## Sinonasal Disease

**Variant 1:** Acute (<4 weeks) uncomplicated rhinosinusitis.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>SOE</th>
<th>Adults RRL</th>
<th>Peds RRL</th>
<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT paranasal sinuses without IV contrast</td>
<td>May be appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>☢☢☢ 0.3-3 mSv</td>
<td>4 n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT cone beam paranasal sinuses without IV contrast</td>
<td>May be appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>4 n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CT paranasal sinuses with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>☢☢☢ 0.3-3 mSv</td>
<td>2 n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiography paranasal sinuses</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv</td>
<td>☢ &lt;0.03 mSv</td>
<td>1 n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
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</tr>
<tr>
<td>CT paranasal sinuses without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢☢☢ 1-10 mSv</td>
<td>☢☢☢ 3-10 mSv [ped]</td>
<td>1 n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRI maxillofacial without IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ 0 mSv</td>
<td>☢ 0 mSv [ped]</td>
<td>1 n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRI maxillofacial without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ 0 mSv</td>
<td>☢ 0 mSv [ped]</td>
<td>1 n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
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</tbody>
</table>

**Variant 2:** Possible surgical candidate. Recurrent acute rhinosinusitis, chronic rhinosinusitis, sinonasal polyposis, or noninvasive fungal sinusitis.
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>SOE</th>
<th>Adults RRL</th>
<th>Peds RRL</th>
<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT paranasal sinuses without IV contrast</td>
<td>Usually appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>☢☢ 0.3-3 mSv [ped]</td>
<td>9</td>
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<tr>
<td>CT cone beam paranasal sinuses without IV contrast</td>
<td>Usually appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>7</td>
<td>n/a</td>
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<td>0 0 0 0 0 0 0 0 0</td>
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<tr>
<td>CT paranasal sinuses with IV contrast</td>
<td>May be appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>☢☢☢ 0.3-3 mSv [ped]</td>
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<tr>
<td>MRI maxillofacial without IV contrast</td>
<td>May be appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>4</td>
<td>n/a</td>
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<td>0 0 0 0 0 0 0 0 0</td>
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<tr>
<td>MRI maxillofacial without and with IV contrast</td>
<td>May be appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>4</td>
<td>n/a</td>
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<tr>
<td>Radiography paranasal sinuses</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv</td>
<td>☢&lt;0.03 mSv [ped]</td>
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<td>n/a</td>
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<tr>
<td>CT paranasal sinuses without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢☢☢ 1-10 mSv</td>
<td>☢☢☢ 3-10 mSv [ped]</td>
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<td>SPECT or SPECT/CT paranasal sinuses</td>
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<td>1</td>
<td>n/a</td>
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**Variant 3:** Acute rhinosinusitis. Suspected orbital or intracranial complication.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>SOE</th>
<th>Adults RRL</th>
<th>Peds RRL</th>
<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRI maxillofacial without and with IV contrast</td>
<td>Usually appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>9</td>
<td>n/a</td>
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<tr>
<td>CT paranasal sinuses with IV contrast</td>
<td>Usually appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>☢☢☢ 0.3-3 mSv [ped]</td>
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<td>Procedure</td>
<td>Appropriateness Category</td>
<td>SOE</td>
<td>Adults RRL</td>
<td>Peds RRL</td>
<td>Rating</td>
<td>Median</td>
<td>Final Tabulations</td>
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<td>-------------------</td>
</tr>
<tr>
<td>MRI head without and with IV contrast</td>
<td>Usually appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv</td>
<td></td>
<td>8</td>
<td>n/a</td>
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<tr>
<td>CT paranasal sinuses without IV contrast</td>
<td>Usually appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>☢☢☢ 0.3-3 mSv [ped]</td>
<td>7</td>
<td>n/a</td>
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</tr>
<tr>
<td>MRI maxillofacial without IV contrast</td>
<td>May be appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv</td>
<td></td>
<td>6</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>MRI head without IV contrast</td>
<td>May be appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv</td>
<td></td>
<td>6</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>CT head with IV contrast</td>
<td>May be appropriate</td>
<td>☢☢☢ 1-10 mSv</td>
<td>☢☢☢ 0.3-3 mSv [ped]</td>
<td>6</td>
<td>n/a</td>
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</tr>
<tr>
<td>CT head without IV contrast</td>
<td>May be appropriate</td>
<td>☢☢☢ 1-10 mSv</td>
<td>☢☢☢ 0.3-3 mSv [ped]</td>
<td>4</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>CT head without and with IV contrast</td>
<td>May be appropriate</td>
<td>☢☢☢ 1-10 mSv</td>
<td>☢☢☢ 0.3-3 mSv [ped]</td>
<td>4</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>CT paranasal sinuses without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢☢ 1-10 mSv</td>
<td>☢☢☢ 0.3-3 mSv [ped]</td>
<td>2</td>
<td>n/a</td>
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<td></td>
</tr>
<tr>
<td>CT cone beam paranasal sinuses without IV contrast</td>
<td>Usually not appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>☢☢☢ 0.3-3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
</tbody>
</table>

**Variant 4: Sinonasal obstruction. Suspected mass.**
## CT paranasal sinuses with IV contrast
- Usually appropriate
- ☢☢ 0.1-1mSv
- ☢☢☢ 0.3-3 mSv [ped]
- 7
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

## MRI maxillofacial without IV contrast
- May be appropriate
- ☢☢☢ 0 mSv
- ☢☢☢☢ 0 mSv [ped]
- 6
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

## Arteriography craniofacial
- May be appropriate
- ☢☢☢ 1-10 mSv
- ☢☢☢☢ 1-10 mSv [ped]
- 4
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

## CTA head with IV contrast
- May be appropriate
- ☢☢☢ 1-10 mSv
- ☢☢☢☢ 3-10 mSv [ped]
- 4
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

## MRA head without IV contrast
- May be appropriate
- 0 0 mSv
- 0 0 mSv [ped]
- 4
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

## CTA neck with IV contrast
- May be appropriate
- ☢☢☢ 1-10 mSv
- ☢☢☢☢ 0.3-3 mSv [ped]
- 4
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

## FDG-PET/CT skull base to mid-thigh
- May be appropriate
- ☢☢☢ 10-30 mSv
- ☢☢☢☢ 10-30 mSv [ped]
- 4
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

## MRA head with IV contrast
- May be appropriate
- 0 0 mSv
- 0 0 mSv [ped]
- 4
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

## MRA neck with IV contrast
- May be appropriate
- 0 0 mSv
- 0 0 mSv [ped]
- 4
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

## MRA neck without and with IV contrast
- Usually not appropriate
- 0 0 mSv
- 0 0 mSv [ped]
- 3
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

## CT paranasal sinuses without and with IV contrast
- Usually not appropriate
- ☢☢ 1-10 mSv
- ☢☢☢ 3-10 mSv [ped]
- 2
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

## CT cone beam paranasal sinuses without IV contrast
- Usually not appropriate
- ☢☢ 0.1-1mSv
- 2
- n/a
- 0
- 0
- 0
- 0
- 0
- 0
- 0
- 0

### Variant 5: Suspected invasive fungal sinusitis.
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>SOE</th>
<th>Adults RRL</th>
<th>Peds RRL</th>
<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRI maxillofacial without and with IV contrast</td>
<td>Usually appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>9</td>
<td>n/a</td>
<td>0</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>CT paranasal sinuses without IV contrast</td>
<td>Usually appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>☢☢ 0.3-3 mSv [ped]</td>
<td>8</td>
<td>n/a</td>
<td>0</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>CT paranasal sinuses with IV contrast</td>
<td>Usually appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>☢☢☢ 0.3-3 mSv [ped]</td>
<td>8</td>
<td>n/a</td>
<td>0</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>MRI maxillofacial without IV contrast</td>
<td>May be appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>6</td>
<td>n/a</td>
<td>0</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>MRA head without IV contrast</td>
<td>May be appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>5</td>
<td>n/a</td>
<td>0</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>MRA head with IV contrast</td>
<td>May be appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>4</td>
<td>n/a</td>
<td>0</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>CTA head with IV contrast</td>
<td>May be appropriate</td>
<td>☢☢☢ 1-10 mSv</td>
<td>☢☢☢ 3-10 mSv [ped]</td>
<td>4</td>
<td>n/a</td>
<td>0</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>Arteriography craniofacial</td>
<td>Usually not appropriate</td>
<td>☢☢☢ 1-10 mSv</td>
<td>☢☢☢ 3-10 mSv [ped]</td>
<td>3</td>
<td>n/a</td>
<td>0</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>CT paranasal sinuses without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢☢ 1-10 mSv</td>
<td>☢☢☢ 3-10 mSv [ped]</td>
<td>2</td>
<td>n/a</td>
<td>0</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>CT cone beam paranasal sinuses without IV contrast</td>
<td>Usually not appropriate</td>
<td>☢☢ 0.1-1mSv</td>
<td>☢☢ 0.3-3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
<td>0</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
</tbody>
</table>
Appendix Key
A more complete discussion of the items presented below can be found by accessing the supporting documents at the designated hyperlinks.

Appropriateness Category: The panel's recommendation for a procedure based on the assessment of the risks and benefits of performing the procedure for the specified clinical scenario.

SOE: Strength of Evidence. The assessment of the amount and quality of evidence found in the peer reviewed medical literature for an appropriateness recommendation.

- References: The citation number and PMID for the reference(s) associated with the recommendation.
- Study Quality: The assessment of the quality of an individual reference based on the number of study quality elements described in the reference.

RRL: Relative Radiation Level. A population based assessment of the amount of radiation a typical patient may be exposed to during the specified procedure.

Rating: The final rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Median: The median rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Final tabulations: A histogram showing the number of panel members who rated the procedure as noted in the column heading (ie, 1, 2, 3, etc.).

Additional supporting documents about the AC methodology and processes can be found at www.acr.org/ac.