# **CARESOURCE**

## Specific policy administered by National Imaging Associates, Inc. (NIA)

Clinical guidelines	
FOLLOW-UP, LIMITED, OR LOCALIZED CT	
CPT Codes: 76380	Original Date: September 1997
Guideline Number: CareSource_CG_009	Last Revised Date (by CareSource): September 2022 Last Reviewed Date (by NIA):
	September 2022  Implementation Date: January 2023

## For Ohio Medicaid members only

#### **INDICATIONS FOR SINUS & MAXILLOFACIAL CT**

### Rhinosinusitis

(Brook, 2019; Chiarella, 2017; Kaplan, 2013; Rosenfeld, 2015)

- Symptoms that persist for more than 4 weeks and are not responding to medical management (e.g., 2 or more courses of antibiotics or any combination of antibiotics, steroids, or antihistamines for more than 4 weeks
- Clinical suspicion of fungal infection (ACR, 2017; Silveira, 2019)
- Clinical suspicion of complications (Dankbaar, 2015), such as
  - o Preseptal, orbital, or intracranial infection (Kastner, 2014)
  - Osteomyelitis
  - o Cavernous sinus thrombosis
- Recurrent acute rhinosinusitis with 4 or more annual episodes without persistent symptoms in between
- Chronic recurrent sinusitis (symptoms for >12 weeks) not responding to at least 4 weeks of medical management and with at least two of the following:
  - mucopurulent discharge
  - o nasal obstruction and congestion
  - o facial pain, pressure, and fullness
  - decreased or absent sense of smell

- If suspected as a cause of poorly controlled asthma (endoscopic sinus surgery improves outcomes) (Vashishta, 2013)
- To evaluate in the setting of unilateral nasal polyps or obstruction (to evaluate for a potential neoplasm) (Rosenfeld, 2015)

#### **Pediatrics Rhinosinusitis**

(Tekes, 2018; Wald, 2013)

- Persistent or recurrent sinusitis not responding to treatment (primarily antibiotics, treatment may require a change of antibiotics)
- Suspicion of orbital or central nervous system involvement (e.g., swollen eye, proptosis, altered consciousness, seizures, nerve deficit)
- Clinical suspicion of a fungal infection (more common in immunocompromised children)

**Deviated nasal septum, polyp, or other** structural abnormality seen on imaging or direct visualization that may be causing significant airway obstruction (if needed to plan surgery or determine if surgery is appropriate) (Poorey, 2014; Sedaghat, 2015)

**Suspected sinonasal mass** based on exam, nasal endoscopy, or prior imaging with contraindication to MRI or if bony involvement suspected (Kirsch, 2017; Rosenfeld, 2015)

**Refractory Asthma** - these patients benefit from medical treatment and surgery together (Ragab, 2006; Sahay, 2016; Vashishta, 2013)

**Anosmia or Dysosmia** noted on objective testing, is persistent, of unknown origin and MRI cannot be performed (Allis, 2012; Geyer, 2008; Kirsch, 2017)

## Suspected infection

- Osteomyelitis (after x-rays, MRI cannot be performed) (Pincus, 2009)
- Abscess

#### **Face mass**

(Kirsch, 2017; Koeller 2016)

- Present on physical exam and remains non-diagnostic after x-ray or ultrasound is completed; OR
- Known or highly suspected head and neck cancer on examination (Kirsch, 2017)
- Failed 2 weeks of treatment for suspected infectious adenopathy (Haynes, 2015)

## **Facial trauma**

(ACR, 2015, 2019; Echo, 2010; Oh, 2017; Raju, 2017; Vemuri, 2017)

Severe facial trauma

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- Suspected facial bone fracture with indeterminate x-ray
- For further evaluation of a known fracture for treatment or surgical planning
- CSF (cerebrospinal fluid) rhinorrhea when looking to characterize a bony defect (for CSF otorrhea should be a Temporal Bone CT; for intermittent leaks and complex cases, consider CT/MRI/Nuclear Cisternography). CSF fluid should always be confirmed with laboratory testing (Beta-2 transferrin assay)

## Salivary gland

- Suspicion of salivary gland stones or clinical concern for abscess (Gadodia, 2011; Kalia, 2015; Terraz, 2013)
- Sialadenitis with indeterminate ultrasound or bilateral symptoms (Abdel Razek, 2017)

**Granulomatosis** with polyangiitis (Wegener's granulomatosis) disease (Pakalniskis, 2015)

## Suspected Osteonecrosis of the Jaw

(Popovic, 2010)

 Possible etiologies: bisphosphonate treatment, dental procedures, Denosumab, radiation treatment

**Lesion seen on x-ray or other study** requiring further characterization (primary or secondary bone tumor, metabolic disorder) (Andreu-Arasa, 2018)

**Trigeminal neuralgia/neuropathy** if MRI is contraindicated or cannot be performed (for evaluation of the extracranial nerve course)

• If atypical features (i.e., bilateral, hearing loss, dizziness/vertigo, visual changes, sensory loss, numbness, pain > 2min, pain outside trigeminal nerve distribution, progression) (ACR, 2017; Borges, 2020; Policeni, 2017)

### Pre-operative/procedural evaluation

• Pre-operative evaluation for a planned surgery or procedure

## Post-operative/procedural evaluation

 When imaging, physical, or laboratory findings indicate surgical or procedural complications

## **COMBINATION OF STUDIES WITH SINUS & MAXILLOFACIAL CT**

### Sinus CT/Chest CT

 Granulomatosis with polyangiitis (Wegener's granulomatosis) disease (GPA) (Jang, 2013; Lohrmann, 2006).

#### **BACKGROUND**

Computed tomography (CT) primarily provides information about bony structures but may also be useful in evaluating soft tissue masses. It can help document the extent of facial bone fractures, facial infections, and abscesses, and can aid in diagnosing salivary stones. Additionally, CT may be useful in characterizing and identifying tumor extent in the face and may be used in the assessment of chronic osteomyelitis.

CT scans can provide more detailed information about the anatomy and abnormalities of the paranasal sinuses than plain films. A CT scan provides greater definition of the sinuses and is more sensitive than plain radiography for detecting sinus pathology, especially within the sphenoid and ethmoid sinuses. CT scan findings can be nonspecific, however, and should not be used routinely in the diagnosis of acute sinusitis. The primary role of CT scans is to aid in the diagnosis and management of recurrent and chronic sinusitis, or to define the anatomy of the sinuses prior to surgery.

Anosmia - Nonstructural causes of anosmia include post viral symptoms, medications (Amitriptyline, Enalapril, Nifedipine, Propranolol, Penicillamine, Sumatriptan, Cisplatin, Trifluoperazine, Propylthiouracil). These should be considered prior to advanced imaging to look for a structural cause. Anosmia and dysgeusia have been reported as common early symptoms in patients with COVID-19, occurring in greater than 80 percent of patients. For isolated anosmia, imaging is typically not needed once the diagnosis of COVID has been made given the high association. As such, COVID testing should be done prior to imaging (Geyer, 2008; Lechien, 2020; Saniasiaya, 2020).

Suspected Osteonecrosis of the Jaw - CT can characterize the extension of the lesions and in detecting cortical involvement. MRI should be reserved for those patients who have soft tissue extension of the disease (Phal, 2007).

#### **OVERVIEW**

Don't order sinus computed tomography (CT) or indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis (AAAAI, 2012). Viral infections cause the majority of acute rhinosinusitis and only 0.5 percent to 2 percent progress to bacterial infections. Most acute rhinosinusitis resolves without treatment in two weeks. Uncomplicated acute rhinosinusitis is generally diagnosed clinically and does not require a sinus CT scan or other imaging. Antibiotics are not recommended for patients with uncomplicated acute rhinosinusitis who have mild illness and assurance of follow-up. If a decision is made to treat, amoxicillin should be first-line antibiotic treatment for most acute rhinosinusitis.

CT instead of MRI – MRI allows better differentiation of soft tissue structures within the sinuses. It is used occasionally in cases of suspected tumors or fungal sinusitis. Otherwise, MRI has no advantages over CT scanning in the evaluation of sinusitis. Disadvantages of MRI include high false-positive findings, poor bony imaging, and higher cost. MRI scans take considerably longer to accomplish than CT scans and may be difficult to obtain in patients who are claustrophobic.

## **POLICY HISTORY**

Date	Summary
April 2021	Updated background section and references Added:
	<ul> <li>Chronic recurrent sinusitis (symptoms for &gt;12 weeks) not responding to at least 4 weeks of medical management and with at least two of the following:</li> </ul>
	o mucopurulent discharge
	<ul> <li>nasal obstruction and congestion</li> </ul>
	o facial pain, pressure, and fullness
	o decreased or absent sense of smell
	Facial Trauma- For further evaluation of a known fracture for
	treatment or surgical planning
	Suspected sinonasal mass based on exam, nasal endoscopy, or prior imaging with contraindication to MRI or if bony involvement suspected      Discouries
	Dysosmia     Sieledonitie with indeterminate ultrace and or hilateral superteres
	Sialadenitis with indeterminate ultrasound or bilateral symptoms     Clarified:
	<ul> <li>Rhinosinusitis - Symptoms that persist for more than 4 weeks and are not responding to medical management (e.g. 2 or more courses of antibiotics or any combination of antibiotics, steroids or antihistamines for more than 4 weeks</li> </ul>
	• CSF (cerebrospinal fluid) rhinorrhea when looking to characterize a bony defect (for CSF otorrhea should be a Temporal Bone CT; for intermittent leaks and complex cases consider CT/MR/Nuclear Cisternography). CSF fluid should always be confirmed with laboratory testing (Beta-2 transferrin assay)
	Suspicion of salivary gland stones
	Deleted:
	For poorly controlled asthma associated with upper respiratory
	tract infection. May be performed without failing 4 consecutive weeks of treatment with medication.
	Trigeminal neuralgia – if Age < 40
May 2020	<ul> <li>Updated references; Updated and reordered background information</li> </ul>
	Reordered and reformatted indications

#### Clarified:

- Reworded: Rhinosinusitis: Clinical suspicion of complications, such Preseptal, orbital or intracranial infection, Osteomyelitis, Cavernous sinus thrombosis
- Deviated nasal septum, polyp, or other structural abnormality seen on imaging or direct visualization that may be causing significant airway obstruction (if needed to plan surgery or determine if surgery is appropriate)
- Refractory Asthma (Sinus CT) these patients benefit from medical treatment and surgery together
- Anosmia noted on objective testing, is persistent, of unknown origin and MRI cannot be done
- Suspected infection: Osteomyelitis (after x-rays, MRI cannot be done)

Facial trauma: Post traumatic CSF (cerebrospinal fluid) rhinorrhea (for CSF otorrhea should be a Temporal Bone CT)

#### Added:

- Rhinosinusitis
  - Recurrent acute rhinosinusitis with 4 or more annual episodes without persistent symptoms in between
  - If suspected as a cause of poorly controlled asthma (endoscopic sinus surgery improves outcomes)
     (Vashishta, 2013)
  - To evaluate in the setting of unilateral nasal polyps or obstruction (to evaluate for a potential neoplasm)
     (Rosenfeld, 2015)
- Pediatrics Rhinosinusitis (ACR, 2018; Wald, 2013)
  - Persistent or recurrent sinusitis not responding to treatment (primarily antibiotics, treatment may require a change of antibiotics)
  - Suspicion of orbital or central nervous system involvement (e.g., swollen eye, proptosis, altered consciousness, seizures, nerve deficit) (Ward, 2013)
  - Clinical suspicion of a fungal infection (more common in immunocompromised children).

#### Added:

- Suspected Osteonecrosis of the Jaw (Popovic, 2010)
  - Possible etiologies: biphosphonate treatment, dental procedures, Denosumab, radiation treatment)
  - CT can characterize the extension of the lesions and in detecting cortical involvement. MRI should be reserved

for those patients who have soft tissue extension of the disease • Lesion seen on xray or other study requiring further characterization (primary or secondary bone tumor, metabolic disorder) • Trigeminal neuralgia/neuropathy if MRI is contraindicated or cannot be performed (for evaluation of the extracranial nerve course) If < 40 years of age or atypical features (ie bilateral,</li> hearing loss, dizziness/vertigo, visual changes, sensory loss, numbness, pain > 2min, pain outside trigeminal nerve distribution, progression) (Policeni, 2017; Hughes, 2016; ACR CN, 2017) Added: Suspected infection: Abscess • Face mass: Known or highly suspected head and neck cancer on examination Facial trauma: Severe facial trauma Deleted: • Symptoms persist after four (4) **consecutive** weeks of medication, e.g., antibiotics, steroids or anti-histamines Clinical Suspicion of osteomyelitis: Direct visualization of lesion over bone Deleted: Face Mass Unless increased risk for malignancy based on Any of these: Fixation to adjacent tissues Firm consistency Size >1.5 cm Ulceration of overlying skin Clinical concern for abscess Facial trauma: Physical findings of direct facial bone injury May 2019 Added: Suspected orbital trauma w/indeterminate x-ray or US Added specifics to Face Mass: Present on physical exam and remains non-diagnostic after x-ray or ultrasound is completed (Kuno, 2014) Clinical concern for abscess o Failed 2 weeks of treatment for suspected infectious adenopathy (Haynes, 2015). Removed: Hyposmia Immunocompromised patient

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#### GENERAL INFORMATION

It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.

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