

**Chest Medicine: Essentials of Pulmonary and Critical Care Medicine**, 5th edition. Ronald B George MD, Richard W Light MD, Michael A Matthay MD, and Richard A Matthay MD, editors. Philadelphia: Wolter Kluwers/Lippincott Williams & Wilkins. 2005. Hard cover, illustrated, 652 pages, \$99.

**Chest Medicine: Essentials of Pulmonary and Critical Care Medicine** is the 5th edition of a respected concise textbook of respiratory medicine. Intended for house officers, physicians in specialties other than pulmonology, and mid-level practitioners, including respiratory therapists, it has historically been convenient, moderately priced, and authoritative. As a pulmonary medicine fellow studying for board certification, I reviewed this 5th edition by real-time use during a busy clinical rotation, and by detailed reading to study for the boards. I explicitly compared the current edition with previous ones to evaluate the changes in this edition.

This is a polished work, produced by a slate of authors and editors who have contributed to multiple editions. George, Light, Matthay, and Matthay are all recognized authorities in their subjects, and are veteran medical educators. Continuity and experience in the production teams have resulted in cohesive structure and well-crafted prose.

The text deserves the appellation "comprehensive," but "essentials" is an even more accurate description—natural enough for a single set of covers binding an entire medical specialty. Throughout the text it is clear that detail has been limited to preserve wide coverage in a single volume. Sacrifices in color and number of illustrations are necessary in a comprehensive text, to keep the price reasonable.

Broadly, the book is divided into sections on scientific background, clinical approach to the patient (well titled "Gathering the Database"), disease- and syndrome-specific chapters, and a final section on critical care.

The first section, on anatomy and physiology, is a reasonably short introduction, which, like that of many other texts, relies heavily on West's classic presentation of pulmonary physiology,<sup>1</sup> particularly regard-

ing lung mechanics and gas exchange. Given length constraints, it perhaps works better as a review of these complex topics than as a concise introduction for the neophyte. To its advantage, this section on anatomy and physiology is more thoroughly augmented with diagrams and illustrations than much of the rest of the book. The section on acid-base balance emphasizes a primarily differential-diagnostic viewpoint on acid-base conditions; more readable and clinically applicable accounts of acid-base physiology can be found elsewhere.

The "Gathering the Database" section includes brief "bird's-eye-view" discussions of the key components of the respiratory history, physical, and adjunctive studies. The chapter on pulmonary function testing is particularly thorough and organized with an appropriate level of detail, considering the importance of these tests. It also includes a nice introduction to exercise physiology and testing.

The heart of the text is titled "Management of Respiratory Diseases," a label that sells short the content. Each disease-, organ-, or syndrome-specific chapter includes balanced summaries, not just of treatment options, but also of pathophysiology, diagnosis, and prognosis. Description of virtually all the important entities in respiratory medicine in a mere 350 or so pages is an impressive accomplishment.

The chapters on asthma and chronic obstructive pulmonary disease are thorough and cite the pertinent practice guidelines from the National Heart, Lung, and Blood Institute<sup>2</sup> and the Global Initiative for Chronic Obstructive Lung Disease (GOLD),<sup>3</sup> with which all pulmonary practitioners should be familiar. I do wonder whether it was useful to include the 2½-page chart (a tenth of the chapter's length) of asthma medications, brand names, and dosing, when such information is both "perishable" and readily available in other, handier formats. Bronchiectasis and cystic fibrosis are discussed piecemeal in the chapters on chronic obstructive pulmonary disease and infectious disease, making the material too difficult to find and too brief to be useful in the clinic.

Many other subjects are neatly covered. The chapter on lung transplantation and

lung-volume-reduction surgery is particularly readable and pithy, and the inclusion of new data from the National Emphysema Treatment Trial<sup>4</sup> on lung-volume-reduction surgery is one of the more important updates from the prior edition. The chapter on pulmonary vascular disease makes nice use of flow charts in discussing venous thromboembolic disease and is up to date but too brief with respect to the new treatment options for primary pulmonary hypertension. These treatments are so distinctive and complex, and their impact on patients' lives so great, that more detail is warranted in a text ostensibly useful for specialists.

Pulmonary complications in the immunocompromised host are discussed in a readable but limited fashion, with organized coverage of stem-cell transplant and patients with human immunodeficiency virus or acquired immune deficiency syndrome, but with a nearly complete absence of discussion of solid-organ transplants other than lung. Other respiratory infections are well detailed in the book's second longest chapter.

The chapter on interstitial lung diseases is thorough, particularly regarding the confusing subject of collagen-vascular-disease-related interstitial lung disease, and makes better use than anywhere else in the text of photomicrographs and high-resolution computed tomography (CT) images to illustrate diagnostic findings and illuminate clinical-radiologic-pathologic correlations. A short discussion of the complex nosology of this group of diseases would be apropos and useful to the typical confused student of interstitial lung diseases.

Unfortunately, throughout the book both the chest radiographs and CT images are much too small, rarely occupying more than a sixth of a page. And the choice of images is often problematic as well; a photograph of a bronchiolitis obliterans organizing pneumonia biopsy that purports to show plugs of granulation tissue is a grayscale mishmash wherein only the reader who already knows what he is looking for will find the pertinent pathology.

An otherwise particularly fine chapter on neoplastic disease suffers from similarly marred illustrations. The chapter is comprehensive, readable, and well organized, with

excellent use of fonts and bulleting to direct the reader's attention and improve efficiency in finding information. However, here the book's deficiencies with regard to images (poor sizing, poor labeling, poorly illustrative images) are most clearly evident. Tiny photomicrographs without adequate highlighting insufficiently illustrate the cancer histology.

The authors' selection of images is occasionally problematic as well. For example, the same photomicrograph is used to demonstrate the histology of both squamous-cell and small-cell carcinoma. Either one or the other use of the illustration is erroneous, or there are elements of both cell types present—all possibilities potentially quite confusing! More telling is not the odd choice of picture (editors are only human), but the fact that this flawed pair of photomicrographs has remained in the text since the third edition of 10 years ago, after being changed from a properly selected, labeled, and sized pair in the second edition.

The chapters on environmental and occupational diseases, sleep-disordered breathing, and miscellaneous nonparenchymal disorders of pleura, mediastinum, and chest wall round out the clinical sections. The final chapter, on pulmonary and critical care issues in the elderly, is a mercifully short hodgepodge of clinical outcomes research and ethics issues specific to the elderly. Not less than a quarter of the chapter is dedicated to unreadable summary lists of studies on the subjects. In my opinion, few would identify this as core content for which other topics should be sacrificed in a brief text.

End-of-life care and ethics in the intensive care unit (ICU) are indeed key topics, and are well covered with other critical-care issues in the final section. Other chapters in this last section focus on mechanical ventilation, both hypoxemic and hypercapnic acute respiratory failure, sepsis, and general supportive care. The selection of topics is reasonable for a text that primarily focuses on a respiratory view of intensive care. The important results of the National Institutes of Health Acute Respiratory Distress Syndrome (ARDS) Network trial<sup>5</sup> of low-tidal-volume mechanical ventilation are included as an update. Prevention of nonpulmonary complications in the ICU is explicitly covered in a separate chapter, which is a very appropriate acknowledgment of the pivotal importance of the principle of *primum non nocere* in the ICU. The chapter would have

been stronger if broadened to include the common, preventable, and well-studied pulmonary complication of ventilator-associated pneumonia, prevention of which is neither indexed nor discussed elsewhere in the text.

Overall, there are about 400 illustrations, including about 110 plain radiographs and CT images. Pulmonary medicine, more than almost any other medical subspecialty, relies on imaging in day-to-day practice. This in itself warrants careful attention to the quality of radiographs and CT scans chosen for a comprehensive text. But many of the images in this book are so poorly reproduced that they leave even the educated eye straining to find the described abnormality. This is not conducive to teaching classic radiographic findings to nonspecialists.

The generous reference lists in almost every chapter are a particular strength. The editors have clearly elected to be thorough rather than selective—a legitimate decision. However, the less-experienced reader when using these lists as a guide to further reading would benefit from some indication of which works contain core content or seminal thinking, and which are of secondary import. For example, applying asterisks or boldface type to the titles of classic papers would not overburden the page.

It appears that the most important decision made by the editors and publisher was to target a specific price point. I have attempted to describe how other choices in the text appear to result from that initial determination, with the understanding that the resultant tradeoffs are inevitable. However, when considering the cost to didactic usefulness of poor-quality chest radiographs and unenhanced photomicrographs, I wonder if this is a "false economy." And the perpetuation of minor errors through multiple editions leaves me wondering about editorial fatigue after 5 editions.

I have reservations regarding the issue of a new edition with such minimal alterations. Given the rapid accumulation of scientific data and the growing efficiency and economy of online information services in dealing with that flood of data, I think it is reasonable to ask what a hardback textbook offers that electronic alternatives do not. It may be only the satisfaction of a weighty text in hand. Less-than-current information is a heavy price to pay for that satisfaction. Considering the new electronic competition, traditional book editors may wish to take

advantage of any opportunities to globally upgrade their products.

There are many alternatives to this text. Hanley and Welsh's *Current Diagnosis and Treatment in Pulmonary Medicine* is more succinct and much less expensive (\$64.95), and may be more accessible and adequately detailed for nonphysicians. Albert, Spiro, and Jett's *Clinical Respiratory Medicine* contains additional detail and far superior images and illustrations, but is longer and more expensive (\$155). Most medical students and residents will have free access to online resources (such as PubMed full-text articles or UpToDate.com) that are more thorough, better illustrated, and better organized, and hence may well eliminate altogether the utility of purchasing a textbook. For the pulmonary specialist, even one in training, either a more comprehensive text or a dedicated board review resource may better fit the bill.

In summary, this is a fine textbook, one that remains neither too long nor too short. The material is reliable, and the discussions, although brief, are crystal clear. The illustrations range from excellent (if small) to distracting and confusing. The 5th edition includes important practice-changing data that have come to light since the 2000 edition, but is not globally revised. For the reader who has carefully considered what they need from a textbook of respiratory medicine, this may be an excellent choice.

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#### REFERENCES

1. Ali J, Summer W, Levitzky M. Pulmonary pathophysiology, 2nd ed. New York: Lange Medical Books/McGraw-Hill;2005.
2. Pauwels R, Buist A, Calverly P, Jenkins CR, Hurd SS; GOLD Scientific Committee. Global strategy for the diagnosis, management, and prevention of chronic obstructive lung disease. NHLBI/WHO Global Initiative for Chronic Obstructive Lung Disease (GOLD) Workshop summary. *Am J Respir Crit Care Med* 2001;163(5):1256–1276; *Respir Care* 2001;46(8):798–825.
3. Gomez FP, Rodriguez-Roisin R. Global Initiative for Chronic Obstructive Lung Disease (GOLD) guidelines for chronic ob-

- structive pulmonary disease. *Curr Opin Pulm Med* 2002;8(2):81–86.
4. Fishman A, Martinez F, Naunheim K, Piantadosi S, Wise R, Ries A, et al; National Emphysema Treatment Trial Research Group. A randomized trial comparing lung-volume-reduction surgery with medical therapy for severe emphysema. *N Engl J Med* 2003;22;348(21):2059–2073.
  5. The Acute Respiratory Distress Syndrome Network. Ventilation with lower tidal volumes as compared with traditional tidal volumes for acute lung injury and the acute respiratory distress syndrome. *N Engl J Med* 2000;342(18):1301–1308.

**Synopsis of Diseases of the Chest**, 3rd edition. Richard S Fraser MD, Neil Colman MD, Nestor L Müller MD PhD, PD Paré MD. Philadelphia: Elsevier Saunders. 2005. Hard cover, illustrated, 957 pages, \$149.

A few words at the outset about the family of books written by the same group of authors will be helpful as a “road map” for potential readers. As the authors point out in the preface, this book grew out of a larger text by the same group (*Fraser and Pare’s Diagnosis of Diseases of the Chest*), and is different from the other text in the same family (*Radiologic Diagnosis of Diseases of the Chest*), which is aimed at radiology residents. The aim of **Synopsis of Diseases of the Chest** is to provide a more approachable text by distilling the information in the larger text, which, at approximately 3,000 pages, is more likely to be used as a reference text. At a little over 900 pages, **Synopsis of Diseases of the Chest** certainly fulfills its intent of being a text that can be read by a trainee without being overwhelmed by minutiae. Of note, the text does not include therapeutics. The authors have targeted this text at residents and clinicians interested in respiratory medicine. Respiratory therapists will find it useful as a concise summary of pulmonary medicine, although the lack of information on pharmacology and therapeutics does detract from its overall value.

There are 23 chapters in the book. The first 4 chapters discuss the basic underpinnings of pulmonary medicine. The next 18 chapters are organized by disease groups. The last chapter discusses a specific radiographic differential diagnosis problem—respiratory diseases associated with a normal chest radiograph. A comprehensive index is included. I will review a few chapters that

exemplify the strengths and weaknesses of this text or address frequently read topics.

The first chapter, “The Normal Chest,” is a concise summary of the anatomy, physiology, and radiographic anatomy of the chest. This is an outstanding chapter and is an excellent introduction to the quality of information seen throughout the textbook. The chapter starts by discussing the geometry and dimensions of the airways. A brief overview of the cells of the respiratory system comes next. These discussions are concise and informative. The concept of the secondary lobule is discussed with a series of figures that illustrate the gross appearance and the histologic features of normal septae and the radiologic appearance of the septae in disease. The figures are excellent; they are well-selected for the detail they intend to show, and the reproduction is clear. The profusion of images necessitates flipping back and forth between the figures and their related text, but this is an unavoidable consequence of an otherwise excellent feature of the text.

The discussion on radiographic anatomy is an excellent synopsis of the subject. The anatomy on plain radiographs is discussed briefly, but includes all clinically relevant information. The radiologic anatomy of the hila is well described, and there is a brief but useful discussion of the lateral radiograph. Pulmonary physiology is not as extensively dealt with as the other elements in this chapter. There are a few minor typographical errors in the chapter and an unfortunate convention of using “P<sub>CO<sub>2</sub></sub>” to represent the pulmonary capillary oxygen tension. A more serious departure from convention is in the section on pleural fluid dynamics. The visceral pleural capillaries are identified as the main route for egress of pleural fluid, which conflicts with the current consensus that emphasizes the dominant role of the parietal pleural lymphatics.

Chapter 2 deals with methods of radiologic investigation. The chapter offers a brief recap of technical aspects of computed tomography, magnetic resonance imaging, and plain-film radiography. Although useful as an introduction, the chapter introduces many concepts without an adequate explanation for nonradiologists (eg, exposure latitude and exposures are discussed without an explanation of the relevance to image interpretation).

Chapter 3, “Radiologic Signs of Chest Diseases,” is another excellent chapter that is required reading for trainees, even if they

are not contemplating finishing the rest of the book. The radiologic signs are arranged in a pattern approach. The differentials for each pattern discuss the most common causes. The figures are excellent, except for a few chest radiographs in which the intended details are not clear. The differences between the various conditions mentioned in the differential are explicitly discussed.

Chapter 4 covers all nonradiologic methods of diagnosing chest diseases, including a section on physical examination, which covers all the essentials but is not as extensively referenced as the rest of the chapter. The section on bronchoscopy has a few statements that are not completely accurate. For example, the need for antibiotic prophylaxis is mentioned in passing, but the statement does not accurately reflect the current consensus. Current guidelines state that routine prophylaxis is not warranted for bronchoscopy, but prophylaxis may be indicated in high-risk situations. The authors advocate measurement of coagulation variables, especially in patients who are to undergo transbronchial biopsy, but such testing has not been found helpful in identifying patients who bleed after transbronchial biopsies. The authors proscribe bronchoscopy in the 6 weeks following an acute myocardial infarction. The data supporting such caution are scant, and the few data that exist suggest that it is safe except in active ischemia. Pulmonary function tests are discussed, although not in as much detail as one would expect in a specialty textbook.

Chapter 7 deals with neoplastic diseases of the lung. There is a wealth of information in this chapter. The risk factors and pathogenesis of lung cancer are discussed in great detail. The pathologic characteristics of lung cancer are discussed very well, and the discussion is aided by excellent figures and color plates. The authors used both an imaging-based and a symptom-based approach to the diagnosis of lung cancers. The imaging-based discussion includes headings such as “solitary pulmonary nodule” and “solitary mass,” and the symptoms-based approach includes headings such as “bronchopulmonary manifestations” and “extrathoracic manifestations.” Almost all clinically relevant information has been included. Staging is discussed well.

Chapter 9 deals with chronic interstitial lung diseases. In general, this chapter is excellent, with detailed discussion of the clinical and radiologic features. The section on sarcoidosis is rather brief on the epidemiol-