

Chest Radiology: The Essentials, 2nd edition. Jannette Collins MD MEd, Eric J Stern MD, editors. Philadelphia: Lippincott Williams & Wilkins; 2008. Hard cover, illustrations, 340 pages, \$100.

The 2nd edition of the popular **Chest Radiology: The Essentials** is an outstanding reference text and a pleasure to review. Appropriately titled, this book provides a fundamental understanding of the thorax, complete with radiographs and computed tomograms (CTs) as guides. The book should be a staple reference for radiology residents, pulmonologists, and allied health professionals in the critical care setting.

This edition has a hard cover that is durable enough to withstand many trips to the on-call room and rough handling. It has 340 pages, nearly 800 images, and a user-friendly index. There is a new chapter on cardiac imaging and a special section devoted to the new classification of idiopathic interstitial pneumonias.

Each of the 20 chapters begins with a clear list of learning objectives that prepares the reader for key concepts. The first chapter concentrates on normal chest anatomy. The chest radiographs and CTs will be useful to physicians and allied health professionals, who are expected to be familiar with both modalities. The authors reinforce concepts previously introduced by presenting normal posteroanterior and lateral chest radiographs, with and without drawings and labels of expected structures.

The second chapter tackles several of the common signs and patterns of lung disease. Each sign comes with a classic figure and a brief description of the pathophysiology. The chapter ends with a list of common patterns, accompanied by an excellent table of differentials for each pattern. Separating the signs and patterns of lung disease into chest radiograph and CT sections may be more useful for some readers who are looking for another way to organize the concepts.

The next 2 chapters concentrate on interstitial and alveolar lung diseases. Although these topics may be difficult to explain, the format here is easy to follow, and the figures help "lock in" the patterns. The

tables with mnemonics of differential diagnosis are very useful for quick reference.

The chapter "Tubes and Lines" has several examples of properly placed monitoring and support devices, and figures that show complications associated with device placement. This is an important chapter because critical care clinicians are often required to quickly interpret chest radiographs and place devices that may alter the patient's clinical course. This chapter will ease a physician's concerns about certain procedures and call attention to irregularities in device placement.

The next section addresses thoracic masses, beginning with the mediastinum. The information is made more accessible by separating the discussion into 3 sections: the classic anterior, middle, and posterior compartments. The discussions of supporting modalities, such as nuclear medicine scans, positron emission tomography, and magnetic resonance imaging, complement the chest radiographs and CTs very well. Solitary and multiple pulmonary nodules are also discussed. The examples are clear and succinct. Many readers will appreciate the table on the algorithm for managing nodules incidentally detected on CT, which is an emerging issue because CT is now widely accessible. Some may want a more detailed discussion of positron emission tomography for evaluating solitary pulmonary nodules.

The chapter on chest trauma presents high-quality chest radiographs and CTs (axial, coronal, and sagittal views) of various injuries, and includes several clear examples of aortic damage, tracheobronchial compromise, and diaphragm rupture. There is an especially impressive example of pneumopericardium. The following chapter addresses the structures that surround the outer lung, including the pleura, chest wall, and diaphragm. Detailed discussions about pleural effusions, pneumothorax, pleural masses, and pleural plaques are followed by classic examples. Chest-wall abnormalities and diaphragm dysfunction are also clearly described.

The next section focuses on upper lung disease and radiologic abnormalities in immunocompromised patients, which will be useful for clinicians in tertiary-care settings. The figures give excellent illustrations of

the disease processes described. For a future edition, I would suggest devoting an entire chapter to the immunocompromised patient, with a stronger emphasis on lung transplantation, especially expected changes and complications in the postoperative period.

The following chapter combines illustrations, chest radiographs, and CTs that effectively describe partial and complete atelectasis. This leads to an interesting potpourri of pathology that manifests in a peripheral distribution. Many physicians will flip to these pages when they encounter peripheral lung diseases.

A chapter focused on airway disorders tours the pathology from the trachea to the bronchioles. The CTs are clear and include arrows that point to the abnormalities. Conditions that were not shown but might have benefited readers include lateral views of saber-sheath trachea and tracheoesophageal fistula.

Chapter 15 is well-organized and expertly discusses lung neoplasms. The authors review the histologic classifications and the current staging guidelines for bronchogenic carcinoma, with appropriate supporting images and tables. Many readers may find other organizational frameworks for staging and TNM (tumor, node, metastases) subsets, such as that from Lababede et al,¹ easier to dissect. The chapter ends with an overview of post-pneumonectomy complications and carcinoid and salivary gland tumors.

The section on congenital lung disease is brief but the images fully address the learning objectives. Readers will appreciate the coronal reformatted CTs and magnetic resonance images.

The next chapter provides clear illustrations of pulmonary thromboembolism, pulmonary arterial hypertension, and pulmonary artery tumors. The table on the diagnostic algorithm for suspected pulmonary embolism, the illustration of a pulmonary angiogram, and the discussion about the benefits of CT venography for deep venous thrombosis tie together the concepts in this chapter beautifully.

The new chapter in this edition that discusses congenital and acquired cardiac diseases is timely because there is increasing interest in this subject in both the educa-

tional and clinical arenas. The part on acquired heart diseases is subdivided into valvular diseases, cardiomyopathies, coronary artery disease and its sequelae, and pericardial diseases. The tables, images, and prose communicate the learning objectives with clarity and depth. The images are detailed, particularly the CT image that shows both coronary artery calcification and a right coronary-artery stent.

Chapter 19 focuses on the thoracic aorta in the age of multidetector CT and magnetic resonance imaging. Impressive images of dissections, aneurysms, and repairs solidify these concepts.

The final chapter is for self-assessment; it contains 113 images and recall questions. The images are unambiguous, the questions direct, and the explanations thorough. This is a perfect way to tie together an excellent reference.

This book succinctly and effectively delivers the concepts of chest radiology. The chapters are well-organized, the images are carefully chosen, and the tables are clear. Readers will be impressed with the chapter on cardiac diseases and the self-assessment chapter. In a future edition I would suggest providing more discussion on lung transplantation and optimizing a few of the figures. I highly recommend this book for physicians and allied health professionals.

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REFERENCE

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Textbook of Pleural Diseases, 2nd edition. Richard W Light MD and YC Gary Lee MBChB PhD. London: Hodder and Stoughton. 2008. Hard cover, illustrated, 672 pages, \$198.50.

Pleural diseases are common chest disorders encountered in clinical practice, with clinicians occasionally experiencing difficulty in establishing a diagnosis and addressing management decisions and options.

Two of the top experts on pleural diseases are editors for the **Textbook of Pleural Diseases**, a resource that provides up-to-date information and insight on these issues. After its 1st edition in 2003, this 2nd edition is a further improvement in context, information, number of chapters and contributing authors. Hard work by the authors and editors has gone into the preparation to make this one of the leading textbooks on pleural diseases. This hard-cover textbook of 672 pages contains 50 chapters, and is divided into a basic science section and a clinical science section. It offers a good blend of both basic science research and clinical information that will be helpful for both researchers and clinicians alike, and is a good reference for any office or library.

The book is well organized with a familiar format. One of the new chapters for this edition is the opening chapter on "History of Pleural Diseases." It is well written and concisely explains where we are currently in diagnosis and management of pleural diseases compared to centuries ago. This is followed by the basic science section. It has 15 chapters devoted to basic science research that has been done thus far in pleural disorders. The authors of these chapters are well known experts in their specialty and have placed considerable effort into each chapter to make it a high quality review. Even for a practicing clinician, the chapters in the basic science section are easy to read and will help to enhance the understanding of the pathophysiology of pleural diseases. The basic science section also has important information for a basic researcher for further research opportunities in pleural diseases. The authors in most of these basic science chapters have taken substantial effort to translate basic research information into applicable clinical information for a practicing physician.

The remaining 35 chapters are devoted to clinical science, and cover most if not all of the pleural diseases that may be encountered in clinical practice. The first 8 chapters in the clinical science section provide information that is useful for any medical professional, not just for pulmonologists alone. These chapters deal with the approach in diagnosing and managing a patient with pleural disorders. The authors are experts in this field and discuss pleural fluid analysis as well as a general approach of using pleural manometry, radiology, and pathology in the management of pleural disorders. The subsequent chapters are arranged under ef-

fusions due to a specific organ involvement, asbestos-related diseases, pneumothorax, pediatric considerations, intervention procedures, and conclusion. Each chapter is easy to traverse since it is well organized into the following sections: introduction, clinical presentation, diagnosis, and treatment. Most of the chapters also contain appropriate tables, figures, and illustrations to concur with the points that the authors have raised. The final, concluding chapter of the textbook talks about future directions that the editors envision. It is a very interesting read, as the editors debate, agree, and contradict important points, and is a fitting finish to this excellent textbook.

Compared to the previous edition of the textbook in 2003, there have been some new but favorable changes to this current edition. Apart from the first chapter on "History of Pleural Diseases," 7 new chapters have been added, including the ones on ultrasound, thoracoscopy, and pleurodesis. The expanded information in the whole textbook is a reflection of knowledge expansion in this field that has been clearly orchestrated by the authors. The numbers of new contributing authors are higher than the previous edition and indicate the increased need and interest among the various academic centers in the world on pleural diseases.

The quality of the illustrations is exceptional and the color plates add further clarity. The abbreviations are well explained in the beginning of the textbook and seem to be mostly covered and explained in the text chapters. The index at the end of the book also appears to be more complete than many other textbooks.

If there is one thing that makes this reference textbook worth purchasing, it is the bullet point summary after each chapter. These summary points are very useful and give a clear and concise review of the chapter in a few sentences. A busy physician who may not have time to read the text chapter may gain valuable information by just quickly reviewing these bullet points. Most of these are concise teaching points that every clinician should be aware of. In fact, it may be useful to convert these summary bullet points into a pocket size small book version to carry around during clinical rounds.

References after each chapter are more than adequate, and the increased number of references compared to the previous version indicate the expanding research and

knowledge on pleural diseases. Not to be overloaded by the increased number of references, and keeping the interests of the busy physician in mind, the authors for each chapter have made appropriate annotations that inform readers on key papers and review articles.

Though a well written and thorough review, this textbook does have some minor limitations. This book is meant for physicians and basic researchers interested in pleural diseases. While the vast information may stimulate interest in reading for nurses and therapists, it may be beyond their scope of clinical application. Also, while there is a chapter on pediatric pleural diseases, the textbook focuses primarily on adult practice. The cost of the textbook (\$198.50) may limit its addition to many personal libraries, but for those interested in pleural diseases, this will be worthwhile addition. In summary, this is a great textbook for any pulmonologist, internist, and medical professional who has a keen interest in pleural diseases. This is a textbook that will definitely be on my library book shelf as a reference text.

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Jeff May's Healthy Home Tips: A Workbook for Detecting, Diagnosing, & Eliminating Pesky Pests, Stinky Stenches, Musty Mold, and Other Aggravating Home Problems. Jeffrey C May and Connie L May. Baltimore: Johns Hopkins University Press. 2008. Soft cover, illustrated, 200 pages, \$16.95.

As part of their continuous vigilance against allergen exposure, atopic individuals and asthmatics routinely need to control environmental triggers in their homes. This is a workbook-style compendium of "do's and don't's," case studies, recommendations, and resources to improve home indoor air quality, for people with and without environmental sensitivities. The book is arranged in a popular, easy-to-read, guide format similar to the "... For Dummies" series, in which the text is rich with boxed hints, tips, anecdotes, and reminders. There are also plenty of lists of questions and lined

spaces for the reader to respond to and list problems specific to his or her situation. The workbook format is apparently designed to induce reader involvement; however, without a classroom, workgroup, or other interactive context that provides feedback, I question the utility of this format. Further, I think the book would have been more useful with a spiral binding that would allow it to lie flat; the standard hard-spine paperback construction makes it harder to enter handwritten text.

The book is divided into 2 parts: "Mold, Mildew, and You" (105 pages) and "Problems Other Than Mold" (66 pages). The chapter "Mold: Inside, and Out" covers water and mold issues, and provides do's and don't's about a dwelling's susceptible locations. The chapter discusses floods, garages, heating and cooling systems, things to watch for when considering buying a house or automobile or staying at a hotel, and how to deal with a home's exterior, especially factors that slow or prevent rain-shedding. There is a long list of helpful hints, some of the more constructive of which include keeping basements and crawl-spaces within the building's conditioned space, the use of barrier systems, and the use of hygienic methods when removing moldy and water-damaged materials. One recommendation I questioned was that environmentally sensitive people should always test fiberglass insulation within a crawlspace. I am not clear why they make that recommendation; such tests can be difficult to interpret and may cause unnecessary occupant anxiety.

The chapter "Confirmation and Remediation" covers testing for mold, the decision on whether to clean up the mold yourself or to hire a professional remediation firm. One of the most useful pieces of advice is on the questionable value and validity of mold air sampling. The Mays agree with the emerging professional consensus that air sampling for mold is unnecessary in most cases, and they discuss ways to ensure that mold remediators are well-qualified and cognizant of industry standards.

In the chapter "What and Where?" the Mays explore means to solve a wide range of contaminant-producing problems. They begin with rooms that have piped-in water, and provide diagrams (eg, how a toilet operates), and ways to prevent indoor air quality problems from these moisture-generating spaces, such as making sure the dryer exhausts completely to the outdoors.

The next section, about other rooms and contents, reviews methods to prevent beds, furnishings, rugs, carpeting, shelves, and home office machines from becoming contaminant sources. Valuable information is also provided regarding smoke and harmful gases, heating and cooling systems, pet-dander management, control of pest infestations, and renovation and construction.

The chapter "Everyday Cleaning" provides recommendations on the use of vacuums with high-efficiency particulate air (HEPA) filters, air purifiers, avoiding irritating cleaning products, and how to minimize aerosolization by using damp wiping and cleaning wipes instead of spray cleaners.

The chapter "Testing" briefly discusses testing for carbon monoxide, formaldehyde, radon, and volatile organic compounds. As in the other chapters, there are lists of resources, organizations, and products.

This book is for a lay audience, and the language and style sometimes seems alarmist. There are nontechnical uses of terms throughout. Jeff May is a self-described environmentally sensitive individual, which may have contributed to his occasional use of hyperbole (eg, "nightmarish mold") and his liberal use of exclamation points. He also appears at times to support certain controversial recommendations, such as requiring a fragrance-free workplace and telling us not to live in a home with a finished basement. So, some of the book's recommendations, as with any health-care practitioner, should be considered in the light of a second opinion.

Examples of some of the book's best advice include: a simple paper towel method for determining whether a given surface is the source of a problem odor; using a box fan in a window to establish negative pressure in a room to locate problem odors; tips on how to respond to a flood in the house; and minimizing the use of plug-in air fresheners. Because many of the tips on reducing contaminants rely on various cleaning measures, this book's recommendations sometimes blur the usefully hygienic and the simply esthetic, so at times I thought I was reading "Hints from Heloise."

Nevertheless, the book covers a wide range of subjects in an easy-to-understand fashion. As an indoor-air-quality investigator, I was familiar with many of the problems presented in the book, but there were also tips and information new and valuable to me, including an apparently rising inci-

dence of shrew infestation in certain dwellings. The Mays are in the Boston area; I have not heard of shrew infestation in the Pacific Northwest, where I live and work. Overall the Mays do a good job of not making only region-specific recommendations, and they remember to provide advice that can be applied to building environments outside of their own climate, such as in the South, where air conditioning is common.

In summary, I recommend this book as an easily readable collection of useful tips to optimize indoor air quality in the home. Based primarily on Jeff May's career experience, most of the recommendations appear to be quite practical. However, one should consider some of the book's opinions with caution, as the information doesn't always come from peer-reviewed publications.

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Clinical Tuberculosis, 4th edition. Peter DO Davies MA DM FRCP, Peter F Barnes MD, Stephen B Gordon MA MD FRCP DTMetH, editors. London: Hodder Arnold/Oxford University Press. 2008. Hard cover, illustrated, 576 pages, \$198.50.

When the first edition of **Clinical Tuberculosis** was published in 1994, the resurgence of tuberculosis (TB) in the western world was drawing increased attention from pulmonologists and infectious-disease specialists. Since then we have achieved more insight into the pathogenesis and treatment of mycobacterial disease. TB diagnosis and treatment has progressed, and the 4th edition of **Clinical Tuberculosis** is a valuable new reference for the TB clinician. It reviews in detail the basic tenets of mycobacterial disease, diagnosis, and treatment, including new approaches to diagnosis and therapy not covered in previous editions.

The book is divided into 7 major sections, and I will expound on each below. I will put extra emphasis on those chapters new to this edition. These 7 sections frame a logical approach to division of TB pathophysiology. They separate history, epidemiology, diagnostics, and treatment in a thoughtful way. Each chapter ends with a set of summary points. The chapters on di-

agnosis and treatment include case vignettes. In general, the figures are clear and concise, the tables are thorough and logical, and there is a subject index.

The first section focuses on the history and epidemiology of TB. The history section discusses the first evidence of TB, in human remains from North Africa, the Mediterranean region, and northern Europe. There is an excellent review of TB's origins and spread, from Egypt, around 4500 BC, through the advent of sanatoriums in the late 19th century. I found this section enjoyable to read and full of interesting historical data not commonly found in a medical text. The first section ends with a chapter on TB epidemiology, which focuses on trends in mortality, drug resistance, and efficacy of the DOTS (directly observed treatment, short-course) strategy.

The next section, which addresses TB pathology and immunology, has an abundance of new material on diagnostics. The first chapter in this section gives an overview of TB genotyping methods and transmission dynamics, and reviews the benefits and limits of restriction fragment length polymorphism analysis, spacer oligonucleotide typing, and VNTR/MIRU (variable number of tandem repeats/mycobacterial interspersed repetitive units) analysis. New insights from those genotyping methods in transmission dynamics, laboratory cross-contamination, and contact investigation are also discussed. The summary table of the tests in this section has become a useful reference in my clinical practice.

In the following chapters the focus shifts to the mycobacteria organism. There is a review of the pathways and genetics of resistance to anti-TB drugs, including the mechanisms of resistance to first-line and second-line agents. The advantages and limitations of sputum-culture-based diagnosis are also reviewed. Extra attention is given to sputum induction and fiberoptic bronchoscopy and their utility in diagnosis. A discussion of nucleic-acid amplifications in both pulmonary and extrapulmonary TB follows, and the chapter finishes with a brief review of rapid detection methods for drug resistance, including molecular beacons and phage amplification.

A new chapter on immunodiagnostic tests covers, in depth, the interferon gamma release assays and their utility in diagnosis of latent TB infection and active TB disease. The review of the ELISpot (enzyme-linked immunosorbent spot) and T-spot assays dis-

cusses the use of each in healthy adults, children, and immunosuppressed patients. An excellent table reviews many of the major interferon gamma release assay (IGRA) studies and addresses the sensitivities, specificities, and key limitations of each interferon gamma release assay. The chapter concludes with a brief mention of newer, more sensitive, immunodiagnostic tests in the development pipeline, and their possible roles in clinical care.

The second new chapter, on the human immune response to *Mycobacterium tuberculosis* infection, explores the innate and adaptive immune responses and the immune coordination in response to infection. Separate focus is given to regulatory mechanisms in host defense, humoral, and cell-mediated immunity. Also reviewed is the role of the *M. tuberculosis* strain on the human immune response. Immunogenomics are explored, though the discussion of genetic variation in susceptibility is brief. The chapter ends with a summary of host/mycobacteria interactions, and the host factors that influence effective vaccine development. Given the increase in tuberculosis immunology research publications over recent years, this chapter will grow in future editions.

The following section discusses clinical aspects of TB. A chapter on respiratory TB discusses the clinical features of primary and post-primary infections. There is a thorough discussion of complications following TB infection. The differential diagnosis of pulmonary TB is also discussed. A chapter on nonrespiratory TB reviews the clinical presentation, relative incidence, diagnosis, and treatment of TB of lymph nodes, bone, joints, gastrointestinal system, skin, and central nervous system, and miliary and rare forms of extrapulmonary TB.

The next major section of the book delves into TB treatment and the pharmacology of the first-line and second-line TB medications, including drugs in development. For each drug reviewed, pharmacokinetics, dosing, adverse effects, and drug interactions are addressed. I also find this chapter useful in practice, though a comprehensive table of drugs, dosing, clearance, and interactions is lacking.

The third new chapter in this edition calls for the development of new TB drugs to combat increasing drug resistance and reviews drugs that are in development and clinical trials. The fluoroquinolones, in addition to many of the mycobacterial drugs

in phase-1 and phase-2 trials, are discussed here. Though many of these drugs may never make it to the bedside, this chapter offers insight on current approaches to developing new targets for treatment.

The following chapters include a review of directly observed therapy, including DOTS and DOTS-Plus. International standards of therapy, and strategies for implementation of these standards are also covered; the section ends with a discussion of surgical options in treatment of TB infection.

The well-written and sobering discussion of HIV/TB co-infection outlines approaches to treatment in countries with different health-care resources. The chapter on TB in human migration is an excellent resource for the public health officer, to guide screening of immigrants from high-incidence countries.

In the section on TB prevention, a chapter reviews the history and benefits of TB-prevention therapy. Though short, this chapter follows the history of screening and treatment in low-incidence countries and gives insight into alternatives to isoniazid

monotherapy in special situations. Other chapters in this section address the use and interpretation of the tuberculin skin test and the interferon gamma release assays, and the benefits and limitations of the bacillus of Calmette and Guérin vaccine, and recommendations for its use in a TB-control strategy.

The last section, on TB control, is another excellent resource for the public-health officer. Separate chapters are devoted to control of TB in both low-incidence and high-incidence countries. There is also a chapter on the utility of the specialist TB nurse in effective screening and surveillance. An underlying theme of this edition is the need for coordinated international TB control, and this theme becomes more concrete in the last new chapter, which details the Global Plan to Stop TB.

At the book's end are chapters on non-TB mycobacterial disease and animal TB. These chapters are well written but short and somewhat out of place in this book, I thought.

The 4th edition of **Clinical Tuberculosis** is an excellent resource for the physician. The book is written by a compilation

of internationally renowned TB scientists and clinicians. This array of authors adds many perspectives on the disease not possible in a single-author text. It is a comprehensive review of the major aspects of TB epidemiology, diagnosis, and treatment, and is organized in a way that adds to its utility as a reference. At the same time, the mix of historical perspective and scientific dialogue make it manageable as a readable textbook for the TB clinician. While the subspecialist TB scientist may wish to have the book present a more specific review of a particular aspect of TB infection, the wide-ranging topics covered in this book make it an important addition to the bookshelf of any clinician who cares for patients with TB.

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