

# 2024 Computed Tomography Angiography (CTA) Chest (Non-Coronary)

**Diagnostic Imaging** 

 $\label{eq:CTA-Chest-HH} \mbox{Copyright $\textcircled{@}$ 2024 WNS (Holdings) Ltd.}$ 

Last Review Date: 12/09/2024 Previous Review Date: 10/28/2024 Guideline Initiated: 06/30/2019



# **Table of Contents**

Computed Tomography Angiography (CTA) Chest (Non-Coronary)	3
CTA General Contraindications	3
Preamble: Pediatric Diagnostic Imaging	3
CTA Chest (Non-Coronary) Guideline	3
CTA Chest and CTA Abdomen or CTA Abdomen/Pelvis Combination	6
CTA Chest (Non-Coronary) Procedure Codes	6
CTA Chest (Non-Coronary) Summary of Changes	6
CTA Chest (Non-Coronary) Definition	7
CTA Chest (Non-Coronary) References	11
Disclaimer & Legal Notice	13



# Computed Tomography Angiography (CTA) Chest (Non-Coronary)



#### NCD 220.1

See also, **NCD 220.1**: Computed Tomography at https://www.cms.gov/medicare-coverage-database/search.aspx if applicable to individual's healthplan membership.

### **CTA General Contraindications**

Computed tomography angiography (CTA) is contraindicated for ANY of the following: [4] [7] [25]

- Contrast allergy
- Heart failure is decompensated.
- Hemodynamic instability (eg, abnormal laboratory values, blood pressure instability)
- Renal impairment (glomerular filtration rate is 30 mL/min/1.73m<sup>2</sup>)
- Protocol can **NOT** be followed (eg, technical or related to individual).

## **Preamble: Pediatric Diagnostic Imaging**

HealthHelp's clinical guidelines for the Diagnostic Imaging program, are intended to apply to both adults and pediatrics (21 years of age or younger), unless otherwise specified within the criteria.

## CTA Chest (Non-Coronary) Guideline

Computed tomography angiography (CTA) of the chest (non-coronary) is considered medically appropriate, <u>for intrathoracic blood vessel evaluation</u>, when the medical record demonstrates **ANY** of the following: [1]

- 1. Arterial occlusion in the chest or upper extremities is known, to determine embolic source. [22]
- 2. Congenital malformations are suspected or known with **ANY** of the following: (\***NOTE**: chest magnetic resonance angiography (MRA) is preferred for pediatrics or repeat imaging.) [11] [17]
  - a. Congenital heart disease with pulmonary hypertension or vascular anomalies [23]
  - b. Pulmonary sequestration [9]



- c. Thoracic malformation is <u>suspected</u>, based on prior imaging (chest X-ray, echocardiogram [ECHO], gastrointestinal study) **OR** computed tomography [CT]) is <u>non-diagnostic or indeterminate</u>. [12]
- 3. Hemoptysis is known. [20]
- 4. Peri-procedural evaluation for **ANY** of the following: (\***NOTE**: For transcatheter aortic valve replacement (TAVR) imaging see <u>combination</u> studies below.) [8]
  - a. Aortic valve replacement (AVR) plus ascending aortic root/arch repair or root repair post-procedure baseline, then annually [13]
  - b. Atrial fibrillation ablation is planned. [3]
  - c. Open repair of aorta, if **NO** residual aortopathy; follow-up within first year postoperative, then every 5 years (\***NOTE**: *if residual aortopathy or abnormal findings* on surveillance; follow-up annually.)
  - d. Thoracic procedure pre-operative planning evaluation **OR** if post-operative complications are suspected. [12] [6]
  - e. Thoracic endovascular aortic repair (TEVAR); post-operative follow-up at 1 month, 1 year and if stable, annually. [6]
- 5. Prior CTA chest imaging is <u>non-diagnostic or indeterminate</u>. (\***NOTE**: *One follow-up is appropriate to evaluate for changes since preceding imaging finding[s]. Further surveillance is appropriate when lesion is specified as "highly suspicious" or there is a change since last exam.*)
- 6. Pulmonary embolism (PE) is suspected and **ANY** of the following: [16] [15]
  - a. PE risk is high based on shock, hypotension **OR** Well's criteria (*See <u>Definitions</u>* section).
  - b. PE risk is intermediate or low, based on Well's criteria (*See <u>Definitions</u> section*) **AND** D-dimer is <u>positive</u>.
  - c. Pregnancy is known.
- 7. Pulmonary hypertension is suspected based on ECHO or right-heart catheterization. [23]
- 8. Thoracic aneurysm surveillance for **ANY** of the following: [6]
  - a. Aortic dissection, follow-up **AFTER** medical treatment: <u>acute</u> dissection at 1 month,
     6 months, then annually; <u>chronic</u> dissection annually
  - Ascending aortic dilation is suspected or known OR ascending aortic dissection is known, with clinical changes (eg, symptoms, abnormal testing), AND results may impact treatment planning.



- c. Thoracic aorta, dilated, for assessment of rate of change from most recent CT, for **ANY** of the following:
  - i. 6 month follow-up after initial finding
  - ii. Aortic root or ascending aorta and **EITHER** of the following:
    - A. 3.5 cm to 4.4 cm, follow-up annually
    - B. 4.5 cm to 5.5 cm **OR** growth rate greater than 0.5 cm per year, follow-up every 6 months
  - iii. Descending aorta and **EITHER** of the following:
    - A. 4.0 cm to 4.9 cm, follow-up annually
    - B. 5.0 cm to 6.0 cm **OR** growth rate greater than 0.5 cm, follow-up every 6 months
  - iv. Genetically mediated (aortic root or ascending aorta, Marfan's syndrome) and **ANY** of the following:
    - A. 3.5 cm to 4.4 cm, follow-up annually
    - B. 4.5 cm to 5.0 cm **OR** growth rate greater than 0.5 cm, follow-up every 6 months
- 9. Thoracic aortic disease is suspected or known and **ANY** of the following: [11] [14] [2]
  - a. Aneurysm is <u>suspected</u> clinically **OR** demonstrated on prior imaging (ultrasound or X-ray).
  - b. Bicuspid aortic valve screening of the thoracic aorta (ECHO may not show dilation of the ascending aorta); follow-up every 3 to 5 years if normal.
  - c. Connective tissue disease (Ehlers-Danlos, Loeys-Dietz or Marfan syndromes) or genetic condition is <a href="known">known</a> AND there is predisposal to aortic aneurysm or dissection, imaging is as follows: [10]
    - i. Ehlers-Danlos and Marfan syndrome; one time follow-up
    - ii. Loeys-Dietz syndrome; at diagnosis and then every two years thereafter.
  - d. Dysphagia or expiratory wheezing with vascular cause is <u>suspected</u> **AND** prior imaging is <u>non-diagnostic or indeterminate</u>. [18]
  - e. First-degree relatives (child, parent, sibling) with a thoracic aortic aneurysm that is more than 50% above normal or dissection (see <u>Definitions</u> section for explanation of "normal")
  - f. First-degree relative (child, parent, sibling) with a bicuspid aortic valve



- g. Turner's syndrome-related screening for aneurysm or coarctation of the thoracic aorta; follow-up annually if abnormal results; every 5 to 10 years if normal results
- 10. Trauma to the chest is known and cardiac injury is suspected. [24]
- 11. Vascular disease is suspected or known for evaluation of ANY of the following: [2] [5]
  - a. Acute aortic dissection is <u>suspected</u> with sudden painful ripping sensation in chest or back **AND** is symptomatic (eg, cardiac tamponade, distant heart sounds, hypotension, new diastolic murmur, shock). [14]
  - b. Subclavian steal syndrome evaluation **AND** ultrasound is <u>positive</u>, <u>non-diagnostic</u> or indeterminate.
  - c. Superior vena cava (SVC) syndrome
  - d. Takayasu's arteritis [21] [19]
  - e. Thoracic outlet syndrome [26]

# CTA Chest and CTA Abdomen or CTA Abdomen/Pelvis Combination

A computed tomography angiography (CTA) chest **combined** with CTA abdomen **OR** CTA abdomen/pelvis is considered medically appropriate when the documentation demonstrates **ANY** of the following:

- 1. Acute aortic dissection [14] [8]
- 2. Lower extremity vascular disease evaluation of embolic source. [22]
- 3. Post-operative complications
- 4. Takayasu's arteritis [19] [21]
- 5. Transcatheter aortic valve replacement (TAVR) [13]

## **CTA Chest (Non-Coronary) Procedure Codes**

## **Table 1. CTA Chest (Non-Coronary) Associated Procedure Codes**

CODE	DESCRIPTION
71275	Computed tomographic angiography, chest (noncoronary), with contrast material(s), including noncontrast im-
	ages, if performed, and image postprocessing

# **CTA Chest (Non-Coronary) Summary of Changes**

CTA Chest (Non-Coronary) guideline had the following version changes from 2023 to 2024



- Added the following to keep in line with current research:
  - Indications under "Connective tissue disease"
  - "Post-medical treatment" under "Thoracic aneurysm surveillance"
- Mid-cycle update: added Pediatric Preamble
- 12/10/2024 mid-cycle update:
  - changed parameters under "Descending aorta" to reduce redundancy

# **CTA Chest (Non-Coronary) Definition**

**Ablation therapy** uses extremely high or low temperatures to destroy abnormal tissue or tumors, or to treat other conditions.

**Aneurysm** refers to weakness in an artery wall, allowing it to abnormally balloon out or widen. **Aortic root** is where the aorta and the heart connect.

**Aortopathy** is a type of heart disease that affects the aorta, the body's main artery. The aorta carries oxygen-rich blood to the body's organs and the rest of the body. Aortopathy can cause limited or decreased blood flow in the body.

**Atrial fibrillation (AF)** is a cardiac rhythm disorder characterized by uncontrolled atrial activation without effective atrial contraction. On the electrocardiogram (ECG), P waves are absent. AF is characterized by rapid oscillations or fibrillatory waves that vary in amplitude, shape and timing associated with an irregular ventricular response.

- Paroxysmal AF terminates spontaneously or with intervention within 7 days of onset.
   Episodes typically convert back to sinus rhythm within 48 hours.
- **Persistent AF** is continuous AF sustained beyond 7 days.is a type of arrhythmia, or abnormal heartbeat. Afib is caused by extremely fast and irregular beats from the upper chambers of the heart (usually more than 400 beats per minute).

**Bicuspid aortic valve (BAV)** is a heart defect that occurs when the aortic valve has two leaflets instead of three. BAV is the most common type of congenital heart disease. It's present from birth and can go unnoticed until later in life.

**Coarctation** is a stricture or narrowing especially of a canal or vessel.

**Computed tomography (CT)** refers to a computerized X-ray imaging procedure in which a three-dimensional image of a body structure is revealed through a series of cross-sectional images or "slices."

**Computed tomography angiography (CTA)** is a medical test that combines a computed tomography (CT) scan with an injection of a special dye to produce pictures of blood vessels and tissues in a part of the body.

**Congenital** is a condition or trait present from birth.



**D-dimer** is a protein fragment that's produced when a blood clot breaks down in the body. D-dimer is usually undetectable or only detectable at very low levels unless the body is forming and breaking down significant blood clots.

**Dissection** is the abnormal and usually abrupt formation of a tear or separation of the layers inside the wall of an artery.

**Dysphagia** is difficulty with swallowing or the sensation of food getting stuck in the esophagus. **Echocardiogram (ECHO)** is a test that uses high frequency sound waves (ultrasound) to make pictures of the heart. The test is also called echocardiography or diagnostic cardiac ultrasound. An echo uses sound waves to create pictures of the heart's chambers, valves, walls and the blood vessels (aorta, arteries, veins). A probe called a transducer is passed over the chest. The probe produces sound waves that bounce off the heart and "echo" back to the probe. These waves are changed into pictures viewed on a video monitor.

**Ehlers-Danlos syndrome** is a group of hereditary connective tissue disorders that manifests clinically with skin hyperelasticity, hypermobility of joints, atrophic scarring, and fragility of blood vessels.

**Embolism** is an obstruction of an artery, typically by a clot of blood or an air bubble.

**Hemoptysis** is the expectoration of blood from some part of the respiratory tract.

**Indeterminate** findings are inconclusive or insufficient for treatment planning.

**Loeys-Dietz syndrome** is a disorder that affects the connective tissues of the body and increases the risk of aneurysm in arteries such as the aorta.

**Magnetic resonance angiogram (MRA)** is a test that uses a magnetic field and pulses of radio wave energy to provide images of blood vessels inside the body, allowing for evaluation of blood flow and blood vessel wall condition. MRA is used to look for aneurysms, clots, tears in the aorta, arteriovenous malformations and stenosis caused by plaque in the carotid arteries (neck) or blood vessels leading to the lungs, kidneys or legs.

**Marfan syndrome** is a congenital connective tissue disorder that is primarily associated with cardiac pathology (eg, mitral valve prolapse, aortic root dilation), skeletal pathology (eg, lengthening of long bones, joint laxity) and ocular pathology (eg, ectopia lentis).

**Non-diagnostic** is a result that does not lead to a confirmed diagnosis.

**Pediatric approximate ages** are defined by the US Department of Health (USDH), the Food and Drug Administration (FDA), and the American Academy of Pediatrics (AAP) as the following:

- Infancy, between birth and 2 years of age
- Childhood, from 2 to 12 years of age
- Adolescence, from 12 to 21 years of age, further defined by the AAP into:
  - 1. Early (ages 11–14 years)
  - 2. Middle (ages 15–17 years),
  - 3. Late (ages 18–21 years)



4. Older ages may be appropriate for children with special healthcare needs.

**Pulmonary embolism** is an obstruction of a pulmonary artery or one of its branches that is usually produced by a blood clot originated in a vein of the leg or pelvis and traveled to the lungs that is marked by labored breathing, chest pain, fainting, rapid heart rate, cyanosis, shock and sometimes death.

**Pulmonary hypertension** describes when the pressure in the blood vessels leading from the heart to the lungs is too high.

**Pulmonary sequestration vascular syndrome** is a condition in which a segment or lobe of dysplastic lung tissue exists with no communication with the rest of the tracheobronchial tree and receives an anomalous systemic vascular supply, separate from the rest of the lung. It is, therefore, a nonfunctional tissue.

**Screening** does not diagnose the illness. The goal is early detection and lifestyle changes or surveillance, to reduce the risk of disease, or to detect it early enough to treat it most effectively. **Shock** is the body's response to a sudden drop in blood pressure. At first, the body responds to this life-threatening situation by constricting (narrowing) blood vessels in the extremities (hands and feet). This is called vasoconstriction and it helps conserve blood flow to the vital organs. **Subclavian steal syndrome (Vertebral artery flow reversal)** is a phenomenon causing retrograde flow in an ipsilateral vertebral artery due to stenosis or occlusion of the subclavian artery, proximal to the origin of the vertebral artery.

**Superior vena cava syndrome (SVC)** is a condition characterized by elevated venous pressure of the upper extremities with accompanying distension of the affected veins and swelling of the face and neck. Caused by blockage (as by a thrombus or an aneurysm) or compression (as by a tumor) of the superior vena cava.

**Surveillance** in cancer is the ongoing, timely and systematic collection and analysis of information on new cancer cases, extent of disease, screening tests, treatment, survival and cancer deaths.

**Takayasu's arteritis** is a chronic inflammatory disease especially of the aorta and its major branches (the brachiocephalic artery and left common carotid artery) that result in progressive stenosis, occlusion and aneurysm formation marked by diminution or loss of the pulse (as in the arm) and ischemic symptoms.

**Thoracic Aorta Normal Sizes** for males and females: (\*NOTE: to determine if there is a true aneurysm, multiply the numbers below by 1.5 and compare to size on imaging)

Male average sizes:

Aortic sinuses: 3.63 cm to 3.91 cm

Ascending aorta: 2.86 cm

Mid-descending aorta: 2.39 cm to 2.98 cm



• At diaphragm: 1.43 cm to 2.69 cm

Female average sizes:

Aortic sinuses: 3.5 cm to 3.72 cm

Ascending aorta: 2.86 cm

Mid-descending aorta: 2.46 cm to 2.64 cm

At diaphragm: 2.40 cm to 2.44 cm

**Thorackc endovascular aortic repair (TEVAR)** is a minimally invasive procedure that treats aneurysms in the upper part of the aorta, or body's largest artery. TEVAR is especially suited to treat aneurysms in the descending aorta, which moves down through the chest toward the belly.

**Thoracic outlet syndrome** is a term that refers to three related syndromes involving compression of the nerves, arteries, and veins in the lower neck and upper chest area. This compression causes pain in the arm, shoulder, and neck.

**Transcatheter Aortic Valve Implantation/Replacement (TAVI/TAVR)** is a minimally invasive procedure that replaces a diseased aortic valve with a man-made or animal tissue valve. TAVR is for patients with severe aortic stenosis, which is a narrowing of the valve opening. The procedure only requires a small cut in the skin and does not require open-heart surgery.

**Turner's syndrome** is a genetically determined condition that is typically associated with the presence of only one complete X chromosome and no Y chromosome. It is characterized by a female phenotype with underdeveloped (and usually infertile) ovaries and short stature. **Ultrasound** is the diagnostic or the appendix use of ultrasound and especially a popinyasive

**Ultrasound** is the diagnostic or therapeutic use of ultrasound and especially a noninvasive technique involving the formation of a two-dimensional image used for the examination and measurement of internal body structures and the detection of bodily abnormalities.

**Wells score** is a point-based system that assesses a patient's risk of developing deep vein thrombosis (DVT). The score is based on clinical criteria and categorized into three risk groups.

**Table 1. Wells Score Criteria** 

Criteria	Score
Clinical symptoms of deep vein thrombosis (DVT) (leg swelling, pain with palpation)	3.0
Other diagnosis less likely than pulmonary embolus	3.0
Heart rate more than 100 beats per minute (BPM)	1.5
Immobilization (3 or more days) or surgery in the previous 4 weeks	1.5
Previous DVT or pulmonary embolism (PE)	1.5
Hemoptysis	1.0
Malignancy	1.0



## **Table 2. Probability**

Probability	Score
High	more than 6.0
Moderate	2.0 to 6.0
Low	less than 2.0

# **CTA Chest (Non-Coronary) References**

- [1] Adamczyk, P. & Liebeskind, D. (2022). Vascular Imaging: Computed Tomographic Angiography, Magnetic Resonance Angiography, and Ultrasound. J. Jankovic & J.C. Mazziotta (Eds.). *Bradley and Daroff's Neurology in Clinical Practice* (8), (pp. 547-575). Philadelphia, PA: Elsevier.
- [2] Aghayev, A., Steigner, M.L., . . . Dill, K.E. (2021). ACR Appropriateness Criteria Noncerebral Vasculitis. *Journal of the American College of Radiology, 18*(11S), S380-S393.
- [3] American College of Radiology. (2024). ACR Appropriateness Criteria Preprocedural Planning for Left Atrial Procedures in Atrial Fibrillation. *American College of Radiology*. Retrieved: February 2024. https://acsearch.acr.org/list/GetAppendix?

  TopicId=319&]TopicName=Preprocedural%20Planning%20for%20Left%20Atrial%20Procedures%20in%20Atrial%20Fibrillation
- [4] American College of Radiology. (2023). ACR Manual on Contrast Media. *American College of Radiology*. Retrieved: February 2024. https://www.acr.org/-/media/ACR/Files/Clinical-Resources/Contrast\_Media.pdf
- [5] Beache, G.M., Mohammed, T.L.H., . . . Abbara, S. (2020). ACR Appropriateness Criteria Acute Nonspecific Chest Pain-Low Probability of Coronary Artery Disease. *Journal of the American College of Radiology, 17*(11S), S346-S354.
- [6] Bonci, G., Steigner, M.L., . . . Dill, K.E. (2017). ACR Appropriateness Criteria Thoracic Aorta Interventional Planning and Follow-Up. *Journal of the American College of Radiology,* 14(11S), S570-S583.
- [7] Canan, A., Rajah, P. & Abbara, S. (2023). Cardiac computed tomography. G.N. Levine, (Ed.). *Cardiology Secrets* (6), (pp. 85-96). Philadelphia, PA: Elsevier.
- [8] Contrella, B.N., Minhajuddin, S.K., . . . . Steigner, M.L. (2023). ACR Appropriateness Criteria Thoracoabdominal Aortic Aneurysm or Dissection: Treatment Planning and Follow-Up. *Journal of the American College of Radiology*, 20(5), S265-S284.
- [9] Gabelloni, M., Faggioni, L., . . . Neri, E. (2021). Pulmonary sequestration: What the radiologist should know. *Clinical Imaging*, *73*, 61-72.
- [10] Grygiel-Gorniak, B., Oduah, M.T., . . . Klokner, M. (2020). Disorders of the aorta and aortic valve in connective tissue diseases. *Current Cardiology Reports*, 22, (8), 70.



- [11] Gunn, A.J., Kalva, S.P., . . . Dill, K.E. (2021). ACR Appropriateness Criteria Nontraumatic Aortic Disease. *Journal of the American College of Radiology*, 18(5S), S106-S118.
- [12] Hanley, M., Ahmed, O., . . . Dill, K.E. (2016). ACR Appropriateness Criteria Clinically Suspected Pulmonary Arteriovenous Malformation. *Journal of the American College of Radiology*, *13*(7), 796-800.
- [13] Hedgire, S.S., Saboo, S.S., . . . Steigner, M.L. (2023). ACR Appropriateness Criteria Preprocedural Planning for Transcatheter Aortic Valve Replacement: 2023 Update. *Journal of the American College of Radiology*, 20(11), S501-S512.
- [14] Kicska, G.A., Koweek, L.M.H., . . . Abbara, S. (2021). ACR Appropriateness Criteria Suspected Acute Aortic Syndrome. *Journal of the American College of Radiology18*(11S), S474-S481.
- [15] Kilgerman, S.J., Bykowski, J., . . . Abbara, S. (2021). ACR Appropriateness Criteria Syncope. *Journal of the American College of Radiology, 18*(5), S229-S238.
- [16] Kirsch, J., Wu. C.C., . . . Abbara, S. (2022). ACR Appropriateness Criteria Suspected Pulmonary Embolism: 2022 Update. *Journal of the American College of Radiology, 19*(11), S488-S501.
- [17] Krishnamurthy, R., Suman, G., . . . Abbara, S. (2023). ACR Appropriateness Criteria Congenital or Acquired Heart Disease. *Journal of the American College of Radiology, 20*(11), S351-S381.
- [18] Lakhani, D.A., Balar, A.B. & Tarabishy, A.R. (2021). Atypical cause of dysphagia. *European Journal of Internal Medicine, 88*, 114-115.
- [19] Maz, M., Chung, S.A., . . . Mustafa, R.A. (2021). 2021 American College of Rheumatology/ Vasculitis Foundation Guideline for the Management of Giant Cell Arteritis and Takayasu Arteritis. *Arthritis Care & Research*, 73(8), 1071-1087.
- [20] Olsen, K.M., Manouchehr-Pour, S., . . . Kanne, J.P. (2020). ACR Appropriateness Criteria Hemoptysis. *Journal of the American College of Radiology*, *17*(5S), S148-S159.
- [21] Oura, K., Oura, M.Y., . . . Maeda, T. (2021). Vascular Imaging Techniques to Diagnose and Monitor Patients with Takayasu Arteritis: A Review of the Literature. *Diagnostics, 11*(11), 1993.
- [22] Parenti, V.G., Vijay, K., . . . Dill, K.E. (2023). ACR Appropriateness Criteria Workup of Noncerebral Systemic Arterial Embolic Source. *Journal of the American College of Radiology,* 20(5), S285-S300.
- [23] Sirajuddin, A., Mirmomen, S.M., . . . Donnelly, E.F. (2022). ACR Appropriateness Criteria Suspected Pulmonary Hypertension: 2022 Update. *Journal of the American College of Radiology*, 19(11), S502-S512.
- [24] Stojanovska, J., Hurwitz-Kowek, L.M., . . . Abbara, S. (2020). ACR Appropriateness Criteria Blunt Chest Trauma-Suspected Cardiac Injury. *Journal of the American College of Radiology*, 17(11), S380-S390.



# [25] Witte, D.H. (2021). Advanced Imaging in Orthopaedics. F.M. Azar & J.H. Beaty (Eds.). *Campbell's Operative Orthopaedics* (14), (pp. 141-176). Philadelphia, PA: Elsevier.

[26] Zurkiya, O., Ganguli, S., . . . Dill, K.E. (2020). ACR Appropriateness Criteria Thoracic Outlet Syndrome. *Journal of the American College of Radiology*, *17*(5S), S323-S334.

# **Disclaimer & Legal Notice**

## **Purpose**

The purpose of the HealthHelp's clinical guidelines is to assist healthcare professionals in selecting the medical service that may be appropriate and supported by evidence to safely improve outcomes. Medical information is constantly evolving, and HealthHelp reserves the right to review and update these clinical guidelines periodically. HealthHelp reserves the right to include in these guidelines the clinical indications as appropriate for the organization's program objectives. Therefore the guidelines are not a list of all the clinical indications for a stated procedure, and associated Procedure Code Tables may not represent all codes available for that state procedure or that are managed by a specific client-organization.

## Clinician Review

These clinical guidelines neither preempt clinical judgment of trained professionals nor advise anyone on how to practice medicine. Healthcare professionals using these clinical guidelines are responsible for all clinical decisions based on their assessment. All Clinical Reviewers are instructed to apply clinical indications based on individual patient assessment and documentation, within the scope of their clinical license.

# **Payment**

The use of these clinical guidelines does not provide authorization, certification, explanation of benefits, or guarantee of payment; nor do the guidelines substitute for, or constitute, medical advice. Federal and State law, as well as member benefit contract language (including definitions and specific contract provisions/exclusions) take precedence over clinical guidelines and must be considered first when determining eligibility for coverage. All final determinations on coverage and payment are the responsibility of the health plan. Nothing contained within this document can be interpreted to mean otherwise.

# Registered Trademarks (®/™) and Copyright (©)

All trademarks, product names, logos, and brand names are the property of their respective owners and are used for purposes of information and/or illustration only. Current Procedural Terminology (CPT) $\mathbb{R}^{\text{TM}}$  is a registered trademark of the American Medical Association (AMA). No



part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise, without permission from HealthHelp.