Evolent Clinical Guideline 2021 for Chest Magnetic Resonance Angiography (MRA)

Guideline ~~or Policy~~ Number:	Applicable Codes	
Evolent_CG_2021		
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc.		
Original Date:	**Last Revised Date:**	**Implementation Date:**
September 1997	JuneMay 20254	January ~~uly~~ 20265

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STATEMENT

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.*
- *Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

Purpose

Magnetic resonance angiography (MRA) generates images of the blood vessels (arteries and/or veins) in the chest that can be evaluated for evidence of stenosis, occlusion, or aneurysms without use of ionizing radiation. Chest MRA (non-coronary) is used to evaluate the blood vessels outside the heart in the chest (thorax).

NOTE: Authorization for MR Angiography covers both arterial and venous imaging. The term *angiography* refers to both arteriography and venography.

INDICATIONS FOR CHEST MAGNETIC RESONANCE ANGIOGRAPHY (MRA)

Known or Suspected Pulmonary Embolism (PE) ~~(1,2,3,4,5,6)~~ (1–5)

- Suspected pulmonary embolism **when CTA is contraindicated or cannot be performed**:
  - High risk for PE based on shock or hypotension
    - Documented score from a validated clinical scoring system for the prediction of pulmonary embolism indicating high probability for PE (See **Clinical Assessment of Pulmonary Embolism**~~Clinical Assessment of Pulmonary Embolism~~~~Background for full details of the clinical scoring systems~~) with any **ONE** of the following:
      - Wells score (original version) >7
      - Geneva score (original version) >11

- Geneva score (simplified version) >5
- Calculated score (when sufficient clinical data are provided) from a validated clinical scoring system (See **Clinical Assessment of Pulmonary Embolism**~~**Clinical Assessment of Pulmonary Embolism**~~~~Background for full details~~) for the prediction of pulmonary embolism indicating high probability for PE
- **NOTE**: Elevated D-dimer is **NOT** needed for high-risk patients; CTA Chest is indicated for high-risk even with normal D dimer

- Intermediate and Low risk for PE requires an elevated D-dimer

- Follow up of known pulmonary embolism when CTA is **contraindicated** or cannot be performed with symptoms ~~**AND** either symptoms~~ (such as dyspnea, fatigue, lightheadedness and/or edema) that recur **OR** ~~are~~ with symptoms that are persistent at 3 months following initial diagnosis
  - **NOTE**: Follow-up imaging in asymptomatic patients to determine if an embolus has resolved or to determine cessation of anticoagulation is **NOT** indicated as imaging changes may persist and therefore follow-up imaging is not useful to determine the duration of therapy~~OR a validated pre-test high probability score (such as Wells score > 6, Modified Geneva score ≥ 11),~~
    - ~~(D-dimer is **NOT** needed for high-risk patients; can approve high-risk even with normal D-dimer)~~
  - ~~Intermediate and Low risk require elevated D-dimer~~

Thoracic Aortic Disease~~(7,8,9,10,11)~~ (6–9)

Screening for Possible Thoracic Aortic Aneurysm (TAA)

- Screening in individuals with a personal history of bicuspid aortic valve when prior TTE (Transthoracic Echocardiogram) is indeterminate or abnormal ~~(10)~~:
  - **NOTE:** Typical TTE follow-up imaging intervals for bicuspid aortic valve patients:
    - Baseline study at initial diagnosis of bicuspid aortic valve
    - Follow-up imaging is based on findings on prior imaging of a dilated aorta of > 40 mm is typically every 2-3 years thereafter
- Screening in individuals at elevated risk due to family history when TTE (Transthoracic Echocardiogram) is inconclusive or insufficient as clinically indicated ~~(10)~~ with any **ONE** of the following (8):
  - First-degree relatives of individuals with a known thoracic aortic aneurysm (defined as 1.5 times (> 50%) larger than the predicted aorta size based on age, sex, body size) **OR** known aortic dissection
  - First and/or second-degree relatives of individuals with heritable thoracic aorta disease (HTAD) (HTAD comprises a clinically and genetically heterogeneous group of disorders sharing the common denominator of aneurysm or dissection of the thoracic aorta)

        - **NOTE**: Previous analogous terminology includes familial thoracic aortic aneurysm and dissection (FTAAD) and non-syndromic heritable thoracic aortic disease (NS-TAD))
    - First degree relatives of individuals with a known bicuspid aortic valve
- See **Imaging in Known Genetic Conditions** ~~**Imaging in Known Genetic Conditions**~~ section for additional indications for screening

Suspected Thoracic Aortic Aneurysm (TAA)

- **Asymptomatic** suspected thoracic aortic aneurysm:
    - With prior indeterminate or abnormal imaging (Such as echocardiogram or chest X~~x~~-ray)
    - ~~Based on other imaging such as echocardiogram or chest x-ray~~
- **Symptomatic** known or suspected thoracic aortic aneurysm:
    - Signs and symptoms may include:
        - Abrupt onset of severe sharp or stabbing pain in the chest, back or abdomen (could indicate aneurysm rupture)
        - A~~cute onset of pain with a~~symmetric blood pressure between limbs
        - Acute chest or back pain and at high risk for aortic aneurysm and/or aortic syndrome (risk factors include hypertension, atherosclerosis, prior cardiac or aortic surgery, underlying aneurysm, bicuspid aortic valve, and connective tissue disorder (Such as ~~e.g.,~~ Marfan syndrome, vascular form of Ehlers-Danlos syndrome, Loeys-Dietz syndrome)

~~- Suspected vascular cause of dysphagia or expiratory wheezing with other imaging that is suggestive or inconclusive.~~

Thoracic Aortic Syndromes ~~*(9)*~~*(7,8)*

- For **suspected** acute aortic syndrome (AAS) (S~~s~~uch as aortic dissection, intramural hematoma and penetrating atherosclerotic ulcer) with any **ONE** of the following:
    - ~~Other~~ Prior imaging (such as echocardiogram) is suggestive of AAS ~~**OR**~~
    - ~~Individual is either:~~
    - **High risk** patient for AAS and **one** sign/symptom concerning for AAS
        - **High risk** conditions for AAS:
            - Marfan's syndrome or other connective tissue disease, family history of aortic disease, known aortic valve disease, recent aortic manipulation and/or known thoracic aortic aneurysm
        - **Signs and symptoms** concerning for AAS:
            - Chest, back or abdominal pain described as abrupt onset, severe in intensity and/or ripping or tearing in quality

- Pulse deficit or systolic blood pressure differential
- Focal neurologic deficit with pain
- New heart murmur with pain
- Hypotension or shock

- **Non-high-risk** patient and **two** or more signs/symptoms concerning for AAS (See above)~~**high risk** and **one** sign/symptom **OR** non-high risk and **two** or more s~~

- For follow-up of **known** aortic syndromes (Such as aortic dissection, intramural hematoma and penetrating atherosclerotic ulcer) as clinically indicated
- Suspected vascular cause of dysphagia (from vascular compression of the esophagus) or expiratory wheezing (from vascular compression of the trachea/bronchus) with prior imaging that is indeterminate or abnormal.

~~including : frequency for follow up is~~

Follow-up of Known Thoracic Aortic Aneurysm ~~*(9)*~~ *(7,8)*

- Baseline imaging at diagnosis then every 6-24 months
  - If there is a change in clinical status or cardiac exam, then imaging sooner than 6 months is indicated

Post-operative Follow Up of Aortic Repair ~~*(9,12)*~~ *(7,8)*

- Follow-up after thoracic endovascular aortic repair (TEVAR) at the following intervals if there is a reason for MRA rather than CT~~MRI:~~
  - Baseline study ~~post-EVAR~~ at 1-month post-EVAR
  - Annually thereafter if stable ~~for the first 5 years~~
    - More frequent imaging (as clinically indicated) may be needed if there are complications or abnormal findings on surveillance imaging
    - After 5 post-operative years without complications, continuing follow-up every 5 years should be considered

    ~~more frequent imaging (as clinically indicated) may be needed if there are complications or abnormal findings on surveillance imaging~~
  - ~~After 5 post-operative years without complications, continuing follow-up every 5 years should be considered~~
- Follow up after thoracic aorta open repair at the following intervals if there is a reason for MRA rather than ~~M~~CT~~RI:~~
  - A~~Baseline follow-up study a~~t one year ~~post-operatively~~ and at 2 years post-repair~~operatively~~
  - Every 5 years thereafter
  - If abnormal findings are seen on any prior surveillance imaging study, imaging is then done annually

Non-Aortic Vascular Disease ~~of the Chest~~ ~~(13,14,15)~~

- Suspected or known Superior Vvena Ccava (SVC) syndrome (10)
  - SVC syndrome is a clinical diagnosis and may be suspected when there are signs of venous congestion in the upper body (such as shortness of breath, distended neck veins and facial/upper extremity edema)
- Subclavian sSteal sSyndrome after ~~positive or inconclusive~~ indeterminate or abnormal ultrasound (8)
- Suspected or known ~~Thoracic~~ thoracic oOutlet sSyndrome (11,12)
- Suspected pulmonary hypertension ~~when other test~~with~~ing~~ith suggestive prior testing (Such as echocardiogram or CT cChest ~~or right heart catheterization~~) (7,8)~~is suggestive of the diagnosis~~
- For patients with fibromuscular dysplasia (FMD) (13,14): ~~(24,25)~~
  - Baseline vascular study indicated from brain to pelvis
- Takayasu's Arteritis (15): ~~(32)~~
  - At initial diagnosis
  - Every 6 months for the first 2 years while on therapy
  - Annually after the first 2 years
- Non-Central Horner's Syndrome (Secondary/preganglionic or tertiary/post-ganglionic) to evaluate for a vascular source (Such as dissection, aneurysm, arteritis) (16,17)

NOTE: CTA/MRA of the brain and neck may also be indicated

Congenital ~~Malformations~~ Vascular Disease of the Chest ~~(16,17,18,19)~~ (18–20)

- Suspected thoracic malformation based ~~on other imaging~~with suggestive prior imaging (Ssuch as chest Xx-ray, echocardiogram, gastrointestinal study or cChest CT)
- Congenital heart disease with pulmonary hypertension and/or extra-cardiac vascular anomalies (Such as Tetralogy of Fallot, transposition of the great vessels, truncus arteriosus)
- Suspected coarctation of the aorta with suggestive prior testing (Such as disparity in the pulsations and blood pressures in the legs versus the arms)
- Pulmonary sequestration

Evaluation of Tumor

- When needed for clarification of vascular ~~invasion~~ involvement from tumor

PRE-OPERATIVE OR POSTOPERATIVE ASSESSMENT ~~/PROCEDURAL EVALUATION~~

When not otherwise specified in the guideline:

Preoperative Evaluation:

- Prior to the following procedures:
  - Ablation for atrial fibrillation
  - Endovascular aneurysm repair (EVAR) [8]
  - Transcatheter Aortic Valve Replacement (TAVR) [21]
  - Solid organ transplantation
- Imaging of the area requested is needed to develop a surgical plan

~~Pre-operative evaluation for a planned surgery or procedure (including prior to planned ablation for atrial fibrillation)~~

~~Evaluation of interventional vascular procedures for luminal patency versus restenosis due to conditions such as atherosclerosis, thromboembolism, and intimal hyperplasia~~

~~Evaluation of vascular anatomy prior to solid organ transplantation~~

~~Evaluation prior to endovascular aneurysm repair (EVAR)~~

~~Evaluation prior to Transcatheter Aortic Valve Replacement~~

Post-operative~~/procedural~~ Evaluation: ~~[20,21]~~

- ~~Follow-up study may be needed to help evaluate a patient's progress after treatment, procedure, intervention, or surgery. Documentation requires a medical reason that clearly indicates why additional imaging is needed for the type and area(s) requested.~~
- ~~Evaluation of endovascular/interventional abdominal vascular procedures for luminal patency versus restenosis due to conditions such as atherosclerosis, thromboembolism, and intimal hyperplasia~~
- ~~Evaluation of post-operative complications, e.g., pseudoaneurysms, related to surgical bypass grafts, vascular stents, and stent-grafts in abdomen and pelvis~~
  - ~~Suspected complications of IVC filters~~Evaluation of post-operative complications (Such as pseudoaneurysms) following interventional vascular procedures (Such surgical bypass grafts, vascular stents, and IVC filters) [22]
  - Known or suspected complications
  - A clinical reason is provided how imaging may change management

NOTE: This section applies only within the first few months following surgery

FURTHER EVALUATION OF INDETERMINATE

FINDINGS ~~ON PRIOR IMAGING~~

Unless follow up is otherwise specified within the guideline

- For initial evaluation of an inconclusive finding on a prior imaging report that requires further clarification
- One follow-up exam of a prior indeterminate MR/CT finding to ensure no suspicious interval change has occurred. (No further surveillance unless specified as highly suspicious or change was found on last follow-up exam).

IMAGING IN KNOWN GENETIC CONDITIONS ~~SYNDROMES AND RARE DISEASES~~

- ~~For patients with fibromuscular dysplasia (FMD):~~ [22,23]
  - ~~One-time vascular study from brain to pelvis~~
- Vascular Ehlers-Danlos syndrome [23,24]: ~~[24,25]~~
  - Every 18 months (including a~~A~~t diagnosis) **OR** ~~and then every 18 months~~
  - As clinically indicated to follow known vascular ~~More frequently if~~ abnormalities ~~are found~~
- Marfan Syndrome [25]: ~~[9,26]~~
  - Every 3 years (including a~~A~~t ~~initial~~ diagnosis)
  - More frequently (annually) if **EITHER**: history of dissection, dilation of aorta beyond aortic root **OR** aortic root/ascending aorta are not adequately visualized on TTE (i.e. advanced imaging is needed to monitor the thoracic aorta)
- Loeys-Dietz [26]: ~~[28]~~
  - Every two years (including a~~A~~t diagnosis) **OR** ~~and then every two years~~
  - More frequent if abnormalities are found
- Williams Syndrome [27]: ~~[29]~~
  - ~~When there is concern for~~ Abdominal vascular ~~disease based on abnormal~~ exam or imaging findings (such as diminished pulses, bruits or signs of diffuse thoracic aortic stenosis)
- Turner Syndrome [7]: ~~[9]~~
  - Screening with no known vascular abnormality at the following intervals:
    - At diagnosis
    - Every 5 years until age 18
    - Every 10 years in adults
    - Prior to pregnancy/pregnancy planning

- Annually if any one of the following are present: coarctation of the aorta, aortic dilation, bicuspid aortic valve, hypertension

- ~~Takayasu's Arteritis:~~ ~~(30)~~
  - ~~For evaluation at diagnosis then as clinically indicated~~
- For other syndromes and rare diseases not otherwise addressed in the guideline, coverage is based on a case-by-case basis ~~using societal guidance~~

Combination Studies for Known Genetic Conditions

NOTE: When medical necessity is met for an individual study **AND** conscious sedation is required (such as for young pediatric patients or patients with significant developmental delay), the entire combination is indicated)

Brain/Neck/Chest/Abdomen/Pelvis MRA

- Vascular Ehlers-Danlos syndrome(vEDS): Every 18 months (including a~~A~~t diagnosis) **OR** as clinically indicated to follow known vascular ~~nd then every 18 months; more frequently if~~ abnormalities ~~are found~~ (23,24)~~(24,25)~~
- Loeys-Dietz: Every two years (including at diagnosis) **OR** ~~and then every two years,~~ more frequently if abnormalities are found (26)~~(28)~~

Chest/Abdomen/Pelvis MRA

- Marfan syndrome (25): ~~(26)~~
  - Every 3 years (including a~~A~~t initial diagnosis)
  - More frequently (annually) if **EITHER**: history of dissection, dilation of aorta beyond aortic root **OR** aortic root/ascending aorta are not adequately visualized on TTE (i.e. advanced imaging is needed to monitor the thoracic aorta)
- Williams Syndrome (27): ~~(29)~~
  - ~~When there is concern for~~Abdomen vascular exam ~~disease (including renal artery stenosis) based on abnormal exam~~ or imaging findings (such as diminished pulses, bruits or signs of diffuse thoracic aortic stenosis)

OTHER COMBINATION STUDIES WITH CHEST MRA

NOTE: When medical necessity is met for an individual study **AND** conscious sedation is required (such as for young pediatric patients or patients with significant developmental delay), the entire combination is indicated)

Brain/Neck/Chest/Abdomen/Pelvis MRA

- For patients with fibromuscular dysplasia (FMD), a one-time vascular study from brain to pelvis is indicated (13,14)~~(22,23)~~

- For assessment in patients with spontaneous coronary artery dissection (SCAD), (SCAD is a common initial diagnostic event for underlying fibromuscular dysplasia (FMD)).~~can be done at time of coronary angiography~~ [28]
  - **NOTE**: Body vascular imaging for SCAD can be performed at the time of coronary angiography[~~31~~]
- Takayasu's Arteritis~~: For evaluation at diagnosis then as clinically indicated~~ [15]:
  - At initial diagnosis
  - Every 6 months for the first 2 years while on therapy
  - Annually after the first 2 years

Chest/Abdomen/Pelvis/Lower Extremity MRA

- To evaluate for an embolic source of lower extremity thromboembolic vascular disease.
  - **NOTE**: Echocardiogra~~mphy~~ is also indicated as~~often needed~~ , since the heart is the most commonly reported source of lower extremity emboli~~, accounting for 55 to 87 percent of events~~.

Chest/Abdomen/Pelvis MRA

- Evaluation prior to endovascular aneurysm repair (EVAR) when thoracic involvement is present when CTA is contraindicated or cannot be performed
- Evaluation prior to Transcatheter Aortic Valve Replacement (TAVR) when CTA is contraindicated or cannot be performed ~~[32]~~[21]
- Acute aortic dissection [29]~~[33]~~
- Significant post-traumatic or post-procedural vascular complications reasonably expected to involve the chest, abdomen and pelvis

Chest MRA and Chest MRI (or CT)

- When needed for clarification of vascular involvement ~~invasion~~ from tumor

Chest MRA and Heart MRI (or CT)

- When medical necessity criteria indications are met for each Chest MRA (see above) and Heart MRI (see Clinical Guideline Evolent_CG_7297) or Heart CT (see Clinical Guideline Evolent_CG_7296) (such as for certain congenital malformations when evaluation of extra cardiac and cardiac structures are needed)

~~Brain/Neck/Chest/Abdomen/Pelvis MRA~~Brain/Neck/Chest MRA

- Non-Central Horner's Syndrome (Secondary/preganglionic or tertiary/post-ganglionic) to evaluate for a vascular source (Such as dissection, aneurysm, arteritis) [16,17]

CODING AND STANDARDS

~~Coding~~

~~CPT~~ Codes

71555

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

Clinical Assessment of Pulmonary Embolism

Original Wells Score for Prediction of Pulmonary Embolism ~~(5)~~(2)

Clinical Criteria	Original Version
Clinical Symptoms of DVT (deep vein thrombosis)	3
Other diagnosis (less likely than pulmonary embolism)	3
Heart rate > 100 bpm	1.5
Surgery in previous 4 weeks or Immobilization (≥ 3 days)	1.5
Previous DVT/PE (pulmonary embolism)	1.5
Hemoptysis	1
Malignancy	1

Clinical Probability	
Low probability of pulmonary embolus	0 – 1
Intermediate probability	2 – 6
High probability	> 7

Original and Simplified Geneva Score for Prediction of Pulmonary Embolism ~~(5)~~ *(2,5)*

Clinical Criteria	**Original Version**	**Simplified Version**
Age ≥ 65 years	1	1
Previous DVT (deep vein thrombosis) or PE (pulmonary embolism)	3	1
Recent surgery or fracture (within 1 month)	2	1
Active malignant condition	2	1
Unilateral lower limb pain	3	1
Hemoptysis	2	1
Heart rate 75-94 bpm	3	1
Heart rate ≥ 95 bpm	5	2
Unilateral edema of lower limb and pain on deep palpation	4	1
Clinical Probability		
Low probability of Pulmonary Embolus (PE)	0 – 3	0 – 1
Intermediate probability	4 – 10	2 – 4
High probability	> 11	> 5

Contraindications and Preferred Studies

- Contraindications and reasons why a CT/CTA cannot be performed may include: impaired renal function, significant allergy to IV contrast, pregnancy (depending on

trimester).

- Contraindications and reasons why an MRI/MRA cannot be performed may include: impaired renal function, claustrophobia, non-MRI compatible devices (such as non-compatible defibrillator or pacemaker), metallic fragments in a high-risk location, patient exceeds weight limit/dimensions of MRI machine.

SUMMARY OF EVIDENCE

2022 ACC/AHA Guideline for the Diagnosis and Management of Aortic Disease [7]

Study Design: This document is a clinical practice guideline developed by the American Heart Association (AHA) and the American College of Cardiology (ACC) Joint Committee on Clinical Practice Guidelines. It includes recommendations based on a comprehensive literature review conducted from January 2021 to April 2021, with additional relevant studies considered through June 2022.

Target Population: The guidelines are intended for clinicians diagnosing and managing patients with aortic disease, including asymptomatic, stable symptomatic, and acute aortic syndromes.

Key Factors:

- Diagnosis and Management: Recommendations cover genetic evaluation, family screening, medical therapy, endovascular and surgical treatment, and long-term surveillance.
- Imaging Techniques: Various imaging techniques such as computed tomography, magnetic resonance imaging, echocardiography, and intravascular ultrasound are discussed.
- Multidisciplinary Teams: Emphasis on the importance of multidisciplinary aortic teams and shared decision-making.
- Pregnancy: Special considerations for managing aortic disease in pregnant patients.

2019 ESC Guidelines for the diagnosis and management of acute pulmonary embolism developed in collaboration with the European Respiratory Society (ERS) [2]

Study Design: This document is a guideline developed by the European Society of Cardiology (ESC) in collaboration with the European Respiratory Society (ERS). It includes recommendations based on a thorough review of the literature and expert consensus.

Target Population: The guidelines are aimed at clinicians diagnosing and managing patients with acute pulmonary embolism (PE).

Key Factors:

- Diagnosis: Recommendations for various diagnostic tests, including D-dimer testing, computed tomographic pulmonary angiography (CTPA), and echocardiography.
- Risk Assessment: Detailed risk assessment strategies, including clinical parameters,

imaging, and laboratory biomarkers.

- Treatment: Guidelines for acute-phase treatment, including anticoagulation, thrombolysis, and mechanical circulatory support.
- Pregnancy: Specific recommendations for managing PE in pregnant patients.
- Long-term Management: Strategies for chronic treatment and prevention of recurrence.

2024 ESC Guidelines for the management of peripheral arterial and aortic diseases [8]

Study Design: This document is a guideline developed by the European Society of Cardiology (ESC) for the management of peripheral arterial and aortic diseases. It includes recommendations based on a comprehensive review of the literature and expert consensus.

Target Population: The guidelines are intended for clinicians managing patients with peripheral arterial and aortic diseases.

Key Factors:

- Diagnosis: Recommendations for various diagnostic tests, including duplex ultrasound, computed tomography angiography (CTA), and magnetic resonance angiography (MRA).
- Screening: Guidelines for screening for carotid, peripheral arterial, and aortic diseases.
- Medical Treatment: Recommendations for lifestyle changes, exercise, and pharmacological therapy.
- Interventional Treatment: Guidelines for revascularization and surgical interventions.
- Follow-up: Recommendations for follow-up after treatment of aortic aneurysms and acute aortic syndromes.
- Genetic Diseases: Specific recommendations for managing genetic and congenital diseases of the aorta.

ANALYSIS OF EVIDENCE

Shared Findings [2,7,8]:

- All three guidelines emphasize the importance of accurate diagnosis and comprehensive management of cardiovascular diseases, including the use of advanced imaging techniques and multidisciplinary teams.
- They all provide specific recommendations for managing cardiovascular conditions in pregnant patients, highlighting the need for special considerations in this population.
- The guidelines stress the importance of long-term management and follow-up to prevent recurrence and manage chronic conditions.

Conclusion [2,7,8]:

In summary, while all three guidelines share common themes of diagnosis, management, and long-term care, they each have a unique focus and provide specific recommendations tailored to their respective areas of cardiovascular disease.

POLICY HISTORY

Date	Summary
June 2025	● GThis guideline number changed from replaces Evolent Clinical Guideline 022-2 to 2021 for Chest MRA ● Guideline name changed from Chest MRA to Chest Magnetic Resonance Angiography (MRA) ● Added in general information statement regarding guideline criteria development by reputable sources, standard of care, and best practices ● Updated Pulmonary Embolism and Thoracic Aortic Disease sections ● Broke down Suspected Thoracic Aortic Disease section into screening criteria and abnormal imaging result or signs/symptoms ● Added Takayasu's Arteritis and Non-Central Horner's Syndrome indications in the Vascular Disease and Combination Studies sections ● Moved fibromuscular dysplasia (FMD) indication from Imaging in Known Genetic Condition section to Non-Aortic Vascular Disease section ● Standardized Preoperative and Postoperative Assessment sections ● Separated combination studies section for Genetic and Nongenetic conditions and updated accordingly ● Edited text for clarity and consistency ● Adjusted applicable lines of business – Medicare Advantage checked ● Updated Background section and references ● Added a Summary of Evidence and Analysis of Evidence
May 2024	● Updated references ● Added Genetics and Rare Diseases, Evaluation of Tumor, and Contraindications and Preferred Studies sections

Date	Summary
~~April 2023~~	~~• Simplified PE indications and removed other details from background)~~ ~~• Clarified and updated follow up after repair of TAA~~ ~~• General Information moved to beginning of guideline with added statement on clinical indications not addressed in this guideline~~ • ~~Added statement regarding further evaluation of indeterminate findings on prior imaging~~

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization management. Coverage for services varies for individual members according to the terms of their health care coverage or government program. Individual members' health care coverage may not utilize some Evolent Clinical Guidelines. Evolent clinical guidelines contain guidance that requires prior authorization and service limitations. A list of procedure codes, services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.

Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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