BOOK REVIEWS


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At over 600 pages in length, Basic Skills in Interpreting Laboratory Data is not a handbook. Basic Skills in Interpreting Laboratory Data is, rather, a thorough reference with an emphasis on interpreting and understanding the pitfalls that accompany laboratory testing. In addition, Basic Skills in Interpreting Laboratory Data provides clear and relevant advice on avoiding or mitigating the pitfalls, gleaned from expert practitioners.

One could ask, “Why do I need a book (“hardware”), when I can access all of this information on the Worldwide Web with my IPhone?” The answer lies in the realms of background material on laboratory testing that the book provides, which is not amenable to quick retrieval and study.

The book contains 22 chapters, a glossary of terms, and 3 appendices that contain the reference value tables, SI unit conversions, and blood collection tube information. Every chapter is referenced fully; the 4th edition has added learning objectives, and retains the mini-cases designed to reinforce the material presented. Most chapters conclude with the “Quickview,” a 1-page précis of a particular test, suitable for copying and posting. There are 3 new chapters in the 4th edition: women’s health, aging males, and pharmacogenomics. Several of the chapters have added graphics and illustrations, and the format has been updated. Chapters now conclude with “Learning Points,” a frequently asked question (FAQ) section to self-assess knowledge.

The 5 introductory chapters (definitions and concepts; primer on drug interferences and test results; substance abuse and toxicological tests; and interpretation of serum drug concentrations) are full of background knowledge and clinical pearls gained from experienced practitioners. The chapter on laboratory assays and technology could use an expanded section on point-of-care testing, but flow cytometry, polymerase chain reaction (PCR) and nanotechnology are included. The chapter on laboratory interferences includes methods to minimize these events. The chapter on interpreting serum drug concentrations is an excellent review of clinical pharmacokinetic principles; the reference list of this chapter reads like “Who’s Who in Pharmacokinetics.” Because the book was edited in 2008, some of the late-breaking information regarding vancomycin trough targets is outdated.

Chapters 6 through 22 employ a systems-based approach (electrolytes; other minerals and trace elements; kidneys; arterial blood gasses and acid base balance; pulmonary function tests; heart, liver, and gastroenterology; endocrine; lipids; hematology–anemia; hematology-coagulation; infectious disease; rheumatic diseases; oncology; pediatrics; women’s health; aging males; and pharmacogenomics). The chapters begin with a description of the physiology of the system, and then introduce the laboratory tests in the sequence that they would be ordered in a patient diagnostic work-up. Relating the pathophysiology of disease to its evaluation with laboratory testing is one of the strong points of this book. The editor also should be commended for sticking to the original intent. For example, there is no section which explains the electrocardiogram in-depth.

Overall, the 4th edition of Basic Skills in Interpreting Laboratory Data comes highly recommended; it should be a staple in every pharmacy, drug information center, poison center, medical library, and every pharmacist’s personal library. It is also a great resource for students, especially those starting the pharmacotherapy course sequence, or during advanced professional practice experiences.

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