
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.

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Cancer Epidemiology

Volume 1, Host Susceptibility Factors

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