

CARDIOTHORACIC IMAGING

Books:

Pre-reading: You should have received a copy of Oxford American Handbook of Radiology. Before starting your first Chest rotation, you should have reviewed Chapter 2 Chest, sections on Radiography and at least CT anatomy (or, if it is your very first rotation, review this at the beginning of the rotation). Read the rest of chest CT during your first rotation. Review entire chapter before starting subsequent rotations.

If you need a more basic review for chest radiography, this softcover primer even includes a CD-ROM: Goodman, LR. Felson's principles of chest radiography: a programmed text. 3rd ed. 2007.

Core books: Amazon has both these hardcover books currently for <\$100, as well as Kindle versions.

Collins, J. and Stern, E.J. Chest radiology: the essentials. 2nd ed. 2008.

Core reading for all residents. This fairly small, densely-written book can be read in its entirety during a rotation and Dr. Black's didactic conferences follow this book closely.

Miller, S, Abbara S., and Boxt L. Cardiac imaging: the requisites. 3rd ed. 2009.

Core reading for all residents. Covers topics such as cardiac evaluation on chest radiography, good for first rotation, to advanced imaging with CT and MR, for subsequent rotations.

Other recommended reading: Several specific articles recommended for pulmonary nodule management and lung cancer screening.

1. Aberle, D.R., et al., Reduced lung-cancer mortality with low-dose computed tomographic screening. N Engl J Med, 2011. 365(5): p. 395-409.
2. Bach, P.B., et al., Benefits and harms of CT screening for lung cancer: a systematic review. JAMA, 2012. 307(22): p. 2418-29.
3. Black, W.C. and H.G. Welch, Screening for disease. AJR Am J Roentgenol, 1997. 168(1): p. 3-11.
4. MacMahon, H., et al., Guidelines for management of small pulmonary nodules detected on CT scans: a statement from the Fleischner Society. Radiology, 2005. 237(2): p. 395-400.
5. Naidich, DP, et al. Recommendations for the management of subsolid pulmonary nodules detected at CT: a statement from the Fleischner Society. Radiology 2013. 266(1): p. 304-317.

RadioGraphics Collections:

Excellent on-line (and print) review articles, most originating as award-winning poster presentations at RSNA Annual Meeting in Chicago. **Highly recommended.**

When organizing your study plan, consider reading an-article-a-day during your Cardiothoracic rotations, especially those articles which expand on something you saw, or read, or discussed that day, to reinforce what you have learned and to expand upon it. Some of these articles, such as articles on thoracic aorta, also overlap with your Body CT/MR rotations or, as in the case of cardiac SPECT, are seen exclusively during your Nuclear Medicine rotations.

Two articles in particular are singled out because of their usefulness in reviewing repeatedly prior to attending Tuesday morning multidisciplinary tumor board (known as CTOP, which stands for Comprehensive Thoracic Oncology Program):

- Arjun Nair, et al. *RadioGraphics* 2011 31:215-238; **Revisions to the TNM Staging of Non-Small Cell Lung Cancer: Rationale, Clinicoradiologic Implications, and Persistent Limitations**
- Stacy J. UyBico, et al. *RadioGraphics* 2010 30:1163-1181; **Lung Cancer Staging Essentials: The New TNM Staging System and Potential Imaging Pitfalls**

A large sample of other titles follows.

Cardiac Section: 58 listed here, out of 123 currently in the collection.

- Erica K. Schallert, et al. *RadioGraphics* 2013 33:E33-E46; **Describing Congenital Heart Disease by Using Three-Part Segmental Notation**
- Ahmed H. El-Sherief, et al, *RadioGraphics* 2013 33:63-72; **Basics of Cardiopulmonary Bypass: Normal and Abnormal Postoperative CT Appearances**
- Julia A. Prescott-Focht, et al. *RadioGraphics* 2013 33:73-85; **Ascending Thoracic Aorta: Postoperative Imaging Evaluation**
- Nancy Pham, et al. *RadioGraphics* 2012 32:1873-1892; **Complications of Aortic Valve Surgery: Manifestations at CT and MR Imaging**
- Jesse Habets, et al. *RadioGraphics* 2012 32:1893-1905; **Multidetector CT Angiography in Evaluation of Prosthetic Heart Valve Dysfunction**
- Jean Jeudy, et al. *RadioGraphics* 2012 32:1369-1380; **From the Radiologic Pathology Archives: Cardiac Lymphoma: Radiologic-Pathologic Correlation**
- Mi-Young Jeung, et al. *RadioGraphics* 2012 32:1381-1398; **Myocardial Tagging with MR Imaging: Overview of Normal and Pathologic Findings**
- Christopher J. Bennett, et al. *RadioGraphics* 2012 32:1399-1420. **CT and MR Imaging of the Aortic Valve: Radiologic-Pathologic Correlation**
- Sanket S. Shah, et al. *RadioGraphics* 2012 32:991-1008; **Imaging of the Coronary Sinus: Normal Anatomy and Congenital Abnormalities**
- Jimmy C. Lu, et al. *RadioGraphics* 2012 32:E107-E127; **Evaluation with Cardiovascular MR Imaging of Baffles and Conduits Used in Palliation or Repair of Congenital Heart Disease**
- Carlos S. Restrepo, et al. *RadioGraphics* 2012 32:633-649; **Imaging Patients with Cardiac Trauma**
- Jabi E. Shriki, et al. *RadioGraphics* 2012 32:453-468; **Identifying, Characterizing, and Classifying Congenital Anomalies of the Coronary Arteries**
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- Peter M. A. van Ooijen, et al. *RadioGraphics* 2012 32:589-599; **Informatics in Radiology: Postprocessing Pitfalls in Using CT for Automatic and Semiautomatic Determination of Global Left Ventricular Function**
- Farhood Saremi, et al. *RadioGraphics* 2012 32:E1-E32; **Coronary Veins: Comprehensive CT-Anatomic Classification and Review of Variants and Clinical Implications**
- Elena Peña, et al. *RadioGraphics* 2012 32:9-32; **Pulmonary Hypertension: How the Radiologist Can Help**
- Himesh V. Vyas, et al. *RadioGraphics* 2012 32:87-98; **MR Imaging and CT Evaluation of Congenital Pulmonary Vein Abnormalities in Neonates and Infants**

- Ryan A. Dvorak, et al. *RadioGraphics* 2011 31:2041-2057; **Interpretation of SPECT/CT Myocardial Perfusion Images: Common Artifacts and Quality Control Techniques**
- Amanda L. Aguilera, et al. *RadioGraphics* 2011 31:1669-1682; **Radiography of Cardiac Conduction Devices: A Comprehensive Review**
- Marcelo F. Di Carli, et al. *RadioGraphics* 2011 31:1239-1254;. **Cardiac PET/CT for the Evaluation of Known or Suspected Coronary Artery Disease**
- Paul Stolzmann, et al. *RadioGraphics* 2011 31:1255-1269; **Complementary Value of Cardiac FDG PET and CT for the Characterization of Atherosclerotic Disease**
- Olga G. James, et al. *RadioGraphics* 2011 31:1271-1286; **Utility of FDG PET/CT in Inflammatory Cardiovascular Disease**
- Alan H. Maurer, et al. *RadioGraphics* 2011 31:1287-1305; **How to Differentiate Benign versus Malignant Cardiac and Paracardiac ¹⁸F FDG Uptake at Oncologic PET/CT**
- Steven J. Co, et al. *RadioGraphics* 2011 31:E101-E115; **Role of Imaging in Penetrating and Blunt Traumatic Injury to the Heart**
- Venkata S. Katabathina, et al. *RadioGraphics* 2011 31:1141-1160; **Nonvascular, Nontraumatic Mediastinal Emergencies in Adults: A Comprehensive Review of Imaging Findings**
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- Carlos S. Restrepo, et al. *RadioGraphics* 2011 31:435-451; **Aortitis: Imaging Spectrum of the Infectious and Inflammatory Conditions of the Aorta**
- Tyler B. Fredenburg, et al. *RadioGraphics* 2011 31:453-463; **The Fontan Procedure: Anatomy, Complications, and Manifestations of Failure**
- Jérôme Caudron, et al. *RadioGraphics* 2011 31:239-259; **Evaluation of Left Ventricular Diastolic Function with Cardiac MR Imaging**
- Fumiko Kimura, et al. *RadioGraphics* 2010 30:1587-1602; **Myocardial Fat at Cardiac Imaging: How Can We Differentiate Pathologic from Physiologic Fatty Infiltration?**
- Michael F. Morris, et al. *RadioGraphics* 2010 30:1603-1620; **CT and MR Imaging of the Mitral Valve: Radiologic-Pathologic Correlation**
- Eun Ju Chun, et al. *RadioGraphics* 2010 30:1309-1328; **Hypertrophic Cardiomyopathy: Assessment with MR Imaging and Multidetector CT**
- Judith L. Babar, et al. *RadioGraphics* 2010 30:e40; **Application of MR Imaging in Assessment and Follow-up of Congenital Heart Disease in Adults**
- Luba Frank, et al. *RadioGraphics* 2010 30:1069-1094; **Cardiovascular MR Imaging of Conotruncal Anomalies¹**

- Mi-Jin Kang, et al. *RadioGraphics* 2010 30:685-698; **Dual-Energy CT: Clinical Applications in Various Pulmonary Diseases**
- Chantale Lapierre, et al. *RadioGraphics* 2010 30:397-411; **Segmental Approach to Imaging of Congenital Heart Disease**
- Carrie M. Carr, et al. *RadioGraphics* 2010 30:429-444; **CT of Left Ventricular Assist Devices**
- Michelle A. McMahon, et al. *RadioGraphics* 2010 30:445-460; **Multidetector CT of Aortic Dissection: A Pictorial Review**
- Eric T. Kimura-Hayama, et al. *RadioGraphics* 2010 30:79-98; **Uncommon Congenital and Acquired Aortic Diseases: Role of Multidetector CT Angiography**
- Aliye Ozsoyoglu Bricker, et al. *RadioGraphics* 2010 30:99-110; **Valsalva Sinus Aneurysms: Findings at CT and MR Imaging**
- Mariana Díaz-Zamudio, et al. *RadioGraphics* 2009 29:1939-1954; **Coronary Artery Aneurysms and Ectasia: Role of Coronary CT Angiography**
- Joseph J. Chen, et al. *RadioGraphics* 2009 29:1393-1412; **CT Angiography of the Cardiac Valves: Normal, Diseased, and Postoperative Appearances**
- Navid A. Zenooz, et al. *RadioGraphics* 2009 29:781-789; **Coronary Artery Fistulas: CT Findings**
- Christine P. Chao, et al. *RadioGraphics* 2009 29:791-804; **Natural History and CT Appearances of Aortic Intramural Hematoma**
- Patrick J. Sparrow, et al. *RadioGraphics* 2009 29:805-823; **CT and MR Imaging Findings in Patients with Acquired Heart Disease at Risk for Sudden Cardiac Death**
- Prachi P. Agarwal, et al. *RadioGraphics* 2009 29:537-552; **Multidetector CT of Thoracic Aortic Aneurysms**
- Elena Peña, et al. *RadioGraphics* 2009 29:553-565; **ALCAPA Syndrome: Not Just a Pediatric Disease**
- Farhood Saremi, et al. *RadioGraphics* 2008 28:1161-1187; **Optimizing Cardiac MR Imaging: Practical Remedies for Artifacts**
- Jeffrey J. Hom, et al. *RadioGraphics* 2008 28:407-416; **Velocity-encoded Cine MR Imaging in Aortic Coarctation: Functional Assessment of Hemodynamic Events**
- Farhood Saremi, et al. *RadioGraphics* 2007 27:1539-1565; **Cardiac Conduction System: Anatomic Landmarks Relevant to Interventional Electrophysiologic Techniques Demonstrated with 64-Detector CT**
- James P. O'Brien, et al. *RadioGraphics* 2007 27:1569-1582; **Anatomy of the Heart at Multidetector CT: What the Radiologist Needs to Know**

- Baskaran Sundaram, et al. *RadioGraphics* 2007 27:1583-1594; **CT Findings Following Thoracic Aortic Surgery**
- C. Santiago Restrepo, et al. *RadioGraphics* 2007 27:1595-1610; **Imaging Findings in Cardiac Tamponade with Emphasis on CT**
- Dianna D. Cody, et al. *RadioGraphics* 2007 27:1829-1837; **AAPM/RSNA Physics Tutorial for Residents: Technologic Advances in Multidetector CT with a Focus on Cardiac Imaging**
- Naama R. Bogot, et al. *RadioGraphics* 2007 27:1297-1309; **Cardiac CT of the Transplanted Heart: Indications, Technique, Appearance, and Complications**
- Qi Liu, et al. *RadioGraphics* 2007 27:1311-1321; **Three-dimensional Contrast-enhanced MR Angiography of Aortic Dissection: A Pictorial Essay**
- Emma C. Ferguson, et al. *RadioGraphics* 2007 27:1323-1334; **Classic Imaging Signs of Congenital Cardiovascular Abnormalities**
- Mahadevappa Mahesh, et al. *RadioGraphics* 2007 27:1495-1509; **AAPM/RSNA Physics Tutorial for Residents: Physics of Cardiac Imaging with Multiple-Row Detector CT**
- Hong Il Ha, et al. *RadioGraphics* 2007 27:989-1004; **Imaging of Marfan Syndrome: Multisystemic Manifestations**
- Sebastian Leschka, et al. *RadioGraphics* 2007 27:829-846; **Pre- and Postoperative Evaluation of Congenital Heart Disease in Children and Adults with 64-Section CT**
- Christian J. Kellenberger, et al. *RadioGraphics* 2007 27:5-18; **Cardiovascular MR Imaging in Neonates and Infants with Congenital Heart Disease**

Chest Section: 58 listed here, out of 184 currently in the collection.

- Indravadan J. Patel, et al. *RadioGraphics* 2013 33:797-801; **AIRP Best Cases in Radiologic-Pathologic Correlation: Mediastinal Mature Cystic Teratoma**
- Shaan H. Shah, et al. *RadioGraphics* 2012 32:2047-2052; **AIRP Best Cases in Radiologic-Pathologic Correlation: Coal Workers' Pneumoconiosis**
- Arjun Nair, et al. *RadioGraphics* 2012 32:E201-E232; **Multidetector CT and Postprocessing in Planning and Assisting in Minimally Invasive Bronchoscopic Airway Interventions**
- Fereidoun G. Abtin, et al. *RadioGraphics* 2012 32:947-969; **Radiofrequency Ablation of Lung Tumors: Imaging Features of the Postablation Zone**
- Christopher M. Walker, et al. *RadioGraphics* 2012 32:971-985; **Tumorlike Conditions of the Pleura**
- Alison C. Greiwe, et al. *RadioGraphics* 2012 32:987-990; **AIRP Best Cases in Radiologic-Pathologic Correlation: Pulmonary Langerhans Cell Histiocytosis**

- Christina M. Paquette, et al. *RadioGraphics* 2012 32:721-740; **Unilateral Vocal Cord Paralysis: A Review of CT Findings, Mediastinal Causes, and the Course of the Recurrent Laryngeal Nerves**
- Laura K. Nason, et al. *RadioGraphics* 2012 32:E51-E70; **Imaging of the Diaphragm: Anatomy and Function**
- Stamatis N. Kantartzis, et al. *RadioGraphics* 2012 32:469-473; **AIRP Best Cases in Radiologic-Pathologic Correlation: Pulmonary Sarcoidosis Complicated by Aspergilloma Formation**
- Amandine Desir, et al. *RadioGraphics* 2012 32:477-498; **CT of Blunt Diaphragmatic Rupture**
- Elena Peña, et al. *RadioGraphics* 2012 32:9-32; **Pulmonary Hypertension: How the Radiologist Can Help**
- Julia Capobianco, et al. *RadioGraphics* 2012 32:33-50; **Thoracic Manifestations of Collagen Vascular Diseases**
- Felipe Martinez, et al. *RadioGraphics* 2012 32:51-69; **Common and Uncommon Manifestations of Wegener Granulomatosis at Chest CT: Radiologic-Pathologic Correlation**
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- Miriam M. Barreto, et al. *RadioGraphics* 2012 32:71-84; **Thoracic Paracoccidioidomycosis: Radiographic and CT Findings**
- Marcelo F. K. Benveniste, et al. *RadioGraphics* 2011 31:1847-1861; **Role of Imaging in the Diagnosis, Staging, and Treatment of Thymoma**
- Jeffrey P. Kanne, et al. *RadioGraphics* 2011 31:1651-1668; **Beyond Skin Deep: Thoracic Manifestations of Systemic Disorders Affecting the Skin**
- Brian P. Holly, et al. *RadioGraphics* 2011 31:1415-1424; **Multidetector CT of Blunt Traumatic Venous Injuries in the Chest, Abdomen, and Pelvis**
- Christopher A. Meyer, et al. *RadioGraphics* 2011 31:1425-1441; **Put Your Back into It: Pathologic Conditions of the Spine at Chest CT**
- Cooper W. Dean, et al. *RadioGraphics* 2011 31:1443-1447; **AIRP Best Cases in Radiologic-Pathologic Correlation: Adenoid Cystic Carcinoma of the Trachea**
- Venkata S. Katabathina, et al. *RadioGraphics* 2011 31:1141-1160; **Nonvascular, Nontraumatic Mediastinal Emergencies in Adults: A Comprehensive Review of Imaging Findings**
- Jonathan R. Dillman, et al. *RadioGraphics* 2011 31:723-741; **Expanding upon the Unilateral Hyperlucent Hemithorax in Children**
- Sarah W. Kao, et al. *RadioGraphics* 2011 31:743-748; **AIRP Best Cases in Radiologic-Pathologic Correlation: Type 2 Congenital Cystic Adenomatoid Malformation (Type 2 Congenital Pulmonary Airway Malformation)**

- Se Jin Nam, et al. *RadioGraphics* 2011 31:749-770; **Imaging of Primary Chest Wall Tumors with Radiologic-Pathologic Correlation**
- Anna Rita Larici, et al. *RadioGraphics* 2011 31:771-789; **Lung Abnormalities at Multimodality Imaging after Radiation Therapy for Non-Small Cell Lung Cancer**
- Pilar García-Peña, et al. *RadioGraphics* 2011 31:465-482; **Thoracic Findings of Systemic Diseases at High-Resolution CT in Children**
- Nasir A. Siddiqui, et al. *RadioGraphics* 2011 31:585-590; **Best Cases from the AFIP: Pulmonary Alveolar Microlithiasis**
- Claudia Grosse, et al. *RadioGraphics* 2010 30:1753-1777; **CT Findings in Diseases Associated with Pulmonary Hypertension: A Current Review**
- Eva Criado, et al. *RadioGraphics* 2010 30:1567-1586; **Pulmonary Sarcoidosis: Typical and Atypical Manifestations at High-Resolution CT with Pathologic Correlation**
- Santiago Martinez-Jimenez, et al. *RadioGraphics* 2010 30:e41; **Nonsurgical Extracardiac Vascular Shunts in the Thorax: Clinical and Imaging Characteristics**
- Tara A. Morgan, et al. *RadioGraphics* 2010 30:851-867; **Acute Traumatic Aortic Injuries: Posttherapy Multidetector CT Findings**
- Mi-Jin Kang, et al. *RadioGraphics* 2010 30:685-698; **Dual-Energy CT: Clinical Applications in Various Pulmonary Diseases**
- H. Henry Guo, et al. *RadioGraphics* 2010 30:327-333; **Best Cases from the AFIP: Fatal 2009 Influenza A (H1N1) Infection, Complicated by Acute Respiratory Distress Syndrome and Pulmonary Interstitial Emphysema**
- Farbod Nasser, et al. *RadioGraphics* 2010 30:413-428; **Clinical and Radiologic Review of the Normal and Abnormal Thymus: Pearls and Pitfalls**
- Eva Castañer, et al. *RadioGraphics* 2010 30:33-53; **When to Suspect Pulmonary Vasculitis: Radiologic and Clinical Clues**
- Shin Matsuoka, et al. *RadioGraphics* 2010 30:55-66; **Quantitative CT Assessment of Chronic Obstructive Pulmonary Disease**
- Guillaume Bierry, et al. *RadioGraphics* 2009 29:1909-1920; **Thoracic Manifestations of Primary Humoral Immunodeficiency: A Comprehensive Review**
- Jan V. Hirschmann, et al. *RadioGraphics* 2009 29:1921-1938; **Hypersensitivity Pneumonitis: A Historical, Clinical, and Radiologic Review**
- Matthew G. Gipson, et al. *RadioGraphics* 2009 29:1531-1535; **Bronchial Atresia**
- Jay K. Pahade, et al. *RadioGraphics* 2009 29:639-654; **Quality Initiatives: Continuing Medical Education: Imaging Pregnant Patients with Suspected Pulmonary Embolism: What the Radiologist Needs to Know**

- Yoon Kyung Kim, et al. *RadioGraphics* 2009 29:825-837; **Thoracic Complications of Liver Cirrhosis: Radiologic Findings**
- Carlos S. Restrepo, et al. *RadioGraphics* 2009 29:839-859; **Imaging Appearances of the Sternum and Sternoclavicular Joints**
- Rathachai Kaewlai, et al. *RadioGraphics* 2008 28:1555-1570; **Multidetector CT of Blunt Thoracic Trauma**
- Carlos S. Restrepo, et al. *RadioGraphics* 2008 28:1289-1305; **The Diaphragmatic Crura and Retrocrural Space: Normal Imaging Appearance, Variants, and Pathologic Conditions**
- Santiago Martinez, et al. *RadioGraphics* 2008 28:1369-1382; **Mucoid Impactions: Finger-in-Glove Sign and Other CT and Radiographic Features**
- Anil K. Attili, et al. *RadioGraphics* 2008 28:1383-1396; **Smoking-related Interstitial Lung Disease: Radiologic-Clinical-Pathologic Correlation**
- Alexander A. Bankier, et al. *RadioGraphics* 2008 28:919-931; **Quality Initiatives Respiratory Instructions for CT Examinations of the Lungs: A Hands-on Guide**
- Aletta Ann Frazier, et al. *RadioGraphics* 2008 28:883-899; **From the Archives of the AFIP: Pulmonary Alveolar Proteinosis**
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- John F. Bruzzi, et al. *RadioGraphics* 2008 28:551-560; **Imaging of Non–Small Cell Lung Cancer of the Superior Sulcus: Part 1: Anatomy, Clinical Manifestations, and Management**
- John F. Bruzzi, et al. *RadioGraphics* 2008 28:561-572; **Imaging of Non–Small Cell Lung Cancer of the Superior Sulcus: Part 2: Initial Staging and Assessment of Resectability and Therapeutic Response**
- Joshua Burrill, et al. *RadioGraphics* 2007 27:1255-1273; **Tuberculosis: A Radiologic Review**
- Carlos S. Restrepo, et al. *RadioGraphics* 2007 27:941-956; **Pulmonary Complications from Cocaine and Cocaine-based Substances: Imaging Manifestations**
- Mayil S. Krishnam, et al. *RadioGraphics* 2007 27:957-974; **Postoperative Complications of Lung Transplantation: Radiologic Findings along a Time Continuum**
- Gregory W. Gladish, et al. *RadioGraphics* 2007 27:975-987; **Pedicle Muscle Flaps in Intrathoracic Cancer Resection: Imaging Appearance and Evolution**
- Christina Mueller-Mang, et al. *RadioGraphics* 2007 27:595-615; **What Every Radiologist Should Know about Idiopathic Interstitial Pneumonias**
- Yeon Joo Jeong, et al. *RadioGraphics* 2007 27:617-637; **Eosinophilic Lung Diseases: A Clinical, Radiologic, and Pathologic Overview**
- Wayne Fang, et al. *RadioGraphics* 2007 27:641-655; **Imaging Manifestations of Blastomycosis: A Pulmonary Infection with Potential Dissemination**

- Camilla R. Whitten, et al. *RadioGraphics* 2007 27:657-671; **A Diagnostic Approach to Mediastinal Abnormalities**
- Aletta Ann Frazier, et al. *RadioGraphics* 2007 27:867-882; **From the Archives of the AFIP: Pulmonary Veno-occlusive Disease and Pulmonary Capillary Hemangiomatosis**