Mark Hachey, and Julia H. Rowland

#### RESEARCH ARTICLES

- 571 **A Novel Serum Metabolomics-Based Diagnostic Approach to Pancreatic Cancer**  
Takashi Kobayashi, Shin Nishiumi, Atsuki Ikeda, Tomoo Yoshie, Aya Sakai, Atsuki Matsubara, Yoshihiro Izumi, Hidetaka Tsumura, Masahiro Tsuda, Hogara Nishisaki, Nobuhide Hayashi, Seiji Kawano, Yutaka Fujiwara, Hironobu Minami, Tadaomi Takenawa, Takeshi Azuma, and Masaru Yoshida
- 580 **Cervical Cancer Screening Among Young Adult Women in the United States**  
Katherine B. Roland, Vicki B. Benard, Ashwini Soman, Nancy Breen, Deanna Kepka, and Mona Saraiya

- 589 **Relationship of Early-Onset Baldness to Prostate Cancer in African-American Men**  
Charnita Zeigler-Johnson, Knashawn H. Morales, Elaine Spangler, Bao-Li Chang, and Timothy R. Rebbeck
- 597 **Using Genetic Proxies for Lifecourse Sun Exposure to Assess the Causal Relationship of Sun Exposure with Circulating Vitamin D and Prostate Cancer Risk**  
Carolina Bonilla, Rebecca Gilbert, John P. Kemp, Nicholas J. Timpson, David M. Evans, Jenny L. Donovan, Freddie C. Hamdy, David E. Neal, William D. Fraser, George Davey Smith, Sarah J. Lewis, Mark Lathrop, and Richard M. Martin
- 607 **Melanoma Genetic Testing, Counseling, and Adherence to Skin Cancer Prevention and Detection Behaviors**  
Karen Glanz, Kathryn Volpicelli, Peter A. Kanetsky, Michael E. Ming, Lynn M. Schuchter, Christopher Jepson, Susan M. Domchek, and Katrina Armstrong
- 615 **Time to First Cigarette and 4-(Methylnitrosamino)-1-(3-Pyridyl)-1-Butanol (NNAL) Levels in Adult Smokers; National Health and Nutrition Examination Survey (NHANES), 2007–2010**  
Steven A. Branstetter and Joshua E. Muscat
- 623 **Drinking Water Arsenic in Northern Chile: High Cancer Risks 40 Years after Exposure Cessation**  
Craig M. Steinmaus, Catterina Ferreccio, Johanna Acevedo Romo, Yan Yuan, Sandra Cortes, Guillermo Marshall, Lee E. Moore, John R. Balmes, Jane Liaw, Todd Golden, and Allan H. Smith
- 631 **Metabolomics in Epidemiology: Sources of Variability in Metabolite Measurements and Implications**  
Joshua N. Sampson, Simina M. Boca, Xiao Ou Shu, Rachael Z. Stolzenberg-Solomon, Charles E. Matthews, Ann W. Hsing, Yu Ting Tan, Bu-Tian Ji, Wong-Ho Chow, Qiuyin Cai, Da Ke Liu, Gong Yang, Yong Bing Xiang, Wei Zheng, Rashmi Sinha, Amanda J. Cross, and Steven C. Moore
- 641 **Sociodemographic Inequalities in Sexual Activity and Cervical Cancer Screening: Implications for the Success of Human Papillomavirus Vaccination**  
Mélanie Drolet, Marie-Claude Boily, Christina Greenaway, Shelley L. Deeks, Caty Blanchette, Jean-François Laprise, and Marc Brisson
- 653 **Acrylamide Hemoglobin Adduct Levels and Ovarian Cancer Risk: A Nested Case-Control Study**  
Jing Xie, Kathryn L. Terry, Elizabeth M. Poole, Kathryn M. Wilson, Bernard A. Rosner, Walter C. Willett, Hubert W. Vesper, and Shelley S. Tworoger
- 661 **Hay Fever and Asthma as Markers of Atopic Immune Response and Risk of Colorectal Cancer in Three Large Cohort Studies**  
Eric J. Jacobs, Susan M. Gapstur, Christina C. Newton, Michelle C. Turner, and Peter T. Campbell
- 670 **Dairy Intakes in Older Girls and Risk of Benign Breast Disease in Young Women**  
Catherine S. Berkey, Walter C. Willett, Rulla M. Tamimi, Bernard Rosner, A. Lindsay Frazier, and Graham A. Colditz
- 675 **HOXB13 Mutation and Prostate Cancer: Studies of Siblings and Aggressive Disease**  
John S. Witte, Joel Mefford, Sarah J. Plummer, Jinghua Liu, Iona Cheng, Eric A. Klein, Benjamin A. Rybicki, and Graham Casey
- 681 **Reproductive, Lifestyle, and Anthropometric Risk Factors for Cancer in Elderly Women**  
Jenny N. Poynter, Maki Inoue-Choi, Julie A. Ross, David R. Jacobs Jr, and Kimberly Robien
- 688 **Genetic Variation in the Vitamin D Pathway in Relation to Risk of Prostate Cancer—Results from the Breast and Prostate Cancer Cohort Consortium**  
Alison M. Mondul, Irene M. Shui, Kai Yu, Ruth C. Travis, Victoria L. Stevens, Daniele Campa, Frederick R. Schumacher, Regina G. Ziegler, H. Bas Bueno-de-Mesquita, Sonja Berndt, E.D. Crawford, Susan M. Gapstur, J. Michael Gaziano, Edward Giovannucci, Christopher A. Haiman, Brian E. Henderson, David J. Hunter, Mattias Johansson, Timothy J. Key, Loïc Le Marchand, Sara Lindström, Marjorie L. McCullough, Carmen Navarro, Kim Overvad, Domenico Palli, Mark Purdue, Meir J. Stampfer, Stephanie J. Weinstein, Walter C. Willett, Meredith Yeager, Stephen J. Chanock, Dimitrios Trichopoulos, Laurence N. Kolonel, Peter Kraft, and Demetrius Albanes
- 697 **Dietary Fat, Fatty Acids, and Risk of Prostate Cancer in the NIH-AARP Diet and Health Study**  
Colleen Pelsler, Alison M. Mondul, Albert R. Hollenbeck, and Yikyung Park

---

708 **The Ability of Plasma Cotinine to Predict Nicotine and Carcinogen Exposure is Altered by Differences in CYP2A6: the Influence of Genetics, Race, and Sex**  
Andy Z.X. Zhu, Caroline C. Renner, Dorothy K. Hatsukami, Gary E. Swan, Caryn Lerman, Neal L. Benowitz, and Rachel F. Tyndale

719 **Human Papillomavirus Load in Eyebrow Hair Follicles and Risk of Cutaneous Squamous Cell Carcinoma**  
Rachel E. Neale, Soenke Weissenborn, Damiano Abeni, Jan Nico Bouwes Bavinck, Sylvie Euvrard, Mariet C.W. Feltkamp, Adele C. Green, Catherine Harwood, Maurits de Koning, Luigi Naldi, Ingo Nindl, Michael Pawlita, Charlotte Proby, Wim G. Quint, Tim Waterboer, Ulrike Wieland, and Herbert Pfister

728 **Prevalence and Healthcare Actions of Women in a Large Health System with a Family History Meeting the 2005 USPSTF Recommendation for BRCA Genetic Counseling Referral**  
Cecelia A. Bellcross, Steven Leadbetter, Sharon Hensley Alford, and Lucy A. Peipins

736 **Association of AMP-Activated Protein Kinase with Risk and Progression of Non-Hodgkin Lymphoma**  
Aaron E. Hoffman, Kathryn Demanelis, Alan Fu, Tongzhang Zheng, and Yong Zhu

# BLOOD CANCER DISCOVERY

**22 (4)**

*Cancer Epidemiol Biomarkers Prev* 2013;22:479-744.

**Updated version** Access the most recent version of this article at:  
<http://cebp.aacrjournals.org/content/22/4>

**E-mail alerts** [Sign up to receive free email-alerts](#) related to this article or journal.

**Reprints and Subscriptions** To order reprints of this article or to subscribe to the journal, contact the AACR Publications Department at [pubs@aacr.org](mailto:pubs@aacr.org).

**Permissions** To request permission to re-use all or part of this article, use this link <http://cebp.aacrjournals.org/content/22/4>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.