Cohere Medical Policy - Computed Tomography (CT), Neck (Soft Tissue)

Clinical Policy for Medical Necessity Review

Version: 4
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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.

Other Notices:

Policy Information:

Specialty Area: Diagnostic Imaging
Policy Name: Computed Tomography (CT), Neck (Soft Tissue)
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

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Medical Necessity Criteria

Service: Computed Tomography (CT), Neck (Soft Tissue)

Cohere Health takes an evidence-based approach to reviewing imaging and procedure requests, meaning that sufficient clinical information must be provided at the time of submission to determine medical necessity. Documentation must include a recent and detailed history, physical examination related to the onset or change in symptoms, relevant lab results, prior imaging, and details of previous treatments. Advanced imaging or procedures should be requested after a clinical evaluation by the treating provider, which may include a referral to a specialist.

- When a specific clinical indication is not explicitly addressed in the Cohere Health medical policy, medical necessity will be determined based on established clinical best practices, as supported by evidence-based literature, peer-reviewed sources, professional society guidelines, and state or national recommendations, unless otherwise directed by the health plan.
- Requests submitted without clinical documentation, or those that do not align with the provided clinical information—such as mismatched laterality, body part, or CPT code—may be denied for lack of medical necessity due to insufficient or inconsistent clinical information.
- Repeat diagnostic testing due to technical issues—such as patient motion, incomplete exams, or incorrect imaging sequences—may not be considered medically necessary, as it is the responsibility of the imaging center to deliver appropriate, high-quality studies as originally authorized. Similarly, repeat imaging requested at a different facility based solely on provider preference may not be approved for medical necessity.
- When there are multiple diagnostic or therapeutic procedures requested simultaneously or within the past three months, each will be reviewed independently. Clinical documentation must clearly justify all of the following:
    - The medical necessity of each individual request

    - Why prior imaging or procedures were inconclusive or why additional/follow-up studies are needed
    - How the results will impact patient management or treatment decisions
- Requests involving adjacent or contiguous body parts may be considered not medically necessary if the documentation demonstrates that the patient's primary symptoms can be adequately assessed with a single study or procedure.
- Cohere Health evaluates imaging exams based on medical necessity, regardless of contrast use. If an initial non-contrast study is completed and the radiologist later determines that contrast is needed to clarify a finding, the original authorization number may be used—provided the contrast-enhanced exam is performed at the same imaging center and within the original request's validity period, unless otherwise directed by the health plan.

Description

Computed tomography (CT) is a radiological method for assessing various conditions affecting the head and neck outside the skull. Its utilization should be limited to genuine medical necessities, minimizing radiation exposure while ensuring an effective examination. Supplementary or specialized tests might be warranted. While CT may not identify all abnormalities, adherence to specified criteria enhances the likelihood of their detection. CT is often the first-line advanced imaging modality for many neck disorders due to its speed, availability, and high resolution. CT Neck for soft tissue evaluation is routinely performed with contrast; compared to magnetic resonance imaging (MRI), CT is less sensitive to patient motion.[1]

Medical Necessity Criteria

Indications

Computed tomography (CT), neck (soft tissue) is considered appropriate if **ANY** of the following is **TRUE**:

- Initial staging, treatment assessment, and surveillance of known malignant conditions in the neck (e.g., nasopharynx, oropharynx, hypopharynx, larynx, salivary glands, jaw, oral cavity)[1]; **OR**
- Thyroid masses or goiter when ultrasound is nondiagnostic or requires further work-up; **OR**
- Mass or lymphadenopathy when **ANY** of the following is **TRUE**[2]:
    - Has been present for at least 2 weeks; **OR**

    - Not felt to be due to infection; **OR**
    - Mass does not resolve after treatment with antibiotics for suspected infection; **OR**
    - Lymphadenopathy or mass is larger than 1.5 cm; **OR**
    - Ulceration of skin over the mass; **OR**
    - Mass or lesion detected on laryngoscopy; **OR**
- Assessment of signs and symptoms, when endoscopy or fluoroscopic examination is inconclusive or requires additional evaluation for **ANY** of the following:
    - Odynophagia (throat pain); **OR**
    - Vocal cord paralysis, recent voice change, or hoarseness; **OR**
    - Cranial neuropathy of cranial nerves (CN) 9-11[1]; **OR**
    - Hemoptysis; **OR**
    - Weight loss; **OR**
    - Ear pain unexplained by otolaryngologic evaluation and a trial of conservative therapy (e.g., topical and systemic antibiotics, ear drops); **OR**
- Infectious conditions (e.g., tonsillitis, epiglottitis, cellulitis) when **ANY** of the following is **TRUE**:
    - Suspected compromise of the airway; **OR**
    - Surgery is planned; **OR**
    - Not improving with appropriate therapy; **OR**
- Suspected Ludwig's angina (rapidly progressive bacterial infection of the floor of the mouth); **OR**
- Localization of parathyroid adenoma (including 4-D parathyroid CT) when lab tests indicate primary hyperparathyroidism and neck ultrasound and Sestamibi scan (nuclear medicine scan) are normal or nondiagnostic[3,4]; **OR**
- Presurgical evaluation, planning, or guidance, including radiation planning[1]; **OR**
- Postoperative dysphagia following surgery on the oropharynx, esophagus, cervical spine or stomach; **OR**
- Evaluation for **ANY** of the following[5]:
    - Trauma that is not related to the cervical spine; **OR**
    - Suspected Eagle's syndrome when a long styloid process is detected on prior imaging; **OR**
    - Foreign body when initial radiographs are nondiagnostic; **OR**

    - Suspected extracapsular spread of a tumor into the surrounding neck structures; **OR**
    - Suspected recurrent thyroid cancer or rising thyroglobulin, with negative ultrasound and physical exams to detect occult neck nodes; **OR**
- Repeat imaging (defined as a repeat request following recent imaging of the same anatomic region with the same or similar modality) will be considered reasonable and necessary if **ALL** of the following are **TRUE**:
    - There are no established guidelines; **AND**
    - **ANY** of the following:
        - There are new or worsening symptoms not addressed in the guidelines, such that repeat imaging would influence treatment; **OR**
        - There is need for a 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 (CT), neck (soft tissue) is not considered appropriate if **ANY** of the following is **TRUE**:

- The patient has undergone advanced imaging of the same body part within 3 months without undergoing treatment or developing new or worsening symptoms.[6]

*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.[7]
**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 Populations

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.[8,9]

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.[8,9]

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.[8,9]

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.[8,9]

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
70490	Computed tomography (CT), soft tissue neck; without contrast material
70491	Computed tomography (CT), soft tissue neck; with contrast material(s)
70492	Computed tomography (CT), soft tissue neck; without contrast material, followed by contrast material(s) and further sections
76380	Computed tomography, limited or localized follow-up study

Medical Evidence

Bedernik et al. (2022) conducted a randomized control trial (RCT) to assess image quality by comparing single-energy computed tomography (SECT) with automated tube voltage adaptation (TVA) to dual-energy CT (DECT) weighted average images. A total of 80 patients underwent SECT or radiation dose-matched DECT. The effective radiation dose (ED) showed no significant difference between the SECT and DECT study groups. Compared to the SECT group, the DECT group exhibited significantly higher contrast-to-noise ratio differences (CNRD) for jugular veins relative to fatty tissue and muscle tissue relative to fatty tissue. However, the CNRD for jugular veins relative to muscle tissue was comparable between groups. Image artifacts were also less pronounced, and overall diagnostic acceptability was higher in the DECT group. Overall, DECT-weighted average images demonstrate superior objective and subjective image quality compared to SECT performed with TVA in head and neck imaging.[10]

Smith-Bindman et al. (2020) performed an RCT to study the efficacy of interventions to lower the amount of radiation exposure in patients. The RCT included 864,080 adults at 100 facilities who underwent a CT scan, including head CT (n = 1,156,657 scans). The study included two primary measures: the percentage of high-dose CT scans and the average effective dose administered at the facility level. The study's secondary measure included the doses received by specific organs. Outcomes were assessed with respect to the impact of the interventions and outcomes postintervention. Data were contrasted with preintervention data, utilizing hierarchical generalized linear models that accounted for temporal patterns and patient attributes. In conclusion, data regarding CT radiation dosage and practical recommendations may improve quality, including significant dose reductions, especially for organ-specific doses.[11]

Baba et al. (2022) published a systematic review related to advanced imaging of head and neck infections. The authors state that contrast-enhanced CT is the primary and standard imaging modality of choice for head and neck infections. They state that magnetic resonance imaging (MRI) does have advantages compared to CT, including less artifact related to dental treatment and higher contrast resolution. Intracranial

spread of head and neck infections is better detected by MRI. Technological developments in mitigating dental-related artifact on CT have been shown to be effective. Subtraction technique CT has been found to be useful in evaluating skull base invasive nasopharyngeal carcinoma, skull base osteomyelitis, and evaluation of recurrence and spread of middle ear cholesteatoma.[12]

References

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Policy Revision History/Information

Original Date: May 6, 2022		
Review History		
Version 2	08/08/2024	Annual review and policy restructure. Updated indications, non-indications, medical evidence section, references
Version 3	10/30/2024	Edited repeat imaging criteria language.
Version 4	08/21/2025	Annual review Updated content layout to align with revised template, including repeat imaging criteria Expanded references throughout criteria