The text is not intended as a comprehensive source for chest imaging, but it provides quite a bit of information in the answer sections. It includes cases that are often presented to radiology residents in teaching files and on examinations. The images, particularly the chest radiographs, are small, but perhaps that is good preparation for the reprinted tests. For those who like the question/answer format of learning, this text would be a useful adjunct to more exhaustive texts.

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Imaging of the Airways: Functional and Radiologic Correlations. David P Naidich MD, W Richard Webb MD, Philippe A Grenier MD, Timothy J Harkin MD, and Warren B Gefter MD, editors. Philadelphia: Lippincott Williams & Wilkins. 2005. Hard cover, illustrated, 216 pages, $129.

In the last 10 years there have been a number of advances in both the radiologic and bronchoscopic appraisal of and bronchoscopic management of airway diseases. The goal of these authors was to put forth a comprehensive book that illustrates the benefits and limitations of state-of-the-art technologies of airway assessment, in order to best serve the patient. Naidich, Webb, Grenier, and Gefter are renowned thoracic radiologists, and Harkin, a renowned interventional pulmonologist.

This compact, well-illustrated text contains 6 chapters, based predominantly on the distribution of diseases within the tracheobronchial tree. The first chapter is dedicated to airway anatomy and the specific computed tomography (CT) techniques and variables used to evaluate the airways, including 3-dimensional reconstructions and virtual bronchoscopy. The second chapter reviews the bronchoscopic appearance of airway diseases with virtual-bronchoscopic correlates and discusses the technique and limitations of transmural biopsies of extraluminal structures (primarily lymph nodes). The chapter briefly introduces various bronchoscopically guided treatment modalities (eg, laser phototherapy, photodynamic therapy, cryotherapy, stenting), autofluorescent bronchoscopy, and endobronchial ultrasound.

The next 3 chapters discuss and demonstrate the CT appearance (axial, coronal, sagittal, 3-dimensional reconstruction, inspiratory-expiratory, and/or virtual bronchoscopic) of disease processes that affect the trachea and central bronchi (Chapter 3), and small airways (Chapter 5), and various causes of bronchiectasis (Chapter 4). Differential diagnoses for particular CT patterns are often displayed in color-highlighted tables, which is a particularly useful detail for residents and fellows. The last chapter touches on functional imaging techniques, some of which are currently used in clinical practice, such as ventilation-perfusion scintigraphy, static inspiratory-expiratory CT scanning, physiologic imaging of the upper and lower airways with CT and magnetic resonance imaging (MRI) in obstructive sleep apnea, tracheobronchomalacia, and chronic obstructive pulmonary disease. The remainder of the chapter deals with experimental techniques in CT (using stable xenon gas), MRI (using hyperpolarized noble gases), and molecular imaging, which may soon permit investigation of regional ventilation, perfusion, and inflammation in patients, and the results of which can be fused with CT images, allowing function and structure correlations. There are hundreds of references in each chapter, and the index is quite useful, although not exhaustive.

The intended readership includes residents and fellows in radiology, thoracic surgery, and pulmonary medicine, subspecialists in these fields, and those with an interest in expanding their knowledge of airway imaging.

A few inconsequential faults do not substantially detract from this book. Among these are the lack of an accepted conventional display of standard and virtual bronchoscopic images, which can be confusing, because CT images are displayed as if viewed from below and bronchoscopic images as if viewed from above. The images are therefore flipped 180 degrees with respect to each other. In some illustrations the images or arrows do not show what the legend or text indicates (Figures 2–8, 2–19, 3–8, 3–22, 3–23, 4–12, 5–22). There are a few minor mistakes where words are interchanged: "osteochondrolytica" for "osteochondroplastica" (page 86), "proximal death" for "proximal disease" (page 102), "dermatomyosis" for "dermatomyositis" (page 148), and "collagen tissue disease" for "connective tissue disease" (page 149). I found rare typographical errors ("mucus" spelled 2 different ways in the same sentence, misspelling of an author's name). One other error was the inclusion of 10 R/L nodes as mediastinal rather than as hilar nodes (page 39). Overall, the chapters are well written and well organized and nearly all of the images are excellent. The book's division of chapters based on anatomic location is practical and useful with regards to the generation of differential diagnoses in the clinical setting.

Radiologic assessment of the airways has always been an important adjunct to bronchoscopy, particularly because of CT's ability to provide "road mapping." Virtual bronchoscopy allows the bronchoscopist to visualize the pathway leading to a suspicious airway abnormality before the procedure, which is a valuable tool now that ultra-thin bronchoscopes are available. Airway imaging in combination with physiologic or functional measurements will allow us to better understand the effects of pathologic processes and interventions on the patient, perhaps leading to new interventions or prevention of disease. Knowledge of currently available technology in both radiologic and bronchoscopic areas will benefit the radiologist as a consultant and the pulmonologist and thoracic surgeon by allowing them to use these tools in patient management.

This book is a timely and valuable resource. The recent explosion of literature on this topic has created the need for an up-to-date review in the form of a textbook, and this publication provides that information in an interesting and easy-to-read fashion.

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Functional Imaging of the Chest. Hans-Ulrich Kauczor MD, editor. *Medical Radiology Diagnostic Imaging* series, AL Baert and K Sartor, editors. Berlin: Springer-Verlag. 2004. Hard cover, illustrated, 228 pages, $159.

Until recently, imaging of the chest has been limited to evaluating structure and morphology, while various aspects of lung function were the dominion of pulmonary function tests. Correlation between the imaging