

## AmeriHealth Caritas Louisiana

National Imaging Associates, Inc.*	
Clinical guidelines CHEST MRA	Original Date: September 1997
CPT Codes: 71555	Last Revised Date: April 2021
Guideline Number: NIA_CG_022-2	Implementation Date: January 2022

### INDICATIONS FOR CHEST MRA

**Chest Magnetic Resonance Angiography (MRA) is ordered for evaluation of the intrathoracic blood vessels. Chest MRI and Chest MRA should not be approved at the same time. Magnetic resonance angiography (MRA) or computed tomography angiography (CTA) may be used for several indications but not both.**

#### Vascular Disease

- Superior vena cava (SVC) syndrome (Friedman, 2017)
- Subclavian Steal Syndrome after positive or inconclusive ultrasound (Osiro, 2012; Potter, 2014)
- Thoracic Outlet Syndrome (ACR, 2014; Chavhan, 2017; Povlsen, 2018)
- Takayasu's arteritis (Keser, 2014)
- Clinical concern for acute aortic dissection (ACR, 2017; Barman, 2014)
  - Sudden painful ripping sensation in the chest or back and may include
    - New diastolic murmur
    - Cardiac tamponade
    - Distant heart sounds
    - Hypotension or shock
- For MRPA (MR Pulmonary Angiography) in patients with intermediate pretest probability with a positive D-dimer or high pretest probability (but only at centers that routinely perform it well and only for patients for whom standard tests are contraindicated)
  - **Risk can be determined by the parameters detailed at the bottom of this document in Background section**

#### **Suspected Thoracic Aortic Disease**

- **Echocardiogram or chest xray show aneurysm**

\* National Imaging Associates, Inc. (NIA) is a subsidiary of Magellan Healthcare, Inc.

~~— Can be done if TTE was not performed or, was technically inadequate~~

- ~~• , or if imaging is required beyond the proximal ascending aorta~~  
~~Screening of the thoracic aorta after a diagnosis of a bicuspid aortic valve or ascending aortic aneurysm~~

### **Initial/Screening for Thoracic Aortic Disease (Erbel, 2014; Hannuksela, 2015; Hiratzka, 2010)**

- **Echocardiogram or chest x-ray show aneurysm**
- Screening of first-degree relatives of individuals with a thoracic aortic aneurysm (defined as  $\geq 50\%$  above normal) or dissection, ~~or if an associated high-risk mutation is present~~
  - ~~If one or more first degree relatives of a patient with a known thoracic aortic aneurysm or dissection, have thoracic aortic dilatation, aneurysm or dissection, then imaging of 2nd degree relatives is reasonable~~
  - **Known connective tissue disease or genetic conditions that predispose to aortic aneurysm or dissection (e.g., Marfan syndrome, Ehlers Danlos or Loeys-Dietz syndromes)**
- ~~Evaluation of the ascending aorta in suspected connective tissue disease or genetic conditions that predispose to aortic aneurysm or dissection (e.g., Marfan syndrome, Ehlers Danlos or Loeys-Dietz syndromes) at time of diagnosis~~  
~~Patients with Turner's syndrome should undergo imaging to assess for bicuspid aortic valve, coarctation of the aorta or dilation of the ascending or thoracic aorta. If the initial imaging is normal and there are no additional risk factors for dissection, imaging can be done every 5-10 years.~~
- **Screening of the thoracic aorta after a diagnosis of a bicuspid aortic valve (dilation of the ascending aorta may not be seen on echocardiogram) (Borger, 2018; Verma, 2014)**
  - **If normal, reimaged every three to five years.**
- **Screening of first-degree relatives of patients with a bicuspid aortic valve**
- **Turner's syndrome – Screen for coarctation or aneurysm of the thoracic aorta.**
  - **If normal results, screen every 5-10 years.**
  - **If abnormal, screen annually**
- **Suspected vascular cause of dysphagia or expiratory wheezing with other imaging is suggestive or inconclusive**

### **Follow-up after established Thoracic Aneurysm (Erbel, 2014; Hannuksela 2015; Hiratzka, 2010)**

- ~~Follow-up known aneurysm/vascular pathology~~
- Six months follow-up after initial finding of a dilated thoracic aorta, for assessment of rate of change
  - **Aortic Root or Ascending Aorta**
    - **3.5 to 4.4 Annual**

- 4.5 to 5.5 or growth rate > 0.5 cm/year - Every 6 months
  - Genetically mediated (Marfans syndrome, Aortic Root or Ascending Aorta)
    - 3.5 to 4.4 Annual
    - 4.5 to 5.0 or growth rate > 0.5 cm/year Every 6 months
    - Surgery generally recommended over 5.0 cm
  - Descending Aorta (Braverman, 2011)
    - 4.0 to 5.0 Annual
    - 5.0 to 6.0 Every 6 months
- ~~Biannual (twice/year) follow up of enlarged aortic root  $\geq$  4.5 cm or showing growth rate  $\geq$  0.5 cm/year~~
- ~~Evaluation of the ascending aorta in known connective tissue disease or genetic conditions that predispose to aortic aneurysm or dissection (e.g., Marfan syndrome, Ehlers Danlos or Loeys-Dietz syndromes) 6 months after initial imaging for growth rate assessment, followed by annual imaging, or biannual (twice yearly) if diameter  $\geq$  4.5 or expanding  $\geq$  0.5 cm/yr~~
- ~~Turner's syndrome — If an **abnormality** exists on initial imaging, annual imaging is recommended~~
- ~~Re-evaluation of known ascending aortic dilation or history of aortic dissection with a change in clinical status or cardiac exam or when findings may alter management~~
- ~~Re-evaluation (<1 y, generally twice a year) of the size and morphology of the aortic sinuses and ascending aorta in patients with a bicuspid AV with 1 of the following:~~
  - ~~Aortic diameter  $\geq$  4.5 cm~~
  - ~~Rapid rate of change in aortic diameter when an annual growth rate of  $\geq$  0.5 cm is suspected.~~
  - ~~Family history (first-degree relative) of aortic dissection~~
- Follow-up post medical treatment of aortic aortic diseasedissection:
  - Acute dissection: 1 month, 6 months, then annually
  - Chronic dissection: annually
- Follow-up post either root repair or AVR plus ascending aortic root/arch repair: baseline post-op, then annually
- Re-evaluation of known ascending aortic dilation or history of aortic dissection with a change in clinical status or cardiac exam or when findings may alter management

### **Congenital Malformations**

- Thoracic malformation on other imaging (chest x-ray, echocardiogram, gastrointestinal study, or inconclusive CT) (Ferreira, 2015; Hellinger, 2011; Karaosmanoglu, 2015; Poletto, 2017)
- Congenital heart disease with pulmonary hypertension (Pascall, 2018) or vascular anomalies (Pascall, 2018)
- Pulmonary Sequestration (Sancak, 2003) (Tanze r) ~~(Al-Timmy, 2016; Long, 2016)~~

**Pulmonary Hypertension** based on other testing  
(Ascha, 2017; Rose-Jones, 2015)

- Echocardiogram

- Right heart catheterization

### Atrial fibrillation with ablation planned

(Kolandaivelu, 2012)

#### Pre-operative/procedural eEvaluation

- Pre-operative evaluation for a planned surgery or procedure

#### Post-operative/procedural evaluation

- Post-operative complications (Bennet, 2017; Choudhury, 2017)
- Routine post-operative (Lawrence; 2018-(~~SVS, 2018~~; Uthof, 2012)
  - Thoracic endovascular or open surgical aneurysm repair
    - 1 month
    - More frequent follow-up/possible intervention if complicationendleak detected
    - ~~6 month if initial abnormal, or it for aortic dissection~~
    - If stable, aAnnual for 5 years

#### Chest MRA and Abdomen MRA or Abdomen/Pelvis MRA

- Acute aortic dissection (Barman, 2014)

—Takayasu’s arteritis (Keser, 2014)

- - ~~Open Surgical Repair~~
  - ~~5 year intervals~~

## BACKGROUND

Magnetic resonance angiography (MRA) is a noninvasive technique used to provide cross-sectional and projection images of the thoracic vasculature, including large\_ and ~~medium~~ medium-sized vessels, e.g., the thoracic aorta. ~~It~~ MRA provides images of both normal ~~as well~~ asand diseased blood vessels, and it quantifies blood flow through these vessels. Successful vascular depiction relies on the proper imaging pulse sequences. MRA may use a contrast agent, gadolinium, which is non-iodine-based, for better visualization. It can be used in patients who have history of contrast allergy and who are at high risk of kidney failure.

## OVERVIEW

**MRA and Coarctation of the Aorta** – One of the most common congenital vascular anomalies is coarctation of the aorta which is characterized by obstruction of the juxtaductal aorta. Clinical symptoms, e.g., murmur, systemic hypertension, difference in blood pressure in upper and lower extremities, absent femoral or pedal pulses, may be present. ~~Gadolinium~~ Gadolinium-enhanced 3D MRA may assist in preoperative planning as it provides angiographic viewing of

the aorta, the arch vessels, and collateral vessels. It may also assist in the identification of postoperative complications.

**MRA and Pulmonary Embolism (PE)** – Note: D-Dimer blood test in patients at low risk\* for DVT is indicated prior to MRA imaging. Negative D-Dimer suggests alternative diagnosis in these patients.

**Low risk is not approved. Low risk is defined as NO to ALL of the following questions with intermediate and high risk defined based on the number of positive responses**

**(Konstantinides, 2014~~20~~):**

- **Evidence of current or prior DVT;**
- **HR > 100;**
- **Cancer diagnosis;**
- **Recent surgery or prolonged immobilization;**
- **Hemoptysis;**
- **History of PE;**
- **Oral hormone use;**
- **Another diagnosis beside PE is less likely**

Studies show mixed results regarding the value of MRA ~~vs~~ **versus** CTA in detecting pulmonary embolism. A systematic review and meta-analysis found MRA to be inferior to CTA in detecting PE. Therefore, MRA should be used only if CTA is not available or contraindicated in a specific patient (Li, 2016~~09~~).

**MRA and Thoracic Aortic Aneurysm** – One of the most common indications for thoracic MRA is thoracic aortic aneurysm, most often caused by atherosclerosis. These aneurysms may also be due to aortic valvular disease. Aneurysms are defined by their enlargement and patients with rapidly expanding aortas, or with aortic diameters greater than five or six centimeters, are at high risk of rupture and may require surgery.

**MRA and Thoracic Aortic Dissection** – The most common clinical symptom of aortic dissection is tearing chest pain and the most common risk factor is hypertension. An intimal tear is the hallmark for aortic dissection and intramural hematoma may also be detected. Unfortunately, patients with aortic dissection may be unstable and not good candidates for routine MR evaluation; MRA may be indicated as a secondary study. 3D MRA is also useful in postoperative evaluation of patients with repaired aortic dissections.

**MRA and Central Venous Thrombosis** – MRA is useful in the identification of venous thrombi. Venous thrombosis can be evaluated by ~~gadolinium~~ **gadolinium**-enhanced 3D MRA as an alternative to CTA, which may not be clinically feasible due to allergy to iodine contrast media or renal insufficiency.

**Other MRA Indications** – MRA is useful in the assessment for postoperative complications of pulmonary venous stenosis.

**MRI and Patent Ductus Arteriosus** – Patent ductus arteriosus (PDA) is a congenital heart problem in which the ductus arteriosus does not close after birth. It remains patent allowing oxygen-rich blood from the aorta to mix with oxygen-poor blood from the pulmonary artery. MRI can depict the precise anatomy of a PDA to aid in clinical decisions. It allows imaging in multiple planes without a need for contrast administration. Patients are not exposed to ionizing radiation.

**POLICY HISTORY**

Date	Summary
April 2021	<ul style="list-style-type: none"> <li>• <del>Added aortic screening in the setting of bicuspid valves</del></li> <li>• <del>Follow-up recommendations for bicuspid aortic valve</del></li> <li>• <del>Added suspected vascular cause of dysphagia or expiratory wheezing</del></li> <li>• <del>Combined follow-up surveillance recommendations for endovascular and open ascending aorta repair as per literature review</del></li> <li>• <del>Edited aortic aneurysm follow-up for accuracy</del></li> <li>• <del>Added indications for combination studies and for ordering</del></li> <li>• <del>Added indications for ordering combination studies</del></li> <li>• <del>Added Pulmonary Embolism criteria to Overview</del></li> <li>• <del>Clarified pre-operative evaluation for a planned surgery or procedure</del></li> <li>• <del>Did literature review and added references</del></li> <li>• <del>Added references</del></li> </ul>
<u>May 2020</u>	<ul style="list-style-type: none"> <li>• <u>Thoracic Aortic Disease</u> <ul style="list-style-type: none"> <li>○ <u>Organized into two sections:</u> <ul style="list-style-type: none"> <li>▪ <u>Initial/Screening</u></li> <li>▪ <u>Follow-up of known aneurysm/vascular pathology</u> <ul style="list-style-type: none"> <li>• <u>Removed: ‘Annual follow up of enlarged thoracic aorta that is above top normal for age, gender, and body surface area’</u></li> </ul> </li> </ul> </li> </ul> </li> </ul>
<u>May 2019</u>	<ul style="list-style-type: none"> <li>• <u>Removed pulmonary embolism indication</u></li> <li>• <u>Added indications specifying criteria for follow-up of thoracic aneurysm</u></li> <li>• <u>Added statement: “For MRPA (MR Pulmonary Angiography) in patients with intermediate pretest probability with a positive D-dimer or high pretest probability (but only at</u></li> </ul>

	<p><u>centers that routinely perform it well and only for patients for whom standard tests are contraindicated)”</u></p> <ul style="list-style-type: none"> <li>● <u>Expanded criteria for congenital malformations</u></li> <li>● <u>Updated thoracic aortic disease section for consistency with cardiac guidelines</u></li> <li>● <u>Added greater specificity for post op complications</u></li> </ul>
--	--

May 2019

- ~~Removed pulmonary embolism indication~~
- ~~Added indications specifying criteria for follow-up of thoracic aneurysm~~
- ~~Added statement: “For MRPA (MR Pulmonary Angiography) in patients with intermediate pretest probability with a positive D-dimer or high pretest probability (but only at centers that routinely perform it well and only for patients for whom standard tests are contraindicated)”~~
- ~~Expanded criteria for congenital malformations~~
- ~~Updated thoracic aortic disease section for consistency with cardiac guidelines~~
- ~~Added greater specificity for post op complications~~

May 2020

- ~~Thoracic Aortic Disease~~
  - ~~Organized into two sections:~~
    - ~~Initial/Screening~~
    - ~~Follow up of known aneurysm/vascular pathology~~
      - ~~Removed: ‘Annual follow up of enlarged thoracic aorta that is above top normal for age, gender, and body surface area’~~

## REFERENCES

~~Al Timmy QAH, Shamseei HF. Intralobar pulmonary sequestration in elderly woman: A rare case report with emphasis on imaging findings. *Radiol Case Rep*. 2016 Sep; 11(3):144–147.~~

American College of Chest Physicians (ACCP). Choosing Wisely®: Five Things Physicians and Patients Should Question. ACCP. 2013. Retrieved from <http://www.choosingwisely.org/clinician-lists/american-college-chest-physicians-american-thoracic-society-chest-ct-angiography-to-evaluate-possibly-pulmonary-embolism/>.

American College of Radiology (ACR). ACR Appropriateness Criteria®. Published 2014. Revised 2016. Retrieved from <https://acsearch.acr.org/list>.

American College of Radiology (ACR). ACR Appropriateness Criteria®. <https://acsearch.acr.org/list>. Published 2017. Retrieved from March 16, 2018.

Ascha M, Renapurkar RD, Tonelli AR. A review of imaging modalities in pulmonary hypertension. *Ann Thorac Med*. 2017; 12(2):61–73.

Barman M. Acute aortic dissection. *E-Journal European Society of Cardiology*. 2014;12: N° 25 – 02.

Bauer AM, Amin-Hanjani S, Alarj A, et al. Quantitative magnetic resonance angiography in the evaluation of the subclavian steal syndrome: Report of 5 patients. *J Neuroimaging*. 2009; 19:250-252.

Bennet KM, Kent KC, Schumaker J, et al. Targeting the most important complications in vascular surgery. *J Vasc Surg*. 2017;65(3):793-803.

Bonci G, Steigner ML, Hanley M, et al. ACR Appropriateness Criteria®. Thoracic Aorta Interventional Planning and Follow-up. *J Am Coll Radiol*. 2017; 14(11S):S570-S583.

**Borger MA, Fedak PWM, Stephens EH, et al. The American Association for Thoracic Surgery consensus guidelines on bicuspid aortic valve-related aortopathy: Full online-only version. *J Thorac Cardiovasc Surg*. 2018;156(2):e41-e74. doi:10.1016/j.jtcvs.2018.02.115.**

**Borger MA, Fedak PWM, Stephens EH, et al. The American Association for Thoracic Surgery consensus guidelines on bicuspid aortic valve-related aortopathy: The American Association for Thoracic Surgery consensus guidelines on bicuspid aortic valve-related aortopathy: *J Thorac Cardiovasc Surg*. 2018; Full online-only version.**

**Braverman A, Thompson R, Sanchez L. Diseases of the aorta. In: Braunwald's heart disease, 9th ed, Bonow R, Mann D, Zipes D, Libby P (Eds), Elsevier, Philadelphia 2011. p.1309.**



Chavhan GB, Batmanabane V, Muthusami P, et al. MRI of thoracic outlet syndrome in children. *Pediatr Radiol*. 2017; 47:1222-1234.

Choudhury M. Postoperative Management of Vascular Surgery Patients: A Brief Review. *Clin Surg*. 2017; 2: 1584.

Corrigan D, Prucnal C, Kabrhel C. Pulmonary embolism: the diagnosis, risk-stratification, treatment and disposition of emergency department patients. *Clin Exp Emerg Med*. 2016; 3(3): 117–125.

Erbel R, Aboyans V, Boileau C, et al. 2014 ESC Guidelines on the diagnosis and treatment of aortic diseases: Document covering acute and chronic aortic diseases of the thoracic and abdominal aorta of the adult. The Task Force for the Diagnosis and Treatment of Aortic Diseases of the European Society of Cardiology (ESC). *Eur Heart J*. 2014; 35(41):2873.

Ferreira TDA, Chagas ISS, Ramos RTT, et al. Congenital thoracic malformations in pediatric patients: two decades of experience. *J Bras Pneumol*. 2015; 41(2): 196-199.

Friedman T, Quencer KB, Kishore SA, et al. Malignant Venous Obstruction: Superior Vena Cava Syndrome and Beyond. *Semin Intervent Radiol*. 2017; 34(4):398.

Hannuksela M, Stattin E, Johansson B, et al. Screening for Familial Thoracic Aortic Aneurysms with Aortic Imaging Does Not Detect All Potential Carriers of the Disease. *Aorta (Stamford)*. 2015; 3(1): 1–8.

Hellinger JC, Daubert M, Lee EY, et al. Congenital thoracic vascular anomalies: Evaluation with state-of-the-art MR imaging and MDCT. *Radiol Clin N Am*. 2011; 49:969-996.

Hiratzka LF, Bakris GL, Beckman JA, et al. 2010 ACCF/AHA/AATS/ACR/ASA/SCA/SCAI/SIR/STS/SVM guidelines for the diagnosis and management of patients with Thoracic Aortic Disease: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines, American Association for Thoracic Surgery, American College of Radiology, American Stroke Association, Society of Cardiovascular Anesthesiologists, Society for Cardiovascular Angiography and Interventions, Society of Interventional Radiology, Society of Thoracic Surgeons, and Society for Vascular Medicine. *Circulation*. 2010; 121(13):e266.

Karaosmanoglu AD, Khawaja RD, Onur MR, et al. CT and MRI of aortic coarctation: Pre- and postsurgical findings. *AJR Am J Roentgenol*. 2015; 204(3):W224-33.

Keser G, Direskeneli H, Aksu K. Management of Takayasu arteritis: a systematic review. *Rheumatology*. 2014; 53(5):793–801.

Kirsch J, Brown RKJ, Henry TS, et al. ACR Appropriateness Criteria® Acute Chest Pain-Suspected Pulmonary Embolism. *JACR*. 2017; 14(Suppl 5):S2-S12.

Kolandaivelu A. Role of Cardiac Imaging (CT/MR) Before and After RF Catheter Ablation in Patients with Atrial Fibrillation. *J Atr Fibrillation*. 2012; 5(2): 523.

Konstantinides SV, Torbicki A, Agnelli G, et al. 2014 ESC Guidelines on the diagnosis and management of acute pulmonary embolism: The Task Force for the Diagnosis and Management of Acute Pulmonary Embolism of the European Society of Cardiology (ESC). *European Heart Journal*. 2014; 35(43):3033–3080.

Lawrence PF, Gloviczki P. The Society for Vascular Surgery practice guidelines on follow-up after vascular surgery arterial procedures. *Journal of Vascular Surgery*. 2018;68(1):1. doi:10.1016/j.jvs.2018.05.012.

Li J, Feng L, Li J, et al. Diagnostic accuracy of magnetic resonance angiography for acute pulmonary embolism: A systematic review and meta-analysis. *Vasa*. 2016; 45:149-154.

Long Q, Zha Y, Yang Z. Evaluation of pulmonary sequestration with multidetector computed tomography angiography in a select cohort of patients: A retrospective study. *Clinics (Sao Paul)*. 2016; 71(7): 392–398.

Lopez-Costa I, Bhalla S, Raptis C. Magnetic resonance imaging for pulmonary hypertension: methods, applications, and outcomes. *Top Magn Reson Imaging*. 2014; 23(1):43-50.

Osiro S, Zurada A, Gielecki J, et, al. A review of subclavian steal syndrome with clinical correlation. *Med Sci Monit*. 2012; 18(5): RA57-RA63.

Pascall E, Tulloh RMR. Pulmonary hypertension in congenital heart disease. *Future Cardiol*. 2018; 14(4): 343–353.

Poletto E, Mallon MG, Stevens RM, et al. Imaging review of aortic vascular rings and pulmonary sling. *J Am Osteopath Coll Radiol*. 2017; 6(2):5-14.

Potter BJ, Pinto DS. Subclavian Steal Syndrome. *Circulation*. 2014; 129:2320–2323.

Povlsen S, Povlsen B. Diagnosing thoracic outlet syndrome: Current approaches and future directions. *Diagnostics (Basel)*. 2018; 8(1):21.

Rose-Jones LJ, Mclaughlin VV. Pulmonary hypertension: Types and treatments. *Curr Cardiol Rev*. 2015 Feb; 11(1):73-79.

**Sancak T, Cangir AK, Atasoy C, Ozdemir N. The role of contrast enhanced three-dimensional MR angiography in pulmonary sequestration. *Interact Cardiovasc Thorac Surg.* 2003;2(4):480-482. doi:10.1016/S1569-9293(03)00118-X.**

Schiebler ML, Nagle SK, Francois CJ, et al. Effectiveness of MR angiography for the primary diagnosis of acute pulmonary embolism: Clinical outcomes at 3 months and 1 year. *J Magn Reson Imaging.* 2013; 38:914-925.

Singh B, Mommer SK, Erwin PJ, et al. Pulmonary embolism rule-out criteria (PERC) in pulmonary embolism--revisited: A systematic review and meta-analysis. *Emerg Med J.* 2013;30(9):701-6.

Swift AJ, Rajaram S, Condliffe R, et al. Diagnostic accuracy of cardiovascular magnetic resonance imaging of right ventricular morphology and function in the assessment of suspected pulmonary hypertension results from the ASPIRE registry. *J Cardiovasc Magn Reson.* 2012; 14:40.

**Tanzer Sancak, Ayten Kayi Cangir, Çetin Atasoy, Nezih Özdemir The role of contrast enhanced three-dimensional MR angiography in pulmonary sequestration Interactive. *Cardio Vascular and Thoracic Surgery.* Volume 2, Issue 4, December 2003. Pages 480–482.**

Uthof H, Pena C, Katzen BT, et al. Current clinical practice in postoperative endovascular aneurysm repair imaging surveillance. *J Vascular and interventional Radiology.* 2012; 23(9): 1152–1159.

**Verma S, Siu SC. Aortic dilatation in patients with bicuspid aortic valve. *N Engl J Med.* 2014;370(20):1920-1929. doi:10.1056/NEJMra1207059. Verma S, Siu SC. Aortic dilatation in patients with bicuspid aortic valve. *N Engl J Med.* 2014 May;370(20):1920-9.**

Zucker EJ, Gnguli S, Ghoshhajra BB, et al. Imaging of venous compression syndromes. *Cardiovasc Diagn Ther.* 2016; 6:519-532.

**Reviewed / Approved by**

Reviewed / Approved by



M. Atif Khalid, M.D., Medical Director, Radiology

## GENERAL INFORMATION

It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.

**Disclaimer:** Magellan Healthcare service authorization policies do not constitute medical advice and are not intended to govern or otherwise influence the practice of medicine. These policies are not meant to supplant your normal procedures, evaluation, diagnosis, treatment and/or care plans for your patients. Your professional judgement must be exercised and followed in all respects with regard to the treatment and care of your patients. These policies apply to all Magellan Healthcare subsidiaries including, but not limited to, National Imaging Associates (“Magellan”). The policies constitute only the reimbursement and coverage guidelines of Magellan. Coverage for services varies for individual members in accordance with the terms and conditions of applicable Certificates of Coverage, Summary Plan Descriptions, or contracts with governing regulatory agencies. Magellan reserves the right to review and update the guidelines at its sole discretion. Notice of such changes, if necessary, shall be provided in accordance with the terms and conditions of provider agreements and any applicable laws or regulations.