
According to its Preface, this book is intended to assist practicing primary care physicians and physicians-in-training in the appropriate selection and interpretation of laboratory tests. This stated focus, however, should not deter laboratorians from giving this book strong consideration.

The book is divided into six parts: the Introduction, Chemical Pathology, Hematologic Pathology, Diagnosis and Monitoring of Infections, Immunology, and Factors Effecting Laboratory Tests. The Introduction (chapters 1–3) covers some of the fundamental aspects of laboratory testing, including reference ranges, causes for variation in laboratory testing, and evaluating the usefulness of laboratory tests. The Introduction effectively presents the origins and limitations of reference ranges and sources of preanalytical variability.

The Chemical Pathology section (chapters 4–23) covers the major areas of this discipline. The chapters in this section begin with a brief review of physiology. Relevant laboratory tests are then described, including brief descriptions of test methodologies and factors that may be important for the clinician to understand (e.g., the effects of low oxygen or hematocrit on glucose oxidase methods for glucose determination).

Pathophysiologic states and their effects on laboratory tests are then discussed, as well as other considerations in the screening, diagnosis, and monitoring of disease. The Hematologic Pathology section has chapters on red cell and white cell disorders, plasma cell dyscrasias, and laboratory evaluation of hemostasis. A feature of this section is the inclusion of color diagrams and some good-quality color photomicrographs of typical and pathological white cell morphology. These are conveniently integrated into the text as opposed to being sequestered separately as color plates. The Microbiology section (chapters 28–35) devotes chapters to commonly infected organ systems, selecting and monitoring antibiotic therapy, and advantages and disadvantages of serologic procedures in diagnosing infections. With the exception of the latter two, these chapters discuss clinical patterns of infection in a given organ system, followed by general tests that are useful in identifying such infections and then methods to detect specific types of infection. The Immunology section consists of chapters covering laboratory assessment of immunologic function, immunodeficient states, and autoimmunity.

The final section is an extensive table of factors affecting laboratory tests, organized in a practical manner. Effects on laboratory tests are categorized into nondisease causes of changes, disease-related changes, and drug-related changes. Another useful column lists brief descriptions of conditions for which a test is commonly used.

This book is well-written and presents information in a succinct, concise manner. Numerous diagrams, graphs, electrophoresis patterns, and tables populate the book throughout. Also included are multiple algorithmic approaches to laboratory diagnosis of and testing certain conditions (e.g., hypercalcemia), which are presented as flow charts.

There are a few shortcomings in this otherwise well-constructed book. Given the presence of flow charts elsewhere, a diagram outlining the work-up of a prolonged aPTT assay would have been helpful. In the discussion of the workup of hypogammaglobulinemia, one could argue that urine immunofixation and not urine protein electrophoresis should be ordered to exclude the possibility of light chain disease. The photographs of immunofluorescence patterns for anti-neutrophil cytoplasmic antibody and anti-glomerular basement membrane antibody are too dark, and the captions are mismatched.

Although not intended to replace more comprehensive texts, this book is recommended to laboratorians as: (a) a quick reference providing answers on a broad range of topics; (b) a teaching tool for laboratory scientists-in-training, residents, and technologists; and (c) a resource to recommend to primary care physicians with whom laboratorians interact. In this latter sense, this book would be useful in a role that laboratorians play in educating physicians and others who use the laboratories.

Walter H. Henricks
Division of Anatomic Pathology and Laboratory Medicine
The Cleveland Clinic Foundation
9500 Euclid Avenue
Cleveland, OH 44195


The editor of this text has assembled a group of contributors who, individually or in pairs, have prepared 33 brief seminars on major topics in clinical biochemistry. The content is focused on pathophysiology and laboratory investigation; there is no methodology here. The unique feature of this book is the organization of each chapter into a series of figures (lefthand pages) and explanatory legends (righthand pages). The figures are mainly line diagrams, tables, and text, whereas the legends consist of paragraphs that explain key points that may or may not be apparent from the accompanying diagram. Chapters have between 4 and 16 figures each; therefore, only enough space exists for fundamental information on each subject.

The topics presented are standard fare for clinical biochemists: water and electrolytes, acid-base balance, renal function, liver disease, endocrinology, diabetes, lipids, plasma proteins, enzymology, toxicology, and others. Single chapters on hematology, coagulation, and blood transfusion are also present; however, coverage is superficial at best, and the reasons for including material from a different
laboratory specialty are not clear. The quality of the writing is excellent throughout, straightforward and easily understood. Figures are generally good, although the smaller print is difficult to read in some of the tables, and the curved lines used in graphs and some diagrams appear a bit jagged.

Reading this book offers an experience similar to attending a series of short lectures on clinical biochemistry. The figures, which would be slides in a lecture format, focus attention on the key concepts, whereas the legends replace the animated or droning voice of the lecturer. As presented, each lecture could be given in 20–30 min. One could argue that the remaining 30 min would be better spent re-reading each chapter rather than trying to cram in more details, particularly if this is the reader’s first encounter with these subjects. The material is at a level appropriate for second- or third-year medical students.

In the introduction, the editor states that as more medical schools move toward “student-centered, problem-oriented teaching . . . the delivery of core, ‘safe-doctor’, knowledge, is particularly important”. That philosophy is captured in the book’s “bare bones” approach, and it is suitable for medical students who might otherwise receive no formal training in laboratory medicine. However, *Seminars in Clinical Biochemistry* is not a stand-alone text. Whether it is used by an instructor preparing for teaching sessions or by a student learning and reviewing clinical chemistry, additional sources in laboratory medicine, internal medicine, and their subspecialties should be available to fill in gaps and provide depth. The book is an appetizer, not a main course.

William E. Schreiber

Department of Pathology and Laboratory Medicine

Vancouver Hospital & Health Sciences Center

855 West 12th Avenue

Vancouver, BC V5Z 1M9, Canada


This new book, which was written as a comprehensive reference work for researchers, teachers, and students, provides detailed explanations of more than 75 statistical procedures. Among the 21 inferential tests that are covered are the single and two sample *t*-tests, the Wilcoxon test, the Mann–Whitney *U*-test, the *χ*² test, the binomial sign test, analysis of variance with multiple comparisons, factorial analysis of variance, the Kruskal–Wallis test, the Cochran *Q*-test, and the Friedman test. Five statistical procedures for evaluating association and correlation, including the Pearson, Spearman, and Kendall correlation coefficients, are also presented. The book’s first chapter includes an introduction to statistics, hypothesis testing, and experimental design as well as guidelines and tables that assist in the selection of appropriate statistical procedures based on the type of data being analyzed, the number of samples being investigated, and the hypothesis that is being tested. The book also has an appendix consisting of 20 statistical tables.

One of the author’s goals was to write a book that would be accessible to readers with varying levels of expertise, from novice to expert. The attainment of this somewhat formidable goal is facilitated by the author’s systematic approach to the presentation of each statistical test, which begins with a general description of the test, the hypothesis that it is designed to evaluate, and the assumptions on which it is based; continues with the presentation of one or more specific experiments to which the test is applicable and a thorough demonstration of the calculations necessary to compute the test statistics; and then concludes with a discussion of the interpretation of the results. The text is organized in a progressive fashion from the simplest to the more complex aspects of the subject matter, and there is good integration and cross-referencing between topics such that the more basic concepts presented in the earlier chapters are linked to the more advanced applications that follow.

The author does an excellent job in familiarizing the reader with a wide array of statistical terms (for which he provides clear definitions) and in translating statistical concepts into words. This text is written at a level that will be most appealing to readers who already have a knowledge of descriptive statistics and a background in experimental design. It should also be noted that the book is aimed at a broad audience of readers in the social and biological sciences and in the fields of mathematics, business, and education. Therefore, many topics of specific interest to laboratorians (for example, Deming regression, discriminant analysis, metaanalysis, survival analysis, and Bayesian statistics) are not covered. Nevertheless, this is a comprehensive, authoritative, applications-oriented handbook that I highly recommend to clinical scientists who use inferential statistics in their research and to those who serve as instructors or consultants in the areas of statistical analysis and experimental design.

Earle W. Holmes

Loyola University Medical Center

2160 S. First Ave.

Maywood, IL 60153


With a title that is broad in scope, this small, soft-covered 132-page book tries to cover a wide range of topics related to clinical biochemistry and cancer. The book is written by a clinical biochemist and a practicing medical oncologist, and its approach is somewhat eclectic, rather basic, and lacking in depth for the reader who is seeking more than the fundamentals. Despite this, the book contains many interesting, pertinent, and current facts. It is easy to read