

CT Chest

CPT: 71250, 71260, 71270, 71271

1 Major Symptom or Complaint presented as primary indication

1.1 Asthma CT ordered to exclude alternative causes for wheezing [BOTH]

1.1.1 Diagnosis established with spirometry

1.1.2 Chest x-ray not diagnostic

References

1. Catherine Beigelman-Aubry, André Capderou, Philippe A. Grenier, Christian Straus, Marie-Hélène Becquemin, Thomas Similowski, and Marc Zelter Mild Intermittent Asthma: CT Assessment of Bronchial Cross-sectional Area and Lung Attenuation at Controlled Lung Volume Radiology April 2002 223:181-187
2. McKenzie SA. Difficult asthma in children. Eur Respir Review 2000;60:18 -22
3. Marchac, Valentine, Emond, Sophie, Mamou-Mani, Tania, Le Bihan-Benjamin, Christine, le Bourgeois, Muriel, de Blic, Jacques, Scheinmann, Pierre, Brunelle, Francis Thoracic CT in Pediatric Patients with Difficult-to-Treat Asthma Am. J. Roentgenol. 2002 179: 1245-1252
4. Phillips, CD, Platts-Mills, TA Chronic sinusitis: relationship between CT findings and clinical history of asthma, allergy, eosinophilia, and infection Am. J. Roentgenol. 1995 164: 185-187

1.2 Chest pain

1.2.1 Aortic dissection, suspected Best handled in ER May be time sensitive, treat as expedited case.

NOTE

- CTA or MRA of the chest and abdomen are the preferred examinations, routine CT or MR are acceptable especially if dissection is not the only diagnosis under consideration. This is a true emergency with mortality increasing about 1% per hour. Michelle A. McMahon and Christopher A. Squirrell Multidetector CT of Aortic Dissection: A Pictorial Review Radiographics March 2010 30:445-460

1.2.1.2 Indications

1.2.1.2.1 Absent distal pulses

1.2.1.2.2 Acute onset of severe chest, upper back, or abdominal pain.

1.2.1.2.3 Pain with abnormal appearance of aorta on prior imaging

1.2.1.2.4 Prior Aneurysm Repair

1.2.1.2.5 Unequal blood pressure in arms

References:

1. ACR Appropriateness Criteria® Acute Chest Pain-Suspected Aortic Dissection 2008
2. A. Khan and Chandra K. Nair Clinical, Diagnostic, and Management Perspectives of Aortic Dissection Chest July 2002 122:311-328;
3. Kersting-Sommerhoff, BA, Sechtem, UP, Fisher, MR, Higgins, CB MR imaging of congenital anomalies of the aortic arch Am. J. Roentgenol. 1987 149 9-13
4. Paul J. Arpasi, Kostaki G. Bis, Anil N. Shetty, Richard D. White, and Orlando P. Simonetti MR Angiography of the Thoracic Aorta with an Electrocardiographically Triggered Breath-Hold Contrast-enhanced Sequence RadioGraphics 2000 20: 107-120.
5. Prince MR. Gadolinium-enhanced MR aortography. Radiology 1994; 191:155-164.
6. Roche, Kevin J., Rivera, Rafael, Argilla, Michael, Fefferman, Nancy R., Pinkney, Lynne P., Rusinek, Henry, Genieser, Nancy B. Assessment of Vasculature Using Combined MRI and MR Angiography Am. J. Roentgenol. 2004 182: 861-866
7. Patel, Pawan D., Arora, Rohit R. Pathophysiology, diagnosis, and management of aortic dissection Therapeutic Advances in Cardiovascular Disease 2008 2: 439-468
8. G. Sutsch et al, Predictability of aortic dissection as a function of aortic diameter Eur. Heart J., Jan 1991; 12: 1247 – 1256.
9. Robert G. Hayter, James T. Rhea, Andrew Small, Faranak S. Tafazoli, and Robert A. Novelline Suspected Aortic Dissection and Other Aortic Disorders: Multi-Detector Row CT in 373 Cases in the Emergency Setting Radiology 2006 238: 841-852

1.2.2 Pulmonary embolism suspected

1.2.2.1 Pend for Physician Review as a CTA Chest (71275) is the preferred study

References:

1. Massimo Pistolesi Pulmonary CT Angiography in Patients Suspected of Having Pulmonary Embolism: Case Finding or Screening Procedure? Radiology August 2010 256:334-337; Mark D. Mamlouk, Eric vanSonnenberg, Rishi Gosalia, David Drachman, Daniel Gridley, Jesus G. Zamora, Giovanna Casola, and Sanford Ornstein Pulmonary Embolism at CT Angiography: Implications for Appropriateness, Cost, and Radiation Exposure in 2003 Patients Radiology August 2010 256:625-632
2. Patel S, Kazerooni EA. Helical CT for the evaluation of acute pulmonary embolism. AJR Am J Roentgenol 2005;185(1):135–149 Stein PD, Fowler SE, Goodman LR, et al. Multidetector computed tomography for acute pulmonary embolism. N Engl J Med 2006;354(22):2317–2327 Perrier A, Roy PM, Sanchez O, et al. Multidetector-row computed tomography in suspected pulmonary embolism. N Engl J Med 2005;352(17):1760–1768

1.3 Cough ALL These criteria apply if cough is the only indication given for the exam. Be sure to review the entire history for prior imaging or other clinical data.

1.3.1 Negative prior work up for ACE therapy

1.3.2 Negative prior work up for Asthma

1.3.3 Negative prior work up for GERD

1.3.4 Negative prior work up for Upper Airway Cough Syndrome (UACS or PND)

References

1. Current Medical Diagnosis & Treatment 2007 Stephen J. McPhee, Maxine A. Papadakis, and Lawrence M. Tierney, Jr., Eds. Ralph Gonzales, Roni Zeiger, Online Eds. Cough Ralph Gonzales, MD, MSPH

1.4 Dysphagia

1.4.1 Known Malignancy (Lung or Mediastinum)

References

1. Thurer, RL,, Evaluation of Mediastinal Masses in UpToDate Online Accessed 7/5/07 Sabiston Textbook of Surgery Copyright © 2004 Elsevier. p. 1739

1.5 Dyspnea, acute onset

1.5.1 Pulmonary embolism suspected

1.5.1.1 Pend for Physician Review as a CTA Chest (71275) is the preferred study

References

1. Massimo Pistolesi Pulmonary CT Angiography in Patients Suspected of Having Pulmonary Embolism: Case Finding or Screening Procedure? Radiology August 2010 256:334-337; Mark D. Mamlouk, Eric vanSonnenberg, Rishi Gosalia, David Drachman, Daniel Gridley, Jesus G. Zamora, Giovanna Casola, and Sanford Ornstein Pulmonary Embolism at CT Angiography: Implications for Appropriateness, Cost, and Radiation Exposure in 2003 Patients Radiology August 2010 256:625-632
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1.6 Hemoptysis

References

Gonzales Ralph, Nadler Paul L, "Chapter 2. Common Symptoms" (Chapter). McPhee SJ, Papadakis MA, Tierney LM, Jr.: CURRENT Medical Diagnosis & Treatment 2009:

<http://www.accessmedicine.com/content.aspx?aID=79>

1.7 Hoarseness ALL

1.7.1 CXR AND CT neck nondiagnostic

1.7.1.1 CT neck should be performed before a CT of the chest is approved for hoarseness. According to the ACR Guidelines the CT of the neck will include structures in the upper chest, to about the level of the carina, that might contribute to hoarseness.

References:

1. ACR PRACTICE GUIDELINE FOR THE PERFORMANCE OF COMPUTED TOMOGRAPHY (CT) OF THE EXTRACRANIAL HEAD AND NECK IN ADULTS AND CHILDREN accessed at www.acr.org/SecondaryMainMenuCategories/quality_safety/guidelines/dx/head-neck/ct_head_neck.aspx 5/11/11

1.7.2 Laryngoscopy nondiagnostic

1.7.3 Persists for > ten days

References

1. Richardson BE et al. Clinical evaluation of vocal fold paralysis. Otolaryngol Clin North Am. 2004 Feb;37(1):45-58.
2. Case report: Collapse, hoarseness of the voice and swelling and bruising of the neck: an unusual presentation of thoracic aortic dissection W Al-Hity, M J Playforth Emerg Med J 2001;18:508-509
3. New Clinical Guideline for Hoarseness Offers Assessment and Treatment Advice Mike Mitka JAMA. 2009;302(18):1954-1956

1.8 Pain, Acute onset of severe chest. back or abdomen

1.8.1 See Aortic dissection suspected

1.8.2 Pulmonary embolism suspected [BOTH]

1.8.2.1 Pend for Physician Review as a CTA Chest (71275) is the preferred study

References

1. Massimo Pistolesi Pulmonary CT Angiography in Patients Suspected of Having Pulmonary Embolism: Case Finding or Screening Procedure? Radiology August 2010 256:334-337; Mark D. Mamlouk, Eric vanSonnenberg, Rishi Gosalia, David Drachman, Daniel Gridley, Jesus G. Zamora, Giovanna Casola, and Sanford Ornstein Pulmonary Embolism at CT Angiography: Implications for Appropriateness, Cost, and Radiation Exposure in 2003 Patients Radiology August 2010 256:625-632
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1.9 Pleuritic chest pain

1.9.1 Pulmonary embolism suspected [BOTH]

- Pend for Physician Review as a CTA Chest (71275) is the preferred study

References

1. Massimo Pistolesi Pulmonary CT Angiography in Patients Suspected of Having Pulmonary Embolism: Case Finding or Screening Procedure? Radiology August 2010 256:334-337; Mark D. Mamlouk, Eric vanSonnenberg, Rishi Gosalia, David Drachman, Daniel Gridley, Jesus G. Zamora, Giovanna Casola, and Sanford Ornstein Pulmonary Embolism at CT Angiography: Implications for Appropriateness, Cost, and Radiation Exposure in 2003 Patients Radiology August 2010 256:625-632
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1.10 Tachypnea

1.10.1 Pulmonary embolism suspected [BOTH]

- Pend for Physician Review as a CTA Chest (71275) is the preferred study

References

1. Massimo Pistolesi Pulmonary CT Angiography in Patients Suspected of Having Pulmonary Embolism: Case Finding or Screening Procedure? Radiology August 2010 256:334-337; Mark D. Mamlouk, Eric vanSonnenberg, Rishi Gosalia, David Drachman, Daniel Gridley, Jesus G. Zamora, Giovanna Casola, and Sanford Ornstein Pulmonary Embolism at CT Angiography: Implications for Appropriateness, Cost, and Radiation Exposure in 2003 Patients Radiology August 2010 256:625-632
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1.11 Weight loss (involuntary) of more than 5% body weight over 6 months

2 Working Diagnosis or Rule Out presented as primary indication

2.1 Aneurysm Suspected

2.1.1 Aneurysm on prior examination

2.1.2 Aortic Arch abnormal on CXR

2.1.3 Arch or Descending Aorta > 3.5 cm diameter on CXR

2.1.4 Ascending Aorta > 4.5cm cm diameter on CXR

2.1.5 Marfan's, Turner's or Ehlers-Danlos Syndrome

References

1. Elefteriades John A, Olin Jeffrey W, Halperin Jonathan L, "Chapter 105. Diseases of the Aorta" (Chapter). Fuster V, O'Rourke RA, Walsh RA, Poole-Wilson P, Eds. King SB, Roberts R, Nash IS, Prystowsky EN, Assoc. Eds.: Hurst's The Heart, 12th Edition: <http://www.accessmedicine.com/content.aspx?aID=3075150>
2. Eli Atar, Alexander Belenky, Menashe Hadad, Ehud Ranany, Shlomo Baytner, and Gil N. Bachar MR Angiography for Abdominal and Thoracic Aortic Aneurysms: Assessment Before Endovascular Repair in Patients with Impaired Renal Function Am. J. Roentgenol., Feb 2006; 186: 386 – 393.
3. Eric M. Isselbacher Thoracic and Abdominal Aortic Aneurysms Circulation, Feb 2005; 111: 816 – 828.
4. Christian Olsson, Stefan Thelin, Elisabeth Ståhle, Anders Ekbom, and Fredrik Granath Thoracic Aortic Aneurysm and Dissection: Increasing Prevalence and Improved Outcomes Reported in a Nationwide Population-Based Study of More Than 14 000 Cases From 1987 to 2002 Circulation, Dec 2006; 114: 2611 – 2618.
5. S. Iliceo, G. Ettorre, et al Diagnosis of aneurysm of the thoracic aorta. Comparison between two non invasive techniques: two-dimensional echocardiography and computed tomography Eur. Heart J., Jul 1984; 5: 545 – 555.

2.2 Aortic dissection, suspected Best handled in ER May be time sensitive, treat as expedited case

NOTE

CTA or MRA of the chest and abdomen are the preferred examinations, routine CT or MR are acceptable especially if dissection is not the only diagnosis under consideration. This is a true emergency with mortality increasing about 1% per hour. Michelle A. McMahon and Christopher A. Squirrell Multidetector CT of Aortic Dissection: A Pictorial Review Radiographics March 2010 30:445-460

2.2.1 Indications

2.2.1.1 Absent distal pulses

2.2.1.2 Acute onset of severe chest, upper back, or abdominal pain

2.2.1.3 Pain with abnormal appearance of aorta on prior imaging

2.2.1.4 Prior Aneurysm Repair

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2. Khan and Chandra K. Nair Clinical, Diagnostic, and Management Perspectives of Aortic Dissection Chest July 2002 122:311-328; Kersting-Sommerhoff, BA, Sechtem, UP, Fisher, MR, Higgins, CB MR imaging of congenital anomalies of the aortic arch Am. J. Roentgenol. 1987 149 9-13 Paul J. Arpasi, Kostaki G. Bis, Anil N. Shetty, Richard D. White, and Orlando P. Simonetti MR Angiography of the Thoracic Aorta with an Electrocardiographically Triggered Breath-Hold Contrast-enhanced Sequence RadioGraphics 2000 20: 107-120. Prince MR. Gadolinium-enhanced MR aortography . Radiology 1994; 191:155-164. Roche, Kevin J., Rivera, Rafael, Argilla, Michael, Fefferman, Nancy R., Pinkney, Lynne P., Rusinek, Henry, Genieser, Nancy B. Assessment of Vasculature Using Combined MRI and MR Angiography Am. J. Roentgenol. 2004 182: 861-866 Patel, Pawan D., Arora, Rohit R. Pathophysiology, diagnosis, and management of aortic dissection Therapeutic Advances in Cardiovascular Disease 2008 2: 439-468 G. Sutsch et al, Predictability of aortic dissection as a function of aortic diameter Eur. Heart J., Jan 1991; 12: 1247 – 1256.

2.3 Asthma CT ordered to exclude alternative causes for wheezing [BOTH]

2.3.1 Diagnosis established with spirometry

2.3.2 Chest x-ray not diagnostic

References

1. Catherine Beigelman-Aubry, André Capderou, Philippe A. Grenier, Christian Straus, Marie-Hélène Becquemin, Thomas Similowski, and Marc Zelter Mild Intermittent Asthma: CT Assessment of Bronchial Cross-sectional Area and Lung Attenuation at Controlled Lung Volume Radiology April 2002 223:181-187;
2. McKenzie SA. Difficult asthma in children. Eur Respir Review 2000;60:18 -22
3. Marchac, Valentine, Emond, Sophie, Mamou-Mani, Tania, Le Bihan-Benjamin, Christine, le Bourgeois, Muriel, de Blic, Jacques, Scheinmann, Pierre, Brunelle, Francis Thoracic CT in Pediatric Patients with Difficult-to-Treat Asthma Am. J. Roentgenol. 2002 179: 1245-1252

2.4 Brachial Plexus Pathology (Plexopathy) MRI of shoulder or C spine with contrast preferred.

NOTE

Plexopathy refers to an abnormality of the complex of nerve roots exiting the spine and organizing into the nerves serving the arm, trunk or legs. Symptoms may include burning, tingling, or numbness in a circumferential or dermatomal distribution. The symptoms may radiate to the hand or remain localized in the neck.

2.4.2 Indications BOTH

2.4.2.1 History

2.4.2.1.1 Breast or lung cancer

- Aliya Qayyum, A. David MacVicar, Anwar R. Padhani, Patrick Revell, and Janet E. S. Husband
Symptomatic Brachial Plexopathy following Treatment for Breast Cancer: Utility of MR Imaging with
Surface-Coil Techniques Radiology March 2000 214:837-842

2.4.2.1.2 History of radiation therapy to the chest, breast or axilla

- Bowen, BC, Verma, A, Brandon, AH, Fiedler, JA Radiation-induced brachial plexopathy: MR and
clinical findings AJNR Am J Neuroradiol 1996 17: 1932-1936

2.4.2.1.3 Palpable mass in neck or shoulder area

2.4.2.1.4 Trauma, including at birth

2.4.2.2 Symptoms of upper extremity

2.4.2.2.1 Numbness

2.4.2.2.2 Paresthesias

2.4.2.2.3 Radiating pain

2.4.2.2.4 Weakness

References

1. ACR Appropriateness Criteria Plexopathy p10 Accessed 12/28/08
2. Aliya Qayyum, A. David MacVicar, Anwar R. Padhani, Patrick Revell, and Janet E. S. Husband Symptomatic Brachial Plexopathy following Treatment for Breast Cancer: Utility of MR Imaging with Surface-Coil Techniques Radiology 2000 214: 837-842.
3. BC Bowen, A Verma, AH Brandon, and JA Fiedler Radiation-induced brachial plexopathy: MR and clinical findings AJNR Am. J. Neuroradiol., Nov 1996; 17: 1932 – 1936. Neurosurgical Focus Posted 04/02/2007 Accessed 1/4/09 @ http://www.medscape.com/viewarticle/553963_1
4. Bowen B, Seidenwurm DJ, Davis P, et al, Expert Panel on Neurologic Imaging, American College of Radiology, Appropriateness Criteria, Plexopathy, accessed at http://www.acr.org/SecondaryMainMenuCategories/quality_safety/app_criteria/pdf/ExpertPanelonNeurologicImaging/PlexopathyDoc12.asp 12/28/08
5. Devin K. Binder, M.D., Ph.D.; Justin S. Smith, M.D., Ph.D.; Nicholas M. Barbaro, M.D Primary Brachial Plexus Tumors: Imaging, Surgical, and Pathological Findings in 25 Patients Neurosurgical Focus Medscape Radiology accessed 12/28/08
6. Edward Fathers, David Thrush, Susan M Huson, and Andrew Norman Radiation-induced brachial plexopathy in women treated for carcinoma of the breast Clinical Rehabilitation, Feb 2002; 16: 160 – 165.
7. Neoplastic Brachial Plexopathy Author: Mark A Wren, MD, MPH, Medical Director, Department of Physical Medicine and Rehabilitation, HealthSouth Rehabilitation Hospital of Texarkana eMedicine Specialties > Physical Medicine and Rehabilitation > Plexopathy Updated: Jan 19, 2010 Accesed 3/15/10
8. Vincent J. Miele, M.D.; John A. Norwig, A.T.C.; Julian E. Bailes, M.D. Sideline and Ringside Evaluation for Brain and Spinal Injuries
9. Walker, AT, Chaloupka, JC, de Lotbiniere, AC, Wolfe, SW, Goldman, R, Kier, EL Detection of nerve rootlet avulsion on CT myelography in patients with birth palsy and brachial plexus injury after trauma Am. J. Roentgenol. 1996 167: 1283-1287
10. T. Yoshikawa, N. Hayashi, S. Yamamoto, Y. Tajiri, N. Yoshioka, T. Masumoto, H. Mori, O. Abe, S. Aoki, and K. Ohtomo Brachial Plexus Injury: Clinical Manifestations, Conventional Imaging Findings, and the Latest Imaging Techniques RadioGraphics, October 1, 2006; 26(suppl_1): S133 – S143.
11. TAVAKKOLIZADEH, A. SAIFUDDIN, and R. BIRCH Imaging of Adult Brachial Plexus Traction Injuries J Hand Surg Eur Vol., June 1, 2001; 26(3): 183 – 191

2.5 Boerhaave' Syndrome See Esophageal Rupture

2.6 Bronchiectasis, suspected ANY TWO

2.6.1 Cough

2.6.2 Production of mucopurulent sputum

2.6.3 Hemoptysis

2.6.4 Dyspnea

2.6.5 Wheezing or crackles

2.6.6 Pleuritic chest pain

2.6.7 Digital clubbing

2.6.8 Bronchiectasis on prior CXR

2.6.9 History of cystic fibrosis

2.6.10 Primary ciliary dyskinesia

2.6.11 Known alpha 1-antitrypsin deficiency

2.6.12 Bronchiectasis in children [one of the following]

2.6.12.1 Chronic moist/productive cough

2.6.12.2 Asthma that does not respond to treatment

2.6.12.3 Asthma that does not respond to treatment

2.6.12.4 Recurrent pneumonia

2.6.12.5 Unexplained hemoptysis

2.6.12.6 Positive sputum culture

References

1. Kerby Gwendolyn S, Deterding Robin R, Balasubramaniam Vivek, Sagel Scott D, Cavanaugh Keith L, Federico Monica J, "Chapter 18. Respiratory Tract & Mediastinum" (Chapter). Hay WW, Jr., Levin MJ, Sondheimer JM, Deterding RR: CURRENT Diagnosis & Treatment: Pediatrics, 19th Edition: <http://www.accessmedicine.com/content.aspx?aID=3402130>
2. Dodd, Jonathan D., Souza, Carolina A., Muller, Nestor L. Conventional High-Resolution CT Versus Helical High-Resolution MDCT in the Detection of Bronchiectasis Am. J. Roentgenol. 2006 187: 414-420

2.7 Emphysema

2.7.1 Abnormal Pulmonary Function Tests

2.7.1.1 FEV1, FVC, and the FEV1/FVC (FEV1% ratio) are reduced

2.7.2 Distant breath sounds

2.7.3 Known with worsening symptoms

References

1. Prendergast Thomas J, Ruoss Stephen J, "Chapter 9. Pulmonary Disease" (Chapter). McPhee SJ, Ganong WF: Pathophysiology of Disease, 5th Edition: <http://www.accessmedicine.com/content.aspx?aID=2094128>. accessed 1/16/09

2.8 Esophageal Rupture (Boerhaave' Syndrome) Contrast Esophagram not diagnostic AND

2.8.1 Chest pain beginning after

2.8.1.1 Instrumentation of any kind

2.8.1.2 Wretching or vomiting

References

1. UptoDate 18.2: George Triadafilopoulos, MD Boerhaave's syndrome: Effort rupture of the esophagus
2. Perforation of the esophagus: correlation of site and cause with plain film findings. Han SY; McElvein RB; Aldrete JS; Tishler JM AJR Am J Roentgenol 1985 Sep;145(3):537-40. Esophageal injuries: spectrum of multidetector row CT findings. de Lutio di Castelguidone E; Merola S; Pinto A; Raissaki M; Gagliardi N; Romano L Eur J Radiol. 2006 Sep;59(3):344-8.

2.9 Interstitial lung disease (ILD, pulmonary fibrosis)

2.9.1 Known or suspected based on prior imaging or abnormal pulmonary function test

2.9.2 Persistent nonproductive cough

2.9.3 Hemoptysis

2.9.4 Other associated diseases

2.9.4.1 Sarcoidosis

2.9.4.2 Collagen vascular diseases (scleroderma, dermatomyositis, SLE/lupus, rheumatoid arthritis, polymyositis, sjogren syndrome, mixed connective tissue disease)

2.9.4.3 Tuberous sclerosis

2.9.4.4 Wegener's granulomatosis

2.9.4.5 Bronchiolitis obliterans organizing pneumonia (BOOP)

2.9.4.6 Occupational exposure (asbestosis, silicosis)

2.9.5 Drug related diseases

2.9.6 Interstitial infiltrate on a recent chest x-ray with or without abnormal PFT's

2.9.7 Interstitial lung disease suspected in children, with or without abnormal PFT's

References:

1. Bourke, S J; Interstitial lung disease: progress and problems; Postgrad Med J 2006 82: 494-499
2. Du Bois, R M Fortnightly Review: Diffuse lung disease: an approach to management BMJ 1994;309:175

2.10 Pneumonia

2.10.1 Recurrent in the same location

2.10.2 Unresponsive to treatment.

2.11 Pulmonary embolism suspected

2.11.1 Pending for Physician Review as a CTA Chest (71275) is the preferred study

References

1. Massimo Pistolesi Pulmonary CT Angiography in Patients Suspected of Having Pulmonary Embolism: Case Finding or Screening Procedure? Radiology August 2010 256:334-337; Mark D. Mamlouk, Eric vanSonnenberg, Rishi Gosalia, David Drachman, Daniel Gridley, Jesus G. Zamora, Giovanna Casola, and Sanford Ornstein Pulmonary Embolism at CT Angiography: Implications for Appropriateness, Cost, and Radiation Exposure in 2003 Patients Radiology August 2010 256:625-632
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2.12 Sarcoidosis

2.12.1 Bilateral Hilar adenopathy

2.12.2 Uveitis

2.12.3 Elevated serum calcium (hypercalcemia)

2.12.4 Optic Neuritis

2.12.5 Skin rash

References

1. Baughman RP, Lower EE. Chapter 329. Sarcoidosis. In: Longo DL, Fauci AS, Kasper DL, Hauser SL, Jameson JL, Loscalzo J, eds. Harrison's Principles of Internal Medicine. 18th ed. New York: McGraw-Hill; 2012. <http://www.accessmedicine.com/content.aspx?aID=9138725>. Accessed October 18, 2012
2. Sarcoidosis: Clinical Presentation, Immunopathogenesis, and Therapeutics Michael C. Iannuzzi, Joseph R. Fontana JAMA. 2012;305(4):391-399.
3. Sarcoidosis: correlation of extent of disease at CT with clinical, functional, and radiographic findings. Müller NL, Mawson JB, Mathieson JR, Abboud R, Ostrow DN, Champion P Radiology. 1989;171(3):613.
4. Pulmonary sarcoidosis. Baughman RP Clin Chest Med. 2004;25(3):521
5. Radiologic manifestations of sarcoidosis in various organs. Koyama T, Ueda H, Togashi K, Umeoka S, Kataoka M, Nagai S Radiographics. 2004;24(1):87.

2.13 Smoking (Screening test for smokers) in asymptomatic persons 71250 & 71271 Only a low dose study should be performed and only once every 12 months

2.13.1 Non-Medicare Members

2.13.1.1 History of at least 20 pack years (daily number of packs smoked multiplied by the number of years smoked)

2.13.1.2 Currently smoking or smoked within the last 15 years

2.13.1.3 Aged between 50 and 80 years

2.13.2 For Medicare Members ONLY

2.13.2.1 History of at least 20 pack years (daily number of packs smoked multiplied by the number of years smoked)

2.13.2.2 Currently smoking, or smoked within the last 15 years

2.13.2.3 Aged between 50 and 77 years

References

1. Draft Recommendation Statement USPTF Accessed 10/28/2013 at <http://www.uspreventiveservice taskforce.org/uspstf13/lungcan/lungcandraftrec.htm> <http://pubs.rsna.org/doi/pdf/10.1148/rg.2015150079>
2. US Preventive Services Task Force Lung Cancer Screening Recommendations, March 9, 2021 <http://www.uspreventiveservicestaskforce.org/uspstf/recommendation/lung-cancer-screening>
3. <https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&ncaid=304>

2.14 Superior Vena Cava syndrome [One]

2.14.1 facial or neck swelling,

2.14.2 bilateral upper extremity swelling,

2.14.3 dyspnea,

2.14.4 headache,

2.14.5 cough

2.15 Syndrome of inappropriate ADH

2.15.1 Known Malignancy (Lung or Mediastinum)

References:

1. Thurer, RL,, Evaluation of Mediastinal Masses in UpToDate Online Accessed 7/5/07
2. Sabiston Textbook of Surgery Copyright © 2004 Elsevier. p. 1739

2.16 Thymoma, suspected

2.16.1 Anterior mediastinal mass

2.16.2 Myasthenia gravis

2.16.3 Phrenic nerve palsy,

2.16.4 Superior vena cava obstruction

2.16.5 Ptosis or drooping of the eyelid

2.16.6 Diplopia or double vision

2.16.7 Nasal speech

2.16.8 Difficulty chewing or swallowing

2.16.9 Facial paresis

2.16.10 Proximal limb weakness

2.16.11 Chest pain

2.16.12 Dysphagia

2.16.13 Hoarseness

2.16.14 Paraneoplastic syndrome

2.16.15 Thymoma associated syndromes

2.16.15.1 Pure red cell aplasia

2.16.15.2 Hypogammaglobulinemia

2.16.15.3 Pure white cell aplasia

2.16.15.4 Multi organ autoimmunity

References

1. Sabiston Textbook of Surgery, 17th Edition (2004) Townsend et al, eds; p1746
2. NCCN Practice Guidelines in Oncology – v.2.2009 Thymic Malignancies Maher MM, Shephard JA. Imaging of thymoma . Semin Thorac Cardiovasc Surg 2005;17:12-19
3. Lewis JE, Wick MR, Scheithauer BW, Bernatz PE, Taylor WF . Thymoma: A clinicopathologic review. Cancer. 1987;60(11):2727.

2.17 Cystic fibrosis

2.17.1 Hemoptysis

2.17.2 Respiratory distress

2.17.3 Pneumothorax

2.17.4 Acute chest pain

2.17.5 Rales or crackles

2.17.6 Bronchiectasis

2.17.7 Recurrent respiratory infections

2.18 Paraneoplastic syndrome

2.18.1 Syndrome of inappropriate ADH

2.18.1.1. Decreased serum sodium

2.18.2 Hypercalcemia

2.18.3 Carcinoid syndrome

2.18.4 Glomerulonephritis

2.18.5 Thrombophlebitis

2.19 Fever of unknown origin (FUO) with documented aural temperature of >38.3°C or >100.9°F on several occasions over 3 weeks (CT scans for this indication have a low yield in general and CT of the chest is generally not recommended)

2.19.1 Uncertain diagnosis after lab studies [All of the following]

2.19.1.1 Three blood cultures

2.19.1.2 Urine culture not diagnostic

2.19.1.3 Tuberculin skin test

2.19.1.4 HIV antibody assay and HIV viral load for patients at high risk

2.19.1.5 Negative chest x-ray

2.19.2 Night sweats

References

1. Radiologic evaluation of idiopathic interstitial pneumonias.
2. Koelsch TL, Chung JH, Lynch DA. Clin Chest Med. 2015 Jun;36(2):269-82, ix. doi: 10.1016/j.ccm.2015.02.009. Epub 2015 Apr 1.
3. High-resolution CT of interstitial lung disease : a continuous evolution. Walsh SL, Hansell DM.
4. Semin Respir Crit Care Med. 2014 Feb;35(1):129-44. doi: 10.1055/s-0033-1363458. Epub 2014 Jan 30.
5. Scoring of chest CT in children with cystic fibrosis : state of the art. Calder AD, Bush A, Brody AS, Owens CM.
6. Pediatr Radiol. 2014 Dec;44(12):1496-506. doi: 10.1007/s00247-013-2867-y. Epub 2014 Aug 28.
7. Bronchiectasis: new approaches to diagnosis and management. Feldman C. Clin Chest Med. 2011 Sep;32(3):535-46. doi: 10.1016/j.ccm.2011.05.002. An official American Thoracic Society/American College of Chest Physicians policy statement: the Choosing Wisely top five list in adult pulmonary medicine. Wiener RS, Ouellette DR, Diamond E, Fan VS, Maurer JR, Mularski RA, Peters JI, Halpern SD; American Thoracic Society; American College of Chest Physicians. Chest . 2014 Jun;145(6):1383-91. doi: 10.1378/chest.14-0670.

3 Abnormal Physical Exam Finding presented as primary indication

3.1 Diaphragm elevated

NOTE

A complex CT exam is often called for, including analysis of function by imaging once at inspiration and once at expiration.

References

1. Kyprianou Andreas, Feinsilver Steven, "CONCISE REVIEW: Diaphragmatic Dysfunction and Its Evaluation" (Update). Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson JL, Loscalzo J: Harrison's Principles of Internal Medicine, 17th Edition: <http://www.accessmedicine.com/updatesContent.aspx?aid=395735>

3.2 Pleural fluid on prior imaging or physical examination

3.3 Superior Vena Cava syndrome [One]

3.3.1 facial or neck swelling

3.3.2 bilateral upper extremity swelling

3.3.3 dyspnea

3.3.4 headache

3.3.5 cough

3.4 Unequal blood pressure in the arms

3.4.1 Aortic dissection suspected

References

1. Robert G. Hayter, James T. Rhea, Andrew Small, Faranak S. Tafazoli, and Robert A. Novelline Suspected Aortic Dissection and Other Aortic Disorders: Multi-Detector Row CT in 373 Cases in the Emergency Setting Radiology 2006 238: 841-852
2. Louise A. Prince, Gary A. Johnson in Tintinalli's Emergency Medicine: A Comprehensive Study Guide, 6th Edition Judith E. Tintinalli, MD, MS, Gabor D. Kelen, MD, J. Stephan Stapczynski, MD, O. John Ma, MD and David M. Cline, MD Eds. The American College of Emergency Physicians > Section 7: Cardiovascular Disease > Chapter 58. Aortic Dissection and Aneurysms
3. Sabiston Textbook of Surgery, 17th Edition (2004) Townsend et al, eds; pp1907 – 1913

3.5 Vocal cord paralysis, unilateral

4 Abnormal Lab or Imaging presented as primary indication

4.1 Abnormal or dilated aorta on CXR or abdominal US

4.2 Atelectasis, on prior imaging study

4.2.1 Any atelectasis persisting for > 2 days by CXR

4.2.2 Whole segment, lobe or lung

4.3 Bleb, on prior imaging study

4.4 Bulla, on prior imaging study

4.4.1 Change in clinical condition

-

4.5 Cavitation on prior imaging

4.6 Diaphragm elevated

4.6.1 Note: A complex CT exam is often called for, including analysis of function by imaging once at inspiration and once at expiration

References:

1. Kyprianou Andreas, Feinsilver Steven, "CONCISE REVIEW: Diaphragmatic Dysfunction and Its Evaluation" (Update). Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson JL, Loscalzo J: Harrison's Principles of Internal Medicine, 17th Edition: <http://www.accessmedicine.com/updatesContent.aspx?aid=395735>

4.7 DVT by sonography

4.8 Ground Glass Opacity or Opacities

4.8.1 3, 6, 12 month follow-up after initial discovery, then annually for two years

References:

1. Chang Min Park, Jin Mo Goo, Hyun Ju Lee, Chang Hyun Lee, Eun Ju Chun, and Jung-Gi Im Nodular Ground-Glass Opacity at Thin-Section CT: Histologic Correlation and Evaluation of Change at Follow-up RadioGraphics 2007 27: 391-408. :The popularization of computed tomography (CT) in clinical practice and the introduction of mass screening for early lung cancer with the use of CT have increased the frequency of findings of subtle nodules or nodular ground-glass opacity. Nodular ground-glass opacity may be observed in malignancies such as bronchioloalveolar carcinoma and adenocarcinoma, as well as in their putative precursors, such as atypical adenomatous hyperplasia. Nodular ground-glass opacity also may be seen in the presence of benign conditions, including focal interstitial fibrosis, inflammation, and hemorrhage. The persistence of nodular ground-glass opacity over time may be strongly suggestive of an early-stage malignancy, especially if the lesion increases in size or includes a solid component that increases in its extent. Persistent nodular ground-glass opacity also may remain stable in size but show increased attenuation. The more extensive the solid portions of the lesion, the higher the probability of malignancy and the poorer the prognosis. An awareness of the clinical setting, in addition to familiarity with the thin-section CT features of nodular ground-glass opacity at initial and follow-up imaging over several months, can help identify malignancy and achieve an accurate diagnosis. A meticulous evaluation of those CT features, and their correlation with specific histopathologic characteristics, also may enable a more accurate prognosis in cases of neoplastic disease. et al reported that the margin characteristics and the sizes of foci of nodular ground-glass opacity were not helpful for differentiating between benign and malignant lesions. Instead, they identified benign lesions on the basis of the apparent resolution of nodular ground-glass opacity at short-term follow-up CT; benign lesions, except focal interstitial fibrosis, resolved partially or completely within 3 months after initial CT. Benign lesions that are due to inflammation, focal hemorrhage, or edema might resolve spontaneously or after appropriate therapy with antibiotics or steroids.
2. Li F, Sone S, Abe H, MacMahon H, Doi K. Malignant versus benign nodules at CT screening for lung cancer: comparison of thin-section CT findings. Radiology 2004;233:793-798
3. Hara M, Oda K, Ogino H, et al. Focal fibrosis as a cause of localized ground glass attenuation (GGA): CT and MR findings. Radiat Med 2002; 20:93-95
4. C. M. Park, J. M. Goo, H. J. Lee, C. H. Lee, E. J. Chun, and J.-G. Im Nodular Ground-Glass Opacity at Thin-Section CT: Histologic Correlation and Evaluation of Change at Follow-up RadioGraphics, March 1, 2007; 27(2): 391 – 408.

4.9 Hilar enlargement on prior imaging

4.10 Hyperaeration of lung field on prior imaging

4.11 Nodule or Nodules with no prior cancer diagnosis

4.11.1 Nodule, Solitary: Follow Up evaluations SMOKER newly detected, asymptomatic >35yo.

4.11.1.1 Less than 6 mm, CT at 12 months and no further follow-up if unchanged

4.11.1.2 6 – 8 mm, CT at 6 – 12 months then CT at 18 – 24 months

4.11.1.3 Greater than 8 mm, consider CT at 3 months, PET/CT, or tissue sampling

4.11.2 Nodule, Solitary: Follow up evaluation NONSMOKER newly detected, asymptomatic >35yo.

4.11.2.1 Less than 6 mm, No routine follow-up

4.11.2.2 6 – 8 mm, CT at 6 – 12 months then consider CT at 18 – 24 months

4.11.2.3 Greater than 8 mm, consider CT at 3 months, PET/CT, or tissue sampling

4.11.3 Nodules, Multiple

4.11.3.1 Smoker, Asymptomatic, >35 YO (High Risk)

4.11.3.1.1 Less than 6 mm, CT at 12 months and no further follow-up if unchanged

4.11.3.1.2 6 – 8 mm, CT at 3 – 6 months then CT at 18 – 24 months

4.11.3.1.3 Greater than 8 mm, CT at 3 – 6 months then CT at 18 – 24 months

4.11.3.2 Nonsmoker, Asymptomatic, > 35 YO (Low Risk)

4.11.3.2.1 Less than 6 mm, No routine follow-up

4.11.3.2.2 6 – 8 mm, CT at 3 – 6 months then CT at 18 – 24 months

4.11.3.2.3 Greater than 8 mm, CT at 3 – 6 months then CT at 18 – 24 months

4.11.4 Nodule or nodules in patient <35 years of age, one low dose CT at 6-12 months

References

1. MacMahon H, Naidich DP, Goo JM, et al. Guidelines for Management of Incidental Pulmonary Nodules Detected on CT Images: From the Fleischner Society 2017. Radiology July 2017; 284 (1): 228-243. <https://pubs.rsna.org/doi/full/10.1148/radiol.2017161659>

4.12 Initial work up of lung nodule or mass on prior chest x-ray [One of the following]

4.12.1 Age >35

4.12.2 Enlarged compared to prior exam

4.12.3 Age <35 with equivocal, eccentric or no calcifications on prior exam

4.12.4 Smoker

4.12.5 Known malignancy elsewhere

4.12.6 Abnormal findings at the lung base on recent CT of the abdomen

References

1. Helen T. Winer-Muram, The Solitary Pulmonary Nodule, Radiology 2006 239: 34-49.
2. MacMahon H, Austin JHM, Gamsu G, et al., Guidelines for management of small pulmonary nodules detected on CT scans: A statement from the Fleischner Society, Radiology, 2005; 237:395
Henschke CI, Yankelevitz DF, Naidich DP, et al. CT screening for lung cancer: suspiciousness of nodules according to size on baseline scans. Radiology 2004;231(1):164-168
3. Clinical Significance of Small Pulmonary Nodules with Little or No 18F-FDG Uptake on PET/CT Images of Patients with Nonthoracic Malignancies Joo Hyun O, Je Ryung Yoo, Sung Hoon Kim, Hyung Sun Sohn, and Soo Kyo Chung J Nucl Med 48: 15-21. Tissue Characterization of Solitary Pulmonary Nodule: Comparative Study Between Helical Dynamic CT and Integrated PET/CT Chin A Yi, Kyung Soo Lee, Byung-Tae Kim, Joon Young Choi, O. Jung Kwon, Hojoong Kim, Young Mog Shim, and Myung Jin Chung J Nucl Med 47: 443-450 Frank C. Detterbeck, Steven Falen, M. Patricia Rivera, Jan S. Halle, and Mark A. Socinski
4. Seeking a Home for a PET, Part 1 : Defining the Appropriate Place for Positron Emission Tomography Imaging in the Diagnosis of Pulmonary Nodules or Masses Chest June 2004 125:2294-2299 Frank C. Detterbeck, Steven Falen, M. Patricia Rivera, Jan S. Halle, and Mark A. Socinski Seeking a Home for a PET, Part 1 : Defining the Appropriate Place for Positron Emission Tomography Imaging in the Diagnosis of Pulmonary Nodules or Masses Chest June 2004 125:2294-2299
5. Keith Robert L, " Chapter 41. Bronchogenic Carcinoma & Solitary Pulmonary Nodules" (Chapter). Hanley ME, Welsh CH: CURRENT Diagnosis & Treatment in Pulmonary Medicine : <http://www.accessmedicine.com/content.aspx?aID=578809> .

4.13 Pleural fluid on prior imaging or physical examination

4.14 Pleural thickening on prior imaging

4.14.1 Asbestos exposure

References

1. McLoud, TC, Woods, BO, Carrington, CB, Epler, GR, Gaensler, EA Diffuse pleural thickening in an asbestos-exposed population: prevalence and causes Am. J. Roentgenol. 1985 144: 9-18 Henk Kramer, Remge M. Pieterman, Dirk-Jan Slebos, Wim Timens, Willem Vaalburg, Gerard H. Koëter, and Harry J.M. Groen PET for the Evaluation of Pleural Thickening Observed on CT J Nucl Med 45: 995-998. D R Warakaulle, and Z C Traill Imaging of pleural disease Imaging 16: 10-21, Kim, FM, Fennessy, JJ Pleural thickening caused by leukemic infiltration: CT findings Am. J. Roentgenol. 1994 162: 293-294

4.15 Restrictive pattern on Pulmonary Function Testing (PFT)

References:

1. Bourke, S J; Interstitial lung disease: progress and problems; Postgrad Med J 2006 82: 494-499
2. Du Bois, R M Fortnightly Review: Diffuse lung disease: an approach to management BMJ 1994;309:175

4.16 Sputum Cytology suggest malignancy

5 Significant Prior Medical History presented as primary indication

5.1 Aneurysm or Dissection Previously repaired, aortic

5.1.1 Changed clinical situation

5.1.2 Interval follow up

References

1. Franziska Albrecht, Friedrich Eckstein, and Peter Matt Is close radiographic and clinical control after repair of acute type A aortic dissection really necessary for improved long-term survival? Interact CardioVasc Thorac Surg 2010;11:620-625;

5.2 Malignancy Known

5.2.1 Anywhere outside the chest

5.2.1.1 Initial work up of

5.2.1.1.1 Cervix Cancer

5.2.1.1.2 Colon Cancer

5.2.1.1.3 Hodgkin's Disease

5.2.1.1.4 Lymphoma

5.2.1.1.5 Melanoma

5.2.1.1.6 Renal Cell Cancer

5.2.1.1.7 Sarcomas

5.2.1.1.8 Testicular or germ cell cancer

5.2.1.1.9 Thymoma

5.2.1.2 Pulmonary embolism suspected

- Pending for Physician Review as a CTA Chest (71275) is the preferred study

5.2.1.3 Suspected lesion on chest radiograph

5.2.2 Lung or Mediastinum

5.2.2.1 Airway compromise

5.2.2.2 Chest pain

5.2.2.3 Deteriorating radiographic or clinical picture

5.2.2.4 Dysphagia

5.2.2.5 Hoarseness

5.2.2.6 Interval follow up every four months or longer

References:

1. NCCN Practice Guidelines in Oncology v.2.2009 Non small cell Lung Cancer p17 accessed 12/30/08

5.2.2.7 Syndrome of inappropriate ADH

5.2.3 Breast cancer, known

5.2.3.1 Initial work up of invasive cancers

5.2.3.2 For ROUTINE follow up see oncology section

References:

1. NCCN Clinical Practice Guidelines in Breast Cancer V.1.2010 accessed 03/15/10

5.2.4 Cervix cancer, known

5.2.4.1 Initial work up

References

1. NCCN Clinical Practice Guidelines in Oncology™ Cervical Cancer V.1.2007 p.5
2. Kavanagh John J, Phan Alexandria T, Tangjitgamol Siriwan, Ramirez Pedro T, "Chapter 24. Tumors of the Uterine Cervix" (Chapter). Kantarjian HM, Wolff RA, Koller CA: MD Anderson Manual of Medical Oncology: <http://www.accessmedicine.com/content.aspx?aID=2795094>

5.2.5 Colon cancer, known

5.2.5.1 Initial work up

5.2.6 Esophageal cancer

5.2.6.1 Initial evaluation

5.2.6.2 Following completion treatment

5.2.6.3 Worsening clinical situation

5.2.6.3.1 Cervical lymph node new or enlarging

5.2.6.3.2 Chest pain

5.2.6.3.3 Cough

5.2.6.3.4 Dysphagia

5.2.6.3.5 Dyspnea

References

1. NCCN Practice Guidelines in Oncology Esophageal Cancer v.1.2009 Tae Jung Kim, Kyoung Ho Lee, Young Hoon Kim, Sook Whan Sung, Sanghoon Jheon, Suk-ki Cho, and Kyung Won Lee Postoperative Imaging of Esophageal Cancer: What Chest Radiologists Need to Know RadioGraphics 2007 27: 409-429.
2. Yamabe, Yuichiro, Kuroki, Yoshifumi, Ishikawa, Tsutomu, Miyakawa, Kunihiisa, Kuroki, Seiko, Sekiguchi, Ryuzo Tumor Staging of Advanced Esophageal Cancer: Combination of Double-Contrast Esophagography and Contrast-Enhanced CT Am. J. Roentgenol. 2008 191: 753-757

5.2.7 Lymphoma or Hodgkin's disease

5.2.7.1 Initial work up, metastases suspected

5.2.7.2 Surveillance of asymptomatic patient at 6 month intervals

References

1. NCCN Clinical Practice Guidelines in Oncology Hodgkin Disease/Lymphoma Cancers V.2.2009 accessed 1/22/09 American College of Radiology ACR Appropriateness Criteria® Clinical Condition: Staging Evaluation-Hodgkin's Lymphoma 2005

5.2.8 Melanoma, known

5.2.8.1 Stage I or II

5.2.8.1.1 Chest symptoms or findings

5.2.8.1.1.1 Abnormal CXR

5.2.8.1.1.2 Cough

5.2.8.1.1.3 Hemoptysis

5.2.8.1.1.4 Hoarseness

5.2.8.2 Stage III or IV CT or PET/CT may be approved

References

1. NCCN Practice Guidelines in Oncology v.2.2009 Melanoma accessed 12/30

5.2.9 Renal cell cancer

5.2.9.1 Initial work up, metastases suspected

5.2.9.2 Surveillance of asymptomatic patient at 6 month intervals

- Lam, JS, Shvarts, O, Leppert, JT, et al. Postoperative surveillance protocol for patients with localized and locally advanced renal cell carcinoma based on a validated prognostic nomogram and risk group stratification system. J Urol 2005; 174:466

5.2.10 Sarcoma, known

5.2.10.1 Initial work up, metastases suspected

5.2.10.2 Surveillance of asymptomatic patient at 3 – 6 month intervals

References:

1. NCCN Clinical Practice Guidelines in Oncology™ Sarcoma V.2.2007

5.2.11 Testicular or germ cell cancer, known

5.2.11.1 Initial workup

5.2.11.2 Restaging

References

1. NCCN Practice Guidelines in Oncology Testicular Cancer V2.2009 M. L. Harvey , T. R. Geldart , R. Duell , G. M. Mead , and K. Tung Routine computerised tomographic scans of the thorax in surveillance of stage I testicular non-seminomatous germ-cell cancer-a necessary risk? Ann Oncol 13: 237-242. [Paper indicates no real value from routine CT follow up, but increased risk of radiation induced malignancy.] Sohaib, S. Aslam, Koh, Dow-Mu, Husband, Janet E. The Role of Imaging in the Diagnosis, Staging, and Management of Testicular Cancer Am. J. Roentgenol. 2008 191: 387-395 [Takes a more favorable view of using chest CT. But recognizes the risk.]

5.3 Ehler Danlos syndrome

5.3.1 Surveillance or change in clinical picture

References

"The disorder is one of several resulting from abnormalities in collagen and elastin. The fragile skin can be susceptible to bruising and poor healing of wounds, leaving "cigarette paper" scars " Lichtman's Atlas of Hematology A. External Manifestations Marshall A. Lichtman, Jean A. Shafer, Raymond E. Felgar, Nancy Wang Copyright © 2007, by The McGraw-Hill Companies, Inc. Aneurysm formation is also characteristic

5.4 Marfan syndrome

5.4.1 Change in clinical status

5.4.2 Interval follow up

References

1. Sabiston Textbook of Surgery, 17th Edition (2004) Townsend et al, eds; p 1909
2. Schwartz's Principles of Surgery, 8th Edition F. Charles Brunicaudi, Dana K. Andersen, Timothy R. Billiar, David L. Dunn, John G. Hunter, Jeffrey B. Matthews, Raphael E. Pollock, Seymour I. Schwartz Copyright © 2005, The McGraw-Hill Companies, Inc. Part II. Specific Considerations > Chapter 21. Thoracic Aortic Aneurysms and Aortic Dissection from www.accessmedicine.com/content.aspx?alD=805165 accessed 7/5/07

5.5 Mediastinal mass, known

5.6 Myasthenia Gravis

5.6.1 Thymoma suspected

References

1. Drachman DB. Myasthenia gravis. N Engl J Med 1994;330:1797-1810
2. Thanvi, B R, Lo, T C N Update on myasthenia gravis Postgrad Med J 2004 80: 690-700

5.7 Pneumonia

5.7.1 Recurrent in the same location

5.7.2 Unresponsive to treatment.

5.8 Sarcoidosis known

5.8.1 To evaluate extent of disease

5.8.2 Interval follow up (annual)

5.8.3 Worsening symptoms

References

1. Baughman RP, Lower EE. Chapter 329. Sarcoidosis. In: Longo DL, Fauci AS, Kasper DL, Hauser SL, Jameson JL, Loscalzo J, eds. Harrison's Principles of Internal Medicine. 18th ed. New York: McGraw-Hill; 2012. <http://www.accessmedicine.com/content.aspx?aID=9138725>. Accessed October 18, 2012
2. Sarcoidosis: Clinical Presentation, Immunopathogenesis, and Therapeutics Michael C. Iannuzzi, Joseph R. Fontana JAMA. 2012;305(4):391-399.
3. Sarcoidosis: correlation of extent of disease at CT with clinical, functional, and radiographic findings. Müller NL, Mawson JB, Mathieson JR, Abboud R, Ostrow DN, Champion P Radiology. 1989;171(3):613.
4. Pulmonary sarcoidosis. Baughman RP Clin Chest Med. 2004;25(3):521
5. Radiologic manifestations of sarcoidosis in various organs. Koyama T, Ueda H, Togashi K, Umeoka S, Kataoka M, Nagai S Radiographics. 2004;24(1):87.

5.9 Smoking (Screening test for smokers) in asymptomatic persons 71271 Only a low dose study should be performed

5.9.1 Non-Medicare Members

5.9.1.1 History of at least 20 pack years (daily number of packs smoked multiplied by the number of years smoked)

5.9.1.2 Currently smoking or smoked within the last 15 years

5.9.1.3 Aged between 50 and 80 years

5.9.2 For Medicare Members ONLY

5.9.2.1 History of at least 20 pack years (daily number of packs smoked multiplied by the number of years smoked)

5.9.2.2 Currently smoking, or smoked within the last 15 years

5.9.2.3 Aged between 50 and 77 years

References

1. Draft Recommendation Statement USPTF Accessed 10/28/2013 at <http://www.uspreventiveservice taskforce.org/uspstf13/lungcan/lungcandraftrec.htm>

5.10 Thymoma, Known

5.11 Trauma

References

1. Robert G. Hayter, James T. Rhea, Andrew Small, Faranak S. Tafazoli, and Robert A. Novelline
Suspected Aortic Dissection and Other Aortic Disorders: Multi-Detector Row CT in 373 Cases in the
Emergency Setting Radiology 2006 238: 841-852
2. Louise A. Prince, Gary A. Johnson in Tintinalli's Emergency Medicine:A Comprehensive Study Guide,
6th Edition Judith E. Tintinalli, MD, MS, Gabor D. Kelen, MD, J. Stephan Stapczynski, MD, O. John Ma,
MD and David M. Cline, MD Eds. The American College of Emergency Physicians> Section 7:
Cardiovascular Disease > Chapter 58. Aortic Dissection and Aneurysms
3. Sabiston Textbook of Surgery, 17th Edition (2004) Townsend et al, eds; pp1907 – 1913