Cohere Medicare Advantage Policy - Computed Tomography Angiography (CTA), Neck

Clinical Guidelines for Medical Necessity Review

Version: 1
Effective Date: September 19, 2024

Important Notices

Notices & Disclaimers:

GUIDELINES ARE SOLELY FOR COHERE'S USE IN PERFORMING MEDICAL NECESSITY REVIEWS AND ARE NOT INTENDED TO INFORM OR ALTER CLINICAL DECISION-MAKING OF END USERS.

Cohere Health, Inc. ("**Cohere**") has published these clinical guidelines to determine the medical necessity of services (the "**Guidelines**") for informational purposes only, and solely for use by Cohere's authorized "**End Users**". These Guidelines (and any attachments or linked third-party content) are not intended to be a substitute for medical advice, diagnosis, or treatment directed by an appropriately licensed healthcare professional. These Guidelines are not in any way intended to support clinical decision-making of any kind; their sole purpose and intended use is to summarize certain criteria Cohere may use when reviewing the medical necessity of any service requests submitted to Cohere by End Users. Always seek the advice of a qualified healthcare professional regarding any medical questions, treatment decisions, or other clinical guidance. The Guidelines, including any attachments or linked content, are subject to change at any time without notice. This policy may be superseded by existing and applicable Centers for Medicare & Medicaid Services (CMS) statutes.

Other Notices:

Guideline Information:

Specialty Area: Diagnostic Imaging
Guideline Name: Cohere Medicare Advantage Policy Computed Tomography Angiography (CTA), Neck

Date of last literature review: 9/6/2024
Document last updated: 9/18/2024
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

Table of Contents

Medical Necessity Criteria

Service: Computed Tomography Angiography (CTA), Neck

Benefit Category

Not applicable.

Related CMS Documents

Please refer to the CMS Medicare Coverage Database for the most current applicable CMS National Coverage.

- There are no NCDs and/or LCDs for CTA Neck.

Recommended Clinical Approach

Cervicocerebral computed tomography angiography (CTA) is a clinically established and valuable procedure for identifying and characterizing vascular diseases, as well as for evaluating vascular anatomy relevant to the management of extravascular disorders. Typically, CTA focuses on evaluating the heart, arteries, or veins and necessitates a thin-section CT scan combined with intravenous injection of iodinated contrast medium. Incorporating three-dimensional rendering and multiplanar reformations are integral components of CTA examinations.[1]

CTA can serve as the primary imaging modality for disease detection or as a supplementary tool for characterizing known conditions or monitoring changes over time. Preferentially, magnetic resonance angiography (MRA) should be considered as an alternative to CTA to minimize radiation exposure, particularly in pediatric and vulnerable patient populations. CTA involves exposure to ionizing radiation and should be performed solely for medically necessary reasons and with the lowest radiation dose necessary to achieve diagnostically adequate image quality.[1]

Evaluation of Clinical Benefits and Potential Harms

Cohere Health uses the criteria below to ensure consistency in reviewing the conditions to be met for coverage of CTA of the neck. This process helps to

prevent both incorrect denials and inappropriate approvals of medically necessary services. Specifically, limiting incorrect approvals reduces the risks associated with unnecessary procedures, such as complications from surgery, infections, and prolonged recovery times.

The potential clinical harms of using these criteria may include:

- Inherent risk of procedure: There are inherent risks of imaging, including cumulative radiation exposure, contrast, allergy, nephrotoxicity, and contrast extravasation into surrounding tissues.[2-5]
- Potential danger to pregnancy: CT imaging completed during pregnancy confers a dose of ionizing radiation to the fetus and is generally only utilized when the potential benefits of this specific imaging modality outweigh the risks to the pregnancy.[6] Fetal risk includes fetal demise, intrauterine growth restriction, microcephaly, delayed intellectual development, risk of childhood cancer, and fetal thyroid injury.[6]
- Increased healthcare costs and complications from the inappropriate use of additional interventions.[7]

The clinical benefits of using these criteria include:

- Accuracy: A retrospective review of 4923 patients with blunt trauma demonstrated that performing CTA of the neck with CT or CTA of the spine identified more injuries compared to spine imaging alone.[8] CTA is also effective in diagnosing acute ischemic stroke compared to non-contrast CT.[9]
- Rapid evaluation: CTA offers fast evaluation of the vasculature of the head and neck when there is concern of acute onset of neurologic symptoms (including stroke) and blunt trauma.[10]
- Non-invasive: CTA provides excellent detail to identify and classify a lesion.[10]
- Enhanced overall patient satisfaction and healthcare experience.

This policy includes provisions for expedited reviews and flexibility in urgent cases to mitigate risks of delayed access. Evidence-based criteria are employed to prevent inappropriate denials, ensuring that patients receive medically necessary care. The criteria aim to balance the need for effective treatment with the minimization of potential harms, providing numerous clinical benefits in helping avoid unnecessary complications from inappropriate care.

In addition, the use of these criteria is likely to decrease inappropriate denials by creating a consistent set of review criteria, thereby supporting optimal patient outcomes and efficient healthcare utilization.

Medical Necessity Criteria

Indications

- ➔ **Computed tomography angiography (CTA), neck** is considered appropriate for **ANY** of the following:
  - ◆ Detection, screening, surveillance, and follow-up of vascular neck mass (e.g., paraganglioma, pulsatile neck mass [not parotid region or thyroid])[11]; **OR**
  - ◆ Tumor of vascular origin, with rich vascular supply or involving vascular structures[12-13]; **OR**
  - ◆ Trauma-related conditions as indicated by **ANY** of the following:
    - Trauma of the head with a suspected intracranial arterial injury based on clinical findings or prior imaging[14]; **OR**
    - Traumatic and non-traumatic orbital pathology with clinical or imaging findings that indicate vascular involvement[15]; **OR**
    - Traumatic injury to cervicocerebral vessels, suspected[16]; **OR**
    - Trauma-related spine injuries (cervical and upper thoracic)[17]; **OR**
    - Blunt cerebrovascular injury (BCVI) is suspected based on the mechanism and location of trauma (CTA head is also indicated with CTA neck)[17]; **OR**
    - Suspected carotid or vertebral artery dissection secondary to trauma or spontaneous due to weakness of vessel wall (CTA head is also indicated with CTA neck); **OR**
    - Traumatic vascular injury[12,18-20]; **OR**
  - ◆ Vascular conditions, known or suspected, including **ANY** of the following:
    - Arterial aneurysm; **OR**
    - Pseudoaneurysm[21-22]; **OR**
    - Atherosclerotic stenosis or occlusive disease (e.g., atherosclerotic plaque localization and characterization)[1]; **OR**
    - Cerebrovascular disease, including **ANY** of the following[22]:

        - Acute ischemic stroke with focal neurologic deficit; **OR**
        - Carotid stenosis, asymptomatic; **OR**
        - Cervical bruit, asymptomatic; **OR**
        - Cervical vascular dissection or injury, known or suspected; **OR**
        - Recent ischemic infarct; **OR**
    - Collagen vascular disease; **OR**
    - Hemorrhage (acute) including **ANY** of the following:
        - Cervical spine[23-24]; **OR**
        - Head and neck; **OR**
    - Ischemic stroke[12,18-20]; **OR**
    - Non-atherosclerotic, non-inflammatory vasculopathy (e.g., radiation vasculopathy); **OR**
    - Pulsatile tinnitus for the evaluation of vascular etiology[25-26]; **OR**
    - Subclavian artery stenosis; **OR**
    - Thromboembolism[12,18-20]; **OR**
    - Transient ischemic attack (TIA)[12,18-20]; **OR**
    - Vasculitis; **OR**
    - Vasospasm[12,18-20]; **OR**
    - Vascular anatomic variant[27]; **OR**
    - Vascular fistula; **OR**
    - Vascular malformation[28]; **OR**
    - Venous varix; **OR**
- For evaluation of **ANY** of the following uncategorized/miscellaneous symptoms when applicable:
    - Cranial neuropathy as indicated by **ANY** of the following[29]:
        - Combined lower cranial nerve syndromes (CN IX-XII); **OR**
        - Multiple different lower cranial nerve palsies; **OR**
        - Unilateral isolated weakness or paralysis of the tongue (hypoglossal nerve, CN XII); **OR**
    - Penetrating neck injury[30]; **OR**
    - Chronic recurrent vertigo associated with other brainstem neurologic deficits[31]; **OR**
- Preoperative, postoperative, or pre-treatment evaluation for **ANY** of the following[1]:
    - Surgical and radiation therapy localization, planning, and neuronavigation[32-33]; **OR**

- Vascular compression or vertebrobasilar insufficiency[34]; **OR**
- Vascular intervention and follow-up (percutaneous and surgical)[32,35-36]; **OR**

◆ Repeat imaging (defined as repeat request following recent imaging of the same anatomic region with the same modality), in the absence of established guidelines, will be considered reasonable and necessary if **ANY** of the following is **TRUE**:

- New or worsening symptoms, such that repeat imaging would influence treatment; **OR**
- One-time clarifying follow-up of a prior indeterminate finding; **OR**
- In the absence of change in symptoms, there is an established need for monitoring which would influence management.

Non-Indications

➔ **Computed tomography angiography (CTA), neck** is not considered appropriate if **ANY** of the following is **TRUE**:

◆ If contrast is used, history of anaphylactic allergic reaction to iodinated contrast media.

*NOTE: The referring professional and radiologist should discuss the risks and benefits of contrast media administration, including possible prophylaxis, in patients with chronic or worsening kidney disease or severe renal failure.
**NOTE: CT in patients with claustrophobia should be requested at the discretion of the ordering provider.
***NOTE: CT in pregnant patients should be requested at the discretion of the ordering provider and obstetric care provider.

Disclaimer on Radiation Exposure in Pediatric Population

Due to the heightened sensitivity of pediatric patients to ionizing radiation, minimizing exposure is paramount. At Cohere, we are dedicated to ensuring that every patient, including the pediatric population, has access to appropriate imaging following accepted guidelines. Radiation risk is dependent mainly on the patient's age at exposure, the organs exposed, and the patient's sex, though there are other variables. The following technical guidelines are provided to ensure safe and effective imaging practices:

Radiation Dose Optimization: Adhere to the lowest effective dose principle for

pediatric imaging. Ensure that imaging protocols are specifically tailored for pediatric patients to limit radiation exposure.[4,37]

Alternative Modalities: Prioritize non-ionizing imaging options such as ultrasound or MRI when clinically feasible, as they are less likely to expose the patient to ionizing radiation. For instance, MRI or ultrasound should be considered if they are more likely to provide an accurate diagnosis than CT, fluoroscopy, or radiography.[4,37]

Cumulative Dose Monitoring: Implement systems to track cumulative radiation exposure in pediatric patients, particularly for those requiring multiple imaging studies. Regularly reassess the necessity of repeat imaging based on clinical evaluation.[4,37]

CT Imaging Considerations: When CT is deemed the best method for achieving a correct diagnosis, use the lowest possible radiation dose that still yields reliable diagnostic images.[4,37]

Cohere Imaging Gently Guideline

The purpose of this guideline is to act as a potential override when clinically indicated to adhere to Imaging Gently and Imaging Wisely guidelines and As Low As Reasonably Possible (ALARA) principles.

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
70498	Computed tomographic angiography (CTA), of neck; with contrast material(s), including non-contrast images, if performed, and image post-processing

Medical Evidence

Tu et al. (2022) conducted a retrospective review on the utilization of head and neck computed tomography angiography (CTA) in the emergency department (ED). Head and neck CTA in the ED has shown a disproportionate increase compared to other neuroimaging examinations. The study contrasted utilization and the frequency of communicating non-routine results across different patient chief concerns. The study identified the top 50 primary concerns that led to the most CTA examinations. A total of 17903 CTAs for 833 distinct chief concerns were included, which accounts for 2.5% of 708,145 ED visits. The rates of ordering and communication of non-standard results exhibit significant variability across different chief concerns. Approximately half of the non-standard communications made by radiologists pertain to acute indications. Understanding the trends in ordering head and neck CTA and the communication of non-standard results can aid in refining patient selection and enhancing radiologist interactions in the ED setting.[38]

Paladino et al. (2021) performed a systematic review to determine the efficacy of CTA Neck in determining vascular or aerodigestive injuries (ADI). CTA covering the entire neck region is now an integral component of the standard diagnostic approach for patients with penetrating neck trauma (PNT) who do not necessitate immediate surgical intervention for ADI. While many studies have highlighted the usefulness of CTA to rule out arterial injuries, consensus is lacking regarding the capability of CTA Neck to detect ADI.[39]

Schenk et al. (2021) report on a retrospective review of stroke in young adults and the use of CTA Head and Neck diagnostic yield for anterior circulation ischemic stroke evaluation. The review included adults aged 18-50 who presented to the Mayo Clinic Rochester ED. Carotid dissection is a predominant cause of anterior circulation ischemic stroke, as evidenced by findings on CTA. Carotid webs were found to be infrequent in the patients studied, while carotid atherosclerosis was relatively rare. The presence of carotid webs, understanding their potential to trigger recurrent strokes. No significant disparity in the prevalence of carotid atherosclerosis between the symptomatic and asymptomatic sides was identified. Additionally, clinicians can recognize high-risk morphological attributes of carotid plaque observed on CT angiography, even in cases with no discernible stenosis.[40]

References

1. American College of Radiology (ACR), American Society of Neuroradiology (ASNR), Society for Pediatric Radiology (SPR). ACR–ASNR–SPR practice parameter for the performance and interpretation of cervicocerebral computed tomography angiography (CTA) - resolution 42. Updated 2020. Accessed August 6, 2024. https://www.acr.org/-/media/ACR/Files/Practice-Parameters/CervicoCerebralCTA.pdf.
2. Zhang F, Lu Z, Wang F. Advances in the pathogenesis and prevention of contrast-induced nephropathy. *Life Sci*. 2020 Oct 15;259:118379.
3. Rudnick MR, Leonberg-Yoo AK, Litt HI, Cohen RM, Hilton S, Reese PP. The controversy of contrast-induced nephropathy with intravenous contrast: what is the risk? *AJKD*. 2020 Jan 1;75(1):105-13.
4. The Image Gently Alliance. Procedures - image gentle and CT scans. Updated 2014. Accessed June 26, 2024. https://www.imagegently.org/Procedures/Computed-Tomography.
5. Summers LN, Harry ML, Colling KP. Evaluating our progress with trauma transfer imaging: repeat CT scans, incomplete imaging, and delayed definitive care. *Emerg. Radiol*. 2021 Oct;28(5):939-48.
6. Nguyen T, Bhosale PR, Cassia L, Surabhi V, Javadi S, Milbourne A, Faria SC. Malignancy in pregnancy: Multimodality imaging and treatment. *Cancer*. 2023 May 15;129(10):1479-91.
7. Kjelle E, Brandsæter IØ, Andersen ER, Hofmann BM. Cost of low-value imaging worldwide: a systematic review. Applied Health Economics and Health Policy. 2024 Mar 1:1-7.
8. Harper PR, Jacobson LE, Sheff Z, et al. Routine CTA screening identifies blunt cerebrovascular injuries missed by clinical risk factors. *Trauma Surg Acute Care Open*. 2022 Aug 26;7(1):e000924. doi: 10.1136/tsaco-2022-000924. PMID: 36101794; PMCID: PMC9422891.
9. Douglas V, Shamy M, Bhattacharya P. Should CT angiography be a routine component of acute stroke imaging? *Neurohospitalist*. 2015 Jul;5(3):97-8. doi: 10.1177/1941874415588393. PMID: 26288667; PMCID: PMC4530427.
10. Madhuripan N, Atar OD, Zheng R, et al. Computed tomography angiography in head and neck emergencies. *Semin Ultrasound CT MR*. 2017 Aug;38(4):345-356. doi: 10.1053/j.sult.2017.02.003. PMID: 28865525.
11. Expert Panel on Neurologic Imaging, Aulino JM, Kirsch CFE, et al. ACR appropriateness criteria - neck mass adenopathy. *J Am Coll Radiol*. 2019 May;16(5S):S150-S160. doi: 10.1016/j.jacr.2019.02.025. PMID: 31054741.
12. Swieton D, Kaszubowski M, Szyndler A, et al. Visualizing carotid bodies with Doppler ultrasound versus CT angiography: Preliminary study. *AJR Am J Roentgenol*. 2017 Dec;209(6):1348-1352. doi: 10.2214/AJR.17.18079. PMID: 28871807.

13. Xiao Z, Zheng Y, Li J,et al. Four-dimensional CT angiography (4D-CTA) in the evaluation of juvenile nasopharyngeal angiofibromas: Comparison with digital subtraction angiography (DSA) and surgical findings. *Dentomaxillofac Radiol*. 2017 Dec;46(8):20170171. doi: 10.1259/dmfr.20170171. PMID: 28845691.
14. Expert Panel on Neurological Imaging, Shih RY, Burns J, et al. ACR appropriateness criteria - head trauma: 2021 update. J Am Coll Radiol. 2021 May;18(5S):S13-S36. doi: 10.1016/j.jacr.2021.01.006. PMID: 33958108.
15. Expert Panel on Neurologic Imaging, Kennedy TA, Corey AS, et al. ACR appropriateness criteria - orbits vision and visual loss. J Am Coll Radiol. 2018 May;15(5S):S116-S131. doi: 10.1016/j.jacr.2018.03.023. PMID: 29724415.
16. Rutman AM, Vranic JE, Mossa-Basha M. Imaging and management of blunt cerebrovascular injury. *Radiographics*. 2018 Mar-Apr;38(2):542-563. doi: 10.1148/rg.2018170140. PMID: 29528828.
17. Expert Panel on Neurological Imaging and Musculoskeletal Imaging, Beckmann NM, West OC, et al. ACR appropriateness criteria - suspected spine trauma. *J Am Coll Radiol*. 2019 May;16(5S):S264-S285. doi: 10.1016/j.jacr.2019.02.002. PMID: 31054754.
18. Tessler RA, Nguyen H, Newton C, Betts J. Pediatric penetrating neck trauma: Hard signs of injury and selective neck exploration. *J Trauma Acute Care Surg*. 2017 Jun;82(6):989-994. doi: 10.1097/TA.0000000000001407. PMID: 28521330.
19. Todnem N, Hardigan T, Banerjee C, et al. Cephalad migration of intradural bullet from thoracic spine to cervical spine. *World Neurosurg*. 2018 Nov:119:6-9. doi: 10.1016/j.wneu.2018.06.198. PMID: 30036715.
20. Ugalde IT, Claiborne MK, Cardenas-Turanzas M, et al. Risk factors in pediatric blunt cervical vascular injury and significance of seatbelt sign. *West J Emerg Med*. 2018 Nov;19(6):961-969. doi: 10.5811/westjem.2018.9.39429. PMID: 30429928.
21. American College of Radiology (ACR), North American Society for Cardiovascular Imaging (NASCI), Society of Interventional Radiology (SIR), Society for Pediatric Radiology (SPR). ACR–NASCI–SIR–SPR practice parameter for the performance and interpretation of body computed tomography (CTA) - resolution 47. Updated 2021. Accessed August 6, 2024. https://www.acr.org/-/media/ACR/Files/Practice-Parameters/body-cta.pdf.
22. Expert Panel on Neurological Imaging, Pannell JS, Corey AS, et al. ACR appropriateness criteria - cerebrovascular diseases (stroke and stroke-related conditions). Published 2023. Accessed August 6, 2024. https://acsearch.acr.org/docs/3149012/Narrative.
23. Chakraborty S, Alhazzaa M, Wasserman JK, et al. Dynamic characterization of the CT angiographic 'spot sign'. *PLoS One*. 2014 Mar 3;9(3):e90431. doi: 10.1371/journal.pone.0090431. PMID: 24594897; PMCID: PMC3940908.

24. Rodriguez-Luna D, Dowlatshahi D, Aviv RI, et al. Venous phase of computed tomography angiography increases spot sign detection, but intracerebral hemorrhage expansion is greater in spot signs detected in arterial phase. *Stroke*. 2014 Mar;45(3):734-9. doi: 10.1161/STROKEAHA.113.003007. PMID: 24481974.
25. Expert Panel on Neurological Imaging, Jain V, Policeni B, et al. ACR appropriateness criteria - tinnitus: 2023 update. *J Am Coll Radiol*. 2023 Nov;20(11S):S574-S591. doi: 10.1016/j.jacr.2023.08.017. PMID: 38040471.
26. National Guideline Centre (UK). Evidence review for imaging to investigate the cause of non-pulsatile tinnitus: Tinnitus: assessment and management. London: National Institute for Health and Care Excellence (NICE); March 2020. PMID: 32437099; Bookshelf ID: NBK557031.
27. Sivaraju L, Mani S, Prabhu K, et al. Three-dimensional computed tomography angiographic study of the vertebral artery in patients with congenital craniovertebral junction anomalies. *Eur Spine J*. 2017 Apr;26(4):1028-1038. doi: 10.1007/s00586-016-4580-7. PMID: 27137997.
28. Singh R, Gupta V, Ahuja C, et al. Role of time-resolved-CTA in intracranial arteriovenous malformation evaluation at 128-slice CT in comparison with digital subtraction angiography. *Neuroradiol J*. 2018 Jun;31(3):235-243. doi: 10.1177/1971400917744403. PMID: 29366361.
29. Expert Panel on Neurological Imaging, Rath TJ, Policeni B, et al. ACR appropriateness criteria - cranial neuropathy. Updated 2022. Accessed August 6, 2024. https://acsearch.acr.org/docs/69509/Narrative/.
30. Expert Panels on Neurologic and Vascular Imaging, Schroeder JW, Ptak T, et al. ACR appropriateness criteria - penetrating neck injury. *J Am Coll Radiol*. 2017 Nov;14(11S):S500-S505. doi: 10.1016/j.jacr.2017.08.038. PMID: 29101988.
31. Expert Panel on Neurologic Imaging, Wang LL, Thompson TA, et al. ACR appropriateness criteria - dizziness and ataxia. Published 2023. Accessed August 6, 2024. https://acsearch.acr.org/docs/69477/Narrative/.
32. Wada K, Nawashiro H, Ohkawa H, et al. Feasibility of the combination of 3D CTA and 2D CT imaging guidance for clipping microsurgery of anterior communicating artery aneurysm. *Br J Neurosurg*. 2015 Apr;29(2):229-36. doi: 10.3109/02688697.2014.967748. PMID: 25299789.
33. Srinivasan VM, Schafer S, Ghali MG, Arthur A, Duckworth EA. Cone-beam CT angiography (Dyna CT) for intraoperative localization of cerebral arteriovenous malformations. *J Neurointerv Surg*. 2016 Jan;8(1):69-74. doi: 10.1136/neurintsurg-2014-011422. PMID: 25480885.
34. Jost GF, Dailey AT. Bow hunter's syndrome revisited: 2 new cases and literature review of 124 cases. *Neurosurg Focus*. 2015 Apr;38(4):E7. doi: 10.3171/2015.1.FOCUS14791. PMID: 25828501.
35. Bal S, Bhatia R, Shobha N, et al. Stroke- on- awakening: Safety of CT-CTA based selection for reperfusion therapy. *Can J Neurol Sci*. 2014 Mar;41(2):182-6. doi: 10.1017/s0317167100016553. PMID: 24534028.

36. Nambiar V, Sohn SI, Almekhlafi MA, et al. CTA collateral status and response to recanalization in patients with acute ischemic stroke. *AJNR Am J Neuroradiol*. 2014 May;35(5):884-90. doi: 10.3174/ajnr.A3817. PMID: 24371030; PMCID: PMC7964545.
37. National Cancer Institute. Radiation risks and pediatric computed tomography (CT): A guide for health care. Updated September 4, 2018. Accessed August 6, 2024. https://www.cancer.gov/about-cancer/causes-prevention/risk/radiation/pediatric-ct-scans.
38. Tu LH, Malhotra A, Venkatesh AK, et al. Head and neck CTA utilization: Analysis of ordering frequency and nonroutine results communication, with focus on the 50 most common emergency department clinical presentations. *AJR Am J Roentgenol*. 2022 Mar;218(3):544-551. doi: 10.2214/AJR.21.26543. PMID: 34585611.
39. Paladino L, Baron BJ, Shan G, et al. Computed tomography angiography for aerodigestive injuries in penetrating neck trauma: A systematic review. *Acad Emerg Med*. 2021 Oct;28(10):1160-1172. doi: 10.1111/acem.14298. PMID: 34021515.
40. Schenk WB, Brinjikji W, Larson AS, et al. Diagnostic yield of neck CT angiography in young adults with anterior circulation ischemic stroke: A community based study. *Neurohospitalist*. 2021 Apr;11(2):119-124. doi: 10.1177/1941874420974542. PMID: 33791054; PMCID: PMC7958676.

Clinical Guideline Revision History/Information

Original Date: September 19, 2024		
Review History		