

Evolut Clinical Guideline 2055007 for Temporomandibular Joint (TMJ) Magnetic Resonance Imaging (MRI)

Guideline Number: Evolut_CG_ <u>0072055</u>	<u>Applicable Codes</u>	
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STATEMENT

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

Purpose

Imaging can assist in the diagnosis of TMJ dysfunction (TMD) when history and physical examination findings are equivocal.

INDICATIONS FOR TEMPOROMANDIBULAR JOINT (TMJ) MRI

Evaluation of Temporomandibular ~~Joint Dysfunction Disorders~~ (TMD) ⁽¹⁾

Temporomandibular disorders (TMD) is an umbrella diagnostic term that encompasses the entire clinical spectrum of related jaw/facial dysfunction symptomatology. Imaging of the TMJ can be considered when the etiology of TMD is suspected to be an internal anatomic derangement within the joint

Suspected Internal ~~Joint~~ TMJ Derangement

- Persistent symptoms of facial or jaw pain, restricted range of motion, pain and/or noise with TMJ function (i.e., chewing) ⁽²⁻⁴⁾ **AND**
- Conservative therapy with a trial of anti-inflammatory pharmacotherapy* **AND** behavioral modification* has been unsuccessful for at least four (4) weeks

*Pharmacotherapy typically includes analgesics, anti-inflammatories (NSAIDs), and/or muscle relaxants. In chronic cases, antidepressants and benzodiazepines may be used.

**Behavioral modification may include patient education, self-care, cognitive behavior therapy, physical therapy, and/or occlusal devices.

Note: X-ray should be the initial study if there is recent trauma, dislocation, malocclusion, ⁽²⁾ or dental infection ⁽⁴⁾

Evaluation of Juvenile Idiopathic Arthritis (JIA) ^(4–6)

[For initial evaluation or re-evaluation as indicated](#)

Abnormal Initial X-ray or Ultrasound ^(1,2,4)

When additional imaging is needed.

PREOPERATIVE OR POSTOPERATIVE ASSESSMENT EVALUATION ^(7,8)

Preoperative Evaluation ^(7,8):

- Imaging of the area requested is needed to develop a surgical plan

Candidates for orthognathic jaw surgery affecting the TMJ

Post-Operative Evaluation ⁽⁸⁾

- Known or suspected complications
- A clinical reason is provided how imaging may change management

NOTE: This section only applies within the first few months following surgery ~~Follow-up study may be needed to help evaluate a patient's progress after treatment, procedure, intervention, or surgery. Documentation requires a medical reason that clearly indicates why additional imaging is needed for the type and area(s) requested.~~

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
- 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.)

CODING AND STANDARDS

Coding

CPT Codes

70336

Applicable Lines of business

<input checked="" type="checkbox"/>	CHIP (Children’s Health Insurance Program)
<input checked="" type="checkbox"/>	Commercial
<input checked="" type="checkbox"/>	Exchange/Marketplace
<input checked="" type="checkbox"/>	Medicaid
<input checked="" type="checkbox"/> <input type="checkbox"/>	Medicare Advantage

BACKGROUND

~~Temporomandibular Joint Dysfunction Disorders (TMD)~~

~~Temporomandibular joint (TMJ) dysfunction causes pain and dysfunction in the jaw joint and muscles controlling jaw movement. Symptoms may include jaw pain, masticator muscle stiffness, limited movement or locking of the jaw, clicking or popping in jaw joint when opening or closing the mouth, and a change in how the upper and lower teeth fit together. The cause of the condition is not always clear but may include acute or chronic trauma to the jaw or temporomandibular joint, e.g., grinding of teeth, clenching of jaw, or impact in an accident. Osteoarthritis or rheumatoid arthritis may also contribute to the condition.~~

~~TMD Etiologies~~

~~Etiologies of TMJ dysfunction (TMD) include intra-articular (intracapsular) and extra-articular (extracapsular pathology). Intra-articular (intracapsular pathology), such as disc displacement and coexisting osteoarthritis or degenerative joint disease, is considered the most common cause of serious TMJ pain and dysfunction and the most likely to be treated surgically. Extra-articular (extracapsular pathology) includes musculoskeletal (bone, masticatory muscles and tendons) and central nervous system/peripheral nervous systems.⁽⁹⁾~~

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TMD Imaging

Imaging can assist in the diagnosis of TMD when history and physical examination findings are equivocal. The initial study should be plain radiography (transcranial and transmaxillary views) or panoramic radiography when there is recent trauma, dislocation, malocclusion, or dental infection.⁽¹⁰⁾ Ultrasound is an inexpensive and easily performed imaging modality that can also be used to evaluate the TMJ.⁽¹¹⁾ CT is useful to evaluate the bony structures of the TMJ when there is suspicion of bony involvement (i.e., fractures, erosions, infection, invasion by tumor, as well as congenital anomalies).⁽¹¹⁾ Magnetic resonance imaging (MRI) has the highest sensitivity, specificity, and accuracy in the evaluation of temporomandibular joint dysfunction and provides tissue contrast for visualizing the soft tissue and periarticular structures of the TMJ.

TMD Conservative Care

Conservative care for TMD includes patient education, self-care, behavioral modification, cognitive behavioral therapy/biofeedback, medication, physical therapy, and occlusive devices. Medications includes NSAIDs and muscle relaxants (for spasms) and in chronic cases benzodiazepines or antidepressants.

There is lack of high-quality evidence and uncertainty about the effectiveness of manual therapy and therapeutic physical therapy in treating TMJ dysfunction.⁽¹²⁾

The use of occlusive splints is thought to alleviate some of the degenerative forces on the TMJ which may be helpful in patients with bruxism or nocturnal teeth clenching. Preferred devices are unclear from the literature and dental consultation is required.⁽¹⁰⁾ In systematic reviews, there has been short-term benefit observed from splinting but no clear role in the overall long-term treatment of TMD patients.^(13,14)

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Contraindications and Preferred Studies

- Contraindications and reasons why a CT/CTA cannot be performed may include: impaired renal function, significant allergy to IV contrast, pregnancy (depending on trimester)
- Contraindications and reasons why an MRI/MRA cannot be performed may include: impaired renal function, claustrophobia, non-MRI compatible devices (such as non-compatible defibrillator or pacemaker), metallic fragments in a high-risk location, patient exceeds weight limit/dimensions of MRI machine

SUMMARY OF EVIDENCE

Diagnosis and treatment of temporomandibular disorders ⁽¹⁾

Study Design: The study focuses on the diagnosis and treatment of temporomandibular disorders (TMD). It includes a prospective cohort study with more than 6,000 participants.

Target Population: The study targets adults, with a peak incidence of TMD between 20 to 40 years of age. It is twice as common in women than in men.

Key Factors: TMD is multifactorial, including biologic, environmental, social, emotional, and cognitive triggers. Factors consistently associated with TMD include chronic headaches, fibromyalgia, autoimmune disorders, sleep apnea, and psychiatric illness. TMD is categorized as intra-articular (within the joint) or extra-articular (involving the surrounding musculature). Musculoskeletal conditions are the most common cause of TMD. Diagnosis is based on history and physical examination. Diagnostic imaging may be beneficial when malocclusion or intra-articular abnormalities are suspected. Most patients improve with noninvasive therapies, including patient education, self-care, cognitive behavior therapy, pharmacotherapy, physical therapy, and occlusal devices. Nonsteroidal anti-inflammatory drugs and muscle relaxants are recommended initially, and benzodiazepines or antidepressants may be added for chronic cases.

Recommendations for Imaging of the Temporomandibular Joint. Position Statement from the American Academy of Oral and Maxillofacial Radiology and the American Academy of Orofacial Pain ⁽⁴⁾

Study Design: This position statement was developed by an ad hoc committee of the American Academy of Oral and Maxillofacial Radiology and the American Academy of Orofacial Pain. It provides evidence-based recommendations and clinical guidance for applying appropriate diagnostic imaging to evaluate the temporomandibular joint (TMJ).

Target Population: The study targets patients with temporomandibular disorders (TMDs), which include musculoskeletal and neuromuscular conditions involving the TMJs, masticatory muscles, and associated tissues.

Key Factors: Current modalities for TMJ imaging include panoramic radiography, CBCT, CT, and MRI. Each technique has specific applications and limitations. The statement provides detailed recommendations for imaging techniques based on the type of TMD, including odontogenic sources, arthritic diseases, developmental disorders, internal derangement,

trauma, cysts, and neoplasms. The selection of imaging modality should consider the accuracy and adequacy of the imaging for the diagnostic task and its potential to provide information that contributes to diagnosis and management.

ANALYSIS OF EVIDENCE

Analysis ^(1,4):

The evidence presented in both articles supports the use of MRI as a critical tool for diagnosing TMJ disorders, particularly for evaluating soft tissue components. However, "Mallya 2023" offers a more comprehensive and detailed guideline on the application of MRI, including specific recommendations for different TMJ conditions and the use of various MRI sequences.

In summary, while both articles agree on the value of MRI for TMJ diagnosis, "Mallya 2023" provides a more detailed and structured approach to its use, making it a more practical guide for clinicians. "Gauer 2015," on the other hand, offers a broader overview and emphasizes the importance of MRI in cases where other imaging modalities are inconclusive.

Shared Findings

Both articles emphasize the importance of MRI in diagnosing TMJ disorders due to its ability to provide detailed images of soft tissues, including the articular disc and joint effusion. They agree that MRI is superior to other imaging modalities like CT and CBCT for evaluating soft tissue components of the TMJ.

- **Soft Tissue Evaluation:** Both articles highlight that MRI is the only imaging technique that reliably shows the location, shape, and size of the articular disc. It also provides valuable information about the presence of fluid effusion within the joint.
- **Diagnostic Accuracy:** MRI is considered the optimal modality for comprehensive joint evaluation in patients with signs and symptoms of TMJ disorders. It has a high correlation with joint morphology in symptomatic patients.

POLICY HISTORY

Date	Summary
<u>July 2025</u>	<ul style="list-style-type: none"> ● <u>Added a Summary of Evidence and Analysis of Evidence</u>
<u>June 2025</u>	<ul style="list-style-type: none"> ● <u>This guideline number changed from 007 to 2055</u> ● <u>Added in general information statement regarding guideline criteria development by reputable sources, standard of care, and best practices</u> ● <u>Added additional pharmacotherapy for conservative treatment</u> ● <u>Preoperative and postoperative section adjusted for clarity</u>

	<ul style="list-style-type: none"> ● <u>Applicable line of business adjusted – Medicare checked</u> ● <u>Removed background section</u>
June 2024	<ul style="list-style-type: none"> ● Updated references ● Added Contraindications and Preferred Studies section
April 2023	<ul style="list-style-type: none"> ● Updated references ● General Information moved to beginning of guideline with added statement on clinical indications not addressed in this guideline ● Added statement regarding further evaluation of indeterminate findings on prior imaging

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization management. Coverage for services varies for individual members according to the terms of their health care coverage or government program. Individual members' health care coverage may not utilize some Evolent Clinical Guidelines. Evolent clinical guidelines contain guidance that requires prior authorization and service limitations. A list of procedure codes, services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.

Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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