renchymal lung diseases and provide the key concepts, such as the relationship between high-resolution computed tomography appearances and macroscopic histopathology features. The limitations of these diagnostic approaches are explained in detail, which provides insight as to why controversies in the classification of diffuse parenchymal lung diseases persist despite the widespread acceptance of the current system.

Du Bois opens the book's second section with a comprehensive review of the genetic determinants of disease for sarcoidosis, systemic sclerosis, and familial and sporadic interstitial pulmonary fibrosis. At the time this book was being published, 2 research groups simultaneously reported that heterozygous mutations in the *hTERT* or *hTR* genes can appear as familial pulmonary fibrosis. Although selected mutations in surfactant protein C had previously been associated with the development of pulmonary fibrosis in single kindreds, these were the first reports of mutations in selected genes associated with pulmonary fibrosis in multiple kindreds (8% of families studied).

The completion of the human genome sequence is considered by many the single most important advance in the biological sciences, and it led to the birth of the field of genomics, which is defined as the scientific discipline that strives to characterize the complete genetic makeup of an organism. Key components of this discipline include genetics, functional genomics, proteomics, and bioinformatics. The description of telomerase mutations in familial pulmonary fibrosis is a great example of the rapid pace at which genomic studies, including classic genetic linkage analysis, genome-wide association studies, gene-expression studies with microarrays, and other "omics" sciences will improve our capability to study complex diseases such as idiopathic pulmonary fibrosis. The novel research presently being amassed with genomics approaches is not covered in **Diffuse Parenchymal Lung Disease**. Considering the rapid increases in information and shifts in technology, a future volume of the *Progress in Respiratory Research* series will be required to introduce readers to the impact of genomics respiratory research applications on this exciting new medical discipline.

The idiopathic nature and poor outcomes associated with several diffuse parenchymal lung diseases, such as idiopathic pulmonary fibrosis and granulomatous and collagen vascular diseases, is the drive behind the growing scientific interest and increased funding by governmental and private funding agencies. Three chapters discuss disease mechanisms in the development and progression of selected idiopathic diffuse parenchymal lung diseases. The proposed mechanisms are presented in a clear and concise format, and the reader is pointed to key references that give more detailed discussions of the original research findings. Behr closes this section with an overview of the evidence-based approaches to the treatment of diffuse parenchymal lung diseases, including practical recommendations on how to manage patients with primary or secondary diffuse parenchymal lung disease.

Section 3 is dedicated to diseases. Frequently encountered primary disorders such as sarcoidosis, idiopathic pulmonary fibrosis, and eosinophilic pneumonia are reviewed in depth, and numerous (> 150 causes described) secondary disorders (eg, pulmonary fibrosis in collagen vascular diseases, and drug-induced and iatrogenic infiltrative lung diseases) are grouped. There has been considerable progress in the characterization and management of less common diffuse parenchymal lung diseases such as idiopathic nonspecific interstitial pneumonia, pulmonary alveolar proteinosis, and lymphangiomyomatosis, which makes this an excellent reference book for general practitioners, pulmonary specialists, and researchers.

The rising number of older patients affected with end-stage lung disease probably reflects the improvement in early detection and treatment of cardiovascular disease and some cancers. Therefore, more physicians will encounter in their general and subspecialty practices patients who are potential lung-transplant candidates or recipients. In the fourth section, Boehler outlines general eligibility criteria for lung transplantation and the indications for referral for lung transplantation in patients with end-stage diffuse parenchymal lung disease. Important practical clinical concepts, such as the appropriate referral strategy and expected outcome after lung transplantation, are clearly presented.

In summary, **Diffuse Parenchymal Lung Disease** is a worthy addition to the *Progress in Respiratory Research* series. This an excellent reference book that reflects the substantial recent progress in the field of diffuse parenchymal lung disease. We commend the editor-in chief, the invited editors, and the chapter authors for their outstanding contributions to this important field of pulmonary medicine.

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RN Expert Guides: Respiratory Care. Rita Doyle, Jennifer Dellarossa Kowalak, editors. *RN Expert* series. Philadelphia: Wolters Kuer/Lippincott Williams & Wilkins. 2007. Soft cover, illustrated, 441 pages, $39.95.

Clinicians and teachers in allied health fields such as respiratory therapy or nursing value resources that are compact and provide accurate, high-quality information and are easily accessible at the bedside. This volume of the *RN Expert Guides* series is one such valuable resource. It introduces the practitioner, instructor, or student to the principles of respiratory medicine and provides a comprehensive yet succinct account of the full range of respiratory diseases. It is presented in a quick-reference, easy-to-follow style of the the *RN Expert* books. The explanations in the text are clarified and enhanced by abundant illustrations and tables. This book has 441 pages and 11 chapters, which cover principles and practices of respiratory care, anatomy and physiology of the cardiovascular system, assessment, diagnostic test results, respiratory disorders, emergencies, and complications, and treatments. The book uses eye-catching icons and has a very useful English-Spanish respiratory-assessment guide, and numerous diagrams, charts, graphs, and bullet lists.

In the section on anatomy and physiology the authors do a terrific job and use easy-to-read illustrations and diagrams to cover the anatomy of the respiratory system, the mechanics of breathing, gas exchange, pulmonary circulation, ventilation, pulmonary perfusion, and diffusion. There is a nice illustration of ventilation-perfusion mismatch.

Chapter 2, on assessment, has 3 major sections, which cover the patient's health history, physical assessment, and abnormal

findings. This chapter emphasizes a step-by-step approach to thorough physical examination and defining normal findings with abnormal findings that the practitioner may encounter. The chapter also includes "age awareness" alerts to which the clinician should pay close attention when assessing children or the elderly, and "red flags" to highlight subjects that could be of great importance (eg, during chest inspection, watch for areas of abnormal collapse during inspiration or abnormal expansion during expiration, which could signify paradoxical movement). The "age awareness" and "red flag" alerts appear throughout the book and emphasize the most important parts of each section. Chapter 2 provides a table with which to interpret assessment findings and probable causes, which will be very useful, especially for students to help them critically think through the various possible diagnoses or problems a patient may present with.

Chapter 3, on diagnostic tests and procedures, provides detailed synopses of respiratory diagnostic tests, including the course of obtaining the samples. The chapter starts with blood studies, particularly arterial blood gas values and white-blood-cell counts. The section on arterial blood gases covers the common probable causes of abnormal blood gas values in an easy table format. The one typographical error I noticed in the chapter was in the alveolar gas equation, which is given as:

$$P_{aO_2} = F_{IO_2}(P_B - P_{H_2O}) - 1.25(P_{aCO_2})$$

It should read

$$P_{AO_2} = F_{IO_2}(P_B - P_{H_2O}) - 1.25(P_{aCO_2})$$

The chapter also covers sputum and fluid studies, the difference between transudative and exudative effusions, endosopic and radiologic imaging, pulmonary function tests, and noninvasive monitoring such as end-tidal CO_2 and pulse oximetry. I would have liked to see more on pulse oximetry, such as device limitations and precautions (eg, abnormal hemoglobins and low-perfusion states) and debunking of some widespread misconceptions regarding the appropriate applications of pulse oximetry.

Chapter 4, on treatments, is a nice reference. It covers all the major treatments seen in respiratory care. This chapter starts off with a thorough yet brief dialogue on drug therapy and explains the various classes of drugs, such as anti-infectives, β_2 adrenergics, corticosteroids, and xanthines. Included in this section are drug-delivery methods (eg, metered-dose inhaler, powder inhaler), indications, adverse effects, and points to which the clinician should pay close attention when delivering medications. Also included are discussions on inhalation therapy, continuous positive airway pressure, mechanical ventilation, and bronchial hygiene. I found all the treatments to be very accurate and according to the American Association for Respiratory Care clinical practice guidelines. I particularly liked the table on troubleshooting mechanical-ventilator alarms, which includes potential causes and interventions.

Chapters 5–10 cover the most common respiratory conditions, from pneumonias (viral vs bacterial) to obstructive, restrictive, and neoplastic disorders, and traumatic injuries. Each chapter covers the pathophysiology, assessment findings, complications, and treatment considerations of a given disease, in a brief, accurate, and easy-to-follow format. I noticed that the description of diagnosing acute respiratory distress syndrome (ARDS) failed to completely use the American/European Consensus Conference's definition. There is a mention of P_{aO_2}/F_{IO_2} ratio of <200 mm Hg ($P_{aO_2} < 60$ mm Hg on room air), but there is mention that the patient needs a pulmonary artery wedge pressure of < 12 mm Hg, which is lower than the 18 mm Hg stated in the consensus-conference definition. Most importantly, there was no mention of using a low-tidal-volume strategy when ventilating a patient with ARDS. The National Institutes of Health ARDS Network study found that a tidal volume of 4–6 mL/kg predicted body weight and a static pressure of < 25 cm H_2O reduced mortality by 20%, compared to the traditional style of ventilation, when treating patients with ARDS.

Another item I would have liked to see added is in the asthma section of this chapter. The authors mention that the National Institutes of Health endorses a stepwise approach (step 1 mild persistent, through step 4 severe persistent) to treating asthma. However, they failed to mention the corresponding treatment the National Institutes of Health endorses. I found it odd that the authors would describe the steps of diagnosing the severity of asthma but fail to include the treatment options. Including that treatment chart would have been extremely helpful.

The highlights in each of these chapters were the author's inclusion of educational discharge notes, which will help clinicians and student prepare the patient and family for discharge by making them aware of possible outcomes. Overall, each of these chapters was what I would call the "CliffNotes" for most common respiratory diseases and problems. These supplement big heavy pathophysiology books very well, and this book is an easy-to-use reference.

The last chapter, on emergencies, mainly included information on airway obstruction, bronchospasm, anaphylaxis, and respiratory arrest. I think these discussions will be easily understood, and they include the pathophysiology, assessment findings, complications, and treatment options. I particularly like the illustrated step-by-step explanation of what happens during anaphylaxis. Other chapter highlights were on ways to manage an obstructed airway and a list of common antidotes for drug/toxin-induced respiratory depression.

The appendix has a very useful section on common English-to-Spanish translations, such as ¿Tiene ud tos? (Do you have a cough?) and ¿Ha tenido ud problemas de los pulmones? (Have you had any lung problems?). I'm sure most clinicians who speak only English will greatly appreciate this section when taking care of patients who speak only Spanish. I know I will.

In summary, this text is wide-ranging in its coverage of all areas of respiratory care. I found this compact text logically structured, well written, accurate, and, most importantly, useful to health care practitioners especially nurses, respiratory therapists, and students. I recommend this text.

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Irwin and Rippe's Intensive Care Medicine, 6th edition. Richard S Irwin MD and James M Rippe MD, editors. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins. 2008. Hard cover, illustrated, 2,847 pages, $239.

This is the 6th edition of this title, which is a classic multi-author adult critical care