

DENTAL BENEFIT COVERAGE GUIDELINE – 9.02.503


Computerized Diagnostic Imaging for Complex Maxillofacial Procedures

Effective Date: Oct. 1, 2024
Last Revised: Sept. 23, 2024
Replaces: N/A

RELATED DENTAL / MEDICAL POLICIES:
9.02.501 Orthognathic Surgery

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Introduction

When imaging is needed to diagnose certain dental/medical problems related to the face, neck, or teeth standard dental x-rays are usually enough. In some cases, other imaging such as MRI or ultrasound, are needed. This policy explains when imaging besides standard dental x-rays may be medically or dentally necessary.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.

Policy Coverage Criteria

Procedure	Dental / Medical Necessity
Computerized diagnostic imaging such as: <ul style="list-style-type: none">2D/3D photographs	These services are considered not dentally/medically necessary for the following purposes: <ul style="list-style-type: none">Screening: Pre-treatment screening for routine dental procedures, including orthodontia and periodontal surgery

Procedure	Dental / Medical Necessity
<ul style="list-style-type: none"> • Cone beam computerized tomography (CBCT) • Maxillofacial magnetic resonance imaging (MRI) • Maxillofacial ultrasound • Sialoendoscopy 	<ul style="list-style-type: none"> • A substitute for traditional diagnostic dental x-rays • Recall and/or periodic examinations and x-rays
Computerized diagnostic imaging such as: <ul style="list-style-type: none"> • 2D/3D photographs • Cone beam computerized tomography (CBCT) • Maxillofacial magnetic resonance imaging (MRI) • Maxillofacial ultrasound • Sialoendoscopy 	<p>These services may be considered dentally/medically necessary for the following purposes:</p> <ul style="list-style-type: none"> • Planned therapy <ul style="list-style-type: none"> ○ Implants ○ Complex third molar extractions ○ Implant or third molar extraction has near proximity to nerve, sinus – vital oral structures ○ Implant or third molar extraction has significant risk of complications due to vicinity of the proximity of vital structures ○ Clinical study prior to consideration of temporomandibular joint dysfunction (TMJ) surgical treatment or orthognathic surgical procedures • Diagnostic purposes <ul style="list-style-type: none"> ○ Suspicion of head and neck neoplasms ○ Head and neck trauma • Post-treatment care <ul style="list-style-type: none"> ○ Consideration of retreatment of endodontic procedures ○ Consideration of retreatment of implant placement

Documentation Requirements

Submit diagnosis or narrative of condition (pathology or operative report if applicable).

Coding

Code	Description
CDT	
D0350	2D oral/facial photographic image obtained intra-orally or extra-orally



Code	Description
D0364	Cone beam CT capture and interpretation with limited field of view – less than one whole jaw
D0365	Cone beam CT capture and interpretation with field of view of one full dental arch – mandible
D0366	Cone beam CT capture and interpretation with field of view of one full dental arch – maxilla, with or without cranium
D0367	Cone beam CT capture and interpretation with field of view of one full dental arch – maxilla, with or without cranium
D0368	Cone beam CT capture and interpretation for TMJ series including two or more exposures
D0369	Maxillofacial MRI capture and interpretation
D0370	Maxillofacial ultrasound capture and interpretation
D0371	Sialoendoscopy capture and interpretation
D0372	Intraoral tomosynthesis - Comprehensive series of radiographic images
D0373	Intraoral tomosynthesis - Bitewing radiographic image
D0374	Intraoral tomosynthesis - Periapical radiographic image
D0380	Cone beam CT image capture with limited field of view –less than one whole jaw
D0381	Cone beam CT image capture with field of view of one full dental arch – mandible
D0382	Cone beam CT image capture with field of view of one full dental arch – maxilla, with or without cranium
D0383	Cone beam CT image capture with field of view of both jaws, with or without cranium
D0384	Cone beam CT image capture for TMJ series including two or more exposures
D0385	Maxillofacial MRI image capture
D0386	Maxillofacial ultrasound image capture
D0387	Intraoral tomosynthesis - Comprehensive series of radiographic images-image capture only
D0388	Intraoral tomosynthesis - Bitewing radiographic image-image only
D0389	Intraoral tomosynthesis - Periapical radiographic image-image only
D0391	Interpretation of diagnostic image by a practitioner not associated with capture of the image, including report
D0393	Treatment simulation using 3D image volume



Code	Description
D0394	Digital subtraction of two or more images or image volumes of the same modality
D0395	Fusion of two or more 3D image volumes of one or more modalities
D0396	3D printing of a 3D dental surface scan (new code effective 1/1/2024)
CPT	
70010	Myelography, posterior foss, radiological supervision and interpretation
70015	Cisternography, positive contract, radiological supervision and interpretation
70100	Radiologic examination, mandible; partial, less than 4 views
70110	Radiologic examination, mandible; complete, minimum 4 views
70120	Radiologic examination, mastoids; less than 3 views per side
70130	Radiologic examination, mastoids; complete, minimum of 3 views per side
70140	Radiologic examination, facial bones; less than 3 views
70150	Radiologic examination, facial bones; complete, minimum of 3 views
70240	Radiologic Examination, sella turcica
70250	Radiologic examination, skull; less than 4 views
70260	Radiologic examination, skull; complete, minimum of 4 views
70300	Radiologic examination, teeth; single view
70310	Radiologic examination, teeth; partial examination, less than full mouth
70320	Radiologic examination, teeth; complete, full mouth
70328	Radiologic examination, Temporomandibular joint, open and closed mouth; unilateral
70330	Radiologic examination, temporomandibular joint, open and closed mouth; bilateral
70332	Temporomandibular joint arthrography, radiological supervision and interpretation
70336	Magnetic resonance (e.g., proton) imaging, Temporomandibular joint(s)
70350	Cephalogram, orthodontic
70355	Orthopantomogram (e.g., panoramic x-ray)
70380	Radiologic examination, salivary gland for calculus
70390	Sialography, radiological supervision and interpretation



Code	Description
70557	Magnetic resonance (e.g., proton) imaging, brain (including brain stem and skull base), during open intracranial procedure (e.g., to assess for residual tumor or residual vascular malformation); without contrast material
70558	Magnetic resonance (e.g., proton) imaging, brain (including brain stem and skull base), during open intracranial procedure (e.g., to assess for residual tumor or residual vascular malformation); with contrast material(s)
70559	Magnetic resonance (e.g., proton) imaging, brain (including brain stem and skull base), during open intracranial procedure (e.g., to assess for residual tumor or residual vascular malformation); without contrast material(s), followed by contrast material(s) and further sequences
76380	Computed tomography, limited or localized follow-up study

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Related Information

N/A

Evidence Review

Cone Beam Computed Tomography (CBCT) scan is a diagnostic imaging method in which a computer is used to generate a three-dimensional image of an object using a series of two-dimensional X-ray image slices taken around a single axis of rotation. Cone beam refers to the type of X-Ray projection which allows users to image a small, well-defined volume such as the lower face and mouth at a low radiation dosage.

Cone Beam Computed Tomography (CBCT) scan may be indicated when:

- Implant or third molar extraction has near proximity to nerve, sinus – vital oral structures
- Implant or third molar extraction has significant risk of complications due to vicinity of the proximity of vital structures.

- Post-endodontic care complications
- Treatment planning with head/neck trauma situations
- Complex orthognathic surgical cases

This dental policy has been developed through consideration of generally accepted standards of dental practice, review of dental literature, dental necessity, and as appropriate, government approval.

Drage et al, in *Three-Dimensional Imaging for Orthodontics and Maxillofacial Surgery* offer that:

One of the major advantages of CBCT over conventional CT is the reduced radiation dose. However, compared with a conventional lateral cephalogram, a panoramic radiograph, and any supplemental films that are required, the radiation dose of CBCT's is still relatively high. A recent report³ stated that CPCT imaging normally used the comprehensive orthodontic patients was about 65 mSv, compared with about 26 mSv for a lateral cephalogram and a panoramic image taken on their digital machine.²

It has been reported that significant differences in dose exist for different CBCT machines, and also there are differences in dose for different examinations or techniques with the same unit.

The American Association of Orthodontists made a recommendation in 2010, stating: "the AAO recognizes that while there may be clinical situations where a CBCT radiography may be of value, the use of such technology is not routinely required for orthodontic radiography." Further, The British Orthodontic Society guidelines give a similar recommendation: "routine use of CBCT even for most cases of impaction of teeth...cannot be recommended."

References

1. Cone Beam Computed Tomography: From Capture to Reporting", *Dental Clinics of North America* Volume 58, Number 3, July 2014 ISSN 0011-8532, ISBN: 978-0-323-31161-8
2. Drage N, Rout J. Diagnostic imaging. In: Kau CH, Richmond S, editors. *Three-dimensional imaging for orthodontics and maxillofacial surgery*. Oxford: John Wiley & Sons; 2010. p. 47.
3. 10Grunheid T, Kolbeck Schieck JR, Pliska BT, et al. Dosimetry of a cone-beam computed tomography machine compared with a digital x-ray machine in orthodontic imaging. *Am J Orthod Dentofacial Orthop* 2012; 141(4):436-43.
4. 13Qu XM, Li G, Ludlow JB, et al. Effective radiation dose of ProMax 3D cone-beam computerized tomography scanner with different dental protocols. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2010; 110(6):770-6



History

Date	Comments
11/10/14	New coverage guideline; add to Dental section. Computerized diagnostic imaging may be considered medically necessary when criteria are met.
07/14/15	Annual Review. Guidelines reviewed with no change to policy content.
10/13/15	Interim update. Policy statement clarified to indicate "dentally/medically necessary" and "not dentally/medically necessary."
06/24/16	Coding update. Removed 70486-70488, 70450, 70460, 70470, 70496; 70540, 70542-70546, 70551-70553, and 76390. They are reviewed by AIM.
11/01/16	Annual Review, approved October 11, 2016. Updated Coverage Guideline, added the words "Surgical treatment" between TMJ and orthognathic. Also expanded CPT code ranges and added descriptors. Policy moved into new format.
07/01/17	Annual Review, approved June 22, 2017. No changes to policy statement.
05/01/18	Annual Review, approved April 3, 2018. No changes to policy statement.
04/01/19	Annual Review, approved March 5, 2019. No changes to policy statement.
06/01/20	Annual Review, approved May 5, 2020. No changes to policy statement.
08/01/21	Annual Review, approved July 9, 2021. No changes to policy statement.
11/01/22	Annual Review, approved October 24, 2022. No changes to policy statement.
09/01/23	Annual Review, approved August 21, 2023. No changes to policy statement.
10/01/24	Annual Review, approved September 23, 2024. No changes to policy statement. Added new CDT codes D0372-D0374, D0387-D0389 and D0396.

Disclaimer: This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a member service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2024 Premera All Rights Reserved.

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