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EDI Journal

European Journal for Dental Implantologists

TOPIC

The path of the BDIZ EDI 2023

BDIZ EDI

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

SWCC

STRAUMANN
WORLD CLASS CUP
2022

straumann

ESTHETIC DENTISTRY

This is the moment we have all been waiting for. The Straumann World Class Cup (SWCC) championship, round 4 – Esthetic!

The field has been narrowed, and only the top-ranked teams remain. Join us on December 3rd from 1 to 2:30 am CET for the conclusion of the Straumann World Class Cup and watch how the teams compete face to face!

In Round 4, the remaining teams will present cases highlighting the effective use of dental implants in the esthetic zone, with results that respect the original natural appearance of the missing dental units.

Thanks to the loyal SWCC fans who have engaged, shared, and voted for their favorite teams during our first 3 rounds. They helped determine who will compete in the final championship.

Round 4 – Esthetic is sure to be educational and exciting. Make sure to mark your calendar with this final championship round.

INTERNATIONAL ESTHETIC DAYS

The Finals of the Straumann World Class Cup (SWCC) will take place during the first International Esthetics Days (iED) in Palma de Mallorca, Spain. From 1 to 3 December, the iED will gather top dental professionals from around the world and across a wide area of expertise.

Sixteen international speakers and four Straumann Group representatives will share insights into the latest clinical and technical developments in esthetic dentistry. This complete program will cover a wide range of topics, such as immediate protocols, soft-tissue management, ceramic materials in implant dentistry and patient communication.

The congress will also provide excellent networking opportunities. Participants will be able to meet and exchange with peers and renowned experts from around the world. In a wide variety of training sessions and workshops, they will be able to learn more about new esthetic dental techniques in a quick and easy way.

Dental professionals interested in attending the event can now register at www.estheticdays.com

REGISTER NOW ON
www.straumann.com/swcc

Moving forward with BDIZ EDI in 2023

Dear colleagues,

The year 2022 was remarkable in many ways—although, to tell the truth, not always in a positive sense. The various flavours of SARS-CoV-2 were keeping us on our toes. COVID-19 is no longer able to spread terror the way it did in 2020 and 2021, so the worst may actually be behind us, but we are not nearly back where we were before COVID-19; we will have to live with SARS-CoV-2 and its mutants.

The pandemic has also left its mark on society and the economy. Politicians from Brussels to Berlin acted too timidly. As physicians and dentists familiar with meticulous treatment planning, we wonder why the pandemic was not approached in a similarly systematic fashion. Not a trace of proper crisis management.

BDIZ EDI will, of course, continue to take care of your concerns in 2023, even as caps on contractual dental services and the fight to renew the fee schedule continue to haunt us in Germany—to say nothing of the inflation monster everywhere in Europe. Starting in 2023, we will concentrate all our physical resources at our office in Munich. We will digitalise many processes to save on resources. But this will not detract us from the focus of our activities—giving our members the best possible advice, providing them with useful legal tips and offering high-quality training.

Since the very beginning of the pandemic, we have been conducting very successful webinars (online seminars). So far, we have not taken these webinars to the international level—but that is about to change. We have excellent speakers lined up, and we can rely on our well-functioning administrative team. We are therefore pleased to invite the members of our partner associations to participate! Attendance is free of charge.

Visit our booth at IDS 2023 (Hall 11.2, O069) to learn more! Here you can meet our team of hosts and some of the speakers. Our webinars of course cover implantological topics—but are in no way limited to them. The EU Medical Device Regulation, MDR, is weighing heavily on the dental industry, and on dentists as well. Many medical devices we use in everyday practice may soon no longer be available "thanks" to an unspeakable maze of unreasonable regulations and requirements. We are actively countering these challenges, by raising our voice, by informing the public and politicians, by seeking out allies wherever we can. Our legal counsel, Professor Thomas Ratajczak, is an expert on the MDR. Feel free to learn about the implications for dentistry in one of our English-language webinars.

One thing that will remain unchanged in 2023 is the Expert Symposium. I would like to cordially invite you to attend our 18th Expert Symposium in Cologne on 19 February 2023, which will put short, angulated and reduced-diameter implants to the test. Looking forward to seeing you there!

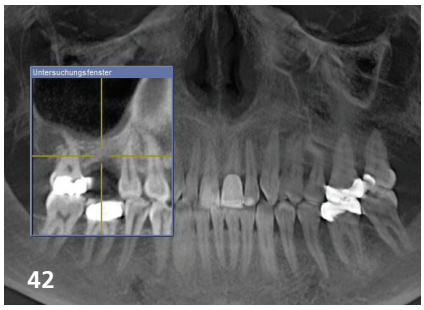
On behalf of my colleagues on the BDIZ EDI board, I would like to thank you for your support and for your interest in our work and our goals.

We hope you will enjoy a peaceful holiday season—and a fulminant start into a successful new year 2023.

Christian Berger, President BDIZ EDI

Meeting Point Implantology 2023

No headscarf in the workplace?



New crestal bone formation thanks to a micro-structured back-taper concept

EDI News

Case Studies

Business & Events

News and Views

NSK Create it

Go beyond.

The new Surgic Pro2

Operability, safety, wireless extensibility: these are the crucial points where the brand new Surgic Pro2 makes the difference. The NSK surgical micromotor system represents an extraordinary innovation, designed to give the professionals the best device, for the most effective, reliable and comfortable work experience. There are so many good reasons to choose Surgic Pro2 – the brilliant progress, that lets you go beyond.

1 Improved operability thanks to the new, more compact motor and the center of gravity moved closer to the head of the handpiece: more comfort, less stress.

2 Safe and sensitive display thanks to the easy-clean screen and the smart touch panel, to be adjusted to respond when surgical gloves and surgical barrier sheets are in use.

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4 High-resolution color LED light to let you see blood and gums as if naturally-lit and therefore give you increased visibility during treatment, generating a minimal amount of heat.

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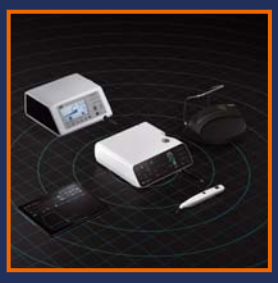
7 Predictability and control to enhance decisions about when to load the implant, especially when a shorter treatment time is given, thanks to the dialogue with Osseo 100+.



8 Wireless extensibility with multiple devices such as VarioSurg3, Osseo 100+, wireless foot control and iPads, to significantly broaden the scope of implant treatments.

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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.

Ogolnopolskie 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 (Certy kat Umiejetnosci OSIS), which over 130 dental implantologists have already been awarded.

Sociedad Espanola 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)

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)

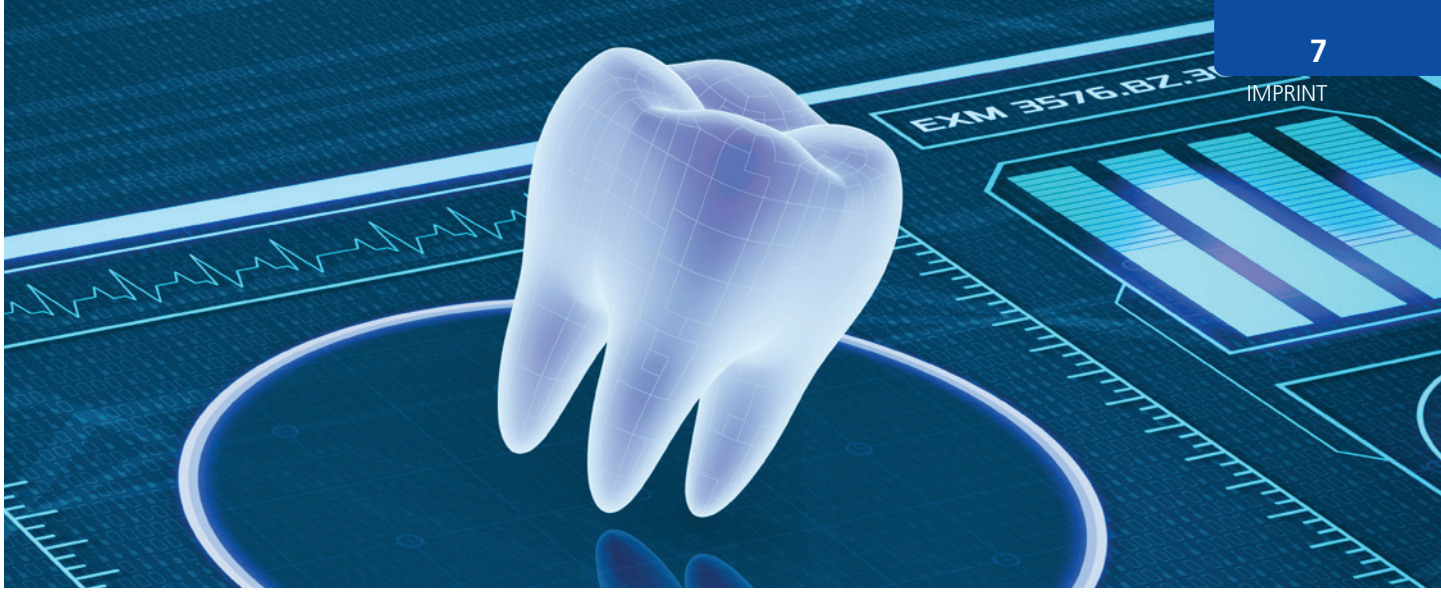
USSI EDI was founded in 2010 with the desire to enhance dentists' knowledge of dental implants, as well as to provide the highest quality of continuing education in dentistry. The most important aims of the organisation are to make postgraduate studies meeting the standards of the European Union available 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

Imprint

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Assembly of the German Dental Association calls for more support for the outpatient sector

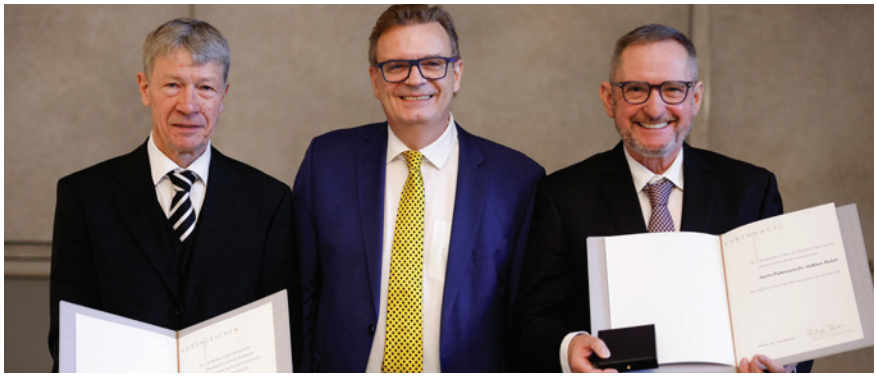
"We need more security!"

The Assembly of the German Dental Association (Bundeszahnärztekammer, BZÄK) congregated in Munich on 4 and 5 November 2022. In his welcoming address, Klaus Holetschek, the Bavarian Minister of State for Health and Care, thanked the dental profession for its continuing commitment, not least during the COVID-19 pandemic. He also referred to the ongoing crises, including the energy crisis and high inflation, which also drove the costs of dental practices.

For the first time, Prof. Ihsane Ben Yahya (Morocco), President of the FDI World Dental Federation, addressed the delegates.

She emphasized in her welcoming address that while all countries were facing individual situations and challenges, by working together, knowledge and best practices could be shared and positive changes could be driven to provide the best possible oral health for all. FDI, she said, was proud of having Germany as a member country and welcomed the efforts of BZÄK in promoting oral health and advancing dentistry.

Dr Klaus Sürmann, head of the German Dentists' Relief Foundation (HDZ), thanked the attendees for the willingness to donate in support of the Ukraine aid and the victims of last year's floods, referring HDZ' numerous aid projects.



BZÄK President Prof. Christoph Benz accepted the tribute from former BZÄK Vice President Prof. Dietmar Oesterreich (left) and retired fleet doctor Dr Helfried Bieber (right).

Tribute to Oesterreich and Bieber

Prof. Christoph Benz, BZÄK President, presented Prof. Dietmar Oesterreich with the highest award of the German dental profession, the Fritz Linnert Medal of Honour, for his decades of service to the profession. Dr Helfried Bieber, chief dentist of the German Armed Forces, was awarded the Gold Badge of Honour of the German Dental Association.

Presidents' reports

The Presidents of the Federal Dental Association gave their first statement of accounts (from left to right): Dr Romy Ermler, Konstantin von Laffert and Prof. Christoph Benz.

In his political report, Benz spoke about crises as an opportunity. At the beginning of the pandemic, dentistry had felt to be the "fifth wheel", but it had capitalised on its hygiene expertise and delivered exemplary work. It is true, he said, that society in general and the dental profession in particular are facing new challenges, such as high inflation rates and the energy crisis, which are bound to have an impact on dental practices. It makes sense to protect the inpatient sector from overload, but the outpatient sector has been completely forgotten, even though it plays a central role in the care of the population. Investor chains and health care kiosks apparently enjoy a higher priority with politicians than the justified concerns and needs of physicians in private practice. The federal government has repeatedly admitted that the success of the German healthcare system is to a large extent based on the dense network of small practices throughout the country.

Benz also spoke about the breach of trust as manifested in the so-called Financial Stabilisation Act for Statutory Health Insurance. The version that has now been passed puts the long-term treatment of periodontitis and, thus, patient welfare at risk. Other topics included staff shortages and adequate pay for medical staff.

Konstantin von Laffert, BZÄK Vice President, called for a speedy reduction of red tape. There is no "special relief packages" for practices such as those that exist for hospitals—but at least we should not have "special burden packages" for practices. He said that BZÄK had many realistic proposals that could mean meant more time for care. However, politicians are simply not prepared to act. The EU Medical Device Regulation (MDR) poses particular problems for all private practices. As there are too few Notified Bodies, the required recertification of medical products is not making enough progress. This also affects many dental products. There is a risk of supply bottlenecks if specific products and devices are no longer allowed to be used in dental practices. Von Laffert also touched on the European Health Data Space (EHDS), efforts to achieve sustainability in practice, the shortage of specialists, the risks inherent in externally funded medical care centres (MCCs)—including the risk of impending overtreatment—as well as the risks of "aligner stores" with remote treatment and mistreatment through self-treatment.

Dr Romy Ermler, BZÄK Vice President, pointed out that dentistry is an energetic profession. Dragging out the revised German standard schedule of fees for private patients (GOZ) can no longer be justified. The remuneration of dentists had been deliberately removed from the free market. But then the state must also ensure that fees are and can be expected to remain up to date. However, the state has successfully shunned its responsibility—since 1988 and throughout the tenures of 12 health ministers.

The Financial Stabilisation Act for Statutory Health Insurance also capped benefits supporting the systematic treatment of periodontitis—the current Minister of Health has clearly abandoned any thought of a future-oriented and reliable prevention policy. With a view to the next generation of professionals, Ermler said, policymakers must continue to be admonished to round up the necessary support to alleviate the discrepancies between urban and rural health care. It would also be important to hasten along the digital transformation in terms of improving processes, creating a functioning IT infrastructure, etc.

Motion and resolution

In their leading political motion, delegates called on the federal government to improve the legal and economic framework for dental practices. To this end, the fees reimbursed by private and statutory health insurers must be permanently adjusted to reflect cost increases. Budgeting of any kind is rejected. Independent dental practices must be strengthened.

Other resolutions were passed, for example, on adjusting fee point values, on orthodontics exercised by general dentists, on the shortage of skilled personnel and the promotion of young talent, against the commercialisation of dentistry, on improving dental care for people with disabilities or special medical needs, for ending the budgeting of periodontal treatment, and for an IT infrastructure that actually benefits users.

By the way

There was no sign of life from the Federal Minister of Health, Prof. Karl Lauterbach, at this Assembly of the German Dental Association in Munich—no welcoming message, no delegation of a State Secretary to Munich. Interestingly enough, Lauterbach had been invited by the private "Hartmannbund" medical association and accepted... BZÄK President Prof. Christoph Benz, commenting on this affront to the highest body of German dentists at the press conference, said, "Lauterbach has a strange aversion to outpatient practices."

RED/BZÄK-PM

Update on short, angulated and reduced-diameter implants

18th Expert Symposium in Cologne in February 2023

The 18th Expert Symposium will be held in Cologne on Sunday, 19 February 2023. It will examine the state-of-the-art for short, angulated and reduced-diameter implants. The BDIZ EDI last addressed this topic in 2016; now, new findings will be the focus of the one-day symposium.

At the same time, the 2016 Guideline will also be updated. On 6 February 2016, the European Consensus Conference (EuCC) under the auspices of BDIZ EDI concluded: "Provided the specific treatment parameters are observed, the use of short, angulated or reduced-diameter implants in sites with reduced bone volume can be a reliable treatment option, given 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 choose the best possible therapy for each patient."

Do these statements still apply, or do they need to be fundamentally revised? What is the status of inserting short implants compared to augmentation procedures? In February in Cologne, this treatment option will be put to the test for the third time. In 2011, the focus was on its readiness for practical use; in 2016, the focus was on advantages and limitations. "In view of the rapid development in the field of short implants, we decided to address the topic again", said Prof. Joachim E. Zöller, scien-

Christian Berger, President, BDIZ EDI

An important cornerstone of BDIZ EDI's work is postgraduate educations for professionals involved in or interested in oral implantology. The Cologne Expert Symposium has become a tradition. For the 18th time now, we will now impart knowledge and conduct discussions with the participants—in a compact and concentrated format. In 2023, as in earlier years, we will be presenting our special feature with the combination of advanced training and superior entertainment: The Cologne Carnival will be celebrating its 200th anniversary, and with it the oldest carnival society of Cologne, the "Grosse von 1823", with its President—who is also the scientific director of our Expert Symposium. So make sure you are where it's at: education and training during the day—carnival in Cologne relaxation in the evening. After what is sure to be another highly interesting day full of enlightening educational sessions, BDIZ EDI and Prof. Joachim E. Zöller invite you to participate in the sunday carnival session in Gürzenich hall.

Prof. Joachim E. Zöller, scientific director

At the 18th Expert Symposium 2023, we will once again be putting short and angulated implants to the test, for the third time after 2011 and 2016. In those earlier guidelines, we had focused on practical readiness and on benefits and limitations. This time we will turn our attention to a review and update of short, angulated and reduced-diameter implants. In view of the rapid developments in the field, we decided to revisit the topic and to update our recommendations. Do the short implants live up to their promise? What is the prognosis for restorations with short and angulated implants? Can we offer patients simple restorations without augmentation and still promise long-term success? The European Consensus Conference under the auspices of BDIZ EDI will once again issue a pertinent guideline in 2023. At the same time, the 2016 guideline will also be updated. Do not miss this symposium! Enjoy a top-of-the-line programme on an important topic in oral implantology.

tific director, in his foreword at the time. Do the short implants live up to their promise? What is the prognosis for restorations with short and angulated implants? Can we offer patients simple restorations without augmentation and still promise long-term success?

As has been our tradition, the Expert Symposium will be held at the Dorint Hotel on Heumarkt. BDIZ EDI members enjoy reduced registration fees. To view the previous guideline on the subject, visit the BDIZ EDI website at:
www.bdizedi.org/en/european-consensus-conference

You can find the most up-to-date CPD information at:
www.bdizedi.org/en/further-education

Incidentally, the Cologne carnival will be celebrating its 200th anniversary with its 2022/23 session. The main focus will be on the 200th anniversary of the oldest Cologne carnival celebrations committee, the "Grosse von 1823", whose President is Prof. Joachim E. Zöller.

AWU

Programme	
9:15 a.m. – 9:30 a.m.	Welcome screen Christian Berger, President; Prof. Joachim E. Zöller, scientific director
9:30 a.m. – 10:15 a.m.	Augmentation versus alternative techniques **Dr Markus Tröltzsch, Ansbach, Germany**
10:15 a.m. – 10:30 a.m.	Discussion
10:30 a.m. – 11:15 a.m.	Short implants—a predictable alternative? **Dr Eduardo Anitua, Vitoria, Spain**
11:15 a.m. – 11:30 a.m.	Discussion
11:30 a.m. – 12:00 noon	Coffee break · Dental exhibition visit
12:00 noon – 12.45 p.m.	Angulated implants—a real alternative in the atrophied jaw? **Dr Alexandros Manolakis, Thessaloniki, Greece**
12:45 p.m. – 1:00 p.m.	Discussion
1:00 p.m. – 2:00 p.m.	Lunch break · Dental exhibition visit
2:00 p.m. – 2:45 p.m.	What does the dental literature have to say about reduced-diameter implants? **Dr Keyvan Sagheb, Mainz, Germany**
2:45 p.m. – 3:00 p.m.	Discussion
3:00 p.m. – 3:45 p.m.	Fixating dentures with mini-implants: practical experience **Prof. Friedhelm Heinemann, Greifswald, Germany**
3:45 p.m. – 4:00 p.m.	Discussion
4:00 p.m. – 4:30 p.m.	Coffee break · Dental exhibition visit
4:30 p.m. – 5:15 p.m.	Fixed teeth in one day—a reliable treatment option? **Dr Ingo Frank, Landsberg/Lech, Germany**
5:15 p.m. – 5:30 p.m.	Discussion
5:30 p.m. – 6:00 p.m.	Update on short, angulated and reduced-diameter implants—results of the European Consensus Conference 2023 **Prof. Jörg Neugebauer, Landsberg/Lech, Germany**
6:00 p.m. – 6:30 p.m.	Final discussion

18th Expert Symposium

Update on short, angulated and reduced-diameter implants
Cologne, 19 February 2023

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Prof. Jörg Wiltfang and Prof. Peter Proff at the helm

German Society of Dentistry and Oral Medicine (DGZMK) with new leadership

Prof. Jörg Wiltfang (University of Kiel) has taken over as President of the German Society of Dentistry and Oral Medicine (DGZMK). He succeeds Prof. Roland Frankenberger (University of Marburg), whose regular term ended with the online congress entitled "Critically scrutinized: Ethics – Biology – Sports".

At the recent General Meeting, Prof. Peter Proff, Director of the Polyclinic for Orthodontics at the University Hospital of Regensburg, was unanimously elected President-elect.

Goals of the DGZMK presidency

Prof. Wiltfang has very specific ideas about the goals of his presidency: "During the pandemic, we realised the immense importance of dental care for the general population. The strengthening of oral medicine within dentistry, establishing research alliances through better networking within the DGZMK specialist societies and improving the visibility of the DGZMK will be the focal points of my presidency."

Wiltfang expects to see promising opportunities for new developments in geriatric dentistry: "Now that dental prevention has made very good progress, I recognise that the treatment of older patients is an critical issue that must be addressed. Demographic change and medical progress have resulted in this specific clientele becoming a challenge for dental practices. It is therefore particularly important to support and reinforce geriatric dentistry. I see further potential for scientific development, in particular, in the fields of inflammatory medicine and sleep medicine. Dentistry has developed very well in these areas so far."

One of the special challenges of Wiltfang's tenure may be the joint congress of all professional societies in 2025. He is looking forward to the entire range of dentistry, oral and maxillofacial medicine presenting itself to the professional and general public.

Source: DGZMK PR

The new DGZMK board (left to right): Dr Jens Baresel (board member), Prof. Anne Wolowski (secretary general), Dr Dietmar Weng (Vice President), Prof. Peter Proff (President-elect), Prof. Jörg Wiltfang (President), Dr Stefan Ries (board member), Dr Markus Tröltzsch (chair, Academy of Dentistry and Oral Medicine).

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References on www.straumann.com/tlx

A0025/en/A/01-EDI 02/22

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BDIZ EDI office in Munich as of 2023

BDIZ EDI goes Munich

In future, BDIZ EDI will concentrate its administrative work at the Munich office, where BDIZ EDI President Christian Berger and press officer Anita Wuttke have been working since 2006. Following the retirement of Brigitte Nötzel, the BDIZ EDI board is pulling up stakes in Cologne. The Munich office will take over the association administrative functions starting in 2023.

Important meetings have already been held in Munich since 2006. Activities with a European and international dimension have been directed from here, and this is where the media and chief editorial offices have been located. The office in the Munich district of Theresienhöhe will be the central hub of the association.

Helga Karanikas has been on board since 2018. A former assistant to the President of the Bavarian Chamber of Dentists, she will take over major aspects of membership administration and event organisation.

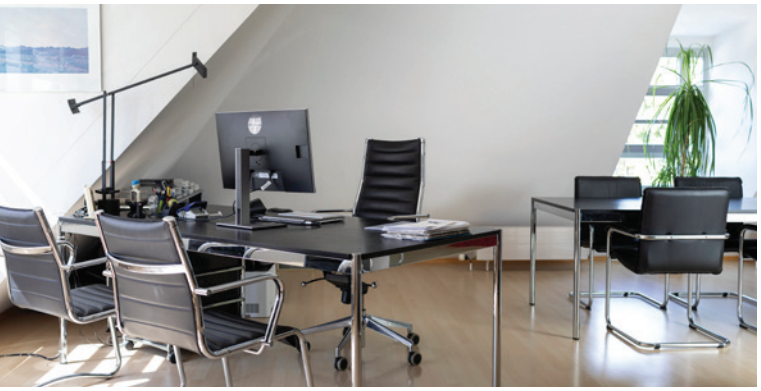
"We are not starting from scratch, because a great deal of BDIZ EDI's work has been performed or supported from here over the years", says Anita Wuttke, a journalist who runs her own independent media office and who has been working for various associations and organisations in the dental field for many years. 2022, she successfully managed the election campaigns of both the Chamber of Dentists and the State Association of Contract Dentists. She has been Editor-in-Chief of *BDIZ EDI konkret* and *EDI Journal* since 2013.

BDIZ EDI President Christian Berger is looking forward to seeing the importance of the Munich office grow: "We have been planning the relocation of our office to Munich for many years—and we are definitely ready. Of course, we will have to pool the various roles and tasks. With the help of modern technology, we can do this successfully, because our association can draw on great talent and expertise at all levels."

Press officer Anita Wuttke and staff member Helga Karanikas work in the Munich office.

In the future, BDIZ EDI will focus on resource-saving digital solutions, driven and implemented in particular by BDIZ EDI managing director Dr Stefan Liepe.

AWU



The new office can also be used for meetings. It has already been used for this purpose in the past.

The office is located between Harras and Theresienwiese.

Contacting the BDIZ EDI office

From 2023, the BDIZ EDI office will be located here:

BDIZ EDI
Lipowskystraße 12
81373 München

+49 89 72069-888 (T)
+49 89 72069-889 (F)
E-mail: office@bdizedi.org

The billing hotline also has a new phone number: Kerstin Salhoff will be available on Tuesdays from 8 a.m. to 12 p.m. at +49 89 72069-883

Three questions for BDIZ EDI

What changes will members encounter?

Berger: Members will hardly notice anything—except for the new phone number. The Munich office—where I have my desk—has been taking care of a variety of duties for many years and has gradually taken over many administrative tasks. Our board member Stefan Liepe is an expert when it comes to IT and digital media. Here the digital modernisation of BDIZ EDI's services is in the best of hands!

What changes will we see in BDIZ EDI's administrative sphere?

Dr Liepe: We have been going through a restructuring process at BDIZ EDI for years. Mostly this has involved the digitisation of our processes. The most important step at this point is the relocation of the office to Munich. We have entered into a new banking relationship. And we are in the process of using new association software to help digitalise and simplify labor-intensive processes such as invoicing. This will also lead to significant savings. We can then allot the funds we saved to important projects to support our members with fee-related issues.

What goals will BDIZ EDI pursue in future?

Berger: We will continue to offer our major training courses face to face: Expert Symposium in Cologne, Europe Symposium, Expert Conference on behalf of the Consensus Conference on Implantology; we will also continue to help develop guideline in the field of oral implantology. As university professor emeritus, our Vice President, Joachim Zöller, will be able to focus more intensively on continuing education and scientific discussion for the BDIZ EDI. With 17,000 participants since 2020, our webinars are an unbeatable tool for educating members quickly and unconventionally. Our secretary general, Jörg Neugebauer, will be much more involved in them than he has been in the past. Given the strong demand, we are planning to launch another curriculum: Curriculum South. Personally, I will continue to work intensively on private dental billing and the pertinent schedules and legal frameworks. We are looking for and finding solutions to show our members how to drive their practice profitably despite having to work with a state-mandated fee schedule that has not been updated in 35 years.

The BDIZ EDI office is moving

Goodbye to Brigitte Nötzel

Brigitte Wilhelmine Nötzel is quite an institution at BDIZ EDI. Members and non-members alike have known her as a competent worker and warm-hearted soul at the Cologne office—always approachable, always ready to answer any question, drawing on her many years of experience. Now she is ready to retire.

A heartfelt thank you and a bouquet of flowers were given to Brigitte Nötzel by BDIZ EDI Board Member and Treasurer, Dr Wolfgang Neumann, on behalf of the entire board. The pictures above show the former office in Cologne-Porz, Brigitte Nötzel at work and a thank you from 2012 after the conference of experts by Dr Hans Hermann Liepe to Brigitte Nötzel and Alexandra Papke.

In June 2006, Brigitte Nötzel, who is from Sankt Augustin near Bonn, began her "life among implantologists", working alongside two other employees at the Bonn-Bad Godesberg office. A trained legal assistant, she had worked for Christian Democratic Union party in Bonn—first as an assistant at its central German office, then at its press office in Bonn, then at the party's business enterprise Dico-Soft—and then in assistant positions for executives of associations and corporations in Bonn. She brought a lot of experience to her position, serving members of the BDIZ EDI, answering telephone and written inquiries of absolutely every kind related to oral implantology and BDIZ EDI's offerings. In July 2006, the office moved to new premises in the north of Bonn, where Brigitte Nötzel has taken on the full workload all by herself since 2017, including moving the office to Cologne in August of this year.

Always on duty

Brigitte Nötzel knows the BDIZ EDI inside and out—and everything associated with it. For many years she was the go-to person for the Curriculum Implantology and for obtaining or extending the formal "Focus of Professional Activities: Oral Implantology". She acted as the first point of contact for inquiries about legal and billing issues, upcoming BDIZ EDI events she organised or helped organise, and she always had the board's back. She was responsible for billing and bookkeeping, membership administration, distribution of incoming letters, whether from the Federal Ministry of Justice or the Federal Ministry of Health, the Federal Joint Committee on social security policy, universities, the dental industry, or of course individual members.

She worked hand in hand with the Munich-based press office of BDIZ EDI and willingly shared her knowledge with all employees. Brigitte Nötzel's retirement marks the end of an era at BDIZ EDI. The association's office will be located in Munich from now on. "The board would like to express its sincere thanks for her many years of extraordinary commitment. Her paramount sense of duty and her dedication have helped her manage the Bonn and Cologne offices all by herself throughout the past few years. We would like to express our heartfelt thanks for all her hard work", said Christian Berger. Brigitte Nötzel will be taking her well-deserved retirement but will continue to contribute her valued expertise to our projects.

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100 years of IDS: Many key players have registered

High number of exhibitors

IDS, the International Dental Show in Cologne is demonstrating all of its strengths: At the coming event from 14 to 18 March 2023, almost all of the relevant key players have already confirmed their participation. In total, IDS is currently recording well over 1,000 exhibitors as well as 11 country participations with over 400 companies represented.

"The global appeal of IDS as the most important industry platform is the driving force for both a successful present and future of the international dental family. 100 years of IDS stands for innovation and constant performance at the highest level and is thus also a synonym for the strength of the dental industry. And together we will position IDS as the leading international dental trade fair over the next decades," Mark Stephen Pace, Chairman of the Association of German Dental Manufacturers (VDDI), and Oliver Frese, Chief Operating Officer of Koelnmesse, emphasised in a joint statement. Once again, IDS will cover the comprehensive spectrum of the dental world—from the dental and dental technology section, infection protection and maintenance, through to services, information, communication and organisation systems as well as organisation tools.

An overview of all of the top players registered to-date as well as the overall preliminary list of exhibitors of IDS 2023 is available at: http://Preliminary exhibitor list of IDS Cologne 2023 | IDS (ids-cologne.de)

"We are delighted to take part in IDS 2023 and come together with dentists, laboratories and specialised trade partners from all over the globe again to engage in a knowledge exchange and network for a whole week," said Walter Petersohn, Chief Commercial Officer at Dentsply Sirona. "The diversified programme at our booth aims to support our customers in offering their patients the best possible dental treatment. You will be excited to see which product innovations we are going to introduce next year."

"In its capacity as an industry association, VDDI is indispensable because it assists its members in dealing with the manifold, current and future challenges: MDR and regulatory framework conditions, export support and last, but not least as organisers of the leading global dental trade fair, IDS. If VDDI didn't exist, it would have to be urgently invented!"

Christoph Weiss, Chief Operating Officer, BEGO

"100 years of IDS, i.e. 100 years of world-class dental developments! There is no better place to present new products for the first time! We are looking forward to an international audience of experts!"

Werner Slapnig, Sales Director, Erkodent

"We are looking forward to participating at IDS next year. Not merely because IDS is considered to be the leading trade fair of the worldwide dental industry and because we look back on a long-term successful partnership, but also because it offers the perfect platform for an international exchange. This enables us to present products and solutions and engage in a targeted exchange with dentists, dental technicians and dental hygienists at one location."

Norbert Wild, Managing Director, Ivoclar Germany

"It really is a special honour to take part in IDS again in the anniversary year 2023. Over the past years we have always been able to present our innovative technologies from the professional world and engage in an intensive exchange with the users at this international trade fair. We are looking forward to sharing our company's latest product developments and their applications with our customers and partners at the next IDS."

Carsten Barnowski, Head of Sales & Marketing D-A-CH, Kuraray Europe

Numerous group stands have also applied to take part at the jubilee event of IDS 2023: So far, groups from Argentina, Brazil, Bulgaria, China, Israel, Italy, Japan, Hong Kong, Korea, Singapore and the USA have registered. IDS 2023 will be staged in Halls 1, 2, 3, 4, 5, 10 and 11 of the Cologne fair grounds on exhibition space spanning around 180,000 square metres.

IDS is celebrating a double anniversary next year: Not only the fortieth edition is being staged from 14 to 18 March 2023, the leading global trade fair of the dental industry is also looking forward to its 100th birthday. The success story of the dental world is inseparably linked with IDS, because the leading trade fair is based on a system of values that makes it unique. 100 years of IDS stand for the depiction of the industry in its entirety, for innovations and market trends, for a consistent and open comparison of performance in the sense of the Olympic principle and last but not least for a leadership claim as the largest international industry platform that has been repeatedly confirmed for decades.

BDIZ EDI will be there as well—together with a European partner association in Hall 11.2, Stand O61.

Source: VDDI, IDS

About IDS

IDS (International Dental Show) takes place in Cologne every two years and is organised by the GFDI Gesellschaft zur Förderung der Dental-Industrie mbH, the commercial enterprise of the Association of German Dental Manufacturers (VDDI), and is staged by Koelnmesse GmbH, Cologne.

IDS 2021 in Cologne.

BDIZ EDI shows its colours at the 40th IDS in Cologne

Meeting Point Implantology 2023

Anyone wanting to meet the "movers and shakers" behind our work or get their hands on our new publications should visit the BDIZ EDI booth at IDS 2023, Hall 11.2, aisle O, booth 069, from 14 to 18 March 2023. As tradition dictates, the BDIZ EDI booth will once again located opposite the German Dental Association.

The organisers are celebrating 100 years of IDS, and BDIZ EDI will of course be in on it again! "For 2023, as in earlier years, our Meeting Point Implantology is designed to bring together different types of competence and skills and to showcase 2023 the support BDIZ EDI can offer oral implantologists in Germany, Europe and beyond", said BDIZ EDI President Christian Berger.

The BDIZ EDI booth before the start of IDS 2021.

BDIZ EDI's Table 2023 available to take home

The major talking points of the association will be presented at its booth: legal and billing support with BDIZ EDI legal counsel Prof. Thomas Ratajczak and the BDIZ EDI billing hotline with Kerstin Salhoff (since 2020). This also includes the "We-want-you" programme for young professionals, which is aimed at newcomers to oral implantology. BDIZ EDI will show the different paths that lead to this field. An important module is the Curriculum Implantology, designed by Prof. Joachim E. Zöller, which is held at the University of Cologne. And there is BDIZ EDI's Table 2023 to take home, which compares the various German fee schedules (GOZ, GOÄ, BEMA) and also includes the time factor for treatment length.


Always a pleasure: Photo shoot with visitors from Spain.

The booth staff on all days: Christian Berger, Anita Wuttke, Dr Wolfgang Neumann, Helga Karanikas and Dr Stefan Liepe.

New Guideline: "Update on short, angulated and reduced-diameter implants"

In early 2023, the European Consensus Conference (EuCC) under the auspices of BDIZ EDI will hold its discussions, remotely, and launch the 18th Guideline for implant dentistry. At IDS, the consensus paper, which addresses short, angulated, reduced-diameter and mini-implants, will be available hot off the press in German and English.

Many discussions took place in the international lounge of the BDIZ EDI. Here with representatives of the Croatian Dental Association, Dr Davorin Simunovic (third from left) and President Dr Hrvoje Pezo (fourth from left)...

The success story continues: BDIZ EDI webinars

Early on in the COVID-19 pandemic, in 2020, BDIZ EDI offered online seminars with top-notch speakers to answer questions that dental practices feel are pressing ones. Some 17,000 participants have participated in these continuing-education courses with topics across the spectrum of interest to dental practices. The 2023 incarnation of our programme "BDIZ EDI informs" is already its fourth instalment—ever highly topical, ever highly informative. Topics include everything within (implantological) continuing education, from the focal surgical and restorative subjects to more marginal aspects, such as the influence of vitamin D on bone augmentation, crystal-meth addiction as a possible contraindication for implants, functional theory—and much more. Legal aspects will be addressed by Prof. Thomas Ratajczak, legal adviser of BDIZ EDI, and accounting issues will be discussed by Kerstin Salhoff. Other topics include tax-related innovations, practice strategies, etc.

Patient brochures available

"Implants—Long-lasting implant for long-lasting beauty". This patient brochure, available in German and in English, is the absolute hit among our publications and can also be ordered from the BDIZ EDI online store. Written in simple language and richly illustrated, it provides guidance for implant patients on successful oral hygiene.

You have questions? We like to provide answers

Representatives of the board of BDIZ EDI will be on site in varying line-ups: Presidents Christian Berger and Prof. Joachim E. Zöller and the members of the board will be happy to answer your questions. Visit BDIZ EDI in Hall 11.2, aisle O, booth 069!

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...and in the German corner with BZÄK President Prof. Christoph Benz (second from left) and FDI Past President Dr Gerhard Seeberger (third from left).

Bavarian Dentists' Congress and id infotage dental in Munich and Frankfurt

On the road with BDIZ EDI

Managed the BDIZ EDI booth at the Bavarian Dentists' Day: Editor-in-Chief of *EDI Journal* and *BDIZ EDI konkret*, Anita Wuttke.

Thanks to the keynote speaker: The biologist, environmental politician and best-selling author Prof. Ernst Ulrich von Weizsäcker (centre) spoke about energy transition, climate protection and circular economy. The photo shows him with the hosts, Dr Rüdiger Schott as Deputy Chairman of the KZVB (left) and BLZK President Christian Berger.

At the id infotage dental booth in Frankfurt (from left to right): Kerstin Salhoff, Treasurer Dr Wolfgang Neumann and Helga Karanikas.

BDIZ EDI was represented with its own booths in the exhibition areas of the 63rd Bavarian Dentists' Congress and at id infotage dental in Munich and Frankfurt. At the latter event, BDIZ EDI billing expert Kerstin Salhoff held one-hour presentations every day on the Electronic Application and Approval Process (EBZ). BDIZ EDI President Christian Berger opened the Bavarian Dentists' Congress with its approximately 1,200 participants in his capacity of President of the Bavarian Chamber of Dentists; he also served as the main host. Here, too, BDIZ EDI was represented with a booth and with the board members; Dr Stefan Liepe and Dr Wolfgang Neumann served as hosts of the scientific programme.

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Kerstin Salhoff was speaking on behalf of the BDIZ EDI in the dental arena at the id infotage dental in Munich, which took place at the same time as the Bavarian Dentists' Day.

Always on the subject, always on the ball: Dr Stefan Liepe and Dr Wolfgang Neumann moderated at the Bavarian Dentists' Day.

Before the opening: the booth is ready: id infotage dental in Frankfurt.

Topic of the lecture by the billing expert: EBZ.

Online training courses next year

BDIZ EDI informs—2023

BDIZ EDI kicks off the year 2023 with its online training webinars. Our programme continues to be as varied as ever! In addition to implantological training aspects, practitioners and practice teams will gain a lot of new and updated knowledge—about billing, legal issues, tax issues and, of course, new laws and regulations.

The 2022 webinars were immensely popular among members and non-members alike. The online training campaign is designed to support members' practices. BDIZ EDI aims to offer high-quality continued professional development courses addressing the needs of the entire dental team. Naturally, oral implantology will be in focus, but beyond that we will also address issues of billing and the law, new regulations and topics concerning practice concepts, approaches and design.

The procedure

With the online training programme starting as early as mid-January 2023, the BDIZ EDI board has set the programme on the right track—as evidenced by the high numbers of registered participants, between 250 and 400 per webinar. Overall, 17,000 people participated in the continuing-education programme. Attendance is free of charge for members; non-members pay €50. Either 1 or 2 continuing-education (CE) points are awarded per webinar; participants of course also receive a CE certificate. Following the live webinar, the video is available for review in the webinar archive.

The programme itself, and especially the dates and times, are still being fine-tuned at this point. The preview (see table) illustrates the broad variety of topics that BDIZ EDI covers. To stay up to date on current webinar topics, dates and times, please check the BDIZ EDI website. Or you might want to register for the free BDIZ EDI newsletter, available to members and non-members alike.

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More Information…

Get more information about the webinars and other current topics in our newsletter:

Continuing-education webinars, first half of 2023:

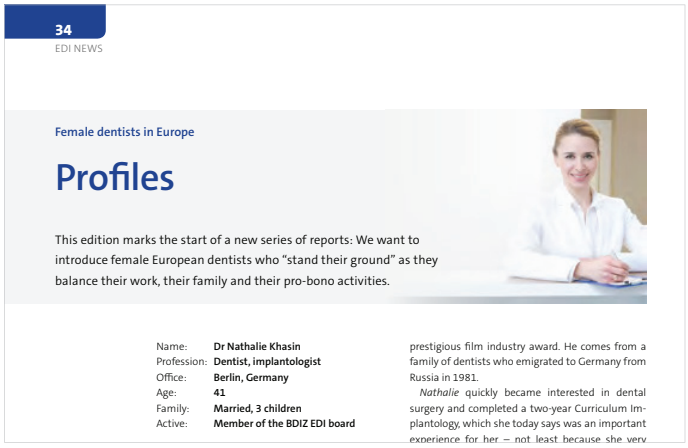
Weekday	Day	Time	Topic	Presenter
	Early February	7 p.m.	(Tax-related topic)	Tax office of Dr Schauer
Tue	Late February	7 p.m.	Presentation of the 2023 guideline "Update on short, angulated and reduced-diameter implants"	Prof. Dr Jörg Neugebauer
	7 March 2023	7 p.m.	Interim restorations and long-term provisionals—calculating the complete fee	Kerstin Salhoff
	April	7 p.m.	How does demographics affect the practice of implant dentistry?	Dr Markus Tröltzsch
	May/June	7 p.m.	CBCT—special findings during implant planning	Prof. Dr Jörg Neugebauer
	May/June	7 p.m.	Soft-tissue management for long-term implant success	Prof. Dr Stefan Fickl

Did you ever know…

…that every year BDIZ EDI

organises an Expert Symposium addressing a current topic in oral implantology? At the same time, a practical guideline on the same topic is prepared for the European Consensus Conference (EuCC) to discuss, update and reach consensus on. The topic for 2022 was "Periodontal disease as a risk factor"; in 2023, discussions will focus on a new "Update on short, angulated and reduced-diameter implants".

Read more here:



…that the BDIZ EDI

is introducing female dentists throughout Europe in a loose succession of interviews in its *EDI Journal*? The new format documents their lives and careers and shows how they assert themselves at work and in their private lives. The interviews can also be read online.

For more information see:

…that the *EDI Journal*

is sent out to all members of the partner associations of the BDIZ EDI? The only requirement is membership of the respective association in the BDIZ EDI. The partner associations and their work are regularly presented in our journal. Back issues (PDF files) of the *EDI Journal* are also available online.

For more information see:

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Results of the CED meeting 2022

White paper on workforce challenges

European dentists offer solutions to workforce challenges, warn against threats to the supply of dental medical devices in the EU, call for an immediate update of the Professional Qualifications Directive and oppose the so-called simplified recognition procedures of non-EU dental qualifications.

On 18 November 2022, the Council of European Dentists (CED) Member, Affiliate Member and Observer associations met in Brussels, Belgium, for their biannual General Meeting under the chairmanship of CED President Dr Freddie Sloth-Lisbjerg.

Workforce challenges for dentistry

CED adopted a White Paper on workforce challenges for dentistry, pointing out the need for action aimed at ensuring a balanced distribution of dental professionals and high-quality oral health care for patients across Europe. Workforce planning is needed to address the imbalance of dental professionals' distribution between and within European countries and to avoid the creation of medical deserts. High-quality education of dentists is crucial for resolving workforce problems and it is imperative that educational systems contribute to restoring the balance by training the proper number of dental professionals that each country requires. Future dentists must be fully equipped not only with the knowledge and skillset for providing high-quality oral health care but also with the right e-skills, as well as expertise in dental practice management, administration and legal matters. While there is increased pressure towards more delegation and task shifting in dentistry, including by the World Health Organization (WHO) in their global oral health strategy, European dentists agree that the dentist should remain the leader of the dental team. The dentist may delegate tasks, under their direct supervision, to other suitably trained team members. General and oral health prevention should be prioritised and promoted within national healthcare systems, ensuring a reduction of costs, reducing the burden of disease and improving public health as a whole.

Results of CED elections

During the plenary session, the CED members were invited to vote for a new treasurer and three new board directors for the term 2022–2025. Dr Ioannis Tzoutzas (Greece) was elected as treasurer. Dr Charlotte Heuze (France), Dr Katalin Nagy (Hungary) and Dr Miguel Pavão (Portugal) were elected as directors. They join the current CED President Dr Freddie Sloth-Lisbjerg (Denmark), Vice-President Dr Anna Lella (Poland) and directors Dr Henner Bunke (Germany) and Dr Robin Foyle (Ireland). The new CED board assumed its powers on 19 November.

CED White Paper on workforce challenges for dentistry

Implementation of Medical Device Regulation

CED expressed deep concern at the delays in implementation of the Medical Device Regulation (MDR) 2017/745, particularly in re-certification of medical devices resulting from the lack of Notified Bodies responsible for certification. As part of the implementation of the new regulation, all medical devices on the market must be re-certified by May 2024 at the latest. Without this re-certification, medical devices, even if they are safe and proven medical devices, may not be placed on the market after that date. CED warned that, unless the legislator makes urgently needed corrections, the supply of dental medical products will be jeopardised and patients will no longer be able to receive dental care in the tried and tested form. According to surveys from the dental industry, at least for individual companies, up to 35% of the dental product range could be withdrawn from the market. The CED, therefore, calls on the European Commission and competent national ministries of health to accelerate the designation and increase the number of Notified Bodies, keep medical devices that are proven to be safe on the market or consider extending transition periods under the Medical Device Regulation.

CED statement on implementation of Medical Device Regulation

Point 5.3.1 of Annex V to the Professional Qualifications Directive remains obsolete and may soon put patients at risk.

CED delegates noted the publication of the report on "Mapping and assessment of developments for sectoral professions under Directive 2005/36/EC—the profession of dental practitioner" carried out by Spark Legal Network for the European Commission. European dentists have been calling for an update of the list of study subjects contained in the Annex V.3/5.3.1 of the Professional Qualifications Directive for many years and now express their disappointment at the results of the study which do not take into account all recommendations put forward by the CED in their resolution of November 2020. "Annex V is clearly obsolete; it does not use the correct terminology and it does not reflect the concrete skills, competences and knowledge required to keep abreast with the ever-increasing demands of dentistry and oral health care in modern European societies", it says. European dentists, therefore, call on the European Commission to immediately update Annex V.3/5.3.1 of the Professional Qualifications Directive, at least in line with CED proposals. As a minimum, the update of the subjects listed would ensure more up-to-date relevance to current dental education. Failing to act now by the European Commission jeopardises the quality of up-to-date dental education and may soon put patients at risk.

Revised CED resolution on Annex V.3/5.3.1 of Directive 2005/36/EC (PQD)

Recognition of non-EU dental qualifications

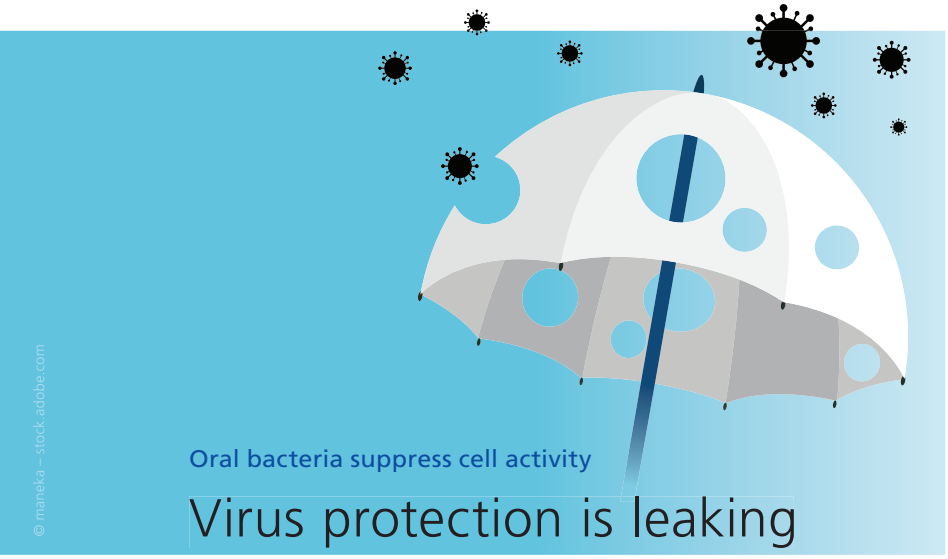
Following reports about legal regulations and administrative procedures in some EU Member States regarding access to the profession of dentists with qualifications obtained outside the EU, CED delegates adopted a statement emphasising that in every case there has to be a recognition procedure carried out which is complete and allows to determine that the qualifications of the dentist are in accordance with the applicable EU requirements.

CED statement on recognition of dental qualifications

About…

The Council of European Dentists (CED) is a European not-for-profit association which represents over 340,000 practising dentists through 33 national dental associations and chambers from 31 European countries. Its key objectives are to promote high standards of oral health care and effective patient-safety centred professional practice across Europe, including through regular contacts with other European organisations and EU institutions.

Europe Ticker +++



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Oral bacteria suppress cell activity

Virus protection is leaking

Researchers from the University of Louisville School of Dentistry and their colleagues have discovered details of how proteins produced by oral epithelial cells protect humans against viruses entering the body through the mouth. They also found that oral bacteria can suppress the activity of these cells, increasing vulnerability to infection.

A family of proteins known as interferon lambdas produced by epithelial cells in the mouth serve to protect humans from viral infection, but the oral bacteria *Porphyromonas gingivalis* reduces the production and effectiveness of those important frontline defenders.

"Our studies identified certain pathogenic bacterial species, *P. gingivalis*, which cause periodontal disease, can completely suppress interferon production and severely enhance susceptibility to viral infection," said Juhi Bagaitkar, assistant professor in the UofL Department of Oral Immunology and Infectious Disease. "These resident oral plaque bacteria play a key role in regulating anti-viral responses."

The mouth often is a gateway into the body for viruses that infect the gastrointestinal tract and lungs such as SARS-CoV-2, human immunodeficiency virus (HIV), herpes simplex and cancer-causing viruses such as human papillomavirus (HPV).

P. gingivalis, a common oral bacterium that causes periodontal disease, has been linked to numerous other diseases, including Alzheimer's disease and rheumatoid arthritis. Recent clinical studies have shown that immune suppression in patients with periodontitis can enhance susceptibility to HIV, herpes simplex and HPV.

Source: University of Louisville, USA

Literature: Carlos J. Rodriguez-Hernandez, Kevin J. Sokoloski, Kendall S. Stocke, Himabindu Dukka, Shunying Jin, Melissa A. Metzler, Konstantin Zaitsev, Boris Shpak, Daonan Shen, Daniel P. Miller, Maxim N. Artyomov, Richard J. Lamont, Juhi Bagaitkar. Microbiome-mediated incapacitation of interferon lambda production in the oral mucosa. Proceedings of the National Academy of Sciences, 2021; 118 (51): e2105170118 DOI: 10.1073/pnas.2105170118

ECDC to provide EU-wide coordination

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Teamwork in health crises

The European Parliament has given final approval for closer cooperation on health threats such as the COVID-19 pandemic at the EU level. At the beginning of October, MEPs endorsed by a large majority a regulation previously agreed between the EU states, according to the Parliament's press service. The EU health authority ECDC will cooperate more closely with the European Commission, national authorities, EU institutions and international organisations. To this end, the European Centre for Disease Prevention and Control (ECDC) is to coordinate the collection and dissemination of data—for example on the infection situation—at the EU level. The European Commission will also be able to formally recognise a public-health emergency at EU level, "This will trigger stronger intra-EU cooperation and allow for the timely development of medical countermeasures and stockpiling of medical supplies." In addition, the ECDC will closely monitor the health care systems of member states in the future. Under the new rules, the agency will assess whether EU countries are able to detect, prevent and respond to disease outbreaks. The ECDC is also to develop health indicators diseases and provide recommendations to member states. The EU member states still have to formally approve the project.

Source: finanzen.net (DE)

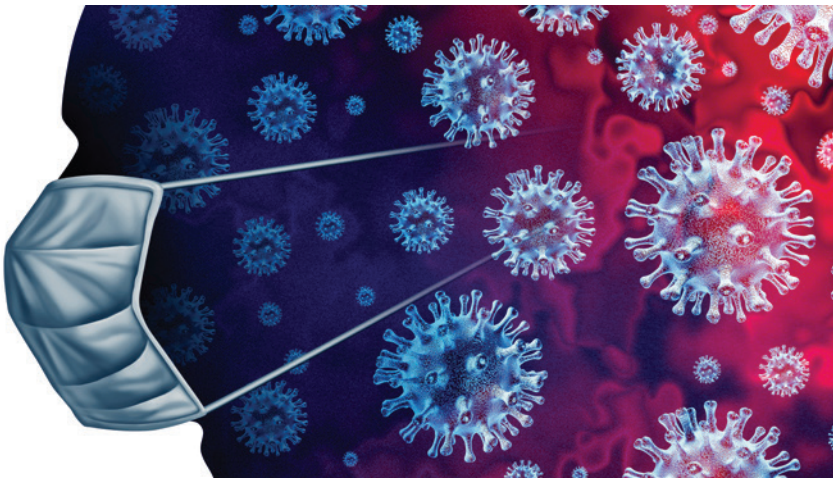
Pilot project in the UK

Pharmacies issue prescriptions

A pilot project by the National Health Service (NHS) will start in England in 2023, allowing pharmacies to issue prescriptions. Officials praised the measure as a "game changer".

Initially, only pharmacies directly affiliated with care centres will participate in the project. "The project is a good opportunity for pharmacists to demonstrate their medical expertise", says David Webb, pharmaceutical director at NHS England. He expects a positive effect for the upcoming negotiations rounds to change the framework for the profession's activities in the coming years. Until then, pharmacists will have to prove that they can help to relieve the general medicine sector of the NHS by providing care for the chronically ill as well as acute and preventive care. All details on the specific implementation of the project are not yet known, so it is still unclear specifically which indication areas will be covered by the service, according to the *Pharmaceutical Journal* (PJ). What is certain, however, is that pharmacists must take continuing education courses to become a so-called "pharmacist independent prescriber". As reported by the German publication *Pharmazeutische Zeitung*, these free courses, of which the NHS will offer around 3,000 starting this autumn, will cover the following: supporting patients from diagnosis to prescribing, counselling and follow-up and preparing pharmacists to provide clinical care. The Pharmaceutical Services Negotiating Committee (PSNC) touted the project as an "NHS commitment to pharmacy workforce development".

Source: The Pharmaceutical Journal (UK); zm



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European Centre for Disease Prevention and Control (ECDC)

Coronavirus update

For mid-November, ECDC reported a continued decline in COVID-19 case rates at the EU level—including among persons 65 years and older and including mortality rates. Hospital and ICU admissions/occupancy had either remained stable or declined. Uptake of the second booster vaccination remains relatively low in most countries and target groups. It remains necessary for ECDC to continue monitoring the epidemiological situation, especially given the increasing share of the BQ.1 variant. The reported EU-wide number of COVID-19 cases in persons aged 65 years and older dropped by 23% from the previous week. The overall reporting rate (for all age groups) decreased by 21%. It should be noted, however, that case projections are considered increasingly unreliable due to changes in testing criteria and reporting procedures. All current forecasts, especially case forecasts, should therefore be treated with caution.

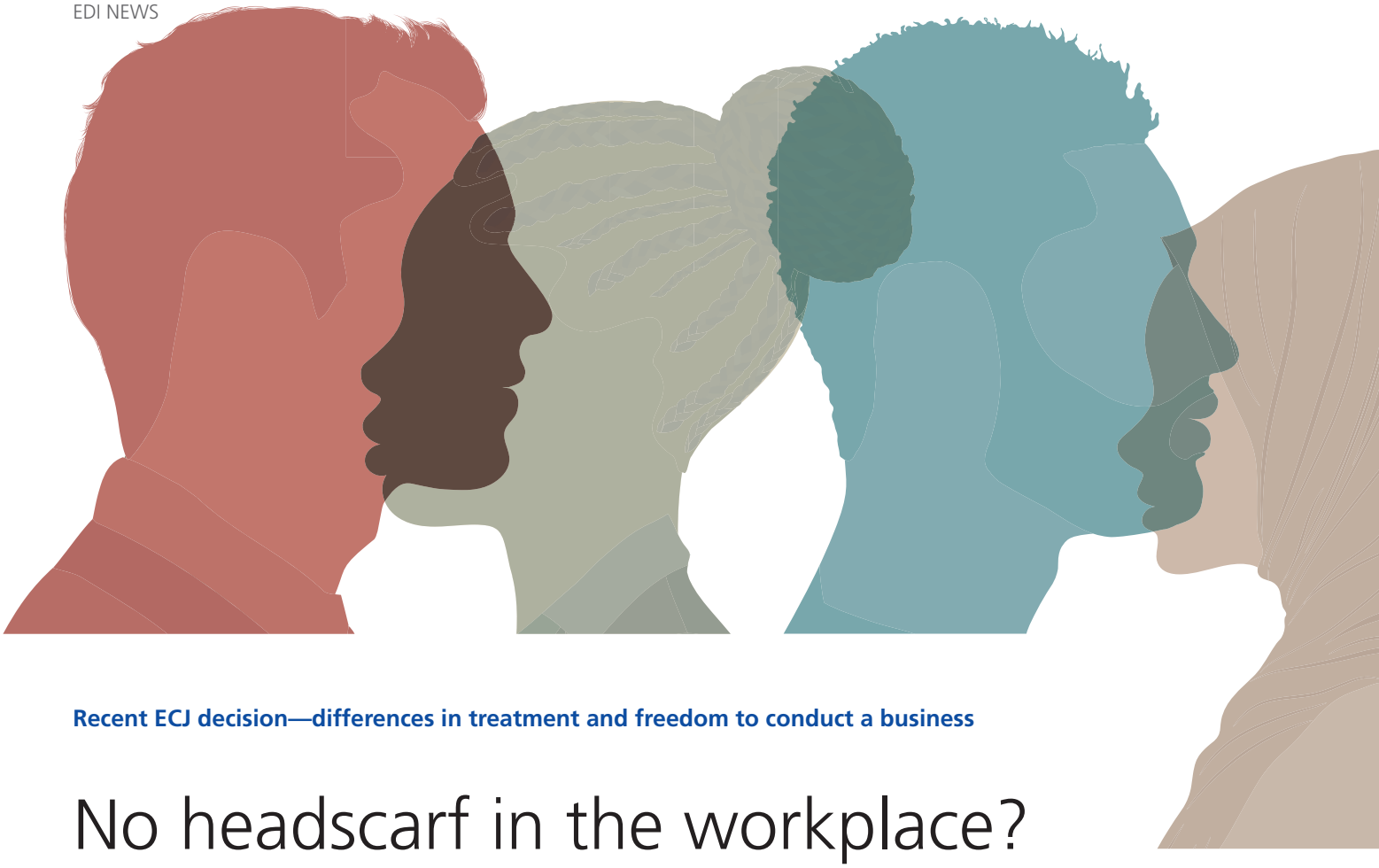
Source: ECDC

Oral Health Foundation UK

Mouth cancer rates hit record high

New cases of mouth cancer in the United Kingdom have risen to a record high, according to the findings of a new report. Figures collected by the Oral Health Foundation show that 8,864 people in the UK were diagnosed with the disease last year, an increase by 34% compared to 10 years ago. The findings are part of the charity's new State of Mouth Cancer UK Report 2022 and have been released to coincide with November's Mouth Cancer Action Month. One in three mouth cancers (33%) are found on the tongue; almost one in four (23%) are discovered on the tonsil. Other locations to check for mouth cancer include the lips, gums, inside of the cheeks, as well as the floor and roof of the mouth. Survival rates for mouth cancer have barely improved in the last 20 years. One of the key reasons behind this is that far too many mouth cancers are diagnosed too late. More than half (53%) of all mouth cancers diagnosed at stage IV—where the cancer is at its most advanced.

Sources: Oral Health Foundation (UK)



Recent ECJ decision—differences in treatment and freedom to conduct a business

No headscarf in the workplace?

An internal company rule prohibiting the wearing of visible signs of religious, philosophical or political beliefs does not constitute direct discrimination if it is applied in a general and undifferentiated way to all employees. This is the synopsis of the Court of Justice of the European Union (ECJ) judgement dated 13 October 2022.

According to the ECJ, "religion" and "belief" must be considered a single ground for discrimination, as otherwise the general framework for the achievement of equal treatment in employment and occupation as provided by Union law—in particular, Council Directive 2000/78—would be compromised.

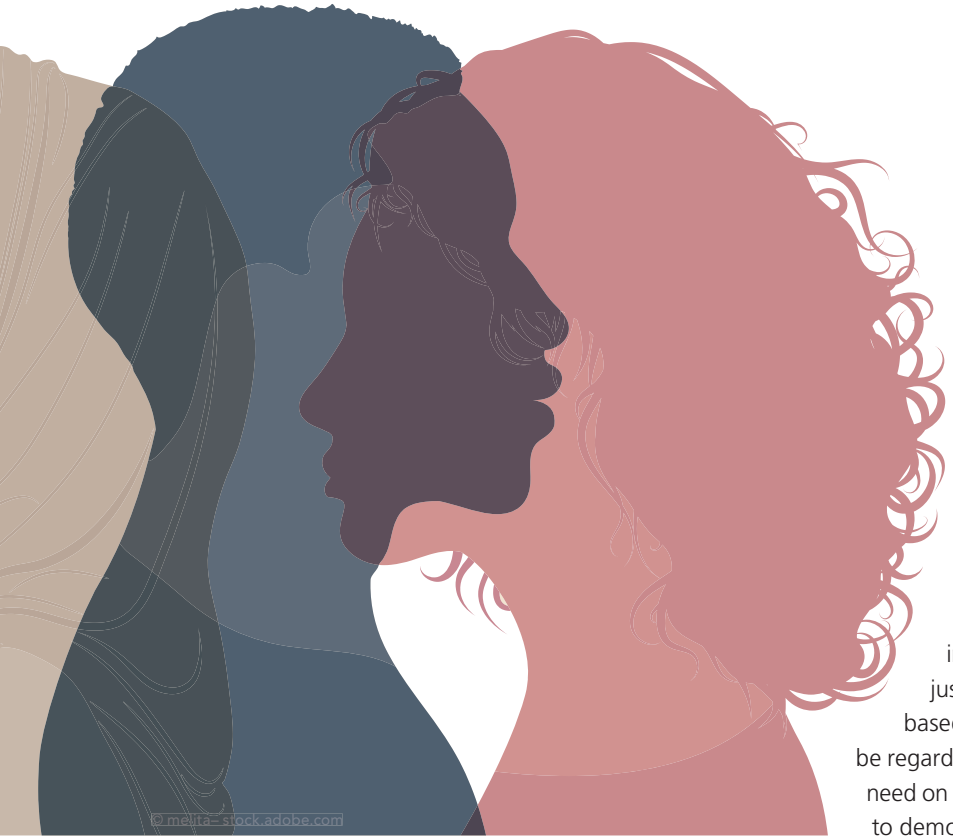
The case

Since 2018, L.F., a Muslim woman who wears the Islamic headscarf, and SCRL, a company that manages public housing, had faced off in a legal battle. This dispute was about the fact that an unsolicited application by L.F. for an internship was not considered because she had stated during an interview that she would refuse to remove her headscarf and comply with the neutrality policy in force at SCRL and laid down in its terms of employment. A few weeks later, L.F. renewed her request for an internship with SCRL and suggested that she wear a different head covering, which she was denied on the ground that no type of head covering was permitted on its premises, be it a cap, a hat, or a headscarf. L.F. then reported a case of discrimination to the independent public body competent to combat discrimination and brought an action for a prohibitory injunction before the (French-speaking) Brussels Labour Court. By that action, she complained that no internship agreement was concluded, which she believed to be directly or indirectly based on religious belief, and sought a declaration that there had been infringement by SCRL of, inter alia, the provisions of the General Anti-discrimination Law.

Discrimination in the workplace?

The Labour Court hearing the action then referred to the ECJ for a preliminary ruling the legal question of whether the terms "religion or... belief" used in Council Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation[1] were to be regarded as two facets of a single protected characteristic or rather as two different characteristics.

In addition, the Labour Court asked the ECJ whether the prohibition to wear a visible sign or an item of clothing with connotations as laid down in SCRL's terms of employment, constitutes direct discrimination on the ground of religion.



In its judgement the ECJ Court of Justice of the European Union states that Article 1 of Directive 2000/78 must be interpreted as meaning the words "religion or... belief" contained therein must be interpreted as constituting a single ground of discrimination, covering both religious belief and philosophical or spiritual belief. The ECJ points out that the ground of discrimination based on "religion or belief" is to be distinguished from the ground based on "political or any other opinion".

With specific reference to the judgements the in G4S Secure Solutions case[2] and in the Wabe and MH Müller Handel case[3], the ECJ states that an internal rule of a private enterprise prohibiting the employees from expressing their political, philosophical or religious beliefs, whatever they may be, by words, clothing or otherwise, does not constitute direct discrimination "on grounds of religion or belief" within the meaning of Union law, provided that it is applied in a general and undifferentiated way.

Since every person may have a religion or religious, philosophical or spiritual belief, such a rule, provided that it is applied in a general and undifferentiated way, does not establish a difference in treatment based on a criterion that is inextricably linked to religion or to those beliefs.

The Court also stated that an internal rule such as that used by SCRL may constitute a difference in treatment that is indirectly based on religion or belief if it is established—which is for the referring court to ascertain—that the apparently neutral obligation it encompasses results, in fact, in persons adhering to a particular religion or belief being put at a particular disadvantage.

In addition, such a difference in treatment would nonetheless not constitute indirect discrimination if it were objectively justified by a legitimate aim and the means of achieving that aim were appropriate and necessary. However, the mere desire of an employer to pursue a policy of neutrality—while in itself a legitimate aim—is not sufficient, as such to justify objectively a difference in treatment indirectly based on religion or belief, since such a justification can be regarded as being objective only where there is a genuine need on the part of that employer, which is for that employer to demonstrate.

Finally, the ECJ stated that union law does not preclude a national court from ascribing, in the context of balancing diverging interests, greater importance to those relating to religion or belief than to those resulting from, inter alia, the freedom to conduct a business, provided that such an approach stems from its domestic law.

The degree of discretion afforded to the member states cannot go so far as to enable those states or their national courts to split one of the grounds of discrimination exhaustively listed in Article 1 of Directive 2000/78 into several grounds, as this would call into question the wording, the context and the intended purpose of that ground and undermine the effectiveness of the general framework for equal treatment in employment and occupation.

RED

[1] OJ 2000, L 303, p. 16

[2] ECJ judgement of 14 March 2017, G4S Secure Solutions, C-157/15

[3] ECJ judgement of 15 July 2021, WABE and MH Müller Handel, C-804/18 and C-341/19

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.

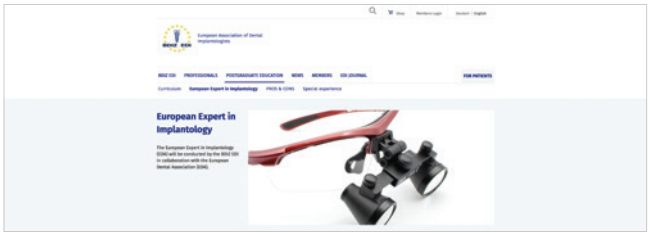
That quality is of paramount importance to BDIZ EDI is no secret. BDIZ EDI has demonstrated this in many different areas – legal and accounting, materials testing, postgraduate education, the annual Guidelines of the European Consensus Conference (EuCC) on current implantological issues and finally the 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-organized 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-recognized 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 (eg 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 recognized 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 recognized, 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.

AWU

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.

Applicant's address:

Full name: .....

Full address: .....

.....

.....

E-mail: ..... Date: .....

Forward by mail or fax to:

European Association of Dental Implantologists (BDIZ EDI)
Mühlenstr. 18
51143 Köln
Germany

office@bdizedi.org
Fax: +49 2203 9168822

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.

31st International Expert Symposium for Regenerative Procedures in Dentistry

Record attendance on Fuerteventura

The well over 300 participants who had come to Fuerteventura this year witnessed a firework display of innovations: a record number of participants, a record number of exhibitors and more presenters than ever before.

Preparation for the workshop: Prof. Jörg Neugebauer.

The 31st International Expert Symposium for Regenerative Procedures in Dentistry addressed the topic of implant treatments in difficult situations. The broad diversity of lectures offered attracted repeat and new participants to Club Esquinzo Playa on Fuerteventura. Host Prof. Joachim E. Zöller knows how to set up a persuasive programme. Once again this year we enjoyed a top-class scientific programme with broad perspectives, in addition to the numerous workshops and an extensive social programme with lots of sports and leisure activities.

Art and dentistry

Henriette Reker, the Lord Mayor of the city of Cologne, presented aspects her city and the state of North Rhine-Westphalia as a centre for the health care field offer. The programme was not restricted to implantological topics. For example, Prof. Axel Karenberg and Kerstin Klemm from the University of Cologne, allowed their listeners to catch a glimpse of the dentist as represented in 20th-century art. A similar presentation by Prof. Marc Schipper and Armin Lühder from Bremen addressed the role of art in the context of health, presenting findings from psychology and neuroscience on the salutogenetic potential of art.

Countless visitors at the scientific programme.

The lectures were not exclusively focused on implantology (-based) topics.

Implantology and beyond

With regard to implantology, presentations highlighted the 2022 Cologne ABC Risk Score (Prof. Hans-Joachim Nickenig, Cologne), high-end immediate implant placement (Prof. Garbot Tepper, Vienna), artificial intelligence in implantology (Dr Volker Knorr, Eislingen), factors determining long-term success (Dr Ralf Masur, Bad Wörishofen)—all of that just on the first day of the symposium. Thus, from Saturday to Wednesday, a daily programme with scientific lectures and interesting innovations in the field of dental billing awaited participants. For example, BDIZ EDI President Christian Berger presented the concept of "analogue billing" as applied to the periodontology guideline ("PAR-Richtlinie") within the German standard fee schedule for private patients. In addition, new diagnostic apps were presented, strategies for successful practice succession were discussed (Dr Freimut Vizethum, Rauenberg), as was the topic of "dental tourism" in Europe (Dr Klaus Ständer, Traunreut). From Saturday to Wednesday, there were lectures until 1 p.m., followed by sports activities, followed in the afternoon by a choice of workshops. Thursday was a workshop-only day, ending with the highlight of the training week, the White BBQ evening. Prof. Joachim E. Zöller once again poured out a cornucopia of topics on the participants, emphasizing many innovative aspects. This one-week continuing-education event under the Canarian sun is growing bigger and more popular every year!

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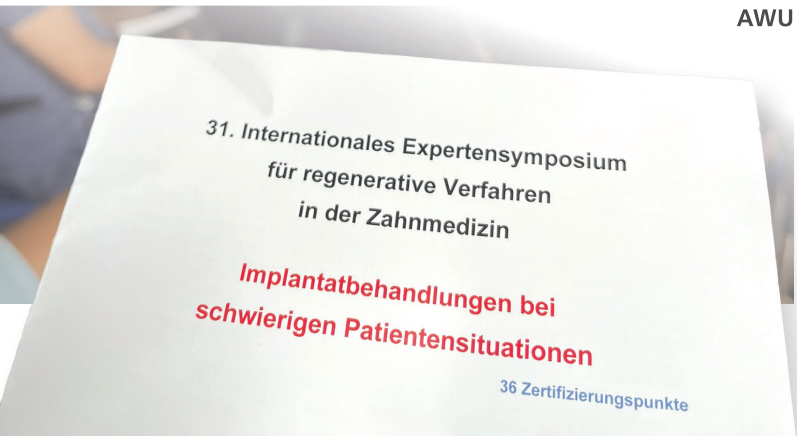
Workshops deepened the knowledge gained in the morning.

The White Night is tradition in Fuerteventura.



Czech-Bavarian-Saxon-Austrian dental symposium with BDIZ EDI

Looking back: 15th European Symposium in Karlovy Vary

BDIZ EDI was one of the cooperating partners of the Czech-Bavarian-Saxon-Austrian dental symposium, which took place in Karlovy Vary (Czechia) in May 2022. Prof. Joachim E. Zöller, Vice President BDIZ EDI, represented the association as a presenter.

Owing to the COVID-19 pandemic, this event, hosted by the dental chambers, could not take place these past two years. Then, in May 2022, the window of opportunity finally opened. The venue was the venerable Czech city of Karlovy Vary (sometimes called Carlsbad in English). This old Austro-Hungarian-style spa in the north-west of Czechia provided a worthy backdrop for the symposium at the Grandhotel Pupp.

In terms of professional policy, a major goal was to share information about the different systems for billing dental services. It transpired that the Austrian system of basic services being covered by social health insurance, combined with a predominantly private sector, differs significantly from the German and Czech systems.

During the ceremony, the Presidents introduced their respective chambers: Roman Šmucler, docent, MUDr, CSc, President of the Czech Dental Chamber (ČSK); Christian Berger, President of the Bavarian Chamber of Dentists (BLZK); Klaus W. Böning, Professor, Dr med. dent., Vice President of the Saxon Chamber of Dentists (LZKS); and Sven Orechovsky, MR, Dr med. dent., member of the board of the Austrian Dental Chamber (ÖZÄK).

The two-day congress provided opportunities to discuss issues arising from bilateral cooperations. But the symposium also offered instructive and exciting presentations delivered by speakers from all participating countries. The two BDIZ EDI Presidents also held presentations. Overall, the scientific programme covered modern implantology, periodontal therapy in the different countries, laser treatment, botulinum toxin in modern dentistry and facial surgery, auto-transplantation of teeth and artificial intelligence.

Continuing professional development

BDIZ EDI Vice President Prof. Joachim E. Zöller gave a lecture on implant surgery. One of the most important prerequisites for successful implant-prosthetic rehabilitations is patient-oriented implant surgery, he said, citing accurate diagnostics and planning

Introducing the boards Presidents at the start of the joint dentists` day, including: Christian Berger for the BLZK.

BDIZ EDI Vice President Prof. Dr Dr Joachim Zöller during his presentation on the Cologne CCARD.

Also in presence for the BDIZ EDI: Dr Wolfgang Neumann and Dr Stefan Liepe.

that take into account patient expectations. The surgical measures that Zöller included in his presentation were bone augmentation in patients with an insufficient bone supply, navigated implant placement and periodontal surgery. Recent years have seen the development of a number of novel procedures. Zöller also discussed differential indications for the various augmentation procedures to achieve high success rates. The augmentation procedure to be performed, he said, should be selected primarily on the basis of the size and geometry of the defect.

For this purpose, BDIZ EDI has developed a simple, therapy-oriented defect classification for standard cases in a guideline from 2013, which provide suitable recommendations, based on examples, for established therapeutic procedures for the respective defect class. The associated risks are also highlighted. Furthermore, in addition to template-guided implant placement, Zöller also presented the soft-tissue techniques necessary to create sufficient attached gingiva.

The chamber Presidents from Bavaria, Saxony, Czechia and Austria were so pleased with the outcome of the event that they expressed their intention to repeat it. The search for a suitable date is already in full swing.

EB

View over Carlsbad.

16th European Symposium of BDIZ EDI and Giornate Veronesi

Implantology and modern dentistry

Oral implantology and modern dentistry will be on the agenda in Valpolicella (Italy) on 16 and 17 June 2023. In cooperation with the 16th European Symposium of BDIZ EDI, the Giornate Veronesi—under the Italian sun, so to speak—will offer top-class scientific lectures, seminars and table clinics as well as a comprehensive supporting programme.

Entrance to the VILLA QUARANTA TOMMASI WINE HOTEL & SPA in Valpolicella/ Italy.

Like speed dating: the format of workshops.

Beautiful surroundings to relax in the evening.

When it is cold, dark and grey in winter, it is time to think about the sun of Italy and a training event with that special Italian flair—the Giornate Veronesi (Verona Days).

Convening at the VILLA QUARANTA TOMMASI WINE HOTEL & SPA in Valpolicella (Italy), dentists and their teams will enjoy a unique opportunity to combine business with pleasure. The scientific programme will cover a broad array of subjects. In addition to oral implantology, the focal topic, general dentistry issues will be addressed throughput, and there will be an interesting programme for the dental team. The language of the Symposium will be German.

The Giornate Veronesi will offer plenty of room for discussions with presenters and an exchange of views with other professionals. In addition to the technical programme, the Friday get-together and the Saturday dinner party with wine and music will provide ample opportunity for this. Since the event will take place at the famous winery of the Tommasi family, it feels natural to offer congress participants the chance to attend a wine seminar where they will receive "expert" training in the oenological field.

The BDIZ EDI approach

"Small opportunities are often the beginning of great enterprises." This quote from Demosthenes has been characteristic of the history of BDIZ EDI's European Symposia. Humble beginnings and spurious opportunities have been consolidated into a comprehensive approach that allows communities of dentists to transcend national borders. With its cooperation partner OEMUS MEDIA AG, BDIZ EDI now presents its 16th European Symposium, showing once again how oral implantologists from different countries can mutually benefit from their assembled knowledge.

RED

More information...

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New crestal bone formation thanks to a microstructured back-taper concept

Prof. Dr Jörg Neugebauer, Dr Steffen Kistler, Dr Ingo Frank, Dr Jacqueline Meier, MDT Siegfried Weiß, Dr Frank Kistler & Prof. Günter Dhom, Germany

Implant design is constantly evolving to optimise success rates and to minimise risks. However, not all new developments provide only extra benefits; some changes to implant systems may also have unfavourable effects. Achieving a long-term stable and risk-free peri-implant hard- and soft-tissue situation must therefore build on different factors in symbiosis, especially in the transitional region from bone to soft tissue.

The long-term success of endosseous implants depends on a stable peri-implant bone level. In recent decades, approaches to implant design in the crestal area have changed significantly.[22] In the beginnings of oral implantology, the assumption had been that a transgingival design—with the abutment connection situated at a distance from the bone level—would be advantageous. Today we know that the microstructured implant surface is essential for osseointegration and for a stable bone level.[7,26] Consequently, the polished regions at the edge on the implant were progressively reduced and the rough region extended, depending on the design of the implant–abutment connection.

Systems with a rough surface as initially presented were viewed critically. It was thought that they increased the peri-implantitis risk, as a rough surface was seen as a predictive factor for microbiological colonisation.[3] However, it has been demonstrated that the risk of peri-implantitis is not determined by the roughness of the surface alone but also by its three-dimensional structure. Thus, implants with a subtractively modified surface (by sandblasting or sandblasting plus etching) are associated with fewer biological complications than implants with an additively modified surface (by coating or anodising).[1,9]

New scientific insights into the process osseointegration have led to improvements in implant surfaces, as it was recognised that microstructuring improves bone healing. The mechanistic principle that long and large-volume implants are more favourable for long-term success was abandoned as a result. Healing times are no longer differentiated by implant location (maxilla or mandible); the relevant aspect is the stability of the implant in its bone bed.

Over the years, it has also become apparent that connective tissue has different requirements in terms of microstructure in contact with the implant surface or with the bone. Bone cells require a three-dimensional, micro- and nanoporous microstructure, while the subepithelial soft tissue requires a two-dimensional rough microstructure for adhesion. However, bone can also attach to this merely two-dimensional microstructured surface, because osteoblast extensions can attach to the insides of the pores. On the other hand, the subepithelial connective tissue requires a rougher structure for adhesion than the epithelium. In addition to the potentially less pronounced bone apposition to a smooth implant surface, this also results in deep epithelial growth, so deeper pockets of peri-implant soft tissue are observed in implants with a partially polished surface, especially when placed epicrestally or even subcrestally.

Self-tapping implants placed in bone prepare to take account of specific bone density can also shorten the osseointegration time from the classic three to four months even in a cancellous

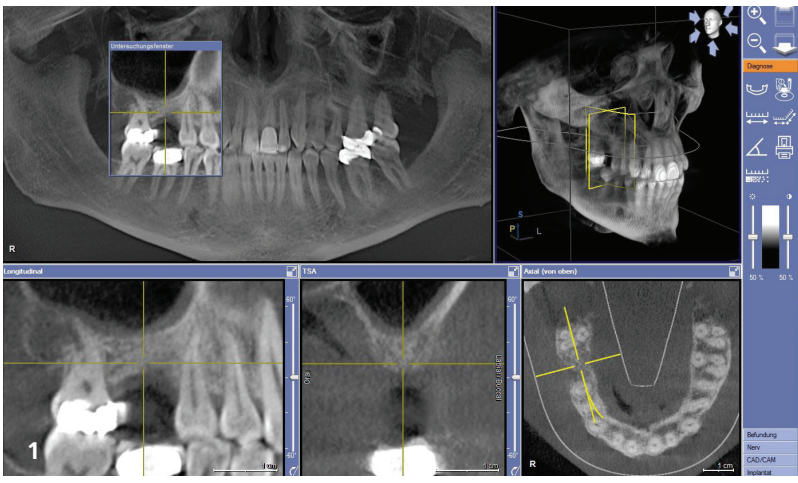
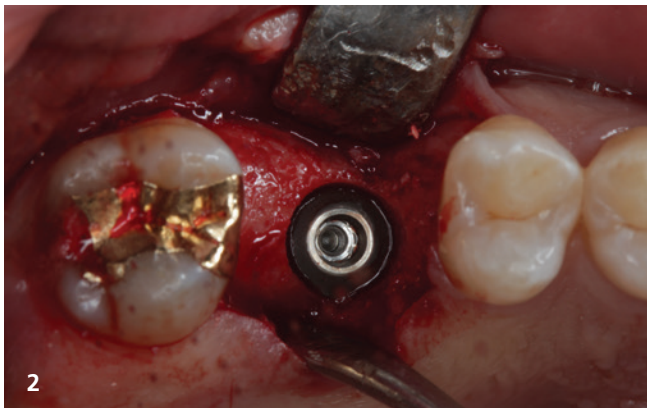


Fig. 1: CBCT for preoperative determination of the qualitative and quantitative bone supply.



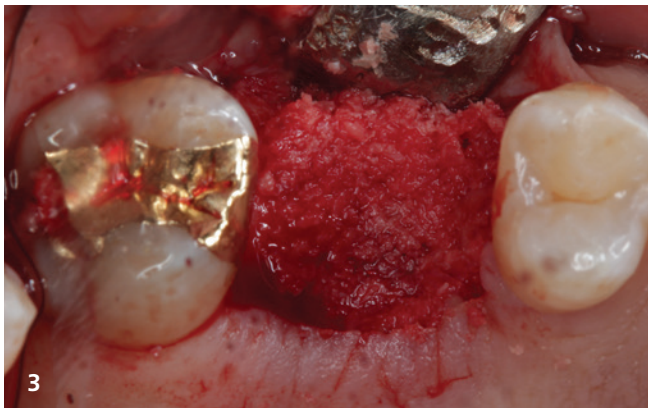


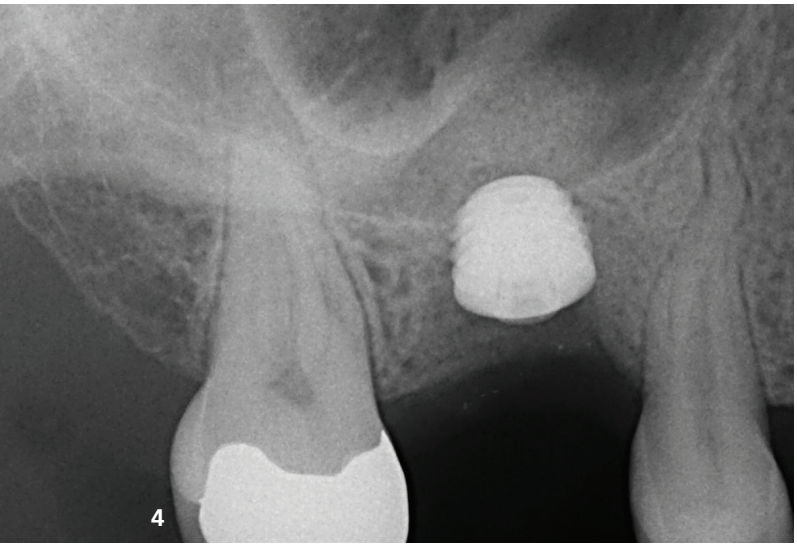
Fig. 2: Subcrestal positioning of the short implant (copaSky, diameter 5 mm, length 5.2 mm; bredent medical). **Fig. 3:** Layering bone chips (collected while the implant bed was prepared) in the open space of the implant site.

bone bed.[20] These considerations are also reflected in the positive results obtained with reduced-diameter or short or ultrashort implants. Various studies have shown that this contemporary implant design is no longer associated with any loss of stability after two to four weeks, as was postulated previously in the literature, thereby facilitating immediate restoration, which turn itself accelerates remodelling and results in more stable osseointegration. Since this approach also reduces the trauma to the gingival attachment previous scene after multiple exchanges of prosthetic components, the peri-implant bone level can be expected to be more stable.[24]

With the development of the tapered implant–abutment connection as an alternative to the conventional internal plug-in connection geometry, the so-called platform switch was promoted with a view to achieving a more stable bone level.[13] However, the underlying animal studies conducted at that time were still performed with cylindrical implants with a 90° angle and a machined margin, which were placed epicrestally.[19,25] Depending on the implant design, the combination of these different factors led to contradictory results, which gave rise to vivid discussions in the field. The sole advantage of the platform switch was assumed to be the smaller-diameter emergence profile of the abutment–superstructure. Two effects are evident here. For one, the soft tissue is attached to the upper margin of the implant, so that the attached epithelium is not detached if the soft tissue is compressed by a slipping bolus. Another advantage is that more soft tissue can form above the level of the bone, with the stronger soft tissue thought to lead to increased vascularisation.[8,12]

The dynamics of the masticatory forces result in high loads on the implant–abutment connection and the implant neck. Particularly in implant systems with an internal anti-rotational feature and a conical connection, sufficiently thick walls must be present in the crestal region to ensure the stability of the implant.[13] Often this will result in a ledge or a less pronounced thread. In addition, atrophy usually manifests itself in terms of crestal ridge becoming significantly narrower, requiring bone augmentation to obtain a sufficient bony implant bed.

In platform-switching implants, however, right-angled or even projecting sharp-edged crestal designs provide no advantage in terms of the stability of the implant body, since the outer aspects



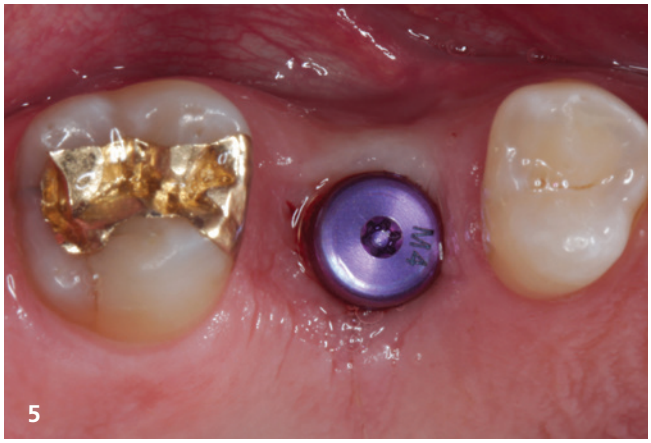


Fig. 4: Radiographic control of the minimally invasive internal sinus floor elevation. **Fig. 5:** Non-irritated soft tissue two weeks after exposure. Deep implant position.

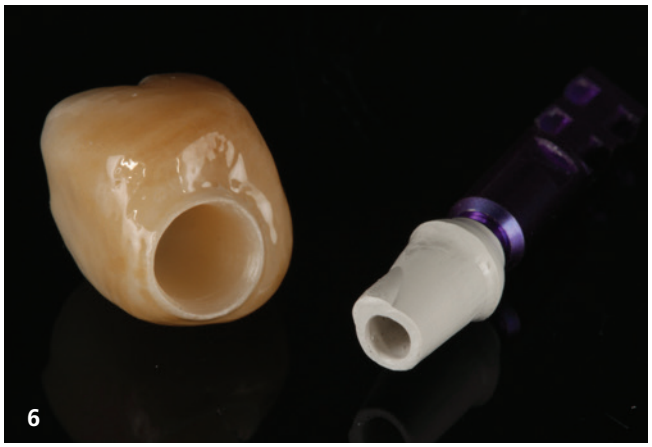


Fig. 6: Fabrication of a zirconia crown on a prefabricated high-performance polymer abutment (Sky elegance; bredent medical). **Fig. 7:** Bonded hybrid crown with ideally configured emergence profile.

of the implant are not additionally loaded when lateral forces are applied. Moreover, this requires an even greater width of the horizontal bone. When small implant diameters are associated sharp-edged implant design, masticatory forces can even create pressure on the cortical bone, which usually leads to its resorption.[21]

If the implant neck is tapered, the mechanical stability of the implant body is not or only insignificantly affected, while the amount of friction to the local bone is reduced. This effect can become more pronounced as the diameter increases, allowing bone chips to be deposited on the so-called back-taper zone to supporting osseointegration.[6]

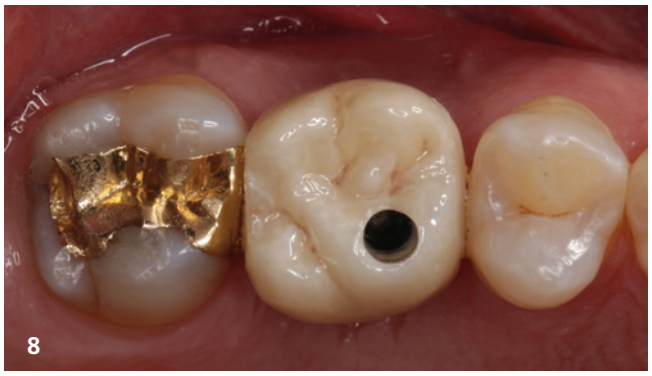
Since the surface structure is of great importance for the attachment of the subepithelial connective tissue and bone. In the transition zone, the back-taper zone should feature a rough, fine-pored structure, best be achieved by acid-etching.[11] Thus, depending on the position of the implant, there is a possibility that not only can the soft tissue attach to the back-taper zone but even new bone may form on it.[12] Thanks to this newly formed bone—especially in the case of a sloping alveolar ridge—will make any levelling of the bone to create a plateau unnecessary; all vertical portions of the alveolar ridge are preserved.

A multicentre study showed that when positioning a back-taper implant, care must be taken to ensure that the start of the back-taper zone is positioned subcrestally to allow a stable apposition of bone chips.[17] In a comparative study of 48 implants with a follow-up of up to 3.3 years, bone growth of 0.8 ± 0.851 mm was observed across all implants if the implants met this requirement. Implants in which the microstructured back-taper zone was positioned above the marginal bone level showed a slight bone resorption of 0.3 ± 0.626 mm, which is common for standard implants.[4]

Individual subcrestal positioning must be taken into account in implant planning and implant selection, as this position results in the implants being placed closer to the anatomically relevant structures than in epicrestal positioning.[15] If a system with drill stops is used, a shorter stop must be used so that the implant can be inserted deeper into the bone. In practical terms, this means that a drill stop for a 12 mm implant is used to place a 10 mm implant. This allows the starting point of the back-taper zone to be placed slightly subcrestally in the correct position.[5]

Discussion

Dental implants have evolved significantly over the past 50 years and have become very dependable in their application. However, since some less-than-ideal outcomes continue to be seen, various concepts for optimising the transgingival im-



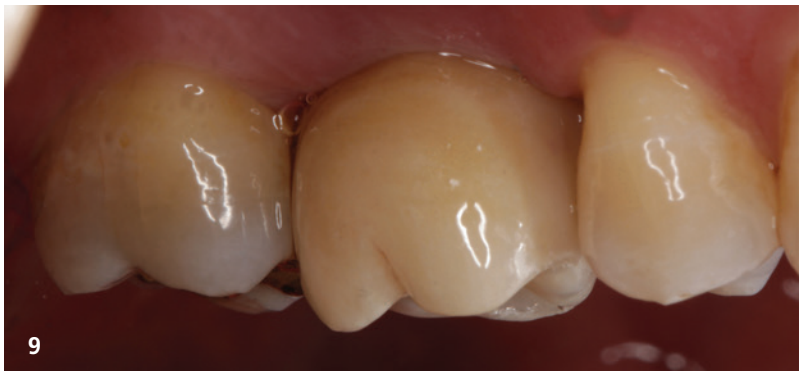
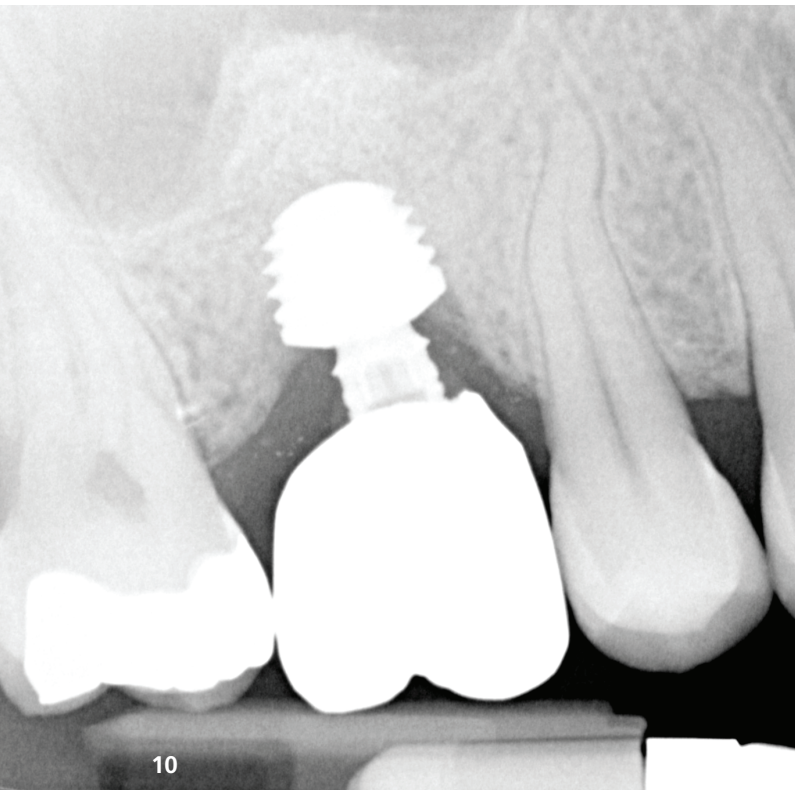


Fig. 8: Inserted abutment crown prior to closing the screw channel. **Fig. 9:** Inserted abutment crown with a peri-implant sulcus shaped with the help of zirconia ceramics.



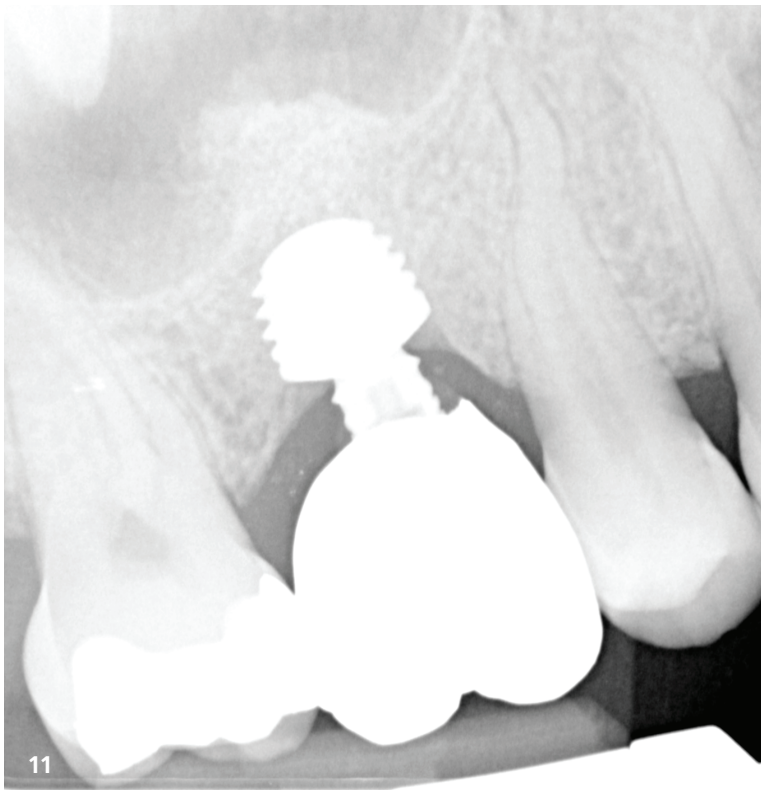


Fig. 10: Control radiograph of the inserted crown. Further consolidation of the bone bed thanks to the internal sinus floor procedure. **Fig. 11:** Follow-up 4.8 years after restoration. Bone has formed on the upper edge of the back-taper zone.

plant design have been pursued in the past.[18] However, a new design invariably changes other features of the product, and this can and will pose new problems. For example, implants developed for use on a sloping alveolar ridge typically exhibit a one- or two-sided bevel or so-called scalloped neck design.[16,23]

Such implants have been difficult to insert in the proper position due to their thread pitch. To compensate for this problem, a fine thread pitch was used in these systems, but the space within the thread flanks was too small and do not allow the incorporation of a functional bone structure complete with newly formed Haversian canals for the nourishment of the osteons.[2]

Therefore, in addition to the neck area, the thread profile is also relevant, especially for short implants. On the other hand, neither must the thread profile be too pronounced, because that would inhibit the success of peri-implantitis therapy because the granulation tissue can no longer be removed.[14]

Clinical relevance

New developments and improvements are still important in implantology today. They can optimise treatment outcomes if the results of clinical experience and scientific studies are implemented in a clinically relevant way to guide the design of implants and their surgical and restorative application. As clinical experience and initial scientific results show, a microstructured back-taper zone in combination with subcrestal implant placement seems not only to prevent bone resorption but even to achieve new bone forming around the implant.[17] However, these results need to be confirmed in further scientific studies.

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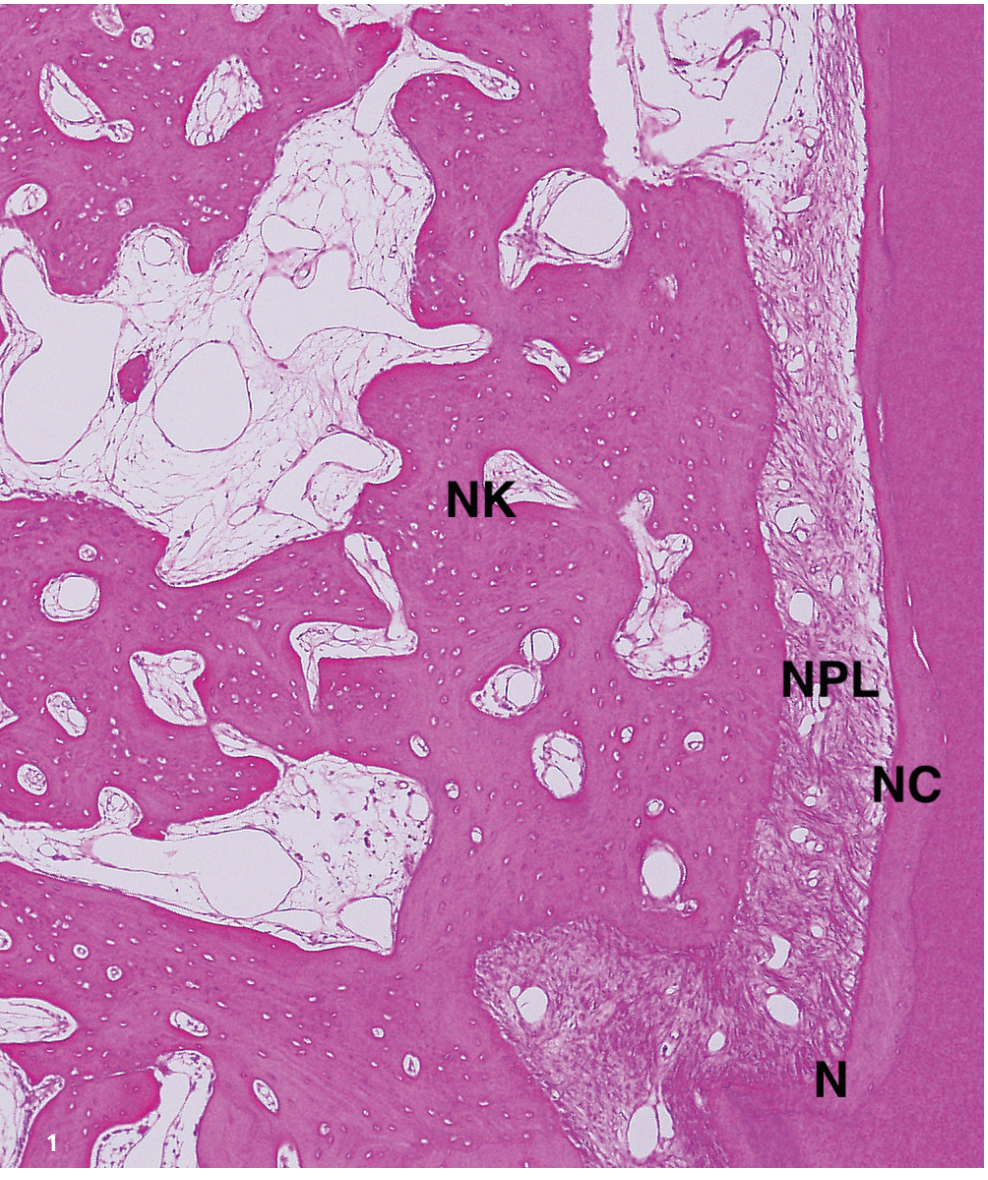
Literature

Use of hyaluronic acid in reconstructive periodontal surgery

Prof. Dr med. dent., Dr h.c. mult. Anton Sculean, MS, Switzerland

Reconstructive periodontal therapy encompasses all treatment methods that facilitate the predictable regeneration of tooth-bearing structures (i.e. the root cementum, the periodontal ligament and the alveolar bone). Recent results from preclinical and clinical studies have indicated that the auxiliary application of hyaluronic acid in periodontal surgery has a beneficial influence on wound healing and promotes the regeneration of periodontal structures. This article briefly summarises the most important findings on the use of hyaluronic acid in reconstructive periodontal surgery.

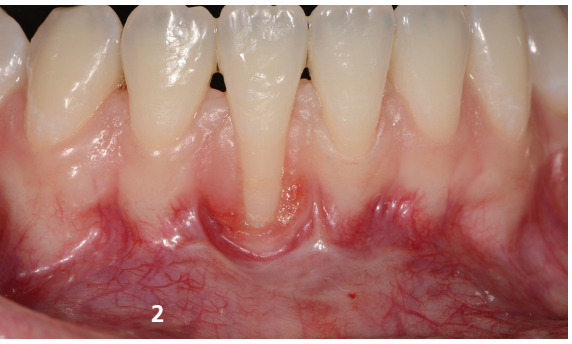


Scientific background

Hyaluronic acid is an anionic, non-sulphated glycosaminoglycan (GAG) that is found in virtually all tissues. It plays a key role in wound healing. Recent results from cell-culture studies have shown that hyaluronic acid is highly biocompatible, promotes the proliferation and migration of periodontal and gingival fibroblasts, positively influences angiogenesis, and stabilises the blood clot.[1] Histological data from preclinical studies have provided evidence that the use of a cross-linked hyaluronic acid in the surgical treatment of intrabony and recession defects promotes the regeneration of the periodontal ligament, root cementum and bone (Fig. 1).[6,7]

More recently, a positive effect of cross-linked hyaluronic acid in class III furcations has been demonstrated, although complete regeneration (i.e. complete closure of the defect) was not achieved.[8]

Fig. 1: The histological image shows the regeneration of periodontal structures in an intrabony defect after treatment with a cross-linked hyaluronic acid (HyaDENT BG; *REGEDENT*). N: Notch showing the deepest point of the defect during the surgical procedure. NC: new root cementum. NPL: new periodontal ligament. NB: new bone.



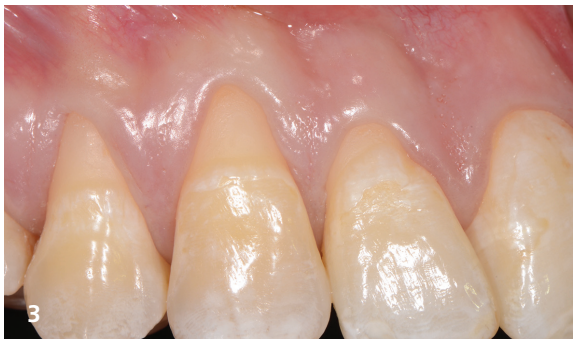
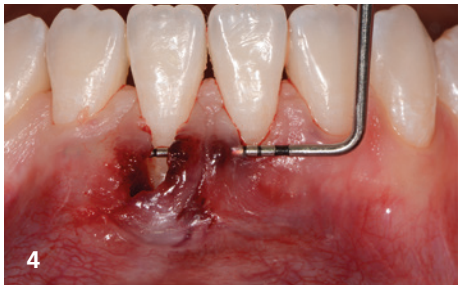


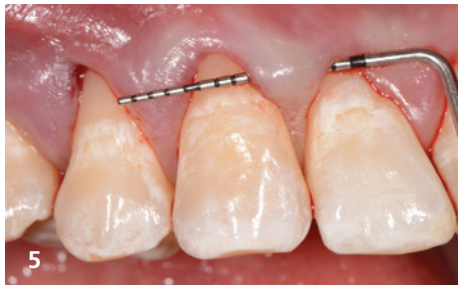
Fig. 2: Deep class II recession in the anterior mandible. Pronounced gingivitis and loss of height of the interdental papilla. **Fig. 3:** Multiple class I recessions in the anterior maxilla compromise the aesthetic appearance.

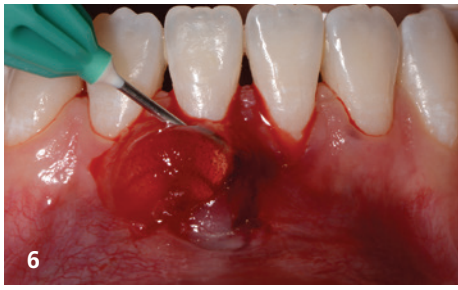
Clinical applications

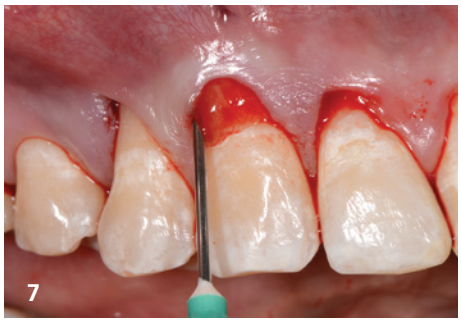
Due to the previously mentioned biological properties, cross-linked hyaluronic acid (HyaDENT BG; *REGEDENT*) has been applied in reconstructive periodontal surgery of intrabony defects and of singular and multiple recessions.[2–5] For example, applying a cross-linked hyaluronic acid in the reconstructive periodontal surgery of intrabony defects and class I recessions resulted in significantly reduced probing depths, clinical attachment gains and recession coverage.[4,5] A randomised clinical trial has shown that the treatment of Miller class I recessions with a coronally advanced flap in combination with the application of hyaluronic acid resulted in a greater reduction in recession depths and more frequent complete recession coverage than the application of the coronally advanced flap alone.[4]

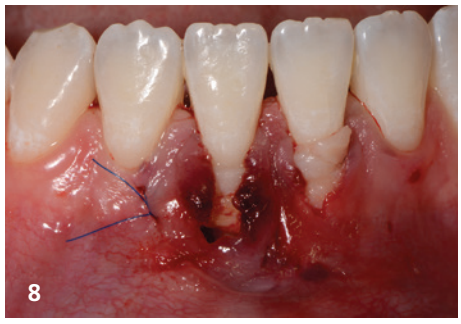
In patients with a thin gingival phenotype, more advanced recessions and pre-existing interproximal bone loss, a combination of hyaluronic acid (HyaDENT BG; *REGEDENT*) with a subepithelial palatal

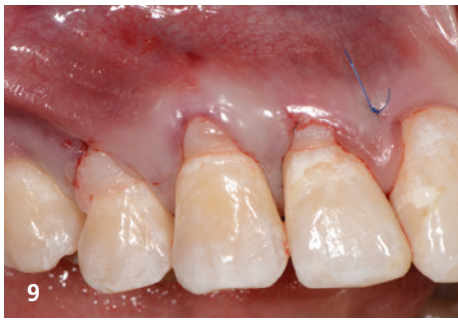


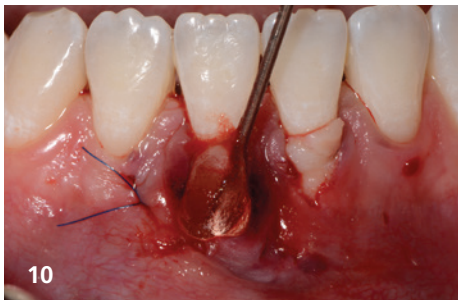


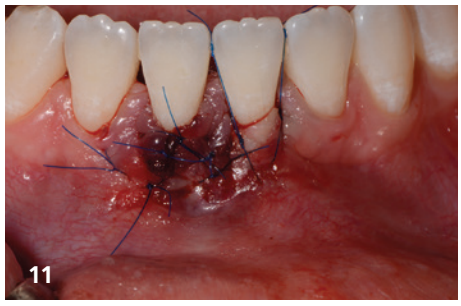












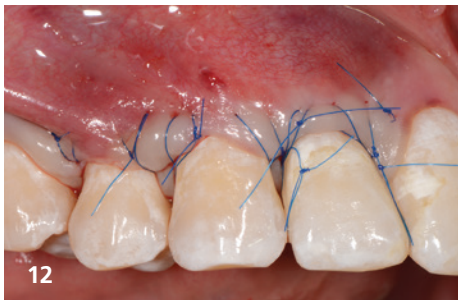
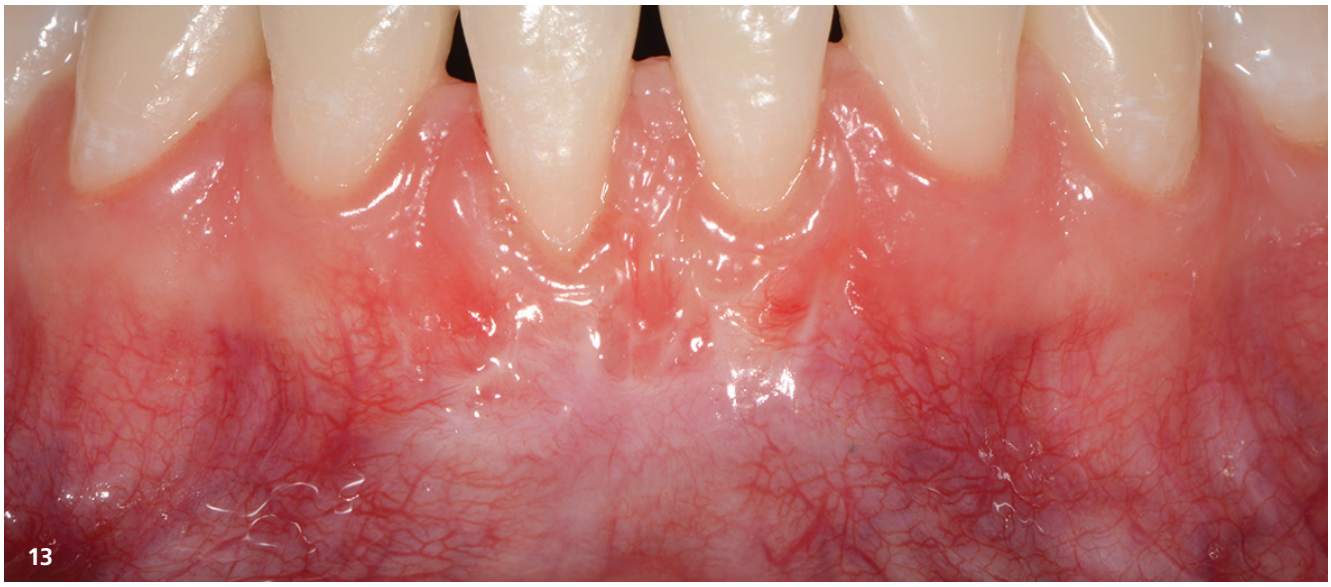


Fig. 4: Prepared tunnel at sites 41 and 31. **Fig. 5:** Prepared tunnel at sites 14 to 11. **Figs. 6 & 7:** Application of cross-linked hyaluronic acid on the root surface and inside the defect. **Figs. 8 & 9:** SBGT secured to the cervical regions with sling sutures. **Fig. 10:** EA second layer of cross-linked hyaluronic acid applied to the SBGT. **Fig. 11:** Laterally closed tunnel at site 41. **Fig. 12:** Coronally mobilised and closed tunnel at sites 14 to 12.



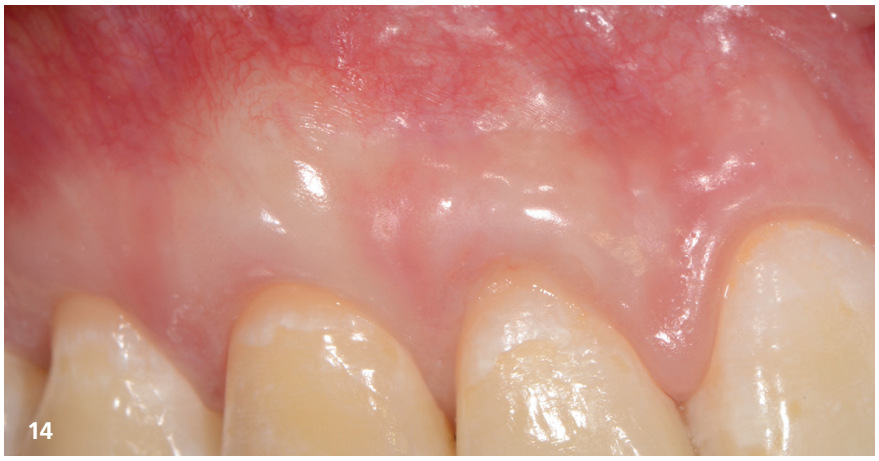


Fig. 13: One year after treatment. The recession is almost completely covered. The gain of attached gingiva makes oral hygiene significantly more effective. **Fig. 14:** One year after treatment. Complete coverage of the maxillary recessions and improved aesthetic appearance.

connective-tissue graft (SBGT) in the context of different variants of the tunnelling technique seems to provide results that had been difficult to achieve until quite recently.[2,3]

Since more severe bleeding can occur in these clinical situations due to the more extensive preparation of the tunnel, the application of hyaluronic acid stabilises the blood clot and exerts a positive influence on wound healing (Figs. 2–14). Two recently published case studies have demonstrated that the combination of hyaluronic acid and an SBGT with different variants of the tunnel technique resulted in complication-free healing and excellent coverage of single and multiple recessions in the maxilla and mandible (Figs. 13 & 14).[2,3]

Conclusion

Existing scientific and clinical evidence shows that the use of cross-linked hyaluronic acid promotes periodontal wound healing and regeneration, opening new possibilities in reconstructive periodontal surgery.

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Restoration using minimally invasive techniques

Severe bone atrophy of the maxilla and mandible

Dr Eduardo Anitua, Spain

Nowadays, dental implants are a highly predictable technique for the restoration of vertical and horizontal bone atrophies, both complex and simple, and for the replacement of single or multiple teeth, whether to support, crowns, bridges or complete dentures.[1–3] Thanks to the advances in the development of implants, versatile solutions can be found to address the various clinical situations that may arise, which can then be managed with great efficiency and with fewer complicated operations and less morbidity.[4,5] This means that an increasing number of patients can benefit from this type of treatment, and indeed the number of patients with dental implants continues to grow every day.[5]

As with all restorative procedures, implant failures do occur, for mechanical reasons (fracture of various components or of the implant itself) and, mainly, owing to infection (peri-implantitis).[6,7] In most cases when implant treatment has failed in a patient, the bone defect caused either by the removal of the implant or by a previous infection increases the complexity of the attempted retreatment of the case, particularly in the most severe situations

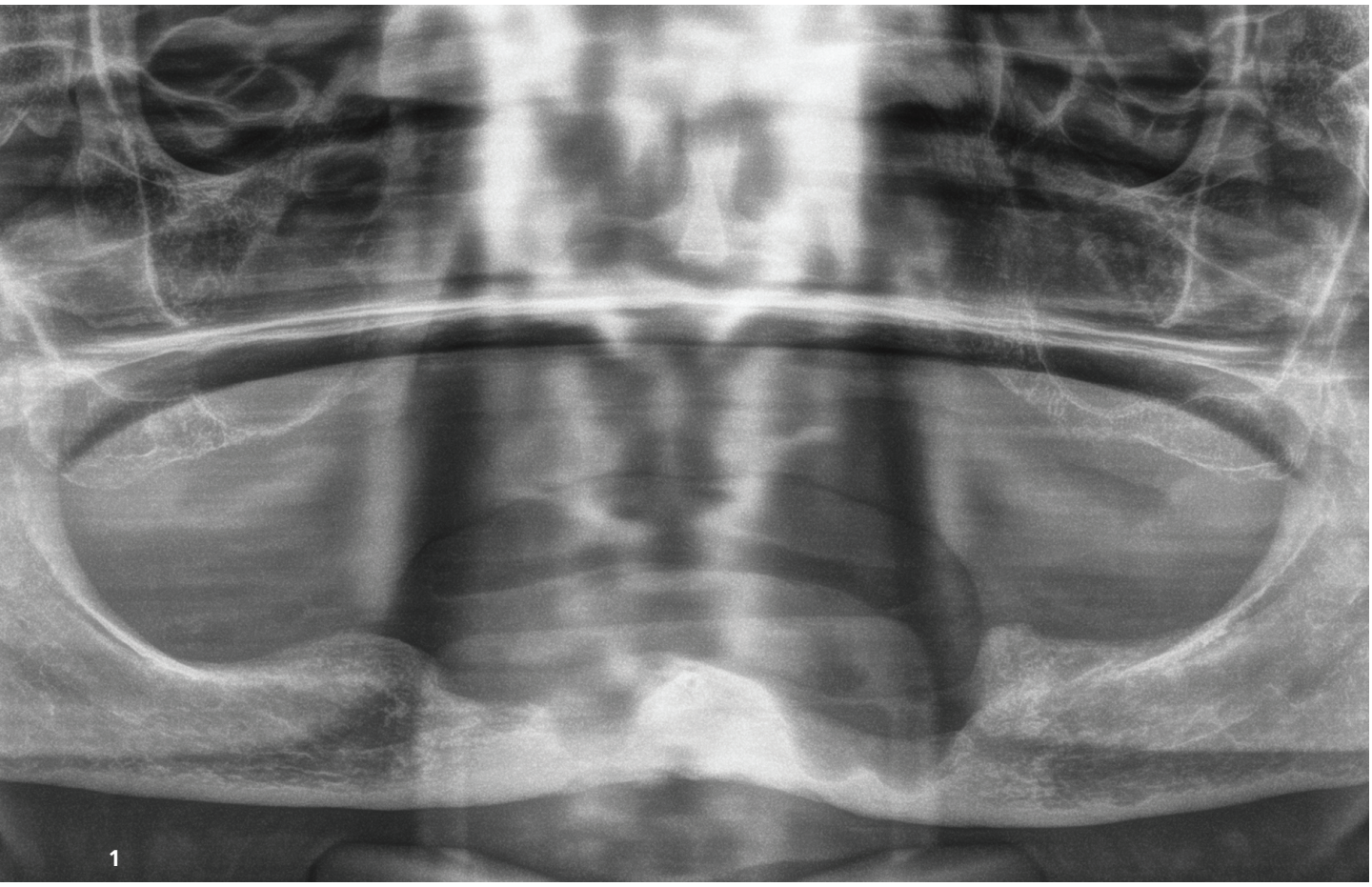
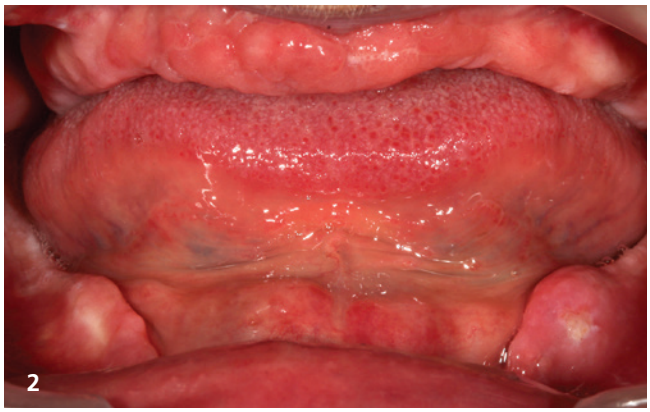
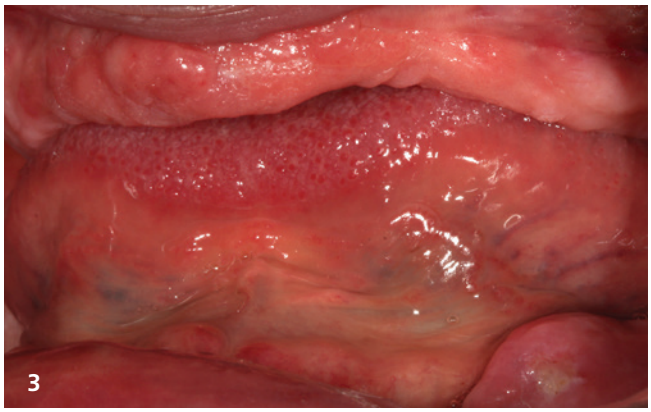


Fig. 1: Initial radiograph of the patient showing bone defects present in the mandible due to peri-implantitis and the state of the bone volume of the maxilla.





Figs. 2 & 3: Intra-oral images of the patient without the prostheses. The vertical antero-superior defect and the interocclusal distance indicating the bone loss in the height of the maxilla and mandible could be observed when the protheses were removed.

of low residual bone volume.[8–10] Minimally invasive techniques are important for cases of extreme atrophy. In the maxilla, short and extra-short implants, as well as trans-crestal sinus lift techniques and more recently the sinus lift technique, make implant placement possible in the most extreme situations, thus avoiding accessory techniques of bone augmentation and highly complex procedures.[11–14] Ultra-short and extra-short implants, as well as the placement of implants over the dental nerve using the latter as an anchorage, may be the alternative.[15–17] When the bone defect is located horizontally, narrow implants with a reduced platform and diameter can be used.[18,19] On occasions where bone atrophy is extreme in the maxilla and mandible, all these techniques together may be necessary, as in this clinical case, where there was a bone defect both vertically and horizontally in both bone beds, using several minimally invasive procedures to place the implants and to carry out the restoration.

Case presentation

A 72-year-old female patient who requested implant treatment presented to our practice. She had an implant-supported prosthesis in the mandible. The implants had developed peri-implantitis, and after implant failure, the vertical bone atrophy of the mandible had worsened. In the maxilla, long-term edentulism had also generated severe bone resorption. In the initial radiograph, the mandibular bone defects could be observed, and these had advanced to the extent of compromising even the stability of the basal bone at some points, and bone atrophy of the upper mandible was beginning to be visible (Fig. 1). When the maxillary and mandibular complete dentures were removed, the vertical bone loss between both jaws could be observed and the antero-inferior defect of the mandible became very evident (Figs. 2 & 3).

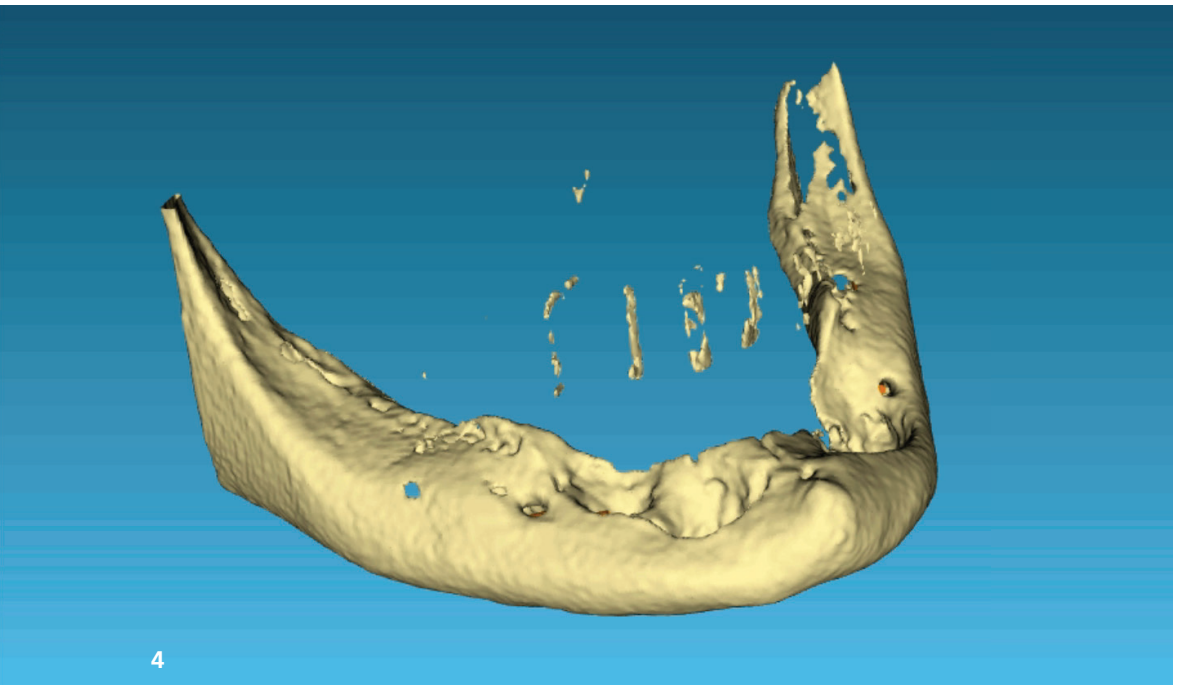
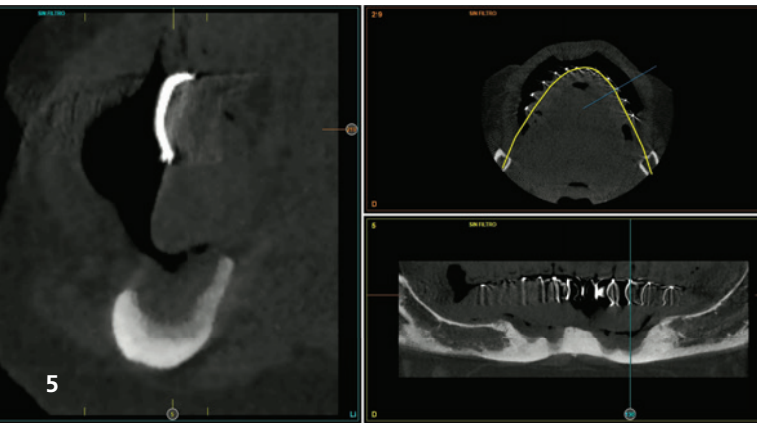
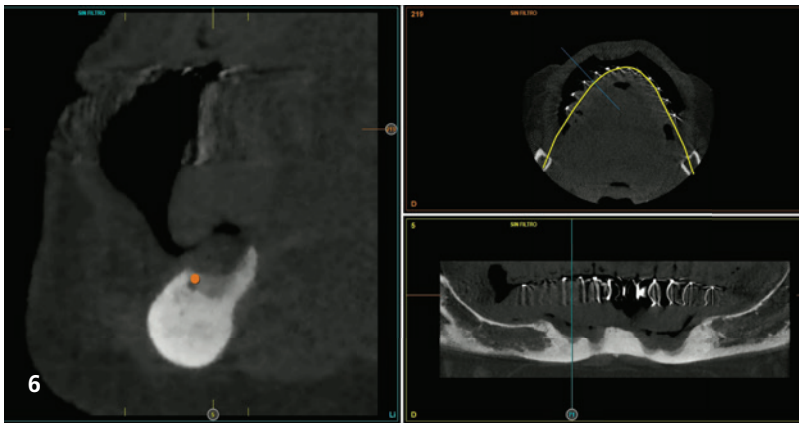
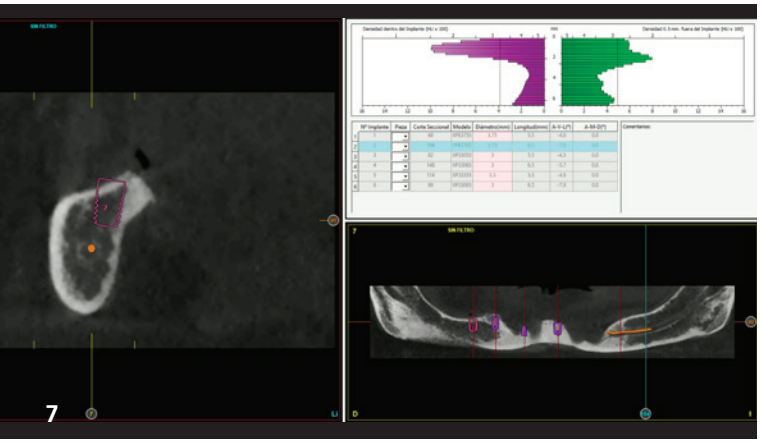
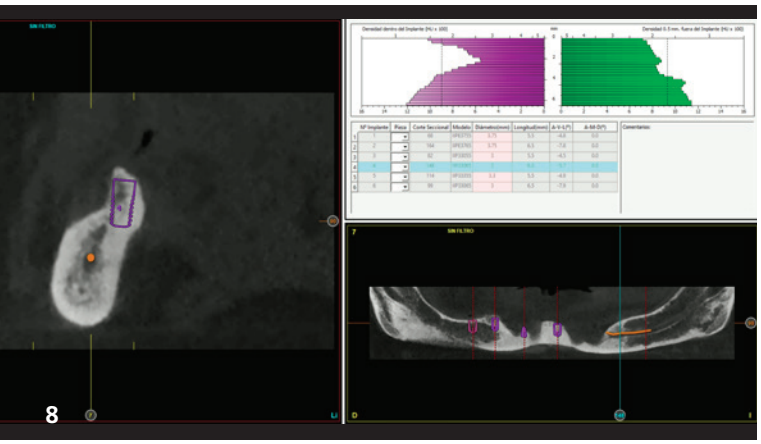


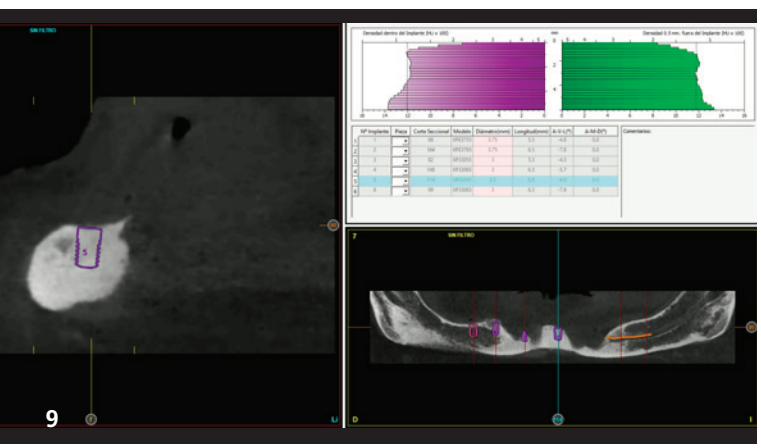
Fig. 4: 3D reconstruction of the mandible showing the most affected areas.











Figs. 5 & 6: Resorption in the bone defects caused by peri-implantitis and involvement of the dental nerve in the lower right quadrant, which had become superficial, lying only below soft tissue. **Figs. 7–9:** Planning of extra-short, narrow and reduced-platform implants in the mandible.

To continue with the diagnosis, a CBCT scan was performed to determine the residual bone volume and the therapeutic options available for the patient's rehabilitation. In the 3D reconstruction of the mandible, several defects were observed in the inter-foraminal area that reached the basal bone in some areas, thus compromising even the structural integrity of the mandible. In the lower right quadrant, there was also involvement of the dental nerve, which was exposed and covered only by soft tissue in the areas of greatest bone resorption (Fig. 4). In the cross-sectional sections of the most affected areas, only a few millimetres of residual bone height was observed (Figs. 5 & 6). Once the diagnosis had been completed, the insertion of implants was planned. In the areas with greater bone height, the placement of extra-short and narrow implants was planned, and implants of reduced platform and diameter (NobelActive 3.0, Nobel Biocare) would be placed in the areas of greater horizontal resorption (Figs. 7–9).

Once the implants had been placed, four of the six implants were immediately loaded with a hinged bar structure. This was possible due to the achievement of the correct primary stability in surgery (above 20 Ncm). The remaining two implants (the two more distal ones) with a lower insertion torque were left to heal. The prosthesis designed according to this technique was placed 12 hours after surgery, offering a fast and versatile approach to this type of prosthesis (Figs. 10 & 11).

The first phase of the mandibular treatment completed, the study of the maxilla was performed. In the diagnostic CBCT sections, extreme atrophy in both height and width of the area corresponding to the premaxilla could be observed. In some areas, the ridge width was 2 mm and the height between 3 and 4 mm, so in order to achieve direct insertion of implants in this area, it would be necessary to perform a sinus lift procedure in combination with the placement of extra-short and narrow-platform implants (Figs. 12 & 13).

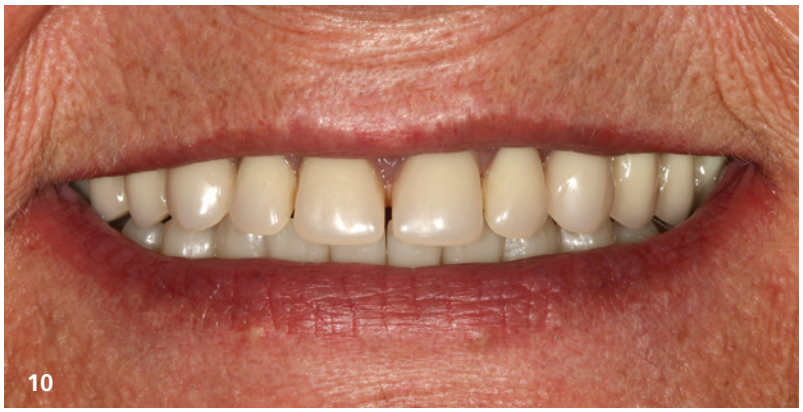
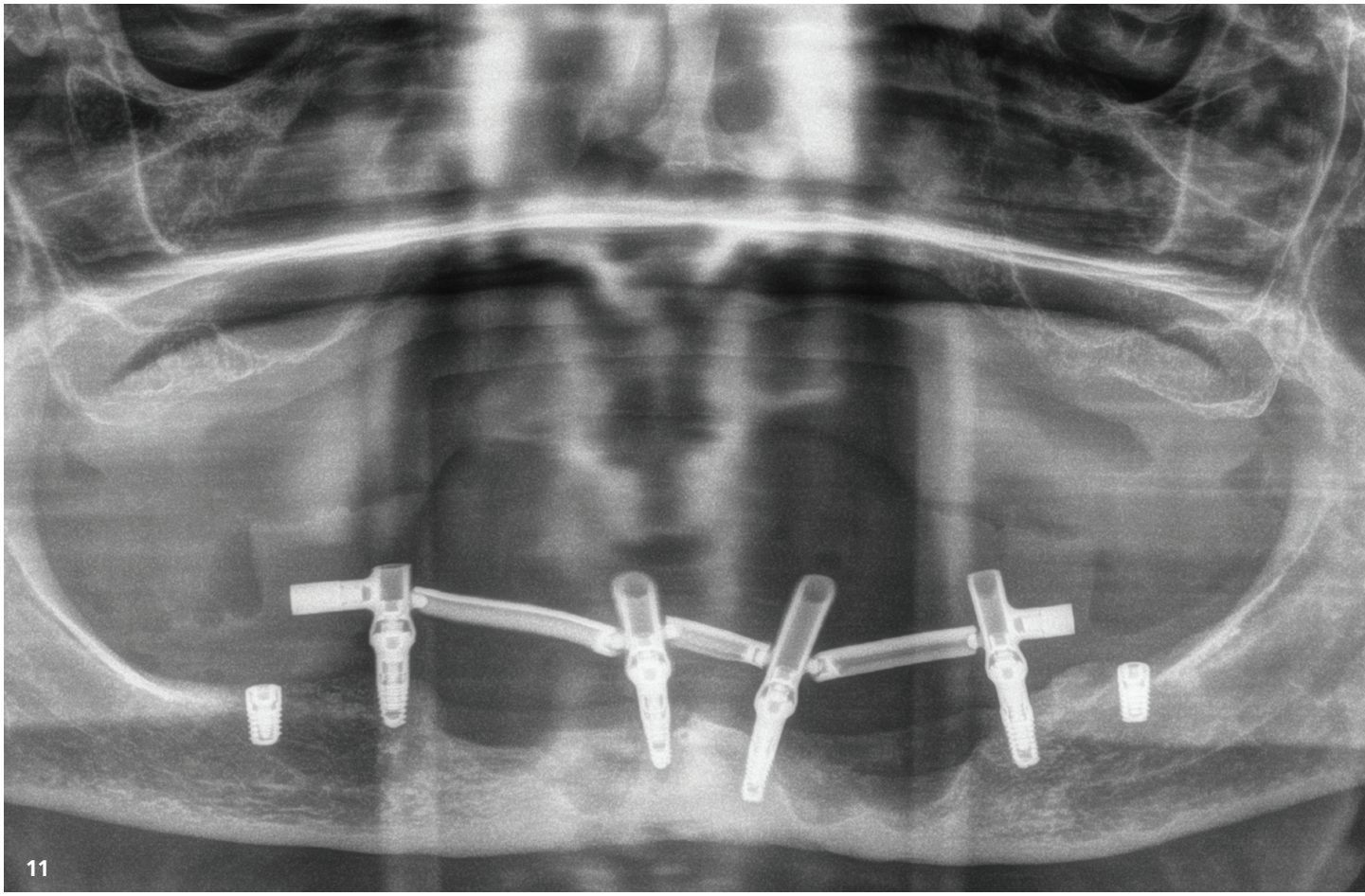
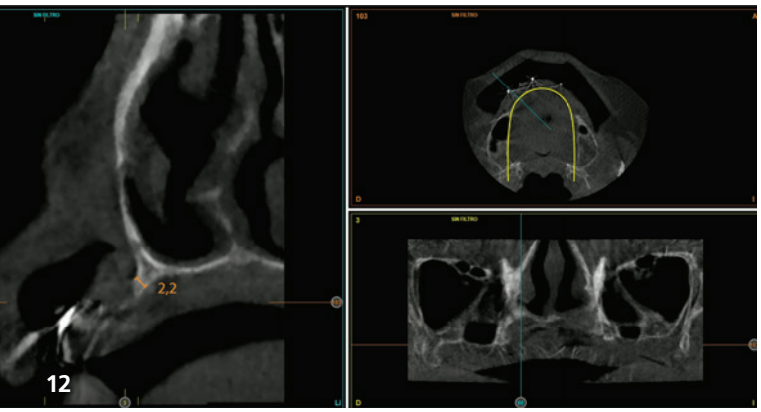


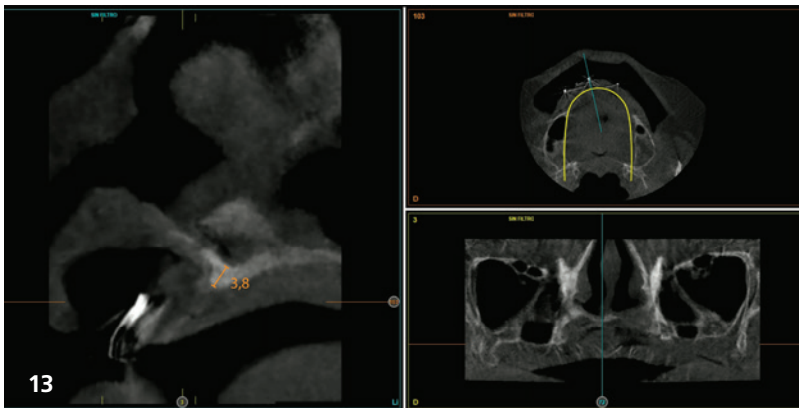
Fig. 10: Image of the patient with the immediately loaded mandibular prosthesis. **Fig. 11:** Panoramic radiograph with the prosthesis immediately loaded on the four implants of the anterior sector and the use of articulated bars.



To perform the sinus lift procedure, the technique described by our study group was used, in which biological drilling is used throughout and a socket is created with drills of increasing diameter and the sinus floor is removed with a specific front-cutting drill.[20–22] This drill, owing to its design with cutting blades at the tip arranged in a circular shape on its axis mounted on a cylinder without cutting capacity, allowed us to remove the inferior cortex of the sinus without damaging the internal membrane covering it. This design provides exclusively apical advancement capacity, which increases depth without damaging the nasal membrane. Once the sinus wall is exposed, it is carefully lifted with a specific instrument and detached to be able to insert the implant. According to the bone volume to be gained in the area, a graft (generally autologous bone obtained from drilling with Endoret PRGF [BTI Biotechnology Institute], autologous fibrin or biomaterial) can be placed beforehand or with implant insertion to maintain the elevation until new bone forms.

In the rest of the maxilla, short and extra-short implants were chosen for the two posterior sectors and reduced-diameter 3.0 platform implants in the areas of smaller bone width (Figs. 14–17). In this way, a minimally invasive approach to the entire maxilla was achieved, without loss of predictability, by avoiding grafting



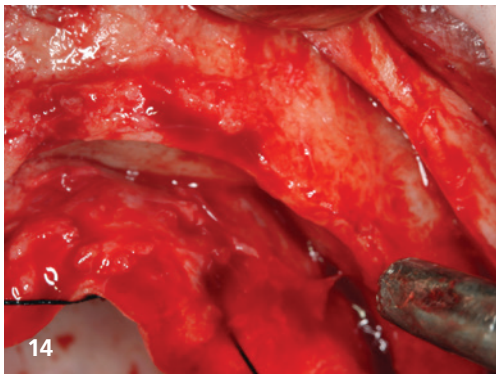


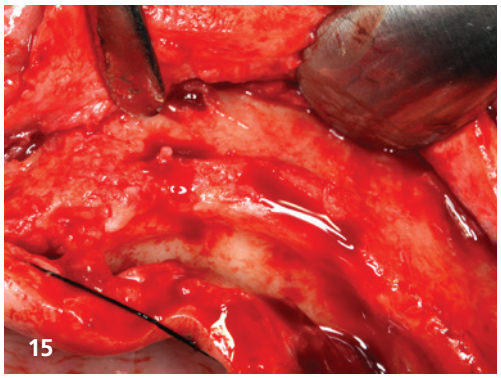
Figs. 12 & 13: Planning for implants in the maxilla. In some areas, such as the selected one, a width of less than 3 mm and a length of approximately 3–4 mm were observed, so an extra-short implant and sinus lift were planned.

and regeneration techniques, which increase morbidity and the number of surgeries to be performed to achieve the patient's rehabilitation. All the implants placed in the maxilla were restored in two phases, immediately following the same technique as that used for the mandible.

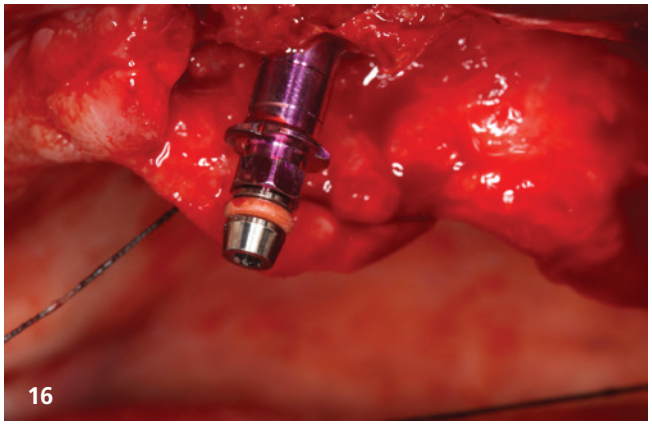
Five months after the insertion of the maxillary implants, the second phase was begun with progressive loading of the maxilla. This prosthesis was fabricated in the same way as the immediately loaded prosthesis, using articulated bars. At this point, a new set of provisional prostheses were also prepared for the mandible, connecting the implants that were not loaded in the first phase to the initial implants (Figs. 18 & 19). The patient wore these prostheses for a few months to adapt the occlusion before placement of the definitive prostheses.

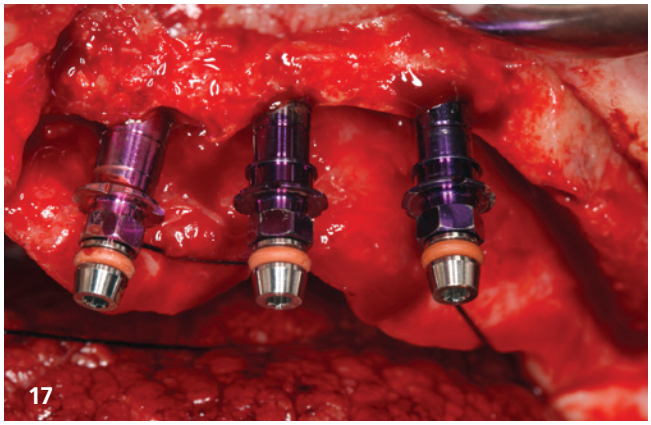
Six months after the placement of the progressive loading prostheses, the preparation of the definitive prostheses began. For this purpose, a wax-up transferring the parameters from the provisional prostheses was prepared that could be placed and adjusted in the patient's mouth for the definitive prostheses (Fig. 20). Once the tests had been completed, the definitive prostheses, both divided into three sections, were completed. This resulted in good occlusal and biomechanical behaviour and decreased the stress on the bone compared with conventional rigid unitary structures (Fig. 21).





Figs. 14 & 15: Bone ridge after flap raising and before insertion of the implants. The extreme bone atrophy, leaving a knife-edge ridge along practically its entire extent, was observed.
Figs. 16 & 17: Placement of implants with a reduced platform and diameter, avoiding bone augmentation.





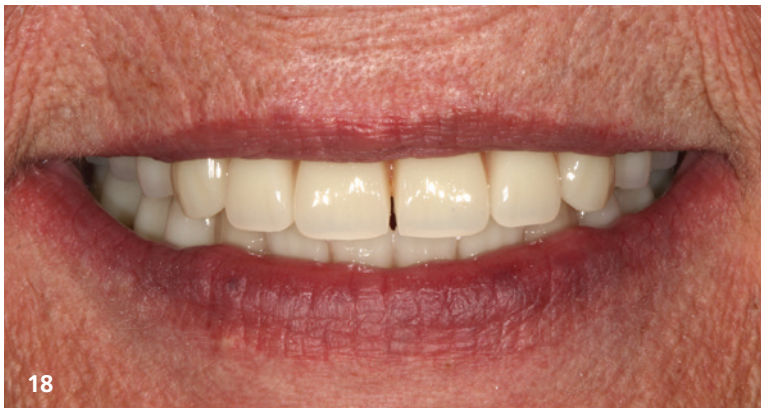
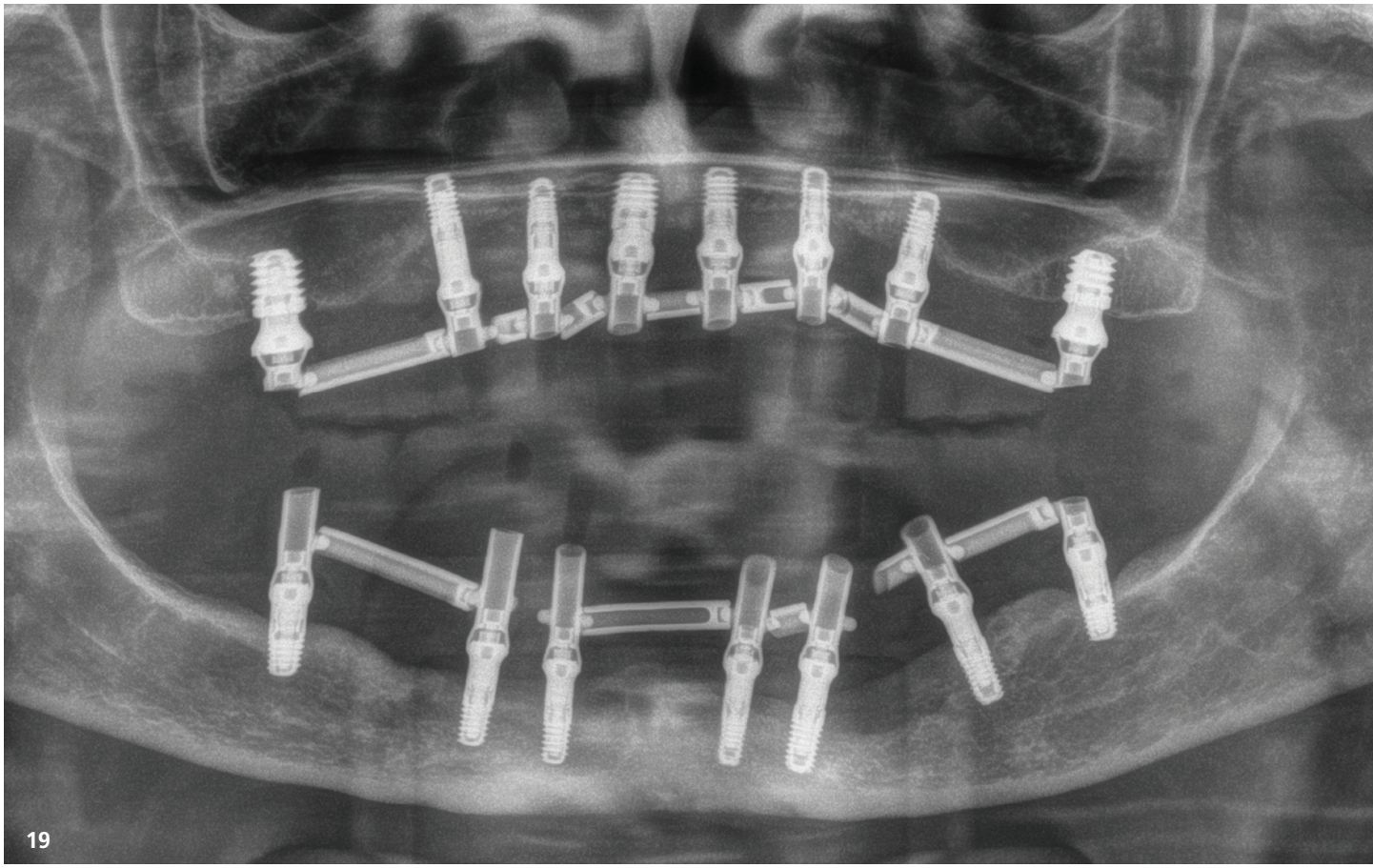
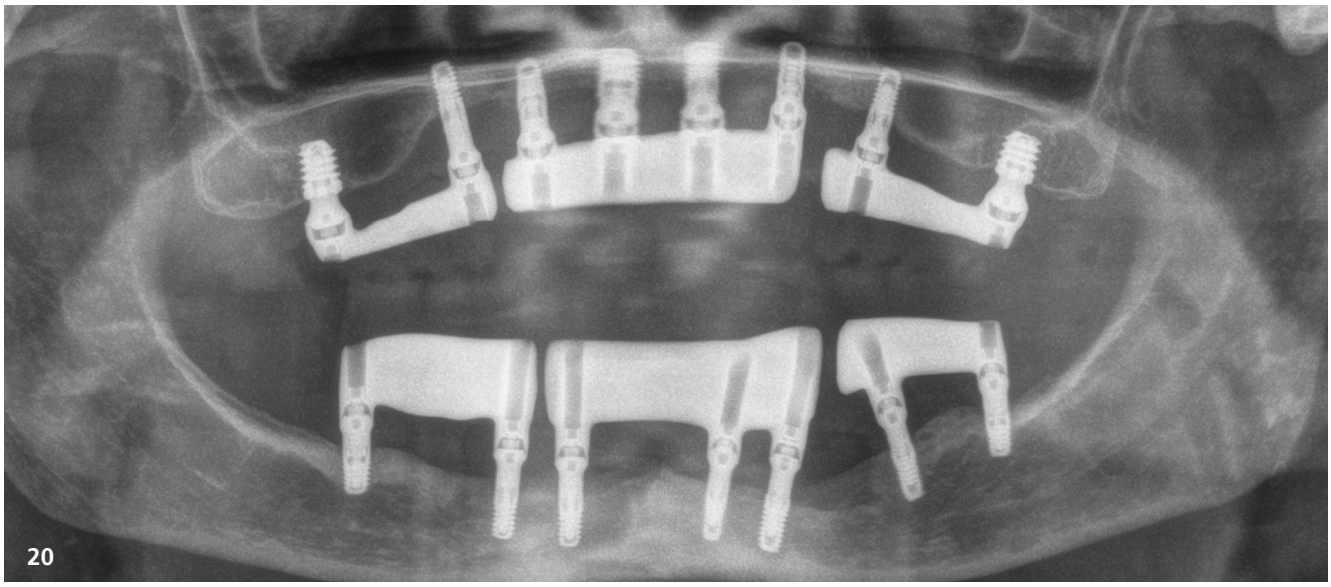


Fig. 18: Maxillary and mandibular progressive loading prostheses. **Fig. 19:** Radiograph with both progressive loading prostheses in place showing the construction by means of preformed bars, allowing rapid and efficient restoration and modifications to the structures and prostheses whenever necessary.



Discussion

When treating patients with severe horizontal atrophy, to ensure correct osseointegration and a good prognosis, it is necessary to have at least 1 mm of bone width surrounding the implant in the vestibular and lingual or palatal direction.[23–26] The reduction of the implant platform to 3 mm allows us to preserve this bone volume, avoiding the use of accessory regeneration techniques to obtain a greater bone volume.[23] In cases of severe combined vertical and horizontal atrophy, the use of short and narrow implants is also a highly predictable means of rehabilitating patients with minimally invasive techniques. As an alternative to more complex bone augmentation techniques, short and extra-short implants are a safe option for the rehabilitation of maxillary and mandibular areas with height atrophy and have long-term survival rates of over 98%.[27–31] Narrow implants also have survival rates of between 90 and 94%, although when the survival rate is differentiated from the expansion and/or regeneration techniques that generally accompany these implants, the rate is higher, reaching 100% in some studies.[32–35] In addition, in this case, along with short, extra-short and narrow implants, the sinus lift technique was used. This technique employing a novel insertion protocol published by our study group[20] allows the treatment of this area even in cases with a residual bone ridge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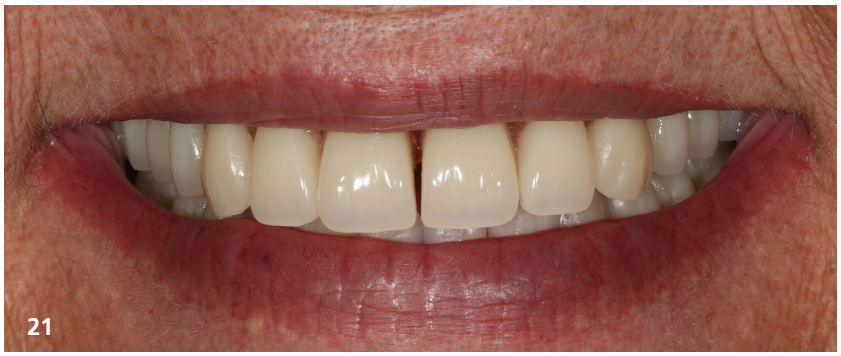
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Fig. 20: Final radiograph of the patient after one year of follow-up wearing the definitive prostheses. The three-section division of both hybrid prostheses to improve the flexion of the bone (both mandible and maxilla) during masticatory movements can be observed. **Fig. 21:** Both prostheses *in situ*, showing the division into sections.

of less than 10 mm (the bone volume which research on sinus lift has employed until now).[36,37] With this new approach and the use of extra-short implants, critical situations can be solved with excellent results, as shown in the present clinical case.

Finally, I would like to mention the reversibility of our implant treatments. In this case, specifically in the mandible, we observed how the defects generated by failed implants had jeopardised the integrity of the mandible and the future rehabilitation of the patient. Whenever an implant treatment is performed, we must always think about the future of the treatment and therefore about the impact that our implants will have on the bone in case the treatment fails or an implant needs to be replaced. Therefore, the use of the smallest possible bone volume reduces the possibility of serious error in case of having to start our treatment again, and this approach should be a general strategy for every patient to be treated with implants, at least from my point of view.[38,39]

Conclusion

Cases of severe mixed bone atrophy are becoming increasingly frequent in the dental clinic. The use of minimally invasive techniques for their resolution too is becoming more frequent, and good long-term results have been achieved. Therefore, knowing all the procedures for successfully addressing this type of situation and carefully planning our cases can effect a difference in the results obtained. Finally, always preserving as much residual bone as possible by using implants of reduced length and diameter ensures that retreatments can be performed if necessary.

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Novel surgical approach

Snake technique in the treatment of posterior peri-implant soft-tissue defects

Dr Cosmin Dima & Iulia Florea, Romania

Soft-tissue peri-implant defects (papillary loss, decrease of mucosal volume, gingival recession, dehiscence, alteration of the ridge colour) are common complications of implant treatment and affect the final aesthetic result and implant stability in the long term.[1,2] Many factors can influence the onset of peri-implant soft-tissue defects. Facial bone loss and thin biotype promote peri-implant recession,[3] and a soft-tissue thickness of less than 2 mm promotes peri-implant marginal bone loss.[4,5] The consequences are exposure of the implant and modification of the abutment–crown ratio. A combination of gingival recession and minimal keratinised mucosa leads to difficulties in plaque removal, inflammation and aesthetic complaints by patients.[6]

Soft-tissue grafting procedures in second-stage surgery are performed at immediate implantation sites for aesthetic reasons, papillary reconstruction, gain in width of keratinised mucosa, increase of mucosal volume and preservation of alveolar ridge contour.[7] The need for management of peri-implant soft-tissue defects is increasing, as immediate implantation is associated with peri-implant gingival recession as the result of the soft-tissue remodelling processes. Also, when implants are placed with no soft-tissue augmentation, peri-implant mucosa may become thin and greyish or may have altered texture due to scars if the flap was not properly managed.[8,9] Thin peri-implant mucosa (< 2 mm) may be transparent, and thus the implant or abutment may show through it.[10]

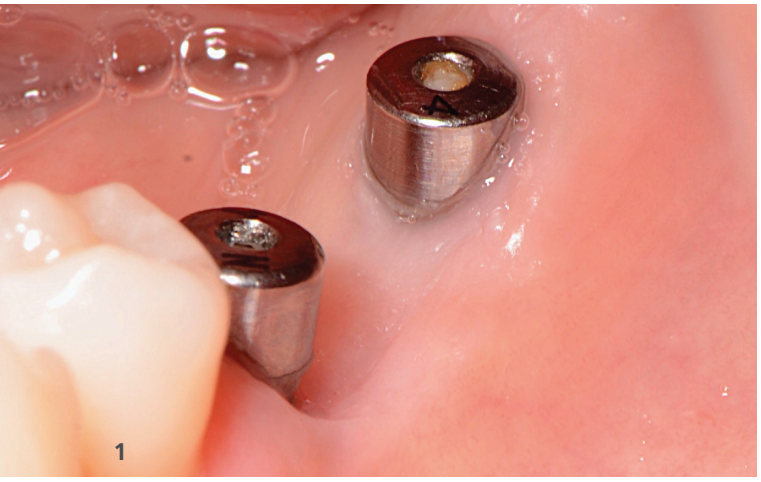
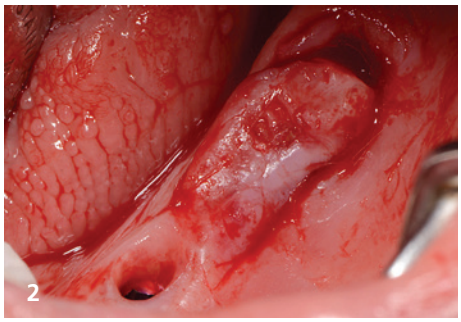
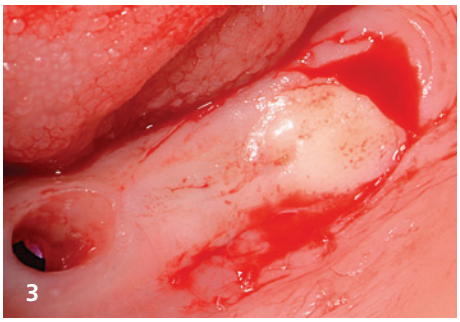
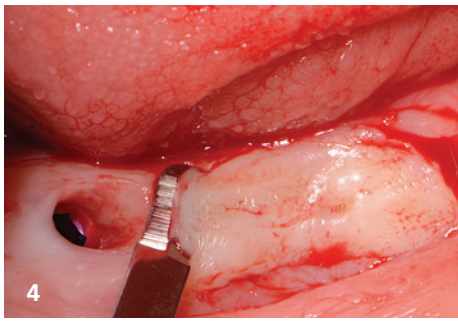


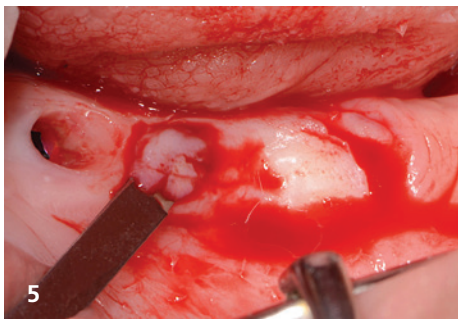
Fig. 1: Pre-op situation, showing the concave area between the implants favouring food retention and peri-implantitis.

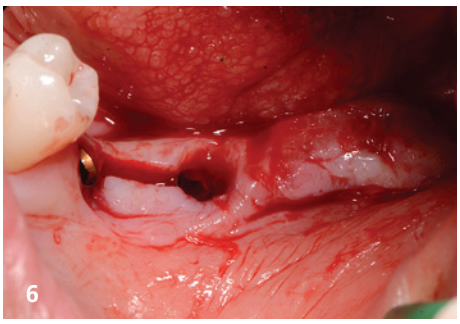
Various surgical techniques and a combination of surgical and prosthetic techniques have been described in the therapeutic management of the peri-implant soft-tissue defects. Arguments in favour of second-stage surgical interventions at the level of the peri-implant soft tissue are made in the literature. A review of the literature concluded that, when aesthetic demands are high or proper plaque control is not feasible, regeneration of keratinised mucosa is required in order to maintain the stability of the peri-implant soft tissue.[11] The design of the flap depends on the extent of the peri-implant gingival recession, vestibular depth, width of the attached gingiva and volume of the interproximal tissue.[1] A classic surgical approach uses apically or laterally positioned flaps at the time of implant exposure. These techniques are combined with a free gingival graft when the width of the keratinised mucosa over the alveolar ridge is minimal. An apically positioned flap or vestibuloplasty combined with a free gingival graft or subepithelial connective tissue graft is the best researched technique in soft peri-implant tissue grafting and has been reported to achieve gains in the width of keratinised mucosa of between 1.15 ± 0.81 mm and 2.57 ± 0.50 mm and partial coverage of the implant surface after peri-implant gingival recession.[12] The combination of an apically positioned flap with a collagen matrix, when used to increase the width of keratinised mucosa, has been found to result in less morbidity and surgery time, but to be as effective as the same technique combined with a free gingival graft.[13] Peri-implant soft-tissue conditioning using a free autologous epithelial graft has also been proposed in the management of supra-crestal and/or dehiscence-type defect morphology.[14] Techniques using autogenous grafts are significantly more effective in the increase of the peri-implant soft-tissue aesthetics and thickness compared with non-grafting techniques.[15,16]

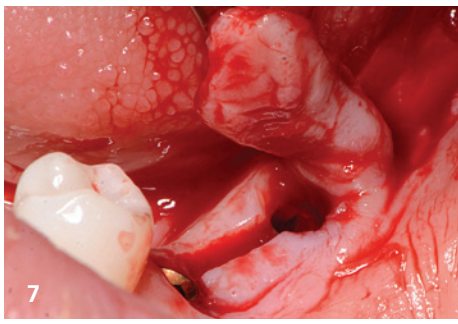


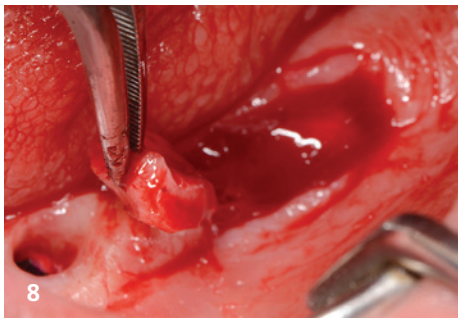


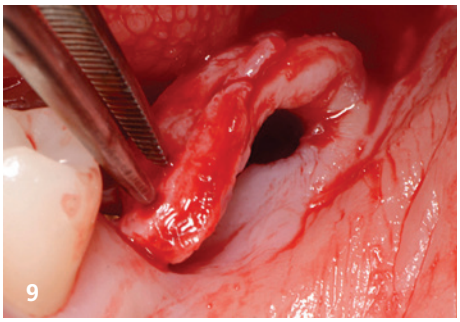


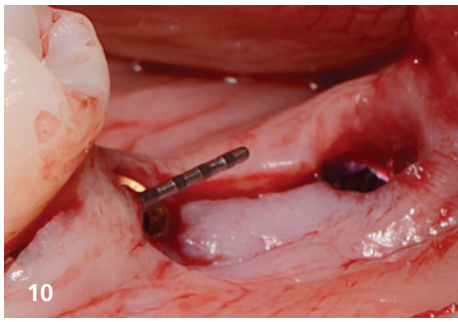








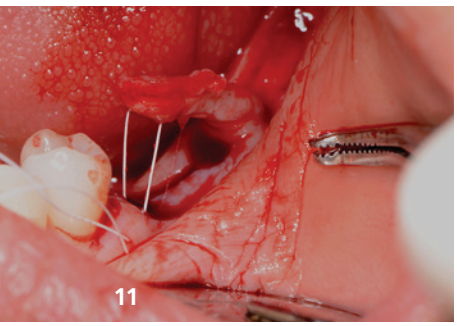


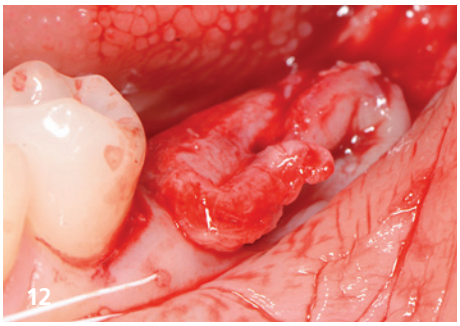


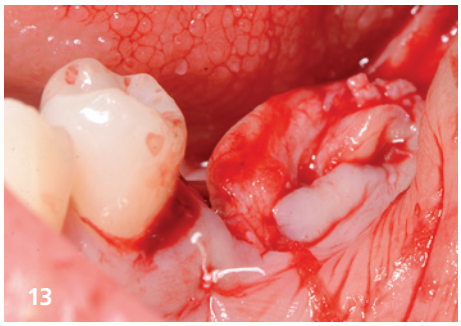
Figs. 2–5: Incising the flap edges and deepithelisation**. Figs. 6–9:** Partial thickness flap. **Fig. 10:** Pedicle gingival graft try-in.

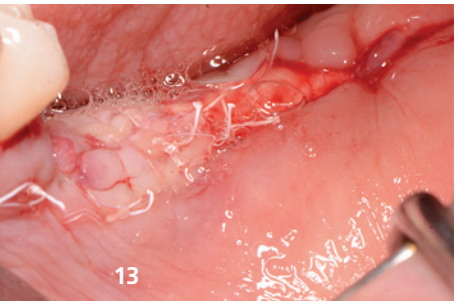
A systematic review of the literature concluded that the use of autogenous grafts to increase mucosal thickness results in significantly less marginal bone loss in the long term and that the use of an apically positioned flap combined with an autogenous graft to increase the width of keratinised tissue improves bleeding on probing indices and marginal bone levels significantly.[17]

Despite the favourable outcome of the previously described techniques for conditioning of the peri-implant soft tissue, morbidity (because of the wound created at the palatal donor site), dynamic soft-tissue changes and the longer healing period must be considered. Also, although these techniques can resolve volume loss and shallow peri-implant recessions, they are less predictable in the management of deep or large peri-implant recessions and papillary loss.[1] These disadvantages can be overcome by epithelial or connective tissue pedicle flap techniques used with or without collagen matrices.[18,19] Pedicle flap techniques are a new minimally invasive surgical approach that can be performed at either a one-stage or two-stage surgery, in both anterior and posterior areas as well as at single and multiple adjacent implants.[18] Pedicle flap techniques are recommended especially in patients demanding retreatment of failed implants and edentulous patients receiving numerous implants that require soft-tissue conditioning with multiple connective grafts.[18] Pandolfi describes a modified flap design (omega roll envelope flap) that combines a roll flap with a modified pouch technique to correct localised horizontal alveolar ridge defects and to increase the peri-implant soft-tissue thickness.[20] This technique avoids harvesting autologous connective tissue from another donor site by using the supra-crestal connective tissue of the implant surgical site. Tabanella describes a buccal pedicle flap technique used in both anterior and posterior areas with a minimum of two adjacent implants.[18] The technique starts with a long lingual horizontal incision running slightly to the buccal side, followed by parasulcular incisions mesially and distally. The mucogingival junction is cut with a #15C blade to avoid flap perforation. The flap is positioned buccally and slight overlapping of tissue on the buccal side creates wrinkles of tissue that enable the increase of the mucosal volume. Moreno Rodriguez and Caffesse proposed a pedicle flap technique (laterally rotated flap) for the treatment of peri-implant defects.[21] The technique involves the creation of a buccal mesial and apical recipient area around each implant and rotating of a pedicle keratinised tissue flap by 90°









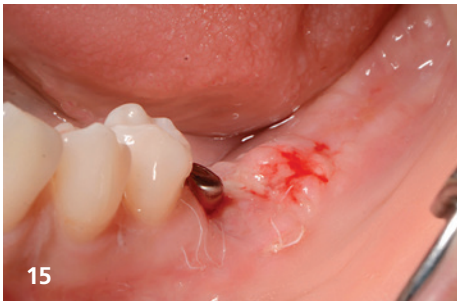


Fig. 11: Snake flap (suture at distal side). **Fig. 12:** Graft fixed on the mesial side with PTFE suture thread. **Fig. 13:** Graft rolled inside the gingival margins. **Fig. 14:** Immediate post-op situation, the final suture pressing on the flap to eliminate dead space. **Fig. 15:** Situation ten days post-op, showing excellent healing of the donor and receiving sites.

from the distopalatal and its positioning and suturing on the peri-implant buccal side.[21,22]

The objective of this paper is to present a novel surgical approach, the Snake modified pedicle flap technique, to peri-implant soft-tissue conditioning around loaded osseointegrated dental implants in the mandibular posterior area.

Case description

A 47-year-old patient presented with a severely resorbed mandibular posterior alveolar ridge due to molar extractions (Fig. 1). The patient was diagnosed with two posterior sites with peri-implant gingival recession and minimal keratinised tissue (< 1 mm). Peri-implant soft-tissue conditioning was performed four months after the initial implant surgery.

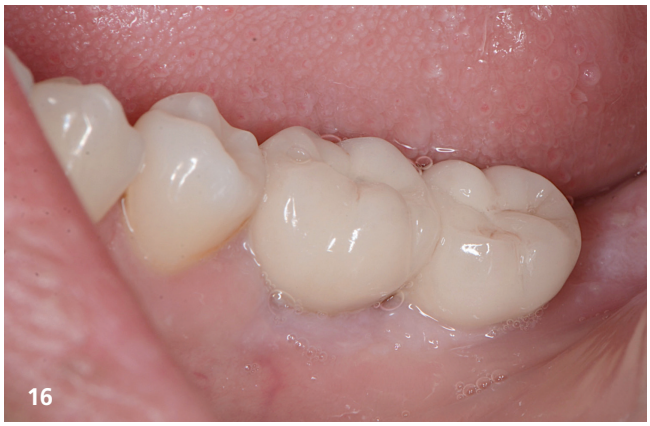
Surgical technique

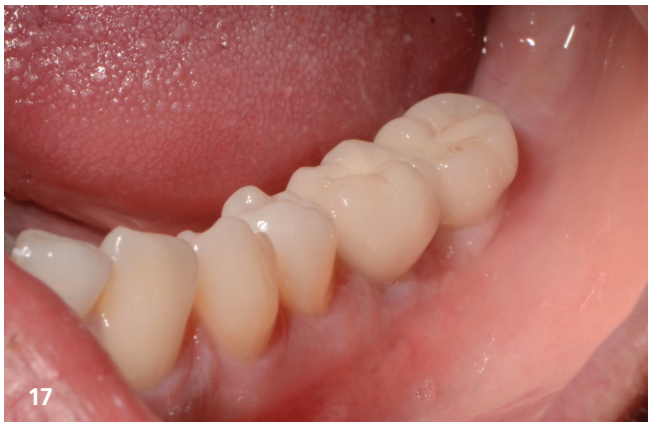
Anaesthesia was performed in the surgical area with articaine and 1:100,000 adrenaline. The recipient site was prepared by sharp dissection in order to create a periosteal bed free of any muscle attachment. Two crestal parallel incisions were made on the distal area of the implants with a #15C blade and connected by a horizontal incision (Figs. 2–5). The extension of the incisions towards the crestal area and the distance between them depend on the amount of keratinised tissue grafting required for each case. The deepithelisation of the flap was performed with a #15C blade (Fig. 6). A partial thickness flap was raised (Fig. 7). The flap was released apically by inner superficial incision to allow passive displacement and suturing without tension. It was mesially displaced with a 180° rotation (Figs. 8 & 9). The mesial papilla was prepared for grafting with the tunnelling technique (Fig. 10). The resulting flap was sutured to the recipient bed at the base of the newly created vestibule with #5/0 non-resorbable PTFE suture thread (Coreflon, IMPLACORE). The graft was rolled inside the gingival margins and was fixed to the mesial side with PTFE sutures (Figs. 11–14).

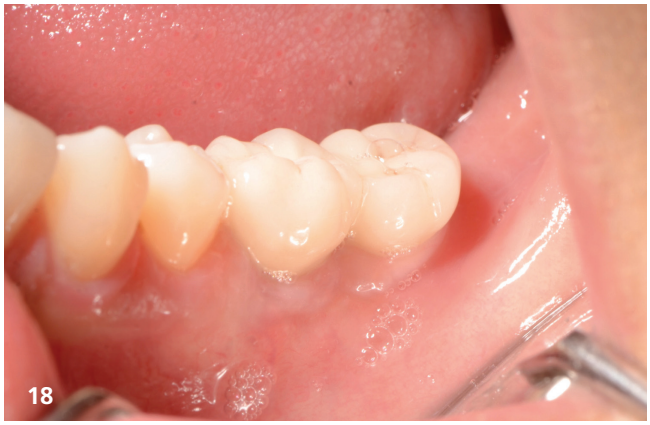
The patient was instructed to rinse twice daily with a 0.12% chlorhexidine mouthrinse for two weeks. Anti-inflammatory therapy (400 mg of ibuprofen every eight hours) was prescribed for three days. The patient reported no discomfort or postoperative pain. The patient was further recommended to rinse with a 0.2% chlorhexidine mouthrinse twice a day for four weeks and to avoid mechanical hygiene on the operated area. The sutures were removed one week later. Excellent healing of the donor and receiving sites was noted at ten days postoperatively (Figs. 15 & 16). Control visits were scheduled at two and four weeks thereafter, followed by visits at three, six and 12 months, and every six months afterwards for five years (Figs. 17–20). After each control visit, professional maintenance procedures were performed at the surgical area.

Clinical measurements

Peri-implant probing depth was measured at the midpoint of the interproximal side, taking the highest value from the soft-tissue margin to the bottom of the peri-implant sulcus. The buccal thickness of the peri-implant mucosa was measured with an ISO #15 endodontic file at 2 mm from the soft-tissue margins mesial, distal and medial to the implant platform (reference point). The keratinised mucosa was measured with a periodontal probe between baseline and follow-up. The measurements were taken vertically from the implant platform to the free gingival margin at the mid-buccal point. The records were per-







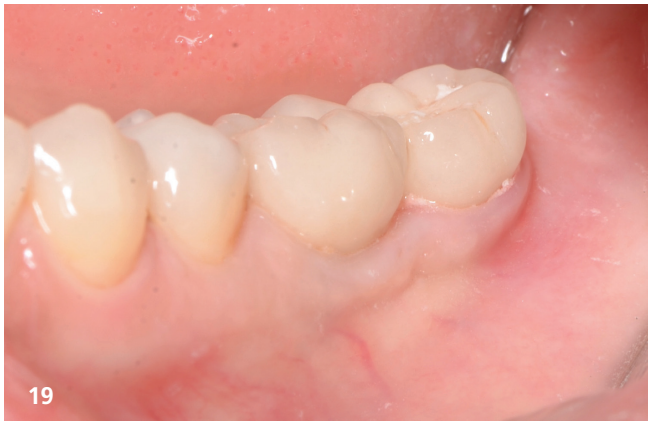


Fig. 16: Clinical aspect of the peri-implant soft-tissue area after loading of the definitive restorations. **Fig. 17:** Clinical aspect of the peri-implant soft-tissue area at one-year follow-up. **Fig. 18:** Clinical aspect of the peri-implant soft-tissue area at two-year follow-up. **Fig. 19:** Clinical aspect of the peri-implant soft-tissue area at five-year follow-up.

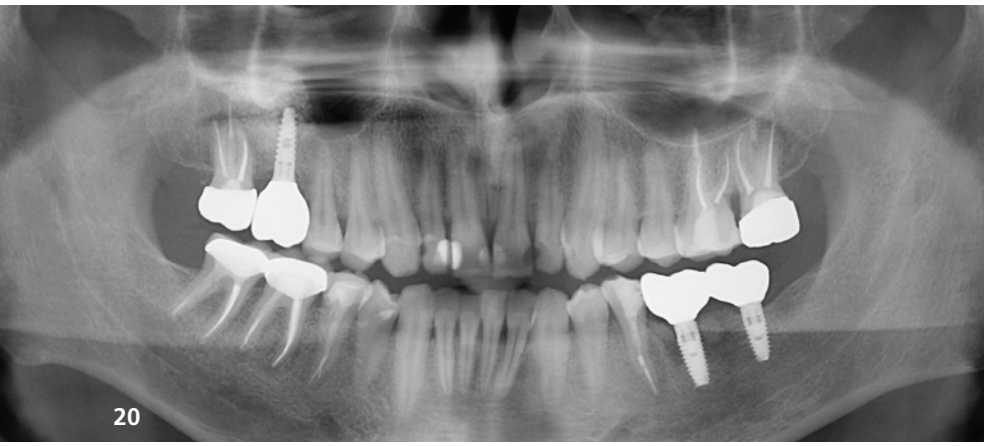
formed preoperatively, immediately postoperatively and at four weeks and one and two years postoperatively. The clinical parameters (width of keratinised mucosa, mucosal volume and recession coverage) were recorded at baseline and at follow-up intervals. At baseline, the width of keratinised mucosa was minimal (1 mm). The gain in width of keratinised mucosa was 2 mm at four weeks, 3 mm at one year and 4 mm at five years postoperatively. The gain in mucosal volume was 3 mm at four weeks, 4 mm at one year and 5 mm at five years postoperatively. The recession coverage was 100% at four weeks, 100% at one year and 100% at five years postoperatively.

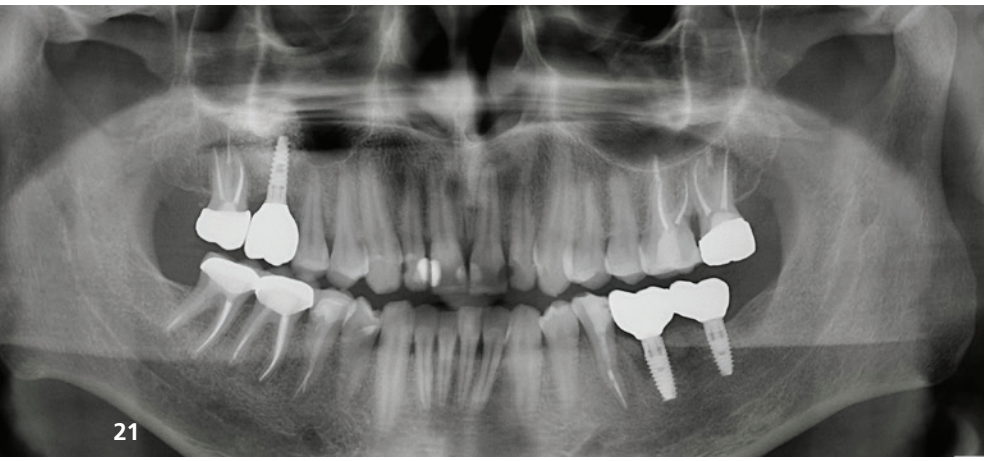
Discussion

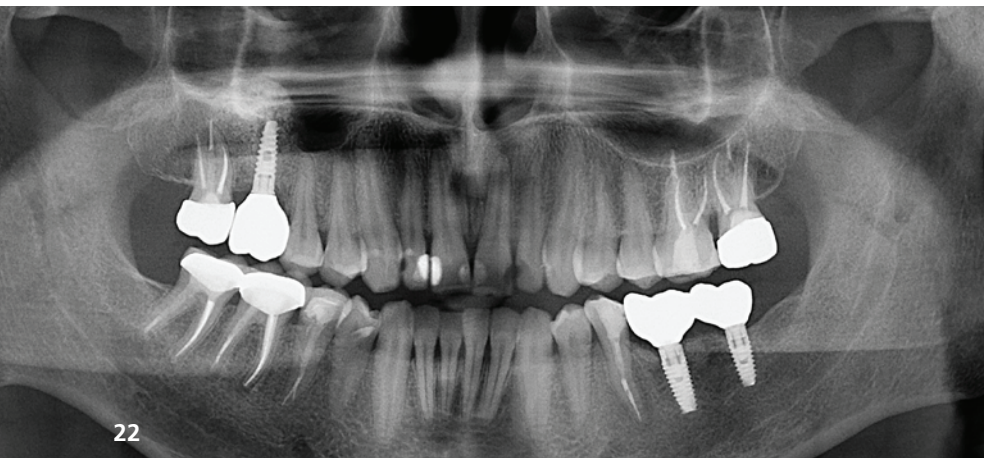
Research has focused on the health of the peri-implant soft tissue because of the importance of adequate width of keratinised mucosa and adequate mucosal thickness in the prevention of biological complications and crestal bone loss.[4,5] Also, non-mobile attached tissue is necessary to preserve transmucosal components of peri-implant tissue, thus avoiding peri-implant inflammation and biological complications, as well as preserving the peri-implant marginal bone.[24,25] Peri-implant soft-tissue conditioning techniques are recommended in clinical cases with factors that may alter good prognosis of the soft-tissue stability and implant coverage (convex prosthesis–abutment contour, thin mucosa, distance from the implant platform to the bone crest of >3 mm, interproximal tissue loss, implant positioned outside the bony envelope).[1]

There is limited scientific evidence regarding the treatment of peri-implant soft-tissue defects.[1] Gains in width of keratinised mucosa were reported by a systematic review that analysed the results of an apically positioned partial thickness flap combined with a free gingival graft, a subepithelial connective tissue graft or xenogeneic grafting material.[12] The same systematic review reported mean rates of between 28.0 and 96.3% for coverage of the soft-tissue recession when a coronally advanced flap was combined with a subepithelial connective tissue graft or allogenic grafting materials or a partial thickness flap was combined with a subepithelial connective tissue graft.[12] Despite the predictability of the classic apically or laterally positioned flap technique (combined with epithelialised soft tissue), recession due to graft contraction, wound stability failure or graft necrosis was reported.[17] Also, techniques that also use a connective tissue graft or collagen matrix can result in the creation of a mobile peri-implant mucosa that will hinder the stability of the peri-implant soft tissue and will promote biological complications.[26]

Considering the invasive character and the morbidity of the classic soft-tissue conditioning techniques, variants of the pedicle flap technique have been proposed for different clinical situations, mostly supported by schematic illustrations and clinical case reports.[18,20–22] Moreno Rodríguez et al. combined their clinical case report with a pilot study.[22] The test group included subjects with partial or complete maxillary implant rehabilitation, buccal soft-tissue defects (absence of keratinised tissue or a soft-tissue width or thickness of < 2 mm) around an osseointegrated implant, hard-tissue dehiscence at buccal level, transparency of the underlying implant surface on the buccal side, and plaque and bleeding indices of less than 30%. The researchers reported a mean 1.37 mm gain in clinical peri-implant buccal attachment, a 3.06 mm gain in soft-tissue thickness and a 4.69 mm gain in width of keratinised mucosa. They also reported the maintenance of the stability of the peri-implant soft tissue for a mean period of 13.50 ± 1.87 months (range of 12.00–18.00 months). Also, other researchers have used pedicle flap techniques in patients with a keratinised soft-tissue thickness and width of less than 2 mm on the buccal side and reported increases of the attached soft tissue and gains of over 2 mm in buccal mucosal thickness and keratinised tissue width.[18,20] Considering the outcome in the short and medium term, one study reported the improvement in width of keratinised mucosa and mucosal volume in the first three months but a 42.4% shrinkage at 12 months.[14]







Figs. 20–22: Pictures from 2017, 2019 and 2022.

Systematic reviews of the literature have found insufficient data to provide recommendations regarding the ideal technique, flap design or graft to be used in the conditioning of the peri-implant soft tissue in relation to the type of peri-implant defect and targeted therapeutic goals (gain in width of keratinised or attached mucosa and in mucosal thickness).[15–17,27]

The Snake technique was born from the desire to offer patients the least invasive technique in the treatment of vulnerable, thin peri-implant soft tissue. I have always thought of both the treatment plan and the treatment as if I were the patient, and if I were the patient, I would like to benefit from a complex treatment in a single surgical session without pain and with very fast postoperative healing. The Snake technique has exactly these advantages, and it has the further advantage of creating only one wound, rather

than two. Seeing the amount of quality keratinised tissue in the vicinity of the area to be augmented, I wondered why I would graft from the palate when I could use tissue from the immediate area requiring augmentation. Moreover, whereas a gingival graft harvested from the palate completely interrupts vascularisation, the Snake graft is permanently vascularised, which significantly reduces the risk of necrosis.

The distal donor area from where the flap is elevated ensures the availability of keratinised tissue and provides the quality of the connective tissue graft according to the need of the receiving area.[28] The 180° rotation of the flap supports the mobility of the flap without reducing muscle freedom and vestibular depth and while maintaining the blood supply in the mesial peri-implant area.[22] A partial thickness flap ensures the flexibility that supports the gain in mucosal volume. Also, it avoids the formation of peri-implant pseudo-pockets that could favour the growth of pathogenic bacteria.[18]

The patient had mobile peri-implant soft tissue, a width of keratinised tissue of less than 1 mm and mucosal thickness of less than 2 mm. The soft-tissue margin was at the level of the implant platform. The use of this technique resulted in significant improvements in peri-implant soft-tissue quality, and the attached keratinised tissue gain was 4 mm. The rotated flap employed in the Snake technique has the benefits of a free keratinised mucosa graft, increasing the width of the peri-implant buccal mucosa. It also ensures high blood supply and stability of the pedicle flap, resulting in less shrinkage over time compared with a free soft-tissue graft.[29]

Conclusion

Complete rehabilitation of the peri-implant soft-tissue defects can be successfully achieved using grafting procedures at second-stage surgery. The proposed Snake modified pedicle flap technique improved status of the soft tissue around dental implants considering the gains of width and thickness at one, two and five years postoperatively. The benefits are as follows: no need for a second wound, graft stability, better vascularisation, absence of necrosis risk, faster healing of both donor and receiving sites, and no additonal pain or discomfort. Randomised controlled studies with long-term follow-ups are necessary to validate the long-term predictability of this surgical technique.

About …

Dr Cosmin Dima

graduated in dentistry from the Carol Davila University of Medicine and Pharmacy in Bucharest in Romania in 2001, was certified in implantology in 2004 and completed his PhD in surgery on the topic of bone regeneration around implants in 2019. He is the managing director of the Dental Progress clinic in Bucharest. Besides the Snake technique, he has invented the periosteal membrane surgical technique for bone augmentation. Dr Dima is cofounder and educational director of the Digital Dentistry Society in Romania and a member of the Society of Esthetic Dentistry in Romania, European Society of Cosmetic Dentistry and International Congress of Oral Implantologists. In 2020, he received the World's Top 100 Doctor in Dentistry lifetime achievement award from the Global Summits Institute.

Literature

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Scientific chairs—International Osteology Symposium 2023

Interview with Pamela K. McClain and Istvan Urban

The International Osteology Symposium is the annual highlight of oral regeneration and will be held in Barcelona from 27 to 29 April 2023. The unparalleled programme consisting of 80 lectures and numerous workshops, features the world leading experts in the field of hard and soft tissue management. Participants can expect three days of intense continuous education where evidence-based knowledge is the currency.

We spoke with Pamela K. McClain and Istvan Urban, the 2023 symposium's scientific chairs, about their role leading up to this high-level scientific programme.

What was the idea behind the programme of the symposium?

Pamela K. McClain: The focus of the Osteology Foundation is on oral regeneration. As a result, the programme for the symposium will fully cover this field which allows a more in-depth look at all aspects involved with oral regeneration. This all-round coverage is quite unique and unlike other programmes. We are looking at unique areas of regeneration, for example endodontic concerns, orthodontic opportunities and aesthetic surgical aspects.

Istvan Urban: In addition to the clinical aspects of oral regeneration, the Osteology Foundation places equal emphasis on education and research. The programme perfectly reflects this dual focus: we will see many exciting contributions with high practical relevance as presentations on the very latest research.

In which way does the programme attract both young, less experienced clinicians and established oral surgeons?

IU: Since its beginnings 20 years ago, the Osteology Foundation has placed great emphasis not only on working with the well-known experts in our field, but also on being very active in promoting young talents. This is still very much the case today and therefore we are in the fortunate position at the International Osteology Symposium to also offer young speakers from our own training and research programmes the opportunity to appear on the big stage.

PKM: Incorporating these young stars has always been a priority of the foundation and allows them to showcase their research and cases in a world class environment. To present with individuals they have looked up to is both exciting and motivating. This headlining of young talent is also of great interest to their peers as well as their more experienced colleagues.

In which teaching formats do the participants get to experience the educational content?

PKM: We are fortunate to offer a wide range of formats from classic lectures, numerous specific workshops, to the interactive round table room, or the new research networking day.

IU: In addition, we will perform two extremely complex surgeries live in Barcelona. The audience will have the unique opportunity to learn advanced surgical procedures step by step.

In this way, we offer both younger and experienced participants content tailored to them, because there is always something new to learn.

Do you have a personal programme highlight?

PKM: My personal highlight is not a single programme item—there are too many highly attractive contributions—but the list of speakers. Take a look at the programme and see the global scope of exceptional clinicians and researchers presenting. With this international gathering it's impossible to highlight a single course.

IU: Assuming an active interest in the field of oral regeneration of the participant, I would almost want to ask the question the other way round: How can one in good conscience miss this truly unique concentration of expertise and learning opportunities? We will see an impressive density of relevant information and a great quality of human exchange in Barcelona, I'm convinced, also from the experience gained at previous IOS editions.

Final words: Why not to miss the International Osteology Symposium?

IU: I`m afraid I have to resort to a commonplace argument—the International Osteology Symposium is simply the place to be in the field of oral regeneration. Where else is it possible to interact with so many peers, meet world-renowned experts face-to-face and be updated on the latest knowledge in just three days? And of course, the fact that this symposium is taking place in one of the most attractive cities is not a disadvantage either.

PKM: The value and rich depth of the programme is not something that you will find anywhere else, I can't think of a better programme in regeneration. This symposium is the go-to place for education in oral regeneration.

About The Osteology Foundation

The Osteology Foundation is a global organisation that supports science, research training, and education in the field of oral tissue regeneration. The objective is to develop and share knowledge and understanding, leading to evidence-based clinical practice for the improvement of patient care. True to its motto "Linking Science with Practice in Regeneration" the Osteology Foundation bridges the gap between scientific advancement and contemporary clinical practice, in the field of oral tissue regeneration.

Dentsply Sirona

Dentsply Sirona World 2023 is coming to Dubai

Dentsply Sirona World takes place for the first time in the Middle East at the world-renowned Atlantis Hotel – The Palm, in Dubai. Nestled between the calm turquoise waters of the Arabian Gulf and the incredible skyline of Dubai, the Atlantis is the perfect location for this 2-day celebration of dentistry that combines superb dental education, innovation, and networking opportunities.

When?

5 February 2023, 8 a.m. – 7 p.m. GST
6 February 2023, 8 a.m. – 10 p.m. GST

Where?

Atlantis, The Palm, Dubai

What you can expect

WORLD CLASS DENTAL EXPERTS:

The Ultimate Experience in Digital Dentistry comes to Dubai with an impressive educational programme featuring international expert speakers across a wide range of academic content covering nearly every area of dentistry:

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- Dr Daniela Aggio, Digital – Brazil
- Dr Ehab Heikal, Clinic Management – Egypt
- Dr James Grutmann, Endodontics – USA
- Dr Marco Martignoni, Restorative – Italy
- Dr Michael Norton, Implantology – UK
- Dr Roberto Molinari, Digital – Italy
- Dr Simone Grandini, Restorative – Italy
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As our valued media guest, we will arrange an exciting and hands-on DS workflow tour for you that will give you a close look at Dentsply Sirona's newest and most innovative solutions, such as DS Core, Primeprint, Primescan Connect and DS PrimeTaper, as well as ProTaper Ultimate and many more.

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MAJESTIC GALA DINNER AT THE ATLANTIS:

Prepare to be amazed by the world's most celebrated chefs in a stunning setting during the Gala Dinner at the Atlantis on 6 February, 8 p.m. GST. This will be the perfect cap to what is set to be Dentsply Sirona's biggest event in the Middle East.

Please note: Limited slots available. We are happy to cover your congress fee, providing access to the educational programme, media tour and Gala Dinner, as well as all meals at the event; however, accommodation, travel, and other additional expenses will not be paid for. In case of any questions, please do not hesitate to contact us.

RSVP now

If you would like to join us in Dubai, please complete the enclosed form and e-mail it to us at:
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More information

Planmeca

Planmeca donates five mobile dental clinics to Ukraine

Planmeca, one of the world's leading dental technology manufacturers, is donating five mobile dental clinics to Ukraine to help provide dental care in the war-torn country. Each mobile clinic is fully furnished and includes a digital Planmeca dental unit, an autoclave and all other necessary devices and instruments needed to provide basic dental services.

The recently developed mobile clinic has been created in cooperation with Planmeca's Finnish distributor Plandent to enable dental care in areas where it is needed the most.

The five mobile clinics donated to Ukraine will be delivered to their destination with the help of Planmeca's Ukrainian distributor. This way, the clinics can be brought into use as soon as possible.

Regional focuses and schedules will be planned in cooperation with the local distributor in order to ensure the effectiveness of the donation in extremely difficult circumstances.

For more information, please contact:

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Interview with Prof. Marco Tallarico

Osstem-Hiossen Meeting in Europe—"Together has no limits"

Today, the digital revolution is rapidly changing dentistry. Prof. Marco Tallarico is dedicated to the latest innovation in digital guided surgery enabling the current dentistry to overcome limitations of the conventional treatments. In the following interview he talks about the latest trends in implantology, research, and his experiences at the Osstem-Hiossen Meeting in Europe.

You lectured on computer-guided bone regeneration at the meeting. How do modern technologies such as computer-guided surgery relate to biological concepts to ensure bone volume stability?

In several manuscripts, I have demonstrated that less marginal bone loss can be expected around implants placed using a surgical guide. This contributes to less incidence of peri-implantitis, which has been demonstrated in a ten-year follow-up study. The major biological reason is the execution of minimally invasive surgery; however, correct diagnosis, prosthetically driven treatment planning and accurate execution are key to the success of surgery.

In your opinion, what are the most important current developments and the latest trends in implantology?

In the last decade digital technologies have flooded the dental market. The spread of CBCT units and intra-oral scanners has contributed to the growth of guided surgery. However, software for the pre-evaluation of final aesthetics, strategies to make immediate loading easier and multi-piece surgical guides for bone reduction and immediate implants are the latest trends in implantology.

You are the President of Osstem AIC Italy, the Italian section of Osstem's Advanced Dental Implant Research and Education Center. This year's meeting is the first meeting with academic programmes that has been organised independently by the Osstem AIC scientific community. There were lectures, live surgeries and special sessions with renowned speakers and experts. What has the feedback been from participants on the congress concept so far?

I am extremely happy to have received so much positive feedback—starting with JM Lee, the executive managing director of Osstem Europe; Ottaviano Miceli, the managing director of the orthodontic and implant department of Micerium; all of the speakers and moderators; the sales network; and all of the participants. After the meeting finished, congratulations have kept coming in, so I can happily say that I am grateful to have hosted a meeting of a level that has not been seen for a long time.

You indicated in your opening speech that the Osstem AIC community will continue to grow. Could you give us a glimpse of what is expected in the next few months?

I am glad that you have listened carefully to my speech. I promised that Osstem AIC will continue to grow. The next step is to strengthen the collaboration among all the participating countries. The take-home message from the meeting was that "together has no limits", and we successfully demonstrated it. The meeting in Rome was just a starting point, or a milestone, for our community. Osstem AIC will change to the OIC (Osstem Implant Scientific Community) so that we will be a part of one larger community. Our goal is to become the largest scientific community in the world. To start collaborating, Osstem Europe's key opinion leaders will have to work hard under the coordination of Osstem Europe. In addition to the ambitious programmes for the future of the OIC, the scientific community should start keeping track of its followers and start a membership programme.

Thank you for the interview Prof. Tallarico.

AIC Europe

Prof. Marco Tallarico

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NSK

Finding the right time for implant loading

Today, the trend in implant dentistry is to have a short or no healing period at all before loading the implant. If conditions are not optimal, poor primary stability may increase the risk of implant failure. The Osseo 100 measures implant stability and osseointegration to provide sufficient information to decide when to load an implant. This is particularly important when working with shorter treatment time or managing risk patients.

The peg is excited by magnetic pulses and vibrates due to the stiffness in the contact area between the bone and the implant surface. Once attached to an implant, magnetic pulses cause the MulTipeg™ to vibrate. The instrument measures the frequency of the vibration and translates it to an ISQ scale value between 1 and 99. The higher the ISQ value, the better the stability. Measurements can be made without unnecessary impact since the equipment does not come into physical contact with the implant or abutment.

The device is also available as Osseo 100+: It can be connected via Bluetooth® to Surgic Pro2 to share and manage the data of those measured ISQ scores.

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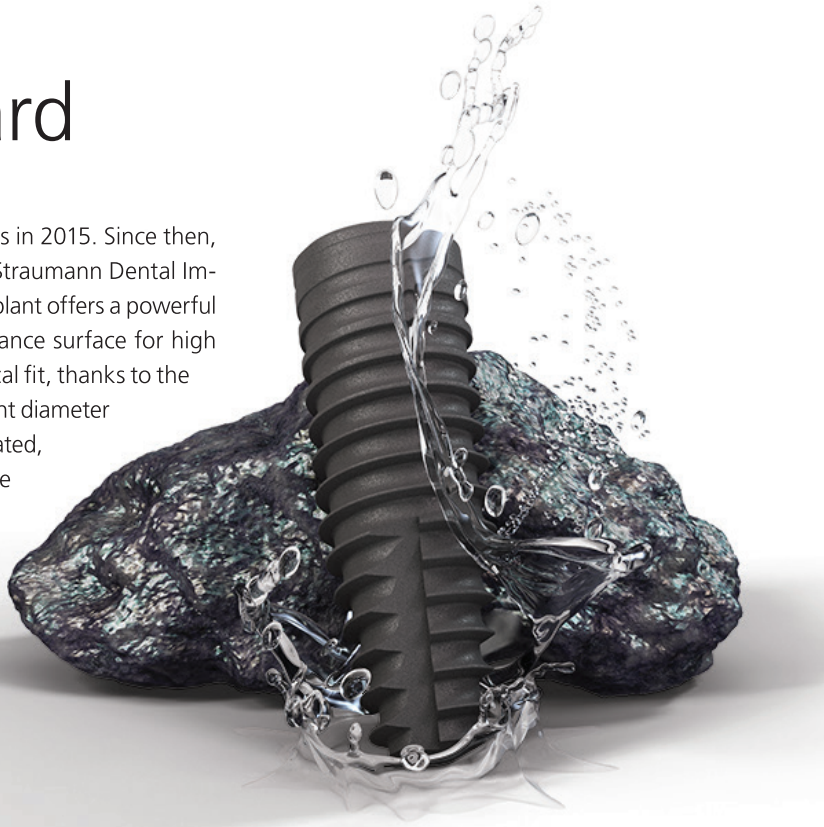
Straumann

The tapered standard



The Straumann® BLT implant has been introduced to the markets in 2015. Since then, it has become the most popular and most used implant line of Straumann Dental Implant System. Building on the clinically proven features, the BLT implant offers a powerful combination of Roxolid®, SLActive®, Straumann's high performance surface for high predictability and accelerated osseointegration, and an anatomical fit, thanks to the slim and tapered implant body. With a portfolio range from implant diameter 2.9 mm, to 3.3, 4.1 and up to 4.8 mm all tooth positions can be treated, be it single tooth, small bridges, or full arch rehabilitations. For the latter, with Straumann® Pro Arch, a scientifically proven immediate fixed, full arch solution for an immediate, aesthetic, and reliable outcome is offered. The Straumann® BLT implant system was designed for a natural look and feel, providing great flexibility and a balanced prosthetic portfolio for the everyday use.

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ClaroNav

Introducing Navident 4: Why do I need one?

Are you constantly looking for ways to elevate and differentiate your practice from mainstream dental providers? We know the challenges you face when you are aiming for the highest levels of performance and results—both functionally and aesthetically.

Navident provides breakthrough surgical navigation with advanced function and form. From more efficient single implant replacements to a fully edentulous rehabilitation workflow, Navident is poised to revolutionise and differentiate your practice: Conduct high-precision implant treatments quickly and confidently. Reliably detect important anatomical structures. Locate root canals and other fine anatomical structures with precision and efficiency. High-precision navigation of your piezotome enables accurate assessment and predictable outcomes.

The new Navident system is equipped not only with next-generation, 3X resolution camera technology, but also provides everything from ergonomic design to reimagined touchscreen interface, and is created to provide smooth workflow integration for clinicians at every stage of their career. Precision dentistry for the precision dentist.

Navident 4 comes in cart-based or new wall or ceiling mount configurations for ultimate versatility. Navident 4 is now available at a special pre-order price.

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Combined SEM image of the surface of two implants, each removed shortly before from sterile packaging. Full-size resolution SEM image mapping, Backscattered electron imaging 500x.

Your implant choice matters

In 2017, the CleanImplant Foundation, in conjunction with a cohort of world-renowned scientists, published the first consensus paper to establish a limit on the amount of particulate organic and metal residue from manufacturing and packaging to define a quality assurance standard of cleanliness for dental implants. Based in Berlin, Germany, this non-profit organisation is dedicated to ensuring implant surfaces are contaminant free, as medical devices in contact with sterile body tissues are considered critical items.

The CleanImplant Foundation now has more than 120,000 subscribers on its social media platforms. One thousand clinicians from around the world visit www.cleanimplant.org monthly to review the quality assurance monitoring reported by the foundation's studies. On 1 September 2022, the CleanImplant Foundation opened an office in New York City. Its mandate: to bring best practices in implant manufacture to the profession and the industry in North America.

Alarming study results and clinical consequences

In a recent quality assessment study performed in an accredited testing laboratory in collaboration with the Charité–University in Berlin, more than 100 different sterile-packaged ceramic and titanium implants from 80 implant manufacturers were analysed for surface contaminants caused by flaws in the manufacturing and packaging processes. Over one-third of the implant samples, removed from their package and examined by scanning electron microscopy in cleanroom conditions, showed unacceptable quantities of carbonaceous particles. These impurities, if detached from the implant's surface during surgical placement, lead to the release of pro-inflammatory cytokines after phagocytosis, followed by the expression of matrix metalloproteinase and the differentiation of osteoclast precursors into mature osteoclasts. The result is an expanding zone of soft tissue damage, inflammation, and peri-implant bone resorption leaving rough areas of the implant surface exposed to bacterial colonisation.

CleanImplant's quality seal provides clinical and legal safety

The CleanImplant Foundation has introduced a globally recognised "Trusted Quality" seal to differentiate those manufacturers who have deficits in the quality control of their products from those who don't. Receiving this seal verifies that the recipient manufacturer has instituted production technologies to eliminate processing pollution of their implant systems. Five randomly selected implant samples of the same type from different batches are used to formulate the quality analysis data. Two members of CleanImplant's Scientific Advisory Board independently review the data from the analysis to ensure the results meet the consensus-based quality criteria for the "Trusted Quality" seal of approval. In addition, the implant system's clinical documentation must show a multi-annual survival rate of no less than 95 per cent. The Scientific Advisory Board responsible for the peer-reviewed process includes Prof. Dr Tomas Albrektsson, Prof. Dr Ann Wennerberg, Prof. Dr Florian Beuer, Prof. Jaafar Mouhyi, Prof. Hugo de Bruyn, Dr Luigi Cannulo, and Dr Michael Norton, past President of the Academy of Osseointegration. Their signatures on the CleanImplant "Trusted Quality" seal guarantee an unbiased quality assessment.

For the patient, surface contaminants causing an uncontrolled foreign body reaction resulting in peri-implantitis, bone loss, and potentially implant failure is a violation of trust. A compromised clinical outcome from a readily resolvable situation breaches the standard of care and duty of care for our patients. Clinicians who unknowingly use surface-contaminated implants run the risk of litigation. A readily identifiable x-factor that nullifies 100 per cent success is inconsistent with the mandate of excellence demanded of the profession and the industry.

More information

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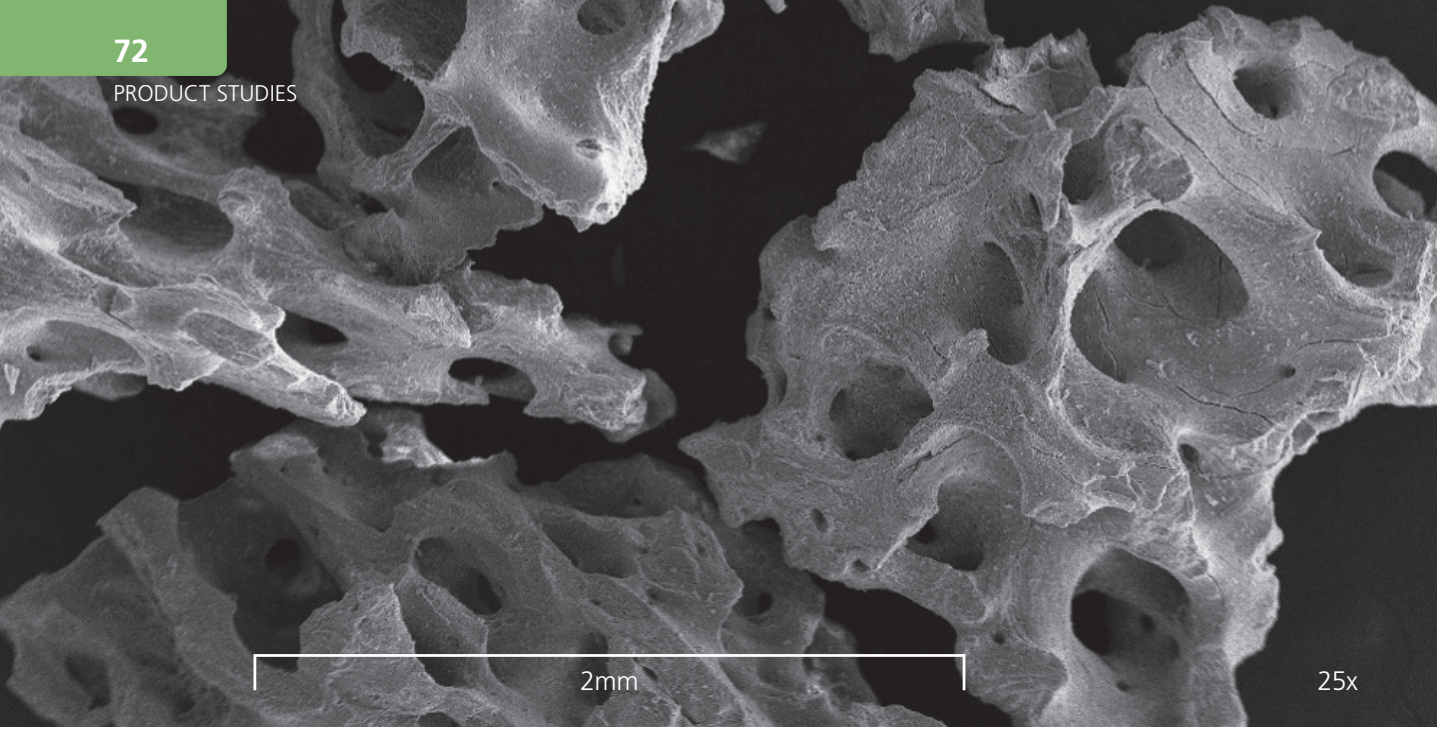

BioHorizons Camlog product report

More room for more bone formation

The correct choice of biomaterials is crucial to achieve optimal clinical results—in functional, structural and aesthetic terms. The aim of any tissue regeneration technique, and bone grafting in particular, is to achieve formation of living and reactive tissue. This should be able to regenerate itself such that the mechanical and biological function is maintained sustainably.

In a randomised comparison study of bovine-derived (MinerOss X) and porcine-derived bone grafts (MinerOss XP) in molar or premolar extraction sockets covered with a collagen membrane (Mem- Lok® Pliable) in 18 patients, Guarnieri and colleagues detected no differences in terms of dimensional vertical and horizontal changes at the extraction sockets between the two groups[1].

In sockets that were grafted using the bovine-derived bone material, the mean ridge width and the average heights of the vestibular and the lingual crest were reduced by 1.25±0.7 mm, 1.18±0.8 mm and 1.12±0.9 mm, respectively. For the group whose sockets were augmented using porcine-derived bone, the reductions were 1.19±0.4 mm, 1.21±0.8 mm, and 1.09±0.6 mm respectively (Fig. 1).

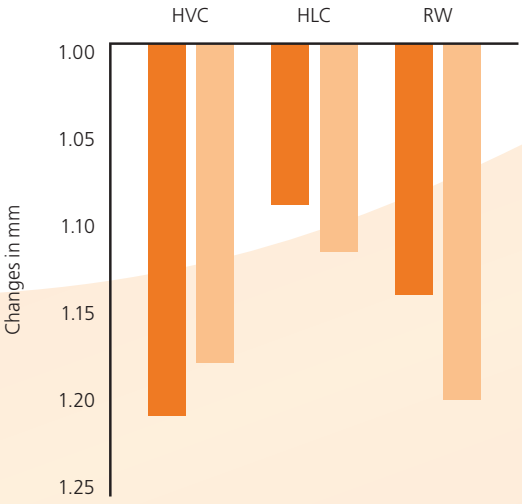

Fig. 1: Horizontal and vertical changes at re-entry surgery. HVC: height of the vestibular bone ridge; HLC: height of the lingual bone crest; RW: ridge width.

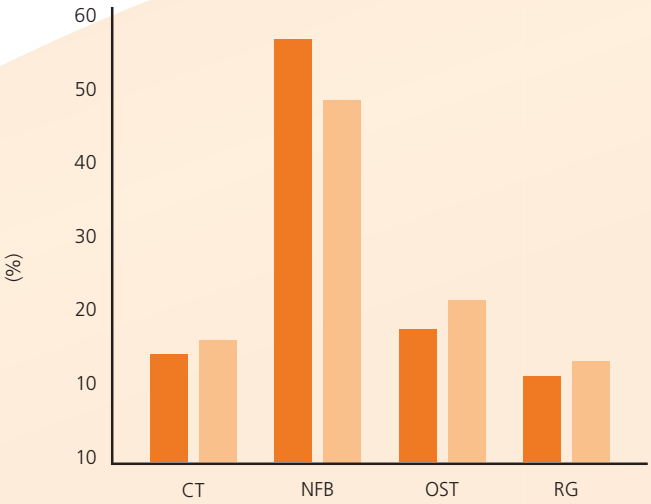

Fig. 2: Histo-morphometric mean values. CT: connective tissue, NFB: newly formed bone; OST: osteoid tissue; RG: residual graft.

The different histological results between the two groups

In the assessment of the histomorphometric parametres, statistically significant differences were detected between the two groups (Fig. 2). The percentage of newly formed bone was significantly higher in the group that was treated with porcine-derived bone material compared to the bovine xenotransplant group at four months post grafting (57.13±2.8% vs. 49.08±3.7% of new bone). Conversely, non-mineralised connective tissue (16.37±4.9% in bovine vs. 13.65±3.6% in porcine), residual graft particles and osteoid tissue were present at a higher extend in the sockets treated with bovine material (13.49±2.8% and 21.06±3.8% in bovine vs. 11.74±4.7% and 17.63±3.8% in porcine).

The data also suggest that alveoli treated with a membrane and porcine bone grafts MinerOss XP) leave less residual bone replacement material compared to alveoli treated with bovine bone grafts (MinerOss X). This might indicate a different impact of the bovine- and porcine-derived materials on the bone healing process. This hypothesis is also supported by the higher percentage of osteoid tissue (bone in maturation phase) found after four months in extraction sockets grafted with bovine-derived bone.

Bone mineral matrices must be biocompatible and fulfil four key properties to promote bone formation and to allow efficient tissue regeneration. In summary, the properties of an "ideal" bone graft enable bone growth in the augmented site and lead to stable osseointegration with minimal host response. Osseointegration is defined as the formation of new bone at the direct interface between an endosteal implant or bone substitute material and the native bone without intervening soft tissue[2].

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Camlog

Simultaneous implantation and augmentation of a buccal bone defect with biologised bone substitute material

Dr Haki Tekyatan, Germany

In implant dentistry, we need sufficient bone and soft tissue for long-term and prognostically safe stability. This is a good prerequisite for long-term success in order to achieve secure stability of the implant and the surrounding peri-implant soft tissue. Buccal defects are often found in our practice and are frequently caused by physiological remodelling processes after tooth extraction. These remodelling processes after tooth loss are scientifically very well studied and proved. Especially the loss and degradation of the bundle bone results in a wide variety of defect morphologies.[1–3]

In addition to an adequate bone situation, sufficient attached and keratinised mucosa is important for long-term success in order to avoid peri-implantitis developing and to prevent aesthetic losses or limitations of the prosthetic restoration.[4–6] If the bone volume is insufficient, bone augmentation or regenerative measures are often necessary. A wide variety of methods, measures and techniques are used for this purpose, for both horizontal and vertical defects,[7] such as augmentation of buccal or horizontal defects with granules of various types. In combination with a membrane, an increase in volume of up to approximately 3 mm can be achieved if indicated.[8] In our practice, various materials are used for this purpose. When using these materials, it is important to ask oneself whether one wants to perform a volume-stable build-up with very little to no resorption or whether one wants to achieve complete remodelling and reshaping into vital bone using biomimetic materials. In combination with the unavoidable side effect of a controlled but nevertheless present volume loss, the use of biologised materials according to Ghanaati's low-speed centrifugation concept (LSCC) seems to be a promising approach in this regard, and has been increasingly used and observed in practice.[9, 10]

In the case presented here, a buccal defect was augmented after implantation using a bone regeneration material (a 3D β-tricalcium phosphate collagen matrix; CERASORB Foam, curasan) biologised with platelet-rich fibrin and further covered with fibrin membranes. The intention of this method is to achieve complete remodelling of the inserted material into vital

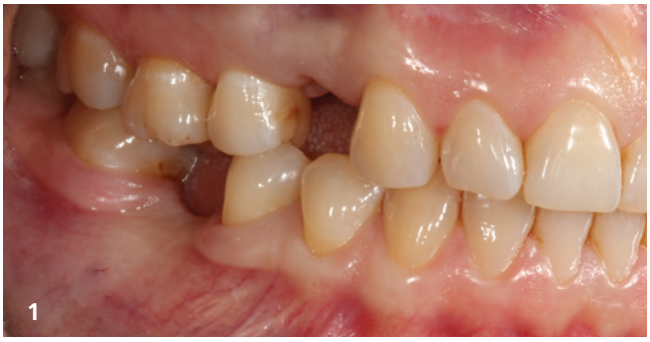
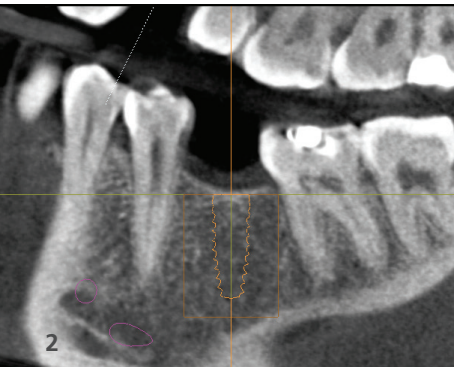
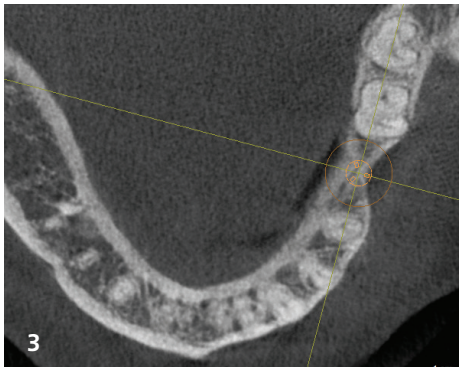
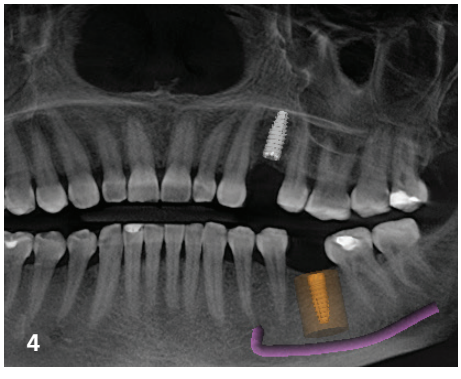
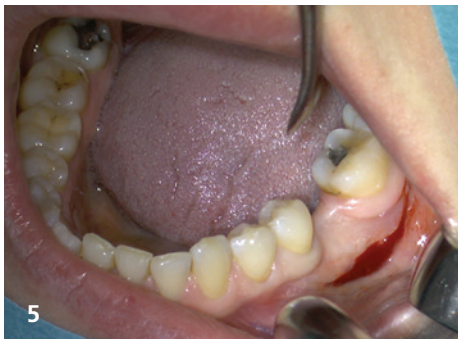


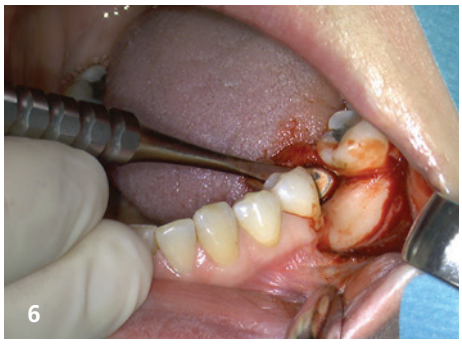
Fig. 1: Initial clinical situation in region #36 with a clear buccal contour incision and complete absence of buccal keratinised mucosa. **Figs. 2–4:** CBCT: the transversal and vertical views clearly showed the buccal defect in region #36.

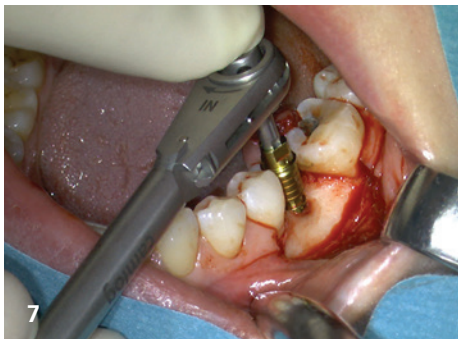


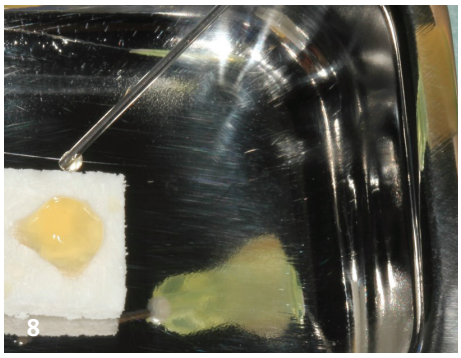


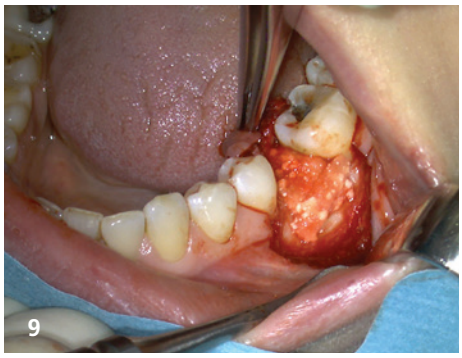


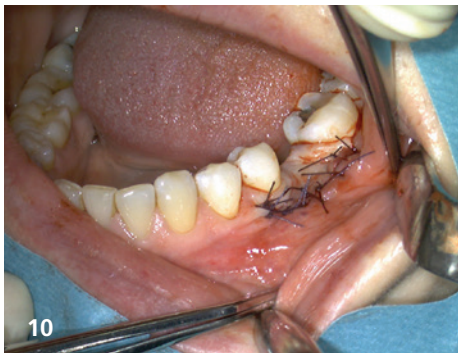












Figs. 5 & 6: Vestibuloplasty modified according to Edlan–Mejchar, lingual mobilisation of the flap and visualisation of the surgical site. **Fig. 7:** Manual final implant positioning to a torque of 25 Ncm². **Fig. 8:** Biologisation and wetting of the CERASORB Foam with injectable platelet-rich fibrin according to the low-speed centrifugation concept protocol. **Fig. 9:** Gentle adaptation of the easily mouldable CERASORB Foam to the defect situation in two layers with medium gentle compression. **Fig. 10:** Layering of two fibrin membranes, plastic coverage of the surgical area.

bone and to support the regeneration of a buccal defect under controlled volume loss.

Case presentation

A healthy 49-year-old female patient presented to our practice with missing teeth #24 and 36 and a request for single-tooth implant restorations. In region #24, the bone and soft-tissue situation was clinically and radiographically adequate. Since this case report deals with the restoration of the implant in region #36, region #24 will not be discussed further. In region #36, there was a considerable bone and soft-tissue defect buccally (Fig. 1). Pre-implant planning using CBCT (Orthophos XG 3D, Dentsply Sirona) was performed to evaluate the situation (Figs. 2–4). After evaluation of the CBCT scan and planning, an implant with a diameter of 3.8 mm and a length of 11.0 mm was selected for region #36.

A few weeks later, the implant was placed under local anaesthesia with simultaneous lateral augmentation. In order to provide sufficient plastic coverage of the augmentation area and the surgical area later, a vestibuloplasty modified according to Edlan–Mejchar was performed. An arch-shaped incision was made buccally. A split-thickness flap was formed crestally and then a horizontal periosteal incision was made. The split-thickness flap formed in this way (combined mucosa and mucoperiosteal flap) was mobilised lingually, and the surgical site was visualised. This revealed a homogeneously structured bone of Class D1 quality (Figs. 5 & 6). After marking and defining of the implant position, the implant site was prepared according to the defined drilling protocol, and the implant was placed to a torque of 25 Ncm² (Fig. 7).

After implant placement, the buccal bone defect or the buccal contour defect was augmented with the collagen matrix. In the hydrated and biologised state in which it was used, the matrix can be excellently shaped and adapted to the defect situation with light to medium compression (Fig. 8). The 3D matrix was adapted and attached to the defect situation in two parts, one layer in the vertical direction and one layer in the horizontal direction. The reason for this two-layer approach was the calculated and deliberately controlled resorption of the material described at the beginning, in order to ensure sufficient material for the remodelling process of the bone and the soft tissue. At the end of the procedure, two fibrin membranes were placed on the augmentation area, and the surgical area was sutured plastically tight (Figs. 9 & 10). At the end of the operation, a radiographic postoperative control was performed with a dental panoramic tomogram (Fig. 11).

Healing was pain-free and observation of the course of healing showed completely irritation-free, stable tissue (Fig. 12). After about four months, the implant was uncovered under local anaesthesia. Clinically, the peri-implant bone was sufficiently dimensioned, firm and stable; there was an estimated volume

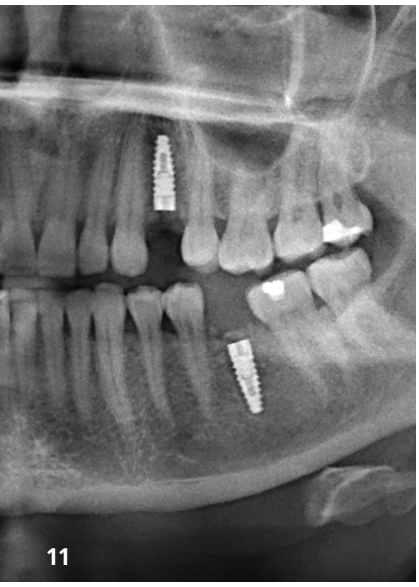
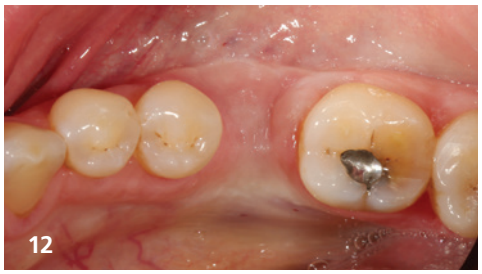
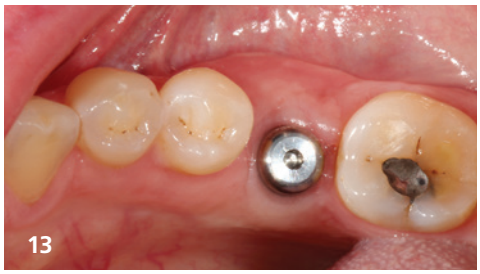
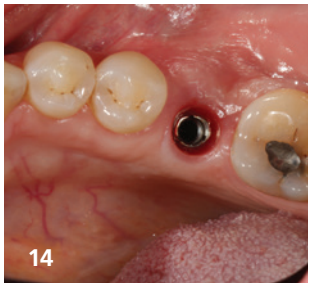
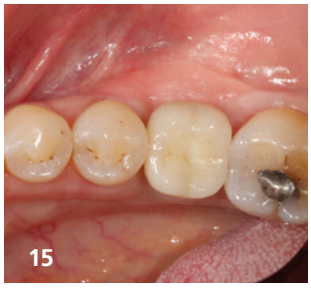
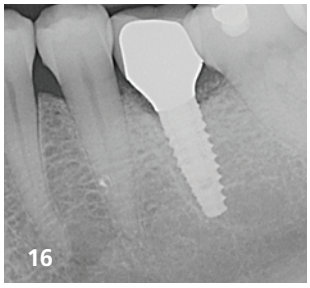







Fig. 11: Postoperative dental panoramic tomogram. **Fig. 12:** Observation of the course of healing found completely irritation-free, stable and pain-free conditions. **Fig. 13:** Exposure of the implant after about four months and inserted healing abutment. **Fig. 14:** Individually shaped mucosa immediately before definitive restoration. **Fig. 15:** After seating of the ceramic crown. **Fig. 16:** Final radiograph.

gain of 2 mm, especially in the buccal region; and there was a significant volume gain in the soft tissue (Fig. 13). After a further four weeks, the final prosthetic restoration of a ceramic crown on a customised zirconia abutment was made, the fit, aesthetics and occlusion were checked and the final radiograph was taken (Figs. 14–16). After six months, a final clinical check and evaluation of the clinical situation were carried out. Stable, irritation-free soft-tissue conditions and, above all, sufficiently dimensioned, stable, attached and keratinised mucosa were still evident buccally.

Conclusion

With the treatment protocol presented, simultaneous augmentation in implantology can be performed predictably. Using individual concepts specifically adapted to the situation, buccal ridge defects can be treated successfully and regeneratively using biologised bone substitute materials. The special 3D matrix structure of CERASORB Foam enables simple and safe handling and very good adaptation to the bony defect. Even though histological evidence of bone regeneration and augmentation was not provided in this clinical case report, the soft-tissue situation showed a clear contour improvement clinically. The combination of the bone substitute with its special collagen matrix and its biomimetic properties, biologised according to the LSCC protocol, as well as the surgical soft-tissue techniques used contributed to this clinically stable and adequately dimensioned situation. In combination with the unavoidable side effect of controlled volume loss, the use of biologised materials seems to be a promising approach in this regard and is increasingly being applied and gaining growing attention in practice.

About…

Dr Haki Tekyatan

is a Germany-based dentist who specialises in implant dentistry and oral surgery. He is currently in private practice in the German city of Simmern.

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Literature

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TruSCREW with its aggressive self-tapping thread is the ideal bone screw for fixing small bone blocks used in the field of oral and maxillofacial surgery. Thanks to the thread, no pre-drilling is required in most cases. The patented screw design allows effortless insertion into all bone types.

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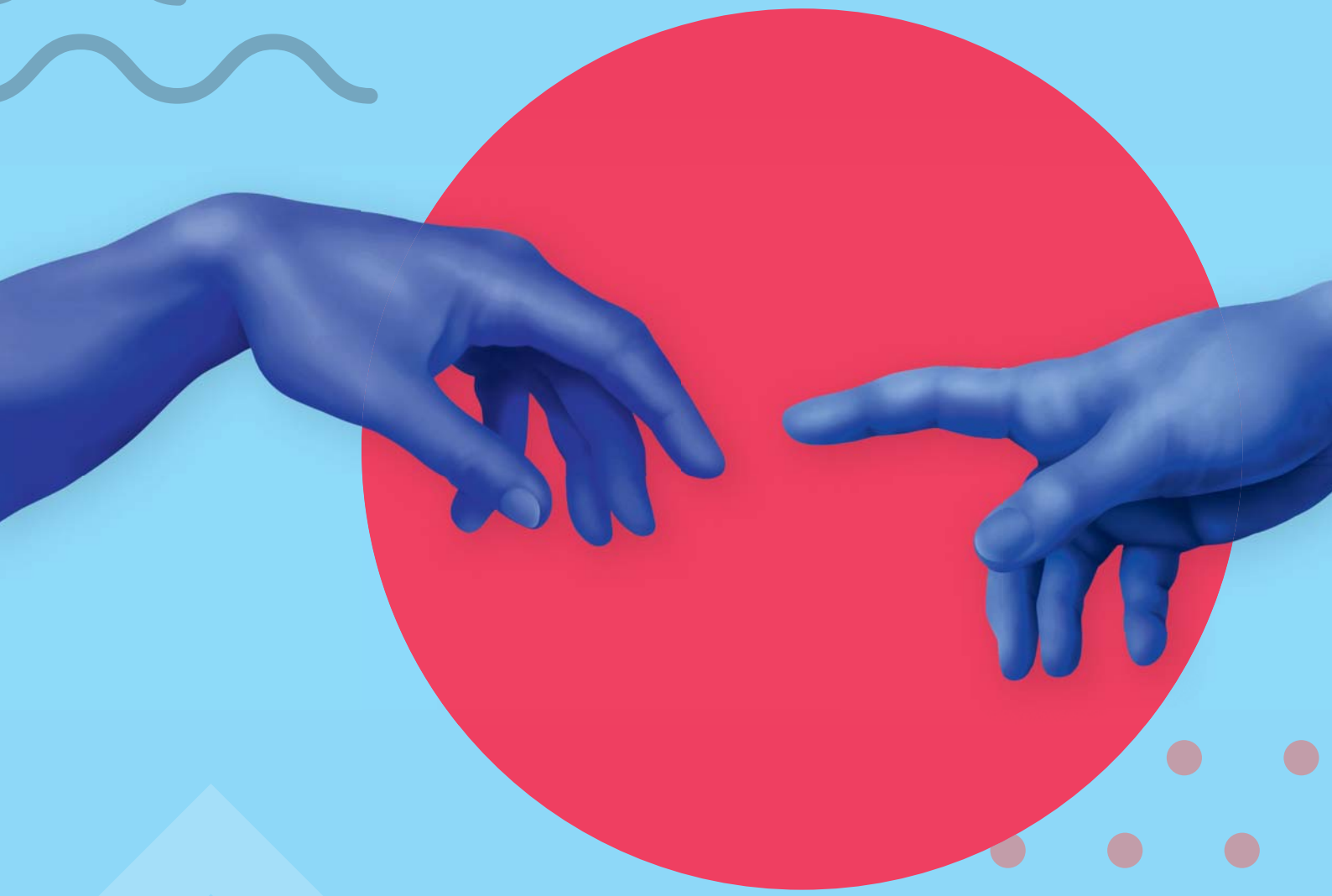

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	ITI Kongress Schweiz 2023	Engelberg Switzerland	20–21 January 2023	www.events.iti.org/congressswitzerland
	BDS – Barcelona Dental Show	Barcelona Spain	26–28 January 2023	www.dentalshowbcn.com
	14. MKG Update	Wiesbaden Germany	27–28 January 2023	www.mkg-update.com
03/2023	Les Printanières 2023	Lyon France	08–10 March 2023	www.lesprintanieres.globald.com/eng/page/ les-printanieres/
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[2] Hildebrand, H. F., Veron, Chr., Martin, P.: Nickel, chromium, cobalt dental alloys and allergic reactions: an overview. Biomaterials 10, 545–548 (1989).

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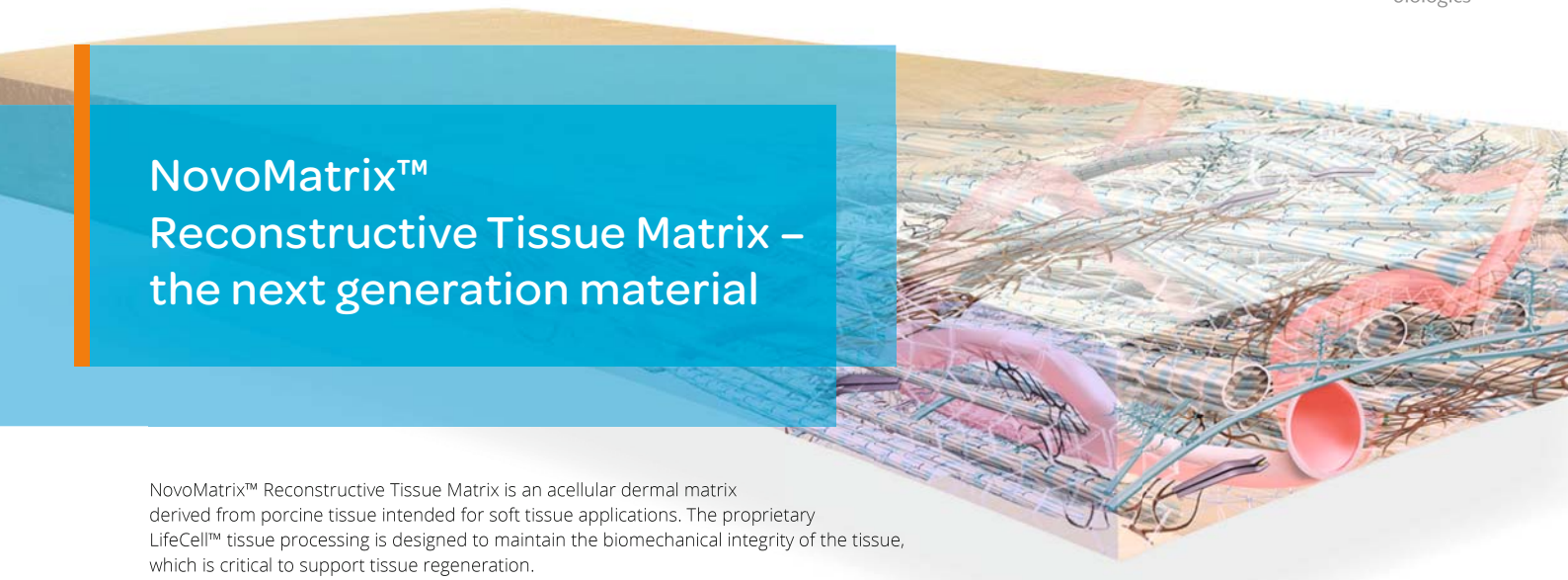

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[1] Wen et al. J. Periodont. 2019, 1, 734.
[2] Schmitt et al. Clin Oral Implants Res. 2013, 24, 576.
[3] Kloss et al. Clin Oral Implants Res. 2018, 29, 1163.
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[5] Kloss et al. Clin Case Rep. 2020, 8, 5.

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