Preamble
The book is dedicated to the memory of Jerome Cornfield and was published in the Wiley series in probability and mathematical statistics. In the frontispiece there is a quotation from Lewis Thomas, “From here on, as far ahead as one can see, medicine must be building, as a central part of its scientific base, a solid underpinning of statistical knowledge. Hunches and intuitive impressions are essential for getting the work started, but it is only through the quality of the numbers at the end that the truth can be told.”

Aims
There is a growing need in medical research for the contributions of professionals trained in biostatistics and epidemiology, and there is a nationwide shortage of adequate manpower. The subject was discussed at length in the course of a workshop on epidemiology and biostatistics organized by the National Cancer Institute in 1979. Since there are not enough professionals in these fields to meet the needs of medical schools and cancer centers around the country, the recommendation was made that special seminars and teaching materials be developed to enhance the effectiveness of individuals now filling many of the positions. In response to the general recommendation a summer conference on statistics in cancer research was held at Memorial Sloan-Kettering Cancer Center during the week of June 22-26, 1981. This book is based on the lectures and discussions presented at the conference. The book offers a comprehensive overview of the field of biostatistics. Although the emphasis of the meeting was on cancer research, nearly everything discussed is applicable to other areas of medical investigation. Since there are currently many opportunities in biostatistics, this volume can provide useful information for classically trained statisticians interested in entering the field, and it can help those new to the field to become more effective collaborators. It can serve as stimulus for graduate students in statistics, to nurture their interest and to prepare them for careers in biostatistics. It can also be read with benefit by clinical investigators seeking a better understanding of statistical concepts and related multidisciplinary aspects of medical research (Preface, pages ix and x).

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