Cohere Medicare Advantage Policy - Computed Tomography (CT), Orbit/Ear/Sella

Clinical Policy for Medical Necessity Review

Version: 2.1
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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. This policy may be superseded by existing and applicable Centers for Medicare & Medicaid Services (CMS) statutes.

Other Notices:

Policy Information:

Specialty Area: Diagnostic Imaging
Policy Name: Computed Tomography (CT), Orbit/Ear/Sella
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

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Medical Necessity Criteria

Service: Computed Tomography (CT), Orbit/Ear/Sella

Related CMS Documents

Please refer to CMS Medicare Coverage Database for the most current applicable CMS National Coverage.[1-3]

- National Coverage Determination (NCD). Computed Tomography (220.1)
- Local Coverage Determination (LCD). MRI and CT Scans of the Head and Neck (L37373)
    - Billing and Coding: MRI and CT Scans of the Head and Neck (A57204)

Description

Computed tomography (CT) is a common noninvasive imaging modality that allows for the visualization of the extracranial head. It allows for the evaluation of the morphology and pathology of extracranial structures. It can be performed both with and without contrast, depending on the structures being visualized.[6]

Medical Necessity Criteria

Indications

Computed tomography (CT), orbit/ear/fossa is considered appropriate if **ANY** of the following is **TRUE**[4]:

- Orbital indications, including **ANY** of the following:
  - Trauma-related conditions, including traumatic visual defect with suspected orbital injury[5]; **OR**
  - **ANY** of the following if magnetic resonance imaging (MRI) is contraindicated or cannot be performed:
    - Congenital conditions (e.g., capillary hemangioma, optic nerve hypoplasia); **OR**
    - Optic neuritis; **OR**
    - Eye pain, with history or other sign or symptom, indicating nonischemic pathology; **OR**
    - Ophthalmoplegia; **OR**
    - Eye movement abnormality in a child (e.g., strabismus, nystagmus in a child 6 months or older); **OR**
    - Vision loss or visual field deficit with history or other signs or symptoms indicating non-ischemic intra-orbital pathology; **OR**
    - Orbital infectious process, suspected or known, that has failed medical management (e.g., orbital cellulitis not responding appropriately to antibiotics) or patient is pediatric or immunocompromised; **OR**
  - Conditions, known or suspected, including **ANY** of the following[5]:
    - Initial staging, treatment response, surveillance, complication, recurrence, treatment planning, or treatment response of an orbital mass (e.g., dermoid, melanoma, lymphoma, metastases)[6]; **OR**
    - Orbital pseudotumor or orbital inflammatory disease; **OR**
    - Osseous lesions (e.g., fibrodysplasia, Paget's); **OR**
    - Foreign body, suspected clinically or seen on prior imaging; **OR**
    - Scleritis confirmed clinically with failure of medical management or with complication suspected[7]; **OR**
    - Uveitis, confirmed clinically with complication suspected; **OR**
    - Thyroid orbitopathy; **OR**
    - Venous conditions (e.g., orbital varices); **OR**

- Additional evaluation is needed when etiology remains unclear following a complete eye examination that includes funduscopy, including **ANY** of the following:
  - Diplopia; **OR**
  - Enophthalmos[8]; **OR**
  - Exophthalmos; **OR**
  - Orbital asymmetry; **OR**
  - Pre-septal or post-septal orbital mass, otherwise unexplained; **OR**
  - Proptosis; **OR**
  - Unilateral papilledema; **OR**
  - Orbital hemorrhage; **OR**
- Preoperative, postoperative, or pre-treatment evaluation for surgery, radiation, or chemotherapy; **OR**

- Temporal bone and inner ear indications including **ANY** of the following:
  - Conditions, known or suspected, including **ANY** of the following[9]:
    - Aberrant and symptomatic congenital or acquired anatomy (e.g., stenosis of the external auditory canal [EAC] or dehiscence of the superior semicircular canal, facial nerve canal, carotid canal, or jugular bulb); **OR**
    - Cholesteatoma, initial and 9 to 12-month postoperative follow-up; **OR**
    - Tympanosclerosis; **OR**
    - Neoplastic conditions, detection, and follow-up (including tumors of the internal or external auditory canal, inner ear, and mastoid); **OR**
    - Otitis media, recurrent with at least 3 episodes in the past 12 months, with complications suspected (e.g., hearing loss, intracranial extension, mastoiditis)[10]; **OR**
    - Malignant otitis externa (also known as skull base osteomyelitis or necrotizing otitis externa) is suspected[11]; **OR**
    - Complicated otitis media, unresponsive to antibiotics, with new or worsening symptoms (e.g., headache, vertigo, neck rigidity or neurologic deficits)[11]; **OR**
    - Mastoiditis; **OR**
    - Other infectious processes involving the middle or inner ear, where imaging is needed to direct appropriate management; **OR**
    - Bell's palsy or other facial nerve abnormalities requiring evaluation of the extracranial portion of the nerve (when MRI is contraindicated or cannot be performed); **OR**

        - Tinnitus, unexplained by history or physical examination, and is worsening or affects daily function (when MRI is contraindicated or cannot be performed)[12]; **OR**
    - Symptoms or signs evaluated by complete auditory examination, including **ANY** of the following[9]:
        - Conductive, mixed-conductive, or congenital hearing loss; **OR**
        - Sensorineural hearing loss, acquired or congenital (when MRI is contraindicated or cannot be performed); **OR**
        - Total deafness, otherwise unexplained; **OR**
        - Vertigo, unexplained by history or physical examination with **ANY** of the following:
            - Worsening; **OR**
            - Affects daily function; **OR**
            - Associated hearing loss or other neurological deficits; **OR**
            - History of prior infection (e.g., otitis or meningitis); **OR**
            - History of prior trauma; **OR**
    - Trauma-related conditions related to the ear, including evaluation of cerebrospinal fluid leak[12-14]; **OR**
    - Preoperative, postoperative, or pre-treatment evaluation for surgery, radiation, or chemotherapy (including evaluation for cochlear implant); **OR**
    - Vascular conditions, known or suspected, related to the ear or temporal bone[15]; **OR**
    - Pulsatile tinnitus, when magnetic resonance angiography (MRA), computed tomography angiography (CTA), or magnetic resonance imaging (MRI) contraindicated or cannot be performed[16]; **OR**
- Sellar and posterior fossa indications, including **ANY** of the following:
    - Sellar mass (including pituitary masses) is suspected due to documented clinical or laboratory findings (e.g., prolactinemia); **OR**
    - Visual field deficit (e.g., bitemporal hemianopsia) indicating optic nerve compression, when MRI is contraindicated or cannot be performed; **OR**
    - Other neoplastic conditions, known, suspected, or suggested by prior imaging (e.g., meningioma); **OR**
    - Trauma-related conditions; **OR**
    - Pituitary dysfunction, suggested by documented laboratory or clinical abnormalities (e.g., pituitary failure due to conditions such as pituitary apoplexy); **OR**
    - Vascular conditions, known or suspected, including aberrant anatomy;

OR

- Preoperative, postoperative, or pre-treatment evaluation for surgery, radiation, or chemotherapy (including preoperative planning for removal of the pituitary tumor); **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), orbit/ear/fossa is not considered appropriate if **ANY** of the following is **TRUE**[17]:

- The patient has undergone advanced imaging of the same body part within 3 months without undergoing treatment or developing new or worsening symptoms[18].

*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 pregnant patients should be requested at the discretion of the ordering provider and obstetric care provider.
***NOTE: CT in patients with claustrophobia should be requested at the discretion of the ordering 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.[19-20]

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.[19-20]

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.[19-20]

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.[19-20]

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
70480	Computed tomography (CT), orbit, sella, or posterior fossa or outer, middle, or inner ear; without contrast material
70481	Computed tomography (CT), orbit, sella, or posterior fossa; with contrast material(s)
70482	Computed tomography (CT), orbit, sella, or posterior fossa; without contrast material, followed by contrast material(s) and further sections
76380	Computed tomography, limited or localized follow-up study

Disclaimer: S Codes are non-covered per CMS guidelines due to their experimental or investigational nature.

Evaluation of Clinical Harms and Benefits

Clinical determinations for Medicare Advantage beneficiaries are made in accordance with 42 CFR 422.101 guidance outlining CMS's required approach to decision hierarchy in the setting of NCDs/LCDs identified as being "not fully established". When clinical coverage criteria are "not fully established" Medicare Advantage organizations are instructed to create publicly accessible clinical coverage criteria based on widely-accepted clinical guidelines and/or scientific studies backed by a robust clinical evidence base. Clinical coverage criteria provided by Cohere Health in this manner include coverage rationale and risk/benefit analysis.

The potential clinical harms of using these criteria for orbit/ear/sella CT 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.[21-24]
- 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.[25] Fetal risk includes fetal demise, intrauterine growth restriction, microcephaly, delayed intellectual development, risk of childhood cancer, and fetal thyroid injury.[25]
- Increased healthcare costs and complications from the inappropriate use of additional interventions.[26]

The clinical benefits of using these criteria for orbit/ear/sella CT include:

- Weighted average head and neck images acquired using dual-energy CT (DECT) demonstrate superior objective and subjective image quality compared to single-energy computed tomography (SECT) performed with tube voltage adaptation (TVA).[27]
- CT radiation doses vary across imaging facilities and are often higher than needed. However, detailed feedback on CT radiation dose combined with actionable suggestions and quality improvement

education significantly reduces radiation doses, particularly organ doses.[28]

- A CT assessment tool developed to assess soft tissue damage secondary to tumor, surgery, or radiation, in patients with lymphedema and fibrosis (LEF) following treatment for head and neck cancer provides a standardized method for assessing critical sites affected by LEF.[29]
- Cone-beam CT with a large field of view can accurately identify craniofacial anomalies and quantify asymmetries between the nonaffected and affected sides of the face in Goldenhar syndrome, a rare disease with hemifacial microsomia and craniofacial disorders including auricular anomalies, for an efficient maxillofacial treatment planning.[30]
- Enhanced overall patient satisfaction and healthcare experience.

Medical Evidence

Bedernik et al. (2022) conducted a randomized controlled 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 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.[27]

Smith-Bindman et al. (2020) performed an RCT to study the efficacy of interventions to lower radiation doses in patients undergoing a CT scan. The RCT included 864,080 adults at 100 facilities who underwent a CT scan, including CT of the head (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. The authors examined the change in outcomes following interventions, contrasting the data 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.[28]

Aulino et al. (2018) reported on a clinical trial that focused on an assessment tool for the late effect continuum of lymphedema and fibrosis (LEF) for patients with head and neck cancer (HNC) undergoing CT. The tool evaluates areas of soft tissue damage resulting from tumors, surgical interventions, or radiation therapy. The tool analyzed CT scans taken before and after treatment in 10 patients with HNC. The finalized tool has 11 elements, including

assessing fat stranding at six specific sites, measuring epiglottic thickness, and measuring prevertebral soft tissue thickness at C3. The trial included 176 CT scans from 20 patients (with a range of 4-14 scans per patient). The final version of the LEF assessment tool (CT-LEFAT) offers a standardized approach to assess critical sites affected by soft tissue damage. Studies continue to evaluate reliability and validity.[29]

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Policy Revision History/Information

Original Date: October 17, 2024		
Review History		
Version 2	10/02/2025	Annual review. Expanded reference list and reordered references to reflect order of first appearance in policy. Updated definitions. Clarified criteria for otitis media, otitis externa, and pulsatile tinnitus. Removed relative contraindications (contrast allergy, metallic clips, incompatible implantable devices, metallic foreign body)
Version 2.1	11/20/2025	Per CMS updates for 10/23/2025: L35175 and A57215 retired by CMS and removed from policy. L37373 and A57204 updated by CMS without criteria changes, updated links and references.