



European Association of Dental Implantologists

Bundesverband der implantologisch
tätigen Zahnärzte in Europa e.V.

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European Journal for Dental Implantologists



DIGITAL DENTISTRY? Chances and limitations of current digital treatment approaches

EDI News | New BDIZ EDI outfit | Coming up: 17th European Symposium in Split | BDIZ EDI portrait: getting involved |

European Law | ECJ: Free disclosure of medical records | CED: Call for speedy revalidation of medical devices |

Case Studies | Surgical guides | Clinical evolution over 25 years |

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The year 2023 is drawing to a close

Dear colleagues,

The good news is that COVID-19 is largely contained and the WHO does not expect any pandemic outbreaks this winter. However, we should be aware that we will continue to have to live with mutations of the SARS-CoV-2 virus—just like with the flu virus.

The bad news is that the EU Medical Device Regulation (MDR) continues to be a source of confusion, incomprehension and, dare I say, incompetence on the part of the regulators. The tense situation in the dental market has not changed. The BDIZ EDI was quick to point out the threat of “regulatory overkill”, and unfortunately this prediction has come true. Many dental manufacturers—especially medium-sized ones—that make innovative products have given up. This is partly because of the increasing regulatory pressure, but also because of the high cost of certification and re-certification. This was confirmed to us by Prof. Ulrich Gassner, the founding director of the Research Centre for E-Health Law (EMPR) at the University of Augsburg. There is an immense shortage of Notified Bodies; the few that do exist are completely overburdened. Under pressure from the German states of Bavaria and Baden-Württemberg, the EU Commission has now set up a task force to exert a “sub-legislative” influence to speed up at least the certification of already existing products—including dental implants.

In passing, it should be mentioned that the BDIZ EDI has filed an administrative complaint against the German Scale of Fees (GOZ) for dentists in private practice in order to force the German Minister of Health to finally explain why the point value that determines what amount of money can be charged for what service has not been increased for sixty-five (65!) years and why unequal treatment persists within and between the fee scales used in Germany.

But there is also good reason to look forward to 2024. In February 2024, we will produce our 19th Guideline. Our Guidelines recommend specific courses of action for dentists working in oral implantology. This time, the topic will be digital dentistry and the opportunities and limitations associated with modern treatment concepts. Take a look at the programme in this issue and join us in Cologne during the carnival season. You are cordially invited to attend the 19th Expert Symposium. In anticipation of the symposium the European Consensus Conference (EuCC) will produce a working paper for the 19th Guideline that will be presented in the upcoming issue of the *EDI Journal*.

Another highlight awaits you in Split, Croatia in May. We are planning an international implantology congress with the support of the Croatian Dental Chamber. I look forward to welcoming you personally to the beautiful city of Split. You will find the details in this issue.

Finally, I would like to draw your attention to our social media activities. Follow us on Instagram, Facebook, X/Twitter and YouTube and keep up to date with our training courses, political activities and publications for practitioners.

We wish you and your families all the best for the coming festive season and a prosperous new year 2024.

A handwritten signature in blue ink, which appears to read "K. Berger". The signature is fluid and cursive.

Christian Berger, President BDIZ EDI



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Partner Organizations of BDIZ EDI



Association of Dental Implantology UK (ADI UK)

ADI UK, founded in 1987, is a registered charity committed to improving the standards of implant dentistry by providing continuing education and ensuring scientific research. It is a membership-focused organisation dedicated to providing the dental profession with continuing education, and the public with a greater understanding of the benefits of dental implant treatment. Membership of the ADI is open to the whole dental team and industry, and offers a wealth of benefits, education and support for anyone wishing to start out or develop further in the field of dental implantology.



Ogólnopolskie Stowarzyszenie Implantologii Stomatologicznej (OSIS EDI)

OSIS EDI, founded in 1992, is a university-based organisation of Polish scientific implantological associations that joined forces to form OSIS. The mission of OSIS EDI is to increase implant patients' comfort and quality of life by promoting the state-of-the-art and high standards of treatment among dental professionals. OSIS EDI offers a postgraduate education in dental implantology leading to receiving a Certificate of Skills (Certykat Umiejetnosci OSIS), which over 130 dental implantologists have already been awarded.



Sociedad Española de Implantes (SEI)

SEI is the oldest society for oral implantology in Europe. The pioneer work started in 1959 with great expectations. The concept of the founding fathers had been a bold one at the time, although a preliminary form of implantology had existed both in Spain and Italy for some time. Today, what was started by those visionaries has become a centrepiece of dentistry in Spain. SEI is the society of reference for all those who practice implantology in Spain and has been throughout the 50 years, during which the practice has been promoted and defended whereas many other societies had jumped on the bandwagon. In 2009 SEI celebrated its 50th anniversary and the board is still emphasizing the importance of cooperating with other recognised and renowned professional societies and associations throughout Europe.



Sociedade Portuguesa de Cirurgia Oral (SPCO)

SOCIEDADE PORTUGUESA DE CIRURGIA ORAL

The SPCO's first international activity was the foundation—together with their counterparts in France, Italy, Spain and Germany—of the European Federation of Oral Surgery (EFOOS) in 1999. The Sociedade Portuguesa de Cirurgia Oral's primary objective is the promotion of medical knowledge in the field of oral surgery and the training of its members.



Udruženje Stomatologa Implantologa Srbije-EDI (USSI EDI)

USSI EDI was founded in 2010 with the desire to enhance dentists' knowledge of dental implants, as well as to provide the highest quality of continuing education in dentistry. The most important aims of the organisation are to make postgraduate studies meeting the standards of the European Union available to dentists from Serbia and the region; to raise the level of education in the field of oral implantology; to develop forensic practice in implantology; and to cooperate with countries in the region striving to achieve similar goals.



EDI of Macedonia

The Association is Albanian Implantology Association of Macedonia—AIAM was founded in 2013 as a branch of Albanian Dental Society of Macedonia. The association was created to advance education in the field of dental implantology for the benefit of the population. The objectives of the association are:

- To promote the progress of education, research and development of dental implantology in Macedonia
- To encourage postgraduate education, study and research in dental implantology through:
 - Appointment of meetings, lectures, seminars and courses either individually or with others
 - Encouraging the publication of dental implantology articles!
 - To cooperate and make agreements with relevant, national, local, foreign and different institutions.

In 2017, AIAM & MAOS (Macedonian Association of Oral Surgeons) became EDI of Macedonia and signed a Cooperation Agreement with BDIZ EDI to cooperate in dental implantology!



Scientific Board

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All case reports and scientific documentations are peer reviewed by the international editorial board of EDI Journal.

Chair is Professor Jörg Neugebauer.

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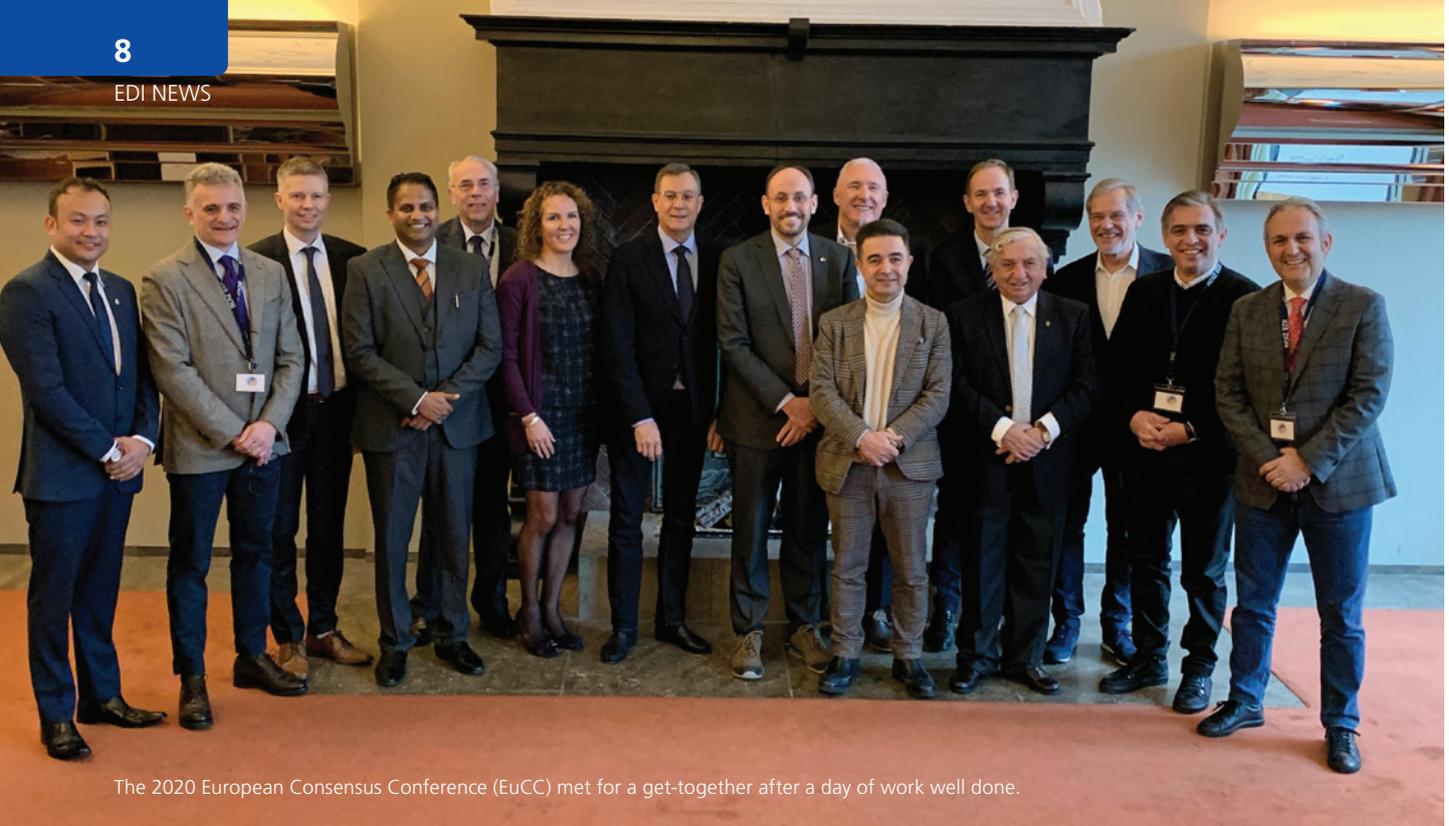
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The 2020 European Consensus Conference (EuCC) met for a get-together after a day of work well done.

19th BDIZ EDI Expert Symposium, Cologne

Innovative and traditional

The BDIZ EDI Expert Symposium will take place for the 19th time on Sunday, 11 February 2024, marking the start of the association's training year. Its scientific director, Prof. Joachim E. Zöller, has condensed the implantology topics of tomorrow into a one-day symposium, which traditionally takes place on the last weekend of the Cologne Carnival.

Those familiar with the concept will know that this event is always preceded by the European Consensus Conference (EuCC) working on a paper drafted at the University of Cologne. Representatives from academic research and clinical practice from Europe and beyond will discuss the working paper online and in person. Co-host Prof. Jörg Neugebauer, Secretary General of the BDIZ EDI, will present the brand new results at the end of the symposium on Sunday. Subsequently, the consensus paper, designated as a guideline, will be published in German and in English. All members of the BDIZ EDI receive a printed version of each year's guideline. The guideline provides recommendations for practitioners and reflects data from controlled clinical trials while also incorporating data from routine clinical practice.

New venue

There will be a new venue for 2024. The BDIZ EDI has decided on a new location for 2024 in order to bring a little more peace and quiet to the educational event and dental exhibition and is moving to the Pullman Hotel in Cologne, on Helenenstraße. A limited number of rooms have been reserved for delegates.

In 2024, the focus will be on digital dentistry. The programme is available below. In recent years, some of the guidelines have had to be updated due to advances in oral implantology. Digital dentistry, the fastest-growing area in the field, will be a new guideline topic in 2024. Below is a summary of the guidelines for the past five years.

The 2024 programme

The 19th Expert Symposium will take place at the Hotel Pullman in Cologne all day on Sunday, 11 February 2024. That evening, Prof. Joachim E. Zöller, Vice President of the BDIZ EDI, who is also President of Cologne's oldest Carnival Society, "die Grosse von 1823", invites you to attend its Sunday session in Gürzenich Hall.

The Top Five of recent years



The 2023 guideline
*Update on short, angulated
and reduced-diameter implants,
2nd update*

2023 was the year the second *Update on short, angulated and reduced-diameter implants* was published. The European Consensus Conference recommended: "The use of short, angulated or reduced-diameter implants in sites with reduced bone volume can be a reliable, faster and less risky therapeutic option in terms of specific treatment parameters, compared with the risks associated with the use of standard-dimension implants in combination with augmentation procedures. The implant surgeon and the restorative dentist must have appropriate training to select the best possible therapy for each patient."

Download the 2023 guideline here:



2022 The European Consensus Conference (EuCC) of the BDIZ EDI has revised and updated the Cologne ABC Risk Score for implant treatment after ten years. The European expert panel discussed this topic at the end of April 2022, meeting online due to the COVID-19 pandemic. As every year, the results of the Consensus Conference were condensed into a BDIZ EDI guideline designed to assist implant dentists in assessing in advance the individual complexity of a given implantological procedure, thereby contributing to minimizing risks associated with implant therapy.

Download the 2022 guideline here:



2021 Update ceramics in implantology—the 2021 guideline updated the previous 2007 paper. The European Consensus Conference (EuCC) under the auspices of the BDIZ EDI discussed possible uses of ceramics in implantology and implant prosthetics online in late February 2021. In addition to abutments and superstructures, one-piece and two-piece ceramic implants were also discussed. The conclusion: "Ceramic solutions are available for all aspects of implant treatment. The implant surgeon and the restorative dentist must have appropriate training to identify the best possible therapy for each patient."

Download the 2021 guideline here:



2020 Shortly before the COVID-19 pandemic hit, the BDIZ EDI and its European experts once again addressed peri-implantitis. The guideline updates the previous 2015 paper. "The treatment outcome is considered less predictable in peri-implantitis than in periodontal disease, but results may be improved by plaque control, post-operative maintenance and non-smoking patients. Currently, the goal is to reduce the signs and symptoms of inflammation and to avoid progression. A frequent recall scheme is essential," was the conclusion. A total of 113 reference citations underpin the EuCC 2020 recommendations.

Download the 2020 guideline here:



2019 The 2019 guideline *Preventing, detecting and treating specific complications to optimize patient outcomes*. In its summary, the EuCC 2019 stated: "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."

Download the 2019 guideline here:



Programme of the 19th Expert Symposium

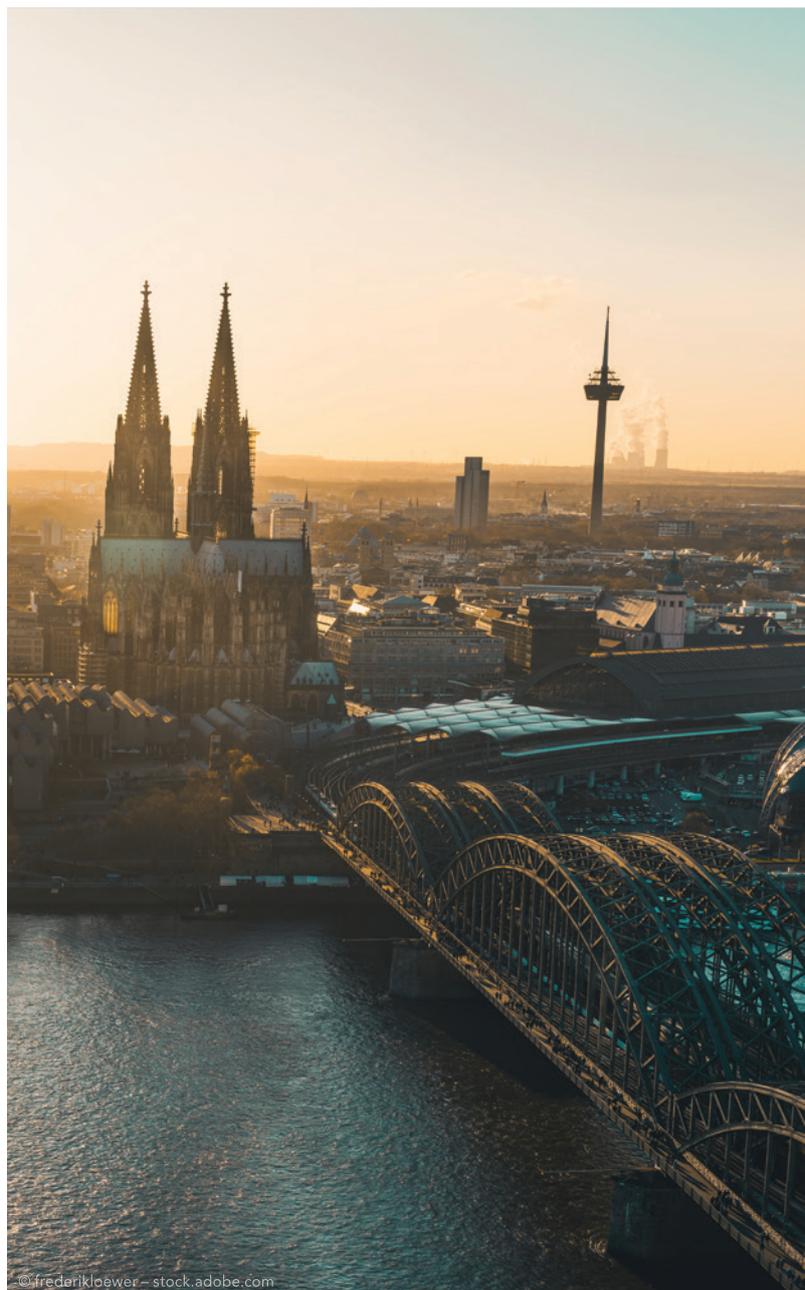
Sunday, 11 February 2024

Pullman Hotel, Helenenstraße 14, Cologne, Germany

Digital dentistry? Chances and limitations of current digital treatment approaches

Preliminary programme

09:00 – 09:15	Welcoming address Christian Berger, President Prof. Joachim Zöller, Scientific Director
09:15 – 09:45	Digital planning and diagnostics: where are we today? Prof. Jörg Neugebauer, Landsberg am Lech
09:45 – 10:15	AI in dentistry—a curse or as blessing? Dr Volker Knorr, Eislingen/Fils
10:15 – 10:45	Fundamentals of artificial intelligence in medicine and dentistry Dr Klaus Ständer, Traunreut
10:45 – 11:00	Discussion
11:00 – 11:30	Coffee break and dental exhibition visit
11:30 – 12:00	Artificial intelligence in dentistry: opportunity or folly? Prof. Falk Schwendicke, Berlin
12:00 – 12:30	Digital procedures in periodontology: “Or would you rather do it by hand?” Prof. Stefan Fickl, Fürth and Würzburg
12:30 – 12:45	Discussion
12:45 – 13:45	Lunch break and dental exhibition visit
13:45 – 14:15	Dental printing in the laboratory and practice Dr Gerhard Werling, Bellheim
14:15 – 14:45	Digital procedures in prosthetics: whither dental technology? Prof. Daniel Edelhoff, Munich
14:45 – 15:15	What is good dentistry in 2024? Prof. Florian Beuer, MME, Berlin
15:15 – 15:30	Discussion
15:30 – 16:00	Coffee break and dental exhibition visit
16:00 – 16:30	Digital implant surgery: what does the robot do? Dr Markus Tröltzsch, Ansbach Dr Detlef Hildebrand, Berlin
16:30 – 17:00	Navigated implantology guarantees success for augmentation, implant placement and prosthetics Prof. Hans-Jörg Nickenig, Cologne
17:00 – 17:30	Update on the digital workflow in oral implantology—results of the 2024 European Consensus Conference Prof. Jörg Neugebauer, Landsberg am Lech
17:30 – 18:00	Discussion and conclusion



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Online registration

Admission fees will remain unchanged for 2024.
Participation in the 19th Expert Symposium
in Cologne is worth 8 CE points.

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32nd Expert Symposium on Fuerteventura

An inspiring journey under the palm trees

Fuerteventura, the sun-drenched island in the Canary Islands, became the meeting place for leading minds in dentistry from 27 October to 3 November 2023. The 32nd Expert Symposium turned out to be more than “just” a scientific platform—it was an eventful interplay of specialist knowledge, interdisciplinary exchange and a touch of holiday feeling under the palm trees.

The symposium focused on approaches to prosthetic treatment on implants—a topic that was not only inspiring but also scientifically sound and clinically proven. A wide range of topics from the entire spectrum of dentistry were covered by renowned experts in lectures and workshops. The exchange with highly experienced colleagues gave the symposium a unique dynamic. This article highlights some of the presentations.

Illustrated with moving pictures from Eritrea, the initiator and Scientific Director of the Expert Symposium, Prof. Joachim E. Zöllner, provided deep insights into his charitable work in the field of cleft lip and palate repair surgery. This beautiful country poses great challenges in terms of medical care for the affected population. Zöllner’s presentation emphasised not only the medical dimension, but also the humanitarian commitment involved in such projects.

Prof. Jörg Neugebauer took the audience on a journey through the landscape of prosthetic design, explaining how prostheses influence bone formation over the long term. His clinical insights showed that careful prosthetic planning can have a decisive influence on the success of implants.

Prof. Florian Beuer discussed current standards and developments in dentistry in his presentation entitled “What is good dentistry in 2023?” The importance of the digital workflow for atraumatic implant placement and bone augmentation was highlighted by Prof. Fred Bergmann. His presentation illustrated how modern technology can make implant procedures gentler, more precise and more efficient.

Dr Tina Mandel looked at innovative aspects of diagnosis and treatment. The app she developed and the technology she described promise to move dentistry towards patient-centred, time-flexible care.

Dr Sebastian Schiel completed the journey by looking at the face as a whole. In his presentation, he discussed facial profiles and aesthetic corrections in men and women that go beyond the purely dental aspects. He presented an interesting fun fact, describing the nasolabial angle as an indicator of character type—a surprising insight into how facial features are not only aesthetic features but can also indicate personality.

The author of this report, Dr Adina Landschoof, asked whether white implants could replace traditional grey implants. Her presentation provided in-depth insights and the latest findings. The bottom line was that “the future of implantology is not only becoming more feminine, but also whiter! Both scientific research and practical experience highlight the trend towards white—ceramic—implants. Aesthetics undoubtedly play a crucial role in modern dentistry, but my focus goes beyond that.” In the following workshop, the advantages of ceramic implants were explored in detail. The first question was to successfully integrate these implants. According to the speaker, soft tissue always plays an important role. The discussions during the workshop reflected the great interest and desire for innovation to meet patient expectations. Critical questions from experienced colleagues also contributed to interesting discussions that shed some light on the evolution of oral implantology over the generations.

The choice of venue under the palm trees contributed significantly to the success of the symposium. The idyllic setting right on the beach created an inspiring atmosphere for the professional exchange. Participants enjoyed not only the technical discussions, but also the social programme with professional evening entertainment and a first-class DJ.

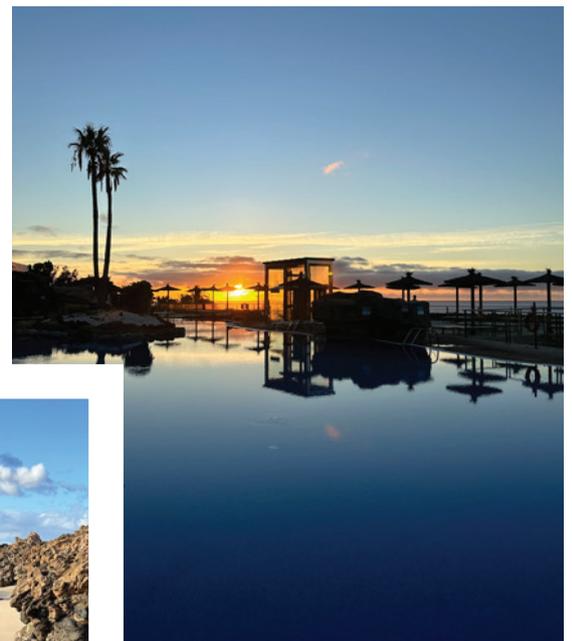
The culinary delights during the evening events, especially the White BBQ evening, were a feast for the eyes and the palate. The combination of professional input and social interaction added a special touch to the symposium. In addition, the sports programme, which offered something for everyone, provided opportunities to feel the tailwind not only for the job but also for the soul.

rience. The combination of professional excellence, stimulating discussions and a touch of holiday flair made this symposium an unforgettable event for all participants.

Dr Adina Landschoof
Geretsried, Bavaria, Germany

Conclusion

Prof. Zöller’s 32nd Expert Symposium on Fuerteventura with participants from academia and clinical practice was more than just a scientific conference. It was an expe-



BDIZ EDI has an updated CI

Our new outfit

In mid-2023, the BDIZ EDI set out to modernise its logo, which has been around for more than 30 years. Read this article to find out how we went about it.



Bundesverband der implantologisch tätigen Zahnärzte in Europa e.V.

European Association of Dental Implantologists



European Association of Dental Implantologists

Bundesverband der implantologisch
tätigen Zahnärzte in Europa e.V.

The BDIZ EDI logo has a high recognition value far beyond the borders of Germany and even Europe. The aim was therefore to refresh rather than replace the most prominent elements of the corporate identity (CI), making it look fresh and contemporary. The BDIZ EDI corporate design team was unanimous on this issue. It consisted of the following people: Christian Berger, who had been instrumental in creating the original logo and who contributed his dental expertise; Anita Wuttke, press and public relations officer; Carolin Neubauer, graphic designer; and Helga Karanikas, who works with the BDIZ EDI "brand" at our office.

Changes

The distinctive wreath of stars has been refreshed but not replaced. The stylised tooth in the logo has been replaced by an

implant. The most significant change is to the lettering, which had been criticised, often quite vociferously, because the "old" lettering got blurred to the point of illegibility if the logo was rendered at a smaller size, whether online or in print.

Rationale

"I believe that a CI should be understood as a framework. It should help ensure that a particular object or document can be associated with a particular organisation", said graphic designer Carolin Neubauer from St Augustin near Bonn, explaining the philosophy behind the change. The corporate design is not only about the logo, but also about the recognition value on letterheads,



certificates, press releases, contracts, publications such as the implant brochure, guidelines, the implant passport, the BDIZ EDI table, exhibition walls and of course *BDIZ EDI konkret* and *EDI Journal*.

Members can order the logo free of charge from the BDIZ EDI shop on our website for use on their practice website or for their practice sign from the BDIZ EDI online shop. The BDIZ EDI is currently relaunching its website. The new logo is available in an English and a German version. The difference is in the lettering.

It is particularly important to the Board that the BDIZ EDI keeps its brand promise: Implantology and more—that means providing the full range of services for dentists working in oral implantology. Political intervention, legal sup-

port and if necessary legal action, support with dental billing issues, high-quality implantology training, participation in the Consensus Conference on Implantology and in the guideline work of the professional associations, development of our own guidelines, patient communication online and via brochures, the awarding of the formal title "Focus of Professional Activity: Oral Implantology" and much more.

AWU



The BDIZ EDI at the 64th Bavarian Dentists' Congress

A foray into dentistry

State-of-the-art and clinically relevant dentistry and the opportunity to exchange ideas with colleagues—these are the hallmarks of the Bavarian Dentists' Congress (19–21 October 2023). The 64th edition certainly lived up to the highest expectations. More than 1,000 delegates experienced an exciting weekend of continuing education.

Personalised dentistry

It is increasingly recognised that men and women can react differently to diagnosis, treatment and prevention. To illustrate this range, the 64th Bavarian Dentists' Congress of the Bavarian State Chamber of Dentists (Bayerische Landes Zahnärztekammer, BLZK) was held under the motto "The small (big) difference—patient-specific planning and therapy".

Fifteen speakers addressed topics such as "Men's common colds and other deadly diseases", gender marketing, general medical challenges and the use of artificial intelligence. Differences between male and female patients in terms of tooth preservation, prosthetics and periodontology

were also on the agenda. Other topics included the telematics infrastructure, data protection and quality assurance and the impact of political austerity measures. Dentists were also able to update their formal X-ray qualifications. Prof. Johannes Einwag from Würzburg, who is responsible for training at the BLZK, chaired the programme.

Knowing and exploiting margins

The congress for the practice team also focused on "The small (big) difference". This one-day course was offered on Friday, 20 October. The five presentations explored "Other countries—other customs" and went on a "Tour de Periodontology".

They focused on gender marketing, smart billing and emergency management. Chair of the Bavarian Dentists' Congress: Prof. Johannes Einwag.

Parallel to the congress programme, the BLZK again presented certificates to the successful graduates of the advanced training courses for dental prophylaxis assistants (ZMP), dental hygienists (DH) and dental administrative assistants (ZMV). The best graduates were also awarded the Master Prize of the Bavarian State Government.

"GOZ reform is overdue"

Bavaria's acting Health Minister, Ulrike Scharf, had called on the Federal Govern-



ment to provide dentists with a reliable framework. Speaking at the opening of the Bavarian Dentists' Congress in Munich, Scharf emphasised: "High-quality medical care close to home is essential for the well-being of our citizens. We must therefore ensure that the dental profession remains attractive for dentists wishing to set up a practice. The success of any practice depends on adequate remuneration. The Federal Government must not forget the outpatient service providers."

Science prize with four winners

The Association for the Promotion of Scientific Dentistry in Bavaria (Verein zur Förderung der wissenschaftlichen Zahnheilkunde in Bayern, VFwZ) awards the Professor Dieter Schlegel Science Prize for outstanding dental dissertations at Bavarian universities. This year, four winners were honoured; they had completed their doctorates at the University of Munich and the University of Würzburg.

Not without the BDIZ EDI booth

One of the speakers on Saturday was Dr Dr Markus Tröltzsch with his presentation about augmentation vs short, angu-



The BDIZ EDI team at the booth in Munich: (from left to right) Kerstin Salhoff, Wolfgang Neumann, Anita Wuttke and Helga Karanikas.

lated and reduced-diameter implants. In this presentation, he referred to the current Guideline on the subject. All available copies of the Guideline at the BDIZ EDI booth were gobbled up shortly after the presentation!

Sources: BLZK, BDIZ EDI



Spoke about augmentation versus short, angulated and reduced-diameter implants: Dr Dr Markus Tröltzsch (left), member of the board of the BDIZ EDI from Ansbach.



National women's football coach Martina Voss-Tecklenburg, spoke about her work.



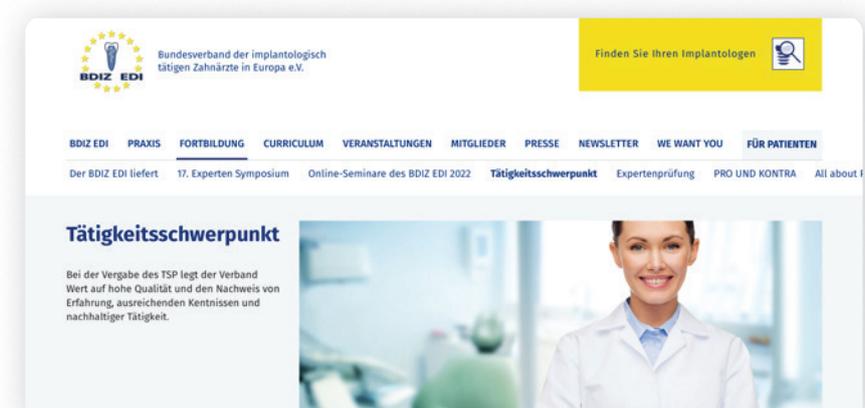
The Bavarian Health Minister Ulrike Scharf, who was in office at the time of the Dentists' Day, called for the GOZ amendment.

“Focus of Professional Activities: Oral Implantology”

Are you certified yet?

In Germany, a formal “Focus of Professional Activities” (FPA) is an official designation and an indication of a narrower area of specialisation of a professional—in our case, a dentist. The BDIZ EDI was instrumental in obtaining a ruling from the Federal Constitutional Court in 2001, to establish the “Focus of Professional Activities: Oral Implantology” (Tätigkeitsschwerpunkt Implantologie) as a legally permissible designation on practice nameplates or other information material aimed at the general public. This article outlines the requirements for an FPA: Oral Implantology.

In its decision of 23 July 2001 (1 BvR 873/00 and 1 BvR 874/00), the German Federal Constitutional Court approved the admissibility of a formal FPA: Oral Implantology on constitutional grounds, despite conflicting regulations in dental professional codes. One prerequisite for the admissibility of information describing (specifying) personal professional activities in detail is that the specified activities are carried out in a field of specialisation on a sustained basis.



Requirements for FPA certification

Licensed dentists, oral surgeons and oral and maxillofacial surgeons who meet the following requirements can apply for certification of a Focus of Professional Activities: Oral Implantology by the BDIZ EDI:

1. Certificate of attendance of the Curriculum Implantology
2. Evidence of at least three years' experience in oral implantology
3. Evidence of at least 200 implants (placed and/or restored)
4. and/or 70 patient cases (affidavit, with five to ten sample OPGs)
5. Membership of BDIZ EDI

FPA renewal or recertification

To renew an FPA: Oral Implantology certification, proof of continuing education in accordance with these guidelines must be provided after five years:

- 100 continuing-education hours or equivalent continuing-education credits
- 200 placed implants or 70 cases

Each renewal is granted for a five-year period. Without renewal, the FPA: Oral Implantology certification will lapse.

Register of oral implantologists

BDIZ EDI maintains a register of oral implantologists, which is used to refer patients seeking implant treatment to certified dentists, oral surgeons, or oral and maxillofacial surgeons. (In German-speaking countries and certain other European countries, including the UK, oral surgeons are specialised dentists, while oral and maxillofacial surgeons have degrees in both dentistry and medicine.)

To be included in this central register, the following requirements must be met:

1. Certified dentists or oral and maxillofacial surgeons should have several years of experience (at least three years) with at least two implant systems.
2. They should have placed and/or restored at least 200 implants or completed 70 cases.
3. They should be able to demonstrate that they place at least 50 implants per year.

Additional information

Applications for certification should be made to our Munich office. FPA guidelines and registration forms are available on the BDIZ EDI website at www.bdizedi.org/taetigkeitsschwerpunkt.

There is an administrative fee of €250 for certification, and €80 for inclusion in the central register of implantologists.

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Instagram, Facebook, Twitter, YouTube

BDIZ EDI on social media

Facebook, Instagram, Twitter and YouTube are the most popular social networking channels. BDIZ EDI uses these platforms to keep its own members and the members of partner associations, as well as all users interested in oral implantology, informed.

“In addition to Facebook, YouTube and Twitter, Instagram has become another important component of our social media activities,” says Dr Stefan Liepe, Managing Director of BDIZ EDI. “We want our channels to provide impartial information, both nationally and internationally, that is free of third-party interests. BDIZ EDI regularly provides information on implantology and topics relevant to dental practices in the areas of law, billing and prac-

tice hygiene. Of course, we also provide links to interesting professional articles and exciting behind-the-scenes insights about our association, which is active in Germany and in Europe.”

The online seminars that BDIZ EDI launched at the height of the COVID-19 crisis can be viewed on the YouTube channel. The latest information can be found on Instagram, Twitter and Facebook. BDIZ EDI often plays a pioneering

role when it comes to scrutinising laws and regulations that affect dentists—even taking cases to the German Constitutional Court if necessary. It intervenes in health policy on behalf of all dentists at the German and European level.

At IDS 2023, BDIZ EDI will provide up-to-date news via its social media channels.

AWU

BDIZ EDI on social media:



Facebook
@bdizediorg



Instagram
@bdiz_edi



YouTube
@bdizediimplantologie7192

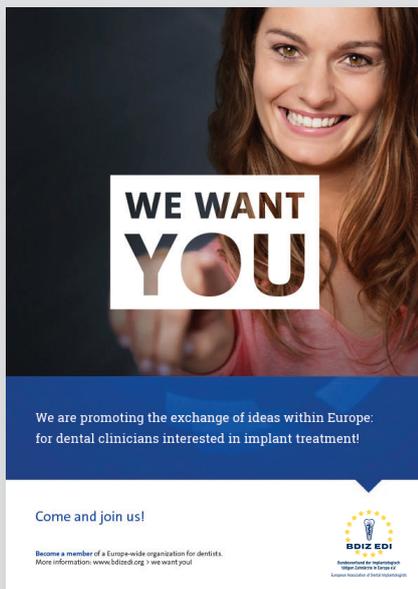


Twitter
@BDIZEDI

BDIZ EDI and its multifaceted work

We want YOU!

BDIZ EDI has launched its “We want you” information campaign. The aim is to interest young dentists from Germany and Europe in oral implantology and in the work of BDIZ EDI.



With the “We want you” campaign, the association wants to draw attention to the many different support services it offers for all dental practices, even beyond implantology, including continuing education for newcomers to the profession and seasoned practitioners alike.

BDIZ EDI is an active Europe-wide association that in 2002 went beyond the borders of Germany to forge collaborations, support partner associations and make its voice heard in EU politics. Of course, health policy interventions are also initiated at the federal level. BDIZ EDI is the only association to have presented its own draft law on combating corruption in the health sector. It is currently working intensively on the Medical Device Regulation (MDR) and its many problems.

With its information offensive, BDIZ EDI is highlighting its work in the field of continuing education:

- “Meet the Experts” allows newcomers to get in touch with experienced implantologists and top lecturers.
- An absolute must for anyone interested in implantology is the Curriculum Implantology, which is run in cooperation with the University of Cologne. This eight-module course teaches the key building blocks of implant dentistry to small groups of participants. The curriculum takes place at the University of Cologne. It runs for one year and is designed to be affordable for newcomers to the profession. It is planned to start the Curriculum South in Munich in 2024. Some partner associations have

adopted, and adapted, the modules for their countries: Greece, Serbia, Poland—and soon even India.

- Each year, the BDIZ EDI Expert Symposium provides an update on a current issue in implant dentistry, and the associated European Consensus Conference (EuCC) provides guidance for practitioners.
- The Europe Symposium of BDIZ EDI provides an opportunity to look beyond the local dental fence and to appreciate the work of European colleagues and exchange ideas. This year’s Europe Symposium took place in June in a villa near Verona in cooperation with OEMUS MEDIA AG.

A wide field

The full scope of BDIZ EDI’s work is illustrated by the “BDIZ EDI informs” webinar series, which the association has been organising since the start of the COVID-19 pandemic in 2020. The continuing-education webinars feature top-notch presenters and cover dental topics (not just implantology!) as well as legal issues. The webinars are particularly suitable for strategic practice orientation for current and future practice owners. BDIZ EDI webinars are aimed at dentists and all members of the dental team. Participation is free of charge for members. On average, BDIZ EDI webinars are attended by between 150 and 400 participants. Members can view the recorded webinars in the seminar archive after the live broadcast.

AWU

New BDIZ EDI implant pass

Bigger, nicer, more useful

The BDIZ EDI has updated its implant pass. Now was a good time, coincident with the launch of the updated BDIZ EDI logo. The size of the implant pass has not changed—it still fits in any wallet. But thanks to a clever folding technique, it now covers a lot more ground.



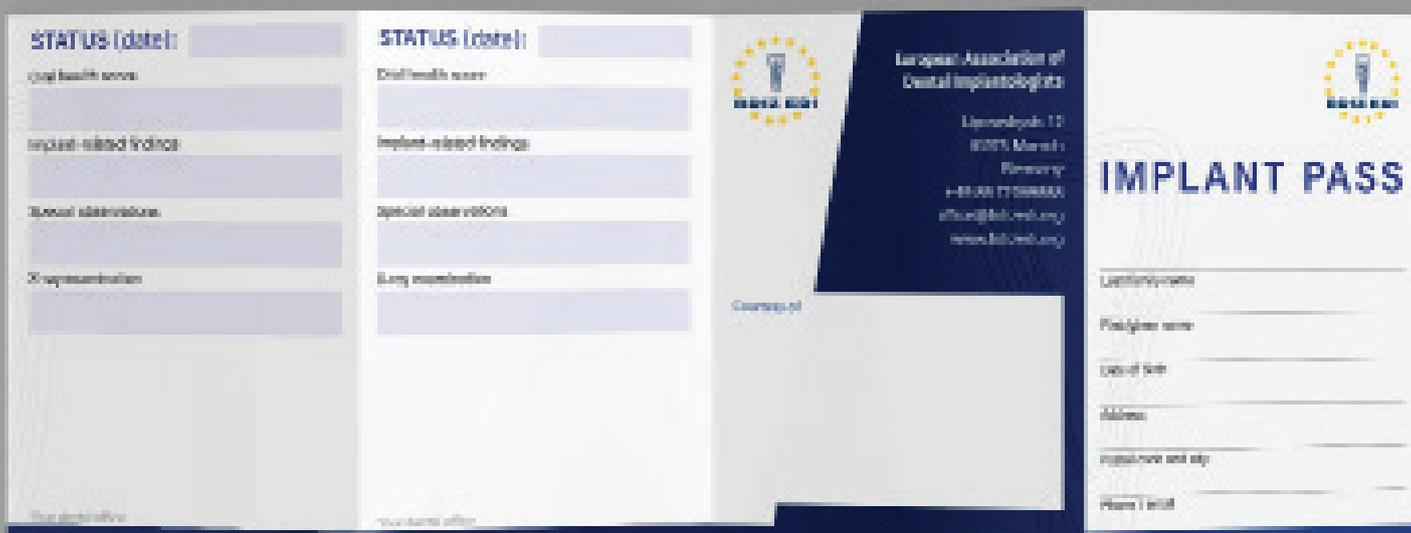
A copy of the implant pass is included with this issue for your inspection.

The small implant pass has been with the BDIZ EDI for more than 30 years. As part of the relaunch of the association's logo and corporate identity, it has been completely renewed and adapted to the current needs of the implantology practice.

Its physical size has remained the same. When folded, the implant pass still matches the size of the standard check-

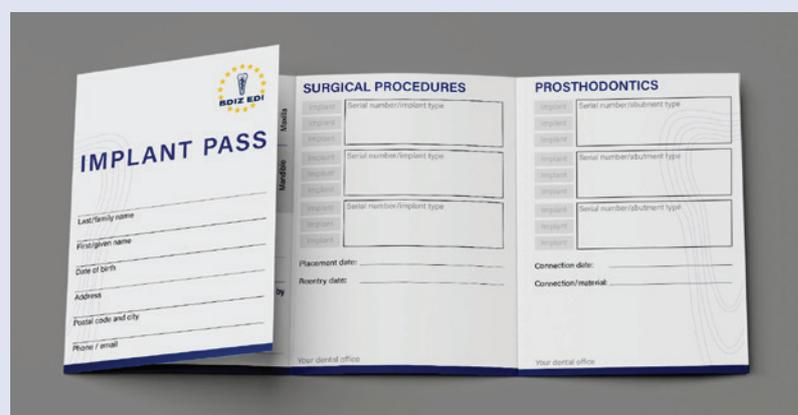
book for routine dental visits. Discreet on the outside, informative and expandable on the inside. The implant pass can be individually expanded with stickers to accommodate a greater number of implants and restorations. In addition to the patient's details and the practice seal, the following information is provided for the patient to sign: "I have decided to have den-

tal treatment with implants. I have been fully informed of the risks and benefits prior to the treatment. I understand that intensive oral hygiene and regular check-ups are necessary for long-term success. I agree to have at least two dental check-ups per year and will contact my dentist immediately if I notice even the slightest change in or around the implants."



Details and ordering information

BDIZ EDI implant pass for dental practices (folded size: 73 × 98 mm)
16 pages, with images of all maxillary and mandibular teeth, surgery, prosthetics, diagnosis, patient information, signature and practice seal.



Scan this QR code to access the shop



Available in English: print on-demand.

Please check the BDIZ EDI's online shop.

AWU

Obituary

Gerhard Stachulla



The internationally renowned and widely respected master dental technician passed away on 8 November 2023 at the age of almost 71. He died peacefully, surrounded by his loved ones, with many wishes still on his mind—but simply too soon.

Gerhard Stachulla, born on 12 November 1952, completed an apprenticeship as a dental technician after graduating from high school, and from 1982 onwards, he dedicated himself to this profession as an ambitious master dental technician. He worked as a managing director in various companies before setting up his own commercial dental laboratory in Augsburg. He recognised the potential of digital dentistry at an early stage and was probably one of the first to get involved with CAD/CAM technology, particularly in the field of implant prosthetics. He can certainly be described as a pioneer, perhaps even the pioneer of navigation surgery in Germany. As a specialist in 3D planning systems, he was in demand nationally and internationally for surgical procedures and also as an experienced lecturer. His presentations as a dental technician at high-profile dental events were an excellent example of interdisciplinary collaboration. His achievements have been recognised and admired at all levels.

Over the years, he has helped to shape various events as a speaker for the BDIZ EDI. We particularly remember the Expert Symposium in Cologne and his constructive participation in the European Consensus Conference (EuCC).

Despite a busy professional life, Gerhard Stachulla's family came first. He found private balance as a passionate glider pilot and in his dream house at the foot of the Chiemgau Alps.

In Gerhard Stachulla, we have lost a lovable person and true friend on whom we could always rely, as well as an accomplished dental technician with many ideas. He leaves a void that will probably never be filled.

We will cherish his memory and keep him in our thoughts.

We extend our sincere condolences and deepest sympathy to his family.

Dr Friedemann Petschelt, for the BDIZ EDI

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For more information



Interview with Markus Tröltzsch and Matthias Tröltzsch, maxillofacial surgeons in Ansbach, Germany

How much medicine does dentistry need?

Medicine and dentistry must be more closely meshed—say two young oral and maxillofacial surgeons from Ansbach, Germany. Not enough general medical knowledge is present in our dental practices today—and conversely, general practitioners and medical specialists know too little about dental medicine. Dr Dr Markus Tröltzsch and PD Dr Dr Matthias Tröltzsch are two of the three authors of a reference volume entitled *Medizin in der täglichen zahnärztlichen Praxis* (“Medicine in Daily Dental Practice”). In a number of free-standing chapters, their book presents fundamental facts about cardiovascular disease, diabetes mellitus, bisphosphonates and oncological topics. By popular demand we again include this interview for the second time in *EDI Journal*.

Oral and maxillofacial surgeons like you are physicians as well as dentists. As far as I know, the two fields were kept apart very carefully for the longest time in medical and dental school. Has this changed at all at our universities today?

Matthias T.: Things are no different at university medical and dental schools today, in that maxillofacial surgery is implemented as a link between general and dental medicine. Collaboration between the two is intense, and oral and maxillofacial surgery is the link. At universities and at the largest hospitals, maxillofacial surgery defines itself primarily as a medical speciality, related as it is to traumatology and to otorhinolaryngology and head and neck surgery. This establishes a certain distance from dental medicine, e.g. prosthodontics and restorative dentistry. This is also the case in emergency medical services. As far as stu-

dent education is concerned, the 1970s and 1980s saw the option to study medicine and dentistry in parallel. Later, when we received our dental and medical education, pursuing two courses of study in parallel was an absolute no-go, and if you tried anyway, one department would terminate your enrolment. The principle was clear: one thing at a time. If the university or department was generous, well, then maybe they would let you take an extraneous course or two. But the older we got, the more difficult this became—that probably also had something to do with the allocation of funds.

Then there was a time, in the early 2010s, when universities such as Freiburg, Munich and Heidelberg let you study medicine and dentistry in parallel—and aggressively promoted this option. Some students earned a double degree when they were no older than 26,

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which was truly revolutionary. But that development was rolled back. But today, once again, only one degree program can be completed at a time.

How would you describe the importance of general medicine in current dental practice?

Markus T.: We see it is growing again. Partly on account of the prevailing demographics, and also because of the forensic complications that can arise if we disregard general medical expertise. Moreover, we have seen that an interdisciplinary approach can be quite helpful in some—not so few—areas. Take headache relief and treatment, for example. Here we have a close overlap between dentistry and neurology. Or take the cluster of periodontitis, diabetology and cardiology. A condition that is coming back into focus right now is Lyme disease. Not all that rarely, patients will arrive at the practice presenting with diffuse facial swellings, and then it turns out that the problem is actually Lyme disease. Regarding your question, I believe that the trend will continue as people are getting older and therefore sicker, meaning that there will be more drug interactions to consider. We will see more and more patients whose underlying medical condition has an impact on their dental treatment. Take patients on bisphosphonates. How can I still do a periodontal treatment or professional tooth cleaning for them at all? These are questions we increasingly face.

Together with your colleague Philipp Kaufmann, you have authored a reference work to describe the role of general medicine in daily dental practice. What was your starting point?

Markus T.: We actually started from point zero. The term “reference work” sums it up quite well, because it describes how the book is structured. It is not a book you would expect to read from cover to cover;



Dr. Dr. Markus Tröltzsch



PD Dr. Dr. Matthias Tröltzsch

rather, it features dedicated chapters that address various issues facing dentists. If, for example, I have a patient with dementia, kidney disease or diabetes, I can turn to the corresponding chapter and receive a relatively brief overview of all the relevant medical information on the topic—covering the theory and providing advice for the dental practice, structured to match a given condition. There are sections on anatomy and pharmacology presenting the tools we need on our everyday practice—in terms of theoretical insights, but also application-specific information for the respective condition.

Various reviewers have praised your book for this very reason. What was the driving force behind your writing this book?

Markus T.: Dentistry has a problem. Because of the constraints of the curriculum and because of the rigid semester term structure, it is almost impossible for dental students to imbibe all of the medical knowledge they will need in real life. Accordingly, our inten-

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tion was to write a standard practical work for the dental practice, providing quick access to clinical conditions in a way that makes the information relevant for practising dentists.

Is there something you would you like to add from a scientific angle?

Matthias T.: Dentists who have enough knowledge to discern what is scientifically relevant, this will always be greatly appreciated. There is an unwritten law in medicine: You only see what you know. So if you have never seen a condition or problem before, you probably will not notice when confronted with it. This is as true of the dental practice as it is of larger clinics. The person in the field it is not always the person who has the most professional experience. I know this is a sad thing to say, but the reality is that it is mostly relative newcomers who work the front lines in our clinics. There are people with a lot of experience who supervise the procedures, but before they can make their voices heard, they first have to actually see the patient. It is simply crucial to establish certain diagnoses right away in order to provide relief for the patient while evaluating the situation scientifically and establishing correlations.

Markus T.: This applies to dental as well as to medical professionals. We have the same problem the other way round—not enough dental knowledge within medicine. We had started offering “Dentistry for physicians” courses for our local colleagues just before the COVID-19 pandemic. Next spring, we plan to revive that topic.

Hardly any doctors see their patients more frequently than dentists do. Naturally, their focus is on their patients’ mouth, jaws and face. So what diseases beyond their immediate area of expertise can, or could, dentists detect at an early stage?

Markus T.: There is no simple answer to that. Very many conditions can be associated with mouth, jaw or facial symptoms due to a patient’s deteriorating general health. Lymphomas are an example in kind. In 25 per cent of cases, the initial manifestation of a lymphoma will be some swelling above the clavicles, and patients will not infrequently consult a dentist—who, however, will not find any dentogenic cause. The situation is aggravated if a dentogenic cause is present but did not trigger the lymphoma. That makes it difficult to differentiate.

Actually, your question basically covers the entire range of what contributes to general health—or disease. We already mentioned diabetology, cardiology,

nephrology—all of which might present with milder symptoms if co-treated by a dentist. These overlaps are immense and well beyond the scope of this interview to try to answer them in full.

Matthias T.: Dentists must see themselves as specialists for oral medicine and be perceived as such, and not as dentists who “merely” address supragingival phenomena. In Europe, this development is still in its infancy; the US has already progressed beyond this point. The best example is sleep medicine—the guideline discussions here not only include ENT specialists, but also dentists on a regular basis. We still have a lot of work to do in Europe to ensure that physicians perceive dentistry as an independent, vital and important field. I think it is also important that dentists embrace this role.

In addition to anatomy and physiology, your book also addresses pharmacology. How important is, or should be, a knowledge of drug actions within dental care?

Matthias T.: In dental school, pharmacology is a minuscule niche. There are maybe one or two pharmacological classes during the entire programme. That is not enough for such a complex topic. The courses we teach start with the very basics. How do drugs work in general, in tablet form, intravenously, in terms of quantity, etc.? We find that certain agents are prescribed because they are the ones the prescribing dentist or physician at one time learned or read about. Many are also unaware that medication levels must depend on body weight and that there is no one-size-fits-all dosage. Especially when it comes to antibiotics, our problem today is that as we talk a lot about viruses, bacteria are becoming increasingly resistant. We have quite a dangerous wave of resistances ahead of us, which researchers are not moving fast enough to catch up with. We are reaching the limits of antibiotic therapy. Many pathogens have become resistant to all antibiotics because those antibiotics have been overprescribed, and improperly prescribed. The key phrase here is “antibiotic stewardship”. We have to understand exactly why we prescribe what, and for how long, and for which indication, otherwise we will fail. This is just one example, but maybe the most succinct one. Analgesics, for example, which we use and prescribe daily, are particularly relevant within dentistry. We need to know all about the entire range of active ingredients.

Can you give specific examples of diseases and medications that have a direct impact on oral health? What do dentists need to consider?

Matthias T.: We—hopefully—all know about anything to do with bone metabolism and antiresorptives by now. Particularly great uncertainty prevails in the case of antirheumatic agents. Rheumatology now uses many new drugs—biologics, antibodies, low-molecular-weight substances. It is hard to keep up with them, even if you are sufficiently interested.

Another area is psychopharmaceuticals, for patients with depressions for example. There are interactions between the classic antidepressants, the serotonin reuptake inhibitors, and bone metabolism. There are interactions between gastrointestinal drugs and bone metabolism.

Markus T.: And you can also go one step further and look at analgesic drugs. When we prescribe a pain medication, it will quite often be ibuprofen. Hardly anyone knows that in patient who take low doses of aspirin as part of a cardiological treatment, the aspirin effect will disappear in the presence of ibuprofen. If we want to keep both drugs effective, we must administer them at separate times.

Early in the pandemic, you had described the management of COVID-19 for the dental team. Where does your knowledge of infection control come from?

Markus T.: We were out early in getting up to speed because we saw the coronavirus wave in the making. In February 2020, we were still in Chicago talking to with Italian friends—while the first wave was already underway in Italy. We noticed that there is already a lot of evidence available going back to the SARS epidemic. The first wave of SARS was in 2003. SARS is also a Corona virus, so we were able to rely on the science that already existed.

In an interview at the beginning of the pandemic, you, Markus, talked about the dentist being the medical specialist for the oral cavity. In your opinion, should dentistry move closer to medicine? And how can that be accomplished?

Markus T.: Both sides must make an effort to close the gap between them. So how did we end up with a situation where oral medicine is excluded from much of the rest of medicine? I think the reason lies in their different historical developments. Medical subjects had achieved university status as early as 1280, while dentistry may once have been an academic subject, but most of the time it was practiced at fairgrounds and the like. Antipathies of class and status have existed for a long time. And since we are

all creatures of habit, it takes us a long time to break down our mental barriers. There is also another aspect: medicine in the oral cavity is quite different from medicine in the abdominal cavity, to cite one example. We have completely different organelles moving around, and therefore we need very specific knowledge and very special skills—which is only positive, I think. We have our own disease patterns in the oral cavity that are not always like those in the rest of the body. As people are living longer and want to maintain a certain quality of life, we are getting to the point where what happens in the mouth can affect the entire body—and vice versa. Dentistry must develop in the direction of specialist oral medicine—but without neglecting its artisanal roots.

How important do you think general medicine should be in every dental practice?

Markus T.: What will our patients look like in 2030—assuming we still have a healthcare system that is comparable to today's? It is hard to predict where we will stand in 20 years, and political environments can change rapidly. If we look at what is happening in the UK with the National Health Service (NHS), or at similar developments in Sweden, we have to realise that the structure of the healthcare system has a significant impact on patient care. If the system in Germany holds up, that is, if it can sustain the level of care we have today, then the main question will be how to treat patients with co-morbidities and special medical needs in the dental practice.

A general medical screening will increasingly be required—of course not trying to cover the entire medical but looking at those the areas where we know critical conditions may exist; in my opinion, these will in future be part of the admission screening. Of course, we will not be able to do this within current budgets. The dental practice must be economically viable.

Thank you two very much for this interesting interview.

This interview on video

If you want to watch Anita Wuttke's whole interview with the Tröltzsch brothers, you can do so here. The video in German language is available on the BDIZ EDI YouTube channel: <https://youtu.be/rTCTTQL8Hxc>



Portrait: BDIZ EDI—European Association of Dental Implantologists

Getting involved

BDIZ, the German Association of Implant Dentists, was founded in 1989 to lend a strong voice to dentists in private practice active within the field of implant dentistry in their efforts to negotiate reasonable individual fees for private dental treatments. As early as 2002, the Association changed its name—and focus—to become BDIZ EDI, where EDI stands for “European Association of Dental Implantologists”.



Each year, the European Consensus Conference (EuCC) under the auspices of BDIZ EDI issues a consensus paper on a current practical topic within oral Implantology. To download the guidelines, use the QR code:

This early pan-European orientation of BDIZ EDI was based on the realisation that the increasing influence of “Brussels” on the healthcare sector does not stop at the door of the dental office. Many guidelines and policies, for example those governing professional recognition, medical devices, etc. originate at EU level. Accordingly, regular meetings are held with partner and associated organisations of BDIZ EDI to devise and implement continuing professional development (CPD) events, to keep members updated on new laws and guidelines and to intervene where appropriate. In doing so, BDIZ EDI maintains close contacts to Brussels, in particular with the Council of European Dentists (CED), but also with the dental associations of the member states.

6,000 members

The number of BDIZ EDI members is increasing continuously. At this point, the association serves 6,000 dentists in Germany and all over Europe. The primary goal of BDIZ EDI is to protect the freedom of therapeutic choice and to promote the field of oral implantology. Any dentist with the requisite qualification should be able to practice dental Implantology in his or her own practice.



The focus of the work of BDIZ EDI when it comes to German dentists is on private dental billing issues. The BDIZ EDI has compiled its interpretation of the GOZ—the German fee schedule for dentists treating private patients—that is recognised and accepted by public corporations, health insurers and related institutions.

Continuing professional development

With its Curriculum Implantology, developed and held in cooperation with the University of Cologne, and the webinar programme, BDIZ EDI shows that it cares deeply about the next generation of implant dentists. As part of its commitment to CPD, the association organises internationally recognised symposia at home and abroad. The annual highlight is the BDIZ EDI Expert Symposium in Cologne that addresses one specific topical issue in oral Implantology every year. This is also where the European Consensus Conference (EuCC) is regularly held under the auspices of BDIZ EDI, issuing a new guideline annually. For example, the topic of 2023 was “2nd update of short, reduced-diameter and angled implants”. All guidelines can be downloaded in English from the BDIZ EDI website.

In addition, BDIZ EDI is an active member of the Consensus Conference Implantology, cooperating with all other professional societies within oral implantology—for example in guideline conferences targeting technical and medical aspects. To support individual dentists in their clinical work, the association has published patient guides on implant treatment and implant maintenance.

BDIZ EDI has also established a comprehensive network of technical and legal experts, as only experts with practical experience in oral Implan-



Helping patients—educating dentists—active in Europe: Members of the BDIZ EDI receive an official membership certificate stating the association's objectives and slogan.

About...

The primary objectives of the BDIZ EDI are:

- to preserve the free exercise of the dental profession in the best interest of both patients and professionals.
- to strive for continuing further development of the oral implantology and to support the dental practice.
- to keeping oral implantology as a part of day-by-day dental treatment.
- to provide continuing education in the discipline of oral implantology—Europe-wide.
- to support dental clinicians with relevant clinical guidelines for the daily implant practice and treatment recommendations.



Become a member of the BDIZ EDI family and participate in a lot of benefits.

You will find all important details on our website www.bdizedi.org. The adjacent QR code will lead you directly to the members' area.

tology are in a position to prepare state-of-the-art opinions with practical relevance. Quality improvements in implant dentistry, in everyday clinical practice as well as in material/technical terms, are the responsibility of the Quality and Research Committee.

It regularly examines and tests dental material in collaboration with renowned

research institutes (for example on surface contamination on implants in sterile packaging).

Getting involved in legislation

Advocacy also extends to healthcare policies relevant for dentists. For example, BDIZ EDI developed draft alternative leg-

islation on combating corruption in health care, where the government draft by the German Ministry of Justice was totally inappropriate in terms of its potential consequences for German dentists. This work also regularly gives rise to guidelines for the dental office.

AWU



European Consensus Conference of 2022 in Cologne.

Certification as an EDA Expert in Implantology

Qualification for experienced implantologists

For many years, BDIZ EDI has been catering to experienced and well-versed oral implantologists by offering the certification exam for EDA Expert in Implantology. Jointly with the European Dental Association (EDA), BDIZ EDI regularly invites interested dentists to take the certification exam, which we would like to present in this article.

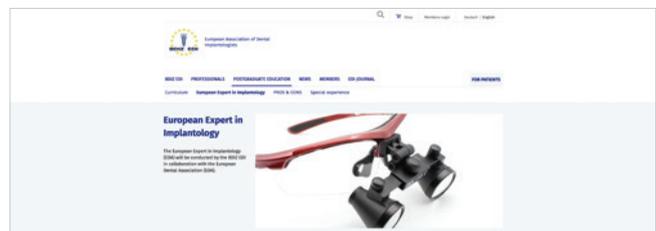
That quality is of paramount importance to BDIZ EDI is no secret. BDIZ EDI has demonstrated this in many different areas—legal and accounting, materials testing, postgraduate education, the annual Guidelines of the European Consensus Conference (EuCC) on current implantological issues and finally the qualification of court experts. BDIZ EDI also supports dental education with its Curriculum Implantology that introduces aspiring dentists and young implantologists to this dental specialty in eight well-organised modules.

Admission requirements for the certification exam

Certification as Expert in Implantology requires very good to excellent skills and knowledge. Candidates must meet the following admission requirements:

- 250 EDA-recognised continuing education/training hours in various sub-disciplines of implantology
- Submission of ten documented, independently performed implantological treatment cases
- At least five years of professional activity, primarily in the field of implantology.

Specific experience and primary activity in the field of implantology must be documented by at least 400 implants inserted and



150 implants restored within the past five years. Candidates who already obtained qualifications in oral implantology (e.g. from other professional societies) may submit the appropriate credentials with their application for certification as EDA Expert in Implantology.

The exam

Candidates meeting all the requirements will be admitted to the examination. The examination board of BDIZ EDI and EDA consists of recognised specialists. The exam has a theoretical and a practical part, both of which must be completed successfully. The procedure is as follows: The theoretical part of the exam will start with a discussion of the documented cases. In addition, candidates are expected to answer questions related to oral implantology and closely associated fields. The theoretical examination usually takes no longer than 60 minutes; it may be administered to candidates in groups. The practical part of the examination covers one or more recognised, state-of-the-art treatment method or methods and/or treatment plans covering some aspect of oral implantology. Candidates will be informed of the respective topic two weeks before the exam date. Candidates are responsible for providing the required materials and instruments on the day of the exam. The examination as a whole is subject to a fee to cover the cost incurred by the examination board.

New EDA Experts in Implantology are nominated by the president or vice president of the EDA certification committee.

More information...

To register for the next certification exam, please go to www.bdizedi.org and select English > Professionals > Expert or write to the BDIZ EDI office in Cologne at office@bdizedi.org.





Bundesverband der implantologisch
tätigen Zahnärzte in Europa e.V.
European Association of Dental Implantologists

Applicant's address:

Full name:

Full address:

.....

.....

E-mail:

Date:

Forward by mail or fax to:

European Association of Dental Implantologists (BDIZ EDI)

Lipowskystr. 12

81373 Munich

Germany

office@bdizedi.org

Fax: +49 89 72069889

**Certification exam: EDA Expert in Implantology
Application for accreditation**

I hereby apply for the EDA Expert in Implantology certification exam (EDA = European Dental Association).

I am qualified for this exam as defined below:

Member of BDIZ EDI yes no

Member of the following Societies/Associations:

I am: a dental clinician an oral surgeon a maxillofacial surgeon

I meet the training requirement of 250 hours of postgraduate education. yes no

Education and experience:

Surgery:

Inserted implants: less than 400 more than 400

Sinus lift: yes no

Close to nerve: yes no

Advanced atrophy of the jaw: yes no

Soft-tissue augmentation: yes no

Bone augmentation: yes no

Prosthodontics:

Implant-supported restorations: less than 150 150 or more

During the exam, I will be able to present documentation for 10 treatment cases. yes no

I understand that the examination board will review my qualifications and vote to accept or reject my application. Furthermore, I declare that all images I present are my own and that the implants have been inserted and prosthetically restored by me.

.....
Applicant's signature

.....
Date

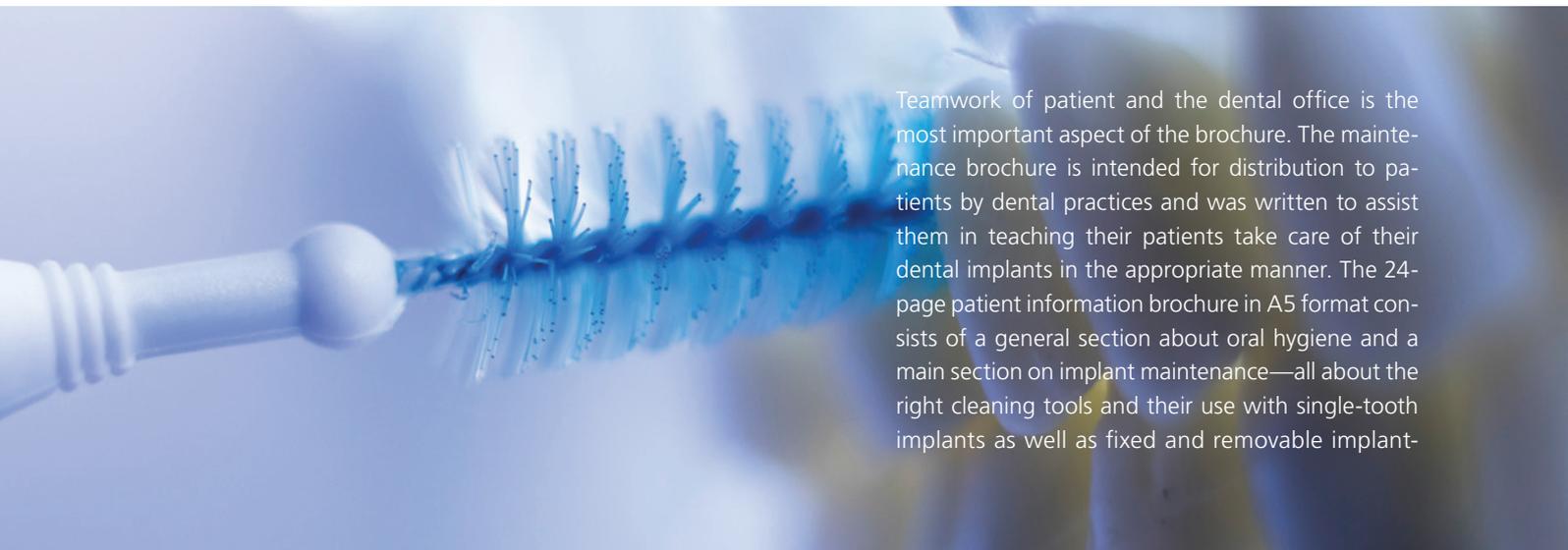
Having successfully passed the exam and paid the requisite fee, I will be certified as EDA Expert in Implantology.

The commercial processing of your personal data on this form is based on the EU General Data Protection Regulation (GDPR – Regulation (EU) 2016/679 of 27 April 2016), Article 6 f GDPR by the European Association of Dental Implantologists (BDIZ EDI), Lipowskystr. 12, D-81373 Munich/Germany. You have the right to obtain information about personal data concerning you (Article 15 of the GDPR). You can also request the correction (rectification) of incorrect data (Article 16 of the GDPR). More information: Privacy Statement on www.bdizedi.org.

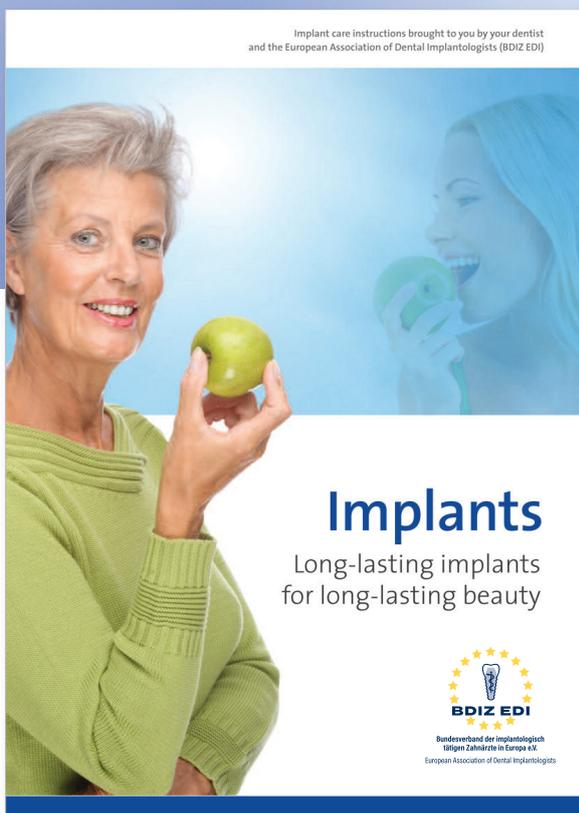
Implant care instructions brochure for patients

Implant maintenance is a team effort

The European Association of Dental Implantologists (BDIZ EDI) has published an English edition of its implant maintenance brochure. In easy-to-understand language, the brochure entitled “Implants—Long-lasting implants for long-lasting beauty” offers well-illustrated instructions and general information about oral health.



Teamwork of patient and the dental office is the most important aspect of the brochure. The maintenance brochure is intended for distribution to patients by dental practices and was written to assist them in teaching their patients take care of their dental implants in the appropriate manner. The 24-page patient information brochure in A5 format consists of a general section about oral hygiene and a main section on implant maintenance—all about the right cleaning tools and their use with single-tooth implants as well as fixed and removable implant-



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supported restorations. "Good to know" provides background information on choosing the right toothbrush and using the proper brushing technique, describes the process of professional tooth cleaning and educates readers about risk factors. A checklist intends to alert implant patients to possible changes in the mouth and around the implant. This is the first English edition of the brochure, which has been completely redesigned with large images and short texts in easy language that patients can understand. The preface states: "It is up to you to ensure careful oral hygiene, and this is a prerequisite for a long implant life. Teamwork is of the essence!"

AWU

Bibliography

Implant care brochure of BDIZ EDI for patients
Implants—Long-lasting implants for long-lasting beauty

A5 format, 24 pages, 32 images
Prize: €1.50 + VAT + shipping (minimum order: 10)

Contact BDIZ EDI in Munich/Germany
office@bdizedi.org · www.bdizedi.org > English

Phone: +49 89 72069-888
Fax: +49 89 72069-889



INTRODUCTION

Why is normal oral hygiene not good enough?

The threat of bone loss

Dental plaque is home to numerous bacteria. As long as the plaque deposits are removed at regular intervals before they cause damage to the teeth or gums, the biological balance in the oral cavity will be maintained. But as soon as the plaque bacteria multiply, there will be an increasing risk of tooth decay and periodontal disease. Severe inflammatory conditions such as periodontitis (inflammation of the gums around a tooth) or peri-implantitis (inflammation of the gums around an implant) pose a significant risk for bone loss and may cause the loss of the tooth or implant.

What tools can and cannot do

- ▶ Toothbrushes (even the most futuristic electric ones) cannot clean the teeth everywhere because they do not get into the interdental spaces.
- ▶ Dental floss, interdental brushes or toothpicks are essential (there is even "thick" dental floss especially for use around implants). They are the only way to remove the bacterial plaque between the teeth.
- ▶ Oral irrigators are of limited use around implants and certainly not a substitute for proper tooth cleaning.

6



INTRODUCTION

Why do implants need particularly intensive care?

There is a natural protective barrier between each natural tooth and the surrounding gums. The transition zone between an implant and its surrounding gums can be passed more easily, so the risk is greater that bacteria can penetrate it and cause inflammation of the mucous membrane around the implant (peri-implant mucositis).

But if you follow a few simple rules, things will not have to come this far. Proper maintenance is the be-all and end-all of implant care. You should invest a bit more time and effort than with "normal" tooth care. In this guide we show you how to maintain your implants carefully and gently.

gressing, attacking the supporting jawbone and breaking it up or destroying it. The implant may work itself loose or even to fall out.

The many different types of bacteria in the mouth (in the oral cavity) will colonize implant roots in the same way as natural tooth roots.

Since implant surfaces are usually rough and may be designed in screw form (depending on the system), invading bacteria can settle down easily and will be difficult to remove even by an experienced professional. Unless it can be stopped, the inflammation will keep on pro-

7



Council of European Dentists

Call for speedy revalidation of medical devices

The General Meeting of the Council of European Dentists (CED) was held in Brussels, Belgium in November 2023. One of the issues addressed by this umbrella association of dental associations of the EU member states was the recognition of dental qualifications acquired in third countries.

The agenda of the General Meeting, chaired by CED President Dr Freddie Sloth-Lisbjerg, included an update on the cooperation between the European Regional Organization (ERO) of the Fédération Dentaire Internationale (FDI) and the CED. In a joint task force, the two organisations want to work to strengthen the dental profession in competition with dental chains in Europe.

No to DIY orthodontics

At the Brussels meeting, the delegates adopted several policy statements. These include a position paper

on direct-to-consumer orthodontics, in which the CED expresses its concern about the spread of “do-it-yourself”/“direct-to-consumer” dentistry (DIY/DTC), particularly in the field of orthodontics. The CED believes that the well-being of patients is at risk if any of these procedures are carried out without a comprehensive orthodontic diagnosis and without the supervision of a specialist; the latter should be made mandatory in all stages of treatment, as strongly recommended by the CED.

A statement on dentistry and the Medical Device Regulation (MDR) was also adopted. The CED holds that “several years into the implementation of the



MDR, there are numerous discrepancies and variations in interpretation of the role of dentists in relation to dental medical devices." In their motion, the delegates call for consistent rules for the duties of dentists within the "MDR ecosystem". Dental medical devices "that have been considered safe and reliable for years (...) under the previous EU medical devices legislation on medical devices should be revalidated and recertified permanently and without restrictions." This would reduce the burdensome bureaucratic process of recertification under the new MDR, with no risk to the patient.

Call for standardised recognition procedures

In its position on the recognition of dental qualifications acquired in third countries, the CED recommends, for example, that all EU member states introduce standardised recognition procedures for these qualifications. However, these procedures must ensure that such recognition is in line with established min-

imum educational requirements. In addition, any simplified or accelerated recognition procedures should be aligned with European standards.

No vote was taken on the CED White Paper on waste management in dentistry. "The delegations from Germany, France, the United Kingdom, the Netherlands, Switzerland and Norway expressed their concern that the paper in its current form could be interpreted by national authorities as a call for even more regulation of dental practices," according to the Brussels office of the German Dental Association (BZÄK). The White Paper has therefore been referred back to the relevant CED working group and will be discussed again at the next General Meeting in Athens in May 2024.

Source: zm-online

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Pharmacies to be allowed to write prescriptions

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Easing the burden of British GPs?

British medical associations are alarmed that the Ministry of Health is apparently planning to allow pharmacists to prescribe and dispense medicines that previously could only be prescribed by physicians. The health policy debate about weakening the current prescribing authority of the medical profession is in full swing. Recently, the respected British daily newspaper *The Times* reported that pharmacists would “soon” be allowed to prescribe certain drugs independently, citing well-placed sources in the Ministry of Health. Contraceptives are said to be the first step, which will reportedly begin as early as December. The Ministry of Health said the move was to “reduce the burden on GP prescribers”. While pharmacists welcomed the move—Boots, the UK’s largest pharmacy chain, said it would begin prescribing in its 2,000 or so branches in early 2024—there was sharp criticism from the medical profession, which said it was highly problematic and would jeopardize patient safety.

Source: *Deutsche Ärztezeitung, Germany*

Telemedicine in railway stations

Criticism from French doctors

French doctors have condemned plans to set up telemedicine clinics in train stations. They say the railways should concentrate on providing better connections. Two days after the French railway company SNCF announced its intention to set up telemedicine clinics in around 300 stations by 2028, the national federation of doctors and medical associations have expressed their outrage at the plan. They see it as a further step towards cheap medicine in the financing of the national health system.

Telemedicine clinics would only be set up in underserved areas and only with the approval of the regional health authorities. Patients will be able to get medical advice via video consultation, receive vaccinations or have blood samples taken by a nurse, the SNCF said. Depending on local needs, other services will also be available, such as eye checks or sports checks and various hygiene products. These telemedicine clinics are not only aimed at rail commuters, but at the local population as a whole.

With 90 per cent of people in France living within ten kilometres of a railway station, the network of stations could be used to improve healthcare in rural areas, the SNCF explained. The healthcare company Loxamed will be responsible for the facilities.

The medical profession has reacted harshly to these plans. The SNCF would be well advised to focus on improving its rural services rather than reforming healthcare, they say. Better transport services could attract more doctors and health professionals to the countryside.

Source: *Deutsche Ärztezeitung, Germany*

Antibiotic Clovibactin effective against multi-resistant bacteria

New discovery raises hopes

In a joint research project, international scientists have discovered a new antibiotic and deciphered its mechanism of action. Clovibactin, derived from a soil bacterium, is highly effective in attacking the cell walls of bacteria, including many multi-resistant nosocomial pathogens such as MRSA, as well as the widespread pathogens that cause tuberculosis, which affects many millions of people worldwide. The findings were published in the journal *Cell*.

The discovery was made by researchers from the University of Bonn, the German Centre for Infection Research (DZIF), the University of Utrecht, Northeastern University in Boston and NovoBiotic Pharmaceuticals in Cambridge, USA. The mechanism of action shows that Clovibactin binds highly specifically to pyrophosphate groups of bacterial cell wall components. The pathogens cannot easily modify the cell wall components to undermine the antibiotic effect. After binding to the target, Clovibactin forms supramolecular fibrils that tightly enclose the target structures and further damage the bacterial cells. However, there is still a long way to go before the new antibiotic reaches the market.

Source: University of Bonn, Germany

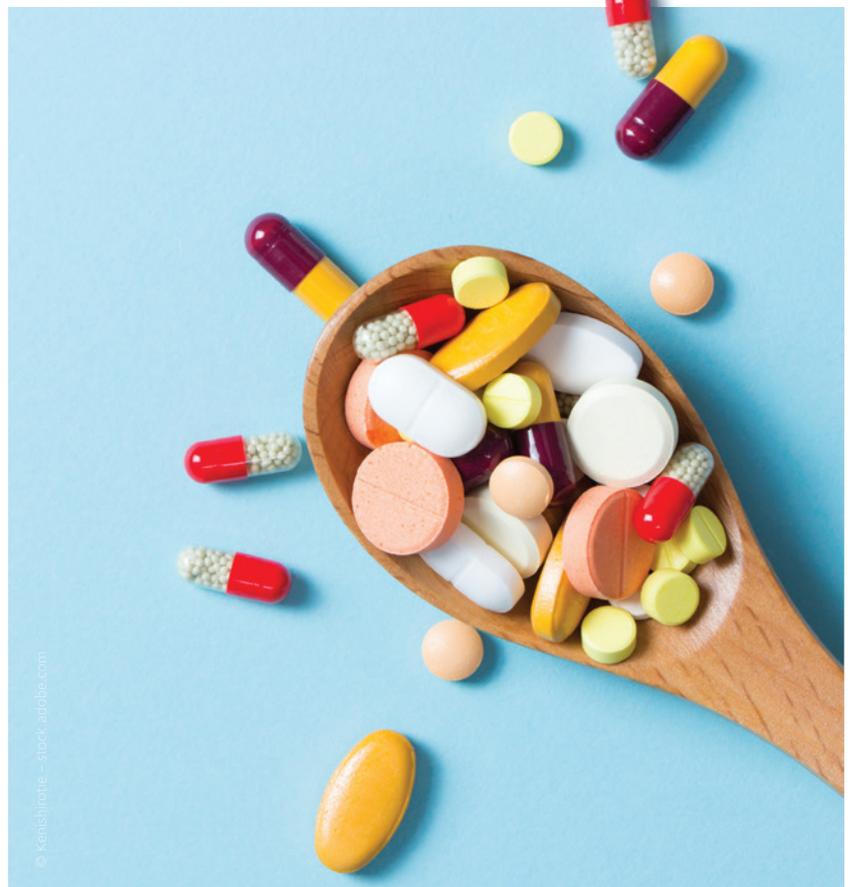
Reference:

Shukla R, Peoples AJ, Ludwig KC, et al. A new antibiotic from an uncultured bacterium binds to an immutable target. *Cell*. 2023 Sep 14; 186(19): 4059–73. e27. doi: 10.1016/j.cell.2023.07.038.

The EU Commission's "Critical Medicines Act"

Preventing drug shortages across Europe

To avoid, or at least mitigate, another shortage of medicines like the one that hit many European countries in the winter of 2022/2023, 18 member states have backed an initiative launched by Belgium. In October, the European Commission published a non-legislative communication entitled "Addressing Medicine Shortages in the EU" (COM[2023] 672 final), also known as the "Critical Medicines Act".



This communication is largely based on the preparatory work carried out by EU member states. The main objective is to avoid or mitigate further drug shortages this winter and beyond. The communication outlines existing and planned measures and further steps to be taken in the context of the reform of pharmaceutical legislation. All measures are aimed at increasing the security of supply of essential medicines in the short and medium term and improving the resilience of supply chains. The Brussels authority plans to set up a Critical Medicines Alliance in early 2024. This will enable national authorities, industry, civil society organisations, the Commission and EU agencies to take coordinated and joint action at EU level to tackle drug shortages and supply-chain vulnerabilities.

Sources: Various



European Court of Justice undermines German Law

Free disclosure of medical records

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In his decision (C-307/22) dated 26 October 2023, the European Court of Justice (ECJ), following a referral from the German Federal Court of Justice (BGH), has ruled that a patient is entitled to the free (!) disclosure of a copy of their medical records. This has thus far been foreign to German law, as the German legislator, in section 630g (2) sentence 2 of the Civil Code (BGB), stipulates that the patient is obliged to reimburse the person providing treatment for the costs incurred in this regard.

This ruling follows the provisions of the General Data Protection Regulation (GDPR), which is intended to take precedence over national law even for purposes unrelated to data protection. Considering the growing bureaucratic challenges provided by the GDPR, and the increasing demands for disclosure of records, this will negatively impact medical practices and hospitals.

The case

The matter in dispute was a dental treatment. Suspecting that his treatment had been incorrectly performed, the patient asked his dentist to provide him with a copy of his medical records free of charge, aiming to prove, based on that information, that a treatment error had been made. The dentist referred to section 630g (2) sentence 2 BGB and stated that he was willing to provide the copy against reimbursement of the associated costs. In response, the patient refused to

pay and filed a lawsuit for the free disclosure of the copy of his medical records.

The lawsuit was successful in the first two instances. The BGH eventually referred the issue to the ECJ, which ultimately agreed with the lower courts.

The judgement

The ECJ had to resolve the conflict between German national law and European law. While section 630g (2) sentence 2 BGB assigns the cost-bearing obligation for copies of patient records to the patient, Article 15 (3) of the GDPR stipulates that the controller shall provide a copy of the personal data that is the subject of the processing and only the costs for (all) further copies shall be borne by the data subject.

One problem is the chronological aspect of the regulations: While section 630g (2) sentence 2 BGB has been in force in its current form since 2013, the GDPR only came into effect in 2018.

Another problem with the case is, that, in its wording, recital 63 of the GDPR subordinates the right of access, which gives rise to the costs of copying, to purposes related to data protection, particularly concerning awareness of processing and the verification of its lawfulness.

Lastly, it is also problematic why the significant effort required to provide copies of patient records should be borne solely by the person providing treatment.

However, the ECJ ignored or countered all these valid criticisms by stating that Article 15 (3) GDPR should be interpreted as follows:

“The controller is under an obligation to provide the data subject, free of charge, with a first copy of his or her personal data undergoing processing, even where the reason for that request is not related to those referred to in the first sentence of recital 63 of that regulation.”

“In the context of a doctor–patient relationship, the right to obtain a copy of

personal data undergoing processing means that the data subject must be given a faithful and intelligible reproduction of all those data. That right entails the right to obtain a full copy of the documents included in his or her medical records and containing, inter alia, those data if the provision of such a copy is essential in order to enable the data subject to verify how accurate and exhaustive those data are, as well as to ensure they are intelligible. Regarding data relating to the health of the data subject, that right includes in any event the right to obtain a copy of the data in his or her medical records containing information such as diagnoses, examination results, assessments by treating physicians and any treatment or interventions provided to him or her."

Critical appraisal

The judgement may seem internally consistent, but it overlooks various legal and factual aspects. It thus misses the opportunity to interpret the right of access and its cost provisions in a practical way.

The interpretation of Article 15 (3) GDPR to the effect that the reason for the patient's request for documents is irrelevant, whether for data protection purposes or other reasons, fails to convince. While it may be justified from the literal wording

of Article 15 (3) GDPR, it falls short of reaching the objective of the GDPR: data protection. The GDPR primarily serves the purpose of data protection and is not an instrument for the preparation of follow-up processes, such as medical liability lawsuits.

The interpretation of Article 15 (3) GDPR in this decision, that the data subject must be provided with a complete copy of the documents containing their personal data in their patient records, rather than just the right to be provided with a copy of that data, is consistent given the ruling that the reason for the request is irrelevant. However, it ignores purely practical problems: particularly with electronically managed patient records, there are significant and well-known issues with EDP. A lot of data can only be seen on the screen because the software is designed primarily as a billing programme rather than a documentation programme.

As a result, the effort required for the medical practice is therefore enormously high, so the demand for document disclosure entails massive personnel, organisational, and technical effort, significantly infringing on entrepreneurial freedom.

Ultimately, one should be aware of the incentives that are created: the threshold for requesting a copy of the patient records is lowered for the affected individ-

ual considering the judgement, while for the controller, not only personnel, organisational, and technical effort but also financial expenses are added.

The German government is therefore well advised to consider amending the GDPR.



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Congress in Split, 11 May 2024

17th European Symposium on the Dalmatian coast

The European Symposium of the BDIZ EDI will be held in Croatia, in the beautiful Mediterranean setting of Split on the Dalmatian coast. The congress will be held on Saturday, 11 May 2024, at the new Ambassador Hotel in Split, right by the harbour.

The list of speakers will be just as international as the expected audience. Speakers will come from all over Europe—including of course BDIZ EDI board members. The Symposium will be held in English. Topics will include implant surgery and implant prosthetics.

Split—then and now

Split is the economic and cultural centre of Dalmatia and has a rich past. Split was made famous by the Roman Emperor Diocletian, who had his retirement palace built here around the year 300. Today, Diocletian's palace is one of the most impressive monuments of Roman architecture outside Rome. The turbulent history of the city that grew up around the im-

perial palace had promising beginnings. In the 10th and 11th centuries, the municipality of Split became autonomous and remained so for 300 years. Later rulers included the Venetians, the Kingdom of Bosnia, the Republic of Venice and the Austro-Hungarian Empire. With the disintegration of Yugoslavia, Croatia became independent. Today Split is a popular tourist destination, renowned for its rich history, scenic beauty and prime location on the Adriatic Sea.

17 years since its inception

For the seventeenth year now, BDIZ EDI will continue its proven concept of holding training courses outside Germany. This concept contributes to the exchange of

ideas within Europe. The Croatian Dental Association with its President, Dr Hrvoje Pezo, is a cooperation partner. The programme will soon be available online at www.bdizedi.org. A dental exhibition is planned to accompany the congress. Interested industry partners are invited to contact Anita Wuttke at: office-munich@bdizedi.org

Save the date:

17th European Symposium

Date: 11 May 2024

Place: Ambassador Hotel, Split

Why the European Symposium?

Every day we face new and continuing practical challenges. Undoubtedly, innovations in implant dentistry originate from scientific advances and are translated into products developed by the dental industry. The demand from practicing dentists for new products and procedures and improved treatment options has culminated in the remarkable variety of new applications we see on the market today—new approaches to bone grafting, new capabilities in laser technology, chairside CAD/CAM and new materials of all kinds.

Given that we have already achieved very high standards and high success rates in implant therapy, it is far from easy to strive for even better results and shorter treatment times. Nature sets

limits. This makes it all the more important for implantologists to continue their education to stay abreast of the latest scientific and technical innovations and materials for the benefit of their patients and their practices. Education and training must keep pace with developments.

The BDIZ EDI has therefore always considered the exchange of ideas as part of its professional focus. It is organising its European Symposium for the 17th time, and for the fourth time in Croatia. With the strong support of the President of the Croatian Dental Association, Dr Hrvoje Pezo, and his team, we are able to offer a congress day with top-class international speakers. Demosthenes (384 to 322 BC) already knew that “the

starting point for the greatest undertakings often lies in barely perceptible opportunities”. This quotation is characteristic of the European Symposia of the BDIZ EDI. Humble beginnings and spurious opportunities have been consolidated into a comprehensive approach that allows communities of dentists to transcend national borders and to intensify the exchange of ideas within Europe. The 17th European Symposium in Croatia is the best example of this. It will once again demonstrate how implant dentists from all over Europe can benefit from each other’s experience.

Christian Berger
President, BDIZ EDI



Did you ever know...

...that the European Association of Dental Implantologists BDIZ EDI

is collaborating with European associations and societies in implant dentistry? Even beyond the European borders there are collaborations existing with EDI India and the Nepalese Society of Implant Dentistry (NSID). EDI India just recently started a fellowship programme with input of the BDIZ EDI. More is coming up soon.



...that the BDIZ EDI

is collaboration partner to implant associations and societies in Europe to organise the European Symposium on an annual basis? 2023 BDIZ EDI was partner of the publishing house OEMUS MEDIA in Valpolicella/Italy. 2024 the partner will be the Croatian Dental Chamber in Split/Croatia.



...that the BDIZ EDI

is looking very carefully to watch what is going on in Europe—European Commission and the European Parliament and also the European Court of Justice—to recognise in an early stage how politics, regulations, directives, decisions regarding the dental practice may change. BDIZ EDI is to take some action by intervening or informing about consequences thereof.



CERAMIC IMPLANTS STATE OF THE ART

8TH ANNUAL MEETING OF

ISMI

INT. SOCIETY
OF METAL FREE
IMPLANTOLOGY



3-4 MAY 2024
HAMBURG



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Oral rehabilitation in the aesthetic area—One-year follow-up

Immediate ceramic implant with immediate provisionalisation and connective tissue graft

Alexandre Marques Paes da Silva¹, Francisco Augusto Horta⁴, Dennis de Carvalho Ferreira², Alice Maria de Oliveira Silva³, Mayla Kezy Silva Teixeira¹, Daniel de Moraes Telles¹, Eduardo José Veras Lourenço¹, Brasil

This case report aimed to describe the step-by-step oral rehabilitation using immediate implant with immediate provisionalisation using ceramic implants and connective tissue grafts and its clinical and radiographic performance after a 12-month follow-up period in the aesthetic area (lateral upper incisor).

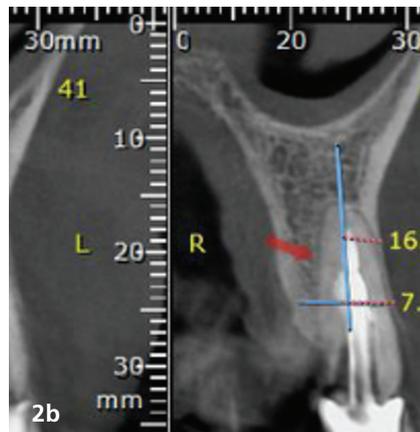
Abstract

Cone beam computed tomography (CBCT) was used for surgical planning and periapical radiographs were used in the immediate postoperative period and in implant follow-up consultations. Implants were installed in fresh sockets (immediate) with immediate provisionalisation. To fill the necessary gap, a bone substitute was used. Four months after surgery, the temporary crown was removed and a lithium disilicate crown was manufactured by impression with

addition silicone. The patient was followed for 12 months, and no prosthetic or biological complications were observed. During the entire follow-up period it was possible to observe stability of the marginal bone level and the peri-implant health of the implant. At the end of the treatment, when the definitive crown was cemented onto the abutment, the patient was asked about the degree of satisfaction with the aesthetic result of the treatment using a visual analogue scale and the patient reported being "very satisfied".



Fig. 1: Initial clinical situation.



Figs. 2a & b: Initial CBCT.

Introduction

Yttria-stabilised zirconia implants (YTZP) have emerged as a promising material with wide applicability in implant dentistry and are increasingly required not only by professionals, but also by many patients who wish to obtain metal-free oral rehabilitation.¹ Among the ceramic materials proposed for the manufacture of dental implants, such as alumina, which was the material used in the first ceramic implants launched on the market in the 1960s and 1970s, YTZP presents some advantages such as resistance to oxidation, high tenacity to fracture and flexural resistance, comparable to titanium implants (Ti).² It is worth noting that YTZP,

in addition to being a resistant material, with low affinity for oral biofilm (biocompatibility) when compared to TI, presents aesthetic advantages, especially when the professional is faced with challenging cases involving patients with a thin gingival phenotype.^{3,4} This fact occurs due to the white colour of the implant, similar to the colour of a natural tooth, helping to maintain the aesthetics of the rehabilitations and avoiding a grayish shadow on the gingival tissue, especially in patients with a thin gingival phenotype rehabilitated with TI. In current literature, studies show that the use of connective tissue graft (CTG) removed from the palate simultaneously with the placement of the dental implant helps in maintaining and, in some cases, increasing the volume of peri-implant soft tissues, helping in the final aesthetic result, especially in cases of metal implants and abutments.⁵ Regarding the low affinity for bacterial plaque, in some studies it was possible to observe a reduction in the formation of inflammatory cell infiltrate in the peri-implant soft tissue of implants made of zirconia.^{6,7}

Thus, the aim of this case report was to demonstrate the step-by-step oral rehabilitation with immediate loading using a ceramic implant with immediate provisionalisation and CTG and its clinical and radiographic performance after a 12-month follow-up period.

Case report

The patient attended a private clinical study center (SobreImplantes—Rio de Janeiro, Brazil) with the indication of installing dental implants. As it is an anterior region where maintaining aesthetics was a challenge, rehabilitation with a ceramic implant with immediate loading was proposed to the patient through a single implant-supported restoration and connective tissue graft, with the patient's own palate region as the donor area. To carry out the correct planning and diagnosis, the patient underwent cone beam computed tomography (CBCT), periapical radiography and intra-oral photographs (Figs. 1 & 2).

Although the patient had good control of supra- and subgingival bacterial

plaque, he underwent supragingival scaling and root planning prior to the surgical procedure. With the aim of maintaining the volume of the peri-implant tissue and avoiding any type of aesthetic collapse, the patient was informed of the importance and advantages of performing a CTG during the implant surgery procedure. This study was submitted to the ethics committee of the State University of Rio de Janeiro (UERJ-RJ) and approved under number 5,598,463. It should be noted that the participant was previously invited and informed about the study and signed an informed consent form to participate, with all ethical aspects respected.

Case description

The patient is male, 54 years old, healthy, and had suffered a fall from his own height in the past, in which the upper left lateral incisor was broken. On clinical examination (Fig. 1), a root fracture was found at the subgingival level and apparently infra-osseous, later confirmed through imaging tests (CBCT and peria-

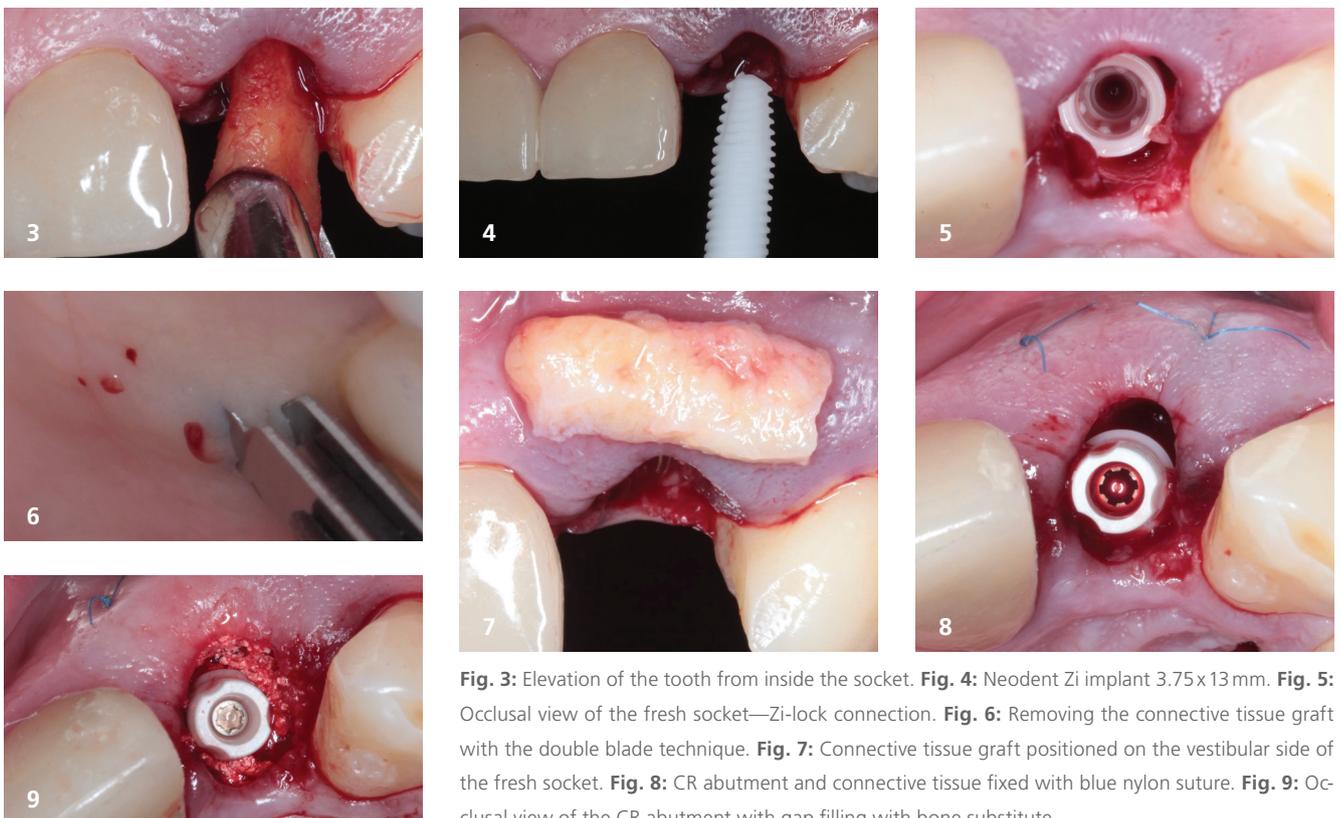
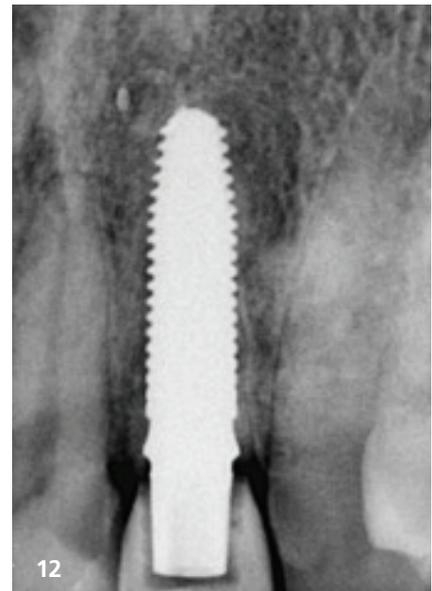
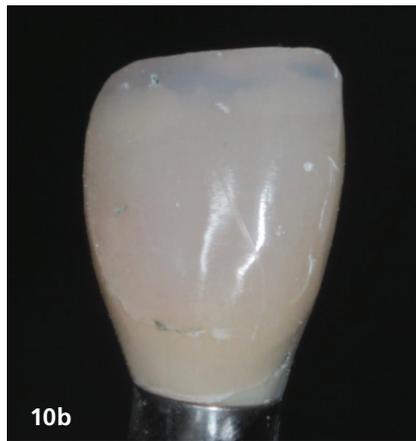
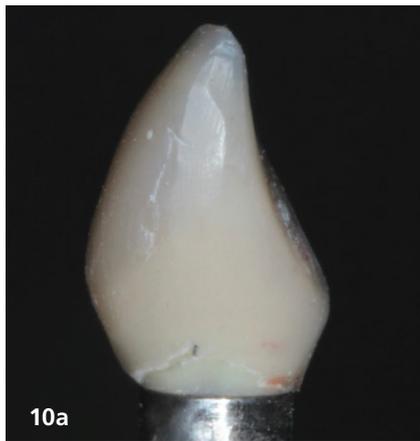


Fig. 3: Elevation of the tooth from inside the socket. **Fig. 4:** Neodent Zi implant 3.75x13 mm. **Fig. 5:** Occlusal view of the fresh socket—Zi-lock connection. **Fig. 6:** Removing the connective tissue graft with the double blade technique. **Fig. 7:** Connective tissue graft positioned on the vestibular side of the fresh socket. **Fig. 8:** CR abutment and connective tissue fixed with blue nylon suture. **Fig. 9:** Occlusal view of the CR abutment with gap filling with bone substitute.



Figs. 10a & b: Temporary crown made of light-cured resin. **Fig. 11:** Temporary crown positioned and sutured. **Fig. 12:** Immediate postoperative radiographic image. **Figs. 13a & b:** 14 days postoperative—suture removal.

pical X-ray, Figs. 2a & b). Given the clinical and radiographic situation, the proposed treatment was the extraction of the upper left lateral incisor with immediate placement of a ceramic implant and prosthetic rehabilitation through an immediate temporary crown and CTG using the double blade technique (DBT).

Surgical procedure

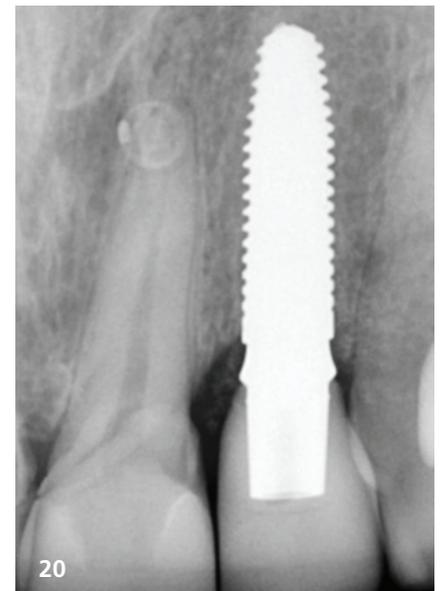
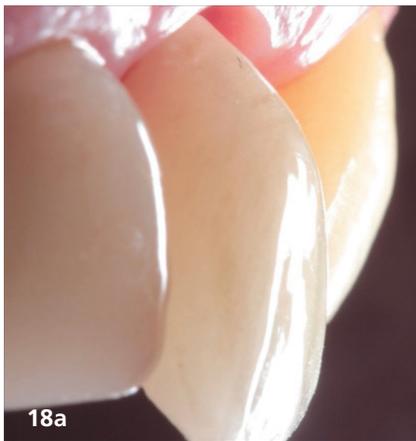
The patient was instructed to perform antibiotic prophylaxis with four tablets of Amoxicillin 500 mg one hour beforehand and rinsed the mouth with 0.12% chlorhexidine for 30 seconds before receiving local anaesthesia with 4% Articaine (1:100,000 epinephrine). Then, the extraction was performed atraumatically with the aid of manual periostomes and forceps (Fig. 3) and a two-piece ceramic implant (Neodent Zi Ceramic Implant®, 3.75 x 13.0mm) was placed in the fresh alveolus (Fig. 4). The Insertion torque was 35Ncm. It should be noted that the in-

strumentation of the surgical site was carried out in accordance with the manufacturer's guidelines, including the use of "the countersink" and the "former screw"

to facilitate the seating of the implant in the recipient bed. After thorough milling, the implant was placed with the help of a surgical contra-angle at a rotation of



Fig. 14: Four months of follow-up. **Fig. 15:** Peri-implant tissue with a healthy appearance (occlusal view). **Fig. 16:** Peri-implant tissue with a healthy appearance (lateral view). **Fig. 17:** Closed impression technique with flow resin to copy the gingival emergence profile and addition silicone (Yllor).



Figs. 18a & b: e.max crown being positioned over the CR abutment with maintenance of interdenal papillae and peri-implant volume. **Fig. 19:** e.max crown cemented. **Fig. 20:** 12-month follow-up X-ray. **Fig. 21:** Visual analogue scale.

30rpm with 35Ncm of torque, at the level of the bone crest (Fig. 5).

On the vestibular area, a CTG was removed from the patient's own palate using the DBT (Fig. 6) and fixed with Blue Nylon 6/0 suture (Techsuture; Figs. 7 & 8). To fill the "gap" between the external wall of the implant and the internal surface of the buccal wall of the alveoli, a bone substitute was used (Straumann® maxresorb® 0.5–1.0mm, 0.5cc; Fig. 9). A 4.5x5.0x1.5mm (regular) zirconia abutment (CR Zi Pillar®) was installed (Figs. 10a & b). Finally, a provisional restoration was made with light-cured composite resin and cemented on the ceramic abutment (Fig. 11).

At the end of the surgical procedure, a periapical X-ray was taken (Fig. 12). The Patient returned 14 days later for suture removal (Figs. 13a & b) and received the necessary instructions. The four-month postoperative period was uneventful, and after this period, the patient returned in order to begin the prosthetic rehabilitation phase.

Prosthetic phase

After four months (Figs. 14–16), the patient returned to have the definitive crown made. This crown was fabricated using the analogic with a conventional impression that was taken with addition silicone with putty and regular body (Ylller; Fig. 17), using the closed tray technique. One lithium disilicate crown (e.max®) was manufactured and cemented with adhesive cement (RelyX™ U200, 3M) onto the prosthetic abutments (Figs. 18 & 19). Occlusal adjustments were performed. At the end of the treatment, a final periapical X-ray was taken, and it was possible to observe the bone stability and the adaptation of the prosthetic work (Fig. 20).

Then, the patient was questioned and instructed to respond about the degree of satisfaction with the treatment through a VAS (visual analogue scale) and answered that he was "very satisfied" (Fig. 21).

After 12 months, the patient was asked to return and a new X-ray was taken,

showing the stability of the alveolar bone crest without marginal bone loss (MBL).

Discussion

The aim of this case report was to demonstrate the step-by-step oral rehabilitation in the aesthetic area with immediate loading and immediate provisionalisation using ceramic implants and connective tissue grafts and its clinical and radiographic performance after a 12-month follow-up period. After 12 months, as proved in other studies that also used this implant system,^{8–10} it was possible to observe that over the course of a year, no biological or prosthetic complications were observed, with the peri-implant tissues remaining stable and healthy.

The MBL around the dental implant is considered one of the key points in observing the success of a treatment.¹¹ In this case report, the MBL measurement was performed and confirmed by two professionals, a specialist in implant den-

tistry and easy-to-apply oral and maxillo-facial surgery. Both observed and agreed that after the 12-month follow-up period, no MBL was observed. Our MBL findings are in line with those reported in studies previously published in the current literature, where MBL observed in two-piece zirconia implants was < 3 mm, but this study presents a nine-year follow-up.¹²

Immediate placement and provisionalisation of implants have gained considerable scientific interest in recent decades, minimising the number of surgical interventions and helping to maintain soft and hard tissues around implants.¹³ Even so, the remodelling of oral soft and hard tissues after tooth extraction tends to

happen, especially in the first year of operation.^{14–16} In the present case report, a joint tissue graft was used in order to maintain peri-implant architecture and aesthetics. Studies show that the use of connective tissue grafts helps maintain the volume of soft tissue around the implants, preventing aesthetic collapse and, consequently, improving pink aesthetics.¹⁷

To assess the level of patient satisfaction, a VAS scale was used where the patient demonstrated that he was “very satisfied” with the treatment, as occurred in another previously published study using another ceramic implant system which demonstrated that patients were very satisfied with the final treatment.¹⁸

Conclusion

According to the present case report, clinical and radiographic results demonstrated that this new two-piece zirconia implant (Neodent Zi) presents favourable performance in relation to osseointegration and maintenance of peri-implant health, making it a safe option for oral rehabilitation involving aesthetic areas.

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References



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Dentist's services and chairside "laboratory" services in guided implant placement

Surgical guides

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As cone-beam computed tomography (CBCT) becomes more ubiquitous, indications for the technique of guided implant placement are becoming more common.

Any justification for the use of guided implantation must take into account the exposure to ionizing radiation. State-of-the-art equipment with radiation-sensitive detectors can help to reduce the radiation exposure by using different radiation parameters e.g. pulsed radiation and an additional copper filter in the low-dose programme.¹⁵ Although the current guideline for the use of navigation-guided implant surgery has not been updated for more than five years, the indications listed therein are still clinically relevant today (Table 1).¹²

As radiological diagnostics are generally still required for navigation-guided implant placement, it is recommended that this diagnostic step be performed with CBCT according to the updated dental CBCT guideline. Accordingly, this guideline contains numerous recommendations that justify a three-dimensional diagnostic approach (Table 2).¹

The adoption of the 2012 German Standard Schedule of Fees for Dentists (GOZ) has provided clarity in one area of implant planning and implant placement, the use of navigation guides. The use of a custom guide in the implant-related analysis and measurement of the alveolar process to determine the correct implant position is now covered by the schedule. Similar provisions in other jurisdictions or under other fee schedules to ensure appropriate reimbursement for this step appear appropriate. Customised diagnostic guides are defined as radiographic templates for 3D diagnostics that may include radiopaque reference bodies for specific planning programs in 3D diagnostics or reference spheres for adjusting 2D diagnostics.⁹

Tools for implant placement

Orientation and navigation guides that require various dental and laboratory steps to prepare for fabrication and application. The use of a navigation guide for implant placement by the clinician involves a separate billable step, namely the insertion and use of guided instruments, steps that are not required, or not to the same extent, for freehand placement or when using an orientation guide. The fabrication of a navigation guide is an additional laboratory step, performed by a planning centre or a

Patients with special risks (e.g. increased bleeding tendency)
After complex jaw reconstruction
Support for the implementation of a difficult prosthetic objective
Special concepts (e.g. for immediate restoration with prefabricated dentures)

Table 1: Indications for navigated implant placement.

Missing or insufficient information from clinical examination and two-dimensional imaging
Prosthetically driven implant planning
Distinct anatomical features: <ul style="list-style-type: none"> • Submerged alveolar processes • Severe atrophy of the alveolar process • Maxillary sinus septa
Special surgical and/or prosthetic approaches <ul style="list-style-type: none"> • Immediate implant placement • Immediate restoration • Navigated implantology • Complex interdisciplinary treatment approaches

Table 2: Indications for three-dimensional implant diagnostics.

dental technician, and is charged to the patient as part of the laboratory bill.

The fabrication of a navigation guide is an additional laboratory step that is performed by a design centre or by a dental technician and will be charged to the patient as part of the laboratory bill. However, because modern programs can be operated by a dentist in his or her office, this step may also include certain chairside services that should be billed as dental services if they are not specifically included in the treatment plan and cost estimate. These chairside "laboratory" services must be billed at the dentist's individual hourly rate.

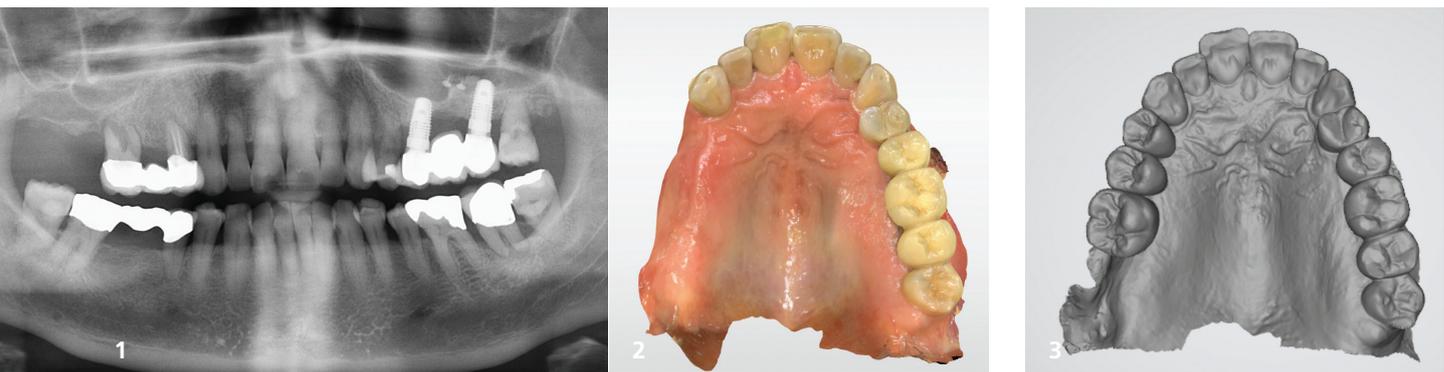


Fig. 1: Preoperative radiograph prior to placement of two ceramic implants. **Fig. 2:** Intra-oral scan for implant planning (CEREC Primescan, Dentsply Sirona). **Fig. 3:** STL data set with prosthetic proposal.

Making a navigation guide

There are several procedures that use navigation guides for precise implant planning, using a virtual model on the computer with the aid of a three-dimensional radiograph produced by CBCT according to the guidelines.¹⁰ This procedure involves several steps, some of which must be performed digitally or conventionally in the laboratory, depending on the system used.^{5,13,14}

In order to prepare the CBCT, a radiographic template must first be used if the system works with a reference plate or ref-

erence bodies.⁷ Ideally, the desired prosthetic result is simulated in this radiographic template by transferring the prosthetic set-up into a radiopaque resin (e.g. by doping with barium sulphate) so that it can be visualised on the radiograph.²

With the increasing availability of intra-oral impressions, digital planning documents can be created directly by the clinician to visualise the desired prosthetic outcome. This involves creating a virtual set-up to be created in a design program after reviewing the optical scan or intra-oral image. If immediate implant placement is planned, the tooth to be extracted may need to be digitally “removed”.

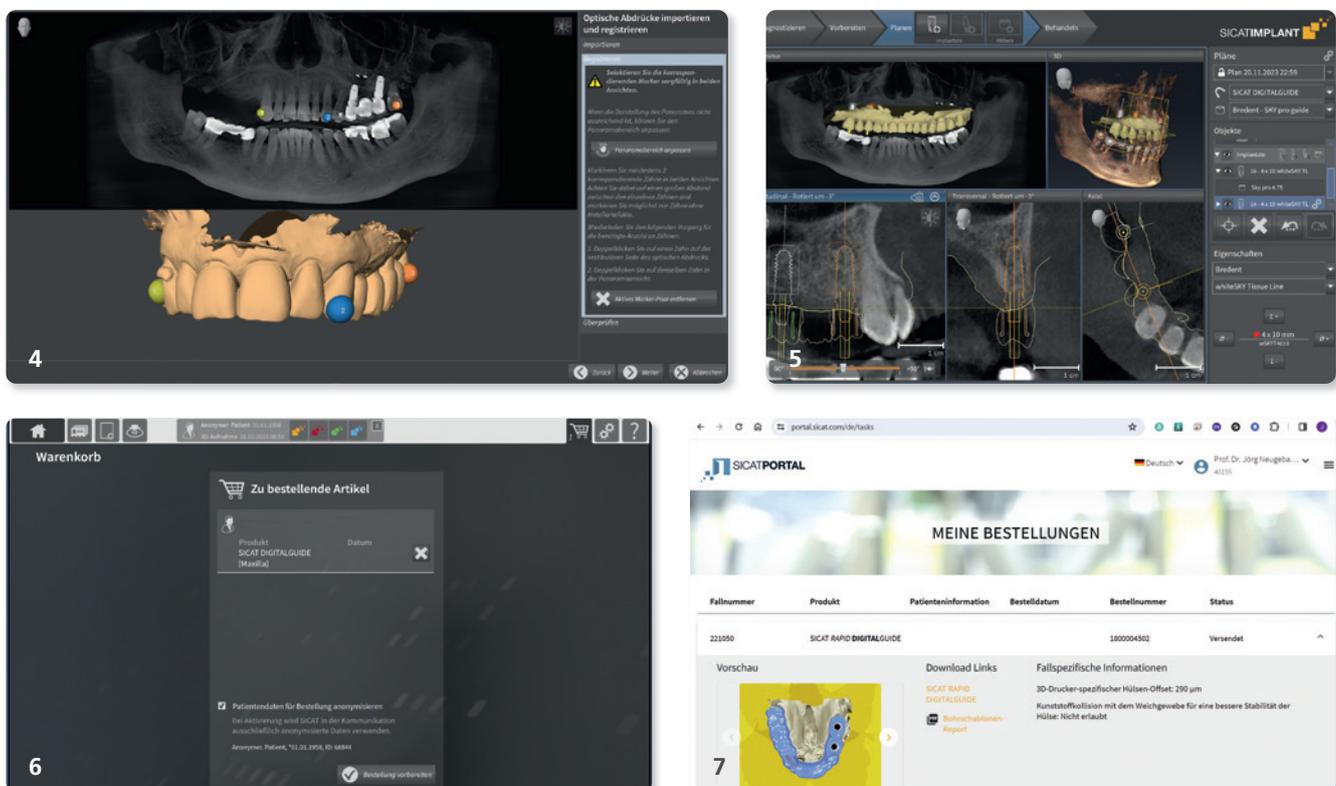


Fig. 4: Superimposition of the data sets in the design program (SICAT Implant 2.0, SICAT). **Fig. 5:** Prosthetically driven positioning of implants with drill sleeves for guided systems (SKY pro guide, bredent medical). **Fig. 6:** Preparation for design export. **Fig. 7:** Download of the navigation guide created with AI (SICAT RAPID DIGITALGUIDE, SICAT).

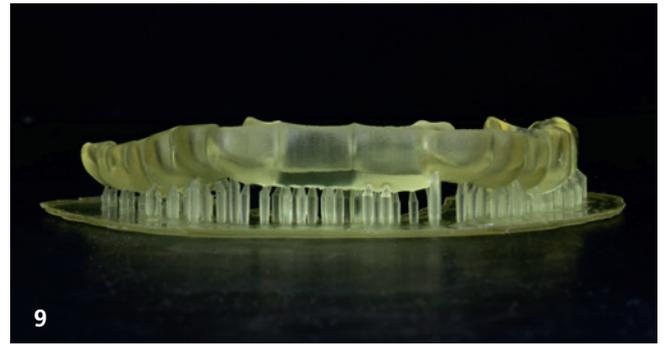
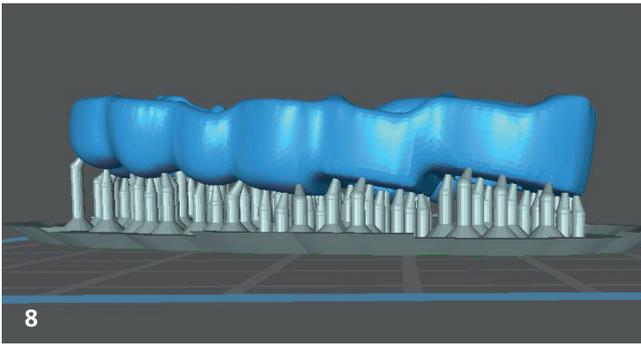


Fig. 8: Navigation guide prepared for printing. **Fig. 9:** Printed navigation guide before sprue removal. **Fig. 10:** Finished navigation guide with fixed master sleeves. **Fig. 11:** Use of the drilling guide with guided implant instruments.

This digital data can then be superimposed on the radiographic data set. Depending on the design program, a combined data set derived from the surface scan and the prosthetic proposal may be required. Alternatively, two data sets must be available – one representing the surface scan and the other representing the prosthetic proposal—for virtual planning to be possible.¹¹

After these steps, the implant position can be determined and the appropriate implant dimensions selected. This selection must be checked for plausibility by the design program. In addition to dimensionally accurate models of the implant bodies, most programs can select and simulate abutments with the appropriate angulations.

Once the position of the implants has been checked against the relevant anatomical and prosthetic parameters, the sleeves can be selected and positioned for the design program. Again, a plausibility check will be required as different sizes of drilling sleeves are available, depending on the intended instrument set for guided implant placement. These sleeves must not collide with the anatomical structures, such as terminal abutment teeth or high mucosal thickness in flapless procedures, or with the sleeves of adjacent implants.

Once the implants have been aligned with the drilling sleeves, the data transfer for the design of the surgical guide can be prepared. Using a web-based portal, all design data can be transferred digitally, eliminating the need to send patient documents to the design centre by post.

As these digitally designed surgical guides are printed in the practice or at a collaborating laboratory, it is necessary to enter the specific production parameters for the printer used. The so-called printer offset is determined by printing a reference body. The individual offset can be determined by inserting the drill sleeve into different-sized holders. This step is necessary once so that the metal sleeves can be easily fixed in the navigation guide.

The guide can then be constructed at the design centre. Alternatively, this step can also be generated by an automated process supported by artificial intelligence. This approach has the advantage that the design is independent of human resources and working hours. On the other hand, this process requires an additional plausibility check of the design to determine whether the resulting navigation guide meets all the requirements for use as a navigation template.

The next step is to print the physical guide. This means that the data set for the navigation guide must be fed into the operating software of the 3D printer. This is done by positioning the data set(s) in the blank (a process called nesting). As support sprues are required for 3D printing, the automatic distribution proposal must be checked and corrected if necessary, so that the sprues are not positioned on the contact surfaces of the drill sleeves, which would make subsequent finishing difficult. After printing, the sprues are removed and the surgical guide is polished.

The navigation guide must then be inspected by the clinician for printing and finishing errors before the sleeves are finally

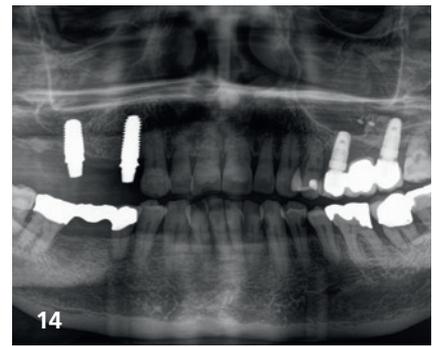
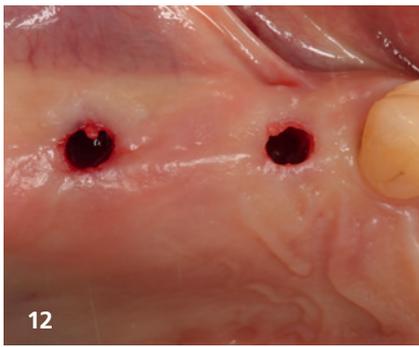


Fig. 12: Flapless preparation of the implant beds. **Fig. 13:** Placement of one-piece ceramic implants (whiteSKY, bredent medical) **Fig. 14:** Radiographic control of the implants before immediate restoration. **Fig. 15:** Restoration with splinted resin crowns. **Fig. 16:** Irritation-free healed ceramic implants before referral for prosthetic restoration.

fitted. If a sterilisable resin has been used, the guide can be sterilised. The device is now ready for use.⁸

Discussion

The navigation guides are used for various restorations in order to achieve optimal implant positioning for special treatment procedures. This makes immediate restorations more reliable and reduces the cost of subsequent fabrication at the laboratory.⁶

However, this advantage depends on intensive preparation, which today can increasingly be done digitally without involving an external laboratory. Especially when it comes to making optimal use of the remaining bone, deviations in the anatomical structures from the norm or unfavourable mucosal conditions, for example after extensive augmentation or soft-tissue surgery, make conventional orientation difficult.⁴

The ability to perform minimally invasive procedures with short, reduced-diameter or angulated implants also benefits from the use of a navigation guide.³ This includes immediate restoration techniques, especially with one-piece ceramic implants, as the temporary prosthesis can be prepared based on the drilling guide. These dental and chairside services should be itemised for documentation purposes and billed accordingly.



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References



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Conservative approach in a patient with advanced periodontitis maintaining key teeth such as central incisors with poor prognosis at the beginning of the case

Clinical evolution over 25 years

Eduardo Anitua DDS, MD, PhD^{1,2,3}, Spain

Introduction

The rehabilitation of periodontal patients with implants has been a topic of interest since the appearance of implants in dentistry.^{1,2} Periodontal patients are by far the ones who most often require the replacement of missing teeth, and the hypothesis was put forward at the beginning about the behaviour that implants could have in them, as they have an underlying infectious pathology that could also affect the implants.¹⁻⁵ For this reason, for a long time the replacement of lost teeth in periodontal pathology was carried out by means of removable prostheses or fixed prostheses on natural teeth.^{6,7}

Studies evaluating the evolution of peri-implant and periodontal pathology have been able to establish that in both pathologies (periodontitis and peri-implantitis) the biological niche plays a major role, but that there are differences in the composition of the flora of both pathologies. Thus, in healthy conditions, the peri-implant microflora consists mainly of Gram-positive cocci and non-motile bacilli, with only a small number of Gram-negative

anaerobic species, which is similar to the microflora of healthy teeth. In contrast, peri-implant mucositis shows a higher number of cocci, motile bacilli and spirochetes, which is similar to gingivitis, while peri-implantitis shows a higher number of Gram-negative, motile and anaerobic species (*Porphyromonas gingivalis*, *Tannerella forsythia* and *Treponema denticola*), which is similar to periodontitis.

However, some microorganisms that do not usually occur in periodontitis, such as *Staphylococcus aureus*, *Staphylococcus epidermidis* and *Candida spp*, have been identified in areas of peri-implantitis.^{7,8} There is therefore a discrepancy between the two pathologies in terms of the causal microorganisms, and it has also been found that the inflammatory response generated in both conditions is different, with advanced peri-implantitis lesions showing an inflammatory infiltrate rich in T and B cells, as well as neutrophils and macrophages with a greater number of all of them than in advanced periodontal lesions, which suggests that the inflammatory reaction in peri-implantitis is more aggressive.⁷⁻¹²

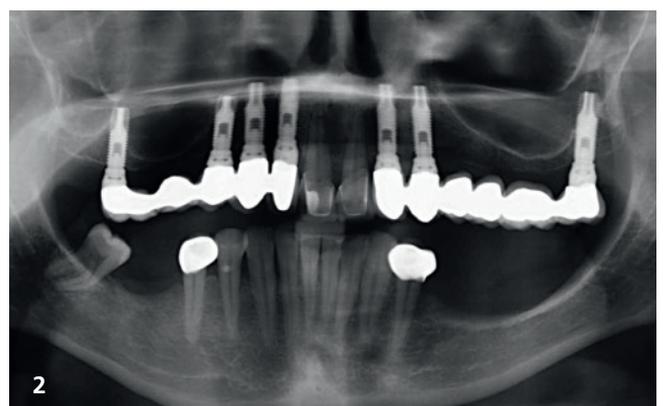
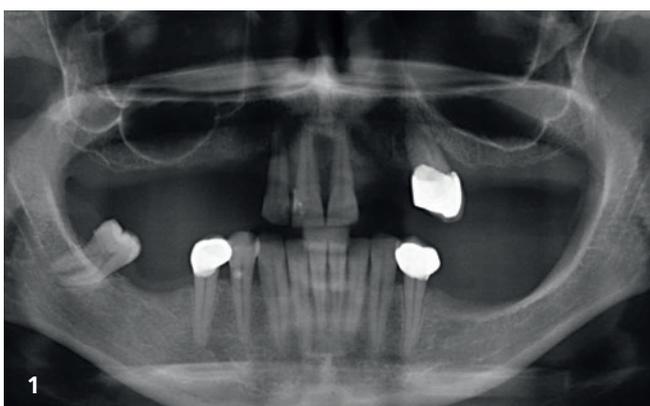


Fig. 1: Initial condition of the patient in 1998, showing the edentulous sections to be rehabilitated with implants and the bone loss of the teeth in the upper arch, as well as the lateral focus of the premolar in position 24. **Fig. 2:** X-ray one year after treatment where we can see the rehabilitation carried out with implants and the periodontal maintenance of teeth 11 and 21, which is giving good results. At this point, the patient decides not to rehabilitate the lower arch.

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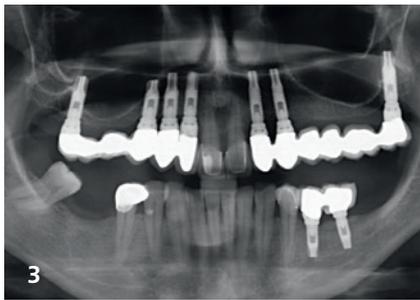
³ University Institute for Regenerative Medicine and Oral Implantology—UIRMI (UPVIEHU-Fundación Eduardo Anitua), Vitoria, Spain.

New advances in periodontal and peri-implant pathogen research have encouraged the use of implants in patients with periodontal pathology, and more and more people are benefiting from implants even with aggressive periodontitis. Today we have clear treatment protocols for both diseases and the approaches needed for long-term success, but 25 years ago, in the early days of implant dentistry, things were different. The main recommendation at that time was to remove all teeth affected by periodontal pathology, allow time for bacterial turnover (no teeth) and then place dental implants.^{14,15} With this type of approach we were able to make many patients completely edentulous without the need for it, and as we have seen subsequently it was not necessary. In addition, the absence of teeth generates multiple alterations, even if they are replaced as implants, such as problems of proprioception and identity in the patient, who when they lose all their teeth can feel affected psychologically, especially the teeth in the upper anterior sector, which form the most important part of their smile.¹⁵⁻¹⁷

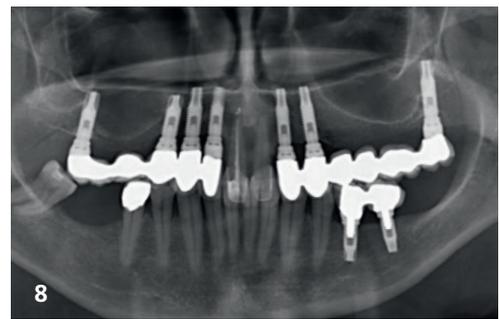
In the following clinical case we show a patient, treated 25 years ago and her follow-up, with advanced periodontal pathology and several teeth with a questionable prognosis, where we opted to keep the teeth as much as possible and rehabilitate the rest with dental implants, without carrying out unnecessary extractions, also conserving the aesthetic front that is part of the patient's identity.

Clinical case

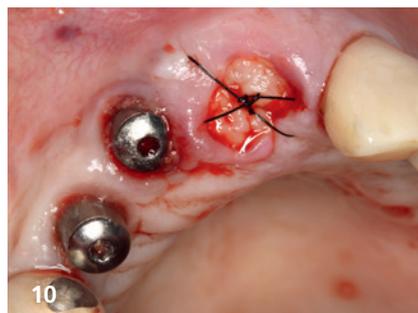
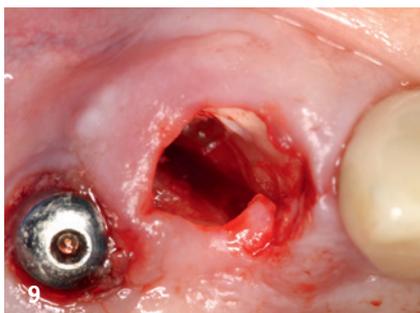
We present the case of a 56 year old female patient who came to the clinic in 1998 to replace missing teeth. In the initial X-ray we can see a large amount of bone loss in the upper anterior sector, mainly involving the upper right lateral incisor and the central incisors. In addition, the premolar in the second quadrant (24) has a lateral focus with a positive mesial punctate probing, indicating a vertical fracture, and it was therefore decided to extract it (Fig. 1).



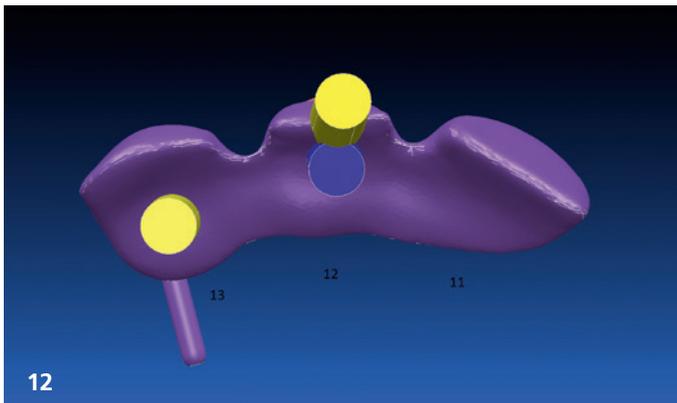
Figs. 3–5: Follow-up of the patient in the year 2000 (two years after the start of treatment) with the stability achieved both in the implants and in the preservation of 11 and 21.



Figs. 6 & 7: Intra-oral images 18 years after the start of treatment. **Fig. 8:** X-ray showing the periodontal status of the remaining teeth and the endodontic treatment performed on tooth 11.



Figs. 9–11: Image of the extraction of the central incisor preserving the wall attached to the vestibular plate (11) and alveolar regeneration with PRGF-Endoret.



A first phase of basic periodontal treatment was carried out and the planned exodontia and dental implants were placed, preserving two key teeth: 11 and 21, which despite having a questionable prognosis, are important teeth both for the patient's smile and identity, and for maintaining the proprioception of the upper arch through the incisor guides in which they participate. The patient underwent implant treatment and periodontal maintenance of the remaining teeth, and we found stability both in the implant treatment and in the maintenance of 11 and 21 the following year (Fig. 2).

One year later, the patient continues with periodontal treatment and maintenance, with both central incisors remaining, although for aesthetic reasons it was decided to place ceramic facets to harmonise the smile and close the spaces caused by the bone loss due to periodontal pathology. In addition, the lower rehabilitation has already begun, placing the implants and crowns in the third quadrant (Figs. 3–5).

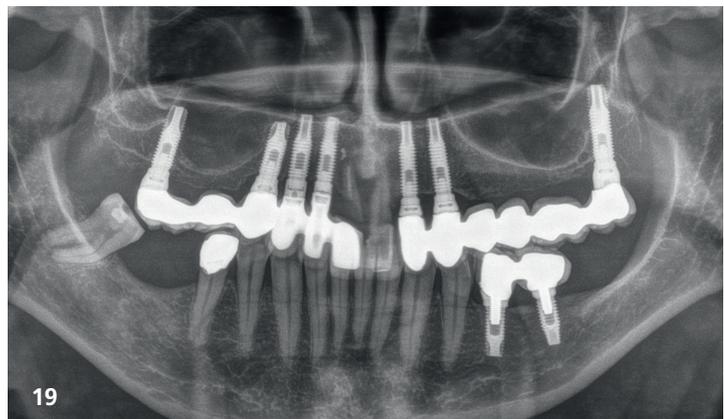
The patient follows a rigorous periodontal treatment protocol and regular check-ups where the health status of the remaining teeth and implants is monitored. In 2017, 18 years after treatment began, the periodontal condition has worsened slightly. A root canal treatment is carried out on tooth 11, due to occlusal overload and increased sensitivity due to root exposure, and the implants remain stable and show no significant bone loss, although the soft tissues have suffered slight retraction at some

points, exposing both the margins of the facets and some of the abutments on the implants (Figs. 6–8).

Despite endodontic treatment, tooth 11 continued to cause discomfort and its mobility increased, fracturing a portion of the tooth, so it was decided to extract the fractured portion, regularise the rest and leave the root portion associated with the vestibular table in the alveolus to prevent resorption and conserve volume. To this end, it is filled with PRGF-Endoret as the only regenerative material, according to the protocol described by our study group for the post-extraction socket (Figs. 9 & 10).^{18,19}

For the rehabilitation of tooth 11, a division of the bridge in the first quadrant was carried out, leaving sections 14–17 individually and rescuing the previous implants located in positions 13 and 12 to generate a bridge with tooth 11 in extension. The structure is made by CAD/CAM with subsequent addition of ceramic, correcting the emergence of the screw of piece 12 to achieve better aesthetics (Figs. 12–14).

Once the soft tissue has healed, a new prosthetic rehabilitation is carried out on tooth 21 to make it more similar to the new prosthesis. We also created a more favourable emergence profile in tooth 11, harmonising the aesthetic front completely (Figs. 15–18). The patient continues to be followed up and in 2019, 21 years after the start of treatment, we can see the stability of the implants placed in the first phase (Fig. 19).



Figs. 12–14: Creation and placement of the bridge screwed on transepithelial with tooth 11 in extension and adaptation of the gingival margin of tooth 12 (which previously showed the prosthetic component). We can also see how the vestibular contour of tooth 11 has been preserved by leaving the root portion buried. **Figs. 15 & 16:** New milling for crown in tooth 21 and the need to adapt the margin of tooth 11. **Figs. 17 & 18:** Adaptation of the emergence profile of tooth 11 and reconstruction of tooth 21. **Fig. 19:** The implants inserted in the first phase were further stable.

In 2022 (24 years later), there was an increase in the mobility of tooth 21, which had been preserved all this time, but which now had to be extracted. In this same approach, it is decided to remove the root fragment situated in the implant in tooth 11 and a new bridge is made from the implant in position 12 to the implant in position 22, which is detached from the bridge in which it was located, making a division of the bridge which is now made up of teeth 22–27. The new bridge is also made by CAD/CAM with subsequent ceramic addition and the prosthesis will be screwed on transepithelials. In this case we can see how implants placed 21 years ago have given us the versatility to adapt to new situations without the need to place new implants in the anterior sector, where the pontics for 11 and 21 give a better aesthetic result (Figs. 20–23). In addition, we have maintained the teeth in the anterior sector for a substantial time, even though they initially presented a poor prognosis, giving the patient adequate aesthetics and function and preserving her proprioception of the anterior guide for a long period of time (Figs. 20–23). In addition, we have maintained the anterior teeth for a substantial period of time, despite their initially poor prognosis, giving the patient adequate aesthetics and function and preserving her anterior guidance proprioception for many years.

Discussion

In the present clinical case, we have seen the evolution of a patient over time in the long term, where we have tried to preserve the life of the teeth as long as possible, seeking a minimally invasive approach, even when some of the teeth have failed during follow-up.^{21,22} Even when one of the teeth had to be extracted (21), it was decided to keep the vestibular portion attached to the alveolar bone in order to maintain the gingival architecture for as long as possible.²¹ We can also observe a change in the trend in terms of implant length.

Today, we opt for short, extra-short and reduced diameter implants in most of our restorations, but 30 years ago things were very different. In the early days of implant dentistry we worked with 2D imaging, so primary stability was sought with bicorticalisation with the length of the implant in the apex-coronal direction.²² This search for stability required the insertion of long implants to reach the two anchorage points.

Nowadays, with 3D imaging and short and extra-short implants of different diameters, corticalisation is sought at four points: mesial, distal, lingual and vestibular, in the contour of the implant with the surrounding cortex, making it unnecessary to

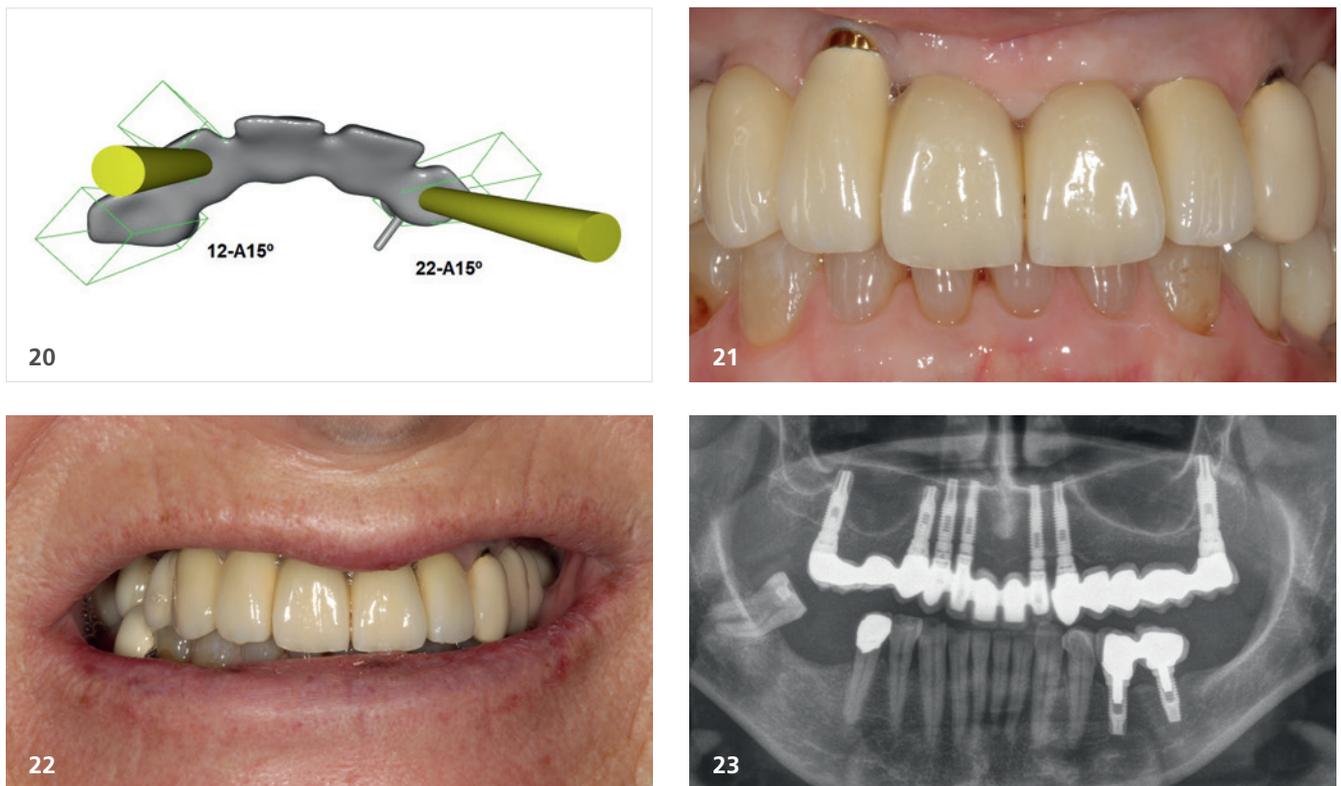


Fig. 20: CAD/CAM design of the new prosthetic structure for the replacement of the upper central incisors. **Figs. 21 & 22:** Intraoral aspect of the finished prosthesis. **Fig. 23:** Rehabilitation after 24 years of follow-up of the upper implants. Despite having undergone changes in the design, we can see how all the implants have remained stable. The two central incisors, with a doubtful prognosis in the first treatment plan, have been functional for 24 years, despite the patient's refusal to use an unloading splint to relieve the occlusal stress on them.

search for points involving longer implants.²⁴⁻²⁷ Today, we would have treated this case differently in terms of the length and diameter of the implants, although not in terms of preserving the teeth until the last moment, which is still our thinking 30 years later. Therefore, the importance of correct periodontal treatment and maintenance of low levels of inflammation is crucial for the correct evolution and preservation of the affected teeth in the long term.²⁸⁻³¹

In addition to what it means for a patient to become totally edentulous on a psychological level, managing to keep teeth, even if *a priori* they have a questionable prognosis in implant restorations, can be beneficial for maintaining the occlusal scheme, as well as proprioception, which with implant restorations is largely lost when there are no teeth present.³²⁻³⁵ The occlusal scheme provided by the teeth is an advantage in terms of load distribution, and when it comes to key teeth such as the incisors, the advantage is multiplied as they form part of the incisor guides that actively participate in protrusion movements, giving the patient a completely different sensation and proprioception to that which he/she would have with dental implants alone.^{36,37}

Control, adherence to treatment and behavioural habits are key to the long-term success of periodontal treatment.³⁷ In this case, the patient's maintenance and involvement as well as regular check-ups have been key to the result obtained.³⁸



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References



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A fully guided digital workflow

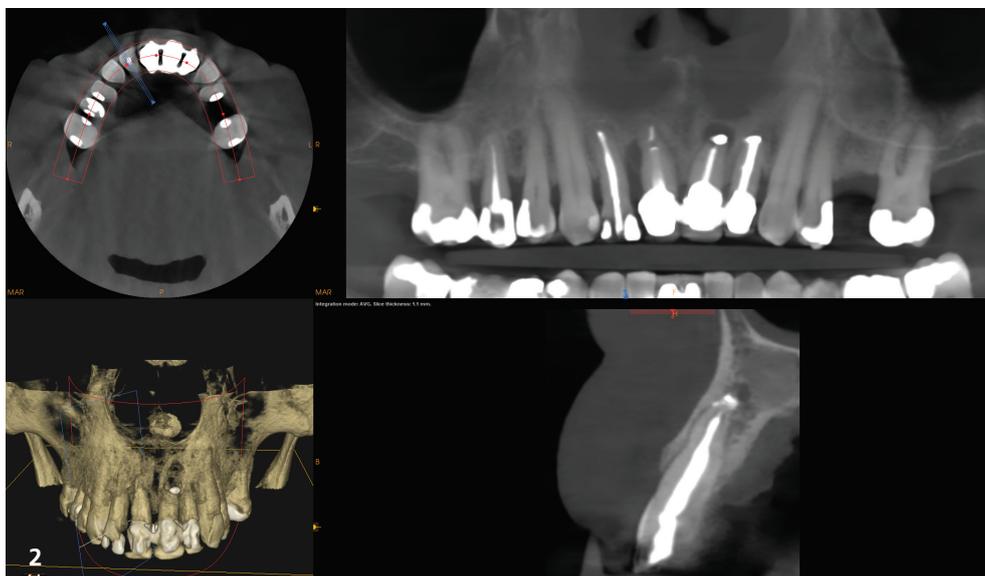
Predictable implant planning and placement

Dr Beat R. Kurt, Switzerland

A 62-year-old male patient was referred to my practice for implant planning and treatment in the maxillary anterior region. The teeth in the maxillary anterior region had all undergone endodontic therapy, and teeth #11-22 had received crowns owing to an accident that had occurred 30 years before. The patient reported pain and was conscious that tooth #21 was mobile (Figs. 1a & b).

The first step was to obtain a CBCT scan of the maxillary arch, which revealed periapical pathology in teeth #12-22 (Figs. 2 & 3). Furthermore, tooth #21 exhibited significant loss of buccal bone, and a small piece of amalgam was identified in the bone near tooth #21. After a thorough analysis of the radiographic findings, a treatment plan was established to extract teeth #12-22 and perform ridge preservation to reduce bone loss in the extraction sites.

As is routine protocol in my dental practice, we captured a digital impression of the maxillary and mandibular arches with the DEXIS IS 3800 intra-oral scanner (Figs. 4a-c), along with intra-oral photographs to document the initial oral condition. These digital models were used for the fabrication of the temporary removable prosthesis.



Figs. 1a & b: Initial situation. **Fig. 2:** Initial CBCT scan of the maxillary arch.

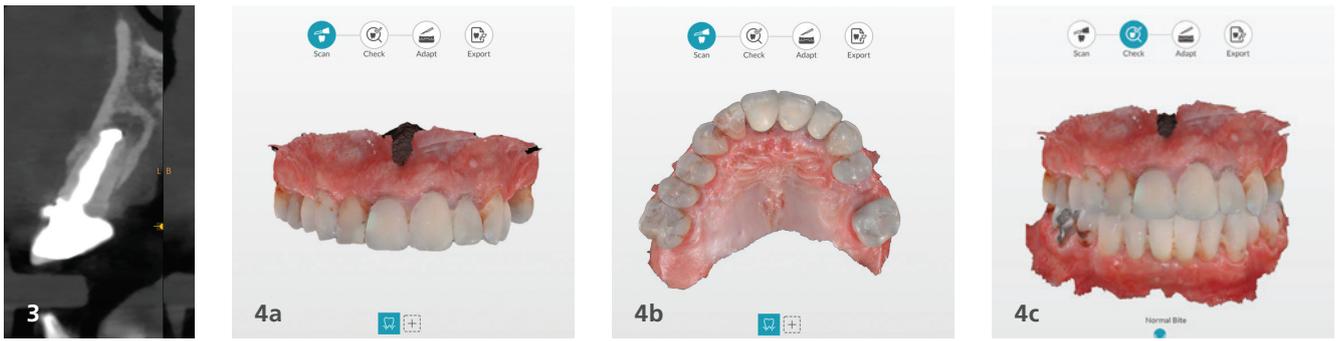
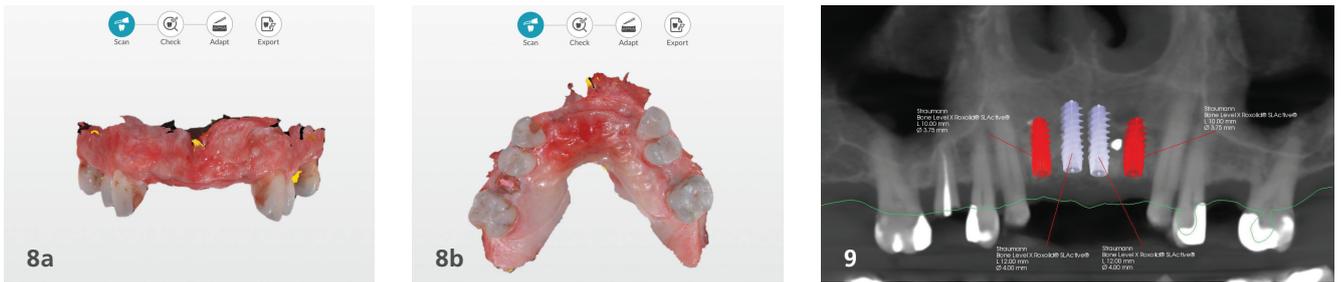


Fig. 3: Initial CBCT scan. Coronal view of tooth #21 showing buccal bone loss. Figs. 4a–c: Digital impressions of the initial situation.



Fig. 5: Intra-oral radiograph after the extractions and ridge preservation. Fig. 6: Intra-oral image with the temporary prosthesis in place. Fig. 7: CBCT scan of the maxillary anterior region after the extractions.



Figs. 8a & b: Digital impressions after the extractions. Fig. 9: Implant planning for all four positions.

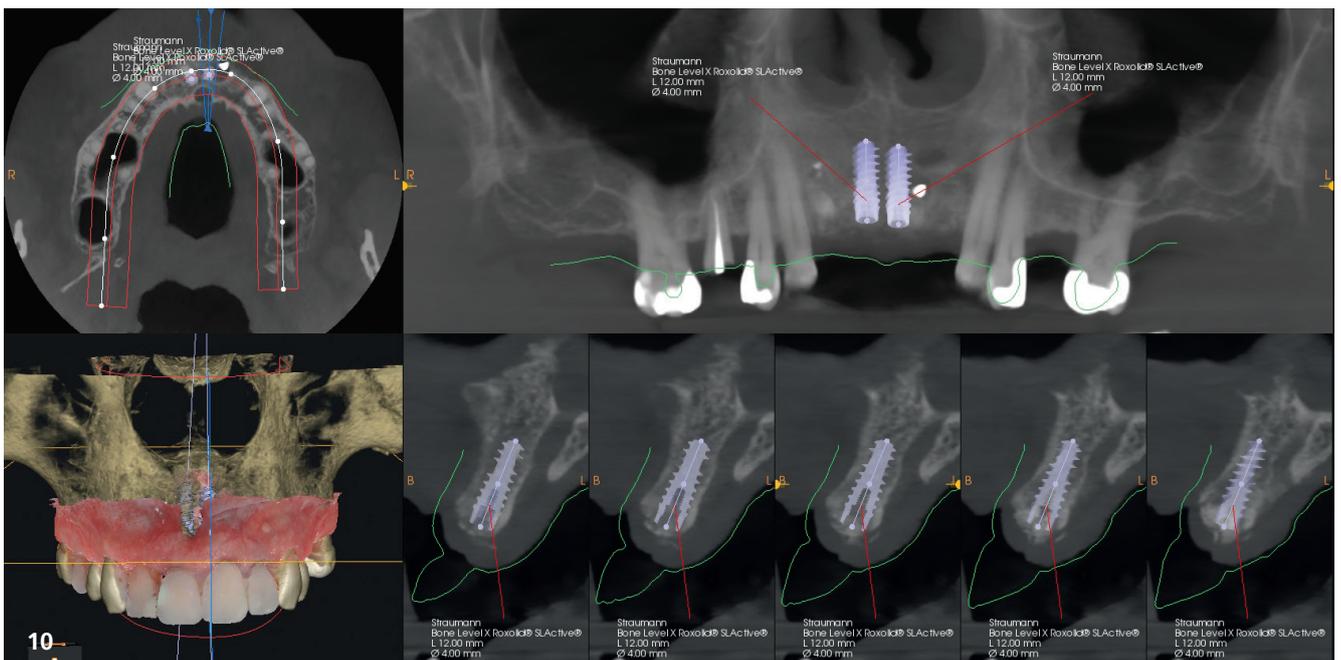
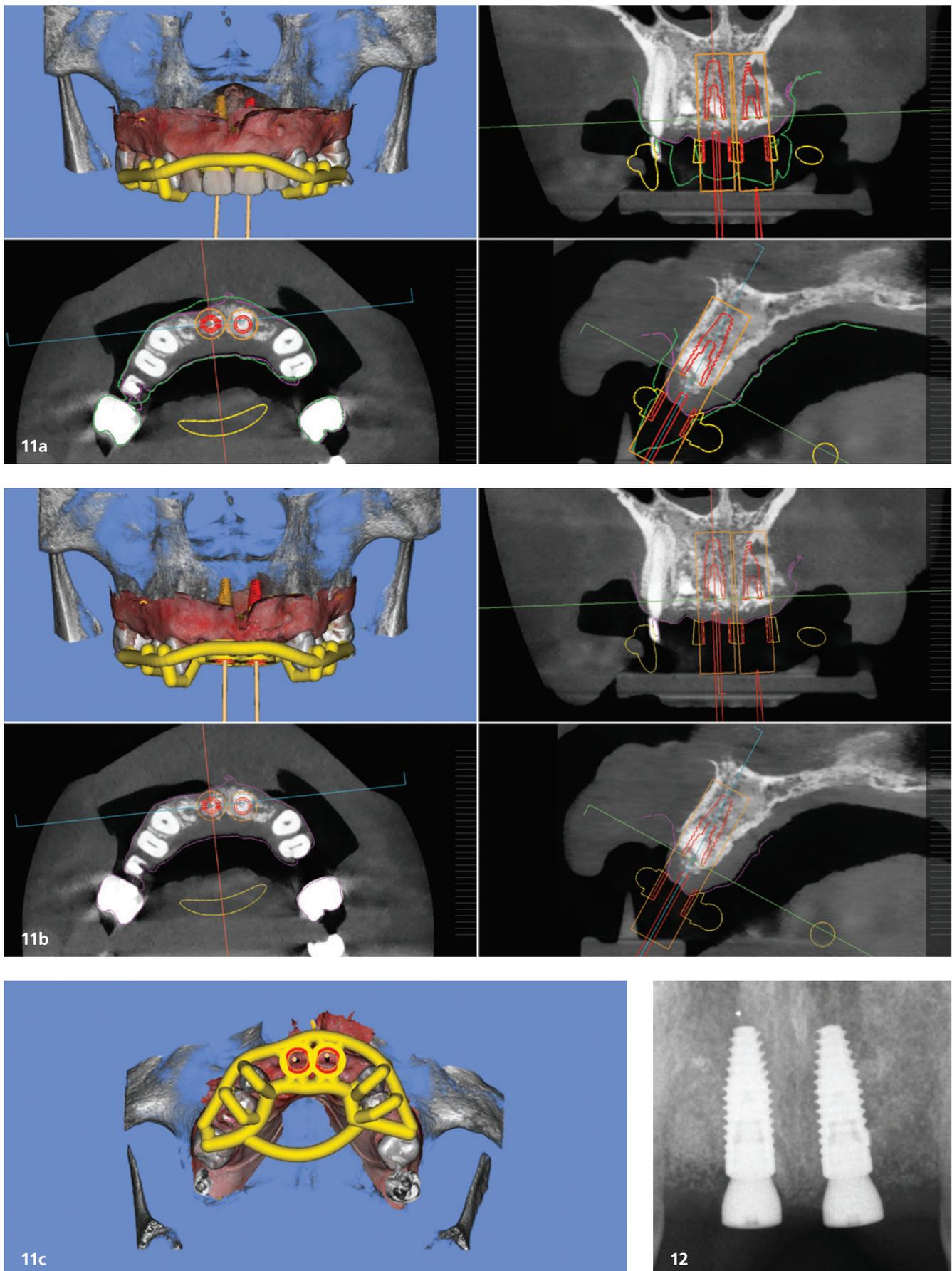
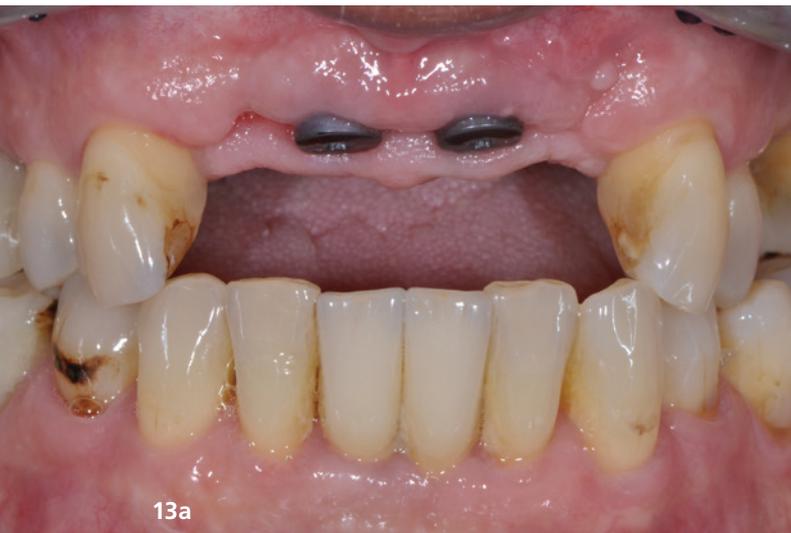


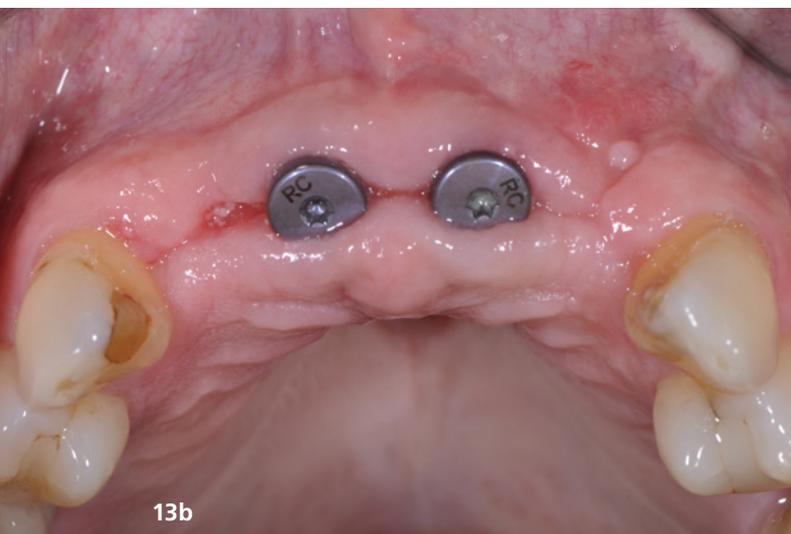
Fig. 10: Final planning for two implants with merged intra-oral scan and CBCT data.



Figs. 11a–c: Implant planning and guided surgical guide design. **Fig. 12:** Intra-oral radiograph of the implants after placement.



13a



13b

Figs. 13a & b: Intra-oral view of the implants with healing abutments after placement.

Upon receiving approval from the insurance company for the proposed treatment plan, all four teeth were extracted. After the extractions, the extraction sockets were meticulously debrided with EthOss degranulation burs and filled with EthOss grafting material to promote primary closure and healing of the wound (Fig. 5).

To preserve both the aesthetic and functional aspects for the patient during the time between extraction of the teeth and the new bridgework, a temporary removable prosthesis was fabricated (Fig. 6). The patient's general dentist has also been working fully digitally for years, and the temporary prosthesis was made from a digital impression and printed models.

Two months after the extractions, we obtained a CBCT scan of the maxilla (Fig. 7) and captured digital impressions using our DEXIS IS 3800 intra-oral scanner (Fig. 8). These scans were essential for commencing the implant planning process and creating the surgical guide.

During the implant planning phase, we created a preliminary plan using 3D imaging software with a prosthetically driven implant planning approach (Figs. 9 & 10), and the plan was exported into surgical guide planning software for final planning and construction of the surgical drilling guide (Figs. 11a–c). The implants were planned in all four positions with the object of identifying the two most optimal and accessible sites for the placement of two implants and the corresponding bridge restoration.

After completion of the planning and drilling reconstruction, the surgical guide was 3D-printed with a Stratasys printer using MED610 resin (Stratasys). The two implants (4.1 x 12.0 mm Straumann Bone Level Tapered, Regular CrossFit, SLActive, Roxolid) were then placed utilising the Straumann guided surgery kit for precise guidance. The remaining piece of amalgam in the bone of tooth #21 was carefully removed—only a small piece in the gingiva remained (Fig. 12). The buccal bone was again thickened with EthOss, and the wound was closed with a semi-submerged technique, facilitating proper healing and integration of the implants (Figs. 13a & b).

After a ten-week osseointegration and healing period, the patient returned for a final assessment of the implant stability using the implant stability quotient measurement. The subsequent step will involve the completion of the final prosthesis, which will be performed by the patient's general dentist. To create the screw-retained monolithic bridge, a digital impression will be obtained using an intra-oral scanner, and the dental technician will also work fully digitally—as far as possible—for the final prosthesis.



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Findings of the 7th ITI Consensus Conference published and available

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Consensus-based clinical recommendations

At its 7th ITI Consensus Conference, the ITI gathered together more than 90 professionals from all over the world to review the current state of evidence in five areas of topical interest in implant dentistry: surgical techniques, technology, oral medicine, patient benefits as well as implant placement and loading protocols. Based on 13 previously submitted review papers, the participants of the three-day conference prepared consensus statements, clinical recommendations, and recommendations for future research in the following five areas:

- The role of bone dimensions and soft-tissue augmentation on procedures on the stability of clinical, radiographic, and patient-reported outcomes of implant treatment
- Technological developments in implant prosthetics
- Materials and antiresorptive drug-associated outcomes in implant dentistry
- Patient benefits following implant treatment in partially and fully edentulous patients
- Implant placement and loading protocols

“Implants are now a common occurrence in daily practice and consensus-based clinical recommendations are a vital component in an evidence-based approach to implant therapy. Our statements and clinical recommendations will guide the implant



International Team for Implantology

dentistry community for the coming five years,” said ITI President Charlotte Stilwell. “Open access to all the findings of our Consensus Conferences ensures that as broad an audience as possible can apply the latest evidence-based treatment approaches in their daily practice.”

The findings of the 7th ITI Consensus Conference held in Lisbon in May 2023 are now available. Published as a free open-access online supplement to *Clinical Oral Implants Research*, the review papers and reports can be accessed and downloaded from the ITI website as well as the Wiley Online Library.

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ITI International Team for Implantology

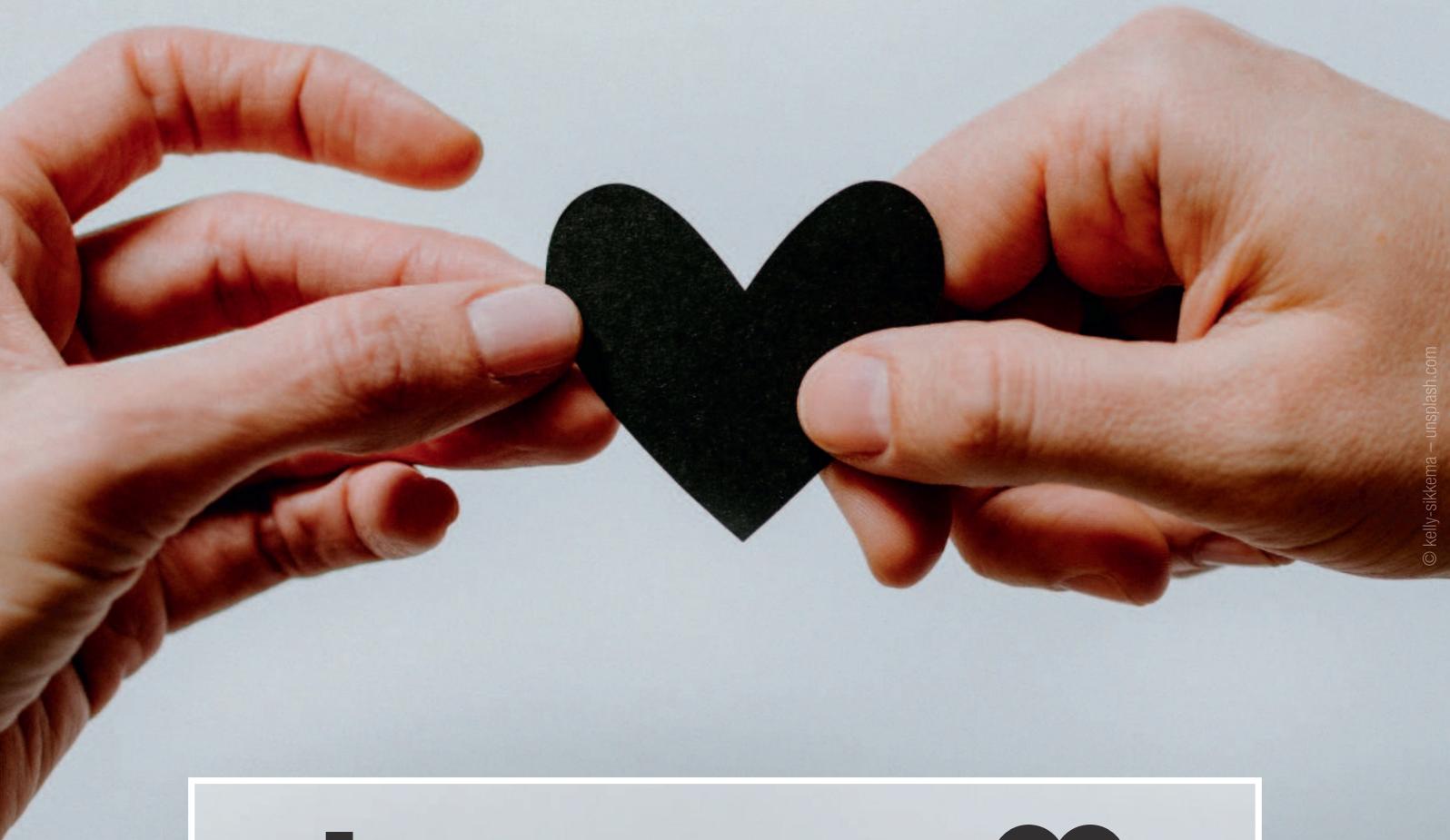
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Long-term study

Implant dentistry without peri-implantitis

Interview with Marco Waldner, CEO Patent™ Dental Implant System

No peri-implantitis and only 2.8 per cent of peri-mucositis after nine years—in a recent independent long-term study, the two-piece Patent™ Dental Implant System has challenged established definitions of implant success.¹ In this interview, Patent™ CEO Marco Waldner discusses the study results and explains how such an outcome is possible.

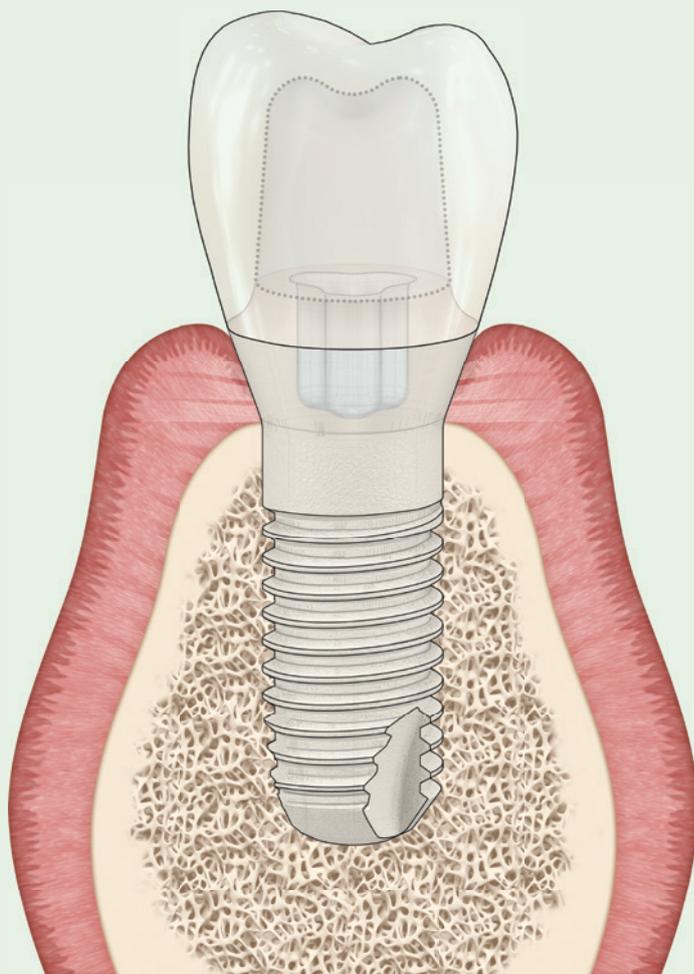


Fig. 1: The two-piece Patent™ Dental Implant System is able to minimise the risk of chronic tissue inflammation by incorporating a combination of three key elements: it promotes strong soft-tissue adhesion to counteract bacterial invasion, it does not have a microgap at the critical crestal bone level, and it features a prosthetic concept which is long-term stable and entirely sealed.

No peri-implantitis around two-piece Patent™ Implants after nine years of function—how is such an outcome possible?

Patent™ achieves this remarkable result through a combination of three key elements: First, it promotes strong soft-tissue adhesion, which creates a biological interface that counteracts bacterial invasion. Secondly, it does not have a microgap at bone level, which would act as a breeding harbour for bacteria. Thirdly, it relies on a prosthetic concept which is long-term stable and entirely sealed. This combination produced the results seen in the nine-year study at the University of Düsseldorf.

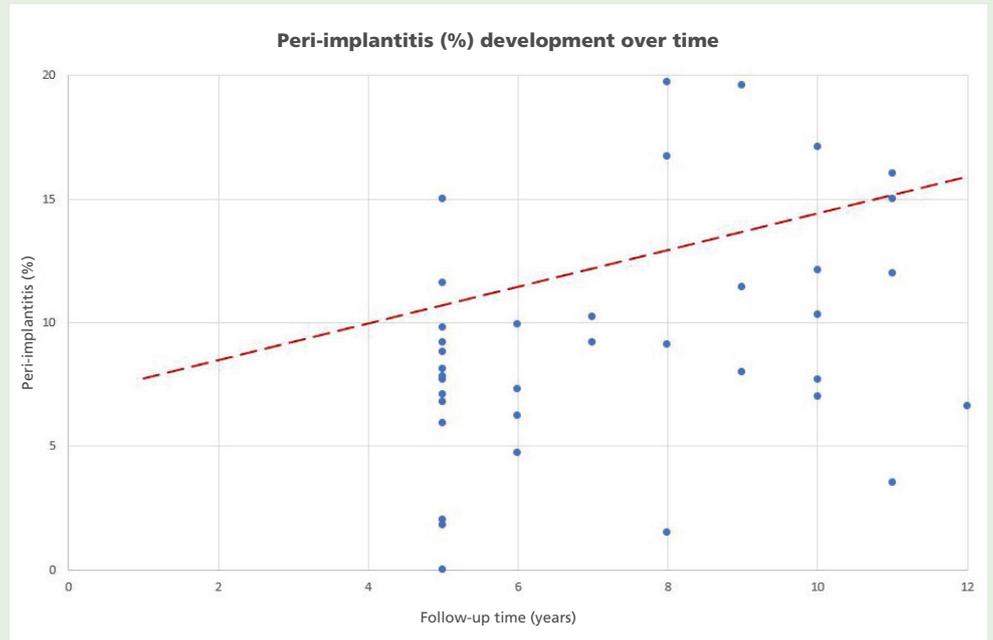
Regarding the strong soft-tissue adhesion you mentioned, could you explain how this is achieved?

The Patent™ Dental Implant's transgingival part is mucophilic thanks to its specialised surface topography and establishes intimate and strong contact with the soft tissue. The resulting soft-tissue seal acts as an ideal defense barrier against pathogenic bacteria.

How does the Patent™ System work?

The system integrates a combination of various elements crucial to sustained tissue health and performance: a unique transmucosal part, which facilitates strong

Fig. 2: An analysis of 53 studies suggests that peri-implantitis increases with the time the respective implants have been in function.²⁻⁵⁴ Blue = documented peri-implantitis (%) in the evaluated studies; red = trend line of the collected data.



soft-tissue adhesion, the absence of a microgap at the critical crestal bone level, and an endosseous implant body designed for atraumatic insertion, which facilitates uninterrupted healing cascades. The Patent™ Concept also involves an innovative prosthetic approach: serving as the abutment, the Patent™ Glass Fiber Post attenuates the masticatory forces thanks to its dentine-like modulus of elasticity, and transfers them to the implant and bone in a favourable way. This solution perfectly complements the material properties of the entire system, ensuring long-term stability, sealing against bacteria, and offering complete reversibility.

In a peer-reviewed long-term study, Patent™ demonstrated the absence of peri-implantitis and very low peri-mucositis rates. Was this surprising?

Not at all. It validates what we observe clinically today with integrated Patent™ Implants and underscores the reason why this system was developed 20 years ago—a fact now substantiated by robust scientific evidence.

What is the mission of your company?

In an environment where peri-implantitis rates are continuously rising, as scientific review articles and discussions at nearly every dental congress worldwide suggest, we offer a tooth replacement solution that effectively opposes this alarming trend.

Do you believe that with your implant system, the prevalence of peri-implantitis can be reduced in the long term?

Absolutely. It's not just our opinion as an implant manufacturer. Another long-term study, which was recently published in *JOMI*, also found no peri-implantitis around two-piece Patent™ Dental—even after 12 years of function.⁵⁵ The message to practitioners is clear: Peri-implantitis can be avoided.

References



Patent™ CEO Marco Waldner on the results of the independent long-term study at the Heinrich Heine University Düsseldorf in Germany:¹ "With Patent™, we are pursuing a zero peri-implantitis strategy."

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Global Ambassadors' Summit 2023 in Berlin

A view to the future of contaminant-free dental implants

The CleanImplant Foundation, a non-profit global initiative for a scientific-based view on the implant market representing numerous dentists as members and more than 150,000 social media followers, invited its international scientific board members and CleanImplant ambassadors to Berlin. Twenty-seven highly esteemed professionals from 15 countries, all experts in the field of implantology, met for the third Ambassadors' Summit at the Adlon Hotel to lend their experience and expertise to the furtherance of the organisation's goals and ideals to raise awareness for the need of flawless implant surfaces for a cleaner and safer implantology.



CleanImplant Summit 2023 at Berlin's Brandenburg Gate with 27 ambassadors and scientific board members from 15 countries, united in support of the non-profit foundation in establishing the cleanliness of implant surfaces as a traceable, clinically relevant quality feature for implants worldwide.

In his lecture, Prof. Dr Patrick R. Schmidlin, University of Zurich, presented possible methods to analyse cytotoxicity, inflammatory response, and osteoblast viability as biological sequelae of factory-related contaminants on dental implants. Dr Birgit Hagenhoff, Tascon GmbH, visiting professor at University Münster, talked about how to provide precise elemental and molecular information on the composition of

help cover the costs of events, and it is often observed that influence is exerted on topics and content. Our way is different," explained the founder and head of research, Dr Duddeck, "The foundation continues to attract clinicians seeking information on the contaminant content of the implant systems they use. We are happy to give them insights into our research assessments."



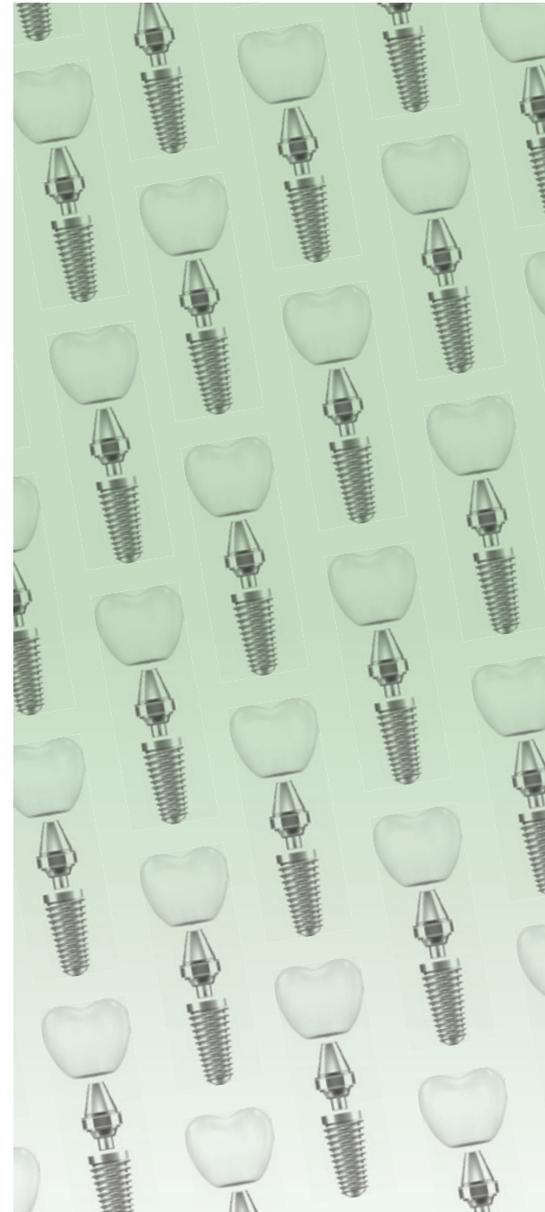
Dr Dirk U. Duddeck, founder and head of research of the global quality initiative, explained the "CleanImplant 2.0" roadmap for the coming years.

particulate and thin-layered contaminants by means of Time-of-Flight Secondary Ion Mass Spectrometry (ToF-SIMS). Dr Miguel Stanley, CleanImplant ambassador and founder of White Clinic Lisbon, invited in his lecture to discuss "the importance of the mouth in relationship to our systemic health," followed by Dr Dirk U. Duddeck, who reported and updated about the CleanImplant roadmap 2.0.

The Summit was funded solely by the CleanImplant Foundation, consistent with its mandate of transparency and unbiased, unfiltered scientific investigation. "As a non-profit foundation, we are obliged to work completely independently. Other congresses rely on industry partners to

The Summit took place on the day prior to the 30th Annual Scientific Meeting of the European Association for Osseointegration. In cooperation with Thermo Fisher Scientific, CleanImplant had a scanning electron microscope specially installed at a booth in the parallel exhibition. Manufacturers and clinicians were given on-site demonstrations of the analysis protocol for determining surface contamination on implants.

Dentists brought implants from their practices to be examined directly, while CleanImplant provided information on those implant systems that have already been awarded the "Trusted Quality" seal for residue-free surfaces.



CleanImplant
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3,000 dentists from numerous countries followed the invitation to the NucleOSS Congress 2023 in Antalya.

A triumph of innovation and collaboration in dental implantology

NucleOSS Congress in Antalya

The NucleOSS Congress in Antalya opened with a poignant and touching introduction by CEO Salih Şanlı, a moment marked by great pride and gratitude. In front of a captivated audience of 3,000 participants, Salih Şanlı spoke about the challenges he has faced throughout the company's history and expressed himself very emotionally. In his stirring speech, he not only acknowledged the hurdles he had overcome, but also expressed his deep gratitude for the unwavering support of his family, friends and the dedicated team and employees who had contributed to NucleOSS' remarkable successes.

The NucleOSS Congress served as a comprehensive platform that focused on the innovative contributions of Turkey's largest dental implant manufacturer and showcased the customised SLH implant for the European market. The three-day event offered participants a broad spectrum of knowledge with exciting lectures, practical demonstrations and a remarkable certificate presentation by Dr Dirk Duddeck from the CleanImplant Foundation, Berlin.

Innovations from Turkey's leading dental implant manufacturer

The congress began with an exciting presentation of the latest innovations and findings from Turkey's leading dental implant manufacturer. Attendees were able to gain an insight into breakthrough technologies, materials and methods that underline the company's commitment to pushing the boundaries of dentistry. The presentations set the tone for an event that promised to be a beacon of innovation in the field.

"It is with deep gratitude that I express my thanks to our outstanding team for their tireless commitment and team spirit that has made the success and development of the T6 and SLH DC implant systems possible. Their dedication has not only transformed dental implantology, but also paved the way for a future where innovation and excellence come together in the service of patient care."



Salih Şanlı, CEO of NucleOSS Europe GmbH gave a touching speech.



Fig. 1: Surface cleanliness guaranteed—certified by the CleanImplant Foundation, presented by Dr Dirk Duddeck to Salih Şanlı, CEO of NucleOSS Europe GmbH. **Fig. 2:** From left to right: Dr Dirk Duddeck, Prof. Ebru Karabecce Çal, Salih Şanlı, Dr Kübel Özkut, Dr Ugur Ergin.

Launch of the SLH implant for the European market

A key moment of the congress was the unveiling of the SLH-DC implant, which has been specially developed for the European market. Participants were enthusiastic about the presentations outlining the unique features and benefits of the SLH system. The focus on customised solutions demonstrated a forward-thinking approach to meet the specific needs of European practitioners and was met with interest and applause.

Demonstrations on the user-friendliness of T6 and SLH systems

Practical orientation took center stage as numerous speakers from the scientific and practical fields demonstrated the seamless integration of the T6 and SLH systems. Clinicians presented the usability of these systems and emphasised their ease of use. The case studies presented by these experts and their practical experiences were of great value to the participants and enabled them to gain a deeper understanding of the applications of these modern technologies.

Clinical expertise put to the test

The congress offered clinicians the opportunity to present their remarkable cases and share practical experiences. In impressive presentations, experts shared their success stories and challenges in clinical practice, creating a forum for shared learning. The dynamic exchange of ideas made the congress a meeting place for clinical excellence and innovative approaches.

Certificate for exceptional surface cleanliness

A special award was the awarding for NucleOSS of a certificate for exceptional surface cleanliness by Dr Dirk Duddeck from the CleanImplant Foundation, Berlin. This distinction underlined the company's commitment to maintaining the highest hygiene and quality standards in dental implantology. The award added a prestigious touch to the congress and underlined the importance of meticulous cleanliness in implant procedures.

The NucleOSS Congress in Antalya was an exceptional gathering of dental professionals and provided a comprehensive insight into the latest developments in dental implantology. From the innovations presented by Turkey's leading implant manufacturer to the customised SLH DC system, the congress was characterised by the spirit of progress. The interplay of practical demonstrations, presentations of clinical achievements and the awarding of the prestigious certificate made this event a firework of collaboration, communication, and interactivity. Participants left the congress after three wonderful days with a vast amount of knowledge and a new sense of excitement for the future of dental implantology.

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OSSTEM IMPLANT's global symposiums in 2024

Advancing dentistry

Prepare for a transformative experience in the realm of dentistry as OSSTEM IMPLANT CO., LTD. sets the stage for two pivotal events in 2024—the OSSTEM World Meeting (OWM) and the OSSTEM-Hiossen Meeting in Europe (OHME). These gatherings are not merely symposiums; they represent a unique convergence of expertise, innovation, and global collaboration, tailored for dental professionals across the spectrum.

OSSTEM World Meeting (OWM): Pioneering digital dentistry

Scheduled for 27 and 28 April 2024, in Seoul, Korea the OSSTEM World Meeting holds special significance as it unfolds in the very heart of OSSTEM IMPLANT's headquarters. The focal theme, "Digital Dentistry", invites participants to delve into the forefront of technological innovation. OWM will feature four distinguished European dentists, contributing as a speaker, course directors for hands-on workshops, and a moderator—ensuring a rich exchange of insights.

OSSTEM-Hiossen Meeting in Europe (OHME): Elevating global collaboration

Taking place on 22 and 23 November 2024, in London, UK OHME is poised to

surpass its 2022 counterpart in Rome, Italy. Anticipating an attendance of 1,000 dentists, OHME promises a dynamic programme, including workshops tailored for young professionals, an insightful symposium, and a gala dinner fostering networking opportunities.

Why attend? Shaping the future of dentistry together

Beyond the conventional symposium setting, OWM and OHME are platforms for dentists to partake in a global movement, shaping the trajectory of our noble profession. The events promise a balance of theoretical knowledge and hands-on experiences, providing a comprehensive approach to professional development.

Consider this an invitation not just to an event but to a journey—a journey that

explores the synergy of tradition and innovation, expertise and excitement. OWM and OHME are where dentistry meets the future, offering a chance to be part of a global community dedicated to advancing the practice.

Mark your calendars, prepare for an enriching experience, and join us in Seoul and London as we collectively shape the future of dentistry. Your practice, and the future of the profession, await.

For further details, kindly reach out to our team.



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2024 
OSSTEM WORLD MEETING
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Osstem Implant HQ & Coex Grand Ballroom



Cutting-edge solutions to drive innovation in implant dentistry

Implant Solutions World Summit 2024 in Miami

Following the resounding success of this year's conference in Athens, Greece the Implant Solutions World Summit 2024 taking place from 13 to 15 June 2024, in Miami, Florida, United States promises to be a remarkable opportunity for networking, knowledge sharing, and building collaborations within the community of implant dentistry professionals.

With its commitment to advancing oral health and delivering innovative solutions, Dentsply Sirona is curating an exceptional programme that features an array of keynote presentations, engaging panel discussions, and interactive workshops. Attendees can look forward to exploring the latest trends, research, and breakthroughs in the field of implant dentistry. Gaining valuable insights to elevate their practices, all while networking with their industry peers.

"It is an honour to host the Implant Solutions World Summit again in 2024," said Tony Susino, Group Vice President of Im-

plant and Prosthetic Solutions at Dentsply Sirona. "This event reflects our commitment to advancing implant dentistry through education, innovation, and collaboration. We are excited to bring together experts from around the world to share their expertise and inspire the future of implant and prosthetic innovations."

Unparalleled insights into the ever-evolving world of dental implant solutions

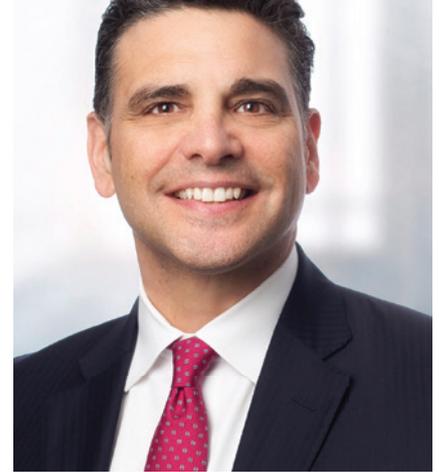
The Implant Solutions World Summit programme is being developed together



Dr Malene Hallund,
Oral & Maxillofacial Surgeon



Lyndon Cooper,
Dean of VCU School of Dentistry



Tony Susino, Group Vice President of Implant
and Prosthetic Solutions at Dentsply Sirona

with the Scientific Chairs Dean Lyndon Cooper and Dr Malene Hallund. With their extensive experience and exceptional contributions to the field, Dean Cooper and Dr Hallund will lend their expertise to ensure that the scientific programme delivers unparalleled educational content and an enriching experience for all attendees.

"This event serves as a platform for professionals dedicated to implant dentistry to connect, exchange ideas, and lead with innovations," said Lyndon Cooper, Scientific Chair of the Implant Solutions World Summit and Dean of VCU School of Dentistry. "We are looking forward to a programme that will inspire and challenge attendees, pushing the boundaries of what is possible in this rapidly evolving field. I believe it will provide transformative educational experience for all participants."

What to expect at the Implant Solutions World Summit 2024

Designed to empower dental professionals and foster collaboration, the agenda will feature a dynamic programme consisting of plenary sessions, master classes, and featuring inspirational speakers from all over the world.

Leading experts will share their knowledge, insights, and real-world case studies, providing attendees with valuable practical information that can be directly applied in their practices and encourage innovative thinking.

In addition to the plenary sessions, the conference will offer a diverse range of parallel sessions, each delving deeper into specific areas of interest. Attendees will have the opportunity to customise their conference experience to meet their unique professional development goals.

Cutting-edge solutions to drive innovation in implant dentistry

Dentsply Sirona constantly strives to provide dental professionals with the most advanced and comprehensive products and solutions. The latest additions to the implant and prosthetic portfolio will further enhance confidence in the delivery of patient care, with an aim to improve oral health outcomes and increased treatment effectiveness.

Attendees at the Implant Solutions World Summit 2024 will also be able to visit an interactive exhibition to learn more about Dentsply Sirona's products, solutions, and treatment workflows, including:

- Dentsply Sirona's EV Implant Family
- OSSIX® regenerative solutions
- DS Signature Workflows
- The cloud-based DS Core® platform

Whether attendees are looking to enhance their skills, gain new insights, or simply connect with like-minded professionals, the conference will undoubtedly provide a valuable and enriching experience.

Early-bird registration for the Implant Solutions World Summit is available until 31 January 2024.

To find out more and to register for the event, visit: <https://dentsplysirona.com/worldsummit>

Read more
and register!



Dentsply Sirona



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DEXIS IOS Solutions expands its portfolio

Bringing new end-to-end digital workflows to dental practitioners

DEXIS IOS Solutions is pleased to announce the expansion of its portfolio and ecosystem through new digital end-to-end workflows. The new and enhanced workflows are designed to align with the objective of DEXIS IOS Solutions to support dental practitioners in accelerating their workflow, resulting in increased productivity and improved patient experience. To reinforce this objective, DEXIS IOS Solutions is focused on three crucial principles: ease of use, productivity and practice expansion. Practitioners can now easily expand their range of services through aligner and denture treatments as well as in-house printing, offering their patients personalised and innovative care.

The new prescriptive workflows are being developed concurrently with ongoing innovations in the broader Envista portfolio, beginning with a new orthodontic workflow in combination with Ormco Spark that enables practices to easily add aligner therapy to their treatment options. A new patient engagement application within IS ScanFlow enables practitioners to show patients a simulated outcome of their orthodontic treatment, enabling them to visualise the treatment outcome chairside. Integrated digital transfer of the datasets to Ormco Spark streamlines the process, enabling patients to promptly initiate treatment.

"By further integrating DEXIS IOS Solutions into the broader Envista offerings, we are providing dentists with the solutions they need to provide exceptional and personalised care for their patients. We are committed to helping dental practitioners improve patient outcomes and grow their practice through digital innovation," said Amir Aghdaei, president and CEO at Envista Holdings Corporation.

DEXIS IOS Solutions has also collaborated with SprintRay 3D-printing ecosystem for definitive ceramic crowns,

to simplify in-office printing and make same-day restorations a reality. SprintRay Cloud Design leverages artificial intelligence (AI) to streamline the design of crowns, appliances, and surgical guides within minutes. Practitioners can scan the patient with any DEXIS intra-oral scanner and upload the dataset directly from either DTX Studio Clinic or IS ScanFlow to the SprintRay portal, eliminating the need to manually select files, enter redundant patient information and design the restoration or appliance.

"By combining DEXIS intra-oral scanners with SprintRay's ecosystem, dental practitioners can offer same-day delivery of crowns and appliances, increasing their productivity by completing more procedures in a shorter amount of time," said Aghdaei. "Offering same-day restorations can give practitioners a distinct competitive advantage, as patients often prefer the convenience of single-visit appointments, enabling dental practitioners to expand their services and attract patients seeking fast and convenient dental treatment."

To further enhance the capabilities of the DEXIS IOS Solutions portfolio, IS ScanFlow v1.0.9 now includes a denture scanning workflow that streamlines the treatment planning process by combining the capture of the bite registration and prosthetic along with the edentulous and denture scans, eliminating the





manual process of matching and aligning data sets by the lab. The software also provides embedded scan tips to optimise and simplify the edentulous data acquisition.

In addition, DEXIS IOS Solutions is introducing the IS 3800 wired scanner, which offers the same high-speed performance as the award-winning IS 3800W. The IS 3800 wired scanner is highly ergonomic and weighs just 190g without the cable, making it one of the lightest intra-oral scanners available. It complements the IS 3800W wireless scanner, which weighs only 240g, and is considered the lightest wireless intra-oral scanner in the industry.

The latest DEXIS IOS Solutions innovations provide dental practitioners with access to intuitive technology that simplifies and streamlines treatment, thereby boosting productivity. With an extended ecosystem and diverse range of new treatment options, practitioners can partner with Envista for access to prescriptive end-to-end workflows or opt for more open workflows, which enable collaboration with their preferred lab or manufacturer. The new workflows further align with the Envista intention to digitise, personalise, and democratise dental care, enabling productivity and predictability of dental practitioners to provide optimal patient treatment.



Contact address

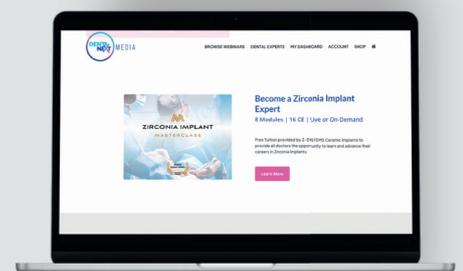
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SLH—The connection between you and your patients

The DC-BONE-LEVEL implant features modern and aesthetic design details and offers a safe and comfortable surgical experience for the dentist and patient. A wide range of prosthetic abutment options helps to give patients a radiant smile. In addition, the implant gives patients self-confidence through its intelligent and strong design. With extensive abutment options, a convenient application kit and a registered clean surface, the DC-BONE-LEVEL implant is more than outstanding. The groundbreaking aspect of the DC-BONE-LEVEL implant is that it balances quality and price. The

implant has been carefully developed to increase comfort for clinicians and patients with its aesthetic design and high strength. SLH is a new dental implant system with the aim of giving patients back their bright smile and stands for "Smart Design, Leading System, Healthy Solution". By developing the highest level of biointegrity and excellent surface cleanliness, it is possible to create the highest possible standard for the user. Many years of research and development have resulted in a new implant system that enables the practitioner to achieve the best possible results.

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ilar studies. An independent long-term study over nine years found no implant fractures for any of the two-piece Patent™ implants investigated, as well as healthy and aesthetic soft tissue, stable marginal bone levels and no peri-implantitis. Patent™ proves that long-term implant success is a reality. Learn more at www.mypatent.com.

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**Zircon Medical
Management AG**
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Dentalpoint

Zeramex XT—Two years follow-up proves success of the two-piece system

Zirconia, the dental material of the future, the two-piece design of the implant, the unique carbon fibre reinforced implant-abutment connection, the conventional and digital workflow as well as the outstanding clinical results are the pillars of success of the Swiss ceramic implant system Zeramex XT.

The heart of the implant-abutment connection is the VICARBO screw made of carbon re-inforced high-performance PEEK. The principle: the implant made of zirconium dioxide absorbs the compressive forces, while the VICARBO screw counteracts tensile and bending forces. The design of the external thread ensures high primary stability and the microrough

and hydrophilic Zerafil surface demonstrates convincing osseointegration with a success rate of 98%.

"...Astounding bone structure after remodel revealing hard cortical bone with absolutely no bone loss from around the implant (Zeramex XT 3.5 mm placed in the anterior region) ... The gum response was amazing..." points out Dr Joseph Sarkissian who has been using Zeramex XT for several years.

Studies confirm that two-piece zirconia implants show a similar bone integration compared to the titanium implants or demonstrate a significantly reduced inflammation and bone loss compared to the titanium implants.

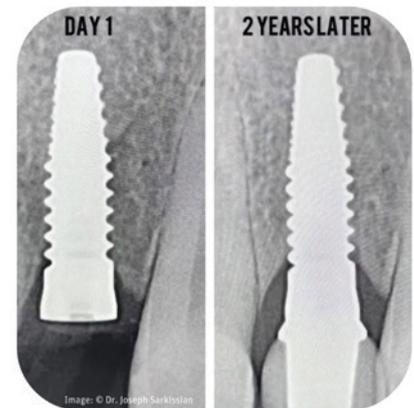


Image: © Dr. Joseph Sarkissian

Contact address

Dentalpoint AG

Switzerland

www.zeramex.com

ZiBone

ZiBone zirconia medical device



With our state-of-the-art products, we aim to equip dentists with the tools they need to create beautiful, natural-looking smiles for their patients. We will delve into the key features and benefits of our products, and how they can enhance your practice and patient outcomes.

ZiBone zirconia implants represent the pinnacle of dental implant technology. Crafted with precision and passion, our implants boast superior biocompatibility, promoting seamless integration with the jawbone. The aesthetic appeal of zirconia perfectly complements the natural dentition, creating a lifelike appearance that leaves patients with renewed confidence in their smiles. ZiBone zirconia implants are engineered to offer outstanding mechanical properties, en-

suring lasting durability and stability, setting new standards for implant success rates.

- **Biocompatibility:** Zirconia's biocompatibility reduces the risk of allergic reactions and inflammation, fostering a healthy healing process.
- **Optimal osseointegration:** The advanced design of ZiBone zirconia implants with Ra 0.6 µm surface treatment, facilitates reliable osseointegration, promoting stable and successful implant placements.
- **Versatility:** Our products cater to a wide range of dental cases, enabling you to provide personalised solutions for each patient's unique needs. Implant dimension 3.6/4.0/5.0 with different length 8/10/11.5/13/14.5.

Join us in revolutionising dental implantology— together, we create smiles that inspire confidence!

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TECHNOLOGY CO., LTD.**

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Dentsply Sirona

Introducing DS OmniTaper Implant System

The DS OmniTaper Implant System is an innovative solution that combines the proven technologies of Dentsply Sirona's EV Implant Family with new features that deliver efficiency and versatility. Unique to the implant system is an intuitive drilling protocol for reduced chair time and a pre-mounted TempBase for immediate restorations and efficient workflows.

The DS OmniTaper Implant System is the newest member of the EV Implant Family, alongside Astra Tech Implant System and DS PrimeTaper Implant System. The EV Implant Family offers surgical flexibility to cover virtually every indication. All three implant systems deliver biologically driven implant designs for natural aesthetics and

lasting bone care, have one connection for restorative clarity, and are optimised for a seamless fit with digital dentistry workflows.

Like the rest of the EV Implant Family, the DS OmniTaper Implant System features the Osseo-Speed implant surface and the conical EV connection that provides access to the harmonised and comprehensive EV prosthetic portfolio for restorative flexibility and immediate chairside solutions.

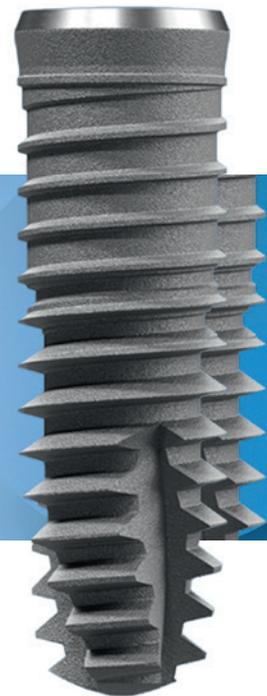
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Fotona

Advancing dental laser technology

Fotona's LightWalker is a revolutionary dental laser system, incorporating state-of-the-art technologies that redefine the industry. With 20 W of power, 2 wavelengths, 5 pulse durations, and 4 special pulse modalities, LightWalker offers dentists an unparalleled range of clinical applications.

The precision and improved ablation efficacy of LightWalker's patented QSP mode make it invaluable for hard-tissue treatments, debonding veneers, orthodontic brackets, dental aesthetics, and surgery, addressing various challenges with a single solution.

Practitioners are thrilled by the efficacy of the LightWalker's SWEEPS mode in endodontic cases, witnessing the power of bubbles in cleaning narrow root canal spaces, removing smear layer, debris, and biofilm. Moreover, SWEEPS extends its benefits beyond direct laser therapy, enabling non-invasive, non-surgical removal of biofilm and calculus in periodontal and peri-implant therapy.

The laser's innovative SMOOTH mode expands the horizons of dental practices, allowing them to offer Fotona's cutting-edge aesthetic and anti-snoring laser therapies. With treatments like SmoothEye®, LightWalker 3D®, LipLase®, and NightLase®, dental practices can attract new patients, fulfilling patient expectations with a wide range of non-invasive options that can enhance revenue and profitability.

Embrace the future of dental laser technology with Fotona's LightWalker, empowering dentists with unparalleled versatility for enhanced patient care.

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Fotona d.o.o., Sweden

+386 1 5009100

www.fotona.com



Straumann

Ceramic Healing Abutments: the first step to harmonious soft-tissue healing



These healing abutments for Straumann bone level implants enable aesthetics from the day of surgery and offer favourable conditions for soft-tissue attachment, thereby supporting a healthy peri-implant environment. Their well-proven zirconia material helps surgeons and prosthodontists who are looking for less plaque attachment (smoother surface compared to titanium) and they support soft-tissue healing from

the day of surgery. In general, more favourable soft-tissue attachment around zirconia than around titanium can be observed, with blood circulation similar to that around a natural tooth, as well as a more mature and pronounced soft-tissue integration. This comes with an ease of use entailing aspiration security thanks to the integrated screw and a colour-coding to clearly identify the corresponding prosthetic platform.



Contact address

Institut Straumann AG
Switzerland
www.straumann.com

	Event	Location	Date	Details/Registration
02/2024	AEEDC Dubai	Dubai World Trade Centre UAE	06–08 February 2024	https://aeedc.com
	19 th Expert Symposium of BDIZ EDI	Cologne Germany	11 February 2024	www.bdizedi.org
	Chicago Dental Society Midwinter Meeting	McCormick Place West Chicago USA	22–24 February 2024	https://www.cds.org/midwinter-meeting
04/2024	OSSTEM World Meeting	Seoul South Korea	27–28 April 2024	www.oic-europe.eu
05/2024	ITI World Symposium 2024	Singapore EXPO Singapore	09–11 May 2024	https://worldsymposium.iti.org

EDI Journal – Information for authors

EDI Journal – the interdisciplinary journal for prosthetic dental implantology is aimed at dentists and technicians interested in prosthetics implantology. All contributions submitted should be focused on this aspect in content and form. Suggested contributions may include:

- Original scientific research
- Case studies
- Product studies
- Overviews

Manuscript submission

Submissions should be made in digital form. Original articles will be considered for publication only on the condition that they have not been published elsewhere in part or in whole and are not simultaneously under consideration elsewhere.

Manuscripts

Pages should be numbered consecutively, starting with the cover page. The cover page should include the title of the manuscript and the name and degree for all authors. Also included should be the full postal address, telephone number, and e-mail address of the contact author.

Manuscripts can be organised in a manner that best fits the specific goals of the article, but should always include an introductory section, the body of the article and a conclusion.

Illustrations and tables

Each article should contain a minimum of 20 and a maximum of 50 pictures, except in unusual circumstances. Our publishing house attaches great importance to high quality illustrations. All illustrations should be numbered, have a caption and be mentioned in the text.

The photos should have a size of 10x15 cm, the image or graphic files must have a resolution of 300dpi. TIFF, EPS and JPG file formats are suitable. Radiographs, charts, graphs, and drawn figures are also accepted.

Captions should be brief one or two-line descriptions of each illustration, typed on a separate page following the references. Captions must be numbered in the same numerical order as the illustrations. Tables should be typed on a separate page and numbered consecutively, according to citation in the text. The title of the table and its caption must be on the same page as the table itself.

References

Each article should contain a minimum of 10 and a maximum of 30 references, except in unusual circumstances. Citations in the body of the text should be made in numerical order. The reference list should be typed on a separate sheet and should provide complete bibliographical information in the format exemplified below:

[1] Albrektsson, T.: A multicenter report on osseointegrated oral implants. *J Prosthet Dent* 1988; 60, 75–82.

[2] Hildebrand, H. F., Veron, Chr., Martin, P.: Nickel, chromium, cobalt dental alloys and allergic reactions: an overview. *Biomaterials* 10, 545–548 (1989).

Review process

Manuscripts will be reviewed by three members of the editorial board. Authors are not informed of the identity of the reviewers and reviewers are not provided with the identity of the author. The review cycle will be completed within 60 days. Publication is expected within nine months.

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