BDIZ EDI

European Association of Dental Implantologists

Bundesverband der implantologisch tätigen Zahnärzte in Europa e.V.

Guideline

Digital workflow in implant dentistry

Update

19th European Consensus Conference (EuCC)
2024

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CONTENT

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1. METHODS

1.1 Objective

The purpose of this guideline is to offer recommendations for clinicians engaging in implant dentistry, enabling them to correctly assess potential indications (and any limitations) for a digital workflow.

1.2 Introduction

This consensus guideline covers the various digital procedures for diagnosis, surgical preparation, digital implant planning and prosthetic rehabilitation typically used in accordance with the indications recommended by the European Consensus Conference on implantology (EuCC, Cologne, Germany, February 10th, 2024).

All consensus recommendations in this paper should be considered as guidelines only. The patient's specific situation is always an important consideration and may justify a deviation from the recommendations of this consensus paper.

1.3 Background

Digital procedures to improve or simplify the implant prosthetic workflow are presented for various treatment steps. To ensure an acceptable treatment outcome, the selection of the appropriate digital procedure for each indication is necessary.

1.4 Literature search

The Cochrane Library, EMBASE, DIMDI and Medline literature databases were used to conduct a systematic search of recent published data on digital workflows and directly related topics. Selective search criteria were used, including terms such as *digital, implant, cad/cam, grafting, guided surgery, abutment, superstructure, surgical guide, printing, AI.* The publications identified by the search were screened by reading their abstracts; those irrelevant to the subject were identified and excluded. Articles found to be potentially relevant were obtained in full-text form. Multiple review papers with meta-analyses and randomized controlled trials (RCTs) as well as other prospective or retrospective systematic clinical studies proved to be available on the subject.

1.5 Procedure for developing the Consensus Conference guidelines

A preliminary version on which the EuCC based its deliberations was prepared and authored by Jörg Neugebauer, Steinbeis University, Magdeburg and Interdisciplinary Department for Oral Surgery and Implantology and Department of Oral and Maxillofacial Plastic Surgery at the University of Cologne, Germany. The preliminary report was then reviewed and discussed by the sitting committee members in five steps as follows:

- Reviewing the preliminary draft
- Collecting alternative proposals
- Voting on recommendations and levels of recommendation
- Discussing non-consensual issues
- Final voting

2. PROBLEM

Complex implant/prosthetic treatment can be performed in various stages with the support of digital technology. Today the aim in selected cases has been to improve the treatment efficiency and outcome by using a fully digital workflow [27, 28]. Various concepts are in use, but the innovation cycles and outcomes should be considered for complication-free use in daily practice.