

Clinical Practice Guideline

The Treatment of Cleft Lip and Palate Deformities

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on behalf of the guideline group "Treatment of Cleft Lip and Palate Deformities"

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Summary

Background: Cleft lip and palate deformities (CLPD) constitute one of the more common types of congenital malformation. In Germany, the prevalence is more than 1 in 500 births. The treatment is complex; multistep interdisciplinary treatment is needed for full recovery. In this S3-level clinical practice guideline, we provide evidence- and consensus-based recommendations for the treatment of patients with CLPD.

Methods: A systematic literature search based on key questions was carried out. All recommendations and statements were formulated by specialists from multiple disciplines and were adopted in a formal consensus procedure.

Results: Despite the epidemiological and clinical importance of CLPD, no clear treatment recommendations are available; the major treatments for it are debated and variably provided. If a fetus is at elevated risk of CLPD, ultrasonography in the second or third trimester of pregnancy is recommended. For a newborn child with CLPD, adequate food intake must be ensured. Orthodontic treatment is carried out in an interdisciplinary manner and in multiple developmental phases. Controversy surrounds the timing and sequence of reconstructive procedures for deformities that affect all

structures. In children who have them, normal ventilation of the middle ear is impaired or obviated, making tympanic effusions and hearing loss more likely. In all children with CLPD, speech can be impaired and there can be a secondary impairment of language acquisition.

Conclusion: Most of the evidence concerning the treatment of CLPD is of low level. Standardization of the treatment approach should improve long-term outcomes and quality of life in patients with CLPD. Standardized, long-term, multicenter data acquisition would help increase the yield of useful information from future studies.

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With an estimated prevalence of 1 in 700 live births, cleft lip and palate deformities (CLPD) rank among the most common types of congenital malformation (1). The significant ethnical and geographic variations in prevalence rates are most likely attributable to genetic factors; with more than 1 in 500 live births, the prevalence in Germany appears to be particularly high compared to other European countries (1, 2).

A failure of fusion of the lateral maxillary prominences with the medial nasal prominence during embryological development results in CLPD. Depending on the affected anatomical subunits (upper lip, alveolar ridge/hard palate, soft palate) and the severity, the degree of deformity ranges from microforms (e.g. bifid uvula, lip notch) to bilateral complete deformities of the upper lip, nasal floor, alveolar ridge, hard palate, and soft palate. Overall, approximately 7% of orofacial malformations are observed as part of syndromes, and over 300 different superordinate syndromes are known. In approximately 16% of cases, associated deformities are found (3).

Thus, the severity of the deformity (*Figure*), complications and concomitant conditions have a decisive impact on an individual's burden of disease. Except for individuals with microforms with no negative esthetic or functional consequences, all patients with cleft lip and palate deformities should be treated. In almost all cases, extensive interdisciplinary treatment effort is required to achieve full recovery (*eBox 2*). Usually, a two-stage approach is used for primary surgical repair of CLPD in the child's first year of life. During the first procedure, reconstruction of the upper lip, nostril and nasal vestibule is performed, followed by reconstruction of the hard/soft palate during the second procedure. The mean length of postoperative hospital stay is slightly longer after cleft palate repair (4.5 ± 2.7 days) compared to cleft lip repair (4.1 ± 2.6 days) (4). The goal of CLPD

treatment is to achieve esthetic and functional recovery so that the child is able to chew, speak and breathe normally by the time it reaches school age (*Figure*). Until completion of jaw and facial development, the interdisciplinary follow-up and management of these patients, which requires considerable time and effort, should be the standard of care.

Suboptimal treatment of patients with CLPD can lead to more severe language, speech and hearing disorders, permanent jaw and teeth misalignment, esthetic impairment and, ultimately, a reduction in well-being and social integration (*Table*). However, despite being highly relevant from an epidemiological and clinical point of view, CLPD treatment is currently not standardized and varies widely between different centers, both across Germany and internationally (4). In the experience of the authors of this article, case numbers per therapist can be very low in the outpatient sector, resulting in a lack of treatment routine.

The aim of this clinical practice guideline is to provide evidence- and consensus-based information relevant to the treatment of patients with CLPD. The long-term outcome and quality of life of this patient population could be improved by standardizing CLPD treatment based on the current evidence.

Methods

The methods used to develop this S3-level clinical practice guideline are in line with those specified in The Guidance Manual and Rules for Guideline Development of the Association of the Scientific Medical Societies in Germany (AWMF, Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften) (5). The available evidence (*eFigure*) was evaluated based on the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) framework, using defined criteria (6). The evidence-based (EB) and consensus-based (expert consensus, EC) recommendations are created on the basis of a critical evaluation of the evidence as well as the clinical, practical care and ethical value judgments of the interdisciplinary guideline group. This group is made up of mandate holders of a total of 40 different medical societies and organizations (*eBox 3*).

While an abundance of publications is available (*eFigure*), the quality of evidence of the identified studies was mostly low. Due to methodological shortcomings, the quality of evidence of most of the few available randomized, controlled trials (RCTs) had to be rated as “low” or “very low”. In addition, the comparability of the study results is limited by a wide variation in study designs and defined endpoints. This constellation complicates the interpretation of the results. For this reason, all recommendations were extensively discussed by leading German experts in the respective fields and assessed based on their clinical expertise.

The recommendations on diagnosis and treatment

A total of 74 recommendations and 20 statements were adopted, of these 66 evidence- and 28 consensus-based.

Due to this large number, we can only present a few examples here. These roughly follow the successive steps.



Figure: Patient with cleft lip and palate deformity before (left) and after (right) primary surgical treatment. Unilateral continuous deformities are the most common.

The complete guideline is available on the website of the Association of the Scientific Medical Societies in Germany (AWMF) (7).

Prenatal diagnosis

Prenatal ultrasound of the fetal face permits identification of a deformity as early as 14 weeks' gestation. An article published in 2022 reported a sensitivity of 81.9 % and a specificity of 99.9% (positive predictive value: 80.1%; negative predictive value: 99.9 %) for the ultrasound detection of orofacial deformities (8). In a preselected risk group, the accuracy and differentiation of various types of deformities can be further improved by using the 3D technique. However, only about half of all CLPD cases are diagnosed prenatally.

On the one hand, a prenatally established diagnosis can give parents time to learn about the deformity and make the necessary preparations. On the other hand, an adequate prenatal diagnosis can lead to giving birth in a specialized hospital where optimum postnatal care can be provided, especially in cases with syndromic disease and associated deformities.

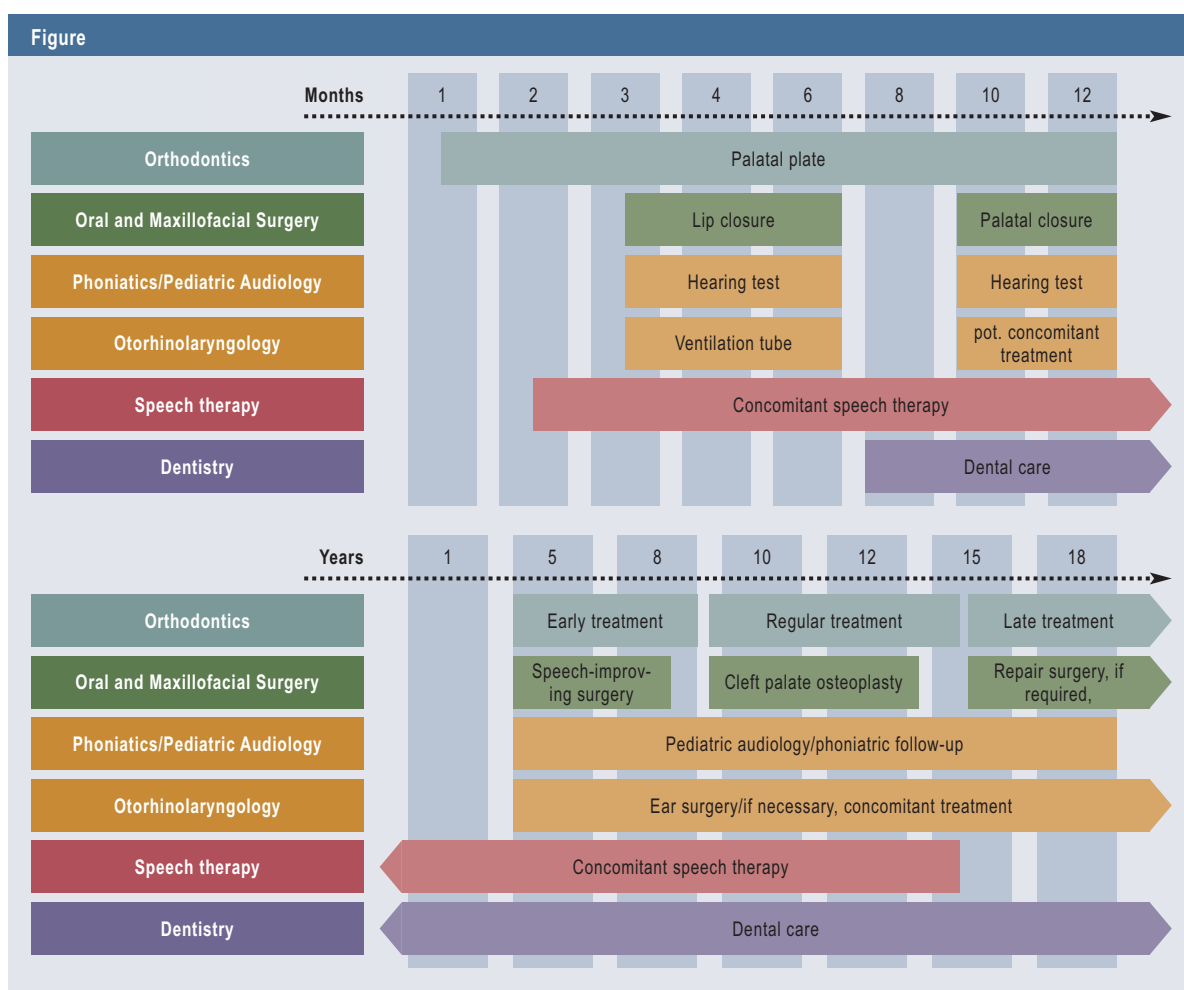
For patients at increased risk of having a child with CLPD, targeted ultrasound examinations aimed at providing detailed diagnostic insights in the second and third trimesters of pregnancy are recommended (EBR ↑↑, “should” recommendation).

Human genetic testing

The genetic background of non-syndromic CLPD is still not fully understood. In principle, however, genetic testing for syndromic diseases caused by chromosomal aberrations or single-gene mutations may be performed on all CLPD patients.

The presence of additional congenital anomalies is considered a strong predictor of syndromic disease. In these cases, the detection of a single-gene mutation or a chromosomal aberration allows a definite genetic diagnosis to be established and statements to be made about the prognosis, pattern of inheritance and the probability of recurrence in relatives and pregnancies. Currently, a pathogenic genetic variant can be identified in about 10% of patients primarily presenting as non-syndromic (9). If genetic testing in patients presenting as non-syndromic is negative, this finding supports a diagnosis of non-syndromic deformity.

Thus, the recommendation is to offer parents prenatal counseling and potentially further diagnostic testing by a clinical human geneticist, if additional malformations are detected by prenatal ultrasound. The same applies pre- and postnatally to patients with clinically non-syndromic CLPD and a positive family history (EBR ↑, “ought to” recommendation).



Overview of treatment steps and disciplines involved

Nutrition

In children born with CLPD, it is of vital importance to ensure adequate food intake. In the case of isolated cleft lips, feeding is usually possible without problems. In contrast, in at least one third of newborns with deformities involving the palate, feeding is markedly impaired (10). As the result of the palatal deformity, it is difficult or impossible for these infants to create adequate suction, making breastfeeding difficult or even impossible. Based on the current literature, the various aids used to feed newborns with CLPD, such as special teats, finger feeding or squeezable bottles, are to be considered equally useful (11). Even though the available evidence is generally of low quality, it seems advisable to offer parents of children with CLPD prenatal counselling and postnatal feeding support by specially trained staff (EBR↑).

After primary surgical reconstruction, oral feeding is frequently temporarily stopped for fear of complications and a switch is made to, for example, nasogastric tube feeding. However, this fear appears to be unjustified, especially after cleft lip repair (12, 13). In patients with CLPD who underwent cleft lip repair, breastfeeding or bottle feeding ought to be resumed immediately after surgery (EBR↑). After surgical repair of a palatal cleft too,

immediate postoperative oral feeding may be attempted under appropriate analgesia without any negative effect on the surgical outcome (EBR↔, “may” recommendation).

Orthodontic treatment

Orthodontic treatment is an important element of the interdisciplinary management of patients with CLPD and of special importance in several developmental phases.

In patients with complete unilateral or bilateral CLPD, a removable so-called mouth/nose separator plate is fitted prior to primary reconstruction surgery. It corrects the position of the tongue and, with regular adjustments, supports the orientation of the maxillary segments. Despite a lack of supporting evidence, this method of passive orthodontic treatment is recommended based on expert consensus in order to facilitate primary surgical repair (EC↑).

In the case of alveolar ridge involvement, bone grafting is required for the repair of the osseous defect in order to enable the eruption of the permanent teeth and to stabilize the maxilla (alveolar cleft osteoplasty). This should be performed as a secondary alveolar cleft osteoplasty during the mixed dentition period (EC↑↑). The available literature

Table

Impairments and complications associated with cleft lip and palate deformities

Associated complications/im-pairments	Comment	Options for intervention	Effects [95% CI]
Oronasal fistulas (e2)	- Postoperative complications after cleft palate repair, multifactorial - Risk depending on configuration of deformity and surgical technique, among others - Incidence in the literature varies widely, in meta-analyses 6.4–8.6%	- Local/regional flap surgery - Interposition repair with synthetic/autologous tissue - Microvascular tissue transfer - Prosthetic restoration	- Successful closure in about 85% of cases - High recurrence rates of 10%–37% in the literature
Articulation disorders/speech development disorders (38)	- Changes in speech ability as a result of CLPD, particularly in the aspects of articulation and resonance - Pot. secondary phonological speech disorder 50% of children have speech impairments at the age of 5 years	- Speech and language therapy - Linguistic-phonological and motor-phonetic approach can be regarded as equivalent	Improved speech production in 75% [61; 87] of cases, on a level of peers in 21% [10; 34]
Velopharyngeal insufficiency (e3–e5)	- Dysfunction of velopharyngeal mechanism with inadequate separation of nasopharynx and oropharynx, resulting hypernasality and nasal regurgitation of food - Primary speech therapeutic assessment and treatment, - Speech-improving surgery indicated in approximately 15% of cases	- Cleft palate revision surgery - Velopharyngoplasty - Sphincter pharyngoplasty - Injection pharyngoplasty - Buccal myomucosal flaps No technique can be considered the gold standard	- Cleft palate revision surgery: - No hypernasality in 53% [40; 65] - Very mild hypernasality in 65% [54; 75] - Velopharyngoplasty: - Normal resonance in 75.6%
Seromucotympanon, secondary hearing loss (32, 33, e6, e7)	- Otitis media with effusion in 94% of newborns with cleft palate deformities (32), resulting conductive hearing loss - Persistent (usually mild) hearing loss into adulthood reported in the literature in up to 50% of cases (e7)	- Paracentesis and placement of ventilation tubes (PC/PD) - Fitting of hearing aids	- After PC/PD: significantly longer period without OME (OR = 2.73 [1.37; 5.42], $p = 0.004$) (33) - Normal hearing threshold at age 6 years (e6)
Dysgnathia (e8)	- Maxillary hypoplasia as a very common secondary deformity results in transverse and sagittal discrepancy between maxilla and mandible - Possible impairment of chewing, speech, esthetics - Surgical treatment required in about 25–60% of cases	- In case of mild severity, orthodontic therapy during growth (e.g. Alt-RAMEC protocol) - Surgery once growth has been completed: - Le Fort I osteotomy - Distraction osteogenesis	- Recurrence, stated in % of the horizontal displacement distance - Le Fort I osteotomy: 20% [14; 26] - Distraction osteogenesis: 12% [3; 20]
Esthetic impairment (e9)	- Impairments can lead to psychosocial problems - due to persistent differences in the facial profile, nasolabial and dental morphology, and scarring, among others	- Plastic corrective surgery: - Upper lip repair - Septorhinoplasty - Augmentation - Scar correction surgery	- Outcomes highly subjective - Hardly any standardized, validated parameters

CI, confidence interval; OME, otitis media with effusion

does not allow to determine a definite superiority of autologous, allogeneic or xenogeneic augmentation material (14). Placement of autologous bone graft in the alveolar cleft area remains the gold standard compared to other materials used for augmentation and ought to be used preferentially until conclusive findings from studies of high methodological quality have become available (EC↑).

Surgical repair

A systematic review published in 2018 included all RCTs related to cleft surgery and craniofacial surgery (15). The authors were only able to identify 17 studies on the primary repair of CLPD that met the criteria for highest quality. Many of the standard surgical procedures in this field cannot be supported by high-quality evidence from RCTs. In addition, the existing, mostly single-center trials included only small numbers of cases, a fact that reduces the quality of the evidence.

To illustrate this problem, we will use the example of a unilateral cleft lip repair. There are no systematic reviews comparing different techniques for the primary surgical repair of cleft lip and nose with re-

gard to both esthetic and functional outcomes. We identified several RCTs in which two surgical techniques were compared in respect to the achieved esthetic outcomes. However, the quality of the evidence of each of the individual studies was very low, making it difficult to interpret the results (16–23). For example, the comparison of two very widely used surgical techniques—the Millard technique versus the Tennison-Randall technique—seems to show advantages of using the Millard technique with regard to the shape (RR, 0.5 [0.05; 5.2]) and thickness (RR, 0.54 [0.25; 1.15]) of the scar. In contrast, the Tennison/Randall technique can achieve a more esthetic shape and symmetry of the nostrils (RR, 1.31 [0.8; 2.15]), columella (RR, 1.38 [0.95; 2]), and Cupid's bow (bow-shaped vermilion border of the upper lip; RR, 3 [0.66; 13.61]) (16, 20). Ultimately, minor trends can be identified from the published data with a low degree of certainty; in most cases, the confidence in the evidence is not strong enough to

support practical recommendations. Nevertheless, consensus-based recommendations, reduced to generally acceptable principles, were created to address these topics. For example, the timing and sequence of CLPD repair procedures for continuous types of deformities (single-stage versus two-stage; upper lip prior to palate or vice versa; hard and soft palate simultaneously or in several steps, etc.) is the subject of ongoing discussion. In Europa, there are only few centers that use a single-stage approach with simultaneous repair of lip, nostrils, hard palate and soft palate. According to the literature, a single-stage strategy is not inferior to multi-stage concepts (24–27); thus, the recommendation for a single-stage or multi-stage approach remains open (EBR↔).

It is recommended to perform primary rhinoplasty for uni- and bilateral deformities at the time of upper lip and nostril repair (28) (EBR↑). Gingivoperiosteoplasty, as a primary alveolar cleft osteoplasty, can only be performed if the anatomical situation is ideal (29) (EBR↔). With regard to the audiological outcome, an early closure of a cleft palate before age one year may be of advantage; preference ought to be given to a technique with velar muscle reconstruction (30, 31) (EBR↑).

Otorhinolaryngology /pediatric audiology

The abnormal insertion of the velar muscles in patients with CLPD makes normal ventilation of the middle ear difficult or even impossible. In more than 90% of affected children, middle ear effusions are found by age six months (32). It is not uncommon that serous otitis media results in an initially unnoticed hearing loss and, if left untreated, in chronic otitis and delayed speech development. Even though the topic is highly relevant and multiple publications are available, the question of indication for and timing of ventilation tube placement remains undecided. The guideline makes an open timing recommendation on the placement of ventilation tubes before or during primary cleft repair (32–34) (EBR↔); however, prophylactic placement is not indicated (35). In the case of repeated ventilation tube placement, the use of permanent ventilation tubes ought to be considered (EC↑). In patients with CLPD and unremarkable newborn hearing screening, an audiological follow-up examination should be carried out no later than age nine months (EBR↑).

Speech therapy/logopedics and velopharyngeal insufficiency

In children with CLPD, speech can be impaired and there can be a secondary impairment of language acquisition. The orofacial changes primarily affect speech ability, mostly in the aspects of articulation and resonance.

In order to confirm the diagnosis of velopharyngeal insufficiency, video nasopharyngoscopy ought to be performed in addition to an auditory-perceptual tone of voice assessment (36, 37) (EBR↑). If intelligibility is impaired or if there are relevant impairments in age-appropriate language development, it is recommended to initiate speech therapy. It was found that this approach improved speech production in 75% of affected children to a clinically relevant degree (95% CI: [61%; 87%]) and that in 21% of the affected children speech production subsequently was on a level of peers (95% CI: [10%; 34%]) (38). According to the current literature, the

linguistic-phonological and the motor-phonetic speech therapy approach can be regarded as equivalent; the choice ought to be made based on the specific disorder (EBR↑).

Anesthesiological aspects

Laryngoscopy for endotracheal intubation during anesthesia for primary repair of a CLPD ought to be performed, if possible, primarily using a video laryngoscope—especially in children aged less than one year (39) (EBR↑).

Infiltration of local anesthetics into the surgical site always seems to be useful in patients undergoing primary reconstructive surgery. For cleft lip repair procedures, the additional administration of an infraorbital nerve block (INB) is recommended (EBR↑). With an INB, significantly lower pain scores and longer anesthesia duration was found compared to placebo administration (40). Furthermore, a significant reduction in the need for postoperative opioid administration was noted (time to first opioid dose prolonged to 215.76 minutes, 95% CI: [83.26; 448.26], $p < 0.005$; reduced overall need for opioid analgesics 0.2 mg/kg/d, 95% CI: [−0.20; −0.20], $p < 0.00001$) (e1).

The duration and modality of postoperative monitoring—e.g., a planned admission to the pediatric ICU—should be based on individual patient factors, the speed and ease of the actual surgical procedure and the risk of occurrence of potentially life-threatening complications (EbE↑↑).

Dental therapy

Due to possible tooth misalignment, hypoplasia and missing teeth, intensive dental care is required. Tooth conservation is critical for the development of the upper jaw, so preventative care should be provided as soon as the primary dentition erupts.

Conclusion

The treatment of patients with CLPD is a field with a tradition which dates back centuries. It is characterized by a complexity and depth that in many cases do not allow for simple and all-encompassing statements. Although thousands of publications are available, many aspects remain controversial.

Study design problems include:

- the patient-specific severity of the deformity
- the lack of generally adopted variables for outcome assessment
- the low patient numbers per center at some sites
- the influence of the person providing treatment, and
- the need for long-term planning, because definitive functional and esthetic outcomes can only be assessed once growth has been completed..

The current S3-level clinical practice guideline is the first in German-speaking countries that attempts to translate the available body of evidence into treatment-relevant recommendations. Expert consensus was easily reached in many relevant areas. At the same time, the guideline also reveals existing evidence gaps in a number of areas. Examples of key research questions include surgical techniques, the timing and sequence of surgical correction procedures as well as the diagnosis and treatment of chronic hearing loss. More interdisciplinary, multicenter, long-term research projects, specifically

including centers that use different concepts, are needed to further improve the treatment of patients with CLPD in Germany. National standards for treatment centers and centralized, standardized documentation could make this task much easier.

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Conflict of interest statement

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Clinical practice guidelines in the *Deutsches Ärzteblatt*, as in many other journals, are not subject to a peer review process, since clinical practice (S3 level) guidelines are texts which have already been evaluated, discussed, and broadly agreed upon multiple times by experts (peers).

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Supplementary material

Complete list of full references including eReferences,
eFigure, eBoxes:
www.aerzteblatt-international.de/m2025.0052

Erratum

In the review article “Onconeurology: The Significance of Renal Function for the Development, Diagnosis, and Treatment of Cancer” by Susanne Delecluse et al. in issue 24/2024, the value for the glomerular filtration rate (GFR) on page 794 was marked with the incorrect mathematical symbol. The correct text should read: “In patients with a GFR of $>60 \text{ mL/min/1.73 m}^2$ and proteinuria, cancer mortality is higher than cardiovascular mortality (7).”

Furthermore, the following requires an additional reference: “The cumulative cancer frequency is higher with a GFR of $<60 \text{ mL/min/1.73 m}^2$ compared to a GFR $>60 \text{ mL/min/1.73 m}^2$ and increases disproportionately over a period of 12 years (5, 8).”

Supplementary material to accompany the article

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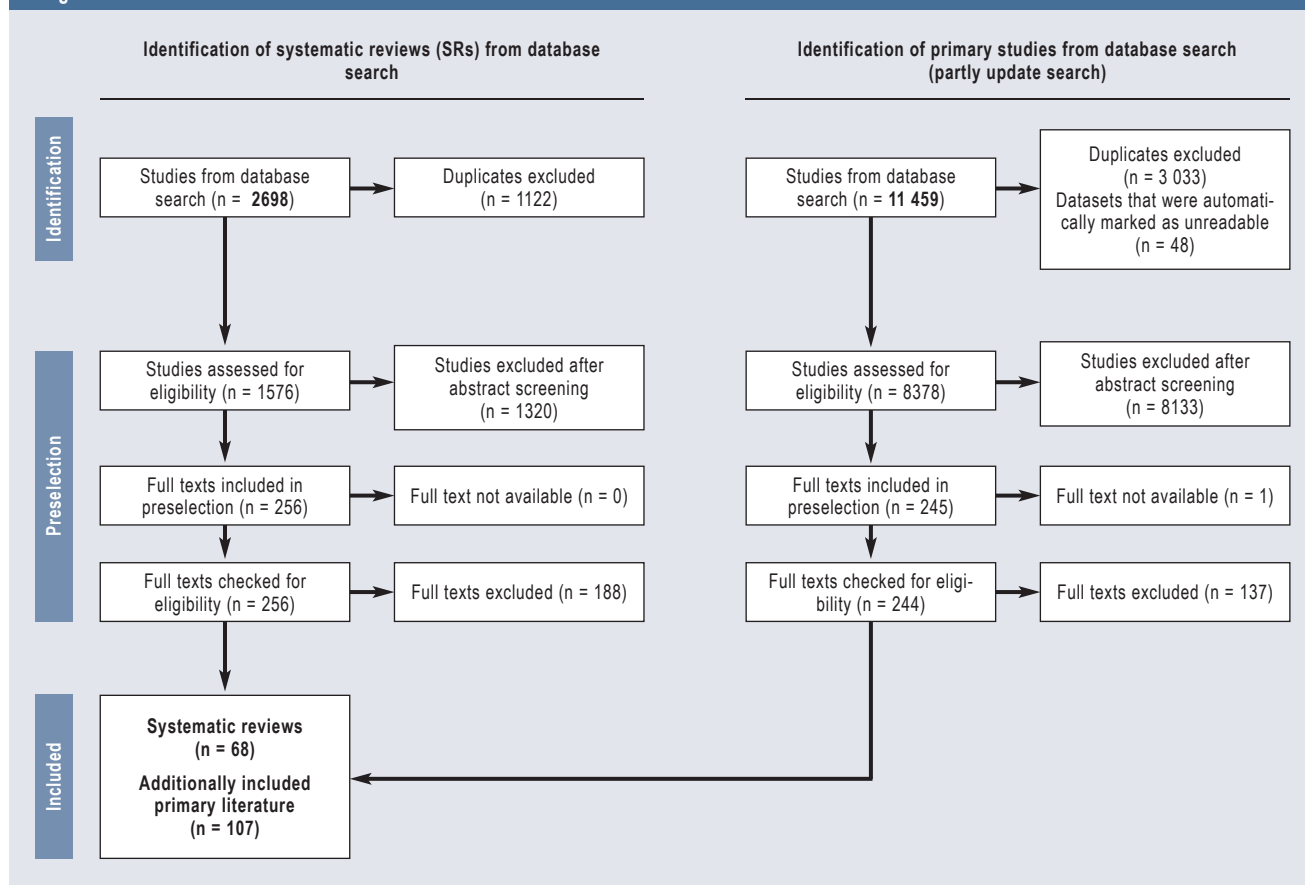
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eFigure



Flow chart of study selection according to current PRISMA guidelines (e10). This diagram is licensed under CC BY 4.0. A copy of this license can be found at <https://creativecommons.org/licenses/by/4.0/>

eBox 1

Collaborators

● Guideline group members (in alphabetical order):

- Alexandra Blöck
- Prof. Dr. Dirk Beutner
- Prof. Dr. Bert Braumann
- Dr. Annemarie Fritz
- Dr. med. Jana-Christian Koseki
- Prof. Dr. Dr. Michael Krimmel
- PD Dr. Elisabeth Mangold
- Prof. Dr. Tobias Piegeler
- Prof. Dr. Christian Poets
- Svenja Werle

eBox 2

Specialist disciplines involved in treatment and corresponding fields of activity

- **Oral and Maxillofacial Surgery**
 - Surgical repair of upper lip, nasal floor and nostrils, hard palate and soft palate
 - Alveolar ridge repair prior to eruption of permanent teeth
 - Speech-improving surgery (e.g. velopharyngoplasty)
 - Plastic esthetic surgical procedures
 - Definitive septorhinoplasty
 - Dysgnathia surgery
- **Prenatal medicine**
 - Diagnosis of orofacial deformities in utero
- **Human Genetics**
 - Prenatal counseling and diagnosis or for estimating the probability of recurrence
- **Pediatrics/Neonatology**
 - In-patient treatment
 - Treatment of concomitant diseases
- **Otorhinolaryngology /pediatric audiology/phoniatrics**
 - Newborn hearing screening
 - Ear microscopy/pediatric audiogram
 - Treatment of diseases of the middle ear/upper respiratory tract
 - Paracentesis/placement of ventilation tubes
 - Regular checks for conductive hearing disorders, taking speech-relevant features into account
 - Screening examinations for the early detection of cholesteatoma into adulthood
 - Indication for speech therapy
- **Anesthesiology**
 - Perioperative care
- **Orthodontics** Fitting of mouth/nose separator plates prior to reconstruction of soft/hard palate,
 - if necessary early treatment in case of major skeletal deformities
 - Pre-treatment and follow-up treatment of alveolar cleft osteoplasty, shaping of the dental arches
 - Pre-treatment and follow-up treatment for necessary secondary corrections (dysgnathia surgery)
- **Speech therapy/logopedics**
 - Treatment of disorders of articulation and resonance
 - Orofacial tract dysfunction
 - Treatment of primary and secondary disorders of speech development (receptive and productive)
- **Midwifery sciences /breastfeeding/lactation counselling**
 - Treatment of food intake disorders/dysphagia, feeding disorders
- **Dentistry**
 - Close monitoring because of increased caries risk
 - Conserving and/or prosthetic treatment of hypoplasia/missing teeth/tooth loss in the cleft area
- **Psychology**
 - Screening of parents and patients for psychological problems
 - Interventions for overt psychological distress

Professional societies involved in the development of the guideline

● Participating professional societies and organizations

- German Society of Oral and Maxillofacial Surgery (*German Society of Deutsche Gesellschaft für Mund-, Kiefer- und Gesichtschirurgie e. V., DGMKG*)
- German Society of Dentistry and Oral Medicine (*Deutsche Gesellschaft für Zahn-, Mund- und Kieferheilkunde e. V., DGZMK*)
- German Society of Orthodontics (*Deutsche Gesellschaft für Kieferorthopädie e. V., DGKFO*)
- German Society of Oto-Rhino-Laryngology, Head and Neck Surgery (*Deutsche Gesellschaft für Hals-Nasen-Ohren-Heilkunde, Kopf- und Hals-Chirurgie e. V., DGHNOKHC*).
- German Society of Phoniatrics and Pediatric Audiology (*Deutsche Gesellschaft für Phoniatrie und Pädaudiologie e. V., DGPP*)
- German Society of Anesthesiology and Intensive Care Medicine (*Deutsche Gesellschaft für Anästhesiologie und Intensivmedizin e. V., DGA*)
- German Society of Pediatric Dentistry (*Deutsche Gesellschaft für Kinderzahnmedizin, DGK*)
- German Society of Plastic Reconstructive and Aesthetic Surgeons (*Deutsche Gesellschaft der Plastischen, Rekonstruktiven und Ästhetischen Chirurgen e. V., DGPRÄC*)
- German Society of Gynecology and Obstetrics (*Deutsche Gesellschaft für Gynäkologie und Geburtshilfe e. V., DGGG*)
- German Society of Pediatrics and Adolescent Medicine, *Deutsche Gesellschaft für Kinder- und Jugendmedizin e. V., DGKJ*)
- German Society of Human Genetics (*Deutsche Gesellschaft für Humangenetik e. V., DGfH*)
- German Federal Association for Academic Speech Therapy and Logopedics (*Deutscher Bundesverband für akademische Sprachtherapie und Logopädie e. V., DBS*)
- German Federal Association for Speech Therapy (*Deutscher Bundesverband für Logopädie e. V., dbf*)
- Working Group Oral Pathology and Oral Medicine in the DGZMK (*Arbeitskreis Oralpathologie und Oralmedizin in der DGZMK*)
- Working Group Basic research in the DGZMK (*Arbeitsgemeinschaft für Grundlagenforschung in der DGZMK*)
- Association of Medical Professions (*Verband medizinischer Fachberufe e. V., VmF*)
- German Society of Preventive Dentistry (*Deutsche Gesellschaft für Präventivzahnmedizin e. V., DGPZM*)
- German Society of Aesthetic Dentistry (*Deutsche Gesellschaft für Ästhetische Zahnmedizin e. V., DGÄZ*)
- Mecklenburg-Western Pomerania Society of Dentistry and Oral Medicine (*Mecklenburg-Vorpommersche Gesellschaft für Zahn-, Mund- und Kieferheilkunde e. V.*)
- Federal Association of Dentists of the Public Health Service (*Bundesverband der Zahnärztinnen und Zahnärzte des Öffentlichen Gesundheitsdienstes e. V., BZÖG*)
- German Society of Dental Implantology (*Deutsche Gesellschaft für Zahnärztliche Implantologie e. V., DGZI*)
- Professional Association of German Oral Surgeons (*Berufsverband Deutscher Oralchirurgen e. V., BDO*)
- Free Association of German Dentists (*Freier Verband Deutscher Zahnärzte, FVDZ*)
- NEUE GRUPPE e. V. Scientific Dental Association (*Neue Gruppe – wissenschaftliche zahnärztliche Vereinigung*)
- Working group for oral and maxillofacial surgery (*Arbeitsgemeinschaft für Oral- und Kieferchirurgie e. V.*)
- European Association of Dental Implantologists (*Bundesverband der implantologisch tätigen Zahnärzte in Europa e. V., BDIZ DEI*)
- Professional Association of German Orthodontists (*Berufsverband der deutschen Kieferorthopäden e. V., BDK*)
- Working Group for Psychology and Psychosomatics (*Arbeitskreis für Psychologie und Psychosomatik*)
- German Society of Implantology in Dentistry and Oral Medicine (*Deutsche Gesellschaft für Implantologie in der Zahn-, Mund- und Kieferheilkunde e. V.*)
- German Federal Association of Pediatric Dentists (*Bundesverband der Kinderzahnärzte, BuKiZ*)
- German Society for Prosthetic Dentistry and Biomaterials (*Deutsche Gesellschaft für Prothetische Zahnmedizin und Biomaterialien e. V., DGPro*)
- German Society of Conservative Dentistry (*Deutsche Gesellschaft für Zahnerhaltung e. V., DGZ*)
- German Society of Dentistry for People with Disabilities or Special Medical Needs in the DGZMK (*Deutsche Gesellschaft Zahnmedizin für Menschen mit Behinderung oder besonderem medizinischen Unterstützungsbedarf*)
- German Society of Midwifery Science (*Deutsche Gesellschaft für Hebammenwissenschaft e. V., DGHWi*)
- Wolfgang Rosenthal Society (*Selbsthilfevereinigung für Lippen-Gaumen-Fehlbildungen e. V. – Wolfgang Rosenthal Gesellschaft*)
- IFUS (*Initiativvereinigung zur Förderung und Unterstützung für Spaltträger e. V.*)
- National Association of Statutory Health Insurance Dentists (*Kassenzahnärztliche Bundesvereinigung, KBV*)
- German Interdisciplinary Working Group Cleft Lip and Palate /Craniofacial Anomalies (*Deutscher interdisziplinärer Arbeitskreis Lippen-Kiefer-Gaumenspalten/Kraniofaziale Anomalien*)
- German Society of Prenatal Medicine and Obstetrics (*Deutsche Gesellschaft für Pränatal- und Geburtsmedizin e. V., DGPGM*)
- Friedrich Louis Hesse Society of Dentistry, Oral and Maxillofacial Medicine at the University of Leipzig (*Friedrich-Louis-Hesse-Gesellschaft für Zahn-, Mund- und Kieferheilkunde an der Universität Leipzig e. V.*)