Breast Cancer Epidemiology
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Foreword by Janet R. Daling, PhD
To Janet Daling, a wonderful mentor, friend, and breast cancer epidemiologist

and

to the millions of women throughout the world who have contributed to finding cures for breast cancer by volunteering their time to research studies
Breast cancer is one of the most common and feared health problems for women worldwide. While breast cancer has been the most common incident and fatal female cancer in the world for sometime now, breast cancer incidence and mortality rates have changed profoundly worldwide over the past several decades. Developed countries experienced a rapid rise in incidence rates starting in the 1980s that continued through the 1990s, largely as a result of the widespread adoption of screening mammography. While incidence rates have historically been higher in developed compared to developing countries, rates have also increased among populations in developing countries. This was seen initially among women from developing countries who upon immigrating to developed countries quickly assumed breast cancer incidence rates at or near those of women in their new country. As Western lifestyles have become increasingly adopted, rapid increases in rates have been observed in a variety of African, Asian, and Latin American countries. What these changes emphasize is the critical component of lifestyle factors in the etiology of breast cancer, which is strongly supported by results from a long and rich history of breast cancer epidemiology studies.

Also quite striking is the dramatic reduction in breast cancer mortality rates that has occurred in developed countries over the past two decades. This is due to both advances in targeted therapies for breast cancer and to earlier detection of disease when it is most treatable through widespread screening. However, breast cancer mortality rates remain high in developing countries and so opportunities to enhance the delivery of screening, diagnostic, and treatment services to these countries could have a powerful impact on reducing the global burden of breast cancer.

The purpose of this book is to provide a comprehensive review and critical assessment of the epidemiology literature on breast cancer etiology and outcomes. Our understanding of exposures that may contribute to breast cancer, as well as the biology and molecular basis for this common disease, has greatly increased over the past few decades. Most epidemiologic research studies currently collect not only detailed histories of exposures that may increase a woman’s chances of developing breast cancer but include the collection of blood samples and tumor tissue. These samples have been used
to classify breast cancers into distinct subtypes, each with its own risk factors, as well as molecular prognostic markers that often dictate the most effective therapies. Blood samples are used to determine a woman’s inherited susceptibility to breast cancer and prospectively collected samples are used to assess how concentrations of various factors in the blood, such as endogenous hormones, are related to risk.

In this book, Dr. Christopher Li enlisted leading experts to write a timely and comprehensive review of various aspects of breast cancer epidemiology. Chapters focus on the roles of traditional etiologic risk factors, as well as more recently evaluated exposures, and when available how risks vary by demographic factors (e.g., age, menopausal status, and race/ethnicity) and tumor characteristics (e.g., stage and hormone receptor status). The inclusion of chapters on screening, diagnosis and treatment, and survival make this the most up-to-date and comprehensive book on breast cancer available. The content is written in a manner to be informative to the scientific community, trainees, and the general public.

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