Cancer Epidemiology
Biomarkers & Prevention

An Official Journal of the American Association for Cancer Research ■ Cosponsored by the American Society of Preventive Oncology

American Association for
Cancer Research, Inc.
Executive Director and
Director of Publications
Margaret Fox
Publications Staff
Associate Director of Publications
Mary Anne Meninie
Manager, Editorial Services
Heide M. Pusztau
Staff Editors
Michael J. Beveridge
Kathleen C. Assemacher
Panela R. Arnold
Ronald M. Vitale
Staff Assistant
Mary Ellen Pirring
Senior Editorial Assistant
Theresa A. Griffith
Editorial Assistants
Valerie L. Samuel
Cecilia Gallo
Marketing Coordinator
Robert B. O’Malley
Administrative Staff
Director of Administration
Adam D. Blisterin
Controller
Joan D. Richie
Manager, Meetings and Exhibits
Jeffrey M. Ruben
Meeting Planner
Carole L. Kanoff
Public Information Coordinator
Jenny Anne Horst-Matz
Assistant to the Executive Director
Ruth E. Fortson
Membership Development Coordinator
Robin E. Felder
Administrative Assistant
Margaret A. Pickels
Systems Specialist
Lydia I. Rodriguez
Secretary
Mattie L. Wright
Editorial Assistant
Diana F. Cento
Office Clerk
James J. Waters
Data Entry Clerk
Robert A. Simms II

Editor-in-Chief
Frederick P. Li
Senior Editors
Epidemiology
John D. Potter
Biomarkers
Fred K. Kadlubar
Prevention
David S. Alberts
Behavioral Sciences
Caryn E. Lerman
Associate Editors
W. Robert Bruce
Webster K. Cavenee
Joseph P. Engstrom
Joseph F. Fraumeni, Jr.
Karen Glanz
Ellen R. Gritz
Curtis C. Harris
Stephen S. Hecht
Laurence N. Kolonel
W. Thomas London
James R. Marshall
Abraham M. Y. Nomura
James A. Swenberg
Steven R. Tannenbaum
Alice S. Whittemore
Chung S. Yang
Mimi C. Yu
Assistant Editor
Arlene F. Kantor
Editorial Advisory Board
Hans-Olov Adami
Bruce K. Armstrong
Helmut Bartsch
Valerie Beral
Leslie Bernstein
John S. Bertram
Joan R. Bloom
William J. Blot
John D. Boice, Jr.
George E. Bonney
Roberd M. Bostick
Ricardo R. Brentani
Eva Buiaiti
Neil E. Caporaso
Wong-Ho Chow
Philip Cole
K. Michael Cummings
Susan J. Curry
Janet Daling
Mary Daly
Eduardo DeStefani
Virginia L. Ernst
Michael Fiore
David Forman
Eduardo L. Franco
Yu-Tang Gao
E. Robert Greenberg
Raymond S. Greenberg
Peter Greenwald
F. Peter Guengerich
Rodrigo Guerrero
Clark W. Heath, Jr.
Kathy J. Helzlsouer
Elizabeth A. Holly
Wan Ki Hong
Geoffrey R. Howe
Mary Clare King
Leo J. Kinlen
Paul Kleihues
Alfred G. Knudson, Jr.
Bernard Levin
Lance A. Liotta
Martin Lipkin
Richard R. Love
Thomas Mack
Frank L. Meyerson, Jr.
Christopher J. Miechjea
Rodney F. Minchin
John D. Minna
Ruggero Montesano
John J. Mulvihill
Alvaro Muñoz
Nubia Muñoz
Alfred I. Neugut
Ghilbert S. Omenn
C. Tracy Orleans
David L. Page
Frederica Perera
Nicholas L. Petros
John P. Pierce
Miriam C. Poivre
Bruce A. J. Ponder
Ross Prentice
Barbara Rimer
Nathanial Rothman
George C. Roush
Jose Russo
Jonathan M. Samet
Arthur Schatzkin
Mark H. Schifferman
David Schottenfeld
Paul A. Schulte
Peter Shields
Roy E. Shore
Margaret R. Spitz
Louise C. Strong
Takashi Sugimura
G. Marie Swanson
Eiichi Tahara
Bruce Trock
Sally Vernon
Michael J. Wargovich
Lee W. Wattenberg
I. Bernard Weinstein
John H. Weisburger
Noel S. Weiss
Ainsley Weston
Walter C. Willett
Rodger J. Winn
Gerald N. Wogan
Sandra R. Wolman
Ernst L. Wynder
Regina Ziegler

Cancer Epidemiology, Biomarkers & Prevention is published monthly, one volume annually, by the American Association for Cancer Research, Inc. (AACR). Except for members of the AACR, all subscriptions are payable in advance to AACR, Subscription Office, P.O. Box 11806, Birmingham, AL 35202 (Telephone: 800-633-493 or (205)-995-1567; FAX: (205)-995-1588), to which all business communications, remittances (in United States currency or its equivalent), and subscription orders should be sent. In Japan, send orders and inquiries to (sole agent): USACO Corporation, Tsutsui Bldg., 13-12, Shimbashi 1-chome, Minato-ku, Tokyo 105, Japan; Tel. (03) 502-6471. Nonmembers of the AACR within the United States may subscribe to Volume 7 (1998) of Cancer Epidemiology, Biomarkers & Prevention at the rate of $110 (individual nonmembers) or $285 (institutional nonmembers), including postage. Individual and institutional nonmembers outside of the United States should add $40 to their respective rates to offset periodicals postage costs, which covers the cost of shipping journals by surface mail. (For faster delivery, expedited mailing rates are available by contacting the AACR Publications Department). Canadian subscribers should add 7% GST. Changes of address notification should be sent 60 days in advance and include both old and new addresses. Member subscribers should send address changes to: Member Services, AACR, Public Ledger Bldg., Suite 826, 150 South Independence Mall West, Philadelphia, PA 19106-3483. Nonmember subscribers should send changes of address to: AACR Subscription Office, P.O. Box 11806, Birmingham, AL 35202. Copies of the journal which are undeliverable because of address changes will be destroyed. Accelerated mailing of all AACR journals to AACR members in Japan is supported by a generous grant from the Banyu Pharmaceutical Company, Tsukuba, Japan.