

Evolut Clinical Guideline 012-12040 for Neck Computed Tomography Angiography (CTA)

Guideline or Policy Number: Evolut_CG_012-12040	Applicable Codes	
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TABLE OF CONTENTS

STATEMENT	3
GENERAL INFORMATION	3
PURPOSE	3
SPECIAL NOTE	3
INDICATIONS FOR NECK CT ANGIOGRAPHY	3
CEREBROVASCULAR DISEASE	3
TUMOR/PULSATILE MASS	4
VASCULITIS AND OTHER EXTRACRANIAL VASCULAR DISEASE	4
PREOPERATIVE POSTOPERATIVE ASSESSMENT	5
FURTHER EVALUATION OF INDETERMINANT FINDINGS	6
IMAGING IN KNOWN GENETIC CONDITIONS	6
COMBINATION STUDIES FOR KNOWN GENETIC CONDITIONS	6
Brain/Neck/Chest/Abdomen/Pelvis CTA	6
OTHER COMBINATION STUDIES WITH NECK CTA	7
BRAIN CT AND BRAIN/NECK CTA	7
BRAIN/NECK CTA	7
BRAIN/NECK/CHEST CTA	8
BRAIN/NECK/CHEST/ABDOMEN/PELVIS CTA	8
CODING AND STANDARDS	9
CODES	9
APPLICABLE LINES OF BUSINESS	9
BACKGROUND	9
CTA AND DISSECTION	10
CONTRAINDICATIONS AND PREFERRED STUDIES	11
SUMMARY OF EVIDENCE	11
ANALYSIS OF EVIDENCE	13
POLICY HISTORY	13

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LEGAL AND COMPLIANCE	15
GUIDELINE APPROVAL	15
<i>Committee</i>	15
DISCLAIMER	15
REFERENCES	16

STATEMENT

General Information

- *It is an expectation that all patients receive care/services from a licensed clinician. ~~All~~ All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. ~~If~~ 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

Indications for performing Computed Tomography Angiography (CTA) in the neck/cervical region.

Special Note

If there is a combination request* for an overlapping body part, either requested at the same time or sequentially (within the past 3 months) the results of the prior study should show one or more of the following:

- Inconclusive or show a need for additional or follow up imaging evaluation **OR**
- The office notes should clearly document an indication why overlapping imaging is needed and how it will change management for the patient.

(See *Unless approvable in the "Indications for Combinations Studies" section for indicated combinations; below)

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

INDICATIONS FOR NECK COMPUTED TOMOGRAPHY CT ANGIOGRAPHY ~~(CTA)~~

Cerebrovascular Disease

- Recent ischemic stroke or transient ischemic attack (see **Background**)⁽¹⁻³⁾
 - **Note:** For remote strokes with no prior vascular imaging, imaging can be considered

- based on location/type of stroke and documented potential to change management
- Known or suspected vertebrobasilar insufficiency (VBI) in patients with symptoms such as dizziness, vertigo, headaches, diplopia, blindness, vomiting, ataxia, weakness in both sides of the body, or abnormal speech ^(4,5,6)
 - Asymptomatic patients with an abnormal ultrasound of the neck or carotid duplex imaging (e.g., carotid stenosis \geq 70%, technically limited study, aberrant direction of flow in the carotid or vertebral arteries) ^{(7,8,9)(1,2)}
 - Symptomatic patients with an abnormal ultrasound of the neck or carotid duplex imaging (e.g., carotid stenosis \geq 50%, technically limited study, aberrant direction of flow in the carotid or vertebral arteries) ^{(7,10,11)(1,2)}

Tumor/Pulsatile Mass

- Pulsatile mass on exam ⁽¹²⁾⁽⁶⁾
- Known or suspected carotid ~~bodybody~~ tumors, or other masses such as a paraganglioma, arteriovenous fistula pseudoaneurysm, atypical lymphovascular malformation ^{(12,13)(4,6-8)}

Note: Ultrasound (US) may be used to identify a mass overlying or next to an artery in initial work up of a pulsatile mass.

Vasculitis and Other Extracranial Vascular Diseases ⁽¹⁴⁾Disease

- Large vessel vasculitis ⁽⁹⁾
 - Giant cell with suspected extracranial involvement ^{(14,15,16,17)(10)}
 - Takayasu's Arteritis for evaluation at ⁽¹¹⁾
 - At initial diagnosis and as clinically indicated for suspected extracranial involvement ⁽¹⁷⁾
 - Every 6 months for the first 2 years while on therapy
 - Annually after the first 2 years
- For patients with Fibromuscular dysplasia (FMD) ^(12,13):
 - One-time vascular study from brain to pelvis
- Spontaneous coronary arteries dissection (SCAD) ⁽¹⁴⁾
 - One-time vascular study from brain to pelvis
- Subclavian steal syndrome when ultrasound is positive or indeterminate **OR** for planning interventions ^{(18)(15,16)}
- Suspected carotid or vertebral artery dissection; (secondary to trauma or spontaneous due to weakness of vessel wall ^(6,19,20)) ^(1,4,17,18)
- Follow-up of known carotid or vertebral artery dissection ~~within~~ with any ONE of the

following ^(19,20):

- At 3-6 months post dissection (for evaluation of recanalization and/or to guide anticoagulation treatment ^(21,22))
- When documentation is provided that the results will be used to guide anticoagulation treatment
- When there is recurrent pain, headache or new neurologic deficits that suggest progression
- To identify an arterial source of bleeding in patients with hemorrhage of the head and neck ^{(6,23)(4,21)}
- ~~Horner's syndrome, non-central (miosis, ptosis, and anhidrosis)~~ ^(24,25)
- Non-Central Horner's Syndrome (Secondary/preganglionic or tertiary/post-ganglionic) to evaluate for a vascular source (Such as dissection, aneurysm, arteritis) with any ONE of the following ^(22,23):
 - For evaluation of a possible underlying vascular issue
 - Associated ipsilateral orbital, face, and/or neck pain that could indicate a possible contributing carotid artery dissection
- NOTE:** Vascular imaging of the brain and chest may also be indicated
- Pulsatile tinnitus (~~subjective or objective~~) for to identify a suspected arterial vascular etiology ^{(26)(4,24)}
- For further evaluation of a congenital vascular malformation of the head and neck ⁽⁴⁾
- Known extracranial vascular disease that needs follow-up or further evaluation ⁽⁴⁾

PRE-OR POST-OPERATIVE/PROCEDURAL PREOPERATIVE POSTOPERATIVE ASSESSMENT

When not otherwise specified in the guideline:

Preoperative Evaluation:

Pre-operative evaluation for a planned surgery or procedure

- ~~Pre-operative evaluation for a planned surgery or procedure~~

Post-operative evaluation for a planned surgery or procedure

- ~~A 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~~
- Imaging of the area requested is needed to develop a surgical plan

Postoperative Evaluation:

- 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 INDETERMINANT FINDINGS

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.)

Genetic Syndromes and Rare Diseases

For patients with Fibromuscular dysplasia (FMD):⁽²⁷⁾

Vascular Ehlers-Danlos syndrome:⁽²⁸⁾

IMAGING IN KNOWN GENETIC CONDITIONS

- Loeys-Dietz⁽²⁵⁾:
 - Every two years (including at diagnosis and then every 18 months) OR
 - More frequently if abnormalities are found
- ~~Loeys-Dietz:⁽²⁹⁾~~
- Vascular Ehlers-Danlos syndrome (vEDS)⁽²⁶⁾:
 - Every 18 months (including at diagnosis and then) OR
 - As clinically indicated to follow known vascular abnormalities

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 CTA

- Loeys-Dietz ⁽²⁵⁾:
 - Every two years (including at diagnosis) OR
 - More frequently if abnormalities are found
- ~~Takayasu's Arteritis~~ ⁽⁴⁷⁾
- For evaluation Vascular Ehlers-Danlos syndrome (vEDS) ⁽²⁶⁾:
 - Every 18 months (including at diagnosis then) OR
 - As clinically indicated to follow known vascular abnormalities
- ~~Spontaneous coronary arteries dissection (SCAD)~~ ⁽³⁰⁾
- ~~For other syndromes and rare diseases not otherwise addressed in the guideline, coverage is based on a case-by-case basis using societal guidance~~

OTHER COMBINATION STUDIES WITH NECK CTA

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 CT and/or Brain CTA and/or Neck CTA ^(1,3)

- Recent ischemic stroke ~~or~~
- Recent transient ischemic attack (TIA) when MRI is contraindicated or cannot be performed ^(1,27)
- History of stroke and ONE of the following:-
 - No prior workup when MRI is contraindicated or cannot be performed
 - New neurologic signs or symptoms
- Suspected or known carotid or vertebral artery dissection with focal or lateralizing neurological deficits
- ~~Approved vascular indications as noted above being performed in high-risk populations (in whom MRI is contraindicated or cannot be performed), will need anesthesia for the procedure and there is a suspicion of concurrent intracranial pathology~~

Note: MRA and CTA are generally comparable noninvasive imaging alternatives each with their own advantages and disadvantages. Brain MRI can alternatively be combined with Brain CTA/Neck CTA.

Brain CTA and/or Neck CTA

- Recent ischemic stroke or transient ischemic attack ^{(31,32)(1,27)}
 - **Note:** For remote strokes with no prior vascular imaging, imaging can be considered

- based on location/type of stroke and documented potential to change management
- Known or suspected vertebrobasilar insufficiency (VBI) in patients with symptoms such as dizziness, vertigo, headaches, diplopia, blindness, vomiting, ataxia, weakness in both sides of the body, or abnormal speech^(4,5) (5,28,29)
 - Suspected carotid⁽³⁰⁾ or vertebral⁽³¹⁾ artery dissection; ~~due (secondary to trauma⁽³²⁾ or spontaneous due to weakness of vessel wall^(19,20))~~ (1,17,18)
 - ~~Follow-up of known carotid or vertebral artery dissection within~~ with any ONE of the following (1,19,20):
 - At 3-6 months post dissection (for evaluation of recanalization and/or to guide anticoagulation treatment^(21,22))
 - ~~Horner's syndrome, non-central (miosis, ptosis, and anhidrosis)⁽²⁴⁾~~
 - Large vessel vasculitis (When documentation is provided that the results will be used to guide anticoagulation treatment
 - When there is recurrent pain, headache or new neurologic deficits that suggest progression
 - Giant cell ~~or Takayasu arteritis~~ with suspected intracranial and extracranial involvement⁽¹⁰⁾
 - ~~Follow-up of known carotid or vertebral artery dissection within 3-6 months for evaluation of recanalization and/or to guide anticoagulation treatment^(21,22)~~
 - Asymptomatic patients with an abnormal ultrasound of the neck or carotid duplex imaging (e.g., internal carotid stenosis ≥ 70%, technically limited study, aberrant direction of flow in the carotid or vertebral arteries) and patient is surgery or angioplasty candidate^(7,8,9)(1,2)
 - Symptomatic patients with an abnormal ultrasound of the neck or carotid duplex imaging (e.g., internal carotid stenosis ≥ 50%, technically limited study, aberrant direction of flow in the carotid or vertebral arteries) and patient is surgery or angioplasty candidate^(7,10,11) (1,2)
 - Pulsatile tinnitus (~~subjective or objective~~) for to identify -a suspected arterial vascular etiology⁽²⁶⁾(4,24)
 - ~~Large vessel vasculitis (Giant cell or Takayasu arteritis) with suspected intracranial and extracranial involvement~~

Brain/Neck/Chest CTA

- Non central Horner's syndrome (secondary/preganglionic or tertiary/post-ganglionic) for evaluation of underlying ~~to evaluate for a~~ vascular source (such as dissection, aneurysm, arteritis)^(22,23)

Brain/Neck/Chest/Abdomen and Pelvis CTA

- For patients with fibromuscular dysplasia (FMD), a one-time vascular study from brain to

pelvis ^(27,33) is indicated ^(12,13)

- ~~Vascular Ehlers-Danlos syndrome: At diagnosis and then every 18 months; more frequently if abnormalities are found.~~ ^(28,34)
- ~~Loeys-Dietz: at diagnosis and then every two years, more frequently if abnormalities are found.~~ ⁽²⁹⁾
- For assessment in patients with spontaneous coronary artery dissection (SCAD), SCAD is a common initial diagnostic event for underlying fibromuscular dysplasia (FMD) ⁽³³⁾
 - NOTE: Body vascular imaging for SCAD can be done at time of coronary angiography ⁽³⁵⁾

Neck/Chest/Abdomen/Pelvis CTA

- ~~Takayasu's Arteritis: For evaluation at diagnosis then as clinically indicated~~ ⁽¹⁷⁾ ₍₁₁₎
 - At initial diagnosis
 - Every 6 months for the first 2 years while on therapy
 - Annually after the first 2 years

CODING AND STANDARDS

Coding

CPT Codes

70498

Applicable Lines of Business

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

BACKGROUND

MRA and CTA are generally comparable noninvasive imaging alternatives, each with their own advantages and disadvantages. CTA is quicker in the acute setting and MRA is an excellent screening test since it does not utilize ionizing radiation⁽³⁶⁾

~~MRA vs CTA for Carotid Artery Evaluation~~^(37,38)

~~Duplex ultrasound and contrast MRA is a common choice for carotid artery evaluation. Limitations of MRA include difficulty in patients with claustrophobia and the risk of nephrogenic systemic sclerosis with gadolinium contrast agents in specific patients. Advantages of CTA over MRA include superior spatial resolution, rapid image acquisition, decreased susceptibility to motion artifacts and artifacts from calcification as well as being better able to evaluate slow flow and tandem lesions. However, CTA can also overestimate high-grade stenosis. Limitations of CTA include radiation exposure to the patient, necessity of IV contrast, and risk of contrast allergy and contrast nephropathy.~~

~~CTA and Dissection~~

~~Craniocervical dissections can be spontaneous or traumatic. Patients with blunt head or neck trauma who meet Denver Screening criteria should be assessed for cerebrovascular injury (although about 20% will not meet criteria). The criteria include: focal or lateralizing neurological deficits (not explained by head CT), infarct on head CT, face, basilar skull, or cervical spine fractures, cervical hematomas that are not expanding, Glasgow coma score less than 8 without CT findings, massive epistaxis, cervical bruit or thrill.^(19,39,40,41) Craniocervical dissections can be spontaneous or traumatic. Spontaneous dissection presents with headache, neck pain with neurological signs or symptoms. There is often minor trauma or precipitating factor (e.g., exercise, neck manipulation). Dissection is thought to occur due to weakness of the vessel wall, and there may be an underlying connective tissue disorder. Dissection of the extracranial vessels can extend intracranially and/or lead to thrombus, which can migrate into the intracranial circulation causing ischemia. Therefore, MRA of the head and neck is warranted.~~

~~(20,42,43)(18,34)~~

~~CTA and Recent Stroke or Transient Ischemic Attack~~

- ~~When revascularization therapy is not indicated or available in patients with an ischemic stroke or TIA, the focus of the work-up is on secondary prevention. Both stroke and TIA should have an evaluation for high-risk modifiable factors such as carotid stenosis atrial fibrillation as the cause of ischemic symptoms.⁽⁴⁴⁾ Diagnostic recommendations include neuroimaging evaluation as soon as possible, preferably with magnetic resonance imaging, including DWI; noninvasive imaging of the extracranial vessels should be performed, and noninvasive imaging of intracranial vessels is reasonable.⁽⁴⁵⁾~~
- ~~Patients with a history of stroke and recent work-up with new signs or symptoms indicating progression or complications of the initial CVA should have repeat brain imaging as an initial study. Patients with remote or silent strokes discovered on imaging should be evaluated for high-risk modifiable risk factors based on the location and type of the presumed etiology of the brain injury.~~

~~Acronyms~~

CT: Computed tomography
CTA: Computed tomography angiography
CVA: Cerebrovascular accident
FMD: Fibromuscular dysplasia
MR: Magnetic Resonance
MRA: Magnetic resonance angiography
MRI: Magnetic resonance imaging
SCAD: Spontaneous coronary artery dissection
TIA: Transient Ischemic Attack
US: Ultrasound
VBI: Vertebrobasilar insufficiency

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

Society for Vascular Surgery clinical practice guidelines for management of extracranial cerebrovascular disease ⁽²⁾

Study Design: This document presents clinical practice guidelines for the management of extracranial cerebrovascular disease, specifically carotid bifurcation stenosis in stroke prevention. The guidelines are based on extensive investigations, including multiple randomized controlled trials (RCTs) and systematic reviews.

Target Population: The guidelines focus on patients with carotid bifurcation disease, including both symptomatic and asymptomatic patients with varying degrees of carotid artery stenosis.

Key Factors:

- **Carotid Endarterectomy (CEA) vs. Medical Therapy:** CEA is recommended over maximal medical therapy for low-risk patients with asymptomatic carotid bifurcation atherosclerosis and stenosis of >70%.
- **CEA vs. Transfemoral Carotid Artery Stenting (TF-CAS):** CEA is recommended over TF-CAS for low surgical risk patients with symptomatic carotid artery stenosis of >50%.
- **Timing of Carotid Intervention:** Carotid revascularization is recommended for

symptomatic patients with >50% stenosis to be performed as soon as the patient is neurologically stable after 48 hours but definitely before 14 days after symptom onset.

- **Screening for Carotid Artery Stenosis:** Routine screening for asymptomatic carotid artery stenosis in individuals without cerebrovascular symptoms or significant risk factors is not recommended.
- **Optimal Sequence for Intervention:** For patients with symptomatic carotid stenosis of 50% to 99% who require both CEA and coronary artery bypass grafting (CABG), CEA before or concomitant with CABG is suggested.

ACR–ASNR–SPR Practice Parameter for the Performance and Interpretation of Cervicocerebral Computed Tomography Angiography (CTA) ⁽⁴⁾

Study Design: This document outlines the practice parameters for the performance and interpretation of cervicocerebral computed tomography angiography (CTA). It is a consensus-based guideline developed collaboratively by the American College of Radiology (ACR), the American Society of Neuroradiology (ASNR), and the Society for Pediatric Radiology (SPR).

Target Population: The guidelines are intended for practitioners performing and interpreting CTA for patients with various vascular diseases and conditions affecting the head and neck.

Key Factors:

- **Indications:** CTA is indicated for diagnosing and characterizing arterial aneurysms, ischemic stroke, atherosclerotic steno-occlusive disease, traumatic vascular injuries, venous and dural sinus thrombosis, vascular malformations, and other vascular conditions.
- **Qualifications:** The guidelines specify the qualifications and responsibilities of personnel involved in performing and interpreting CTA, including physicians, technologists, and medical physicists.
- **Specifications:** Detailed specifications for the examination technique, including patient preparation, CT equipment, and contrast administration, are provided to ensure optimal image quality and patient safety.
- **Radiation Safety:** Emphasis is placed on radiation safety principles to minimize exposure while achieving diagnostic quality.

ACR Appropriateness Criteria Cerebrovascular Diseases-Stroke and Stroke-Related Condition ⁽¹⁾

Study Design: This document provides the ACR Appropriateness Criteria for cerebrovascular diseases, stroke, and stroke-related conditions. The guidelines are evidence-based and reviewed annually by a multidisciplinary expert panel.

Target Population: The criteria focus on patients with stroke-related conditions, including carotid stenosis, carotid dissection, intracranial large vessel occlusion, cerebral venous sinus thrombosis, intraparenchymal hemorrhage, and completed ischemic strokes.

Key Factors:

- **Imaging Recommendations:** The document outlines imaging recommendations for various clinical scenarios, including initial imaging for transient ischemic attack (TIA), acute ischemic stroke, recent ischemic infarct, and surveillance imaging for prior ischemic infarct.
- **Variants:** The criteria include specific variants for different clinical presentations, such as TIA, acute ischemic stroke, recent ischemic infarct, and known intraparenchymal hemorrhage.
- **Relative Radiation Levels:** The document provides relative radiation levels for different imaging procedures to help guide the selection of appropriate imaging techniques.
- **Summary of Literature Review:** The guidelines are based on a systematic analysis of the medical literature from peer-reviewed journals and expert opinions

ANALYSIS OF EVIDENCE

Shared Findings ^(1,2,4):

- **Use of CTA for Stroke and Vascular Conditions:** All three articles agree on the importance of CTA in diagnosing and managing various cerebrovascular conditions, including stroke, carotid stenosis, and vascular malformations.
- **Preference for Non-Invasive Imaging:** Both AbuRahma et al 2022 and Pannell et al 2024 highlight the preference for non-invasive imaging modalities, such as duplex ultrasound, for initial screening of carotid artery stenosis in asymptomatic patients.
- **Importance of Timing:** The timing of carotid intervention is emphasized in both AbuRahma et al 2022 and Pannell et al 2024, with a focus on performing revascularization as soon as the patient is stable.

Conclusion ^(1,2,4)

In summary, while all three articles recognize the value of CTA in managing cerebrovascular conditions, they differ in their specific recommendations and focus areas. AbuRahma et al 2022 emphasizes the preference for CEA over TF-CAS and the use of duplex ultrasound for screening, Pannell et al 2024 provides a comprehensive overview of imaging recommendations for various cerebrovascular conditions, and ACR–ASNR–SPR CTA focuses on the technical aspects and safety considerations of performing CTA.

POLICY HISTORY SUMMARY

Date	Summary
<u>July 2025</u>	<ul style="list-style-type: none"> ● <u>Fixed a spelling typo in the Vasculitis and Other Extracranial Vascular Disease</u> <ul style="list-style-type: none"> ○ <u>Changed “identity” to “identify”</u> ● <u>Edited the policy history for June 2025 to better reflect the</u>

Date	Summary
	<p><u>changes that were presented at committee. No clinical changes</u></p>
<p><u>June 2025</u></p>	<ul style="list-style-type: none"> ● <u>Guideline name changed from Neck CTA to Neck Computed Tomography Angiography (CTA)</u> ● <u>Guideline number changed from 012-1 to 2040</u> ● <u>Added new bullet-point to the General Statement section</u> ● <u>Updated references</u> ● <u>Updated background section</u> ● <u>Updated and rearranged the genetic section</u> ● <u>Added Vasculitis and Other Extracranial Vascular Diseases Section</u> ● <u>Added intervals for imaging of Takayasu arteritis</u> ● <u>Clarified central Horner’s Syndrome to evaluate for a vascular source Updated Horner’s and added to combo section</u> ● <u>Clarified follow-up of known carotid or vertebral artery dissection Clarified carotid dissection follow-up</u> ● <u>Added a Summary of Evidence and Analysis of Evidence</u>
<p>June 2024</p>	<ul style="list-style-type: none"> ● Updated references ● Updated background section ● Updated combination section ● Clarified <ul style="list-style-type: none"> ○ Frequency of screening in genetic syndromes ● Added <ul style="list-style-type: none"> ○ Follow-up of known carotid or vertebral artery dissection within 3-6 months for evaluation of recanalization and/or to guide anticoagulation treatment (already in combo) ○ Horner’s syndrome, non-central (miosis, ptosis, and anhidrosis) - also in combo section ○ Giant cell arteritis with suspected intracranial and extracranial involvement - also in combo section ○ Genetic syndromes and rare disease section ● Deleted <ul style="list-style-type: none"> ○ Aneurysm screening section

Date	Summary
	<ul style="list-style-type: none"> ○ Pulsatile tinnitus combo section
May 2023	<ul style="list-style-type: none"> ● Updated References ● Added <ul style="list-style-type: none"> ○ For further evaluation of a congenital vascular malformation of the head and neck ○ Follow up of known carotid or vertebral artery dissection within 3-6 months for evaluation of recanalization and/or to guide anticoagulation treatment (Combo Neck/Brain CTA) ○ Section on further evaluation of indeterminate or questionable findings on prior imaging ○ General Information moved to beginning of guideline with added statement on clinical indications not addressed in this guideline

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.

REFERENCES

1. Pannell JS, Corey AS, Shih RY, et al. ACR Appropriateness Criteria® Cerebrovascular Diseases-Stroke and Stroke-Related Conditions. *Journal of the American College of Radiology*. 2024;21(6):S21-S64. doi:10.1016/j.jacr.2024.02.015
2. AbuRahma AF, Avgerinos ED, Chang RW, et al. Society for Vascular Surgery clinical practice guidelines for management of extracranial cerebrovascular disease. *J Vasc Surg*. 2022;75(1):4S-22S. doi:10.1016/j.jvs.2021.04.073
3. Robertson RL, Palasis S, Rivkin MJ, et al. ACR Appropriateness Criteria® Cerebrovascular Disease-Child. *Journal of the American College of Radiology*. 2020;17(5):S36-S54. doi:10.1016/j.jacr.2020.01.036
4. ACR-ASNR-SPR. ACR-ASNR-SPR PRACTICE PARAMETER FOR THE PERFORMANCE AND INTERPRETATION OF CERVICOCEREBRAL COMPUTED TOMOGRAPHY ANGIOGRAPHY (CTA). <https://gravitas.acr.org/PPTS/GetDocumentView?docId=72>
5. Lima Neto A, Bittar R, Gattas G, et al. Pathophysiology and Diagnosis of Vertebrobasilar Insufficiency: A Review of the Literature. *Int Arch Otorhinolaryngol*. 2017;21(03):302-307. doi:10.1055/s-0036-1593448
6. Aulino JM, Kirsch CFE, Burns J, et al. ACR Appropriateness Criteria® Neck Mass-Adenopathy. *Journal of the American College of Radiology*. 2019;16(5):S150-S160. doi:10.1016/j.jacr.2019.02.025
7. Haynes J, Arnold KR, Aguirre-Oskins C, Chandra S. Evaluation of neck masses in adults. *Am Fam Physician*. 2015;91(10):698-706.
8. Nguyen RP, Shah LM, Quigley EP, Harnsberger HR, Wiggins RH. Carotid body detection on CT angiography. *AJNR Am J Neuroradiol*. 2011;32(6):1096-1099. doi:10.3174/ajnr.A2429
9. Aghayev A, Steigner ML, Azene EM, et al. ACR Appropriateness Criteria® Noncerebral Vasculitis. *J Am Coll Radiol*. 2021;18(11S):S380-S393. doi:10.1016/j.jacr.2021.08.005
10. Maz M, Chung SA, Abril A, et al. 2021 American College of Rheumatology/Vasculitis Foundation Guideline for the Management of Giant Cell Arteritis and Takayasu Arteritis. *Arthritis & Rheumatology*. 2021;73(8):1349-1365. doi:10.1002/art.41774
11. Joseph G, Goel R, Thomson VS, Joseph E, Danda D. Takayasu Arteritis. *J Am Coll Cardiol*. 2023;81(2):172-186. doi:10.1016/j.jacc.2022.09.051
12. Kesav P, Manesh Raj D, John S. Cerebrovascular Fibromuscular Dysplasia – A Practical Review. *Vasc Health Risk Manag*. 2023;Volume 19:543-556. doi:10.2147/VHRM.S388257
13. Gornik HL, Persu A, Adlam D, et al. First International Consensus on the diagnosis and management of fibromuscular dysplasia. *Vascular Medicine*. 2019;24(2):164-189. doi:10.1177/1358863X18821816
14. Hayes SN, Kim ESH, Saw J, et al. Spontaneous Coronary Artery Dissection: Current State of the Science: A Scientific Statement From the American Heart Association. *Circulation*. 2018;137(19):523-557. doi:10.1161/CIR.0000000000000564

15. Mazzolai L, Teixido-Tura G, Lanzi S, et al. 2024 ESC Guidelines for the management of peripheral arterial and aortic diseases. *Eur Heart J*. 2024;45(36):3538-3700. doi:10.1093/eurheartj/ehae179
16. Rafailidis V, Li X, Chrysogonidis I, et al. Multimodality Imaging and Endovascular Treatment Options of Subclavian Steal Syndrome. *Can Assoc Radiol J*. 2018;69(4):493-507. doi:10.1016/j.carj.2018.08.003
17. Shih RY, Burns J, Ajam AA, et al. ACR Appropriateness Criteria® Head Trauma: 2021 Update. *J Am Coll Radiol*. 2021;18(5S):S13-S36. doi:10.1016/j.jacr.2021.01.006
18. Shakir HJ, Davies JM, Shallwani H, Siddiqui AH, Levy EI. Carotid and Vertebral Dissection Imaging. *Curr Pain Headache Rep*. 2016;20(12):68. doi:10.1007/s11916-016-0593-5
19. Patel SD, Haynes R, Staff I, Tunguturi A, Elmoursi S, Nouh A. Recanalization of cervicocephalic artery dissection. *Brain Circ*. 2020;6(3):175-180. doi:10.4103/bc.bc_19_20
20. Larsson SC, King A, Madigan J, Levi C, Norris JW, Markus HS. Prognosis of carotid dissecting aneurysms. *Neurology*. 2017;88(7):646-652. doi:10.1212/WNL.0000000000003617
21. Travis Caton M, Miskin N, Guenette JP. The role of computed tomography angiography as initial imaging tool for acute hemorrhage in the head and neck. *Emerg Radiol*. 2021;28(2):215-221. doi:10.1007/s10140-020-01835-9
22. Maamouri R, Ferchichi M, Houmane Y, Gharbi Z, Cheour M. Neuro-Ophthalmological Manifestations of Horner's Syndrome: Current Perspectives. *Eye Brain*. 2023;Volume 15:91-100. doi:10.2147/EB.S389630
23. Davagnanam I, Fraser CL, Miskiel K, Daniel CS, Plant GT. Adult Horner's syndrome: a combined clinical, pharmacological, and imaging algorithm. *Eye*. 2013;27(3):291-298. doi:10.1038/eye.2012.281
24. Pegge SAH, Steens SCA, Kunst HPM, Meijer FJA. Pulsatile Tinnitus: Differential Diagnosis and Radiological Work-Up. *Curr Radiol Rep*. 2017;5(1):5. doi:10.1007/s40134-017-0199-7
25. Loeys BL, Dietz HC. Loeys-Dietz Syndrome. *GeneReviews*®. Published online September 12, 2024. <https://www.ncbi.nlm.nih.gov/books/NBK1133/>
26. Byers PH. Vascular Ehlers-Danlos Syndrome. *GeneReviews*®. Published online April 10, 2025. <https://www.ncbi.nlm.nih.gov/books/NBK1494/>
27. Kleindorfer DO, Towfighi A, Chaturvedi S, et al. 2021 Guideline for the Prevention of Stroke in Patients With Stroke and Transient Ischemic Attack: A Guideline From the American Heart Association/American Stroke Association. *Stroke*. 2021;52(7):e364-e467. doi:10.1161/STR.0000000000000375
28. Searls DE, Pazdera L, Korbel E, Vysata O, Caplan LR. Symptoms and Signs of Posterior Circulation Ischemia in the New England Medical Center Posterior Circulation Registry. *Arch Neurol*. 2012;69(3):346-351. doi:10.1001/archneurol.2011.2083

29. Wang LL, Thompson TA, Shih RY, et al. ACR Appropriateness Criteria® Dizziness and Ataxia: 2023 Update. *Journal of the American College of Radiology*. 2024;21(6):S100-S125. doi:10.1016/j.jacr.2024.02.018
30. Goodfriend SD, Tadi P, Koury R. Carotid Artery Dissection. *StatPearls*. Published online December 19, 2022. <https://www.ncbi.nlm.nih.gov/books/NBK430835/>
31. Britt TB, Agarwal S. Vertebral Artery Dissection. *StatPearls*. Published online March 20, 2023. <https://www.ncbi.nlm.nih.gov/books/NBK441827/>
32. Harrigan MR. Ischemic Stroke due to Blunt Traumatic Cerebrovascular Injury. *Stroke*. 2020;51(1):353-360. doi:10.1161/STROKEAHA.119.026810
33. Teruzzi G, Santagostino Baldi G, Gili S, Guarnieri G, Montorsi P, Trabattoni D. Spontaneous Coronary Artery Dissections: A Systematic Review. *J Clin Med*. 2021;10(24):5925. doi:10.3390/jcm10245925
34. Clark M, Unnam S, Ghosh S. A review of carotid and vertebral artery dissection. *Br J Hosp Med (Lond)*. 2022;83(4):1-11. doi:10.12968/hmed.2021.0421