

# Medical Policy Oral and Maxillofacial Surgery and Procedures

#### Policy Number: 038

	Commercial and Qualified Health Plans	MassHealth	Medicare Advantage
Authorization required	Х	Х	х
No Prior Authorization *Cleft lip and palate surgery for members <18 years old	Х	Х	

#### Overview

The purpose of this document is to describe the guidelines Mass General Brigham Health Plan utilizes to determine medical appropriateness for oral and maxillofacial surgeries and procedures including repair of cleft lip and palate.

#### **Coverage Guidelines**

Mass General Brigham Health Plan covers oral and maxillofacial surgery and procedures when medically necessary and covered under the members benefit package. The specialist and/or the primary care provider are responsible for submitting all necessary clinical information including presenting problems, past medical and/or surgical interventions and results thereof, clear photographic and/or radiographic evidence, and recommended interventions necessary in order for a determination of benefit coverage and medical necessity.

Note: Mass General Brigham Health Plan covers emergency dental services only when there is a traumatic injury to sound, natural and permanent teeth caused by a source external to the mouth and the emergency dental services are provided in a hospital emergency room or operating room within 72 hours following the injury.

### **Oral and Maxillofacial Surgery**

Mass General Brigham Health Plan covers medically necessary oral and maxillofacial surgery and procedures when the relevant criteria below are met:

- 1. Excision, repair, and reconstruction of lip and cleft deformities is established when at least one of the following criteria is met:
  - a. For members under the age of 18<sup>1</sup>
    - I. Primary and secondary cleft lip and cleft palate repair, reconstruction, and excision (as defined below under definitions of primary and secondary surgery) do not require prior authorization.
  - b. For members 18 years of age and older
    - I. Prior authorization is required for cleft lip, palate, and nasolabial repair.
- 2. Orthognathic surgery for correction of a significant skeletal abnormality. Medical necessity is determined through InterQual<sup>®</sup> criteria. To access the criteria, log into Mass General Brigham Health

<sup>&</sup>lt;sup>1</sup> For commercial members: Mass General Brigham Health Plan provides coverage of cleft lip and cleft palate treatment for children under the age of 18, including oral and maxillofacial surgery, plastic surgery, speech therapy, audiology, and nutrition services as Medically Necessary. Mass General Brigham Health Plan also covers preventative and restorative dentistry and orthodontic treatment related to the treatment of cleft lip or palate.



Plan's provider website at MassGeneralBrighamHealthPlan.org and click the InterQual<sup>®</sup> Criteria Lookup link under the Resources Menu. Please search using CPT code for the procedure.

- 3. Mass General Brigham Health Plan covers medically necessary oral maxillofacial surgery for poor intelligibility when speaking in sentences when all other modalities of treatment have failed, and the member continues to have poor intelligibility when speaking in sentences. In addition to documentation of the patient history, symptoms, and functional impairment, exam, diagnosis, and proposed treatment plan and expected improvement, a Speech Language Pathology evaluation is required to substantiate degree of impairment in phonation and failed treatment intervention, and to attest to the expected improvement from surgery.
- 4. For surgical correction of skeletal abnormalities associated congenital and syndromatic craniofacial anomalies that require repair for nutritional or airway compromise or for brain development, such as: Pierre Robin syndrome, Apert syndrome, or Treacher Collins. There must be documentation of the clinical history and exam photos, Panorex radiographs, and cephalometric radiographs including lateral and posterior-anterior orientation (where indicated) with analysis, and any other tracings, imaging, or information that supports the analysis or treatment plan.
- 5. For medically necessary treatment of an oral/maxillofacial tumor, facial fractures and dislocations, or osteoradionecrosis of the jaw due to head and neck radiation. There must be documentation of the clinical history and exam, documentation of x-rays, CT scan, and/or photographs demonstrating bone involvement when applicable.
- 6. For airway dysfunction that is due to a significant skeletal abnormality and not amenable to non-surgical treatment when one of the following are met:
  - a. For maxillomandibular advancement or mandibular advancement for sleep apnea there must be medical record documentation of the following:
    - I. Moderate or severe OSA (AHI/RDI ≥15); or mild apnea (AHI/RDI 5-14) with significant O2 desaturations and/or Epworth sleepiness scale of >9
    - II. Failure of PAP titration or adherence despite coaching and treatment adjustments, or for mild OSA failure of an oral appliance due to ineffectiveness or intolerance.
    - III. If the member is obese, weight loss must be discussed.
    - IV. The requested surgical procedure is expected to significantly improve their OSA as evidenced by lateral cephalometric radiographs with tracings, measurements, and predictions, or by 3D CT scan of the upper airway; or
  - b. For other skeletal abnormalities causing airway compromise there must be documentation of the clinical history, photos, Panorex radiographs, and cephalometric radiographs including lateral and posterior-anterior orientation (where indicated) with analysis, and any other tracings, imaging, or information that supports the analysis or treatment plan.

7. Other oral surgery services for Group Insurance Commission (GIC) The removal of 7 or more permanent teeth, excision of radicular cysts involving roots of three or more teeth, extraction of impacted teeth, gingivectomies of two or more gum quadrants. Benefits are provided for the dental services listed only when Mass General Brigham Health Plan determines that the member has a serious medical condition that makes it essential for the member to be admitted to an acute care hospital or to a surgical day care setting in order for the oral surgery to be performed safely.



8. Other oral surgery services for all other Commercial Products (including Health Connector/Qualified Health Plans, and PPO; excluding GIC)

The extraction of impacted teeth is covered only under certain circumstances, which vary from plan to plan. Refer to the Member Handbook for conditions under which these services may be covered.

9. Other oral surgery services MassHealth members only

Medically necessary oral surgery (including the extraction of impacted wisdom teeth) performed in an inpatient or a surgical day care unit or ambulatory surgical facility when Mass General Brigham Health Plan determines that the member has a serious medical condition that makes it essential for the member to be admitted to an acute care hospital or to a surgical day care setting in order for the oral surgery to be performed safely. Oral surgery performed in a dental office or clinic, adult dentures, and diagnostic/preventative/restorative/major dental services may be covered directly through MassHealth; refer to member handbook and covered services list for details.

# Arthroplasty, Temporomandibular Joint (TMJ)

Medical necessity for arthroplasty for TMJ is determined through InterQual<sup>®</sup> criteria. To access the criteria, log into Mass General Brigham Health Plan's provider website at MassGeneralBrighamHealthPlan.org and click the InterQual<sup>®</sup> Criteria Lookup link under the Resources Menu.

# **General Exclusions**

Mass General Brigham Health Plan does not provide coverage for oral and maxillofacial surgery or procedures for conditions that do not meet criteria noted above, including but not limited to:

- Coverage of surgery and procedures that are solely to enhance a patient's appearance in the absence of any signs or symptoms of functional abnormalities and/or associated medical complication, is considered cosmetic and is not a covered benefit, unless specifically noted otherwise in this coverage criteria;
- 2. Expenses associated with the orthodontic phase of care, both pre-surgical and post-surgical, are considered dental in nature and are not covered under the medical benefit, unless consequent to the treatment of cleft lip/palate in a Commercial member under the age of 18;
- 3. Prophylactic extractions other than described above;
- 4. Genioplasty;
- 5. Dental services that are not expressly covered in the member's handbook or in the limited circumstances described in the criteria above, or unless consequent to the treatment of cleft lip/palate in a Commercial member under the age of 18;
- 6. Oral appliances other than those authorized for the treatment of obstructive sleep apnea, and for cleft lip and palate; (unless specified in Member Handbook)
- 7. Experimental and investigational evaluation and treatment including but not limited to: TMJ treatment by electromyography, thermography, kinesiography; and
- 8. Arthroscopy for TMJ for diagnostic purposes only.

# **Medicare Variation**

Mass General Brigham Health Plan uses guidance from the Centers for Medicare and Medicaid Services (CMS) for coverage determinations for its Medicare Advantage plan members. National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), Local Coverage Articles (LCAs) and documentation included in the Medicare manuals are the basis for coverage determinations. When there is no guidance from CMS for the



requested service, Mass General Brigham Health Plan's medical policies are used for coverage determinations. At the time of Mass General Brigham's most recent policy review, there was no NCD/LCD for oral and/or maxillofacial surgery procedures.

## **MassHealth Variation**

Mass General Brigham Health Plan uses guidance from MassHealth for medical necessity determinations for its Mass General Brigham ACO members. At the time of Mass General Brigham's most recent policy review, MassHealth has <u>Guidelines for Medical Necessity Determination for Orthognathic Surgery</u>.

## Definitions

Primary surgery for cleft lip and palate: Surgery that is undertaken to:

- 1. Repair the cleft lip deformity
- 2. Repair the cleft palate
- 3. Replace a bone graft in the alveolar (gum) cleft.

The repair is often completed in stages.

<u>Secondary surgery for cleft lip and palate</u>: Additional or secondary operations to correct residual deformities of the lip or nose.

Significant malocclusion: A malocclusion that cannot be corrected by orthodontic treatment alone.

<u>Temporomandibular joint (TMJ):</u> A syndrome evident by severe aching pain in and around the temporomandibular joint. Pain is often made worse by chewing. The syndrome is often accompanied by clicking during chewing and limited movement of the temporomandibular joint.

### **Related Policies**

- <u>Reconstructive and Cosmetic Procedures Medical Policy</u>
- Dental Treatment Setting Policy
- Oral and Maxillofacial Surgery Provider Payment Guidelines

### Codes

The following codes are included below for informational purposes only; inclusion of a code does not constitute or imply coverage.

This list of codes applies to commercial and MassHealth plans only.

Authorized CPT/HCPCS Codes	Code Description
21010	Arthrotomy, temporomandibular joint
21029	Removal by contouring of benign tumor of facial bone (eg, fibrous dysplasia)
	Meniscectomy, partial or complete, temporomandibular joint
21060	(separate procedure)
	Application of halo type appliance for maxillofacial fixation,
21100	includes removal (separate procedure)
	Reconstruction midface, LeFort I; single piece, segment movement
21141	in any direction (eg, for Long Face Syndrome), without bone graft
	Reconstruction midface, LeFort I; 2 pieces, segment movement in
21142	any direction, without bone graft



	Reconstruction midface, LeFort I; 3 or more pieces, segment
21143	movement in any direction, without bone graft
	Reconstruction midface, LeFort I; single piece, segment movement
	in any direction, requiring bone grafts (includes obtaining
21145	autografts)
	Reconstruction midface, LeFort I; 2 pieces, segment movement in
	any direction, requiring bone grafts (includes obtaining autografts)
21146	(eg, ungrafted unilateral alveolar cleft)
21140	Reconstruction midface, LeFort I; 3 or more pieces, segment
	movement in any direction, requiring bone grafts (includes
	obtaining autografts) (eg, ungrafted bilateral alveolar cleft or
21147	multiple osteotomies)
	Reconstruction midface, LeFort II; anterior intrusion (eg, Treacher-
21150	Collins Syndrome)
21150	Reconstruction midface, LeFort II; anterior intrusion (eg, Treacher-
21151	Collins Syndrome)
21131	Reconstruction midface, LeFort III (extracranial), any type,
	requiring bone grafts (includes obtaining autografts); without
21154	LeFort I
21154	
21155	Reconstruction midface, LeFort III (extracranial), any type,
21155	requiring bone grafts (includes obtaining autografts); with LeFort I
	Reconstruction midface, LeFort III (extra and intracranial) with
21159	forehead advancement (eg, mono bloc), requiring bone grafts
21139	(includes obtaining autografts); without LeFort I
	Reconstruction midface, LeFort III (extra and intracranial) with
21160	forehead advancement (eg, mono bloc), requiring bone grafts (includes obtaining autografts); with LeFort I
21100	Reconstruction superior-lateral orbital rim and lower forehead,
	advancement or alteration, with or without grafts (includes
21172	obtaining autografts)
211/2	Reconstruction, bifrontal, superior-lateral orbital rims and lower
	forehead, advancement or alteration (eg, plagiocephaly,
21175	trigonocephaly, brachycephaly), with or without grafts (includes obtaining autografts)
211/3	Reconstruction midface, osteotomies (other than LeFort type) and
21188	bone grafts (includes obtaining autografts)
21100	Reconstruction of mandibular rami, horizontal, vertical, C, or L
21193	osteotomy; without bone graft
21133	
21104	Reconstruction of mandibular rami, horizontal, vertical, C, or L
21194	osteotomy; with bone graft (includes obtaining graft)
21105	Reconstruction of mandibular rami and/or body, sagittal split;
21195	without internal rigid fixation
21100	Reconstruction of mandibular rami and/or body, sagittal split;
21196	with internal rigid fixation
21198	Osteotomy, mandible, segmental;
21199	Osteotomy, mandible, segmental; with genioglossus advancement
21206	Osteotomy, maxilla, segmental (eg, Wassmund or Schuchard)



	Osteoplasty, facial bones; augmentation (autograft, allograft, or
21208	prosthetic implant)
21209	Osteoplasty, facial bones; reduction
	Arthroplasty, temporomandibular joint, with or without autograft
21240	(includes obtaining graft)
21242	Arthroplasty, temporomandibular joint, with allograft
	Arthroplasty, temporomandibular joint, with prosthetic joint
21243	replacement
	Reconstruction of mandible, extraoral, with transosteal bone plate
21244	(eg, mandibular staple bone plate)
	Reconstruction of mandible or maxilla, subperiosteal implant;
21245	partial
	Reconstruction of mandible or maxilla, subperiosteal implant;
21246	complete
	Reconstruction of mandibular condyle with bone and cartilage
	autografts (includes obtaining grafts) (eg, for hemifacial
21247	microsomia)
	Reconstruction of mandible or maxilla, endosteal implant (eg,
21248	blade, cylinder); partial
	Reconstruction of mandible or maxilla, endosteal implant (eg,
21249	blade, cylinder); complete
	Reconstruction of zygomatic arch and glenoid fossa with bone and
21255	cartilage (includes obtaining autografts)
	Reconstruction of orbit with osteotomies (extracranial) and with
21256	bone grafts (includes obtaining autografts) (eg, micro-ophthalmia)
21270	Malar augmentation, prosthetic material
	Closed treatment of craniofacial separation (LeFort III type) using
21431	interdental wire fixation of denture or splint
	Open treatment of craniofacial separation (LeFort III type); with
21432	wiring and/or internal fixation
	Open treatment of craniofacial separation (LeFort III type);
	complicated (eg, comminuted or involving cranial nerve foramina),
21433	multiple surgical approaches
	Open treatment of craniofacial separation (LeFort III type);
	complicated, utilizing internal and/or external fixation techniques
21435	(eg, head cap, halo device, and/or intermaxillary fixation)
	Open treatment of craniofacial separation (LeFort III type);
	complicated, multiple surgical approaches, internal fixation, with
21436	bone grafting (includes obtaining graft)
	Arthroscopy, temporomandibular joint, diagnostic, with or
29800	without synovial biopsy (separate procedure)
29804	Arthroscopy, temporomandibular joint, surgical
	Plastic repair of cleft lip/nasal deformity; primary, partial or
40700	complete, unilateral
	Plastic repair of cleft lip/nasal deformity; primary bilateral, 1-stage
40701	procedure



	Plastic repair of cleft lip/nasal deformity; secondary, by recreation
40720	of defect and reclosure
	Plastic repair of cleft lip/nasal deformity; with cross lip pedicle flap
	(Abbe-Estlander type), including sectioning and inserting of
40761	pedicle
40840	Vestibuloplasty; anterior
40842	Vestibuloplasty; posterior, unilateral
40843	Vestibuloplasty; posterior, bilateral
40844	Vestibuloplasty; entire arch
	Vestibuloplasty; complex (including ridge extension, muscle
40845	repositioning)
41874	Alveoloplasty, each quadrant (specify)
42140	Uvulectomy, excision of uvula
	Palatopharyngoplasty (eg, uvulopalatopharyngoplasty,
42145	uvulopharyngoplasty
42180	Repair, laceration of palate; up to 2 cm
42182	Repair, laceration of palate; over 2 cm or complex
42200	Palatoplasty for cleft palate, soft and/or hard palate only
	Palatoplasty for cleft palate, with closure of alveolar ridge; soft
42205	tissue only
	Palatoplasty for cleft palate, with closure of alveolar ridge; with
42210	bone graft to alveolar ridge (includes obtaining graft)
42215	Palatoplasty for cleft palate; major revision
42220	Palatoplasty for cleft palate; secondary lengthening procedure
42225	Palatoplasty for cleft palate; attachment pharyngeal flap
42235	Repair of anterior palate, including vomer flap
42280	Maxillary impression for palatal prosthesis
42281	Insertion of pin-retained palatal prosthesis

# Summary of Evidence

Oral and maxillofacial surgeries encompass a broad range of procedures including dentoalveolar surgery (extraction of diseased/impacted teeth); surgical correction of maxillofacial skeletal deformities; cleft and craniofacial surgeries; orthognathic surgery; treatment of temporomandibular joint dysfunction; treatment of cysts, tumors, and infections of the oral and maxillofacial region; reconstructive surgeries; and cosmetic surgeries. This literature review focuses on practice guidelines for repair of cleft lip/palate and the surgical management of maxillofacial skeletal deformities. For other services that require authorization, see supporting documentation within the relevant InterQual subsets.

The American Cleft Palate Association (ACPA 2024) Parameters of Care and a clinical practice guideline by Dutch experts van der Molen et al. (2021) describe best practices for the nonsurgical and surgical management of cleft lip/palate. The primary goals of cheiloplasty (lip repair) are to reconstruct the oral sphincter and upper lip, and to improve the symmetry and function of the nasal airway. The primary goals of palatoplasty (palate repair) are to close the connection between the nasal and oral cavities and to reconstruct the palatal musculature, thus enabling normal speech development. Staged procedures and adjunctive surgical techniques, including bone grafts, osteotomies, distraction osteogenesis, and rhinoplasty, may be indicated. A multidisciplinary care team is required.



Maxillofacial deformities include congenital and acquired anomalies. Congenital anomalies include dentofacial skeletal deformities and various genetic syndromes (including Noonan, Treacher Collins, 22q11.2 deletion syndrome) and the Pierre Robin sequence. Acquired anomalies include traumatic injuries, cysts and tumors, inflammatory and degenerative forms of arthritis, and other disease processes. Whether congenital or acquired, these deformities may result in impairment of masticatory function, dysfunction of speech (including lisps and other disorders of phonation), airway dysfunction (including obstructive sleep apnea), dysfunction of the temporomandibular joint, poor cosmesis, and other sequelae that require surgical management (American Association of Oral and Maxillofacial Surgeons [AAOMS] 2025).

For conditions that are not covered by InterQual criteria, Mass General Brigham relies on criteria derived from these consensus guidelines to determine medical necessity for oral and maxillofacial surgeries.

# Effective

July 2025: Annual update. Clarified MassHealth variation.

April 2025: Ad hoc update. Added Summary of Evidence. References updated.

October 2024: Ad hoc update. Added MassHealth Variation. Clarified Medicare Variation.

July 2024: Annual update. Clarified language around coverage of tooth extraction.

July 2023: Annual update. Medicare Advantage added to table. Medicare Variation language added. References updated.

July 2022: Annual update. References updated.

July 2021: Annual update. References updated.

July 2020: Annual update. References updated.

September 2019: Annual update. Revised oral appliances exclusion to allow for treatment of OSA. Updated references.

December 2018: Annual update. Edited criteria under Oral and Maxillofacial Surgery; added InterQual criteria language.

February 2017: Changes reflect the addition of InterQual® Arthroplasty, TMJ criteria.

January 2017: Annual update.

December 2015: Revised other oral and surgery services #8. Added exclusion #1 and Other oral surgery services for all Commercial to reflect 1/1/16 benefit update.

February 2015: Added exclusion # 5, amended medical necessity criteria to accurately reflect plan benefit.

August 2014: Reorganized criteria and added specific requirements for oral surgery.

January 2013: Changed Cleft Lip and Palate prior authorization age.

August 2012: Added oral surgery criteria, added exclusion of prophylactic extractions.

February 2012: Annual update, no change.

February 2011: Effective date.

# References

Alanko OME, Svedström-Oristo AL. Does orthognathic treatment improve patients' psychosocial well-being? Acta Odontol Scand. 2022 Apr;80(3):177-181. doi: 10.1080/00016357.2021.1977384. Epub 2021 Sep 22. PMID: 34550844.

Al Asseri N, Swennen G. Minimally invasive orthognathic surgery: A systematic review. Int J Oral Maxillofac Surg. 2018;47(10):1299-1310.

American Association of Oral and Maxillofacial Surgeons. Indications for orthognathic surgery. Clinical Paper. 2025. Accessed 3/3/2025 at <a href="https://aaoms.org/wp-content/uploads/2025/01/ortho\_indications.pdf">https://aaoms.org/wp-content/uploads/2025/01/ortho\_indications.pdf</a>.



American Association of Oral and Maxillofacial Surgeons. Parameters of Care: Clinical Practice Guidelines for Oral and Maxillofacial Surgery. Surgical Corrections of Maxillofacial Skeletal Deformities. *Journal of Oral and Maxillofacial Surgery*. 2023;81(11): E95-E119.

American Cleft Palate-Craniofacial Association, Parameters for evaluation and treatment of patients with cleft lip/palate or other craniofacial anomalies. Updated 2024. Accessed 3/3/25 at <a href="https://acpacares.org/wp-content/uploads/2025/02/2024-ACPA\_ParametersOfCare\_Final.pdf">https://acpacares.org/wp-content/uploads/2025/02/2024-ACPA\_ParametersOfCare\_Final.pdf</a>.

American Society of Plastic Surgeons, Recommended Criteria for Third-Party Payer Coverage, 1/2011, 1/2012, 1/2013, 11/2018.

Barbosa LM, de Luna Gomes JM, Laureano Filho JR. Does the use of low-level light therapy postoperatively reduce pain, oedema, and neurosensory disorders following orthognathic surgery? A systematic review. Int J Oral Maxillofac Surg. 2022 Mar;51(3):355-365. doi: 10.1016/j.ijom.2021.06.006. Epub 2021 Jul 6. PMID: 34238645.

Bergamaschi IP, Cavalcante RC, Fanderuff M, et al. Orthognathic surgery in class II patients: a longitudinal study on quality of life, TMD, and psychological aspects. Clin Oral Investig. 2021 Jun;25(6):3801-3808. doi: 10.1007/s00784-020-03709-3. Epub 2021 Jan 7. PMID: 33415380.

Cascone P, et al. Reconstruction of the Adult Hemifacial Microsomia Patient with Temporomandibular Joint Total Joint Prosthesis and Orthognathic Surgery. Case Rep Surg. 2018 Mar 15;2018:2968983.

Dolwick MF, Widmer CG. Orthognathic surgery as a treatment for temporomandibular disorders. Oral Maxillofac Surg Clin North Am. 2018;30(3):303-323.

Daluz ADJ, da Silva TVS, Tôrres BO. Long-term airway evolution after orthognathic surgery: Systematic Review. J Stomatol Oral Maxillofac Surg. 2021 Apr 18:S2468-7855(21)00082-3. doi: 10.1016/j.jormas.2021.04.006. Epub ahead of print. PMID: 33882343.

Duarte V, Zaror C, Villanueva J, et al. Changes in health-related quality of life after orthognathic surgery: a multicenter study. Clin Oral Investig. 2022 Apr;26(4):3467-3476. doi: 10.1007/s00784-021-04315-7. Epub 2021 Dec 2. PMID: 34854989; PMCID: PMC8637059.

Hullihen SP. Case of elongation of the under jaw and distortion of the face and neck, caused by a burn, successfully treated. Am J Dent Sci. 1849;9(2):157–165.

Marklund M, et.al. Oral Appliance Therapy in Patients with Daytime Sleepiness and Snoring or Mild to Moderate Sleep Apnea. A Randomized Clinical Trial. JAMA Intern Med. 2015;175 (8):1278-1285.

Massachusetts General Law, Chapter 234 of the Acts of 2012.

The Commonwealth of Massachusetts. MassHealth Provider Manual Series 130 CMR 420.000: Dental Manual.

MassHealth Guidelines for Medical Necessity Determination for Orthognathic Surgery. Effective October 2022.

Meger MN, Fatturi AL, Gerber JT. et al. Impact of orthognathic surgery on quality of life of patients with dentofacial deformity: a systematic review and meta-analysis. Br J Oral Maxillofac Surg. 2021 Apr;59(3):265-271. doi: 10.1016/j.bjoms.2020.08.014. Epub 2020 Aug 14. PMID: 33546846.

Neeraj, Reddy SG, Dixit A. Relapse and temporomandibular joint dysfunction (TMD) as postoperative complication in skeletal class III patients undergoing bimaxillary orthognathic surgery: A systematic review. J Oral Biol Craniofac Res. 2021 Oct-Dec;11(4):467-475. doi: 10.1016/j.jobcr.2021.06.003. Epub 2021 Jun 30. PMID: 34345581; PMCID: PMC8319520.



Roland-Billecart T, Raoul G, Kyheng M, TMJ related short-term outcomes comparing two different osteosynthesis techniques for bilateral sagittal split osteotomy. J Stomatol Oral Maxillofac Surg. 2021 Feb;122(1):70-76. doi: 10.1016/j.jormas.2020.03.018. Epub 2020 Mar 27. PMID: 32229181; PMCID: PMC8787860.

van der Molen ABM, van Breugel JMM, Janssen NG, et al. Clinical practice guidelines on the treatment of patients with cleft lip, alveolus, and palate: an executive summary. J Clin Med. 2021;10(21):4813.

Zamboni R, de Moura FRR, Brew MC. Impacts of Orthognathic Surgery on Patient Satisfaction, Overall Quality of Life, and Oral Health-Related Quality of Life: A Systematic Literature Review. Int J Dent. 2019 Jun 16;2019:2864216. doi: 10.1155/2019/2864216. PMID: 31316563; PMCID: PMC6604419.

