

Cancer Epidemiology

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METHODS IN MOLECULAR BIOLOGY™

Cancer Epidemiology

**Volume II
Modifiable Factors**

Edited by

Mukesh Verma, PhD

Division of Cancer Control and Population Sciences, National Cancer Institute, Bethesda, Maryland

 **Humana Press**

Editor

Mukesh Verma
Division of Cancer Control and Population Sciences
Bethesda, Maryland 20892
USA

Series Editor

John M. Walker
School of Life Sciences
University of Hertfordshire
Hatfield, Hertfordshire, AL10 9AB, UK

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Preface

Population studies facilitate the discovery of genetic and environmental determinants of cancer and the development of new approaches to cancer control and prevention. Furthermore, epidemiology studies play a central role in making health policies. Cancer epidemiology may address a number of research areas such as:

- familial predispositions to colon cancer and breast cancer study to determine whether families who carry a genetic predisposition to breast cancer may also be at risk of colon cancer, and vice versa;
- prospective examination of whether baseline dietary intakes and serum levels of carotenoids and vitamin A are associated with subsequent risk of lung cancer;
- analysis of the relationship between serum levels of sex-steroid hormones and genetic polymorphisms in biosynthesis enzymes in a prospective cohort of pre-menopausal women;
- analysis of the role of HLA-Class II similarity/dissimilarity between sexual partners and the role in HIV transmission, using the multicenter hemophilia cohort study population for the data set;
- multiple comparisons and the effect of stratifying data on study power.

This two-volume set compiles areas of research that cover etiological factors or determinants that contribute in the development of cancer as well as describe the latest technologies in cancer epidemiology. Emphasis is placed on translating clinical observations into interdisciplinary approaches involving clinical, genetic, epidemiologic, statistical, and laboratory methods to define the role of susceptibility genes in cancer etiology; translating molecular genetics advances into evidence-based management strategies (including screening and chemoprevention) for persons at increased genetic risk of cancer; identifying and characterizing phenotypic manifestations of genetic and familial cancer syndromes; counseling individuals at high risk of cancer; investigating genetic polymorphisms as determinants of treatment-related second cancers; and pursuing astute clinical observations of unusual cancer occurrences that might provide new clues to cancer etiology. All the chapters in these two books are divided into three categories:

Volume 1:

Cancer Incidence, Prevalence, Mortality, and Surveillance
Methods, Technologies, and Study Design in Cancer Epidemiology
Host Susceptibility Factors in Cancer Epidemiology

Volume 2:

Modifiable Factors in Cancer Epidemiology
Epidemiology of Organ-Specific Cancer

These chapters have been written in a way that allows readers to get the maximum advantage of the methods involved in cancer epidemiology. Several examples of specific organ sites would be helpful in understanding cancer etiology.

Mukesh Verma, Ph.D.

Contents

<i>Preface</i>	<i>v</i>
<i>Contributors</i>	<i>ix</i>
<i>Contents of Volume I</i>	<i>xiii</i>

PART I: MODIFIABLE FACTORS IN CANCER EPIDEMIOLOGY

1. Environmental and Occupational Risk Factors for Lung Cancer.	3
<i>Irene Brüske-Hoblfeld</i>	
2. Lifestyle, Genes, and Cancer	25
<i>Yvonne M. Coyle</i>	
3. Energy Balance, Physical Activity, and Cancer Risk.	57
<i>Alecia Malin Fair and Kara Montgomery</i>	
4. Genetic Epidemiology Studies in Hereditary Non-Polyposis Colorectal Cancer . . .	89
<i>Rodney J. Scott and Jan Lubinski</i>	
5. Parental Smoking and Childhood Leukemia	103
<i>Jeffrey S. Chang</i>	
6. Lung Cancer and Exposure to Metals: <i>The Epidemiological Evidence</i>	139
<i>Pascal Wild, Eve Bourgard, and Christophe Paris</i>	
7. Breast Cancer and the Role of Exercise in Women	169
<i>Beverly S. Reigle and Karen Wonders</i>	
8. Energy Intake, Physical Activity, Energy Balance, and Cancer: <i>Epidemiologic Evidence</i>	191
<i>Sai Yi Pan and Marie DesMeules</i>	
9. Contribution of Alcohol and Tobacco Use in Gastrointestinal Cancer Development.	217
<i>Helmut K. Seitz and Chin Hin Cho</i>	
10. Role of Xenobiotic Metabolic Enzymes in Cancer Epidemiology	243
<i>Madhu S. Singh and Michael Michael</i>	
11. Genetic Polymorphisms in the Transforming Growth Factor- β Signaling Pathways and Breast Cancer Risk and Survival	265
<i>Wei Zheng</i>	

PART II: EPIDEMIOLOGY OF ORGAN-SPECIFIC CANCER

12. Molecular Epidemiology of DNA Repair Genes in Bladder Cancer.	281
<i>Anne E. Kiltie</i>	
13. Breast Cancer Screening and Biomarkers	307
<i>Mai Brooks</i>	
14. Epidemiology of Brain Tumors	323
<i>Hiroko Ohgaki</i>	
15. Mammographic Density: A Heritable Risk Factor for Breast Cancer.	343
<i>N. F. Boyd, L. J. Martin, J. M. Rommens, and A. D. Paterson, S. Minkin, M. J. Yaffe, J. Stone, and J. L. Hopper</i>	

16.	Acquired Risk Factors for Colorectal Cancer	361
	<i>Otto S. Lin</i>	
17.	Aberrant Crypt Foci in Colon Cancer Epidemiology	373
	<i>Sharad Khare, Kamran Chaudhary, Marc Bissonnette, and Robert Carroll</i>	
18.	Determinants of Incidence of Primary Fallopian Tube Carcinoma (PFTC).	387
	<i>Annika Riska and Arto Leminen</i>	
19.	The Changing Epidemiology of Lung Cancer	397
	<i>Chee-Keong Tob</i>	
20.	Epidemiology of Ovarian Cancer	413
	<i>Jennifer Permutth-Wey and Thomas A. Sellers</i>	
21.	Epidemiology, Pathology, and Genetics of Prostate Cancer Among African Americans Compared with Other Ethnicities	439
	<i>Heinric Williams and Isaac J. Powell</i>	
22.	Racial Differences in Clinical Outcome After Prostate Cancer Treatment	455
	<i>Takashi Fukagai, Thomas Namiki, Robert G. Carlile, and Mikio Namiki</i>	
23.	Epidemiology of Stomach Cancer	467
	<i>Hermann Brenner, Dietrich Rothenbacher, and Volker Arndt</i>	
	<i>Index</i>	479

Contributors

- VOLKER ARNDT, M.D., M.P.H. • *Division of Clinical Epidemiology and Aging Research, German Cancer Research Center, Heidelberg, Germany*
- MARC BISSONNETTE, M.D. • *Department of Medicine, University of Chicago, Chicago, IL, USA*
- EVE BOURGKARD, Ph.D. • *Department of Occupational Epidemiology, INRS, Vandoeuvre, France*
- NORMAN F. BOYD, M.D., D.Sc. • *The Campbell Family Institute for Breast Cancer Research, Ontario Cancer Institute, Toronto, Canada*
- HERMANN BRENNER, M.D., M.P.H. • *Division of Clinical Epidemiology and Aging Research, German Cancer Research Center, Heidelberg, Germany*
- MAI BROOKS, M.D., F.A.C.S. • *Division of Surgical Oncology, School of Medicine, University of California, Los Angeles, CA, USA*
- IRENE BRÜSKE-HOHLFELD, M.D. • *Institute of Epidemiology, Helmholtz Zentrum München, German Research Center for Environmental Health (GmbH), Neuherberg, Germany*
- ROBERT G. CARLILE, M.D. • *Department of Surgery and Pathology, University of Hawaii School of Medicine, Honolulu, HI, USA*
- ROBERT CARROLL, M.D. • *Department of Medicine, University of Illinois Chicago, IL, USA*
- JEFFREY S. CHANG, M.D., Ph.D., M.P.H. • *Department of Epidemiology and Biostatistics, University of California, San Francisco, CA, USA*
- KAMRAN CHAUDHARY, M.D. • *Department of Medicine, University of Illinois, Chicago, IL, USA*
- CHIN HIN CHO, Ph.D. • *Department of Pharmacology, Faculty of Medicine, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong, China*
- YVONNE M. COYLE, M.D. • *Department of Internal Medicine, UT Southwestern Medical Center, Dallas, TX, USA*
- MARIE DESMEULES, M.Sc. • *Centre for Chronic Disease Prevention and Control, Public Health Agency of Canada, Ottawa, Ontario, Canada*
- ALECIA MALIN FAIR, Dr.PH. • *Department of Surgery, Meharry Medical College, Nashville, TN, USA*
- TAKASHI FUKAGAI, M.D. • *Department of Surgery and Pathology, University of Hawaii School of Medicine, Honolulu, HI, USA*
- JOHN L. HOPPER, Ph.D. • *Centre for Molecular, Environmental, Genetic and Analytic Epidemiology, University of Melbourne, Australia*
- SHARAD KHARE, Ph.D. • *Department of Medicine, Loyola University, Maywood, IL, USA*
- ANNE E. KILTIE, M.A., D. M. MRCP(UK), F.R.C.R. • *Molecular Radiobiology Group, Cancer Research UK Clinical Centre, St James's University Hospital, Leeds, West Yorkshire, UK*

- ARTO LEMINEN, M.D., Ph.D. • *Department of Obstetrics and Gynecology, HUCH Hospital Area, Hospital District of Helsinki and Uusimaa, Helsinki, Finland*
- OTTO S. LIN, M.D., M.Sc. • *Digestive Diseases Institute, Virginia Mason Medical Center, Seattle, WA, USA*
- JAN LUBINSKI, M.D. • *International Hereditary Cancer Center, Pomeranian Medical University, Szczecin, Poland*
- LISA J. MARTIN, Ph.D. • *The Campbell Family Institute for Breast Cancer Research, Ontario Cancer Institute, Toronto, Canada*
- MICHAEL MICHAEL, B.Sc. (Hons), M.B.B.S (Hons), FRACP. • *GI Clinical Service, Division of Haematology and Medical Oncology, Peter MacCallum Cancer Centre, Victoria, Australia*
- SALOMON MINKIN, Ph.D. • *The Campbell Family Institute for Breast Cancer Research, Ontario Cancer Institute, Toronto, Canada*
- KARA MONTGOMERY, Dr.PH. • *Department of Health Promotion, Education, and Behavior, University of South Carolina, Columbia, SC, USA*
- MIKIO NAMIKI, M.D. • *Department of Urology, Kanazawa University School of Medicine, Kanazawa, Japan*
- THOMAS NAMIKI, M.D. • *Department of Surgery and Pathology, University of Hawaii School of Medicine, Honolulu, HI, USA*
- HIROKO OHGAKI, Ph.D. • *Pathology Group, International Agency for Research on Cancer, Lyon, France*
- SAI YI PAN, M.D. • *Centre for Chronic Disease Prevention and Control, Public Health Agency of Canada, Ottawa, Ontario, Canada*
- CHRISTOPHE PARIS, M.D., Ph.D. • *Department of Occupational Health and Epidemiology, Medical School, Vandoeuvre, France*
- ANDREW D. PATERSON, M.B., B.Ch. • *Department of Public Health Sciences, University of Toronto, Toronto, Canada*
- JENNIFER PERMUTH-WEY, M.S. • *Division of Cancer Prevention and Control, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL, USA*
- ISAAC J. POWELL, M.D. • *Department of Urology, Wayne State University Detroit, MI, USA*
- BEVERLY S. REIGLE, Ph.D., R.N. • *College of Nursing, University of Cincinnati, Cincinnati, OH, USA*
- ANNIKA RISKÄ, M.D. • *Department of Obstetrics and Gynecology, Hospital District of Helsinki and Uusimaa, Helsinki, Finland*
- JOHANNA M. ROMMENS, Ph.D. • *Program in Genetics and Genomic Biology, The Hospital for Sick Children, Toronto, Canada*
- DIETRICH ROTHENBACHER, M.D., M.P.H. • *Division of Clinical Epidemiology and Aging Research, German Cancer Research Center, Heidelberg, Germany*
- RODNEY J. SCOTT, Ph.D., FRCPath. • *Discipline of Medical Genetics, School of Biomedical Sciences, Faculty of Health, University of Newcastle and the Hunter Medical Research Institute, Newcastle New South Wales, Australia*
- HELMUT K. SEITZ, M.D. • *Department of Medicine, and Center of Alcohol Research, Liver Disease and Nutrition, Salem Medical Center, University of Heidelberg, Heidelberg, Germany*

- THOMAS A. SELLERS, Ph.D. • *Division of Cancer Prevention and Control, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL, USA*
- MAHDU S. SINGH, M.B.B.S. • *Division of Haematology and Medical Oncology, Peter MacCallum Cancer Centre, Victoria, Australia*
- JENNIFER STONE, Ph.D. • *Centre for Molecular, Environmental, Genetic and Analytic Epidemiology, University of Melbourne, Australia*
- CHEE-KEONG TOH, M.B.B.S, MRCP. • *Department of Medical Oncology, National Cancer Centre, Singapore*
- PASCAL WILD, Ph.D. • *Department of Occupational Epidemiology, INRS, Vandoeuvre, France*
- HEINRIC WILLIAMS, M.D. • *Department of Urology, Wayne State University Detroit, MI, USA*
- KAREN WONDERS, Ph.D. • *Department of Health, Physical Education and Recreation, Wright State University, Dayton, OH, USA*
- MARTIN J. YAFFE, Ph.D. • *Imaging Research, Sunnybrook and Women's Health Sciences Centre, and Department of Public Health Sciences, University of Toronto, Toronto, Canada*
- WEI ZHENG, M.D., Ph.D. • *Vanderbilt Epidemiology Center and Vanderbilt-Ingram Cancer Center, Vanderbilt University School of Medicine, Nashville, TN, USA*

Contents of Volume I

Preface

Contributors

Contents of Volume I

PART I: CANCER INCIDENCE, PREVALENCE, MORTALITY AND SURVEILLANCE

1. Cancer Occurrence
Abmedin Jemal, Melissa M. Center, Elizabeth Ward, and Michael J. Thun
2. Cancer Registry Databases: *An Overview of Techniques of Statistical Analysis and Impact on Cancer Epidemiology*
Ananya Das
3. Breast Cancer in Asia
Cheng-Har Yip
4. Cancer Epidemiology in United States: racial, Social, and Economic Factors
Dana Sloane
5. Epidemiology of Multiple Primary Cancers
Isabelle Soerjomataram and Jan Willem Coebergh
6. Cancer Screenings, Diagnostic Technology Evolution, and Cancer Control
Fabrizio Stracci
7. Thriving for Clues in Variations Seen in Mortality and Incidence of Cancer: *Geographic Patterns, Temporal Trends, and Human Population Diversities in Cancer Incidence and Mortality*
Alireza Mosavi-Jarrahi and Mohammad Ali Mobagheghi

PART II: METHODS, TECHNOLOGIES AND STUDY DESIGN IN CANCER EPIDEMIOLOGY

8. Evaluation of Environmental and Personal Susceptibility Characteristics that Modify Genetic Risks
Jing Shen
9. Introduction to the Use of Regression Models in Epidemiology
Ralf Bender
10. Proteomics and Cancer Epidemiology
Mukesh Verma
11. Different Study Designs in the Epidemiology of Cancer: *Case-control vs. Cohort Studies*
Harminder Singh and Salabeddin M. Mahmud
12. Methods and Approaches in Using Secondary Data Sources to Study Race and Ethnicity Factors
Sujha Sunbramanian
13. Statistical Methods in Cancer Epidemiologic Studies
Nan Xue and Donald R. Hoover

14. Methods in Cancer Epigenetics and Epidemiology
Deepak Kumar and Mukesh Verma

PART III: HOST SUSCEPTIBILITY FACTORS IN CANCER EPIDEMIOLOGY

15. Mitochondrial DNA Polymorphism and Risk of Cancer
Keshav K. Singh and Mariola Kulawiec
16. Polymorphisms of DNA Repair Genes: *ADPRT, XRCC1 and XPD*
and Cancer Risk in Genetic Epidemiology
Jun Jiang, Zhang Xiuqing, Huanming Yang and Wendy Wang
17. Risk factors and Gene Expression in Esophageal Cancer
Xiaochung Xu
18. Single Nucleotide Polymorphisms in DNA Repair Genes
and Prostate Cancer Risk
Jong Y. Park, Yifan Huang and Thomas A. Sellers
19. Linking the Kaposi's Sarcoma-associated Herpesvirus
(KSHV/HHV-8) to Human Malignancies
Inna Kalt, Shiri-Rivka Masa and Ronit Sarid
20. Cancer Cohort Consortium Approach: *Cancer Epidemiology*
in Immunosuppressed Groups
Diego Serraino, and Pierluca Piselli
21. Do Viruses Cause Breast Cancer?
James S. Lawson
22. Epidemiology of Human Papilloma Virus (HPV)
in cervical Mucosa
Subhash C. Chauhan, Meena Jaggi, Maria C. Bell, Mukesh Verma
and Deepak Kumar
23. Epigenetic Targets in Cancer Epidemiology
Ramona G. Dumitrescu
24. Epidemiology of Lung Cancer Prognosis: *Quantity and Quality of Life*
Ping Yang
25. Hereditary Breast and Ovarian Cancer Syndrome: *The Impact of Race*
on Uptake of Genetic Counseling and Testing
Michael S. Simon and Nancie Petrucelli