

think of this rash?" The subject matter is brief, basic, and to the point, and is delightfully free of the esoteric trivia one too often finds plaguing medical texts. Of special note: diabetes mellitus is the only disease that has merited a complete chapter.

The essential background information begins with a brief description of common neuromuscular disorders. An overview of cerebrovascular disease is especially well done. The chapter dealing with connective tissue and rheumatologic diseases is predictably dominated by discussions of rheumatoid arthritis. The section about endocrine disease includes thyroid and adrenal disorders, while diabetes mellitus is grouped under metabolic diseases along with porphyria, carcinoma syndrome, and metabolic bone disease. Remaining sections are devoted to renal, hepatic, gastrointestinal, respiratory, and cardiovascular disorders. A concise section dealing with dermatology is followed by a similar discourse about hematology. A five-page chapter about drug overdoses outlines only the very general principles of management. The last chapter, entitled "Imported Diseases," comprises malaria, typhoid, dysentery, giardiasis, and helminthic infections. These are increasingly seen in the British Isles with the growth of the Asian subpopulation and are becoming an integral part of British medical teaching.

ARIF Z. CHAUDHRY, M.D.

Department of Internal Medicine
The Cleveland Clinic Foundation

Interpretation and Uses of Medical Statistics, 3d ed, by Geoffrey J. Bourke, Leslie E. Daly, and James McGilvray, Oxford, Blackwell Scientific, 1985, 330 pp, \$25.95.

As noted by the authors in the preface, this book is designed to introduce basic concepts of statistics and their application to medicine to readers who have had no formal training in statistical theory or methods. Assumptions required for various statistical procedures and interpretation of results of analyses are emphasized rather than calculation techniques. This third edition expands on earlier editions by including more detail regarding a wide range of commonly used statistical tests, including nonparametric procedures. Computational details are provided only if they are

practicable with a pocket calculator. New chapters dealing with study design and methodology emphasize the need for careful planning and execution of research projects.

The first eight chapters of the book discuss concepts typical of an introductory statistics text—descriptive statistics, probability, point and interval estimation, hypothesis testing, and regression analysis. However, in these basic discussions, reference is also made to statistical power calculations; regression to the mean; and nonlinear, multiple, and logistic regression. Chapters 9 and 10 are concerned with research methodology and study design. Chapter 9 describes observational studies such as cross-sectional, prospective, and case-control studies. Chapter 10 is devoted entirely to a discussion of the randomized clinical trial. Chapter 11 is about the use of vital statistics data in medical research and outlines some of the common techniques in this area. Chapter 12 discusses the use of the computer in medical research. The concluding section of the book examines the source of bias present in many studies. Some guidelines are presented for the critical reading of the medical literature and for the development of a research project. Four appendixes are included which provide details about computational methods, statistical tables, and sample size formulas. An annotated bibliography lists a number of books and articles for further reading.

Interpretations and Uses of Medical Statistics is highly recommended both for the medical students who may only require an introduction to broad principles and for researchers who require more detailed knowledge of statistics and study design. The topics are covered more extensively than in the usual basic statistics textbook. References are current. Explanations are articulate. This reviewer found few substantive points of disagreement with the authors. One example, however, is that the randomization schedule presented on page 189 uses an algorithm that will produce bias between treatment groups in terms of variables that are correlated with time. Consistent with its stated purpose, the book does not contain any exercises for the reader to reinforce knowledge of the textual material presented. The book contains very few typographical errors and is printed with an aesthetically pleasing layout.

GEORGE W. WILLIAMS, PH.D.

Department of Biostatistics and Epidemiology
The Cleveland Clinic Foundation