LETTER FROM THE EDITOR

1 Catalyzing Cancer Prevention Research

Catalyzing Cancer Prevention Research: A New Year/New Opportunities
Scott M. Lippman

SPECIAL REPORT

2 Transforming Cancer Prevention through Precision Medicine and Immune-oncology

Transforming Cancer Prevention through Precision Medicine and Immune-oncology
Thomas W. Kensler, Avrum Spira, Judy E. Garber, Eva Szabo, J. Jack Lee, Zigang Dong, Andrew J. Dannenberg, William N. Hait, Elizabeth Blackburn, Nancy E. Davidson, Margaret Foti, and Scott M. Lippman

EDITORIAL

11 Risk Factor Models and Personalized Health: Opportunities and Challenges for Asymptomatic Individuals

Risk Factor Models and Personalized Health: Opportunities and Challenges for Asymptomatic Individuals
Frank L. Meyskens Jr
See related article. p. 13

REVIEW

13 Risk Prediction Models for Colorectal Cancer: A Systematic Review

Risk Prediction Models for Colorectal Cancer: A Systematic Review
Juliet A. Usher-Smith, Fiona M. Walter, Jon D. Emery, Aung K. Win, and Simon J. Griffin
See related article. p. 11

RESEARCH ARTICLES

27 Plasma Inflammatory Markers and Risk of Advanced Colorectal Adenoma in Women

Plasma Inflammatory Markers and Risk of Advanced Colorectal Adenoma in Women
Mingyang Song, Raq S. Mehta, Kana Wu, Charles S. Fuchs, Shuji Ogino, Edward L. Giovannucci, and Andrew T. Chan

35 Methylseleninic Acid Superactivates p53-Senescence Cancer Progression Barrier in Prostate Lesions of Pten-Knockout Mouse

Methylseleninic Acid Superactivates p53-Senescence Cancer Progression Barrier in Prostate Lesions of Pten-Knockout Mouse
Lei Wang, Xiaolan Guo, Ji Wang, Cheng Jiang, Maarten C. Bosland, Junxuan Lu, and Yibin Deng

43 Cancer-Specific Production of N-Acetylglaspartate via NAT8L Overexpression in Non–Small Cell Lung Cancer and Its Potential as a Circulating Biomarker

Cancer-Specific Production of N-Acetylglaspartate via NAT8L Overexpression in Non–Small Cell Lung Cancer and Its Potential as a Circulating Biomarker
Tzu-Fang Lou, Deepa Sethuraman, Patrick Dossey, Pallevi Sivastava, Hyun Seok Kim, Joongsoo Kim, Xiaotu Ma, Pei-Hsuan Chen, Kenneth E. Huffman, Robin E. Frink, Jill E. Larsen, Cheryl Lewis, Sang-Won Uhm, Duk-Hwan Kim, Jung-Mo Ahn, Ralph J. Delertzadinia, Michael A. White, John D. Minna, and Hyuntae Yoo

53 Targeting mTOR and p53 Signaling Inhibits Muscle Invasive Bladder Cancer In Vivo

Targeting mTOR and p53 Signaling Inhibits Muscle Invasive Bladder Cancer In Vivo
Venkateshwar Madka, Altaf Mohammed, Qian Li, Yuting Zhang, Laura Biddick, Jagan M.R. Patolla, Stan Lightfoot, Rheal A. Towne, Xue-Ru Wu, Vernon E. Steele, Levy Kopelovich, and Chinthalapally V. Rao

63 Preclinical In Vitro, In Vivo, and Pharmacokinetic Evaluations of FLLL12 for the Prevention and Treatment of Head and Neck Cancers

Preclinical In Vitro, In Vivo, and Pharmacokinetic Evaluations of FLLL12 for the Prevention and Treatment of Head and Neck Cancers
Abu Syed Md Anisuzzaman, Abedul Hasque, Mohammad Aminur Rahman, Dongsheng Wang, James R. Fuchs, Selwyn Hurwitz, Yuan Liu, Gabriel Sica, Fadlo R. Khuri, Zhuo (Georgia) Chen, Dong M. Shih, and A.R.M. Rahul Amin

74 Anticancer and Cancer Prevention Effects of Piperine-Free Piper nigrum Extract on N-nitrosomethylurea-Induced Mammary Tumorigenesis in Rats

Anticancer and Cancer Prevention Effects of Piperine-Free Piper nigrum Extract on N-nitrosomethylurea-Induced Mammary Tumorigenesis in Rats
Somchai Sriwiriyajan, Aman Tedasen, Narissara Lailerd, Pleumjit Boonyaphiphat, Anupong Nitiwangjarat, Yan Deng, and Poichanapong Graidist

83 Uninterrupted Sedentary Behavior Downregulates BRCA1 Gene Expression

Uninterrupted Sedentary Behavior Downregulates BRCA1 Gene Expression
Rachael Pettapiece-Phillips, Max Kozyr, Rania Chehade, Leonardo Salmena, Steven A. Narod, Mohammad Akbari, Igor Jurisica, and Joanne Kotsopoulos

89 A Presurgical Study of Oral Silybin-Phosphatidylcholine in Patients with Early Breast Cancer

A Presurgical Study of Oral Silybin-Phosphatidylcholine in Patients with Early Breast Cancer
Matteo Lazzeroni, Aliana Guerrieri-Gonzaga, Sara Gandini, Harriet Johansson, Davide Serzano, Massimiliano Cazzaniga, Valentina Aristicco, Antonella Puccio, Serena Mora, Pietro Caldarella, Gianmatteo Pagani, Giancarlo Pruneri, Antonella Riva, Giovanna Pettangolini, Paolo Morazzoni, Andrea DeCensi, and Bernardo Bonanni
# Table of Contents

## Letter to the Editor

### 115

**Acrolein Levels in e-Cigarettes—Letter**

## Correction

### 116

**Correction: Durable Antibody Responses Following One Dose of the Bivalent Human Papillomavirus L1 Virus-Like Particle Vaccine in the Costa Rica Vaccine Trial**

## About the Cover

The molecular alterations associated with early pathological steps preceding the development of invasive carcinoma have not been well characterized. A Premalignant Cancer Genome Atlas (PCGA) is needed to both support the collection and molecular profiling (circus plot) of premalignant lesions (purple cells) to identify the sequence of initial driver events that cause normal cells (orange cells) to acquire cancer hallmarks that enable lesions (purple cells) to progress to fully invasive carcinoma, including the critical "additional genomic events" (e.g., checkpoint/tumor suppressor loss or other co-activating event) that transform premalignancy (purple cells in the fourth circle to the right) to cancer (far right). In addition to defining the sequence of site-specific genomic driving events, characterizing the premalignant inflammatory microenvironment, including the contribution of the stroma and immune cell (blue) regulation, will provide a better understanding of the selective forces that drive premalignant lesions to become invasive cancer. This figure appears in the Special Report by Kensler and colleagues (beginning on page 2), which sets out a brief agenda for the immediate future of cancer prevention, involving the inter-related fields of precision medicine and immunoprevention, driven by transformative approaches like PCGA, pivotal elements in a broader domain of personalized public health.

---

**AC icon indicates Author Choice**

For more information please visit [www.aacrjournals.org](http://www.aacrjournals.org)