

AmeriHealth Caritas Louisiana

National Imaging Associates, Inc.*	
Clinical guidelines SINUS & MAXILLOFACIAL CT LIMITED OR LOCALIZED FOLLOW UP SINUS CT	Original Date: September 1997
CPT Codes: 70486, 70487, 70488, 76380	Last Revised Date: May 2020
Guideline Number: NIA_CG_009	Implementation Date: January 2021 TBD

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. All prior relevant imaging results, and the reason that alternative imaging (gold standard, protocol, contrast, etc.) cannot be performed must be included in the documentation submitted.

A single authorization for CPT codes 70486, 70487, 70488, or 76380 includes imaging of the entire maxillofacial area including face and sinuses. Multiple authorizations are not required.

~~Important Note: CBCT is not covered for maxillofacial indications with the exception of oral surgery treatment planning when ordered by an oral surgeon.~~

INDICATIONS FOR SINUS & MAXILLOFACIAL CT:

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

- ~~Symptoms persist after four (4) consecutive weeks of medication, e.g., antibiotics, steroids or anti-histamines; OR ~~OR~~~~
- ~~_____~~
- ~~Clinical ssuspicion of ffungal infection (ACR, 2017; Silveira, 2019); OR~~
- Clinical suspicion of complications, such as (Dankbaar, 2015)
 - Preseptal, orbital, or intracranial infection (Kastner, 2014)
 - Osteomyelitis
 - Cavernous sinus thrombosis
 - ~~Cavernous sinus thrombosis (may want to replace with peds info) (may want to replace with peds info)~~

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- 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).

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)

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

Anosmia noted on objective testing, is persistent, of unknown origin and MRI cannot be done (ACR, 2017; Allis, 2012; Geyer, 2008, Allis, 2012)

Non structural causes of anosmia: post viral symptoms, medications (Amitiptyline, Enalapril, Nifedipine, Propranolol, Penicillamine, Sumatriptan, Cisplatin, Trifluoperazine, Propylthiouracil)

Suspected infection

- Osteomyelitis (after ~~xrays~~x-rays, MRI cannot be done) (Pincus, 2009)
- Abscess

Face mass (Kirsch, 2017; Koeller 2016):

- Present on physical exam and remains non-diagnostic after x-ray or ultrasound is completed (Kuno, 2014); **OR**
- Unless ~~noun~~ or highly suspected head and neck cancer on examination; increased risk for malignancy (Kirsch, 2017); with one or more of the following findings (Pynnonen, 2017):
 - ~~Fixation to adjacent tissues~~
 - ~~Firm consistency~~
 - ~~Size >1.5 cm~~
 - ~~Ulceration of overlying skin~~

- ~~Mass present \geq two weeks (or uncertain duration) without significant fluctuation and not considered of infectious cause~~

- ~~Clinical concern for abscess~~

- Failed 2 weeks of treatment for suspected infectious adenopathy (Haynes, 2015)-

Facial trauma (ACR, 2015, [2019](#); Echo, 2010; [Oh, 2017](#); Raju, 2017; ~~Oh, 2017~~)

- Severe facial trauma
- Suspected ~~orbital~~ **facial bone fracture** ~~trauma~~ with indeterminate x-ray
- Post traumatic CSF (**cerebrospinal fluid**) rhinorrhea (for CSF otorrhea should be a Temporal Bone CT)

Salivary gland stones or clinical concern for abscess (~~Terraz, 2013; Kalia, 2015; Gadodia, 2011; Kalia, 2015; Terraz, 2013~~)

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

~~**Anosmia** noted on objective testing, is persistent, of unknown origin and MRI cannot be done (ACR, 2017; Geyer, 2008, Allis, 2012)~~

- ~~Non structural causes of anosmia: post viral symptoms, medications (Amitiptyline, Enalapril, Nifedipine, Propranolol, Penicillamine, Sumatriptan, Cisplatin, Trifluoperazine, Propylthiouracil)~~

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

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 involvement. MRI should be reserved for those patients who have soft tissue extension of the disease (Phal, 2007)~~

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

~~**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)~~

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 (i.e., bilateral, hearing loss, dizziness/vertigo, visual changes, sensory loss, numbness, pain > 2min, pain outside trigeminal nerve distribution, progression) (Policeni, 2017; ACR, 2017; Hughes, 2016; Policeni, 2017-ACR CN, 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:

- For poorly controlled asthma associated with upper respiratory tract infection. May be performed without failing 4 consecutive weeks of treatment with medication.
- 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 – Non-structural causes of anosmia: post viral symptoms, medications (Amitiptyline, Enalapril, Nifedipine, Propranolol, Penicillamine, Sumatriptan, Cisplatin, Trifluoperazine, Propylthiouracil

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:

Review Date: May 2019

Review Summary:

- 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
 - Failed 2 weeks of treatment for suspected infectious adenopathy (Haynes, 2015).
- Removed:
 - Hyposmia
 - Immunocompromised patient

Review Date: May 2020

Review Summary:

- Updated references; Updated and reordered background information
- 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, 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

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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

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