

with managing an individual patient. This is not a criticism, but rather a clarification of the book's goals and how it will most likely be used.

Among the strongest chapters are those dealing with how COPD exacerbations are to be defined, both for clinical purposes and for inclusion in research studies. The first chapter, by Rennard and Leidy, is the best summary I have seen on the problems of definition and the assessment of severity. Skipping to the final section of the book, excellent chapters on the design of studies on COPD exacerbations (by Martinez, Han, and Curtis), and on the statistical treatment of study results (by Aaron), show how these aspects of the evidence informing treatment decisions are as important for clinicians as they are for investigators.

Seventeen chapters cover various aspects of the mechanisms, pathophysiology, and impact of COPD exacerbations. By and large these are clear, comprehensive, and current (as of 2008). The main individual components of the management of COPD exacerbations, such as bronchodilators, corticosteroids, antibiotics, and supplemental oxygen, are then discussed in separate chapters. Generally, these provide concise, accurate, and up-to-date summaries of the relevant studies. Because for most aspects of management rationale remains more persuasive than empirical evidence, at least from the standpoint of outcomes relevant to patients, the authors of these chapters can offer few solid conclusions or practical recommendations. An exception is the chapter on noninvasive ventilation by Miller and Elliott, given that the evidence here is perhaps stronger than in any other aspect of management. After an excellent review of the literature on the improvements in patient-relevant outcomes that can be achieved with noninvasive ventilation during severe exacerbations, as well as on patient selection, the choice of equipment, and where in the hospital it should be carried out, the authors provide the reader with practical evidence-based guidance on its use.

The companion chapter on invasive mechanical ventilation is less successful. It includes considerable material covered in other chapters, and does not agree completely with the recommendations in the chapter on noninvasive ventilation. Invasive mechanical ventilation is treated mainly from the perspective of clinical epidemiology, and practical issues such as facilitating patient-ventilator synchrony, minimizing

dynamic hyperinflation, and other physiological challenges for managing clinicians are not addressed. The discussion of weaning includes a fair amount of data from patients with diagnoses other than COPD.

The prevention of COPD exacerbations has emerged as a key research objective as well as a focus for drug marketing in long-term management. The chapters in this section cover pharmacologic interventions such as inhaled corticosteroids and long-acting bronchodilators, as well as immunizations, self-management issues, and early intervention when exacerbations occur.

Some subject overlap among chapters is inevitable in a contributed book like this, and a brief orienting introduction with background information also covered elsewhere can be a help rather than a problem for the reader researching a given topic rather than reading the chapters in sequence. My comments above notwithstanding, and thanks, I suspect, to concerted efforts on the part of its editors, this book is largely free from redundancy. I could find no other instances of frank contradiction in different chapters that touched on the same subjects.

Some differences in writing style are discernible in the various chapters but these are not distracting. There are a few scattered grammatical slips but very few typographical errors or other production problems. The book is sturdily and attractively bound, although the promotional statements on the back cover are curiously misleading. The cover's brief description of the book's contents refers twice to imaging, and includes the statement, "This text also addresses imaging and how it plays a pivotal role in the diagnosis and study of exacerbations." The book has no chapter on imaging, and I could find nothing about imaging in either the index or the table of contents. There was only brief mention of chest radiographs in the chapter on differential diagnosis, and passing reference to computed-tomography angiograms in a cited study dealing with pulmonary embolism. This oddity was probably the work of someone in the marketing department who was largely unfamiliar with the book.

The editors have done an excellent job of covering their subject, and I cannot think of any important topic areas left unaddressed. This book is an important resource for investigators, teachers, and clinicians who wish to learn more about COPD exacerbations. Given the amount of new information that has appeared in the interval since the

first volume on this topic appeared, we will probably need yet another update in the next few years.

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The author has disclosed no conflicts of interest.

Asthma and COPD: Basic Mechanisms and Clinical Management, 2nd edition. Peter J Barnes, Jeffrey M Drazen, Stephen I Rennard, and Neil C Thomson, editors. San Diego: Academic Press/Elsevier. 2009. Hard cover, 896 pages, \$149.95.

The second edition of **Asthma and COPD: Basic Mechanisms and Clinical Management** provides a unique and authoritative comparison of asthma and COPD. Written and edited by leading experts, it is a comprehensive review of the most recent understandings and findings about the genetic and basic mechanisms of both conditions, specifically comparing their etiologies, pathogenesis, and treatments.

Each chapter is a side-by-side contrast and comparison of asthma and COPD. The content and context of mechanism, triggers, assessments, therapies, and clinical management are discussed. The book presents the latest and most comprehensive understandings of the mechanisms of inflammation/pathophysiology in both asthma and COPD. There is an extensive list of references, along with detailed summaries and illustrations of the latest advances in both diseases.

This is the second edition, published 6 years after the first edition, with the same title. This book consists of very detailed, highly researched, yet complex views of the substantial progress and understanding of the biological basis of both asthma and COPD.

Textbooks such as the one discussed here are necessary for providing the foundation of the basic mechanisms for the biological makeup of lung diseases. In contrast, or at least in controversy, the authors describe the detailed pathophysiological makeup of the 2 most prevalent pulmonary diseases (asthma and COPD) while conveying ways they are similar but uniquely different. While current understanding of these disease pro-

cesses is rooted by clinical management, in preface to the book, the authors spend a great deal of time revisiting, outlining, and explaining the basic understanding of the mechanisms of these 2 diseases, in hopes it will lead to a better outcome in the disease treatment processes down the road. In order to accomplish this purpose, the textbook is heavily weighted by the physiologic and immunological basis of the 2 diseases, while later on the book provides a global outline on treatment strategies of both diseases, including newer therapies, such as airway stenting, immunomodulators (chapter 55), and future therapies (Chapter 61).

While this book is well written, it is not for the faint of heart or casual reader. It is written at a very high level. The language and substantial cytokine abbreviations make it a difficult read. While a few chapters have been shortened, in comparison to the first edition, the intense language and theories require a solid foundation in pathophysiology.

This book is well organized and begins with a concise review of the epidemiology and genetics of asthma and COPD. It then goes into great detail describing the cellular mechanisms involved in the inflammatory response observed with each disease. What is uniquely compared and contrasted are the shared inflammatory responses observed with these 2 diseases. Each chapter is in-

tensely written but favors a reader who has background knowledge in physiology and immune regulation. In the later chapters, the book focuses on clinical aspects of the diseases by describing clinical assessment and management, concluding with a discussion of current and future therapies.

The book has 9 parts, with combined emphasis on both asthma and COPD. The chapters are expansive and vary between definitions, epidemiology, genetic makeup, and reviews on physiology and pathophysiology. The chapters that focus on immunomodulating processes associated with each disease process focus on triggers and inflammatory mediators. The last 3 parts are associated with clinical assessment, therapies, and clinical management issues. The book is very well referenced and up to date. Color illustrations augment the authors' presentation of the evidence. The graphs and schematics are helpful and likely stem from the authors' research proposals or grants. The schematic artwork, figures, and diagrams are excellent; however, the color template/scheme throughout is distracting and visually unappealing, making the subtitles and keys tables very difficult to read and comprehend. Also the font and spatial construction between the title, graphs and figures, along with separation of the key features between asthma and COPD, are at times hard to decipher. The book is

priced appropriately for its content and the level of expertise of its editors and co-authors. I do not suspect this book is out of reach of many who want to add it to their personal libraries.

The editors have assembled a strong, international team of authors who provide a detailed view of the field. This international flavor of the textbook supports the venture that these diseases are global and substantial. To the authors' credit, the book is a superb synthesis of the most up-to-date knowledge of asthma and COPD; however, I would not recommend this to the general clinical physician or therapist. While one could find it an important source, especially when it comes to the physiologic, immune, and pathologic makeup of these 2 disease process, most clinically based healthcare professionals will not find it useful as a go-to source for management or therapeutic opinion.

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The author has disclosed no conflicts of interest.