

## 20 years European Consensus Conference (EuCC) under the auspices of the BDIZ EDI

# Guidelines—recommendations for practitioners

Every dental practice has to face new challenges every day, absorbing scientific and technical innovations, but also in terms of insurance issues and ever-changing guidelines and laws. Once a year, the European Consensus Conference (EuCC) of the BDIZ EDI provides practical recommendations on a major topic within oral implantology. The consensus paper is sent to the members as a printed guideline and is freely available online, in German and in English. All guidelines provide a comprehensive list of references on their topics.

The EuCC is an international body consisting of experts a specific topic. It seeks consensus after detailed discussion on the basis of a working paper prepared by the University of Cologne, with the proceedings being solidified into a guideline. The papers from previous years, some of which have been updated, are available

for download on our website and address the following topics: Preventing, detecting and treating specific complications (2019); Update: Peri-implantitis (2020); Update: Ceramics in implant dentistry (2021); Update: Cologne ABC Risk Score (2022); Update: Short, angulated and reduced-diameter implants (2<sup>nd</sup> update) (2023); and

the current guideline, Update: The digital workflow in oral implantology (2024). The following presentation includes the most frequently downloaded papers. You will find them online by following this QR code:



### 2019: Preventing, detecting and treating specific complications

The conclusions of the 14<sup>th</sup> EuCC (2019) were as follows (they are scheduled to be updated in 2025): “Dental implants are reliable treatment options for restoring patient function and aesthetics. Careful case selection is necessary by considering not only the oral findings alone. Due to the great variation of implant designs and surgical and prosthetic procedures proposed, the individual suggested parameter should be followed to avoid complications. All procedures should be performed by treatment providers with the requisite up-to-date expertise and training.”



## 2020 Update: Peri-implantitis

When defining peri-implantitis, the 15<sup>th</sup> EuCC (2020) made a distinction between: (1) initial, reversible mucositis; (2) inflammatory, currently irreversible peri-implantitis; and (3) apical inflammation as a special manifestation following endodontic treatment and/or apical granuloma or burnt-bone syndrome (so-called retrograde peri-implantitis). As far as diagnosis, the EuCC recognised the inflammatory mediators in the sulcus fluid as a biomarker for peri-implantitis and found that this biomarker can be used to differentiate between early and late disease.



### Update Periimplantitis – periimplantäre Entzündungen und periimplantäre Erkrankungen

15. Europäische Konsensuskonferenz (EuCC) 2020 in Köln  
22. Februar 2020

## 2021 Update: Ceramics in implant dentistry

The 16<sup>th</sup> EuCC (2021) found that commercially available titanium implants inserted according to the manufacturer's instructions achieved good osseointegration and soft-tissue biocompatibility as well as good clinical success, both from an immunological and a biological point of view.

It dispelled earlier concerns about one-piece ceramic implants. The risk of implant fracture is low for current commercially available implants. Overload damage during the early healing phase can be avoided by splinting or by eliminating functional loads on the temporary restoration.

For two-piece ceramic implants, the 16<sup>th</sup> EuCC stated that various abutment connection designs are available, some of which have a metal core. However, the concept of metal-free implant designs has been abandoned. The EuCC pointed out that abutment fixation requires a special protocol that follows the manufacturer's instructions, stating that "Scientific evidence for two-piece implants is rare".

Ceramic abutments scored higher than metal abutments in terms of aesthetics, especially in patients with a thin tissue phenotype.



### Praxisleitfaden 2021 Update Keramik in der Implantologie

16. Europäische Konsensuskonferenz (EuCC)  
23. Februar 2021

The reduced biofilm adhesion compared to titanium, based on experimental studies, was emphasised, but the primary determinant of biofilm accumulation is the surface topography, not the choice of material.

According to the 16<sup>th</sup> EuCC, zirconia superstructures are now commonplace. For ceramically veneered frameworks as implant superstructures, the 16<sup>th</sup> EuCC called for an appropriate design and trained practitioners to avoid chipping.

They found was little medium- or long-term evidence for the use of monolithic zirconia.

## 2022 Update: Cologne ABC Risk Score

Using a simple ABC system, possibly and attractively visualised in four colours, clinicians are given the opportunity to assess the risk of their planned implant treatment, stated the 17<sup>th</sup> EuCC (2022) in its guideline. The four partial scores:

1. Medical history
2. Local findings
3. Surgical
4. Restorative

Each partial score including a summary rating, with the results—like the criteria—expressed in terms of the colours green, yellow and orange, corresponding to A, B and C (Always – Between – Complex).

- A = Always lowest = assessed risk, green
- B = Between = medium risk, yellow
- C = Complex = increased risk, orange

Red is reserved for cases where the risk assessment shows that treatment at issue



may not be recommended (which is not the same as being contraindicated). The overall patient assessment according to the Cologne ABC Risk Score works as follows:

- If all four partial scores are green, the patient case as a whole is assessed as low-risk (A for Always).

- If at least two of the four partial scores are yellow, the patient case is assessed as medium-risk (B for Between)
- If all four partial scores are yellow, the patient case is assessed as high-risk (C for Complex). The same is true if at least two of the four partial scores are orange or yellow.



## 2023 Update: Short, angulated and reduced-diameter implants

### Short implants

This second update has left the definition of “short” unchanged. As before, they have a designed intrabony length of  $\leq 8$  mm with a diameter of  $\geq 3.75$  mm.

They are used, among other things, to avoid bone grafting in the posterior jaw segments of partially edentulous patients, but also to support removable overdentures and as single or multiple tooth replacements in the anterior jaw. The 18<sup>th</sup> EuCC (2023) found that there was no longer any difference in success rates compared with standard implants with augmentation procedures. A new indication is that for immediate loading. There are now studies that support the use of

short implants with special treatment concepts in immediate-loading situations.

### Angulated implants

There have also been new developments regarding angulated implants, which are becoming routine in splinted reconstructions of edentulous jaws. The 18<sup>th</sup> EuCC (2023) agreed that they increase primary stability for immediate loading procedures with longer implants, avoiding bone grafting. In most cases, these treatment concepts require four implants in the mandible and four to six implants in the maxilla. However, current observations have also revealed limitations. “Despite the posi-

tive clinical results, the scientific debate on the clinical relevance of the development of marginal bone levels around angulated implants is still ongoing”, as Prof. Neugebauer summarised the consensus findings.

### Reduced-diameter implants

The EuCC distinguishes between two general settings. Reduced-diameter implants—those with intraosseous diameters of <3.5 mm—are indicated for use in jaws with reduced widths. EuCC refers to implants with diameters of <2.7 mm as mini-implants. There is no change from the previous 2016 guideline.

## 2024 update: The digital workflow in oral implantology

The 19<sup>th</sup> EuCC (2024) examined the various digital procedures for diagnosis, surgical preparation, digital implant planning and prosthetic rehabilitation. Aspects covered included:

- Digital diagnosis
- Digital impression-taking and imaging
- CAD/CAM-assisted grafting techniques
- Digitally guided implant positioning
- Digital laboratory procedures
- Artificial intelligence (AI) in oral implantology

Conclusions of the 19<sup>th</sup> EuCC: Digital technologies in implant dentistry are improving, with good clinical results and better patient-related outcomes (PROMs). The specific parameters for each procedure must be considered by the clinician.



The guidelines are available for download in German and English from the BDIZ EDI website.

