

<b>*National Imaging Associates, Inc.*</b>	
<b>Clinical guidelines</b> <b>SINUS &amp; MAXILLOFACIAL CT</b> <b>LIMITED OR LOCALIZED FOLLOW UP SINUS CT</b>	<b>Original Date: September 1997</b>
<b>CPT Codes: 70486, 70487, 70488, 76380</b>	<b>Last Revised Date: <del>May 2023</del> <del>March 2022</del></b>
<b>Guideline Number: NIA_CG_009</b>	<b>Implementation Date: January 2024<del>3</del></b>

### **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.*
- Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.*

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.

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

#### **Rhinosinusitis<sup>1-5</sup>**

- Clinical suspicion of fungal infection<sup>6, 7</sup>
- Clinical suspicion of complications,<sup>8</sup> such as
  - Preseptal, orbital, or intracranial infection<sup>9</sup>
  - Osteomyelitis
  - Cavernous sinus thrombosis
- Acute (< 4 weeks) or subacute (4-12 weeks) sinusitis (~~viral or bacterial~~ presumed infectious)
  - Not responding to medical management including 2 or more courses of antibiotics ~~at least 5 days each course~~ in the past 3 months

~~\*National Imaging Associates, Inc. (NIA) is a subsidiary of Magellan Healthcare, Inc.~~

Note: Imaging may be indicated in those predisposed to complications, including diabetes, immune-compromised state, or a history of facial trauma or surgery.

- Recurrent acute rhinosinusitis with 4 or more annual episodes without persistent symptoms ~~in-between~~in-between ~~and is a possible surgical candidate~~
- Chronic recurrent sinusitis<sup>3</sup> (> 12 weeks)
  - ~~not~~Not responding to medical management\*, ~~is a possible surgical candidate for surgery or a biologic\*\*~~, and with at least two of the following:
    - mucopurulent discharge
    - nasal obstruction and congestion
    - facial pain, pressure, and fullness
    - decreased or absent sense of smell
  - With nasal polyps especially unilateral polyps, concern for polyps extending outside of the nasal cavity, or other atypical presentations<sup>3</sup>

\*Note: Medical management for chronic sinusitis includes nasal saline irrigation and/or topical intranasal steroids. In chronic sinusitis, repeat imaging is not necessary unless clinical signs or symptoms have changed.

~~\*\*~~ Note: Biologics such as dupilumab can be used to treat chronic sinusitis with nasal polyposis

- Allergic Rhinitis – sinus imaging usually not indicated unless there are signs of complicated infection, signs of neoplasm, or persistence of symptoms/chronic rhinosinusitis despite treatment (including antihistamines) and is a possible surgical candidate<sup>10</sup>
- If suspected as a cause of poorly controlled asthma (endoscopic sinus surgery improves outcomes)<sup>11</sup>
- To evaluate in the setting of unilateral nasal polyps or obstruction<sup>3</sup> ~~(to evaluate for a potential neoplasm)~~<sup>2</sup>

Note: Imaging may be indicated in those predisposed to complications, including diabetes, immune-compromised state, immotile cilia disorders, or a history of facial trauma or surgery.<sup>2</sup>

### **Pediatrics Rhinosinusitis**<sup>12, 13</sup>

- 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

- Causing significant airway obstruction AND

- Imaging is needed to plan surgery or determine if surgery is appropriate<sup>14, 15</sup>

**Suspected sinonasal mass** based on exam, nasal endoscopy, or prior imaging ~~with contraindication to MRI or if bony involvement suspected~~<sup>3, 16</sup>

**Refractory Asthma** - these patients benefit from medical treatment and surgery together<sup>11, 17, 18</sup>

**Anosmia or Dysosmia** noted on objective testing, is persistent, of unknown origin ~~for evaluation of peripheral sinonasal disease and/or bone-related pathology.~~<sup>16</sup> ~~and MRI cannot be performed~~<sup>16,17,20,21,6,21,19-21</sup>

### Suspected infection

- Osteomyelitis (after x-rays and MRI cannot be performed)<sup>22</sup>
- Abscess based on clinical signs and symptoms of infection

### Face mass<sup>16, 23</sup>

- 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; **OR**
- Failed 2 weeks of treatment for suspected infectious adenopathy<sup>24</sup>

### Facial trauma<sup>25-33</sup>

- ~~Severe~~ Serious facial ~~trauma~~ injury with concern for fracture on exam (e.g., bony step off, ecchymosis, nasal deformity, depression, malocclusion)  
Note: x-rays should be performed for isolated dental/mandibular injury
- 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

**Note:** ~~for CSF otorrhea should be a Temporal Bone CT; f~~ or intermittent leaks and complex cases, consider CT/MRI/Nuclear Cisternography. There should be a high suspicion or confirmatory CSF fluid ~~CSF fluid should always be confirmed with~~ laboratory testing (Beta-2 transferrin assay)

### Salivary gland

- Sialadenitis (infection and inflammation of the salivary glands) with indeterminate ultrasound, bilateral symptoms or concern for abscess<sup>34</sup>
- Suspected or known salivary gland stones<sup>35-37</sup>

**Granulomatosis with polyangiitis (Wegener's granulomatosis) disease**<sup>38</sup>

### **Suspected Osteonecrosis of the Jaw**<sup>39</sup>

- 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)~~

**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)<sup>6, 40</sup>

### **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

**Further evaluation of indeterminate findings on prior imaging (unless follow up is otherwise specified within the guideline):**

- For initial evaluation of an inconclusive finding on a prior imaging report that requires further clarification.<sup>37</sup>
- One follow-up exam of a prior indeterminate MR/CT finding to ensure no suspicious interval change has occurred. (No further surveillance unless specified as highly suspicious or change was found on last follow-up exam)

### **Cone Beam CT (CBCT)**

- Can be used in the evaluation of rhinosinusitis for the above-mentioned indications and for surgical planning/pre-operative evaluation in non-neoplastic indications.

\* Cone beam CT is not approvable in the evaluation of dentomaxillofacial imaging<sup>16, 41-44</sup>

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

### **Sinus CT/Chest CT**

- Granulomatosis with polyangiitis (Wegener's granulomatosis) disease (GPA)<sup>45</sup>

### **Sinus CT/Chest CT/Abdomen and Pelvis CT/Brain MRI**<sup>46, 47</sup>

- For initial workup prior to Bone Marrow Transplant (BMT)
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## 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.

**CT vs 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.

**Rhinosinusitis** - Society consensus recommendation is not to order sinus computed tomography (CT) or indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.<sup>42</sup> 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 [with clavulanate](#) should be first-line antibiotic treatment for most acute rhinosinusitis. [If improvement is not demonstrated, it is recommended to change antibiotics to either high-dose amoxicillin plus clavulanate, doxycycline, a fluoroquinolone such as moxifloxacin or levofloxacin, or a dual treatment of clindamycin plus a third-generation oral cephalosporin.](#)<sup>5</sup>

**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.<sup>48-50</sup>

[MRI Orbits, Face, and Neck MRI rather than MRI Brain is the mainstay for directly imaging the olfactory apparatus and sinonasal or anterior cranial fossa tumors that may impair or directly involve the olfactory apparatus.](#)<sup>6</sup>

[MRI FIRST](#)

**Suspected Osteonecrosis of the Jaw** - CT scan 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.<sup>51</sup>

**Trigeminal Neuralgia** - According to the International Headache Society, TN is defined as “a disorder characterized by recurrent unilateral brief electric shock-like pain, abrupt in onset and termination, limited to the distribution of one or more divisions of the trigeminal nerve and triggered by innocuous stimuli.”<sup>52</sup>

## POLICY HISTORY

Date	Summary
<p><u>February 2023</u></p>	<p><u>Updated references</u>  <u>Updated background</u>  <u>Added:</u></p> <ul style="list-style-type: none"> <li>— <u>Nasal polyps as an indication for chronic recurrent sinusitis</u></li> <li>— <u>Cone Beam CT (CBCT)</u> <ul style="list-style-type: none"> <li>• <u>Can be used in the evaluation of rhinosinusitis for the above-mentioned indications and for surgical planning/pre-operative evaluation in non-neoplastic indications.</u></li> <li>* <u>Cone beam CT is not approvable in the evaluation of dentomaxillofacial imaging</u></li> </ul> </li> <li>— <u>Section on further evaluation of indeterminate or questionable findings on prior imaging</u></li> </ul> <p><u>Clarified:</u></p> <ul style="list-style-type: none"> <li>— <u>Acute (&lt;4weeks) or subacute (4-12 weeks) sinusitis (presumed infectious) not responding to medical management including 2 or more courses of antibiotics in the past 3 months</u></li> <li>— <u>When CT would be indicated for anosmia/dysosmia and removed when MRI is contraindicated</u></li> <li>— <u>Serious facial injury with concern for fracture on exam (i.g. bony step off, ecchymosis, nasal deformity, depression, malocclusion)</u></li> <li>— <u>Note: x rays should be performed in isolated dental/mandibular injury</u></li> <li>— <u>There should be a high suspicion of CSF leak or confirmatory CSF fluid laboratory testing (Beta-2 transferrin assay)</u></li> </ul> <p><u>Removed:</u></p> <ul style="list-style-type: none"> <li>— <u>When MRI is contraindicated or if bony involvement suspected from suspected sinonasal mass</u></li> <li>— <u>Lesion seen on x-ray or other study — covered in new indication</u></li> </ul>
<p><u>March 2022</u></p>	<p><u>Reformatted and update references</u>  <u>Reformatted and updated background</u>  <u>Reformatted structural abnormality, salivary gland, and trauma sections</u>  <u>Clarified:</u></p> <ul style="list-style-type: none"> <li>• <u>Sialadenitis (infection and inflammation of the salivary glands) with indeterminate ultrasound, bilateral symptoms, or concern for abscess</u></li> <li>• <u>acute vs subacute sinusitis</u></li> <li>• <u>described medical management for acute (including 2 or more courses of antibiotics at least 5 days each course) and chronic</u></li> </ul>

	<p>sinusitis (includes nasal saline irrigation and/or topical intranasal steroids)</p> <ul style="list-style-type: none"> <li>● <del>Abscess</del></li> </ul> <p>Added:</p> <ul style="list-style-type: none"> <li>● <del>Note: Imaging may be indicated in those predisposed to complications, including diabetes, immune-compromised state, or a history of facial trauma or surgery (Acute sinusitis)</del></li> <li>● <del>And is a surgical candidate for chronic sinusitis and recurrent acute rhinosinusitis</del></li> <li>● <del>In chronic sinusitis, repeat imaging is not necessary unless clinical signs or symptoms have changed.</del></li> <li>● <del>Indications for allergic rhinitis</del></li> </ul> <p>Removed:</p> <ul style="list-style-type: none"> <li>● <del>4 weeks of medical management for acute and chronic sinusitis</del></li> </ul>
<p>April 2021</p>	<p>Updated background section and references</p> <p>Added:</p> <ul style="list-style-type: none"> <li>● <del>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:</del> <ul style="list-style-type: none"> <li>○ <del>mucopurulent discharge</del></li> <li>○ <del>nasal obstruction and congestion</del></li> <li>○ <del>facial pain, pressure, and fullness</del></li> <li>○ <del>decreased or absent sense of smell</del></li> </ul> </li> <li>● <del>Facial Trauma For further evaluation of a known fracture for treatment or surgical planning</del></li> <li>● <del>Suspected sinonasal mass based on exam, nasal endoscopy, or prior imaging with contraindication to MRI or if bony involvement suspected</del></li> <li>● <del>Dysosmia</del></li> <li>● <del>Sialadenitis with indeterminate ultrasound or bilateral symptoms</del></li> </ul> <p>Clarified:</p> <ul style="list-style-type: none"> <li>● <del>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</del></li> <li>● <del>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)</del></li> <li>● <del>Suspicion of salivary gland stones</del></li> </ul> <p>Deleted:</p>

	<ul style="list-style-type: none"> <li>● <del>For poorly controlled asthma associated with upper respiratory tract infection. May be performed without failing 4 consecutive weeks of treatment with medication.</del></li> <li>● <del>Trigeminal neuralgia — if Age &lt; 40</del></li> </ul>
May 2020	<ul style="list-style-type: none"> <li>● <del>Updated references; Updated and reordered background information</del></li> <li>● <del>Reordered and reformatted indications</del></li> <li>● <del>Clarified:</del> <ul style="list-style-type: none"> <li>○ <del>Reworded: Rhinosinusitis: Clinical suspicion of complications, such Preseptal, orbital or intracranial infection, Osteomyelitis, Cavernous sinus thrombosis</del></li> <li>○ <del>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)</del></li> <li>○ <del>Refractory Asthma (Sinus CT) — these patients benefit from medical treatment and surgery together</del></li> <li>○ <del>Anosmia noted on objective testing, is persistent, of unknown origin and MRI cannot be done</del></li> <li>○ <del>Suspected infection: Osteomyelitis (after x-rays, MRI cannot be done)</del> <ul style="list-style-type: none"> <li><del>Facial trauma: Post traumatic CSF (cerebrospinal fluid) rhinorrhea (for CSF otorrhea should be a Temporal Bone CT)</del></li> </ul> </li> </ul> </li> <li>● <del>Added:</del> <ul style="list-style-type: none"> <li>● <del>Rhinosinusitis</del> <ul style="list-style-type: none"> <li>○ <del>Recurrent acute rhinosinusitis with 4 or more annual episodes without persistent symptoms in between</del></li> <li>○ <del>If suspected as a cause of poorly controlled asthma (endoscopic sinus surgery improves outcomes) (Vashishta, 2013)</del></li> <li>○ <del>To evaluate in the setting of unilateral nasal polyps or obstruction (to evaluate for a potential neoplasm) (Rosenfeld, 2015)</del></li> </ul> </li> <li>● <del>Pediatrics Rhinosinusitis (ACR, 2018; Wald, 2013)</del> <ul style="list-style-type: none"> <li>○ <del>Persistent or recurrent sinusitis not responding to treatment (primarily antibiotics, treatment may require a change of antibiotics)</del></li> <li>○ <del>Suspicion of orbital or central nervous system involvement (e.g., swollen eye, proptosis, altered consciousness, seizures, nerve deficit) (Ward, 2013)</del></li> </ul> </li> </ul> </li> </ul>

- ~~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~~

**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~~

	<ul style="list-style-type: none"> <li>▪ <del>Ulceration of overlying skin</del></li> <li>○ <del>Clinical concern for abscess</del></li> <li>● <del>Facial trauma: Physical findings of direct facial bone injury</del></li> </ul>
May 2019	<ul style="list-style-type: none"> <li>● <del>Added: Suspected orbital trauma w/indeterminate x-ray or US</del></li> <li>● <del>Added specifics to Face Mass:</del> <ul style="list-style-type: none"> <li>○ <del>Present on physical exam and remains non-diagnostic after x-ray or ultrasound is completed (Kuno, 2014)</del></li> <li>○ <del>Clinical concern for abscess</del></li> <li>○ <del>Failed 2 weeks of treatment for suspected infectious adenopathy (Haynes, 2015):</del></li> </ul> </li> <li>● <del>Removed:</del> <ul style="list-style-type: none"> <li>○ <del>Hyposmia</del></li> </ul> </li> <li>● <del>Immunocompromised patient</del></li> </ul>

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## POLICY HISTORY

<u>Date</u>	<u>Summary</u>
<u>May 2023</u>	<p><u>Updated references</u>  <u>Updated background</u>  <u>Added:</u></p> <ul style="list-style-type: none"> <li>• <u>Nasal polyps as an indication for chronic recurrent sinusitis</u></li> <li>• <u>Cone Beam CT (CBCT)</u></li> <li>• <u>Can be used in the evaluation of rhinosinusitis for the above-mentioned indications and for surgical planning/pre-operative evaluation in non-neoplastic indications.</u></li> <li>* <u>Cone beam CT is not approvable in the evaluation of dentomaxillofacial imaging</u></li> <li>• <u>Section on further evaluation of indeterminate or questionable findings on prior imaging</u></li> <li>• <u>General Information moved to beginning of guideline with added statement on clinical indications not addressed in this guideline</u></li> <li>• <u>Section on CSF rhinorrhea to characterize bony defect</u></li> <li>• <u>Biologics such as dupilumab for chronic sinusitis with nasal polyposis</u></li> </ul> <p><u>Clarified:</u></p> <ul style="list-style-type: none"> <li>• <u>Acute (&lt;4weeks) or subacute (4-12 weeks) sinusitis (presumed infectious) - not responding to medical management including 2 or more courses of antibiotics in the past 3 months</u></li> <li>• <u>When CT would be indicated for anosmia/dysosmia and removed when MRI is contraindicated</u></li> <li>• <u>Serious facial injury with concern for fracture on exam (i.g.e.g. bony step off, ecchymosis, nasal deformity, depression, malocclusion)</u></li> <li>• <u>Note: x-rays should be performed in isolated dental/mandibular injury</u></li> <li>• <u>There should be a high suspicion of CSF leak or confirmatory CSF fluid laboratory testing (Beta-2 transferrin assay)</u></li> </ul> <p><u>Removed:</u></p> <ul style="list-style-type: none"> <li>• <u>When MRI is contraindicated or if bony involvement suspected from suspected sinonasal mass</u></li> <li>• <u>Lesion seen on x-ray or other study – covered in new indication</u></li> </ul>
<u>March 2022</u>	<p><u>Reformatted and update references</u>  <u>Reformatted and updated background</u>  <u>Reformatted-structural abnormality, salivary gland, and trauma sections</u>  <u>Clarified:</u></p>

	<ul style="list-style-type: none"> <li>• <u>Sialadenitis (infection and inflammation of the salivary glands) with indeterminate ultrasound, bilateral symptoms, or concern for abscess</u></li> <li>• <u>acute vs subacute sinusitis</u></li> <li>• <u>described medical management for acute (including 2 or more courses of antibiotics at least 5 days each course) and chronic sinusitis (includes nasal saline irrigation and/or topical intranasal steroids)</u></li> <li>• <u>Abscess</u></li> </ul> <p><u>Added:</u></p> <ul style="list-style-type: none"> <li>• <u>Note: Imaging may be indicated in those predisposed to complications, including diabetes, immune-compromised state, or a history of facial trauma or surgery (Acute sinusitis)</u></li> <li>• <u>And is a surgical candidate- for chronic sinusitis and recurrent acute rhinosinusitis</u></li> <li>• <u>In chronic sinusitis, repeat imaging is not necessary unless clinical signs or symptoms have changed.</u></li> <li>• <u>Indications for allergic rhinitis</u></li> </ul> <p><u>Removed:</u></p> <ul style="list-style-type: none"> <li>• <u>4 weeks of medical management for acute and chronic sinusitis</u></li> </ul>
<p><u>April 2021</u></p>	<p><u>Updated background section and references</u></p> <p><u>Added:</u></p> <ul style="list-style-type: none"> <li>— <u>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:</u> <ul style="list-style-type: none"> <li>— <u>mucopurulent discharge</u></li> <li>— <u>nasal obstruction and congestion</u></li> <li>— <u>facial pain, pressure, and fullness</u></li> <li>— <u>decreased or absent sense of smell</u></li> </ul> </li> <li>— <u>Facial Trauma – For further evaluation of a known fracture for treatment or surgical planning</u></li> <li>— <u>Suspected sinonasal mass based on exam, nasal endoscopy, or prior imaging with contraindication to MRI or if bony involvement suspected</u></li> <li>— <u>Dysosmia</u></li> <li>— <u>Sialadenitis with indeterminate ultrasound or bilateral symptoms</u></li> </ul> <p><u>Clarified:</u></p> <ul style="list-style-type: none"> <li>— <u>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</u></li> </ul>

	<ul style="list-style-type: none"> <li>— <u>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)</u></li> <li>— <u>Suspicion of salivary gland stones</u></li> </ul> <p><u>Deleted:</u></p> <ul style="list-style-type: none"> <li>— <u>For poorly controlled asthma associated with upper respiratory tract infection. May be performed without failing 4 consecutive weeks of treatment with medication.</u></li> <li>— <u>Trigeminal neuralgia — if Age &lt; 40</u></li> </ul>
<p><u>May 2020</u></p>	<ul style="list-style-type: none"> <li>— <u>Updated references; Updated and reordered background information</u></li> <li>— <u>Reordered and reformatted indications</u></li> <li>— <u>Clarified:</u> <ul style="list-style-type: none"> <li>— <u>Reworded: Rhinosinusitis: Clinical suspicion of complications, such Preseptal, orbital or intracranial infection, Osteomyelitis, Cavernous sinus thrombosis</u></li> <li>— <u>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)</u></li> <li>— <u>Refractory Asthma (Sinus CT) — these patients benefit from medical treatment and surgery together</u></li> <li>— <u>Anosmia noted on objective testing, is persistent, of unknown origin and MRI cannot be done</u></li> <li>— <u>Suspected infection: Osteomyelitis (after x rays, MRI cannot be done)</u></li> </ul> </li> <li style="padding-left: 40px;"><u>Facial trauma: Post traumatic CSF (cerebrospinal fluid) rhinorrhea (for CSF otorrhea should be a Temporal Bone CT)</u></li> </ul> <p><u>Added:</u></p> <ul style="list-style-type: none"> <li>— <u>Rhinosinusitis</u> <ul style="list-style-type: none"> <li>— <u>Recurrent acute rhinosinusitis with 4 or more annual episodes without persistent symptoms in between</u></li> <li>— <u>If suspected as a cause of poorly controlled asthma (endoscopic sinus surgery improves outcomes) (Vashishta, 2013)</u></li> <li>— <u>To evaluate in the setting of unilateral nasal polyps or obstruction (to evaluate for a potential neoplasm) (Rosenfeld, 2015)</u></li> </ul> </li> </ul>

- 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

=

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:

	<ul style="list-style-type: none"> <li><del>— <u>Face Mass</u></del> <ul style="list-style-type: none"> <li><del>— <u>Unless increased risk for malignancy based on</u></del> <ul style="list-style-type: none"> <li><del><u>Any of these:</u></del> <ul style="list-style-type: none"> <li><del><u>Fixation to adjacent tissues</u></del></li> <li><del><u>Firm consistency</u></del></li> <li><del><u>Size &gt;1.5 cm</u></del></li> <li><del><u>Ulceration of overlying skin</u></del></li> </ul> </li> <li><del>— <u>Clinical concern for abscess</u></del></li> </ul> </li> <li><del>— <u>Facial trauma: Physical findings of direct facial bone injury</u></del></li> </ul> </li></ul>
<p><u>May 2019</u></p>	<ul style="list-style-type: none"> <li><del>— <u>Added: Suspected orbital trauma w/indeterminate x-ray or US</u></del></li> <li><del>— <u>Added specifics to Face Mass:</u></del> <ul style="list-style-type: none"> <li><del>— <u>Present on physical exam and remains non-diagnostic after x-ray or ultrasound is completed (Kuno, 2014)</u></del></li> <li><del>— <u>Clinical concern for abscess</u></del></li> <li><del>— <u>Failed 2 weeks of treatment for suspected infectious adenopathy (Haynes, 2015):</u></del></li> </ul> </li> <li><del>— <u>Removed:</u></del> <ul style="list-style-type: none"> <li><del>— <u>Hyposmia</u></del></li> </ul> </li> <li><del>— <u>Immunocompromised patient</u></del></li> </ul>

## Reviewed / Approved by NIA Clinical Guideline Committee

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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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