
Volume 190 of the National Institutes of Health’s long-running series, Lung Biology in Health and Disease, covers the timely and important topic of lung development and regeneration. This field has seen an explosive growth in research and interest in recent years, in part fueled by developments in understanding of cellular and molecular mechanisms underlying lung development and remodeling, including the role of stem cells. The editors, all respected experts in lung development, bring a wealth of experience and have assembled an impressive list of established investigators to provide current state-of-the-art perspectives on selected aspects of lung development and regeneration. This volume will appeal to all basic scientists and clinicians interested in lung biology, as well as to developmental biologists.

The book consists of 20 chapters organized into 5 sections. In the first section, 2 model lung diseases, bronchopulmonary dysplasia (BPD) and chronic obstructive pulmonary disease (COPD) are utilized as paradigms for disordered development and regeneration, respectively. Dr Jacqueline Coalson, one of the pioneers in the field of prenatal lung diseases and BPD, provides a fascinating history of BPD in the first chapter. This chapter sets the tone of the book with its detailed consideration of the anatomical pathology and pathogenesis underlying BPD. The second chapter discusses modern management approaches to BPD. In addition to the widely accepted practices of maternal administration of prenatal corticosteroids in threatened premature births and use of surfactants in premature infants, this chapter provides a concise review of ventilator approaches to BPD, as well as consideration of other past and potential future approaches, including use of oxygen, fluid, and salt management, diuretic use, retinoids, and post-natal glucocorticoid use.

The next 5 chapters discuss different aspects of COPD but don’t always relate back to the central issue of lung development and regeneration. Chapter 3 is a concise and well-written history of COPD that underscores issues such as what is COPD and who will get it. Diagnostic and treatment issues are examined as well. Chapters 4–6 provide an extensive and detailed discussion of the role of inflammatory cells and pathways involved in the inflammation associated with COPD. Several diagrams and tables, especially in Chapter 4, are particularly valuable for helping to collate a large volume of experimental information. Chapter 6 also provides an excellent overview of the rationale and effects of several treatment approaches for COPD, including use of bronchodilators, oxygen, and corticosteroids. The next chapter, on potential use of retinoids for COPD, is the closest of these chapters to the spirit of the volume. The scientific rationale and in vitro and animal studies evaluating retinoid effects on alveolar growth and repair set the stage for review of current clinical trials evaluating use of retinoids in COPD.

The second section focuses on technical approaches and new theoretical possibilities for evaluating lung development and repair. The first 2 of these chapters discuss general use of differential display techniques such as microarrays. While informative, one would have expected information obtained with these techniques on differential gene and protein expression in developing or remodeling lung. Rather, these 2 chapters were strictly concerned with general methodology, and would have been perhaps better placed in a separate volume on experimental methods. The next chapter, on plasticity of circulating stem cells, was a well-written overview to a very cutting-edge field. The final chapter in this section discussed mechanical and cytoskeletal bases of lung morphogenesis and included some informative model illustrations. This chapter arguably could have been better placed in the next section.

The subsequent section contains 2 chapters devoted, respectively, to mammalian lung morphogenesis and to a survey of non-mammalian lung structures. These are well written and presented, particularly from a comparative anatomical standpoint. Many photomicrographs and diagrams add to the interest of these 2 chapters. However, cellular and molecular mechanisms underlying lung development are only briefly discussed.

The fourth section contains a single chapter, on branching morphogenesis. This well-written and detailed chapter explores the mechanisms underlying various aspects of lung development, including epithelial, vascular, and alveolar development, in addition to branching morphogenesis.

The final section is more broad-ranging and includes several timely topics. In the first chapter, the role of apoptosis in emphysema is considered. The second reviews animal models of COPD and emphysema. These 2 chapters are interestingly presented and well-punctuated with informative pictures and diagrams. The next 2 chapters provide detailed assessments of factors governing, respectively, alveolar generation and the cellular and molecular responses involved in post-pneumonectomy lung growth. These latter 2 chapters provide excellent overviews of available knowledge in these respective fields. The final 2 chapters focus on effects of aging, COPD, and various other perturbations, including caloric restriction and temperature, on lung physiology. While well written and interesting, the relation to lung development and regeneration is less clear.

In summary, this current volume is an important addition to the Lung Biology in Health and Disease series and provides an excellent overview of selected aspects of lung development and regeneration. One looks forward to subsequent similar volumes on this topic, as the field continues to explosively develop. This book will be a valuable resource to anyone studying developmental and regenerative aspects of lung biology.

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Volume 185 is an imposing addition to a distinguished line encompassing a varied list of subjects relating to, as the series’ name indicates, lung biology in health and disease. Over the years these books have provided a comprehensive and integrated overview of many topics, bringing together disparate workers in the field and producing repositories of information that truly reflect the state of knowledge at that point in time. This one, on idiopathic pulmonary fibrosis (IPF), is particularly welcome, as the last to deal with pulmonary fibrosis was volume 40, and recent advances in the understanding of this condition make this especially timely.

This one is no less worthy than its predecessors in the scope of its coverage and is divided into 3 broad sections: the first covers clinical aspects of epidemiology, diagnosis, and functional evaluation; the second is the largest and addresses the rapidly expanding areas of the molecular and cellular studies in IPF; and the last, dispiritingly small, is devoted to therapy. After years of relative dormancy, the world of IPF treatment is in an unusually exciting state of activity, and it is not surprising that the most recent trials are not represented in this book. (This raises the inevitable question as to the purpose of such monographs. They represent much hard work and effort but in the end are the last remnants of a time of slower publishing cycles; the definitive replacements are still evolving, but the tacile gratification of the printed page is unlikely to remain seductive enough to stave off eventual replacement by instantly updateable digital formats.)

The 28 chapters that make up this book encompass a very comprehensive overview of IPF. Part I deals with clinical aspects and contains authoritative accounts of current knowledge, with chapters such as those on pathology and high-resolution computed tomography scanning. Others, like the discussion of imaging techniques such as nuclear medicine and magnetic resonance scans, are almost unique, as no comparable equivalent seems to exist in current form. Yet others deal with subjects (eg, bronchoalveolar lavage in interstitial lung disease) that lie somewhere in the uneasy limbo between enthusiastic acceptance in the past, disillusionment in the present, and unclear expectation for the future. No account of IPF would be complete without a review of bronchoalveolar lavage, but the chapter deals primarily with diseases other than IPF and exemplifies the tendency across much of the book to drift between the designated subject and interstitial diseases in general. This is unavoidable in certain areas, such as the discussion on genetic aspects, but this represents a wide and potentially very promising field where increasing knowledge may permit far more focused application in the future. Some topics are notable primarily by their absence, and I found no mention of gastroesophageal reflux at all; if viruses as a possible cause merit 8 pages and surfactant-protein-related issues twice that, acid-reflux and aspiration injury probably qualifies for at least token representation.

Reflecting recent changes in classification, especially the widespread acceptance since 1994 of nonspecific interstitial pneumonia (NSIP) as an entity distinct from IPF, there is varying success in separating earlier data from that of the current era. There is certainly justification for the inclusion of an entire chapter on NSIP, especially since there is a clear attempt at contrasting this from usual interstitial pneumonia (UIP). Similarly a full understanding of IPF is impossible without consideration of the similar conditions seen in patients with connective tissue disorders. This too is dealt with in an expert manner, including an almost subversive Sotto voce commenting regarding placebo-controlled trials in scleroderma-associated lung disease.

In keeping with the literature in this field at large, there continues to be a potentially confusing lack of standardization in terminology, with UIP, IPF, UIP/IPF, IPF/UIP, and cryptogenic fibrosing alveolitis (CFA) being used interchangeably, sometimes with several terms appearing in the same sentence or paragraph. In part these represent a trans-Atlantic divide, and some editorial oversight may have helped contain this, but the degree of confusion, at least amongst pulmonary physicians, is probably less now than it was a decade ago, allowing some latitude in the use of these names.

The second part, which is half the book, deals with the current state of knowledge in the molecular and cellular arenas. Much of this represents information that is new enough to not have a defined place in the overall picture, and this further adds to the excitement. The transition from a purely inflammatory view of pathogenesis to a construct that emphasizes fibrosis is evident, and there is at least the semblance of an emerging understanding of how injury, presently of undefined nature, may lead to IPF. The chapter on fibroblasts and myofibroblasts speaks to this in clear detail. Inevitably, there is overlap and duplication between chapters and sections. For example, transforming growth factor β is discussed in several areas, but its current preeminent presumed role in pathogenesis probably makes this unavoidable.

A particularly interesting chapter revolves around the emerging field of angiogenesis and CXC chemokinics. Whether this represents an important waypoint that may lead to novel treatments or is merely a short-lived froth on the cup of knowledge remains very much to be seen.

From a clinical perspective, the entire book is prologue to the last section on treatment, and this is where one comes upon a sense of helplessness. Despite the preceding 600 pages of descriptive data and molecular biology, the last 100 pages force us to face the fact that no effective treatment exists for IPF. Several promising drugs and biological agents are under evaluation, but the path of therapy for IPF so far is littered with many failed and false gods. These have included corticosteroids, cytotoxic agents, and colchicine, among others. The interferon gamma-1b trial is alluded to, but data from that study were not publicly available at the time this book was completed; that trial has since been shown to have not met its primary goals and must therefore be considered yet another negative study. This lack of success in treatment accounts for the entire subject being dispatched in 25 pages and ending with the none-too-elevating recommendation that early assessment for lung transplantation be considered. No more is said about this option, which is something of an omission, but it is well known that only a minority qualify or live long enough to receive an organ transplant.

In the end this remains an excellent book, putting together the majority of what contemporary experts in the field consider important. It attempts and largely succeeds in presenting a comprehensive but balanced account authored by many instantly recognizable authorities. It does have a somewhat sparse and idiosyncratic index, with, for example, multiple entries for surfactant and none for diffusing capacity. There is a
small scattering of typographical errors that speak of our dependence on out-of-context spell-checking (eg, interference instead of interferon, NIP and NISP for NSIP, scl-70 for scl-70), but overall this volume is in full conformity with the high standards of this series, to which it is a solidly worthwhile addition.

It is somewhat churlish to find further fault in this excellent reference, but one shortcoming must be highlighted. This is the near-complete futility of presenting photomicrographs without color and the poor reproduction of all the computed tomography scan images, especially the 2 illustrating lymphocytic interstitial pneumonia. Both of these detract greatly from a work of this caliber and argue for a quick transition to digital media, which allow far greater flexibility in what may be included and how it is presented. A companion CD containing high-resolution images would have made a very welcome inclusion.

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Although the lungs and heart are anatomically close within the thoracic cavity, textbooks devoted to these topics have traditionally been separated by a wide chasm. Due to the explosion of cardiac imaging in recent years, as well as the inherent overlap between cardiac and pulmonary disorders, there is a growing need for a single textbook that integrates cardiac and pulmonary imaging. Richard Webb and Charles Higgins have responded to this need with the publication of Thoracic Imaging: Pulmonary and Cardiovascular Radiology. This 837-page text was written by 2 world-renowned radiologists and is primarily for radiologists and pulmonologists, as well as residents and fellows in both fields.

Thoracic Imaging: Pulmonary and Cardiovascular Radiology is written to provide a concise, yet rather complete, overview of pulmonary and cardiovascular imaging and the diagnosis of diseases comprised therein. The book has 37 chapters, 26 of which are dedicated to pulmonary imaging, and a detailed index. The preface outlines the aim of the book, which “is to provide in a single volume, a comprehensive but easy-to-digest discussion of the title topic and to review the use and interpretation of radiographs and advanced imaging techniques.” The authors follow a simple, easy-to-read template throughout the book. Topics are distinctly separated and in bold. Key words are in italics. Images, tables, and schematics have generally been selected well and placed in proximity to related text material. Selected reading references are comprehensive and reflect recent publications. Typographic errors are virtually nonexistent. The index appears adequate. The paper, printing, and binding quality are excellent.

A feature of this text is that it encompasses both pulmonary and cardiac imaging—topics that are usually reviewed separately. The material is current and relatively comprehensive. Indeed, the timely nature of this work is evident throughout the text, images, and references. In the chapters devoted to pulmonary imaging, examples from digital radiographic techniques and multidetector-row computed tomography, including many reconstructed images, are provided; the latter also makes the imaging of pathology anatomy from cross-sectional imaging relevant to planar imaging. (The authors did not attempt to provide pathologic correlation for the imaging features). Chapters that are devoted to the normal mediastinum, lung cancer, pulmonary manifestations of systemic diseases (sarcoidosis), diffuse lung diseases, computed tomography, and magnetic resonance imaging of the thoracic aorta and acquired cardiac disease are particularly outstanding.

Thoracic Imaging: Pulmonary and Cardiovascular Radiology is richly illustrated with an appropriate distribution of computed tomography, magnetic resonance imaging, plain radiographs, and artist renderings. The figures are effectively annotated and captioned to elucidate the salient points of the images. A useful feature of the text is the inclusion of many lists in concise, shaded boxes that summarize pertinent imaging features and differential diagnoses.

There are a few minor shortcomings, which is to be expected given the daunting challenge of compressing a broad subject into a single, readable volume of 837 pages. For example, although the majority of topics are comprehensively addressed, a few subjects got relatively cursory coverage, most notably, the sections discussing valvular heart disease, emphysema, and chronic obstructive pulmonary disease. Some of the chapters are more lucid than others, some providing too much detail, some not enough. Some redundancy from chapter to chapter is to be expected and is not necessarily a detriment (at least to me). As an educator I wish that this text included a section about pulmonary and cardiac physiology. A more glaring deficiency is the limited discussion of cardiac and intrathoracic vascular imaging. Only 10 chapters (198 of 837 pages) focus on cardiac and vascular diseases. However, these slight limitations are strongly outweighed by the many merits of this text. Indeed, this text offers a remarkable array of valuable information in one affordable book. It provides a comprehensive source for radiologists, clinicians, and residents-in-training, with an interest in the “art” of chest radiology. At $170, the book is a good value and would be a treasured addition to a department or individual library.

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Sleep Medicine in Clinical Practice is a concise but very complete primer on the clinical problems and corresponding standard treatment strategies that compose the practice of sleep medicine. The 3 physician authors are active in the clinical practice of sleep medicine at the Mayo Clinic in Rochester, Minnesota, and their collective clinical expertise is well documented throughout the various book chapters. The intended readership is clinicians who treat a wide gamut of sleep-related complaints. This book provides a sound basis for pulmonologists and other practitioners to become more familiar with sleep medicine or those who plan to specialize in this subject of expanding interest. It will also serve as an easily understood reference source for respiratory therapists who deal with sleep patients on the ward or in the sleep laboratory.

The field of sleep medicine is unique in that it encompasses components of the clinical practice of pulmonary medicine, neu-
ology, and psychiatry. The failing of some sleep medicine texts is that the quality is not uniform across the sections from these various medical disciplines. This textbook is consistently strong in topics pertaining to each of these disciplines, and has real value in the clarity it brings to management of nonpulmonary diagnoses such as insomnia.

Sleep Medicine in Clinical Practice is divided into 4 sections: basics of sleep medicine, the sleepy patient, the patient who cannot sleep, and the patient with excessive movement during sleep. The book contains 18 chapters on a wide range of relevant clinical sleep medicine topics. The common-sense organization of the sections and chapters reflects the straightforward approach the authors chose in their characterization of the practice of sleep medicine. This textbook is not meant to be an exhaustive catalogue of sleep medicine trivia, and an additional textbook may be required for preparation for a board examination in sleep medicine. The inclusion of clinical vignettes in many of the chapters reinforces the text’s real-life applicability. One limitation is a relative paucity of polysomnographic recording examples. A companion atlas of polysomnographic tracings is recommended for those who are training to specialize in sleep medicine.

This textbook is well written and contains easily understood graphs, diagrams, and other figures. Unfortunately, figures are in black-and-white only, which may decrease reader interest, in comparison to texts with color figures. The references are appropriately integrated into the text and are quite exhaustive for a smaller textbook. As well, the index is fairly comprehensive and corresponds appropriately to specific items of inquiry.

The utility of this book is exemplified in a discussion of the maintenance of wakefulness test (MWT) of daytime alertness. The MWT is not widely used outside of specialized sleep centers. Pulmonologists who do not have a primary practice focus in sleep medicine are not likely to be knowledgeable on the details of the indications, methodology, and clinical utility of the MWT. In Chapter 6, on the approach to the sleepy patient, there is an excellent discussion of the important points one needs to integrate the MWT into clinical practice. This discussion of the MWT gains additional relevance with an accompanying clinical vignette describing a real-life scenario in which the MWT is a key component in clinical decision making.

The chapters discussing sleep-disordered breathing are particularly well done and include very coherent discussions of the diagnostic and treatment approaches to nocturnal breathing problems other than obstructive sleep apnea. Of note, this section includes a very up-to-date review on the nuances of the management of central sleep apnea. The various etiologies of respiratory failure in sleep are covered in a coherent and thorough manner in the textbook.

Getting the answer one seeks on a clinical sleep medicine question is a worthwhile exercise with Sleep Medicine in Clinical Practice. This book will make a valued addition to the office library of providers involved in the day-to-day practice of sleep medicine or those who seek to expand their clinical skills in this sub-specialty.

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The best-selling Critical Care Handbook of the Massachusetts General Hospital (MGHCC), third edition, is now available in PDA (personal digital assistant) format for instant access anytime and anywhere. This is the first critical care database available on PDA. In a user-friendly outline format, this handheld reference presents reliable, up-to-date, hospital-tested tutorials that reflect today’s most advanced critical care practices. All information is hyperlinked and cross-searchable. This PDA version of the handbook has new protocols for adult and pediatric resuscitation and new information on activated protein C, glucose control, transfusion practice, and corticosteroid use.

The computer system requirement is Windows 95 or later, or Macintosh operating system 7 or later, with 20 megabytes free on the hard drive. Prerequisite synchronization software included with your device from the manufacturer is Palm Desktop software for the Palm device or ActiveSync for Windows CE or Pocket PC device. The required PDA memory is 4.4 megabytes for Palm, and 5.7 megabytes for Windows CE. I tested the program with a Compaq Business Notebook nc6000 and a Compaq iPAQ Pocket PC H3800. The program ran quickly enough that operation was not annoying. When you install it, you should set up your account and password by registration.

There are icons for going to the previous screen visited, switching to the index view, switching to the table of contents view, accessing your bookmarks, viewing the history of recently visited topics, accessing your other Skyscape products, and zooming the view. The icons in the middle of the screen are for viewing related topics, viewing previous topics, viewing next topics, adding notes to any entry, and viewing information or outline. The menu below also features “File” to quit program, “Edit” to edit your annotations and bookmarks, “Tools” to access history and “SmarTabs,” and “Help.”

The easy-to-navigate program allows rapid information retrieval. Drug recommendations are hyperlinked to drug profiles. With Skyscape’s patented smARTThink technology, the MGHCC can easily cross-index with other titles from Skyscape to provide a powerful and integrated source of clinical information that you can carry with you. The authors are in the Department of Anesthesia at Harvard Medical School, and are also affiliated with Massachusetts General Hospital. Material is in outline format for practitioners (respiratory therapists and respiratory technicians), residents, nurses, medical students, and others who participate in respiratory medicine, and is divided into sections on abbreviations, critical care principles, medical considerations, surgical considerations, and appendices. Each chapter is organized to allow rapid information retrieval.

Before the main contents, there is an abbreviations section. The first chapter contains 16 sections and provides an overview of critical care principles. The material presented is hemodynamic monitoring; respiratory monitoring; airway management; mechanical ventilation; sedation; analgesia; neuromuscular blockade; nutrition; hypotension and shock; hemodynamic control; neurocritical care; hematology and transfusion therapy; intra-aortic balloon counterpulsation; extracorporeal membrane oxygenation; adult, pediatric, and newborn resuscitation; and ethical and end-of-life issues.
The second chapter contains 16 sections and provides an overview of medical considerations. The material presented is coronary artery disease; valvular heart disease; pacemakers and implantable defibrillators; acute respiratory distress syndrome; chronic obstructive pulmonary disease and asthma; pulmonary embolism and deep venous thrombosis; renal disease; liver disease; gastrointestine disease; endocrine disorders; general considerations in infectious disease; specific infections; acute cerebral injuries; acute neuromuscular weakness, spinal cord injuries, and brain tumors; drug overdose, poisoning, and adverse drug reactions; and dermatological considerations.

The third chapter contains 8 sections and provides an overview of surgical considerations. The material presented is special considerations in trauma patients; the burn patient; thoracic surgery; cardiac surgery; vascular surgery; liver, kidney, and pancreatic transplantation; neonatal intensive care; and obstetrics and gynecology. The appendices consist of 3 sections and provide an overview of supplemental drug information, common intravenous antibiotics, and laboratory values for blood (chemistry part, and hematology and coagulation values part).

This is easily the best critical care handbook around. The chapter on mechanical ventilation is the best I’ve read in a handbook, and hits most topics you need to know. The downsides are that it can use some updating, and I think most chapters could be a little more detailed. Also, the appendix containing the normal chemistry lab values was nonfunctional and could not be accessed.

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