

**Study:** Maxillofacial CBCT

**Patient:** Sample Impacted 3<sup>rd</sup> Molar Report

**Referring Doctor:**

**Practice Address:**

**Study Date:**

**Date of Birth:**

**Sex:**

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**History:** None noted

**Indications:** Impacted 3<sup>rd</sup> molars, malocclusion

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### Study Details

- Large field of view CBCT extending from the level of the frontal bone to C5.
- A nose ring is present.

### General Report

- 1-32 are present.
- 1, 16: Buccally inclined and impacted with their roots abutting the floor of their respective maxillary sinus.
- 17: Slightly disto-angularly inclined and impacted. The mesial and distal roots bifurcate, and the IAC traverses between the bifurcations in direct contact with the roots.
- 32: Slightly disto-angularly inclined and impacted. The IAC traverses buccal and in direct contact with the distal root. The mesial root bifurcates and the IAC traverses between the bifurcation in direct contact with the root.
- Significantly increased overbite.
- Crowding is noted in the maxilla and mandible.
  - o 11 is rotated axially.
  - o 29 is lingually inclined, in reverse crossbite with 4 and appears infra-erupted; correlate clinically.
- A dense bone island is seen apical to 21.
- Palatal torus present.

### TMJs

- Mild, bilateral anterosuperior flattening of the condyles and subchondral sclerosis are seen. Mild flattening and sclerosis are also noted in the articular eminences.
- Both condyles are slightly laterally positioned within their respective glenoid fossa. The superior joint spaces appear reduced in width and are narrowest near the lateral poles.

### Sinuses

- The frontal sinuses are aplastic.
- Mucosal thickening in the right anterior ethmoid air cells.
- Mild polypoid mucosal thickening in the maxillary sinuses bilaterally. The ostiomeatal complexes are patent.

**Airway**

- The palatine tonsils are hyperplastic bilaterally.
- *Upper Airway Analysis:* Minimum cross-sectional area of the upper airway space is  $\sim 156.8 \text{ mm}^2$  at the level of C2/C3 which is within the range of normal.

**Other Findings**

- Faint pineal gland calcification.

**IMPRESSION:**

- 1, 16: Buccally inclined and impacted.
- 17, 32: Slightly disto-angularly inclined and impacted. The mesial and distal roots of 17 bifurcate around the IAC. The mesial root of 32 bifurcates around the IAC.
- Malocclusion, as mentioned above.
- TMJs: Findings, consistent with bilateral functional remodeling. Reduced superior joint space noted.

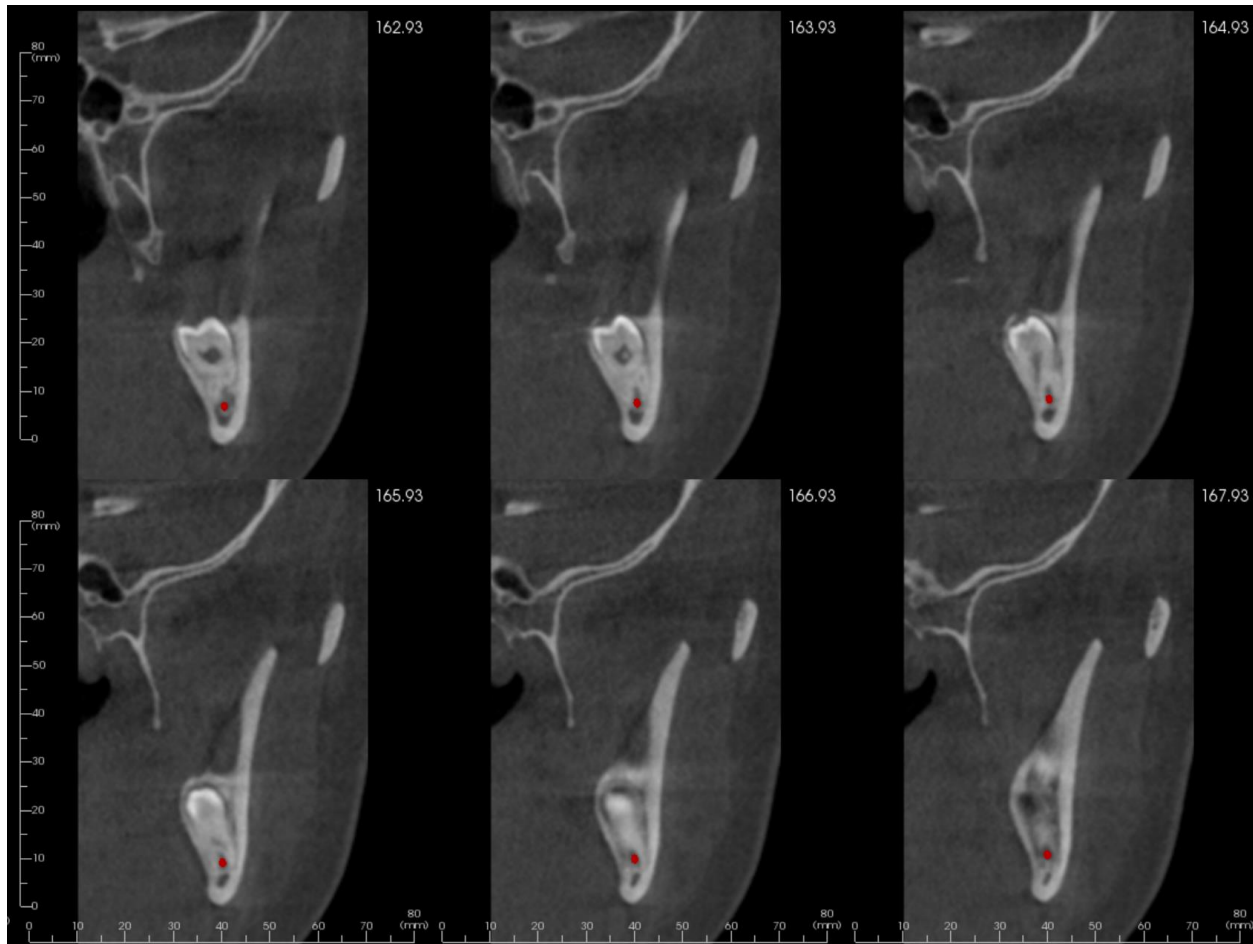
*Brian P. Jardina*

Brian P. Jardina, DMD  
Oral and Maxillofacial Radiologist  
Verified Date:

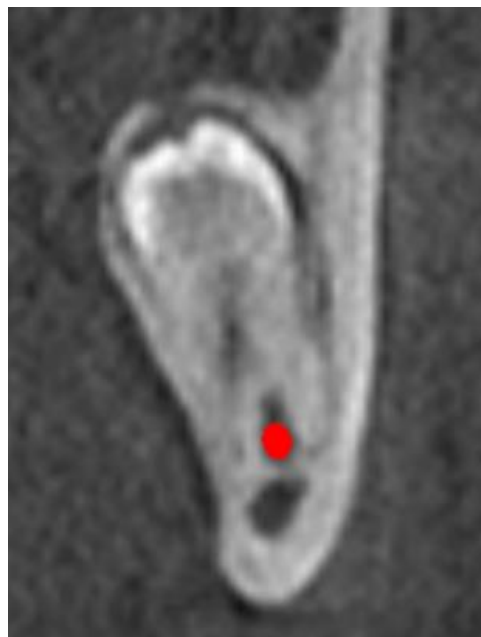
**Disclaimer:** Please note that measurements should not be made from any attached images. The provided images are only representative slices. For implant planning, please reconstruct the region of interest in the desired plane with ideal virtual implant positioning before making measurements.



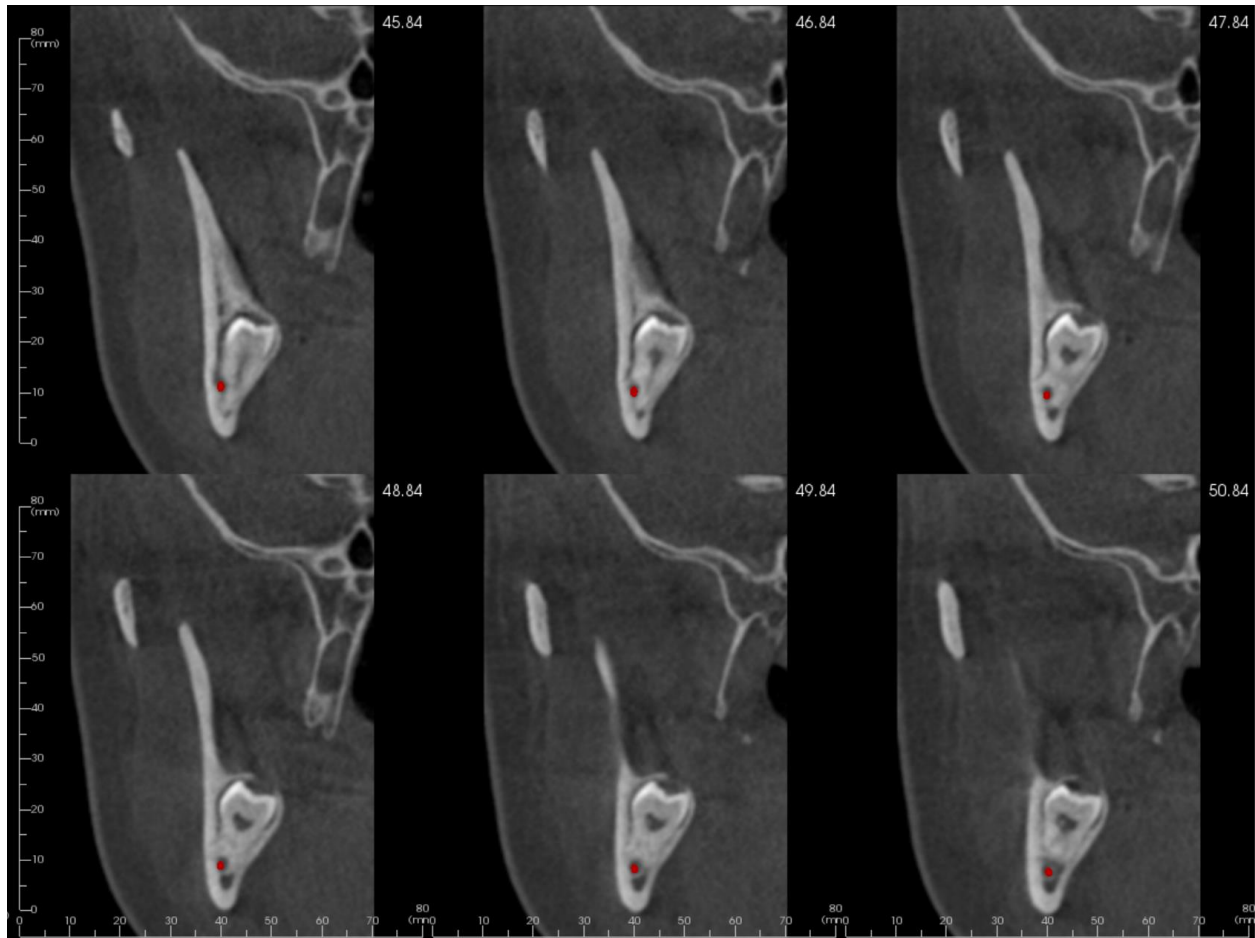
Reformatted Panoramic.



Cross-sectional images showing relationship of the IAC to impacted 17.



Cross-sectional image of 17 showing IAC traversing between the bifurcation of the roots.



Cross-sectional images showing relationship of the IAC to impacted 32.



Cross-sectional image of 32 showing the IAC traversing between the bifurcation of the mesial root.



Reformatted lateral cephalometric.

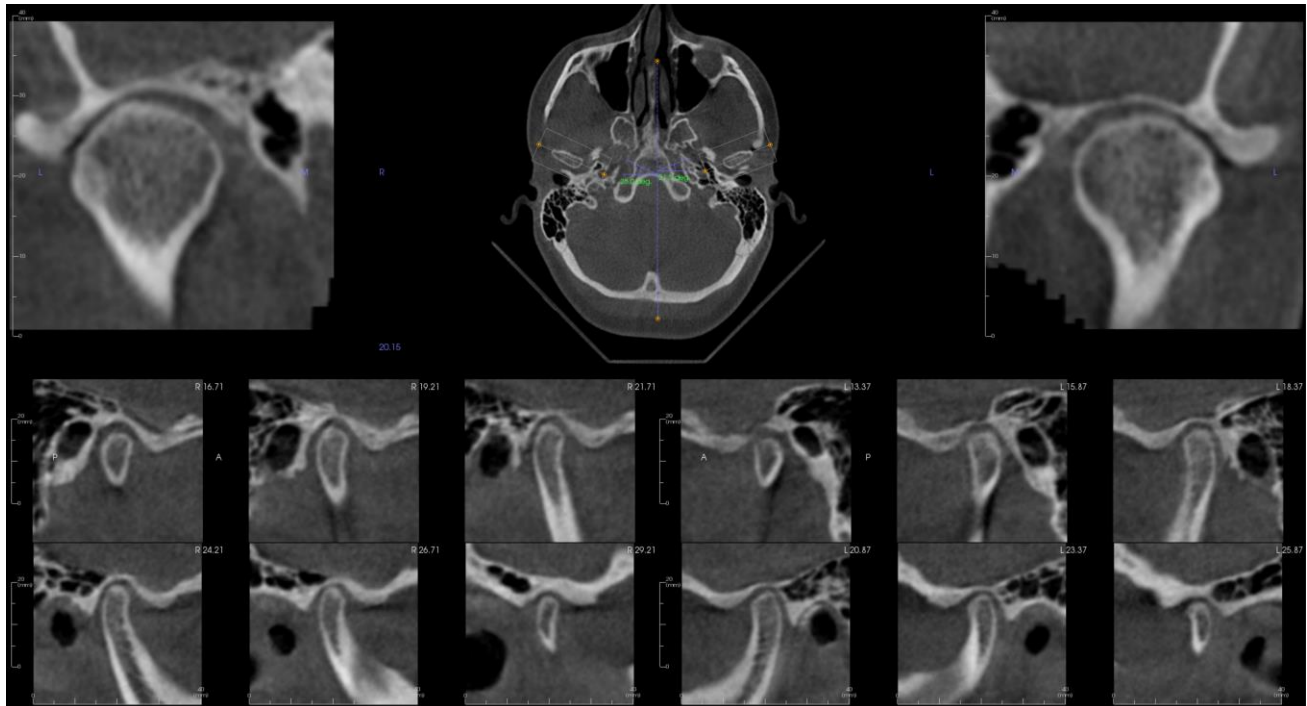


Volume rendering – right lateral view.

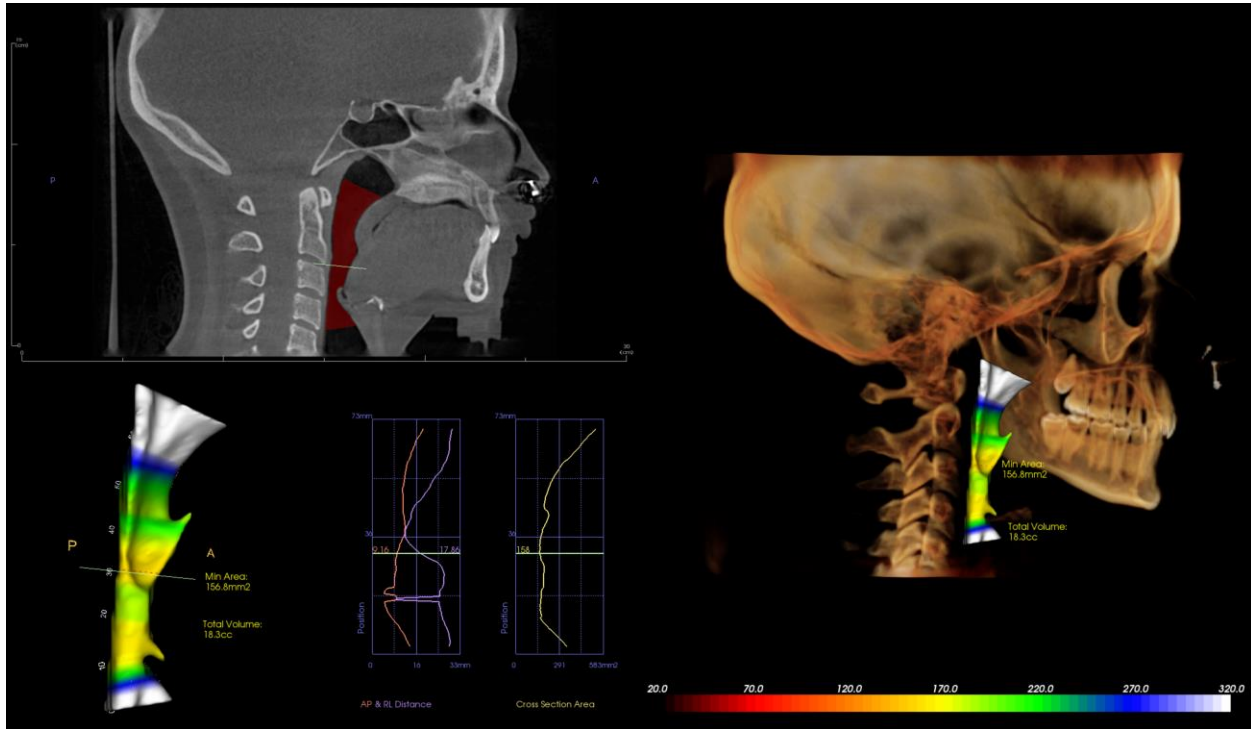




Volume Rendering – frontal view.



TMJ analysis with axial, paracoronal and parasagittal (at 2.5 mm intervals) sections.



**Airway analysis.**

**Airway Length: 72.7626 (mm)**

**Max Area: 529.821 (mm<sup>2</sup>)**  
**Min Area: 156.789 (mm<sup>2</sup>)**  
**Average Area: 238.388 (mm<sup>2</sup>)**

**Max AP Length: 18.9532 (mm)**  
**Min AP Length: 4.347 (mm)**  
**Average AP Length: 10.9046 (mm)**

**Max RL Length: 29.8794 (mm)**  
**Min RL Length: 8.72186 (mm)**  
**Average RL Length: 22.7759 (mm)**

**Max AP-RL Ratio: 6.17754**  
**Min AP-RL Ratio: 0.216577**  
**Average AP-RL Ratio: 0.552421**