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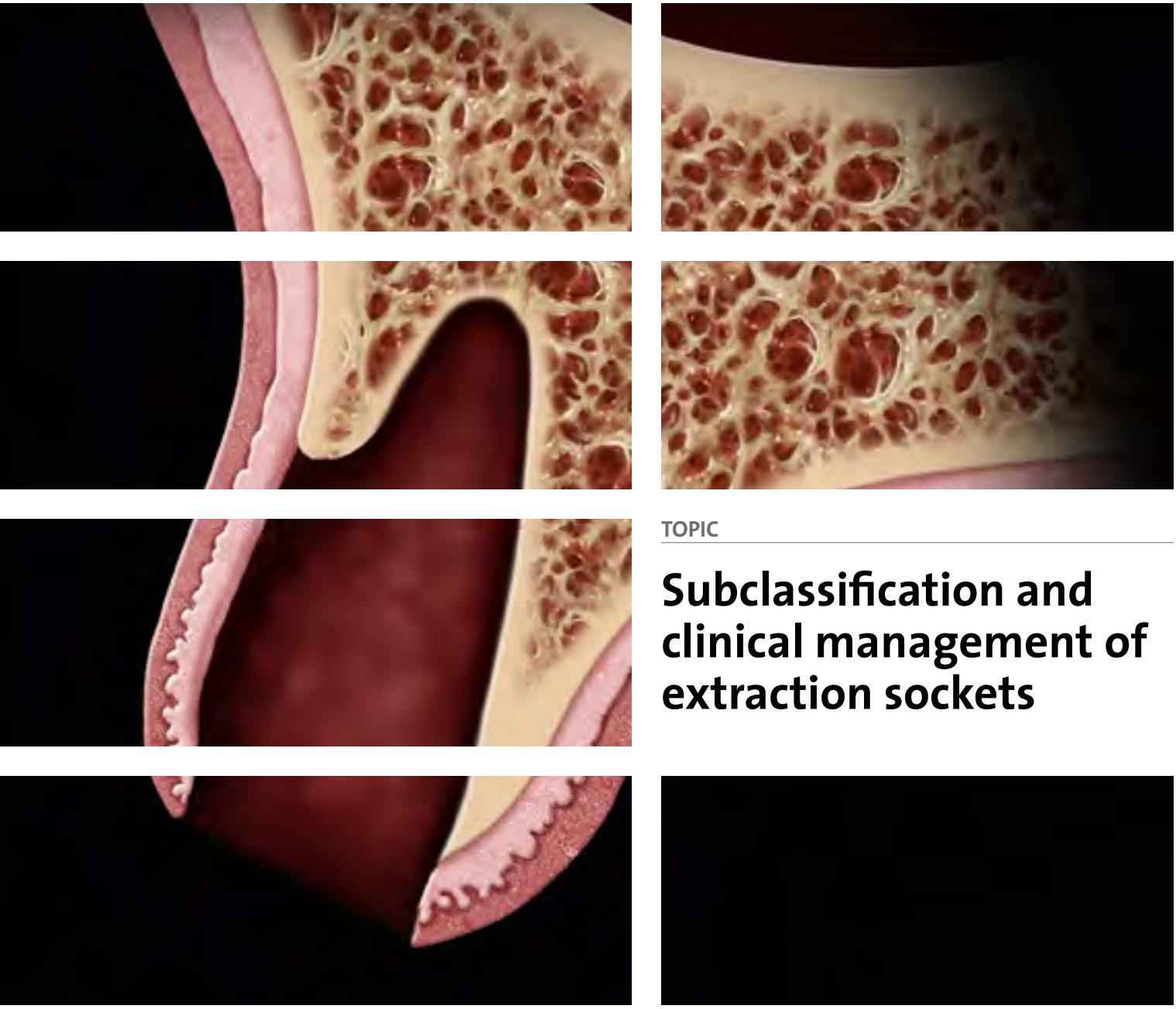
EDI JOURNAL



TOPIC

Subclassification and clinical management of extraction sockets

BDIZ EDI

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

»EDI News: Coming up: 11th BDIZ EDI Expert Symposium · Coming up: 10th European Symposium of BDIZ EDI · Retrospective: The year 2015 in the EU **»European Law:** Compliance and the Sunshine Act **»Clinical Science:** The immediate-placement concept of the Academy of Oral Implantology in Vienna · Subclassification and clinical management of extraction sockets with labial dentoalveolar dehiscence defects · CAD/CAM technology in the implant/restorative workflow

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Challenges

What are the challenges we are facing in daily clinical implant practice? We have learnt how to forestall complications, to master problems and to avoid failures. And the European Consensus Conference (EuCC) under the auspices of BDIZ EDI has supported clinical oral implantologists in Europe by giving them some guidelines on dealing with the challenges in daily work – year by year. So far, ten guidelines have been issued.

We are now beginning to revise and extend the previous papers. In early 2015, we did so with the guideline on peri-implantitis, initially agreed on in 2008. The new guideline aims to provide dental and medical implantologists with recommendations for recognizing potential biological complications and initiating the treatment required for the respective condition. Biological complications are observed as early or late complications and require diagnostic and therapeutic experience on the part of the treatment provider if a progression of the pathological process is to be prevented.

When defining peri-implantitis, the panel of experts made a distinction between initial, reversible mucositis; inflammatory, currently irreversible peri-implantitis; and apical inflammation as a special manifestation following endodontic treatment and/or apical granuloma or burnt-bone syndrome (so-called retrograde peri-implantitis).

Some of the important questions were answered. The EuCC 2015 had no conclusive evidence that implant design or the surface properties could be responsible for an increased risk of peri-implantitis. What is much more important, according to the expert panel, is the surgical technique. In the event of errors on the part of the surgeon, implant placement may result in damage to the peri-implant tissue, resulting in a predisposition for peri-implantitis. The guideline cites thermal and mechanical trauma to the bone, poor soft-tissue management and incorrect positioning of the implant. The types of prosthetic restorations with their different treatment processes, as well as possible overload, are also classified as potential risk factors.

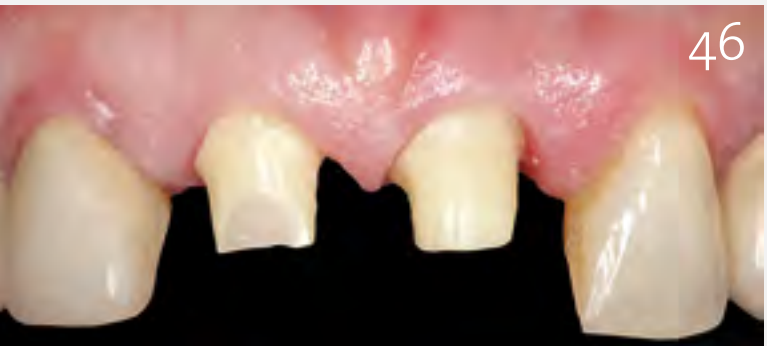
As a matter of fact, we can avoid some of the problems with our skills and experience. For this reason, the BDIZ EDI encourages young dentists to gain skills at an early stage. The Curriculum Implantology we offer has been adopted by many of our partner associations in Europe. And with our annual European Symposia, we spread the word about postgraduate education in implant dentistry.

New events are coming up. In February 2016, the European Consensus Conference will revise the 2011 paper on short and angulated implants. The EuCC will provide an update on whether treatment with e.g. short implants might be an alternative to extensive attempts at surgical reconstruction. Various implant manufacturers have been promoting their short implants, designed especially for cases with limited available vertical bone height.

If you are interested in the work of BDIZ EDI and in the previous papers, do not hesitate to look for them on our website. All papers are online. In May 2016 we will hold a joint congress with Quintessence Italy in the beautiful city of Verona. Why not join us there and find out more about our work, the new papers and the things we are going to do next year?

We are not aiming at imposing prefabricated concepts. We are working on the high-quality level of skills that implant dentists should have – in Europe and around the world.

Sincerely,
Christian Berger, Kempten/Germany
President of BDIZ EDI



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Partner Organizations of BDIZ EDI

Association of Dental Implantology UK (ADI UK)

ADI UK, founded in 1987, is a registered charity committed to improving the standards of implant dentistry by providing continuing education and ensuring scientific research. It is a membership-focused organization 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 organization 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 (Certyfikat Umiejętności 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 recognized 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 organization 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.

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19th Annual Symposium of BDIZ EDI

Partner of the ICOI World Congress

For the first time, the European Association of Dental Implantologists (BDIZ EDI) partnered with the ICOI World Congress in Berlin this year. About 600 participants attended the three-day congress, whose theme was "Evidence-based innovations in oral implantology".

An interested audience at the Maritim Hotel in Berlin.

Starting with a four-hour "Young Implantologists" programme on Thursday, several pre-congress courses rounded out the congress day and were followed by two days with a compact scientific programme. *Professor Joachim Zöller*, BDIZ EDI Vice President, represented the association on the programme committee.

The three-day congress featured speakers from around the world, who presented the latest in dental implantology on topics from soft-tissue application around implants, growth factors in surgical healing, the treatment of peri-implantitis to digital communication skills for minimally invasive surgery and much more. The speakers included some well-known European names: *Professor Ralf Smeets* (Hamburg) presented alternatives to autogenous bone grafts in oral implantology, and *Professor Illia Roussou* (Athens) closed the gap between bruxism and implant-supported restorations by considering the occlusal aspect. *Professor Konstantinos Valavanis* (Athens) addressed implant treatment strategies in the aesthetic zone.

Three German speakers followed up on advanced and approved techniques for predictable single-implant placement in the aesthetic zone (*Dr Pascal Marquardt*, Cologne) and new techniques and materials for sinus-floor elevation including trouble-shooting in the implantological practice (*Ady Palti*, Baden-Baden). *Professor Fouad Khoury* (Olsberg) focused on oral rehabilitation in patients with severe bone loss, describing a surgical approach with autologous bone grafts and good long-term results.

Other topics included implant stability (*Dr Paolo Trisi*, Pescara, Italy), extraction socket management and the decision relating to immediate or delayed implant placement (*Professor Eric Rompen*, Liège, Belgium). *Dr Joseph Choukroun* (Nice, France) presented healing improvements in soft and hard tissue using PRP and advanced PRF, and *Dr Mariusz Duda* (Katowice, Poland) compared successful and failed implantological cases.

Splendid memories

On the fringes of the congress, *Dr Gerard Scortecci* and *Dr Kenneth Judy* (President and Chairman of the ICOI, respectively) presented the ICOI philosophy to the assembled representatives of the press. The mission of the congress, they said, was to provide the attendees with a thorough review of the evidence-based and current innovations in oral implantology. *Ady Palti* introduced the European office of ICOI, which he directs and supports in Baden-Baden (Germany). *Dr Fred Bergmann*, newly elected President of DGOI (the German partner of ICOI), emphasized the friendly cooperation of the ICOI, BDIZ EDI and DGOI. "We will all take home some splendid memories of the good cooperation in Berlin", he said.

The staff of the BDIZ EDI stand at the dental exhibition presented their new papers and guidelines on peri-implantitis, a hygiene brochure for the implant maintenance (addressed to patients) and information about the anti-corruption law (Sunshine Act), as well as upcoming events and meetings, the ››

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Talks at the BDIZ EDI stand during the dental exhibition.

first of which will be on 6–7 February 2016 in Cologne: the European Consensus Conference (EuCC), the Expert Symposium on short and angulated implants and the meeting of the European Committee of BDIZ EDI.

The following interview conducted by the International Dental Tribune with *Christian Berger*, President of BDIZ EDI, explains the benefits of the joint congress. *AWU*

Interview with BDIZ EDI President Christian Berger "Globalization does not stop for implantology"

Christian Berger

Implantologists from all over the world were gathered in Berlin for the ICOI World Congress. This year, the European Association of Dental Implantologists (BDIZ EDI) had collaborated with the International Congress of Oral Implantologists (ICOI) for the event for the first time. Dental Tribune Online spoke with the association's president, *Christian Berger*, about his expectations and the current state of implant dentistry in Europe.

For this year's ICOI World Congress, the ICOI collaborated with your association in addition to the German DGOI for the first time. How did that come about, and what do you expect from this joint effort?

As early as 2011, BDIZ EDI and the DGOI had jointly organized a successful congress in Munich. Since we wanted to repeat this congress in 2015, and since the ICOI was planning to hold its World Congress in Germany, it was only logical to host this event together.

Each year, about one million implants are placed in Germany with its population of some 80 million, whereas – as far as I am aware – only 300,000 implants are placed annually in the USA, which has a population of 320 million. This means that the number of implants per 1,000 patients is about thirteen times higher in Germany compared with the USA. A mutual exchange is important for both Europe and North America so we can learn from each other.

In 2014, the BDIZ EDI celebrated its 25th anniversary and can thus look back on a remarkable history. In your opinion, what have the most important developments in implantology been during the last three decades?

The BDIZ EDI was founded after implantology had been scientifically recognized in Germany in 1988 and included in the German fees scale for dentists then in effect (GOZ). Since then, the association has dealt with professional issues, as well as legal and fee-related matters, and assisted in hygiene and practice management.

Globalization does not stop for implantology. For a long time, many regulations have been developed in the EU and implemented by the member states. As a consequence, BDIZ EDI is geared towards Europe, and our decades-long cooperation has inspired and supported our work and the work of our partner organizations in Europe. This international exchange also boosted the development of new implant surfaces, prostheses and the ongoing improvements of implant shapes.

The BDIZ EDI has been involved in health policy discussions in Europe since its foundation in 1989. What current topics could be interesting and relevant for an international congress such as the ICOI World Congress?

At the moment, experts are vividly debating anti-corruption legislation in health care, similar to the Physician Payments Sunshine Act in the USA, which is also concerned with the prevention of bribery and corruption. The BDIZ EDI has, by the way, drafted an alternative bill and presented it to German lawmakers.

In our globalized world, topics like this are always international in scope, and the cooperative exchange at international congresses always goes far beyond the actual exchange of scientific studies and results.

Interview by Claudia Duschek, Dental Tribune
Courtesy of Dental Tribune Online

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11th BDIZ EDI Expert Symposium, Cologne

Update on short and angulated implants

The Cologne Expert Symposium of BDIZ EDI will be held for the 11th time on Sunday, 7 February 2016 at the Dorint Hotel on Heumarkt, providing an update on how to work with short and angulated implants. This same topic had already been addressed in 2011, at the 6th BDIZ EDI Expert Symposium. That same year, the 6th European Consensus Conference (EuCC) had issued its Guidelines on the same topic, which will be revised in Cologne next year. The symposium traditionally takes place on the last weekend of the Carnival season.

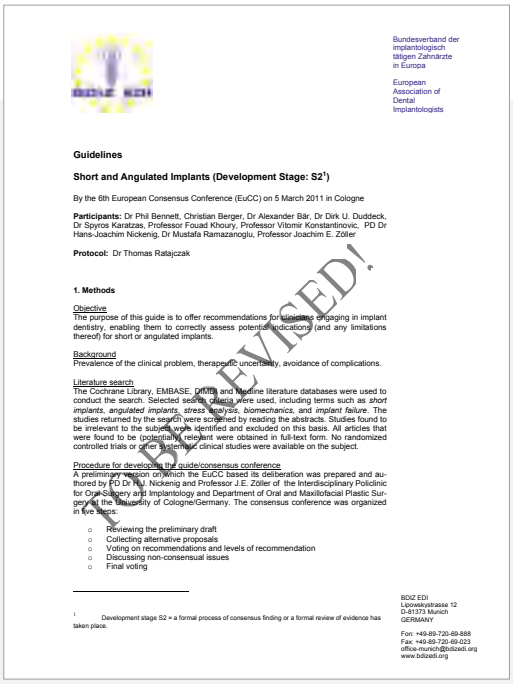
BDIZ EDI continues its series on the challenges in oral implantology with next year's Expert Symposium, which focuses both on reduced-length implants and on angulated implants, asking whether and when it makes sense to place implants without augmentation.

Coming up soon

New Guideline of the European Consensus Conference (EuCC) under the auspices of the European Association of Dental Implantologists (BDIZ EDI)

Cologne, Saturday, 6 February 2016, 11th European Consensus Conference

Topic: Update on short and angulated implants: advantages and limits



Bundesverband der implantologisch tätigen Zahnärzte in Europa

European Association of Dental Implantologists

Guidelines

Short and Angulated Implants (Development Stage: S2[1])

By the 6th European Consensus Conference (EuCC) on 5 March 2011 in Cologne

Participants: Dr Phil Bennett, Christian Berger, Dr Alexander Bär, Dr Dirk U. Duddeck, Dr Spyros Karatzas, Professor Fouad Khoury, Professor Vitomir Konstantinovic, PD Dr Hans-Joachim Nickenig, Dr Mustafa Ramazanoglu, Professor Joachim E. Zöller

Protocol: Dr Thomas Ratajczak

1. Methods

Objective
The purpose of this guide is to offer recommendations for clinicians engaging in implant dentistry, enabling them to correctly assess potential indications (and any limitations thereof) for short or angulated implants.

Background
Prevalence of the clinical problem, therapeutic uncertainty, avoidance of complications.

Literature search
The Cochrane Library, EMBASE, PUBMED and Medline literature databases were used to conduct the search. Selected search criteria were used, including terms such as *short implants, angulated implants, stress analysis, biomechanics,* and *implant failure*. The studies returned by the search were screened by reading the abstracts. Studies found to be irrelevant to the subject were identified and excluded on this basis. All articles that were found to be (potentially) relevant were obtained in full-text form. No randomized controlled trials or other systematic clinical studies were available on the subject.

Procedure for development of guide/consensus conference
A preliminary version on which the EuCC based its deliberation was prepared and authored by PD Dr H.-J. Nickenig and Professor J.E. Zöller of the Interdisciplinary Policlinic for Oral Surgery and Implantology and Department of Oral and Maxillofacial Plastic Surgery at the University of Cologne/Germany. The consensus conference was organized in five steps:

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

[1] Development stage S2 = a formal process of consensus finding or a formal review of evidence has taken place.

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Members of BDIZ EDI will get the new paper as soon as it is finalized.

The paper to be revised may be obtained from the website of BDIZ EDI > English > Professionals > European Consensus Conference

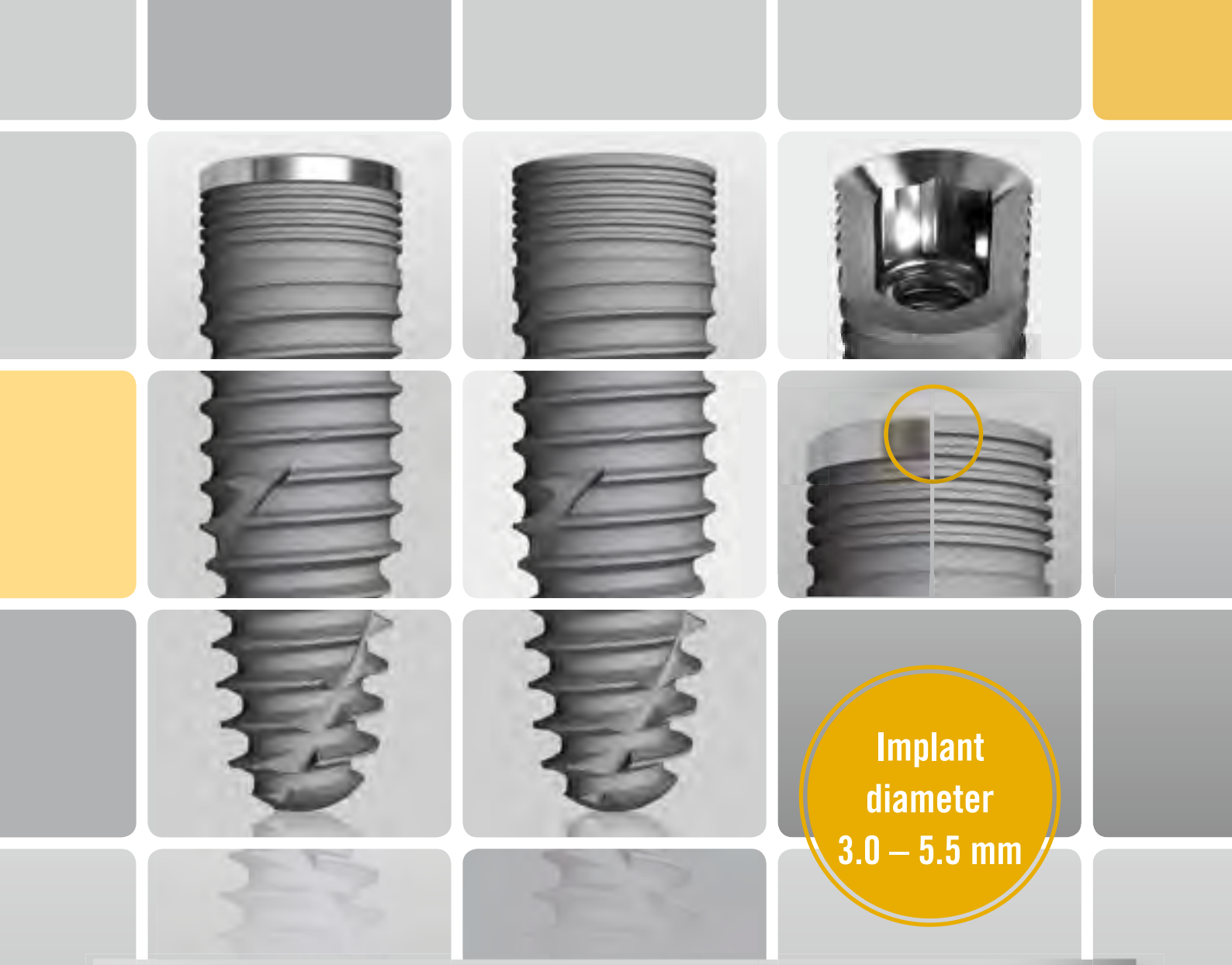
The 11th Expert Symposium will provide an update on whether treatment with e.g. short implants might be an alternative to extensive attempts at surgical reconstruction. Various implant manufacturers have been promoting their short implants, designed especially for cases with limited available vertical bone height.

The Expert Symposia of BDIZ EDI are dedicated to topics of immediate interest to implantological practitioners. Despite the undisputed high success rates in oral implantology, many issues have not been supported by reports at a high level of clinical evidence.

On the preceding Saturday, 6 February 2016, a European panel of experts consisting of practitioners and academics will be meeting under the auspices of BDIZ EDI to develop a renewed consensus on the topic of "Short and angulated implants" and revise the 2011 Guidelines of the 6th EuCC. The purpose of the guide is to offer recommendations for clinicians engaging in implant dentistry, enabling them to correctly assess potential indications (and any limitations thereof) for reduced-length or angulated implants.

Right from the beginning, our series of symposiums addressed highly current and highly controversial issues. BDIZ EDI has considered it an important task to look for, and find, a pan-European consensus on these topics since 2006. Ten practical guidelines have been developed since 2006 that assist implantological practitioners in dealing with the various challenges of implant treatment.

AWU



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10th European Symposium of BDIZ EDI/2nd Quintessence International Congress in Verona

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“State of the art” in a historical setting

BDIZ EDI will again be a partner at the 2nd Quintessence International Congress. From 26 to 28 May 2016, the 10th European Symposium of BDIZ EDI will be held under the auspices of Quintessenza Edizioni in Verona. The motto of the symposium will be “State of the art”. Members of BDIZ EDI are eligible for a special discount.

This 2nd International Congress will be held in Verona and organized by the Italian branch of Quintessence Publishing. Verona was named a UNESCO World Heritage Site in 2000. A number of historical buildings ranging from the Arena, the Roman theatre and the Gavi Arch to the Porta Borsari city gate and from the excavation area of Porta Leoni to the Scavi Scaligeri (now the International Centre for Photography) still bear witness to the erstwhile historical importance of Verona as a political and economic centre.

Photo: fotolia.com/sasimoto

Gavi Arch in Verona.

The well-preserved amphitheatre, well integrated into today’s cityscape, was probably completed under the Roman emperor *Tiberius* around 30 CE, half a century before the Colosseum in Rome (80 CE), making it one of the earliest examples of an amphitheatre following the advanced Roman blueprint, in the form of a closed oval. The building is 138 m long, 109 m wide and is the second largest preserved amphitheatre, next to the Colosseum in Rome. The arena inside consists of 45 rows of seats and today accommodates about 22,000 spectators. Each summer, it is the venue of the famous open-air Opera Festival.

The arena is surrounded by the Piazza Bra with the paved Listone, built in 1730. The wide sidewalk with many restaurants runs in front of the facades of the palaces on the west side of the square. ››

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About the congress

The 10th European Symposium of BDIZ EDI/2nd International Congress of Quintessenza Edizioni will be held in the Palazzo della Gran Guardia. Simultaneous interpretation (Italian – English) will be available for the entire programme. The Congress President will be *Professor Pier Francesco Nocini*, Director of the Surgery Department, Clinic of Maxillofacial Surgery and Dentistry at the University of Verona.

The scientific programme is innovative, attractive and transparent and aims to give all participants clear take-home messages, something new and useful for their daily practice.

The conference opens on 26 May under the theme of "The Future of Dentistry", where the podium will be dominated by young speakers (under 40). The day will end with a speaker contest. The winner of the participant vote will be invited to lecture at the 3rd Congress of Quintessenza Edizioni in 2018.

On Friday and Saturday, the congress will continue featuring speakers with an international reputation. The conference is divided into several sessions:

- Rehabilitation of the completely edentulous patient
- Implant-supported prostheses and aesthetics
- Orthodontics
- Periodontology/aesthetics
- State-of-the-art restorative dentistry and digital dentistry

On Saturday, 28 May, three free courses open to dentists, hygienists and dental technicians will be held in parallel to the conference.

Speakers on Friday and Saturday

Enrico Agliardi, Alessandro Agnini, Andrea Agnini, Christian Berger, Tommaso Cantoni, Andrea Chierico, Enrico Cogo, Fabio Cozzolino, Davide Faganello, Ueli Grunder, Mario Imburgia, Pasquale Loiacono, Giuseppe Luongo, Anna Mariniello, Mauro Merli, Vincenzo Musella, Jörg Neugebauer, Giovanna Perrotti, Massimiliano Politi, Giovanni Polizzi, Loris Prosper, Giano Ricci, Marisa Roncati, Roberto Spreafico, Tiziano Testori, Francesca Vailati, Tomaso Vercellotti, Giovanni Zucchelli.

Registration

The congress programme is available online at www.quintessenzaedizioni.com. BDIZ EDI members are eligible for a reduced registration fee of 250 euros (regular price: 300 euros). To get this discount, please forward the registration on page 22 to BDIZ EDI. The programme, the registration form for members and a list of hotels are also available on the BDIZ EDI website at www.bdizedi.org > English. Use the following link for hotel bookings: www.veronabooking.com/index.cfm/de

AWU ››

More information

Congress location:
Palazzo della Gran Guardia
Bra Square, in front of Arena
Verona
Italy

Organizing office:
Quintessenza Edizioni
Via Ciro Menotti, 65
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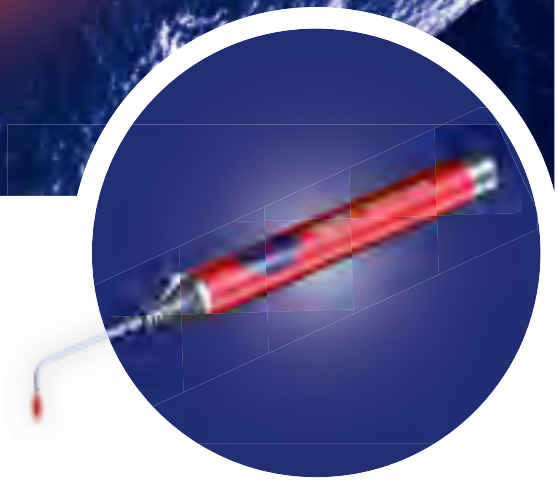

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Friday, 27 May 2016 I Dental Congress

08.30–09.00 Welcome of the Director *Lauro Dusetti* and presentation of the congress
Tiziano Testori, Pier Francesco Nocini

The rehabilitation of the edentulous patient

Moderators: Giovanni Zucchelli, Giuseppe Luongo

09.00–09.30 Therapeutic alternatives in implant treatment in complex clinical cases
Mauro Merli

09.30–10.00 Immediate loading rehabilitation of the athrophic maxilla with angled implants
Enrico Agliardi

10.00–10.30 Cawood and Howell Class V and Class VI mandibular atrophies: treatment protocols
Tiziano Testori

10.30–11.00 Early and late complications in implant dentistry
Jörg Neugebauer

11.00–11.30 Break

11.30–12.00 The clinical results of the first 15 years of use: the piezoelectric bone surgery in Italy and in the world
Tomaso Vercellotti

Prosthesis on implants and aesthetics

Chairmen: Giano Ricci, Dino Re

12.00–12.30 The Digital Revolution: the learning curve
Alessandro and Andrea Agnini

12.30–13.30 Implants in the aesthetic zone
Ueli Grunder

13.30–14.30 Lunch

14.30–15.00 Full Digital Dentistry: the total digitalization of the procedures of the modern dental practice
Giuseppe Luongo

15.00–15.30 Advantages of guided surgery in extraction sockets and in the tuber-pterygoid area
Giovanni Polizzi

15.30 – 16.00 Prosthetic planning in guided surgery
Tommaso Cantoni

16.00–16.30 The tissue and color integration of restorations in the aesthetic area: advice for the management of clinical problems
Andrea Chierico, Davide Faganello

16.30–17.00 Break

17.00–17.30 The influence of implant positioning for long-term success – avoiding implant malpositioning
Christian Berger

17.30–18.00 How does gingival morphology influence tooth preparation? How much importance has marginal fit in order to obtain long-term follow-up?
Loris Prosper

18.00–18.30 Discussion

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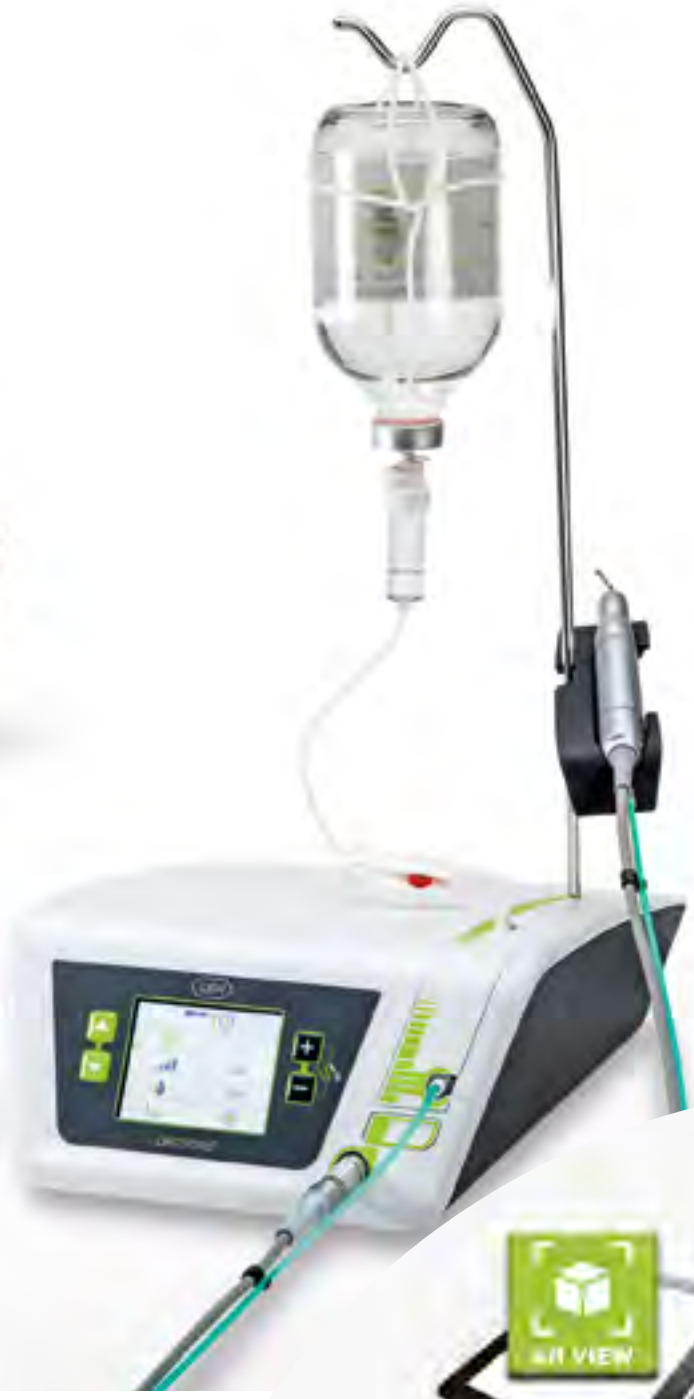

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Saturday, 28 May 2016 I Dental Congress

Orthodontics

Chairmen: Roberto Spreafico, Tomaso Vercellotti

09.00–09.30 Bracketless fixed lingual orthodontics, a new approach in orthodontic treatment
Anna Mariniello, Fabio Cozzolino

09.30–10.00 Effectiveness of 3D cephalometric in programming of orthognatic cases
Giovanna Perrotti, Massimiliano Politi

10.00–10.30 Break

Periodontics and aesthetics

10.30–11.15 Periodontics today: What does it mean? Considerations based on 44 years of clinical practice
Giano Ricci

11.15–12.00 Peri-implant aesthetic defects treatment
Giovanni Zucchelli

12.00–13.00 Additive dentistry vs subtractive, which follow?
Francesca Vailati

13.00–14.00 Lunch

The modern "restorative dentistry" and digital dentistry

Chairmen: Franco Brenna, Andrea Chierico

14.00–14.30 Planning the aesthetics of the prosthetic restoration through digital tools: current concepts and new trends
Mario Imburgia

14.30–15.00 Prosthetic design: clinical and technical aspects in the system "Aesthetic Preview"
Vincenzo Musella

15.00–15.30 Break

15.30–16.15 Partial and full restorations in the digital era: Indications, materials and clinical applications
Roberto Spreafico

16.15–17.00 Closing of the conference and presentation of the 3rd Congress 2018
Pier Francesco Nocini, Tiziano Testori

Saturday, 28 May 2016
Open courses to dentists, dental technicians and hygienists

09.00–13.00 The role of digital photography today in the analysis of dental optical anatomy
Pasquale Loiacono

09.00–13.00 Dental bleaching: materials and techniques for success
Enrico Cogo

09.00–13.00 Nonsurgical periodontal therapy – indications, limits and clinical protocols with the additional use of diode laser. Nonsurgical treatment of peri-implantitis
Marisa Roncati

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Registration: Fax to +49 228 93592-46 or mail to BDIZ EDI: office-bonn@bdizedi.org

10th European Symposium of BDIZ EDI, 26 to 28 May 2016, Palazzo della Gran Guardia, Verona

☐ Yes, I am a member of **BDIZ EDI** and hereby register for the 10th European Symposium of BDIZ EDI in Verona. The registration fee at the special member's rate of 250 euros will be paid as soon as I receive the invoice (no registration without payment!).

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Attorney Peter Knüpper on bureaucracy and regulation

Some more EU diseases

The year 2015 will go down in history as a European crisis year: The Greek bailout, massive refugee flows, armed conflicts in Ukraine, terrorist attacks by religious fanatics in France – the negative headlines dominate. Politicians in the European Union are not to be envied. An uneasy feeling persists that the "summit diplomacy" does not even begin to resolve any of the problems with which the EU is currently struggling, especially not when it comes to global challenges.

Although compromise is one of the features of democracy (or as the famous sociologist *Max Weber* put it: "Politicians should, and must, compromise"), many a result achieved in the political arena (or in the back room) smacks of horse-trading. Can the problems we are faced with be resolved at all? And by what method?

The debate on the future of the euro reveals how problems can arise. There had been ample warnings – not only by the European Central Bank (ECB). Greece served up phony statistics to cheat its way into the single currency. The existing structural problems in the Greek government and social system were concealed. Promised reforms failed to materialize. Corruption has not been curbed.

The same error is being repeated in 2015. Politicians exhibit a blatant disregard for facts and figures, regardless of how many treatises are published by economic experts and regardless of how many concern speeches are being held. The "saviours of the euro" claim that there is no alternative to their politics and unload the problem of Greek debt on the next generation, probably even on the generation after that. Politics increasingly appears to be the art of burying one's head in the sand.

Attorney Peter Knüpper

Euro bailout overstretches the EU legal framework

All of this despite the fact that the political caste – and that is the next problem – is about to abandon the common ground of the European treaties. When it comes to the Stability Pact, originally created as a fundamental building block of the euro, the law has been and still is being broken. Is the Commission really still the "guardian of the treaties"? Not only German Finance Minister *Wolfgang Schäuble* feels driven by this question. But which institution might consider itself called upon to restore the balance of the legal framework? Actually, that would be the task of the European Court of Justice (ECJ). However, given the Court's decision of 16 June 2015 on the so-called outright monetary transactions (OMT) of the European Central Bank, a programme for the controversial purchase of government bonds, the ECJ must allow itself to be asked just how far the interpretation of the European treaties can be stretched. In this context, *Professor Roman Herzog*, former German president and recognized constitutional expert, criticized the Luxembourg judges: "There is plenty of trouble brewing within the European justice system. This is because the European Court of Justice comes up with ever more surprising justifications for taking their very own areas of competence away from the ››

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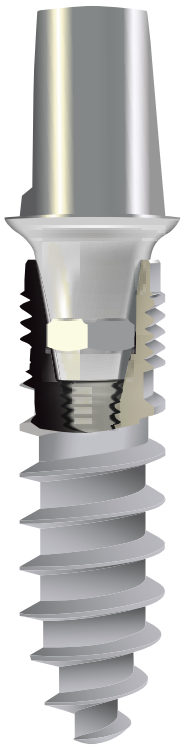

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The Greek bailout was just one of many European crises that dotted the year 2015: German Chancellor Angela Merkel in consultations with French President François Hollande and Greek Prime Minister Alexis Tsipras (left to right) at the Euro Summit meeting, 12 July 2015.

member states and for interfering with their legal system. The Court has lost much of the respect and trust it once commanded."

Bureaucracy replaces democracy

The weightiest aspect when trying to diagnose the problem is the increasing democratic deficit that characterizes not only the decisions on the euro bailout. Nocturnal agreements of the Eurogroup, the ECB and the International Monetary Fund (IMF) are pushed through the parliaments under high pressure; serious consultations about the "bail-out" programmes are no longer held – there is not enough time. On the other hand, the Greek Government could take as much time out as it wanted in the summer, discussing the offers of help as putative blackmail for weeks. The people ultimately rejected the agreements with those who had offered to help. The augurs of that decision then caved in at another crisis summit and in August finally recommended to the Greek Parliament to agree to that programme and even more stringent conditions.

The discussion and decision-making process, pushed forward by the Eurogroup, no longer has anything to do with the usual procedures in a parliamentary democracy. This time the fact that this political method has long since been part of the Brussels repertory backfired. Although an increasing number of German MPs reject this method, the parliaments are pushed into insignificance by the respective governments, not only in terms of the euro bailout but also in other respects. *Professor Hans-Jürgen Papier*, former President of the German Constitutional Court, commented: "Parliamentary, i.e. legislative, competencies have been delegated and replaced by the right of the executive to participate in the legislative process." The result: a serious loss of competences of national legislators.

Keeping a distance from Europe

During his tenure as head of the Eurogroup, Luxembourg's Prime Minister *Jean-Claude Juncker* has described, with disarming frankness, the method of European policy-making as follows: "We decide on something, leave it lying around, and wait and see what happens. If no one kicks up a fuss, because most people don't understand what has been decided, we continue step by step until there is no turning back."

In this manner, not only the European institutions but also the European idea are growing ever more remote. There is an oft-repeated quote by German film director *Wim Wenders*: "The idea of Europe [...] has become an administration, and now people think that the administration is the idea."

More market forces in health care

Examples of the bureaucratic model of policy-making that underlies this observation are legion. For years, the European Commission has called upon Germany to allow more competition in the field of professional services as part of its country-specific recommendations ("European semester"). To evaluate the Services Directive, the Commission had conducted a "peer review" process from 2010 to 2013, which already highlighted the issues of minimum fees, external capital interests and legal status requirements in the liberal professions. Minimum-fee requirements must not be discriminatory and must – as the Commission said with regard to the European fundamental freedoms – be both reasonable and justified by imperative reasons relating to the public interest.

Objective: Growth through deregulation

The efforts of the European Commission for Competition during the last two decades to deregulate services markets resulted in infringement proceedings against Germany in 2015, when the fee scales of tax advisors (StBVV), of architects and of engineers (HOAI) came under attack. The argument goes roughly like this: The maximum and minimum prices established in both fee scale regulations violate the freedom of establishment and the freedom to provide services.

In this case, the Brussels authorities cite Art. 15 para. 1, para. 2 (g) and para. 3 of Directive 2006/123/EC of the European Parliament and of the Council of ››

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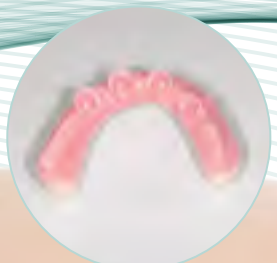
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12 December 2006 on Services in the Internal Market ("Services Directive"). The Regulation requires member states to consider whether their legal requirements for the pricing of services are non-discriminatory, necessary and proportionate. If this is not the case, member states have to change their rules to reflect these prerequisites.

Services market as a challenge for the future

The debate is particularly sensitive against the background that further liberalization of the services market apparently is one of the key demands for keeping the United Kingdom in the European Union. It is well known that the German government is willing to bend over backwards to keep its European partners happy. Berlin wants to prevent a "Brexit" at all costs. This is also the only possible explanation why the German Chancellery tries to exert influence on a resolution of the Bundestag, which in early July, at the request of the governing coalition parties, came out in favour of retaining existing professional regulations and in favour of the liberal professions and their institutions of self-government.

In the context of its current evaluation of the Mutual Recognition of Professional Qualifications Directive (PQD), the Bundestag called on the German government to make it clear to the European Commission that different regulatory approaches do not in themselves constitute an obstacle to the liberalization of the European single market. Professional services of high quality, and the necessary, proven and proportionate rules for access to the professions that ensure this quality, must be preserved – not least in the interest of consumer protection. The Bundestag holds that the regulation of professions falls within the autonomous legislative competence of the member states. Only the fee scales of the liberal professions can "ensure that professional performance continues to be guided by the principle of the common good and prevent price competition at the expense of quality" (Bundestag Publication 18/5217).

No harmonization for dental hygienists

The dental profession is currently affected by the ongoing (since 2013) "Evaluation of national regulations on access to professions" (COM (2013) 676 final) with regard to access to the profession of dental hygienist. Here, the European Commission questioned whether it is necessary to regulate access to the profession for reasons of patient safety. In Germany, the Dentistry Act stipulates that dental hygienists perform their duties only by delegation, or in other words under the supervision of a dentist.

Ahead of an evaluation meeting at the end of April, the German government had declared that there was no need to review the restrictions of access to the profession.

Stricter medical device legislation

While on the one hand the EU Commission supports deregulation when it comes to the access to and the practice of the liberal professions, on the other hand it wants to significantly tighten other existing regulations such as the Medical Devices Act. The planned classification rules for dental materials, especially those that contain nanomaterials, would then be covered by a much more demanding assessment procedure. This would affect, for example, filling materials and crowns, even though, in the view of the manufacturers, these do not pose an increased health risk from abrasion.

Not until mid-June did the EU health ministers manage to agree on a proposal for a revision of the EU's existing regulatory framework for medical devices. Now it is important to implement the proposal by the health ministers, thus preventing increases in the cost of such products and significantly higher liability for manufacturers and users.

Investor protection by TTIP

Another battlefield, from the perspective of health professionals, are the planned international free-trade agreements between the European Union on the one hand and the United States of America and Canada on the other (TTIP, CETA). The chapter on "Medical and Dental Services" provides, inter alia,

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that members of the liberal professions can practice unhindered on both sides of the Atlantic, something that is to be welcomed. A point of contention continues to be the protection for investors provided for in these draft agreements. While foreign corporations in their capacity of investors in the health sector cannot demand, for example, a modification of German laws that allow only natural persons to practice medicine, they could sue for damages if those laws are discriminatory or manifestly disproportionate.

While the European Commission unconditionally welcomed the TTIP and CETA negotiations, the European Parliament has passed a resolution in support of the liberal professions, and specifically the health care professions. This resolution called upon the negotiators for the EU side to advocate that health care and social services be excluded from the scope of the proposed free-trade agreements. The European Parliament also reaffirmed the principle of the mutual recognition of professional qualifications, laid down in EU Directive 2005/36/EC, stating that "every effort must be made that the mutual recognition of professional qualifications is assured". In a hearing before the European Parliament, negotiators this summer signalled acceptance. Quality criteria must not be compromised, least of all with regard to access to the liberal professions. If nothing else, this is a matter of patient protection.

Standardization of services

Standardization has always been one of the pet projects of the European Commission. One regulation that has achieved some prominence is the one that regulates, among other things, the admissible length and thickness of bananas. Another regulation – admittedly repealed in 2009 – sought to standardize the curvature of cucumbers. With Regulation (EU) 1025/2012 on European standardization, the EU has now extended the legal basis for Europe-wide standardization to services. On this basis, the European Commission may in future grant standardization mandates if a need for standards is perceived to exist in the market and the existence of a public interest is asserted.

Ahead of a feasibility study commissioned by the European Commission, physicians and dentists pointed out that health care services are not amenable to standardization. Anyone who has witnessed the zeal of the European Commission for Competition in recent years and decades – despite the fact that "union action shall respect the responsibilities of the member states for the definition of their health policy and for the organization and delivery of health services and medical care" (Art. 168 para. 7 TFEU) – knows that the employees in charge tend not to be particularly impressed by such positions.

Return to the principle of subsidiarity

Art. 5 of the Lisbon Treaty enshrines the subsidiarity principle: "[...] in areas which do not fall within its exclusive competence, the Union shall act only if and insofar as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level." There is no demonstrated need to address issues within the health care sector beyond what has already been regulated at the European level, in particular concerning access to the profession.

Wolfgang Ockenfels, a member of the order of Dominicans and professor of Christian social sciences at the University of Trier, once said: "We need to re-spell Europe using the alphabet of subsidiarity." Some time ago, the Dutch government submitted a list of 54 points for corrective action to turn Europe back on its feet. Even British Prime Minister *David Cameron* is among the leaders in Europe who call for a "fundamental debate" on the content and interpretation of the European treaties: "Every country is different. Each country makes different choices. We cannot harmonize everything." He is only too right.

Peter Knüpper, solicitor
Munich

World Health Organization on refugee issues

Support for European countries

In response to the increasing number of refugees and migrants arriving in the European region, the World Health Organization (WHO) has pledged support for the European countries in the form of medical supplies, assessing emergency plans, and training personnel at points of entry in matters of public health and migration.

Photo: www.fotolia.com/Lydia Geissler

More and more refugees and migrants are arriving in the European region.

Senior government officials of the 53 member states in the WHO European Region discussed the public health impact of large-scale migration during the 65th Session of the Regional Committee for Europe in Vilnius, Lithuania. They called for continued involvement and support from the WHO to respond adequately to the public-health implications of a large influx of people by conducting additional assessments in countries and by providing policy advice on contingency planning, training health personnel and delivering supplies. It was decided that a high-level WHO conference would be organized as soon as possible to agree on a common public health approach to large-scale migration in the region.

Systematic response required

"As refugee and migration movements exceed everything previously imaginable and the migratory routes change, more European countries face this challenge", said *Dr Zsuzsanna Jakab*, WHO Regional Director for Europe. "Today more than ever, this situation calls for a regional, comprehensive and systematic public-health response. As so many refugees and migrants embark on their journey, inter-country coordination must be strengthened across the European region, as well as with the countries of origin and transit."

No increased risk of infection due to refugees

The WHO Regional Office for Europe opposes the widespread view that there is a systematic relationship between migration and the introduction of infectious diseases, stating that the danger of introduction of rare tropical pathogens to the European region (such as Ebola, Marburg and Lassa virus or MERS-CoV) was extremely low. The 15 cases of MERS-CoV infection reported since 2012 in the WHO European Region had affected travelers and tourists, not refugees or migrants. Not a single case of Ebola infection had been brought to Europe by refugees or migrants.

The WHO has carried out assessment missions with the health ministries of Bulgaria, Greece, Italy, Malta, Portugal, Serbia, Spain and Cyprus, using new tools for assessing the ability of health systems to respond to major migration flows. It provides conceptual advice to the health sector in Italy and Malta in terms of emergency planning.

The WHO also procures adequate health emergency kits containing essential medicines and equipment, each catering to the medical needs of a population of 10,000 for three months, to countries in need. In Macedonia, the WHO provided training in September on managing the public-health aspects of migration, including standard operating procedures, to healthcare workers providing medical care for people arriving at entry points.

Turkey most affected

Hosting close to two million refugees, Turkey has had to deal with the largest influx of refugees in the world, according to the Office of the United Nations High Commissioner for Refugees (UNHCR). As early as October 2013, the WHO established a field presence in Gaziantep to scale up its capacity and to respond to the public-health needs of refugees. In close collaboration with the Ministry of Health of Turkey and its partners, the WHO continues to assess the needs of Syrian refugees, providing support by training Syrian medical staff, providing technical and financial assistance for outbreak response and immunization campaigns, supplying medical equipment and drugs and disseminating information material to refugees.

Source: WHO Regional Office for Europe

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Controversial law to come into force in Germany in 2016

Anti-corruption law – a sword of Damocles

75,000 German dentists are waiting apprehensively for a new law to enter into force in Germany in January 2016: the law on combating corruption in the health-care sector, or anti-corruption law for short. It is structured similarly to the Physicians Payments Sunshine Act. However, not the pharmaceutical industry is in focus here but all established health professionals with a government-regulated education: physicians, dentists, psychotherapists and veterinarians.

The project by far overshoots its target. The step from legality to criminal liability is an extremely short one. It is almost impossible to draw the line between permissible and criminal conduct. The German Ministry of Justice wants to make this a clear distinction – between bribery, or active corruption, on the one hand and corruptibility, or passive corruption, on the other. Offering bribes and taking bribes will both be criminal offences. In future, any potential supplier or vendor of medical drugs, remedies, aids or medical supplies may become subject to this new legislation.

Not only dentists, but also physicians in Germany are confused. Where does corruption start? Which discounts are legal and which are not? The European Association of Dental Implantologists (BDIZ EDI) has been examining threat posed by the new law for several months now and offers assistance to its members in the form of brochures and additional information. In addition, the association has ››

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Photo: www.spd-saar.de

Heiko Maas, German Minister of Justice

introduced an alternative bill in Berlin, which is supported by dental associations and medical associations in Germany.

The aims incorporated in the BDIZ EDI draft focus on undesirable behaviour in health care – unlike the draft by the German Minister of Justice, *Heiko Maas*, it does not place specific groups of people under general suspicion. In addition, the BDIZ EDI draft does not get lost in an interpretation thicket but leaves a deliberately broad scope for permissible actions. Here, criminal behaviour presupposes malicious intent. If we do not want to expose innovation and cooperation within the health sector to incalculable risks, we must ensure that there are areas of professional conduct that are safe from recrimination.

In an interview in BDIZ EDI konkret, the German counterpart of the EDI Journal, *Dr Rolf Koschorrek*, a dentist and a former member of the Bundestag for the Christian Democrats, made his opinion very clear: With this project, he said, the federal government by far overshoots its target, the object of the proposed legislation being not so much the fight against corruption but the denunciation of a specific segment of society. "In my view it does not need a special law to deal with corruption in the health-care sector. What we need is better investigators and an effective indictment policy for offences already sufficiently covered by the Criminal Code."

This view is shared by representatives of the governing coalition in the German Bundestag. However, it is uncertain whether the dentists' alternative draft will be considered in the parliamentary debate in Berlin. But at least the Ministry of Justice will have to address it. *AWU*

Membership cards and certificates for 2016

Official proof of BDIZ EDI membership

The preparations for 2016 are in full swing. Membership cards and certificates of appealing print quality will again be available in 2016 that identify the dentist as a BDIZ EDI member.


Certificate of Membership 2016

BDIZ EDI

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

Dr John Sample

is an active member of the Bundesverband der implantologisch tätigen Zahnärzte in Europa/
European Association of Dental Implantologists (BDIZ EDI).

Currently, the association consists of more than 5.500 members in Europe.
The BDIZ EDI is dedicated to providing continuous improvement of excellent quality
in oral implantology in Germany and throughout Europe for the benefit of patients.
By meeting the state of the art in science and technology, the BDIZ EDI is also
dedicated to providing high-quality postgraduate education for dental implantologists.
These efforts will be reflected by the slogan of BDIZ EDI:
Helping patients – educating dentists – active in Europe.

2016

Bonn, January 2016

Christian Berger
President

Membership certificates of BDIZ EDI will again be available in 2016.

The certificates for 2016 are expected to ship with the December circular to members. They are the ideal way to show your patients that you are a member of a large, European-wide association that stands up for high-quality implantology treatment.

BDIZ EDI takes pride in the high standard of qualification of its experts. Its Q&R Committee tests dental materials, and the association provides rock-solid training for junior oral implantologists through the Curricula held in cooperation with the University of Cologne. Each year, the association offers valuable tips for dealing with complex issues in implantological treatment by issuing the practical Guidelines of the European Consensus Conference held under the auspices of BDIZ EDI. All of these are good reasons to take pride in being a member of this association.

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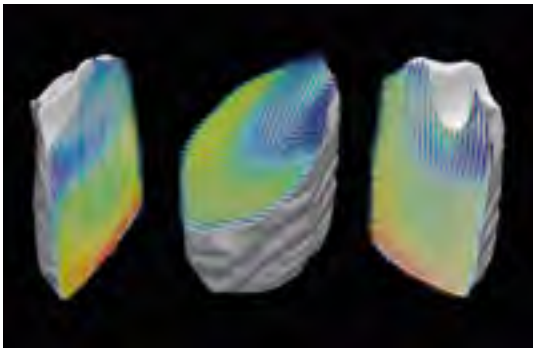
A revolution in computed tomography?

Inside the tooth

In materials research as well as in biomedical research, it is important to be able to visualize minute nanostructures, for example in bone or in carbon-fibre materials. A team from the Technical University of Munich (TUM), the University of Lund, the Charité Hospital Berlin and the Paul Scherrer Institute (PSI) has developed a new computed-tomography method based on the scattering, rather than on the absorption, of X-rays. This method allows nanostructures within millimetre-sized objects to be visualized for the first time. For example, the researchers viewed the three-dimensional structure of collagen fibres in a piece of a human tooth.

X-ray computed tomography has been around since the 1960s: an object is exposed to X-rays from different directions, and a computer uses the resulting individual images to generate a three-dimensional image of the object. Contrast is produced by the differential absorption of X-rays in dissimilar materials. The new method developed by *Franz Pfeiffer*, Professor for Biomedical Physics at TUM and his team utilizes the scattering of X-rays rather than their absorption. The results were recently published in the journal Nature.



Photos: Schaff et al./Nature

Orientation of the collagen fibres within a tooth sample. The individual data were acquired using an X-ray scattering CT, from which a three-dimensional nanostructure of the sample was computed.

Scattering provides detailed images of nanostructures

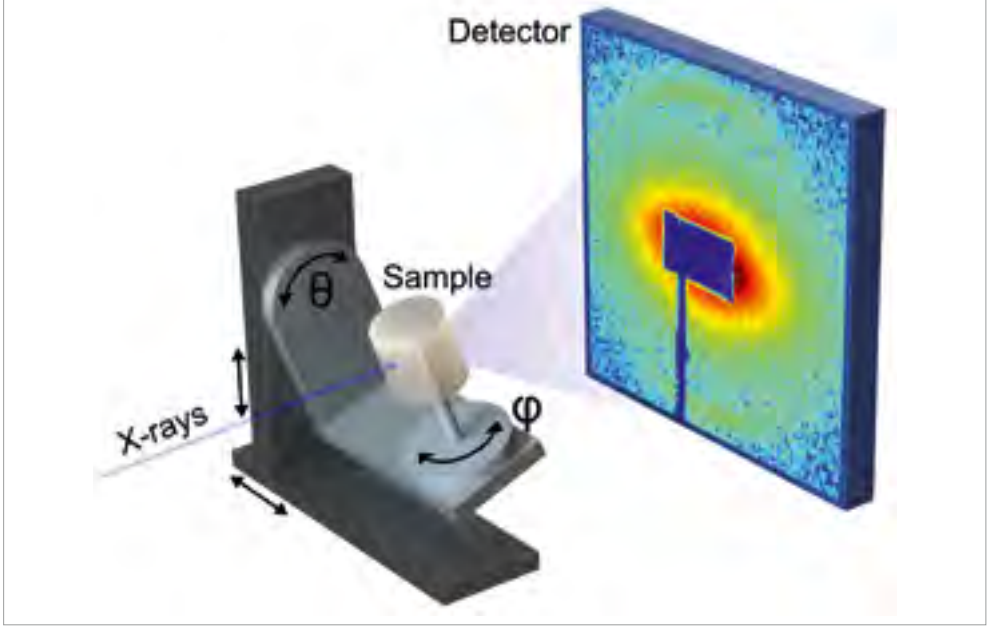
In principle, X-rays behave like visible light with a very short wavelength. This explains how the new method works, according to information from the TUM: "If light illuminates a structured surface, for example that of a CD, the reflected light produces a characteristic rainbow pattern. Even though the fine grooves in the CD cannot be seen with the naked eye, the diffraction (scattering) of the light rays indirectly reveals information about the nature of the object."

The same effect can also be observed with X-rays, which is the principle the scientists utilized for their new technique. The advantage of X-rays over visible light is that they are able to penetrate materials, thus providing detailed information on the internal structure of objects. The researchers have now combined this three-dimensional information from scattered X-rays with computed tomography (CT).

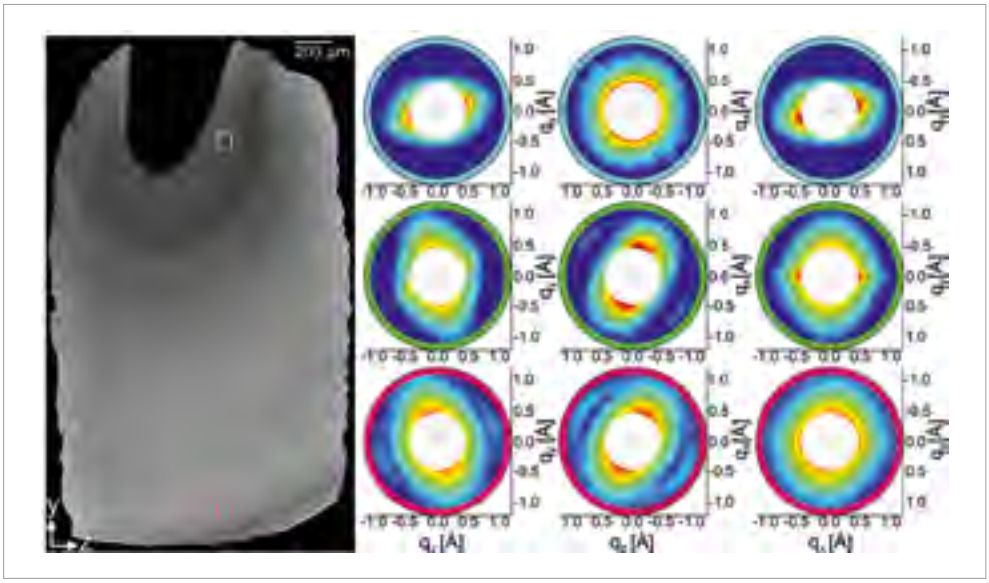
Conventional CT methods calculate exactly one value, known as a voxel, for each three-dimensional image point within an object. The new technique, the TUM report recounts, assigns multiple values to each voxel as the scattered light arrives from various directions. "Thanks to this additional information, we are able to learn a great deal more about the nanostructure of an object than with conventional CT methods. By indirectly measuring scattered X-rays, we can now visualize minute structures that are too small for direct spatial resolution", explains *Professor Franz Pfeiffer* of the Department of Biomedical Physics at TUM.

Details from the inside of the tooth

For demonstration purposes, the scientists examined a piece of human tooth measuring around three millimetres. A large part of a human tooth is made of dentine, which consists largely of mineralized collagen fibres whose structure is responsible for most of the mechanical properties of the tooth. The scientists have now visualized these tiny fibre networks.



Schematic representation of the experimental setup. A thin X-ray is used to record a scatter plot at each point. The sample is also rotated around two axes to obtain images from as many different directions as possible. An algorithm then computes the local, three-dimensional nanostructure of the sample from the totality of all recorded images.



First results of the method for a tooth sample. Instead of a single value, as in conventional computed tomography (CT), the new method calculates a plurality of values for each single point within the object. An image of a high-resolution standard CT is shown on the left, with three regions marked in colour (blue, green and pink). The panels on the right show the corresponding scatter signals of the selected regions, which were recorded using the new X-ray method.

A total of 1.4 million scatter images were taken, with the scattered light arriving from various directions. The individual images were then processed using a specially devised algorithm that builds a complete reconstruction of the three-dimensional distribution of the scattered rays, step by step. "Our algorithm calculates the precise direction of the scatter information for each image and then forms groups having the same scatter direction. This allows internal structures to be reconstructed", said *Martin Bech*, a former postdoctoral fellow at TUM, now assistant professor at the University of Lund.

Using this method, it was possible to clearly view the three-dimensional orientation of the collagen fibres within a sample of this size for the first time. The results are consistent with knowledge previously obtained about these structures from thin sections. "A sophisticated CT method is still more suitable for examining large objects. However, our new method makes it possible to visualize structures in the nanometre range within millimetre-sized objects at this level of precision for the first time", said *Florian Schaff*, lead author of the Nature article.

Source: Technical University of Munich

Publication

Florian Schaff, Martin Bech, Paul Zaslansky, Christoph Jud, Marianne Liebi, Manuel Guizar-Sicairos and Franz Pfeiffer. Six-dimensional real and reciprocal space small-angle X-ray scattering tomography. Nature, 19 Nov 2015. DOI: 10.1038/nature16060
http://www.nature.com/nature/journal/v527/n7578/full/nature16060.html

Europe Ticker +++

Special rules for the liberal professions "inappropriate"

European Commission steps up the pressure

The EU wants to change the rules for access to the liberal professions. Even if this will initially affect only certain professionals, it might eventually also impact dentists and other healthcare professionals. Liberal professions in medicine and certain crafts are protected in Germany. As part of its internal-market strategy, the European Commission now steps up the pressure. "In partnership with the European Parliament and member states, we must now ensure that these concrete actions are put into effect at maximum speed. Europe has no time to waste to respond to its competitiveness challenges", said Commissioner *Elśbieta Bieńkowska*, responsible for the Internal Market.

Furthermore, the European Commission argues that many special rules for the liberal professions are unreasonable and only create unnecessary obstacles to competition. In addition, if the EU member states reduced the privileges for the liberal professions, this would result in more quality for consumers and create new jobs. And: "The Commission will make proposals for better access and a better exercise of the regulated professions."

Only a few years ago, the Commission cast doubts on the continued existence of Master Craftsman's Certificates. Following highly vocal criticism by business and crafts associations, the EU Commission subsequently announced that they "did not want to do away with Master Craftsman's Certificates". The rules will start to be revised during 2016, with the regulations for architects, lawyers, brokers and civil engineers being examined first. According to information received by "Stuttgarter Zeitung", in accordance with the EU's internal-market strategy, member states must demonstrate "that the common good cannot be otherwise protected".

At the German dental associations, this internal-market strategy has encountered sharp criticism. They consider the Commission's initiative a frontal assault on German professional and quality standards, which could have a massive negative impact, particularly in sensitive liberal professions such as the medical professions. "In the interest of patients, the level of treatment provider qualifications must continue to be ensured", said *Dr Peter Engel*, President of the German Dental Association. The elimination of professional regulations would have a massive impact on the quality of professional services.

Sources: Stuttgarter Zeitung, EU Internal Market Commission, German Dental Association

European health report of the WHO

Europeans are living longer, but ...

The latest European health report shows a Europe that has achieved striking successes and is on track to hit several targets, such as reducing premature mortality and setting further national targets for health. The report, which is the WHO Regional Office for Europe's analytical account of the health of the European region and its progress towards the targets set by "Health 2020", WHO's overarching health policy, also reveals a need to find and examine new kinds of evidence to understand the complex relationship between health, well-being and culture, according to an assessment by the WHO Regional Office for Europe.

Life expectancy is steadily increasing, but the report also sounds an alarm, noting that the region has the highest levels of tobacco and alcohol consumption in the world. These risks, combined with rising obesity, could mean that life expectancy falls in future generations.

Moreover, the gap in life expectancy at birth between countries still stands at more than ten years. Israel and Switzerland top the chart for longevity. Tobacco use and alcohol consumption play a significant role in shortening lives, although some progress has been made in reducing these risk factors. The greatest successes in reducing tobacco use have occurred in Belarus, Georgia, Kazakhstan, Russia and Ukraine, and significant reductions have been achieved in some western European countries. Policy interventions on alcohol consumption, such as controlling the availability and pricing of alcohol, are also slowly bearing fruit.

The report shows that Europe is on track to achieve a relative reduction in premature mortality ››

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Duran-Cantolla, J, Hamdan M, Martinez-Null C, Aguirre JJ, Rubio E, Anitua E. Frequency of obstructive sleep apnea sindrom in dental patients with tooth wear. J Clin Sleep Med 2015 (in press). Feb 10. pii: jc-00375-14. [Epub ahead of print].

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Europe Ticker +++

of 1.5 per cent annually until 2020. This means that the number of people whose lives are cut short by cardiovascular disease, cancer, diabetes mellitus and chronic respiratory disease is steadily declining. Significant improvements have also been achieved in the rates of death from external causes, such as road traffic accidents and suicides. The biggest improvements have occurred in the eastern part of the region, especially in Estonia, Latvia, Russia and Ukraine. Russia has reduced mortality rates from road traffic accidents by more than 20 per cent in the last ten years. Despite generally high vaccination coverage in the European region, immunity gaps still account for ongoing endemic transmission and have led to a number of outbreaks of measles and rubella in recent years. In 2015, four deaths from measles have been reported, and one child has died of diphtheria – the first case in three decades.

Only 12 of 53 states of the European region indicated that out-of-pocket expenditure was below 15 per cent of total health expenditure. In the remaining 41 countries, people are vulnerable to catastrophic healthcare expenses that can plunge them into poverty if they become ill. This category has seen no improvement since 2010.

Source: www.euro.who.int

Promoting anaesthesia in dentistry

Is less more?

Dr Peer Kämmerer, senior physician at the Department of Oral, Maxillofacial and Facial Plastic Surgery at the University Medical Centre Rostock, has been awarded the Prize of the European Association for the Advancement of Anaesthesia in Dentistry (EFAAD). The association paid tribute to his research on rendering dental procedures under regional anaesthesia less risky for the patient. In his study, *Kämmerer* examined how a common anaesthetic can still be used effectively while making it safer for the patient in terms of avoiding nerve damage. In the study, patients were administered a 2-percent instead of the previous 4-percent dose to suppress pain while minimizing the risks. It was found, as the association reported in its press release, that this reduced dosage was still sufficient to achieve anaesthesia during treatment. In addition to the lower risk of adverse reactions, the smaller dose also has the advantage that the anaesthetic effect wears off faster.

Source: Various

Oral cancer in Europe

"Dentists saving lives"

Ahead of the European Oral Health Day on 12 September 2015, the MEPs Against Cancer (MAC) Group hosted in the European Parliament in Brussels a panel discussion co-organized by the Council of European Dentists (CED). The event was entitled "Oral cancer – Dentists saving lives". Speakers included representatives of academia, the European Commission, patients and representatives of member organisations of the CED. *Dr Wolfgang Doneus*, President of the CED, expressed his hopes that the discussions will be the beginning of an ongoing dialogue with members of parliament, policy makers and different stakeholders about the importance of early detection and treatment of oral cancer and the role of dentists in ensuring that patients across Europe are given the highest chance possible to prevent, detect and treat the disease.

Doneus noted that cancer is one of the most common causes of morbidity and mortality today, with more than ten million new cases and more than six million deaths each year worldwide. Oropharyngeal cancer is a significant component of the global burden of cancer. Tobacco use, alcohol consumption, unhealthy diet and lifestyle choices and infections are regarded as major risk factors for oral cancer. He looked forward to the discussion and hoped that it would conclude with some constructive recommendations for dental associations and policy makers.

Keynote speaker *Saman Warnakulasuriya*, Professor of Oral Medicine and Experimental Pathology at King's College London and Director of the World Health Organisation (WHO) Collaborating Centre for Oral Cancer, explained that oral cancer is a malignant disease that develops on the lining of the mouth and, if untreated, can spread rapidly. He said that oral cancer is very aggressive and the most life-threatening of all conditions affecting the head and neck. 50 per cent of patients die with or of the disease. ››

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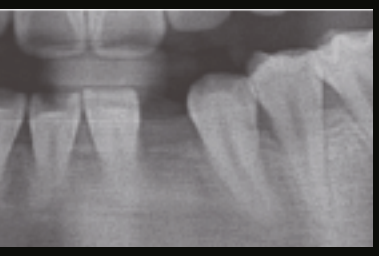

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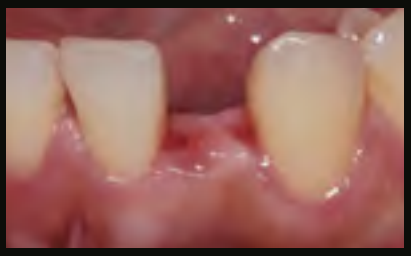
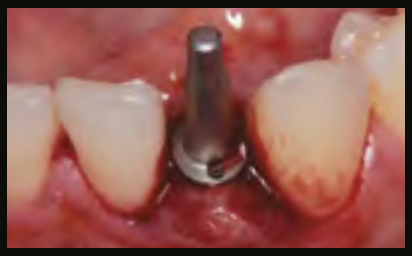
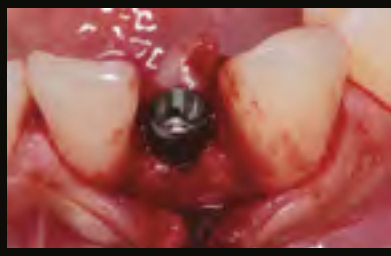
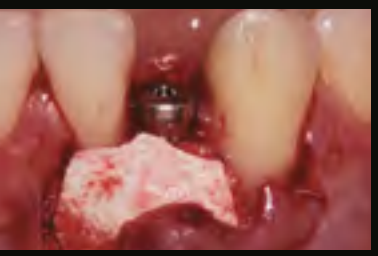




Implant guide



Implantation (NR Line 3009)



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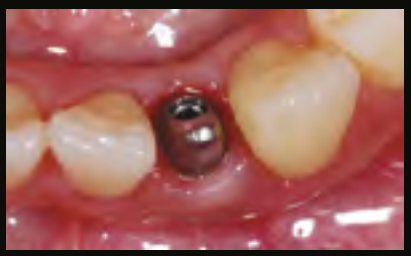

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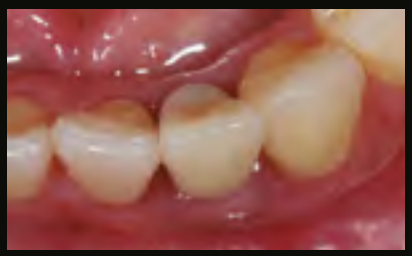

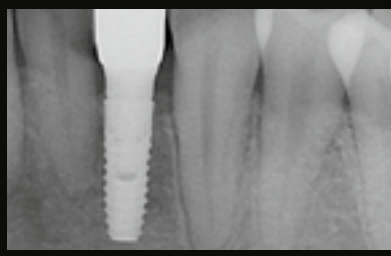

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Even for the other 50 per cent who survive, the disease is visually deforming and can cause functional impairment and psychological disturbance.

Warnakulasuriya further presented the trends for oral cancer. There has been a dramatic increase in head and neck cancers in Central and Eastern Europe. He explained that the increase is a result of the smoking epidemic and rising alcohol consumption. He stressed the importance of screening tests for oral cancer consisting of a visual oral examination and palpation of the neck. To this end, a reliable and valid training is essential and should be included in both dental and medical curricula, he said. He also stressed that late diagnosis needs to be tackled as well as the issues of equity, to ensure that everybody has access to primary healthcare. An e-learning programme entitled "The use of life-long learning and e-learning as an educational tool to improve oral cancer screening and early detection by medical and dental professionals in Europe" has been developed with EU funding by various partners. The results are freely accessible via the project's website, which contains information about oral cancer (http://oralcancerldv.org/en).

Warnakulasuriya asked for an EU policy on oral cancer. That policy should include education at the undergraduate level for both dentists and general practitioners. Oral cancer is a disease that can be prevented, and its incidence can be reduced by 20 per cent.

Source: CED

OECD study: Shortage of physicians in Germany

Immigration as a panacea?

Compared to the other countries of the Organization for Economic Co-operation and Development (OECD), key figures for the future prospects of the German healthcare system are moving far away from the international average, let alone the group of leading countries.

In the long run, the system is headed for collapse, according to the German newspaper "Die Welt". According to OECD figures, the proportion of physicians in Germany who are 55 or older now stands at 42 per cent. This means that in about ten years, at least four out of ten physicians in Germany will retire. The average value for the 29 OECD member countries surveyed was 33 per cent in the 2013 survey. In countries with particularly many newcomers to the profession, such as the nation leading in this respect, the United Kingdom, only 13 per cent of physicians are 55 and over. Nevertheless, the "density" of physicians in Germany is still relatively high, as the newspaper reports: With around four practitioners per 1,000 population, the Federal Republic is still one of the group of leaders within the OECD, which is led by Greece with more than six practitioners per 1,000 inhabitants.

Photo: Fotolia/Kurhan

Yet when it comes to educating young physicians, Germany lags far behind in international comparisons: While, for example, the number of medical graduates nearly doubled in the UK between 2000 and 2013, it remained almost unchanged in Germany.

The risks of this development are high: Despite expected medical advances, an aging society as a whole will present with an increasing demand for medical care in the future. Thus, if the demand for physicians goes up while at the same time thousands of physicians retire and there are no young successors, there is bound to be a supply-side crisis. The miracle cure, according to the findings of the OECD, is immigration.

Here, Germany still has a lot of catching up to do: Only 8.8 per cent of its practising physicians hold a non-German citizenship, according to OECD figures from 2013. Other OECD countries do not distinguish by nationality but according to whether their physicians completed their training at home or abroad. Yet even here the picture is clear: On average, the share of foreign-trained physicians of the average country is 17.3 per cent – about twice as high as the proportion of foreigners within the medical community in Germany.

Sources: Die Welt (Germany), OECD study

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Compliance and the Sunshine Act

Dentists have to adjust to more and more new concepts that enter the realm of health care in the wake of international transparency efforts, with threats of serious sanctions in the case of violations.

Compliance actually denotes the rather self-evident requirement to ensure that a company, practice or business complies with applicable laws and regulations. With this requirement as a starting point, numerous business entities have developed – not least in the wake of well-publicized international corruption scandals in large companies – their own supervisory departments with compliance management systems, generally headed by a Chief Compliance Officer (CCO). If one wishes to follow institutions such as Transparency International, dentists in private practice serve as their own CCOs.

In this capacity, they have to monitor that everything is above board when it comes to purchasing materials for the dental practice and that it is impossible that extrinsic considerations become relevant or even decisive in e.g. the selection of suppliers, manufacturers or materials. Such extrinsic considerations include covert reimbursements but also benefits in kind, such as the sponsoring of events, or free invitations to congresses, or even free travel.

The US has set new standards for market transparency by enacting the **Physician Payments Sunshine Act**, published on 8 February 2013 and gradually implemented starting in 2014. This law is intended to shed light (hence "Sunshine") on the relations between pharmaceutical companies, medical device manufacturers and members of the medical professions, including dentists. France adopted corresponding legislation in May 2013. The US Sunshine Act requires pharmaceutical companies, medical device manufacturers and manufacturers of so-called biologics (e.g. human insulins) who participate in US federal programmes within health care to report any money paid and each non-cash benefit granted to physicians, dentists, etc. on a per-recipient basis if they exceed the value of USD 10 (EUR 9) in each case. The French legislation has defined the minimum value as EUR 10.

In Germany, we are threatened by an amendment to the Criminal Code (StGB) that addresses passive and active corruption in the health sector, an amendment now expected to come into force during 2016. The draft wording submitted by the Federal Government (Publication 18/6446 of 21 October 2015) to amend the StGB reads:

Section 299a
Taking bribes in the healthcare sector
(1) Whosoever as a member of a medical profession that requires a government-regulated education for exercising the profession or using a professional designation, in the context of exercising this profession, demands, allows himself to be promised or accepts a benefit for himself or a third person as a consideration for

1. *according an unfair preference to a domestic or foreign competitor or*
2. *violating his professional duty to protect the independence of the members of the medical profession*

with regard to the prescription or dispensing of medical drugs, medical supplies or medical devices or with regard to referring patients or examination specimens shall be liable to imprisonment not exceeding three years or a fine.

(2) Whosoever as a member of a medical profession as defined in Para. 1, demands, allows himself to be promised or accepts a benefit as a consideration for violating his professional duty to protect the independence of the members of the medical profession with regard to the procurement of medical drugs, medical supplies or medical devices intended for delivery to the patient, shall incur the same penalty.

Section 299b
Giving bribes in the healthcare sector
(1) Whosoever offers, promises or grants a member of a medical profession pursuant to Section 299a Para. 1, in the context of exercising this profession, a benefit for himself or a third person as a consideration for

1. *according an unfair preference to him or a domestic or foreign competitor or*
2. *violating his professional duty to protect the professional independence of the members of the medical profession*

with regard to the prescription or dispensing of medical drugs, medical supplies or medical devices or with regard to referring patients or examination specimens shall be liable to imprisonment not exceeding three years or a fine.

(2) Whosoever offers, promises or grants a member of a medical profession as defined in Para. 1, in the context of exercising this profession, a benefit as a consideration for violating his professional

duty to protect the independence of the members of the medical profession with regard to the procurement of medical drugs, medical supplies or medical devices intended for delivery to the patient, shall incur the same penalty.

There is nothing at all wrong with the goal to fight active and passive corruption in the health sector. Since the federal ministerial draft and the draft submitted by the state of Bavaria were published – that is, for some time now – there has been a discussion about whether the definition of new offenses in these drafts may not be so broad that even an otherwise desired and desirable cooperation with economic benefits for the contracting parties – for example in the form of a group practice – would fall within their scope. In addition, the drafts enter previously uncharted territory in that for the first time, the breach of a professional duty now no longer be sanctioned according to professional rules by professional bodies only but also by the state, by imprisonment or a fine.

If the amendment to the Criminal Code is passed as has been proposed by the German government, the answer to the question if active or passive corruption has occurred will frequently rest on whether anyone has been accorded an "unfair preference". A "fair" preference – such as a 2% discount for cash payment – would be permissible. But would the same hold for a discount of 5%, 10% or even 25%? A market analysis or similar would be required to examine which discounts are "commonly" or "usually" applied and thereby "fair". Physicians and dentists will hardly be in a position to determine this. Moreover, the draft Sections 299a and 299b of the StGB will tend to keep healthcare providers from continuing their close cooperation, because a faulty interpretation of a cooperative agreement might now present not only a financial risk but also the hazard of criminal prosecution. It is therefore doubtful whether the amendment will lead to better care for patients.

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The immediate-placement concept of the Academy of Oral Implantology in Vienna

New anterior teeth – the same day

GEORG MAILATH-POKORNY, DDS, MD, PHD; RUDOLF FÜRHAUSER, DMD, MD; AND BERNHARD POMMER, DDS, PHD; VIENNA, AUSTRIA

The benefits of immediate implant placement compared to the delayed or late placement of implants include a reduced number of surgical visits and overall treatment time as well as lower postoperative morbidity. This provides additional benefits in the anterior region, as no removable provisionals will be required – and, most significantly, the original mucosal situation and the underlying alveolar bone can be maximally preserved. Particularly good aesthetic results are achieved by immediate provisionalization with individual abutments and timely integration of the definitive zirconia (the copy abutment method). This wealth of benefits for the dentist and patient alike outweighs the slightly increased early failure rate associated with immediate implants.

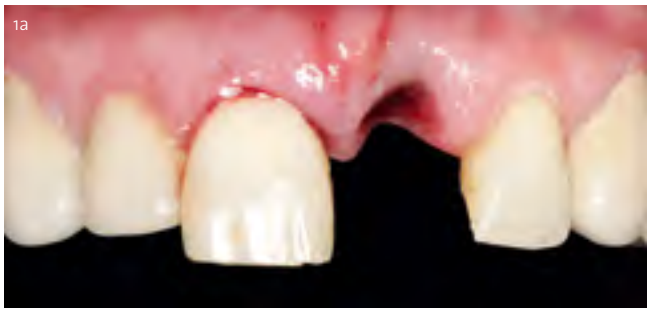
A recent expert survey conducted by the "Next Generation" youth committee of the Austrian, German and Swiss Societies for Implantology (ÖGI, DGI, SGI) revealed that about 20 % of all implant specialists still consider immediate implant placement as a method based on insufficient evidence and with an increased risk of implant failure [1]. While a literature review in 2007 stated that a meta-analysis would seem impossible at that time because of insufficient data [2], the first Cochrane review published in 2010 covered seven randomized controlled studies [3]. Only two years later, a systematic literature review of 46 prospective clinical trials yielded a very satisfactory two-year survival rate following immediate placement of 98 % (95 % confidence interval: 97 % to 99 %) [4]. The most recent meta-analysis published in 2015 now covering 73 studies showed a slight but significantly increased rate of early failure – 3 % in immediate implants compared to 4 % in late implants, i.e. an approximately 1.5-fold increase in risk [5]. Considering only immediate implants in the anterior maxilla with immediate provisionalization, the risk is approximately 3.5 times higher than with late implants and conventional late restoration [6].

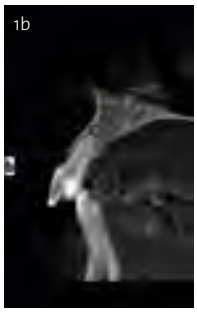
This would not seem surprising in that single-tooth implants without immediate restoration, e.g. in the molar region, are subjected to much less micromovement during the healing phase. But exactly the same is true of splinted immediate loading, as in the rehabilitation of a completely edentulous jaw. This makes osseointegration more predictable. The lion's share of early implant failures (72 %) after immediate placement occurs during the first six months, that is, before the definitive prosthetic rehabilitation [7]. After successful healing of immediate implants in the anterior region, very low bone resorption rates of 0.8 mm on average as well as aesthetic results – with about 0.5 mm of mucosal recession and only 0.4 mm of papillary recession – have been observed [8].

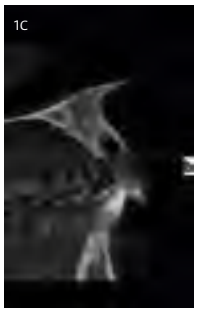
Indications by defect morphology

With the proper indication, aesthetic results can be achieved with immediate implants (Figs. 1a to 5c). However, not every situation is suitable for immediate placement. Especially after trauma or a traumatic extraction, the buccal bone lamella is often missing completely and implantation is possible only in a second session following bone augmentation and a prolonged healing period. For smaller bone defects, bone augmentation simultaneously with implant placement may also be possible.

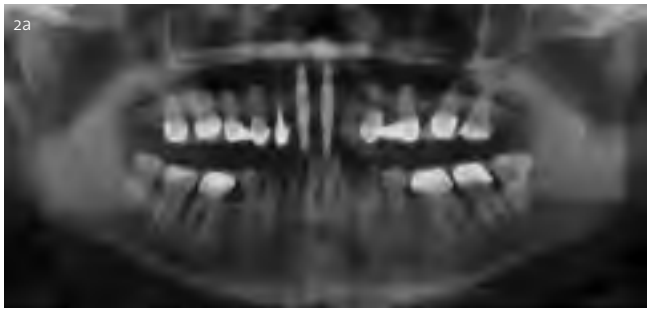
However, it is difficult to anticipate how successfully the graft will be remodelled, and there is a risk of a compromised aesthetic result due to an exposed buccal implant shoulder. So if a significant amount of buccal bone is missing after tooth extraction, immediate socket preservation measures are recommended by which the socket is filled with bone or a bone substitute material. Bone substitute materials based on collagen and tight wound

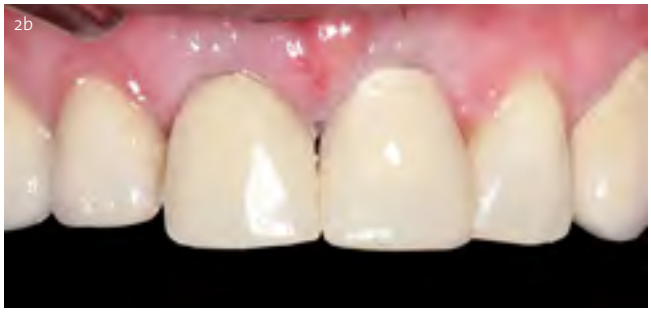




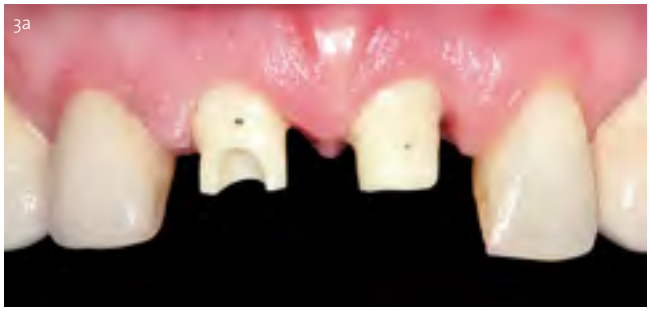


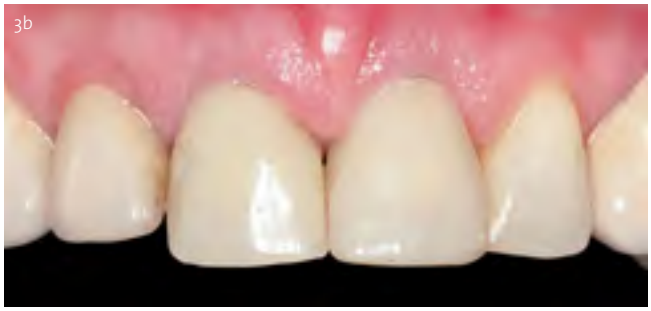
1a to c I Initial clinical (a) and radiological (b and c) findings for a 47-year-old female patient with subluxation of tooth 11 and avulsion of tooth 21 following trauma.



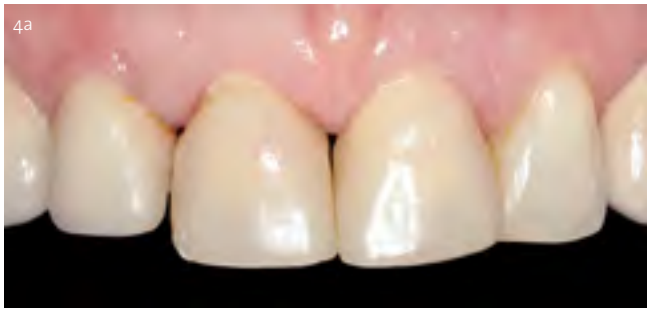


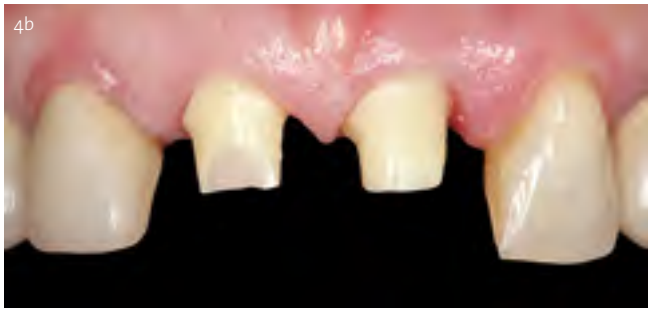
2a and b I Immediate implants at sites 11 and 21 (a) and immediate temporary restoration on the day of placement (b) using the copy abutment concept of the Academy of Oral Implantology in Vienna.



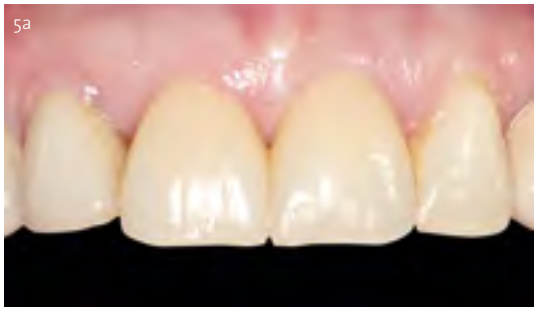


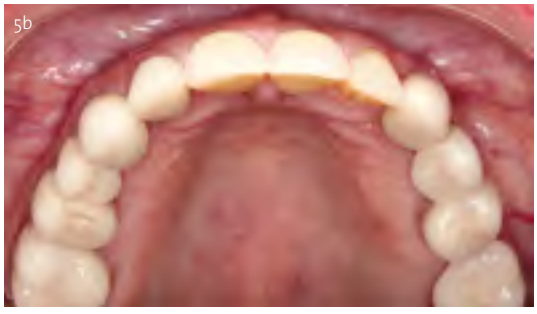
3a and b I Replacing the resin copy abutments by the final zirconia abutments (a) after one week and re-cementing the temporary crowns (b).

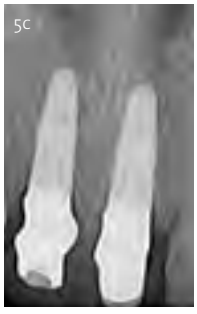




4a and b I Situation at four months with minimal mucosal recession (a) and re-preparation of the zirconia abutments (b) prior to taking the impression.







5a to c I Aesthetic result after cementation of the definitive ceramic crowns (a and b). The control radiograph at five years (c) showed no bone loss (laboratory procedures performed by Szlameczka & Prandtner Laboratory).

closure by membranes or soft tissue grafting have been proven clinical solutions for this purpose. In this case, implant placement should be "flapless", i.e. performed without reflecting a mucoperiosteal flap, and take place only after complete bone healing, four to six months after extraction. So immediate implants are primarily indicated if the alveolar wall is undamaged or if the buccal bone lamella exhibits only minor defects.

Immediate loading – a matter of primary stability?

Satisfactory stability directly after insertion in immediate placement requires advanced surgical skills as well as the use of appropriate implant geometries, since the implant cannot be fully anchored in healed alveolar bone. Yet sufficient primary stability is crucial for successful osseointegration, precisely because immediate anterior implants are often immediately loaded with fixed provisionals. But how stable does an immediate implant have to be? For splinted implant bridges, the rule of thumb has been that the bridge insertion torque, i.e. the average of the insertion torques of all involved implants, should not be less than 35 Ncm for immediate loading to be possible [9].

However, this rule of thumb has never been verified in a clinical trial. It remains questionable whether this requirement also applies to single-tooth implants to be immediately restored. A respectable success rate of 96 % after five years was achieved in a study of 68 immediate implants after immediate loading despite a primary stability of just 25 Ncm [10]. Another study showed successful healing after immediate loading even at an insertion torque of only 15 Ncm [11]. It should be possible in most cases, though, to achieve higher initial stability of the immediate implant by underpreparing the implant bed. At any rate, this increased pressure on the bone in the region of the implant apex appears to have no adverse effect on bone healing [12]. However, studies also showed that regular follow-ups of the stability of immediately loaded implants using resonance frequency analysis is not necessarily indicative of successful osseointegration and therefore cannot predict the presence or absence of implant loss [13].

Immediate implant placement despite periapical inflammation?

The decision on whether or not to place an implant immediately depends primarily on the stage of periapical inflammation of the respective tooth – i.e. whether there is an acute purulent process or a pain-free chronic apical granuloma [14]. Extensive cystic lesions may be too large to allow placement of an immediate implant in the remaining bone with sufficient primary stability. Success rates of between 92 % and 100 % in the presence of periapical inflammation have been reported [15,16]. A retrospective analysis of 418 implants showed a survival rate of 98 % after two years – and consequently no difference to implants after extraction of teeth without periapical inflammation [17].

Nor did the stability of marginal bone show any difference between the groups in controlled trials [18]. So while there is no significant difference between implants replacing teeth with or without periapical inflammation, the success rate is greatly reduced (to only 81 %) when the tooth next to the immediate implant presents with periapical inflammation [19]. For this reason, the endodontic condition of the adjacent teeth (and of course all other residual teeth) should be thoroughly evaluated in the context of pre-implantation diagnosis so that problems with the osseointegration of immediate implants caused by local periapical inflammation can be prevented.

Immediate restoration as the key to aesthetic success

For the immediate restoration of immediate implants in the anterior region, the copy abutment method according to *Fürhauser* et al. (2006) [20] follows the principle of "copying instead of interpreting" and exactly copies the emergence profile of the natural tooth, as this is the only way to provide maximum support for the peri-implant gingiva after tooth extraction. Maximum preservation of soft tissue from the first day of immediate implant placement can be achieved if the gingiva is neither compressed nor collapses due to lack of support.

Another important factor is the timely connection of definitive zirconia abutments. Here the advantage in terms of the healing process is that, if everything goes well, the abutment will never have to be removed again, and only the temporary crown will be replaced by the definitive ceramic crown after a healing period of three to six months. For the peri-implant gingiva, that means undisturbed healing without multiple abutment changes. Studies have shown that with each peri-implant intervention, the attachment of the soft tissue will be destroyed, which can lead to soft-tissue loss and increased marginal bone loss [21].

Digital production techniques now allow custom zirconia abutments to be fabricated on the very day of surgery and to be definitely screw-connected a few hours after implant placement. A five-year analysis of 95 immediate implants in the maxillary anterior region that were immediately restored

with copy abutments showed that the average pink aesthetic score was 12.6 points (out of a possible 14) [22], which was a significant aesthetic improvement compared to the baseline situation with the natural tooth. Late implants, on the other hand, exhibited a generally lower pink aesthetic score of 10.8 points after two to three years [23]. The greatest differences were observed in terms of alveolar ridge contour and the sizes and shapes of the papillae.

Conclusions

Immediate implant placement is an evidence-based treatment concept for the immediate rehabilitation of single teeth in the aesthetic zone and has been extensively described in the literature. The literature results are consistent with the clinical experience at the Academy of Oral Implantology in Vienna: After immediate implant placement for fixed rehabilitations of the edentulous jaw on four to six implants (1,797 implants in the maxilla and 1,323 implants in the mandible), the risk was not found to be increased compared to delayed implantation [24]. However, patients with periodontal disease exhibited significantly increased peri-implant bone loss (1.9 mm instead of 0.8 mm) after about five years [25]. By contrast, the early failure rate of single-tooth implants in the anterior region with immediate restoration (n = 841 implants) was about 3 % higher than with delayed placement. However, the good aesthetic results of immediate implants in this area are rarely achieved by late implants.

To find the list of references visit the web (www.teamwork-media.de). Follow the link "Literaturverzeichnis" in the left sidebar.

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Subclassification and clinical management of extraction sockets with labial dentoalveolar dehiscence defects

A shift in conventional thinking

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Immediate implant therapy involving implants placed into intact Type 1 extraction sockets has become a consistent clinical technique. The classification of Type 2 extraction sockets, where the mucosal tissues are present but there is a midfacial osseous dehiscence defect, has been described according to the extent of the buccal bone plate absence. The literature has offered different techniques in the treatment of Type 2 sockets; however, the extent of the defect has never been defined or delineated. In this article, the authors describe a subclassification of Type 2 sockets: Type 2A presents with a dehiscence defect roughly 5 mm to 6 mm from the free gingival margin (FGM) involving the coronal one-third of the labial bone plate; Type 2B presents with a dehiscence defect involving the middle one-third of the labial plate, approximately 7 mm to 9 mm from the FGM; and in Type 2C the dehiscence defect involves the apical one-third of the labial osseous plate roughly 10 mm or greater from the FGM. The authors also offer a protocol and technique employing immediate implant placement, guided bone regeneration, and bone graft containment with a custom two-piece healing abutment that can lead to consistent and satisfactory clinical outcomes in low-smile-line patients. The treatment protocol and sequence is outlined in a clinical case presentation involving a Type 2B socket.

Immediate implant placement concurrent with provisional restoration (IIPP) into fresh extraction sites has been advocated to improve the esthetic-restorative outcome for patients [1]. This procedure was first described in the late 1980s and has gained popularity and support in the dental literature as a predictable treatment option for single tooth replacement with an immediate dental implant in the esthetic zone [2-10].

When performing IIPP, achieving successful outcomes depends on multiple variables. These include: pre-treatment gingival health, morphology and dimensions of the bone and soft tissues, primary implant stability, spatial positioning of the implant, and the fabrication of a properly contoured provisional restoration. Increased understanding of each of these factors is important to developing an effective protocol for IIPP. The use of IIPP will continue to expand as clinicians gain a greater comprehension of the variables that can lead to success.

Residual bone socket morphology after tooth removal prior to immediate implant placement has been identified as a critical factor when performing IIPP [5,11]. Establishing an accepted classification of residual bone socket morphology allows clinicians to efficiently communicate and collect important clinical data that can lead to establishing more predictable treatment protocols in the future [12,13].

Elian et al. previously provided a defect classification in the literature that identified the problems associated with horizontal and vertical hard- and soft-tissue loss [11]. This classification delineated the midfacial horizontal component and the potential risk of midfacial recession associated with labial bone plate loss after tooth extraction. The following socket classification was described:

- Type 1: Labial bone plate and associated soft tissues are completely intact.
- Type 2: Soft tissue is present, but a dehiscence osseous defect exists that is indicative of the partial or complete absence of the labial bone plate.
- Type 3: Midfacial recession defect is present, representing the loss of the labial bone plate and soft tissues.

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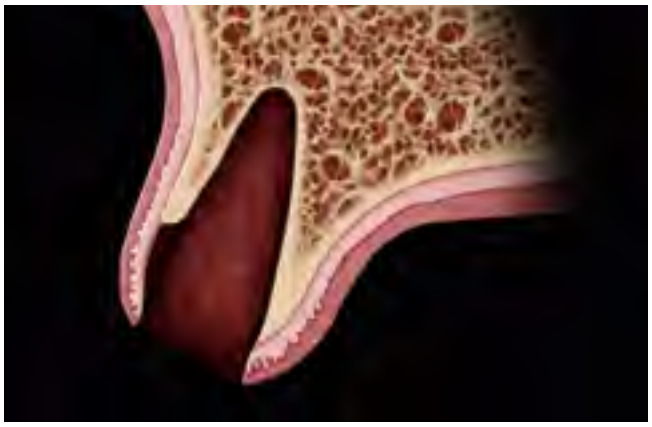
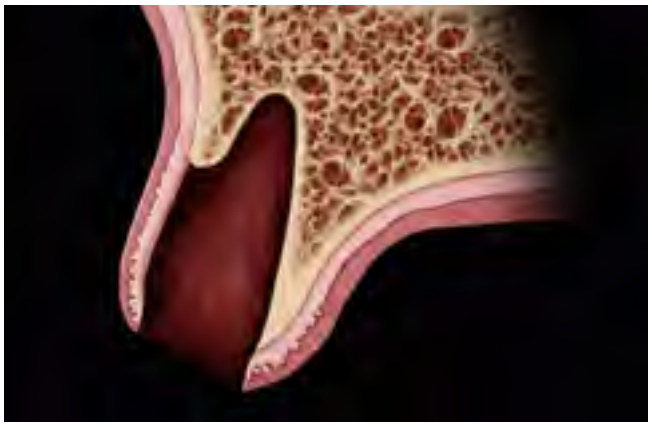


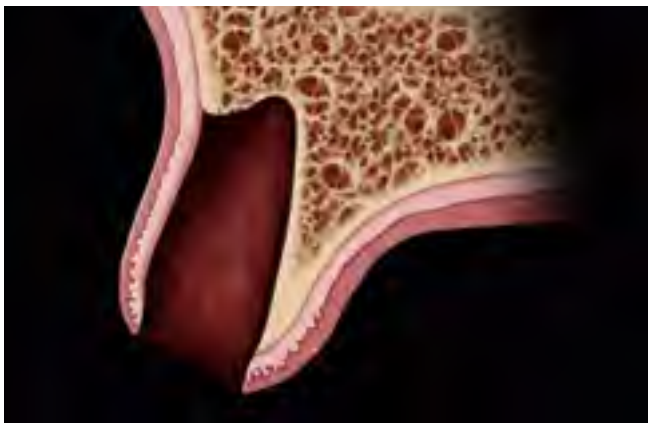
1 I Diagrammatic sagittal view of a Type 2A socket, where the coronal one-third of the buccal bone plate is absent, yet the soft tissues are completely intact.

2 I Diagrammatic labial view of a Type 2A socket, where the coronal one-third of the buccal bone plate is absent, yet the soft tissues are present.



3 I Diagrammatic sagittal view of a Type 2B socket, where the middle one-third of the buccal bone plate is absent, yet the soft tissues are completely intact.

4 I Diagrammatic labial view of a Type 2B socket, where the middle one-third of the buccal bone plate is absent, yet the soft tissues are present.



5 I Diagrammatic sagittal view of a Type 2C socket, where the apical one-third of the buccal bone plate is absent, yet the soft tissues are completely intact.

6 I Diagrammatic labial view of a Type 2C socket, where the apical one-third of the buccal bone plate is absent, yet the soft tissues are present.

In this basic midfacial classification, Type 1 and Type 3 sockets are adequately described. However, the present authors have determined that the Type 2 residual extraction socket – that in which the gingival soft tissue is found to be intact and there is partial or complete bone resorption of the facial cortical plate of bone – requires more detailed description when determining the course of treatment for the Type 2 socket, even though treatment and outcomes of these defect types have been described

in the literature [14]. Prior case reports describe immediate implant placement into extraction sockets with dehiscence defects and placement of a bone graft, whether autogenous blocks, chips, or particulate allograft with or without a membrane for guided bone regeneration (GBR). A full provisional restoration or custom healing abutment is also placed at the time of surgery to contain the bone graft, support the peri-implant gingival tissues, and restore the esthetic loss of the tooth [15-18]. In addition, several authors have also suggested that the size, extent, and shape of the osseous defect can affect the short-term esthetic outcomes of treating such defects [19].

Therefore, the purpose of this article is to identify a subclassification of Type 2 sockets categorizing the dimensions and volume of the labial plate dehiscence defect, as well as to provide a clinical scenario exemplifying the protocol and sequence of therapy in the correction of the dehiscence labial defect.

Subclassification

As previously cited, *Elian* et al. [11] described a classification of Type 2 extraction sockets where the soft tissue is present but the labial bone plate is absent. However, the following subclassification of Type 2 sockets when the soft tissues are intact is used to quantify the absence of the labial bone plate:

- Type 2A: Absence of the coronal one-third of the labial bone plate of the extraction socket 5 mm to 6 mm from the free gingival margin (FGM) (Figs. 1 and 2).
- Type 2B: Absence of the middle to coronal two-thirds of the labial bone plate of the extraction socket approximately 7 mm to 9 mm from the FGM (Figs. 3 and 4).
- Type 2C: Absence of the apical one-third of the labial bone plate of the extraction socket 10 mm or more from the FGM (Figs. 5 and 6).

Clinical technique

A technique employing immediate implant placement, GBR, and bone graft containment with a custom-healing abutment that is conducive to consistent clinical outcomes is described below. A summary of the treatment sequence and clinical steps is provided in Table 1.

First, because the implant is used to retain the custom healing abutment, the treatment protocol requires a minimum of 25 Ncm of implant insertion torque for primary stability at the time of placement to safeguard survival [20]. In premolar sites, the socket anatomy allows implant stability through engagement of the lateral walls, since bicuspids are greater in dimension buccolingually than mesiodistally. In anterior sockets, engagement of the palatal and apical bone is strategic to ensure not only proper implant placement but also primary stability.

A custom-contoured healing abutment is fabricated using provisional material such as acrylic, bisacryl, or flowable composite. It is then removed prior to the placement of an absorbable membrane. The absorbable membrane should cover and extend beyond the lateral walls of the defect by a few millimeters, mimicking its shape and form as well as extending to the level of the FGM midfacially.

The bone graft material is then placed between the palatal aspect of the membrane and the labial surface of the implant up to the level of the FGM.

The custom two-piece healing abutment is then re-placed, thereby containing, protecting, and maintaining the membrane and graft material throughout the healing phase. Excess bone graft material that was expressed into the gingival sulcus is removed.

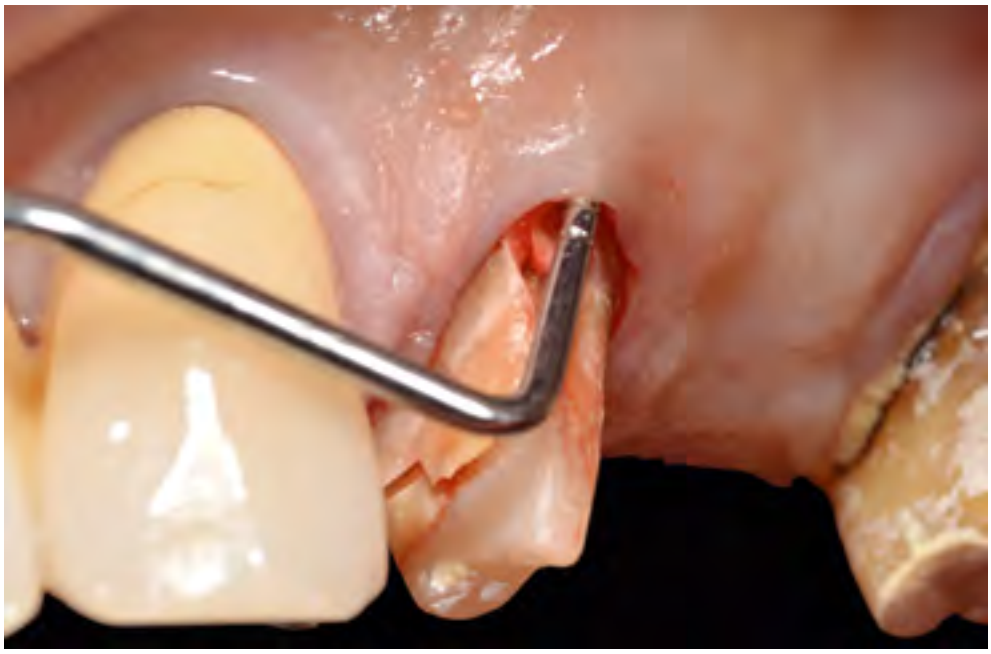
Finally, the patient is instructed to not rinse or brush the area for at least two days to allow the blood clot to stabilize.

Clinical case report

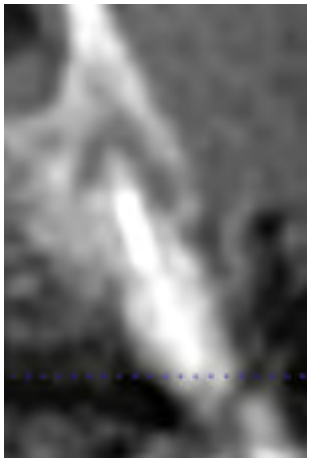
An 87-year-old Asian male patient presented with pain to percussion of the maxillary left first bicuspid (tooth 24), which served as an anterior abutment of a fixed dental prosthesis (FDP) replacing tooth 25. Upon clinical examination with a periodontal probe, a sounding depth of 9 mm was recorded on the direct midfacial aspect of the crown

Treatment step	Clinical procedure
1	Place implant with a palatal bias, engaging the proximal walls of the socket, leaving a buccal gap.
2	Construct custom two-piece, screw-retained healing abutment.
3	Remove custom healing abutment.
4	Fit and place absorbable membrane for GBR. Membrane should cover defect at least 2 mm circumferentially and extend to the level of the FGM midfacially.
5	Place bone graft material buccal to the implant surface and palatal to the absorbable membrane.
6	Re-place prior fabricated custom healing abutment.

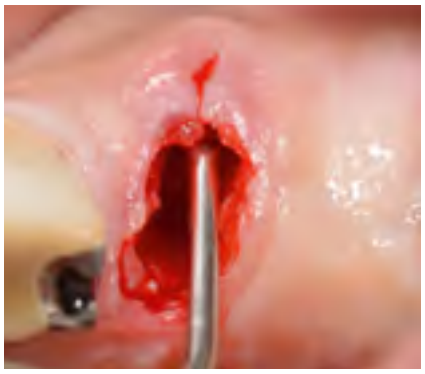
Table 1
Summary of treatment sequence and clinical steps.



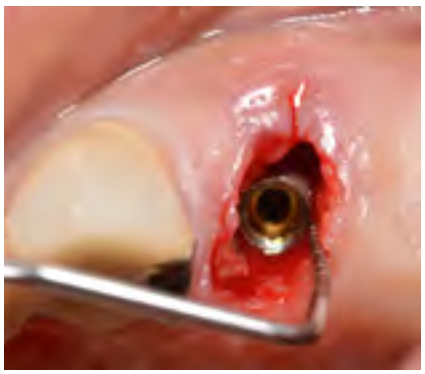
7 I Clinically, the midfacial dehiscence bony defect was diagnosed using a periodontal probe and sounding to the apex of the lesion. A sounding depth of 9 mm was recorded for tooth 24.



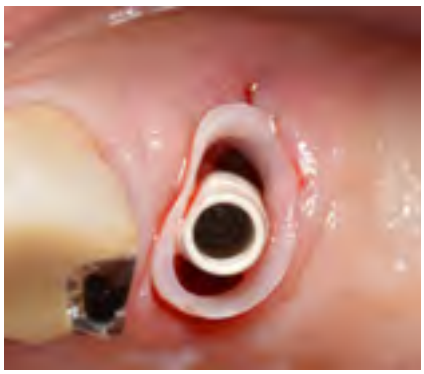
8 I The preoperative CBCT showed the apical extent of the osseous defect in this particular situation; the middle one-third of the labial plate was absent, indicative of a Type 2B socket.



9 I A surgical spoon excavator was used to thoroughly debride the extraction socket after sharp dissection of the gingival fibers prior to tooth removal. Note that with the buccal extension of the excavator the labial plate was absent.



10 I The engagement of the lateral walls of the first bicuspid socket was used for primary stability. The implant was placed with a palatal bias no less than 3 mm and no deeper than 4 mm from the labial FGM to allow greater vertical distance for proper submergence profile of the custom healing abutment.



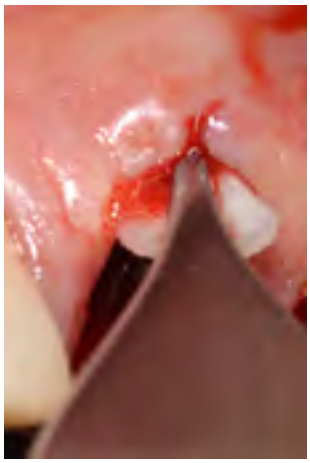
11 I A prefabricated cervical root former or "shell" was used to capture the subgingival shape of the peri-implant mucosal tissues. This acrylic shell was subsequently luted to a pre-manufactured PEEK (polyether-ether-ketone) implant abutment.

abutment, which was indicative of a vertical root fracture (Fig. 7). This diagnosis was also confirmed through periapical and cone-beam computed tomography (CBCT) radiographs (Fig. 8). The subclassification defect type in this clinical scenario was a Type 2B socket.

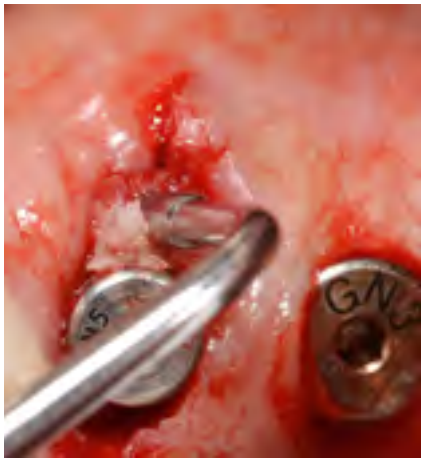
The posterior FDP with full crown retainers on teeth 26 and 27 and an internal interlock attachment to an anterior FDP from teeth 13 through 23 had been placed with provisional cement and was maintained for several years with periodic recementation. The provisional removal of the posterior FDP not only allowed treatment of tooth 24, but also maintained a fixed transitional restoration for the patient during surgical healing and non-occlusal loading of the implants placed in 24 and 25.

Surgical treatment required atraumatic tooth removal without flap elevation, thereby maintaining the periosteal blood supply to the interproximal and residual labial bone plate. Sharp dissection of the supracrestal fibers was performed with a 15c scalpel blade prior to tooth extraction, and the socket was thoroughly debrided with a surgical spoon excavator (Fig. 9). The partial absence of the labial bone plate was evident (Fig. 9), yet the soft tissue was completely intact. A tapered platform-switched internal connection-type implant (Biohorizons Plus, Biohorizons) was placed 4 mm below the FGM to allow greater vertical distance (i.e., running room) for

12 I The custom healing two-piece abutment with voids filled in with acrylic resin, fully contoured and polished prior to insertion; while in place, healing was allowed to occur for six months before the first disconnection.



13 I An absorbable collagen membrane was shaped to extend beyond the lateral walls of the defect and subsequently placed into the socket to the level of the FGM. Only the "cone" portion of the "ice cream cone" membrane was used.

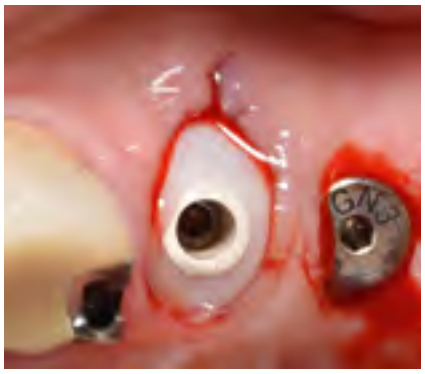


14 I The bone graft was placed between the labial aspect of the implant and palatal to the absorbable collagen membrane.

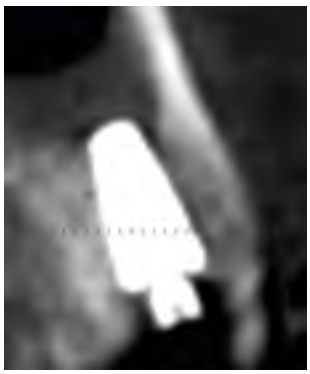
the proper submergence profile of the custom two-piece healing abutment (Fig. 10). Primary stability was achieved through engagement of the lateral proximal walls of the first bicuspid socket and confirmed with hand-torque of 50 Ncm to facilitate immediate fabrication of a custom healing abutment.

A screw-retained, two-piece custom healing abutment was fabricated prior to the placement of the bone graft material. Polyether-ether-ketone (PEEK) internal-hexed connection temporary cylinders (Biohorizons), a preformed polymethylmethacrylate (PMMA) submergence profile root-form shell (Fig. 11) specific for tooth 24 (Specialized Dentistry of New York Dental Lab), and autopolymerizing acrylic resin (Super-T, American Consolidated Mfg. Co.) were used to construct the custom healing abutment [21]. This custom healing abutment possessed the subgingival contours that conformed to the pre-extraction state of the tooth root cervix, thereby supporting the soft-tissue emergence profile to help protect the blood clot and contain the bone graft particles during the healing phase of treatment (Fig. 12).

An absorbable collagen membrane (BioMend Extend, Zimmer Dental) was trimmed and contoured conforming to, yet extending beyond, the size and shape of the labial bone deficiency previously assessed (Fig. 13). The membrane was placed against the internal surface of the residual labial socket wall, and the "gap" was filled with small-particle (250 to 1,000 microns) bone allograft (Puros Cortico-Cancellous Particles, Zimmer Dental) at the time of implant placement (Fig. 14). Once this was accomplished, the previously fabricated two-piece custom healing abutment was reinserted using hand-torque while ensuring adequate support of the soft tissues and gingival architecture (Fig. 15).



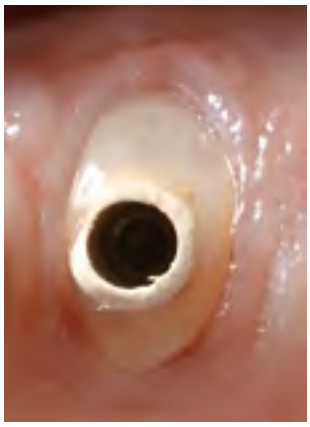
15 I The previously constructed two-piece custom healing abutment was reinserted to contain, protect, and maintain the bone graft material during the healing phase of treatment.

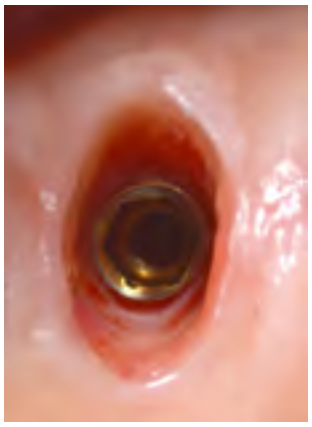


16 I The eight-month postsurgical healing CBCT showed radiographic re-establishment of the buccal bone plate prior to first disconnection and impression-making.

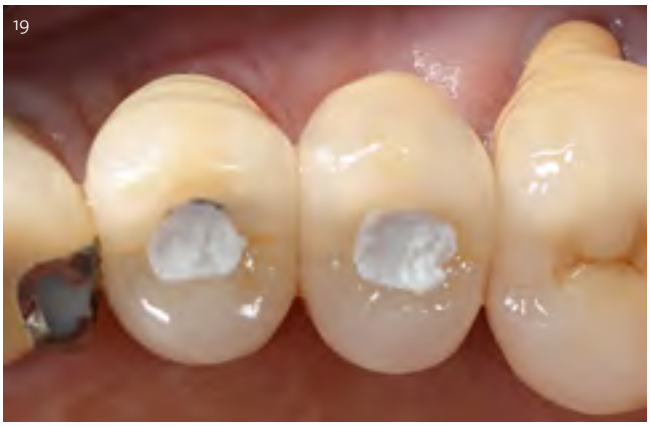
The patient was given post-surgical antibiotic therapy and seen about one week postoperatively for healing during clinical follow-up.

A healing period of eight months was specified for this patient to allow the reconstitution of the buccal plate before final impression-making of implants 24 and 25. A CBCT was also taken to confirm radiographic healing of the newly generated buccal bone plate (Fig. 16). After first disconnection of the two-piece custom healing abutment, the anatomy of the reconstituted and maintained gingival

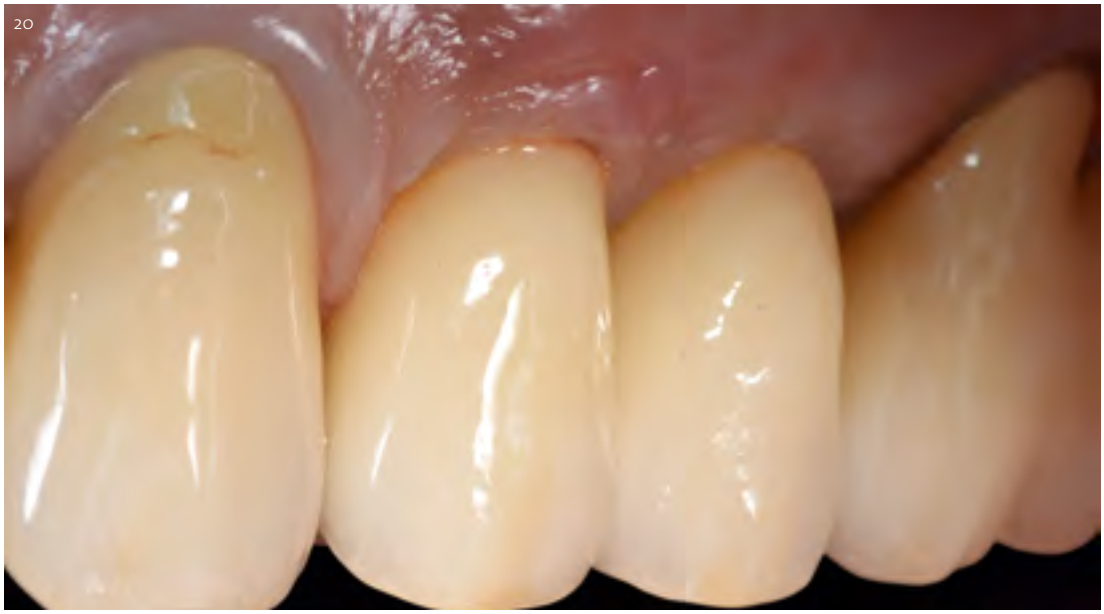




17 and 18 I Clinical appearance of the gingival tissues around the custom healing abutment eight months post-surgical healing (Fig. 17). First disconnection of the healing abutment at tooth 24 showed anatomic shape of the socket and buccal ridge maintenance (Fig. 18).



19 and 20 I Occlusal-buccal view (Fig. 19) and facial view (Fig. 20) of the definitive screw-retained implant crowns for teeth 24 and 25.



architecture of the extraction socket was evident (Figs. 17 and 18). Single-unit, screw-retained, ceramic-metal implant restorations were fabricated for implants 24 and 25, as well as full-coverage crowns for natural teeth 26 and 27 (Figs. 19 and 20). A final periapical radiograph was taken after insertion of the definitive single-unit restorations on the upper left sextant of the patient's dentition (Fig. 21).

Discussion and clinical significance

This article has presented a subclassification of Type 2 socket defects where the soft tissue is present but a dehiscence osseous defect exists, which is indicative of the partial or complete absence of the labial bone plate.

Of equal importance is that the case report presented denotes a shift in conventional thinking where traditional clinical techniques would have warranted treating a Type 2 defect in a delayed-approach protocol – i.e., tooth extraction with or without socket preservation, healing of the socket, implant placement, healing of the implant, provisional restoration of the implant, final impression-making, and then delivery of a definitive restoration. Such a delayed-approach treatment sequence encompasses several steps over an extended period of time and appointments, not only for the practitioner, but also for the patient.

The clinical significance of this described technique, where immediate implant placement into a fresh extraction socket with partial or complete loss of the buccal bone plate is combined with guided bone regeneration, has significant benefits for both the clinician and patient.

These include:
1) treatment procedures are condensed into fewer appointments;
2) the overall treatment time is reduced;
3) the gingival architecture of the soft tissues is maintained; and
4) the opportunity and ability to regenerate the lost labial bone plate is viable.

Type 2A and Type 2B defects can be treated with consistent aforementioned results [18], however Type 2C defects present with a greater degree of difficulty in therapy [19] and should be approached with caution, especially in the esthetic zone.

To find the list of references visit the web (www.teamwork-media.de). Follow the link "Literaturverzeichnis" in the left sidebar.

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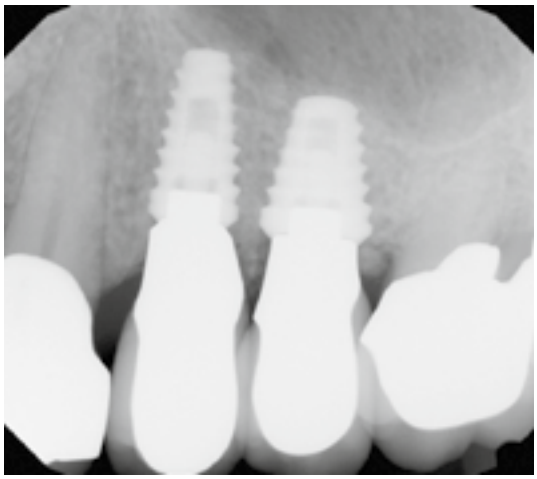

21 | The definitive periapical radiograph of implant restorations 24 and 25 showing more than adequate bone levels around both implants ten months after implant surgery.

Digital workflows in the production of implant superstructures

CAD/CAM technology in the implant/restorative workflow

DR STEFFEN KISTLER[1], DR FRANK KISTLER[1], JO MILLER[2], STEPHAN ADLER[3] AND DR JÖRG NEUGEBAUER, PHD[1,4]

Thanks to modern CAD/CAM-based production technologies, the implantological and prosthetic workflow involving the dentist, dental technician and patient can be optimized while achieving a very high level of precision. The authors describe digital manufacturing options for implant-supported restorations.

There have been significant advances in dental CAD/CAM technology in recent years. This technology is now routinely used in implant-prosthetic procedures [1,14]. Two approaches have become established in the production of the superstructure:

1. Chairside systems with intraoral data acquisition and in-office production.
2. CAD/CAM systems tailor-made for laboratory use with the options of either in-office production or outsourcing to central production facilities.

Depending on the indication and on the complexity of the proposed implant-supported restoration, dentists can collaborate with dental technicians in a backward-planning scenario to explore different ways of customizing the surgical procedure and optimizing it for the individual patient.

Single-tooth restoration

Immediate implantation has been proven to save time and shorten the overall treatment procedure [17]. If the relevant conditions are met, the implant can be inserted immediately after tooth removal (Fig. 1). Minor discrepancies between the socket and the implant body may be addressed by augmentative measures, without requiring major physiological remodeling or impairing the stability of the peri-implant tissue. An osteoconductive bone substitute can be used for filling/augmenting the gap. If a biphasic material (Symbios, Dentsply Implants) with a high content of tricalcium phosphate (ß-TCP) is used, rapid consolidation of the bone may be expected (Figs. 2 and 3). The lower percentage of hydroxyapatite (HA) ensures a sufficiently stable volume [7].

Provisionalization

Provisionalization is an essential factor for treatment success. The provisional restoration can be prepared in advance, based on a classic impression. This requires scanning the impression in the laboratory, removing the tooth to be extracted and re-scanning the cast to provide the appropriate models for the dental technician, who can then proceed to producing the required design.

In addition to the traditional provisionals for immediate restoration that are created on a temporary structure, modified adhesive bridges have become established to ensure load-free healing [6]. These bridges are produced at chairside or in the laboratory, with oral and inconspicuous vestibular wings (Fig. 4). Once the implant has been closed with a cover screw, the bridge can be attached to the adjacent teeth (Maryland-style) with an adhesive resin cement [9] (Fig. 5). The material used for the adhesive bridge can be a highly elastic resin. Different materials such as acrylic resins, ceramics or, more recently, hybrid materials are available for the subsequent definitive reconstruction.

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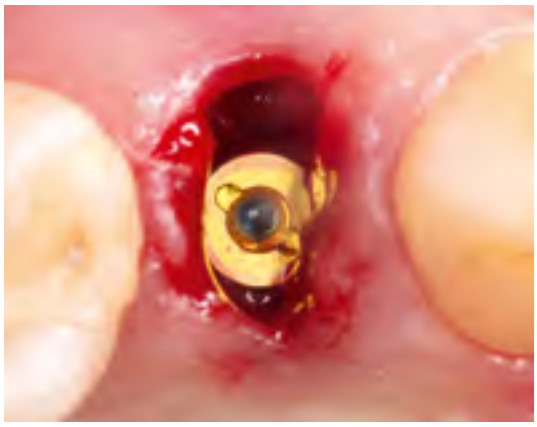
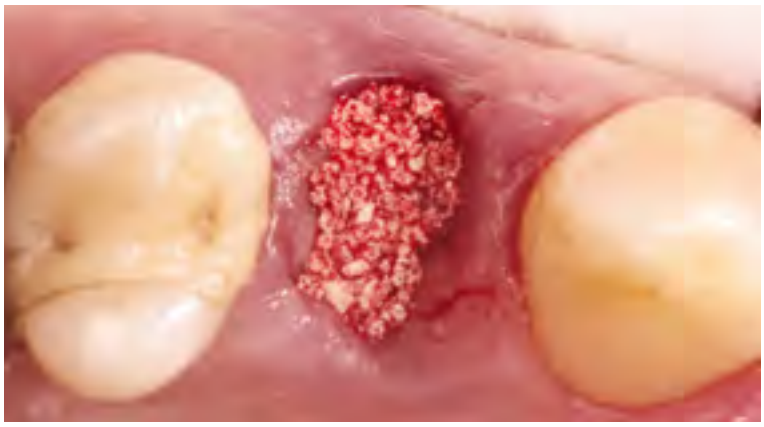
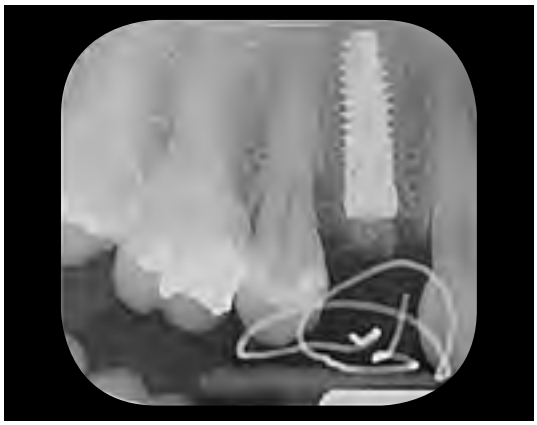


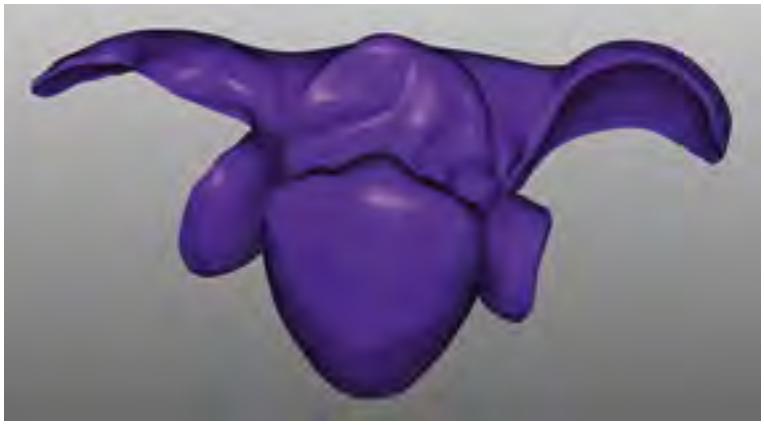
1 I Insertion of a screw implant including screw plug (Xive; Dentsply Implants) at site 14, on the palatal aspect.



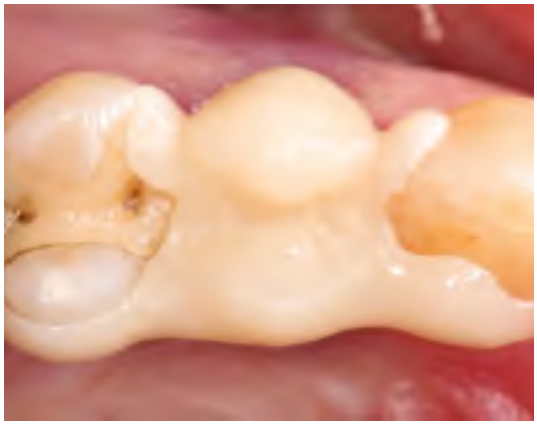
2 I Augmentation of the peri-implant cavities with HA/TCP bone substitute (Symbios, Dentsply Implants).



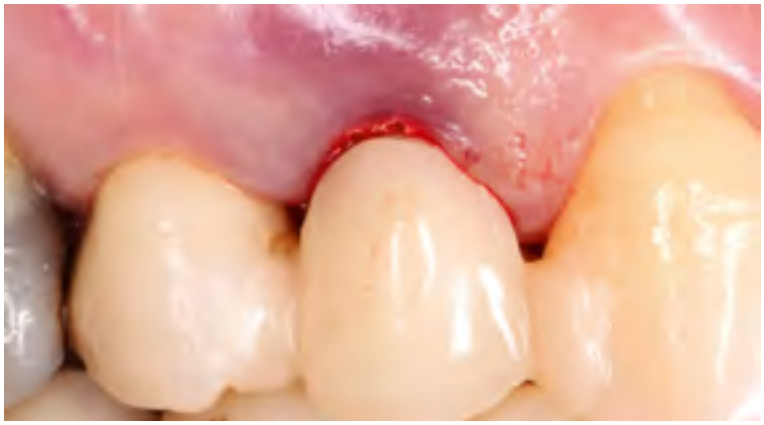
3 I Radiograph taken using dental film and a cotton swab showing the inserted implant and the bone substitute.



4 I CAD design of the adhesive bridge with palatal and buccal wings.



5 I Try-in of the CAM-milled provisional before adhesive fixation with resin cement.



6 I Inserted Maryland bridge with ideal support of the peri-implant soft tissue after polishing the transitions to the retention elements.

Since the design software of modern CAD/CAM systems usually permits free modellation, an ideal contour of the adhesive-bridge pontics can be provided in the transition area to the peri-implant mucosa. Thus, the soft tissue is being ideally shaped for the definitive rehabilitation [10]. In addition, any soft-tissue defects may be filled and lateral augmentation areas covered, as described above. The temporary restoration is delivered directly at the end of the surgical session (Fig. 6). Patients leave the office with an unloaded provisional restoration in place. No physiological forces are transferred to the implant, and a two-stage healing process is possible. This provisional closure lets surgeons dispense with suturing, minimizing the risk of unsightly scars in the aesthetic zone.

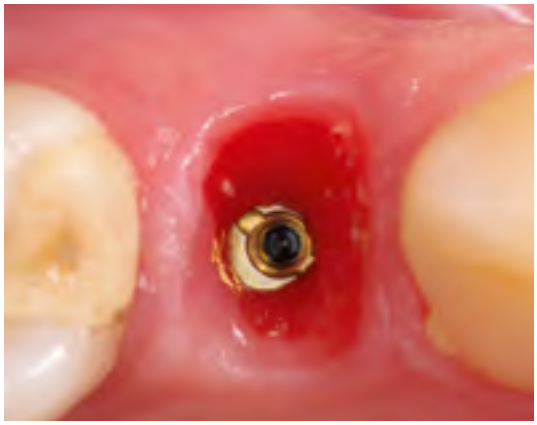
Definitive restoration

Re-entry requires only minimal intervention, since only the soft tissue above the screw has to be removed (Fig. 7). A classic impression is taken to communicate the final position of the implant to the laboratory, which designs and produces the abutment and definitive crown on the basis of the data set for the provisional crown (Fig. 8). To obtain an idealized design of the preparation, the crown or superstructure margin is positioned slightly supragingivally, following the contour of the soft tissue. This simplifies the cementing of the final restoration, as cement residue can easily be removed from the sulcus [4] (Figs. 9 and 10).

Extensive rehabilitation of a jaw

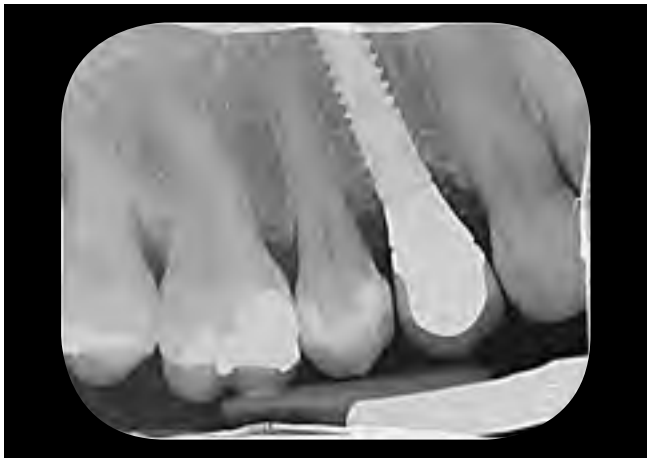
For complex implant-supported restorations, especially in a nearly edentulous jaw, immediate restoration will often be impossible due to a need for augmentation [15] (Fig. 11). In this situation, individual abutment teeth are left in place if at all possible, in order to support – at least partially – an existing or interim restoration as the implants or augmentation material are left to heal. Depending on the extent of the augmentation – for example, a two-stage sinus-floor elevation procedure – this phase may be delayed. At re-entry, the degree of osseointegration achieved is examined, which determines the subsequent procedure [12] (Fig. 12).

An impression is taken of the osseointegrated implants and a wax-up made with denture teeth or veneers. The wax-up or the mock-up transferred into plastic serves as a scan base for the fixed or removable final restoration to be designed in the CAD software [11]. It is imperative to work with a highly accurate physical model that has been checked for exact fit and that reproduces the implant positions in the mouth exactly [8]. As an industrially produced framework should never be segmented and soldered or laser-welded after its production, the

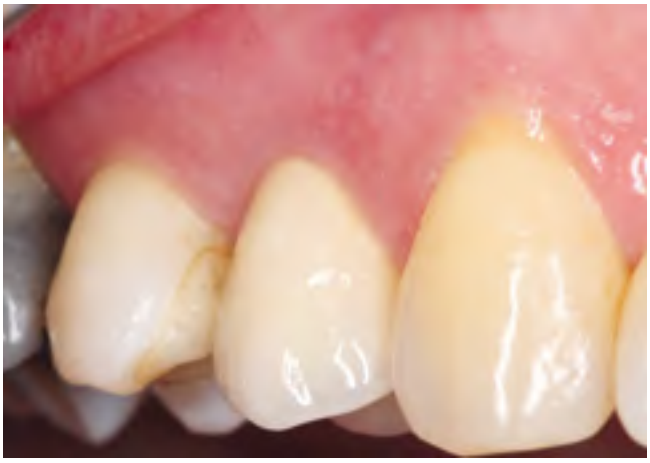


7 I Three months after implant placement: Irritation-free healing of the augmentation material after removal of the CAD/CAM temporary.

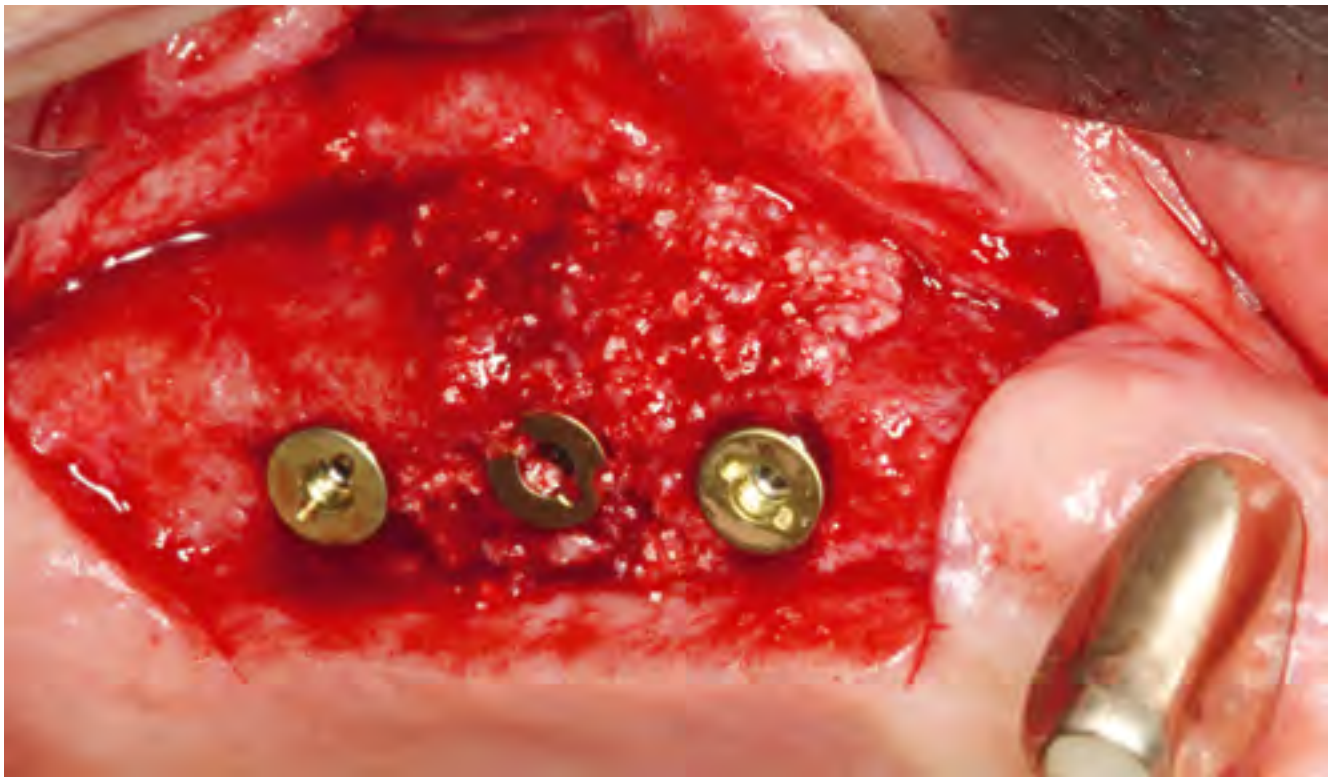
8 I Zirconia coping adhesively connected to the titanium base (Titanium Base for Xive; Dentsply Implants) with a resin key for checking the fit.



9 I Control radiograph of the cemented implant-supported crown 14.



10 I Irritation-free and naturally molded soft tissue six months after delivery of implant crown 14.



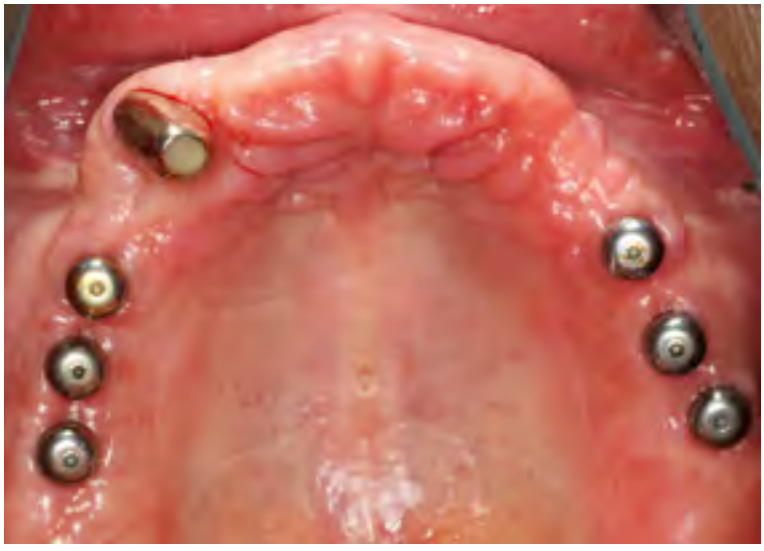
11 I Implant insertion and connection of the cover screws (Xive; Dentsply Implants) and lateral augmentation due to the insufficient vestibular bone supply (Symbios; Dentsply Implants).

accuracy of fit must be checked in advance. This can be done by a metal-reinforced resin bar in the same session as the aesthetic try-in of the wax-up. Since the remaining natural abutments often remain in place during the production phase of the restoration, the teeth to be extracted need to be removed on the model. A fully digital approach cannot be implemented in this case.

The conventionally produced working casts and documentation are sent to the production centre, where the model and the wax-up are scanned [8]. Depending on the equipment available at the laboratory, the surface scans can also be generated in-house and sent to the milling centre. Based on these data, the specifications for the planned superstructure submitted by the dental technician and dentist are implemented on an algorithmic basis. The next step is to provide the dental technician with the virtual 3D planning, which can be discussed with the dentist. This is followed by the design approval for production, at which stage the production centre may be informed of requests for design modifications or adjustments to the desired restorations [3]. Thanks to the computer-assisted process, the framework is designed such that the material-specific and production-related properties result in a maximally stable yet graceful design, yielding optimally designed frameworks for a fixed prosthesis.

Bar-supported restoration

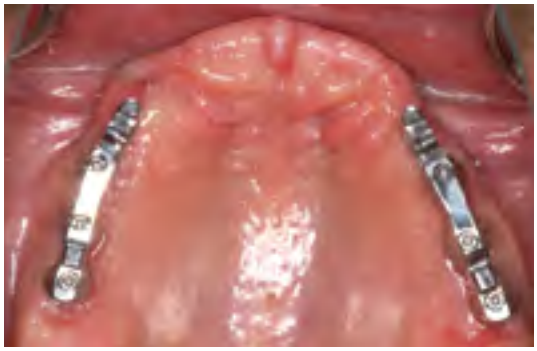
CAD/CAM technology presents itself at its best in the production of bar-supported removable dentures. Here the "2in1" approach (Atlantis Isus; Dentsply Implants) provides good results. With this prosthetic solution, it is no longer necessary for the framework – whether of a bridge or as a hybrid construction – to be made separately by the dental



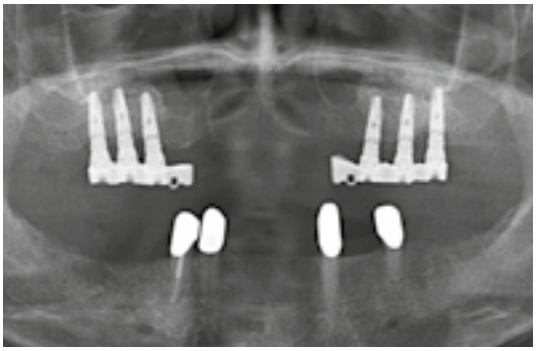
12 I After re-entry: Cover screws on the MP abutments awaiting later impression-taking at the gingival level.

13 I CAD design of the primary bars based on a prefabricated MK-1 bar (Atlantis Isus 2in1, Dentsply Implants).

14 I Design of the secondary structure with retentions for receiving the acrylic teeth.



15 I Clinical check of the implant-supported bars six weeks after delivery. No irritation of the soft tissue.



16 I Control radiograph of the implant- and bar-supported CAD/CAM restoration in the maxilla and the telescope crown-supported restoration in the mandible.

technician. Rather, it will be produced at the manufacturing centre, provided with retention elements as required and precisely milled as one with the primary structure from a homogeneous titanium blank (Figs. 13 and 14). This secondary structure is completed by the dental technician by adding prefabricated acrylic teeth or by individual veneering with composite. Before this is done, however, the fit of the primary structure is checked with a screw-retained bite record. At the time of delivery, the abutment teeth no longer needed for the definitive superstructure are removed (Figs. 15 and 16).

Discussion

State-of-the-art CAD/CAM production technologies can optimize the workflow between the dentist, dental technician and patient while achieving a very high level of precision [2]. This is associated with logistic benefits in that fewer treatment sessions are necessary, while minimizing the extent of the necessary laboratory procedures [5]. The dental technician's expertise can be used for the refinement of the customized restoration. Time-consuming but technically simple production steps required at the laboratory for making a tertiary structure can be dispensed with. Moreover, structures produced in this way are homogenous and exhibit no systemic vulnerabilities that might result in a fracture hazard, such as when combining materials in the form of cast-to components [13].

The added logistical challenge caused by the physical shipment of casts and documents to specialized production centres, a problem often deplored in the infancy of the CAD/CAM technology, can be compensated for by the benefits of digital impression-taking. As the systems evolve, digital models can increasingly be produced without a conventional impression [16]. This means that digital data are already available to the dentist and can be quickly and inexpensively transmitted to the respective service provider via the Internet. The dental technician is relieved from redundant work and can focus on a sophisticated patient-specific adaptation of the superstructure.

A list of references will be supplied by the editorial office on request.

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Dedicated to the father of modern implant therapy

EAO in Stockholm

A reported 2,200 participants from around the world had come to Stockholm at the invitation of the European Association of Osseointegration (EAO) to learn more about oral implantological technologies, treatments and surgical solutions with a focus on the development of clinical osseointegration over the last 50 years.

The three-day conference with its large dental exhibition comprising about 100 dental companies focused on the improved implantation of existing knowledge and its application in daily practice.

This year's EAO Annual Congress was dedicated to the work of the late *Per-Ingvar Brånemark*, the father of modern implant therapy, who passed away in December 2014. On 27 September, the EAO recognized his achievements with a special symposium at the Aula Medica of Karolinska Institutet in Stockholm.

Leading experts from around the world presented their work and discussed the latest scientific findings and clinical concepts in implantology. On the last day of the conference, EAO President *Professor Björn Klinge* announced the winners of the EAO's prestigious European prizes for research in implant-based therapy. This year, over 500 abstracts were submitted for presentation at the meeting, of which 68 were shortlisted for a series of prestigious awards (winners below). Each submission was published in a special supplement to Clinical Oral Implants Research, the EAO's peer-reviewed journal.

As part of this special meeting dedicated to the memory of *Per-Ingvar Brånemark*, *Professor Daniel van Steenberghe*, the EAO's first president, and *Professor Jan Lindhe*, a world-renowned periodontist, received medals awarding them the status of Honorary Membership of the EAO.

Leading experts from around the world discussed the latest scientific findings and clinical concepts in implantology at the EAO Annual Congress in Stockholm.

Award winners announced:

- European prize for basic research in implant dentistry
  Yeliz Çavuşoğlu: Osseointegration of zirconia in the presence of multinucleated giant cells
- European prize for clinical research, surgically related
  Andy Temmerman: A prospective, non-randomized, controlled, multicentre study to evaluate the outcome of oral implants in women over 60 years of age with osteoporosis: 1-year results
- European prize for clinical research, prosthetically oriented
  Melissa Dierens: Cost analysis related to aftercare of mandibular overdenture treatment on non-splinted implants in fully edentulous patients
- European prize for clinical research, peri-implant biology
  1. *Gerdien Telleman*: 5-year results of a RCT comparing the outcome of platform-switching to non-platform-switching of 8.5-mm implants in the posterior region
  2. *Marc El Hage*: Osteotome sinus-floor elevation without grafting: a 10-year cone-beam CT evaluation
- Poster presentation competition
  Lukas Fürhauser: Rating scores to judge the aesthetic outcome of single-tooth implants: methodological appraisal

Coming up in 2016

The 25th Annual Scientific Meeting of the EAO will take place from 29 September to 1 October 2016 in Paris. More information: www.eao-congress.com

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Tom Stratton, President, Implant Direct (3rd from right) and Dr Pedro Peña, Scientific Director (4th from right) in a circle of international speakers.

3rd International Implant Direct Symposium in Palma de Mallorca

The world of implantology assembled on an island

Implant Direct enjoys widespread acceptance among renowned and scientifically oriented clinicians. At the end of October, more than 500 participants from around the world met in Palma de Mallorca at the 3rd International Implant Direct Symposium. Implant Direct's European headquarters in Zurich had organized an excellent event with short distances and succeeded in accommodating within the space of two days a programme packed with leading speakers from all over the world.

Tom Stratton, President, and *David Painter*, Vice President International Sales, found warm words of welcome at the beginning of the symposium. A visibly moved *Dr Pedro Peña* (Madrid) greeted the participants in all the languages represented. *Dr Philippe Khayat* (Paris) started off the scientific part of the symposium with "Peri-implantitis – do the implant's surface and design play a role?" An extensive PubMed search found almost as many studies that suggested no effect as there were studies that did. The presentation by *Dr Joan Pi Urgell* (Barcelona) was devoted to alternative treatment options for the atrophic maxilla. He reminded the audience to take enough time to carefully check the status of the tissue regeneration in atrophic conditions. Especially the psychological effect of fixed rehabilitations was immense, as a survey of international studies had shown. *Dr Jan Willem Vaartjes* (Amsterdam) initiated the next lecture block in which *Dr John Cavallaro* (New York) let his audience participate in his "Legacy experience". The surface of the Legacy implant, he reported, had remained unchanged for 23 years. A five-year study on that implant showed stable bone levels at the implant shoulder once the remodeling processes were completed. *Dr Ateş Parlar* (Ankara) discussed complica-

tions in soft-tissue management. His presentation gave an extensive overview of the biological functions in the healing process of soft-tissue structures and, consequently, techniques and tricks for exploiting the natural healing processes and avoiding the risks of peri-implantitis. At the end of the first day, the award winner among the presenters at the symposium received his prize: *Dr Santiago Fernández* demonstrated the immediate restoration of a periodontally compromised and severely atrophied situation on eight Legacy mini-implants.

Early the next morning, *Dr Achim Schmidt* (Munich) was first out and discussed the highly topical issue of 3D diagnostics in oral implantology, specifically with regard to maxillary interventions. Thanks to ultra-low-dose CBCT, the radiation dose can be reduced enormously, depending on the field of view. The higher cost would be more than offset by efficiency and safety being increased. However, no surgery is without risk, and harnessing the benefits of 3D diagnostics requires extensive training. *Joseph Choukroun* (Nice) gave a lecture on the growth factors concentrates A-PRF and I-PRF he developed. This now makes mesenchymal stem cells available for daily practice. His compatriot *Dr Marc Regrain* (Le Raincy, France) drew on the digital theme of the first lecture and presented the Positdental system, his preferred computer-aided navigation system for immediate post-extraction placement. Eagerly awaited after the break, *Dr Maurice Salama* (Atlanta) presented a multidisciplinary approach in aesthetic implantology. He stressed the importance of teamwork and international collegial exchanges and recommended the Dental XP platform for a mutual learning experience. *Salama's* supportive attitude toward his colleagues was demonstrated in practice in that he shortened his presentation in favour of *Renzo Cassellini* (Los Angeles), whose presentation had run into technical problems the day before, but who now had an opportunity to present after all. *Cassellini's* presentation showed the whole spectrum of modern laboratory services, 3D implant planning and CAD/CAM solutions guided by the principle of aesthetic optimization.

In the afternoon, *Dr Gonçalo Dias* (Lisbon) introduced strategies for predictably successful results in immediate implant placement in the aesthetic zone. *Dr Mario Cappellin* (Pinerolo, Italy) presented his findings related to a fully integrated digital workflow in implant surgery and prosthetics. *Dr Cristiano Caleffi* (Rome) continued the thread by presenting CBCT-assisted treatment for simple as well as highly complex cases using Swish implants. He reported that he could no longer envision his practice without 3D diagnostics due to the significantly increased efficiency in simpler cases and greater safety in complex cases. *Dr Francisco Marques dos Santos* (London) highlighted minimally invasive procedures and atraumatic extraction techniques. He, too, reports not placing any implant without a previous CBCT to facilitate flapless procedures. He also fills the socket with particulate material and places the temporary crown directly, so as to shape the soft tissue. *Dr Markus Lietzau* (Berlin) entered the ring with a provocative presentation on "endodontics versus implantology". Endodontics, he said, had witnessed fascinating developments to the point that even delicate cases with fistulas and severe bone loss can now be treated successfully.

Dr Juan Pi Urgell (top left), one of the founders of the EAO, Renzo Casselini, Swiss dental technician from Los Angeles (top centre), Implant Direct President Tom Stratton (top right), Dr Philippe Khayat (bottom left) and Dr Maurice Salama as a coveted selfie object (bottom right).

Dr Ramón Palomero (Pamplona) is the son of *Pedro Peña's* – sadly deceased – surgical and implantological mentor, whom *Palomero* reminisced about in warm words. Together with his laboratory sidekick, *Iñigo Casares*, *Palomero* presented the ideal form of teamwork between dentists and dental technicians and the jointly developed digital workflow, from function to final soft-tissue aesthetics. The patient, previously partially edentulous, can now once again enjoy the juicy steaks his homeland produces. In summary, everyone stressed the great emphasis they were placing on the diagnostic and planning phases. The densely structured symposium concluded in an unforgettable gala dinner at the Finca Son Termens overlooking the bay of Palma.

STE

Bego's IMCC 2015 in Bremen attracted more than 600 participants

Bego stands for togetherness

This year's "Implantology meets CAD/CAM" congress – IMCC for short – by Bego featured around 600 participants, 16 top-class speakers and two Varseo 3D printing systems as major prizes. The focus of the event was – as usual – on the interdisciplinary exchange between participants and with the Bego experts. Many IMCC participants had already traveled to Bremen for the Bego expert meeting the day before the main congress. The focus of the entire event was Bego's motto: "Together!" – a motto that characterizes the company and its activities very well and a motto that all Bego employees not only know but live.

The congress was opened on Saturday by *Christoph Weiss*, managing partner of the Bego group. Directly following his introductory message, he delivered a presentation entitled "Together!". Current developments in the dental industry and corporate values that are of great importance for any successful economic activity were the focus of his presentation. "Everything we do, whether as dental technicians, as dentists or as implantologists ultimately comes down to what we do for our patients and how we can provide them with high-quality products and services", said *Weiss*.

Christoph Weiss holding his presentation "Together!".

3D printing had not only been the topic of the Bego expert meeting the day before but also the topic of a lecture by *Professor Constantin von See* of the Danube Private University (Krems, Austria) on "Revolution or Evolution? 3D printing in the dental field" before an audience who had travelled to Bremen from all over Germany, the Netherlands and Austria. The established dentists, oral implantologists and dental technicians were joined this year by a group of newcomers to the profession. A number of young and dedicated apprentices and master dental technician students as well as students of dentistry and dental technology availed themselves of the opportunity to attend at reduced rates.

The presentations continued in parallel sessions. The 8th Bego Medical User Meeting centred on topics within dental technology as usual. The 6th Bremen Implantology Day offered equally interesting topics for dentists and oral implantologists. For example, *Professor Heiner Weber* (Tübingen) spoke about "Precision in implant dentistry – what is behind it?!" and presented impressive cases from among his own cases. Here *Weber* was not shy to admit to clinical failures. After all, even if you plan, design and perform everything to the best of your knowledge and belief, you can still fail in a specific clinical case. His regret at the outcome of this case was still tangible, even if his next case had been treated successfully according to the present state of the art.

Dr Susanna Zentai (Cologne) spoke on "Advertising and public relations in the dental practice – limitations and possibilities". She listed the types of advertising available to dentists, pointing out borderline cases and forbidden zones – trying to comply with all the rules often is the equivalent of walking through a minefield. Her professional advice: Get help in good time.

Professor Ina Nitschke (Leipzig/Zürich) impressed the audience with her presentation on "Elder patients: implants and more from A to Z". She recommended the treatment of elderly patients to the audience's special attention and proposed reviewing the entire dental office and its procedures in this light. For example, one might ponder whether the office is easy to reach for the elderly and whether

The speakers at the IMCC Congress 2015.

there might not be one or another physical or conceptual stumbling block that could be ironed out. Communication with the elderly requires a lot of tact, not only when speaking with the individual patient but also when communicating with persons in his or her environment. *Professor Thomas Ratajczak* (Sindelfingen) spoke on "Corruption in health care", pointing out the hazard to the dentist in the context of the upcoming anti-corruption law. He proved impressively that it was very easy to make mistakes, but there was no getting away once a prosecutor had an eye on a physician or dentist. Both these presentations were of special interest to the participants of the IMCC, so *Nitschke* and *Ratajczak* were showered with questions from the audience after their presentations and beyond.

The overarching and comprehensive case report by *Dr Süleyman Selcuk* (Hamburg) and *MDT Olaf van Iperen* (Wachtberg) was equally well received by the dentists. Their presentation was entitled "Restorations with the MultiPlus system – from the point of view of the dentist and the dental technician". *Dr Oliver Zernial* (Kiel) concluded the panel of the Bremen Implantology Day with his presentation on "Marketing in oral implantology: scorned, planned, implemented?".

The Bego Medical User Meeting started with a panel discussion with users of the Bego Varseo 3D printing system reporting on "Practical experience in the dental laboratory". In a lively discussion, *Oliver Hüsken*, *MDT Jörg Bressem*, *MDT Thomas Lenz* and *Nicolas Rebeschke* reported on the use of the 3D printer in the lab. The panel was led by *MDT Thomas Riehl* of Bego and by *Professor Constantin von See*, who had participated in the development of high-performance plastics for the Varseo. *Josef Schweiger* of the University of Munich took a peek into the future with his presentation "Recent new procedures and materials in dental technology". *Carsten Fischer* (Frankfurt) and *MDT Andreas Leimbach* (Ulm) joined in with their presentations on the topics of "Looking for perfection! The importance of custom CAD/CAM abutments in modern implant prosthetics" and "Precision-crafted double crowns using the SLM process". *Professor Florian Beuer* of the Charité Berlin spoke about "Ceramics on implants – myths and truths". *MDT Thomas Kwiedor* of Bego then concluded the user meeting with a look back on 2015 and a look forward on 2016. *Christoph Weiss* announced the five young winners of vouchers for the Bego Training Centre and the Varseo 3D printers.

That night, the participants finalized the successful event at the Congress Center Bremen. "Of course we are particularly pleased with the large number of participants. Even more important is the positive feedback we received from participants who appreciated the quality and atmosphere of the event", said *Christoph Weiss* at the conclusion of the event.

More information

www.bego.com/imcc

Dentaurum Implants invited the world to peaceful Lübeck for an anatomical-specimen course

Graduating in implantology

Exercising its typical Swabian restraint, without making much fuss about it, Dentaurum Implants had launched a series of conferences and courses during the past few years that introduce dental practitioners to established dental implantology, one step at a time. The penultimate module of the "Implantology step by step" series is always an anatomical-specimen course entitled "Anatomy and surgical techniques", where participants refresh their theoretical knowledge of the anatomical structures of the skull and especially the jaw and the oral cavity before practicing on preparations the procedures they will soon perform on patients.

The reward for all their troubles: Dr Weyers, Dr Schulz and Professor Hakim as well as Thorsten Winkler of Dentaurum Implants (centre back) are happy with the successful graduates.

Dr Daniel Schulz from nearby Henstedt-Ulzburg welcomed the participants to the University of Lübeck. By this time, at the 7th module of the series, participants will have bonded as a cohesive team. The training course is in a sense a graduate examination in implantology – the next step is individual supervision with the dentist's own patients. *Dr Imke Weyers* of the University of Lübeck presented the anatomical basis, from bony structures and muscular tension to sensory and motor pathways, whose intricacy should never be underestimated.

After this theoretical introduction, the next step was the dissection room. Extensive demonstrations on wet human specimens always instill a feeling of respect and awe before these difficult and complex structures, which oral implantologists operate on – minimally, but still invasively. The alveolar nerve, which in anatomical atlases is often shown as following a more central course, in fact extends more laterally in most specimens. Because of the positions of the palatal blood vessels, grafts should be harvested as far away as possible from the periphery, that is, from the gingival margin. Participants were of course particularly interested in the location of risk points for bleeding. The close proximity of the sinus as we treat the maxilla becomes once again abundantly clear when working with the human specimens. In the atrophic jaw, the desire to place implants in prosthetically ideal positions sometimes collides with constraints associated with the proximity to critical anatomical structures and pathways.

The next presentation was that by *Dr Daniel Schulz* on tissue healing. Appropriate surgical techniques can exert a decisive influence on how to allow the natural healing processes to develop undisturbed. Following an excursion into the nature and use of various bone substitutes, *Schulz* demonstrated various modern augmentation techniques, including the shell technique according to *Khoury,* tension-free suturing techniques and sinus-lift techniques – human specimens offer ideal conditions for training, especially for the latter. *Schulz* illustrated his presentation with impressive clinical images and videos.

Concentrated work and an avid exchange of thoughts in the dissecting room.

Professor Samer Hakim holds a senior position at the Department for Oral and Maxillofacial Surgery at the University of Lübeck. He thanked the audience for the (well-deserved) congratulations he received on occasion of his recent nomination as professor before proceeding to demonstrating simple implant placement procedures and the specifics of internal and external sinus-floor elevation, subsequently to be duplicated by participants on the anatomic specimens. *Hakim* covers accidental perforations of the Schneiderian membrane with a membrane that, thanks to pronounced vascularization, adheres to it directly. He urged participants always to take patients off blood-thinning medications before sinus lifts, in consultation with the attending cardiologist, because bleeding into the maxillary sinus cannot be controlled and might develop in a life-threatening manner.

During the practical part of the course, *Thorsten Winkler*, medical-device consultant at Dentaurum Implants, worked hard to meet participants' requests for particular instruments, devices, materials or implant types that Dentaurum Implants, mectron and Geistlich Biomaterials had generously provided. The practical exercises showed how far clinical anatomical structures and different oral situations can deviate from what we learn in textbooks, forcing dentists to switch techniques or materials intraoperatively. Thanks to dedicated assistance from *Dr Daniel Schulz*, *Professor Samer Hakim*, *Thorsten Winkler* and *Tobias Grosse*, manager of the Implantology Division at Dentaurum Implants (who together represent more than 30 years of market and technology experience), all participants successfully completed the required implantation as well as one internal and one external sinus lift.

Everyone worked with the utmost concentration, and the hall was filled with a very amicable and helpful spirit. "The participants of this course series have grown to form a close-knit community", as *Tobias Grosse* and *Thorsten Winkler* were able to report to their satisfaction. "Many of them will later meet again in study clubs or at *Dr Daniel Schulz*' events and discuss their practical implantological experience and problem cases." To be able to present more in-depth structured knowledge, the Training Day concept was supplemented in 2014 by the Step by Step course series consisting of eight coordinated courses. Dentaurum Implants has already held more than seven continuing professional development (CPD) events in collaboration with the University of Lübeck. This concept and the associated course series have been enthusiastically received by more than 1,100 participants this year alone. *STE*

More information on the training days and course series for 2016

www.dentaurum-implants.de

bredent medical at the EAO congress in Stockholm

Leading in immediate restorations

bredent medical presented its new concept at this year's EAO congress in Stockholm (24–26 September). The concept and communication contents were presented in a self-confident manner, and the number of interested visitors was enormous. There was also tremendous interest in the therapies of immediate treatment and restorations.

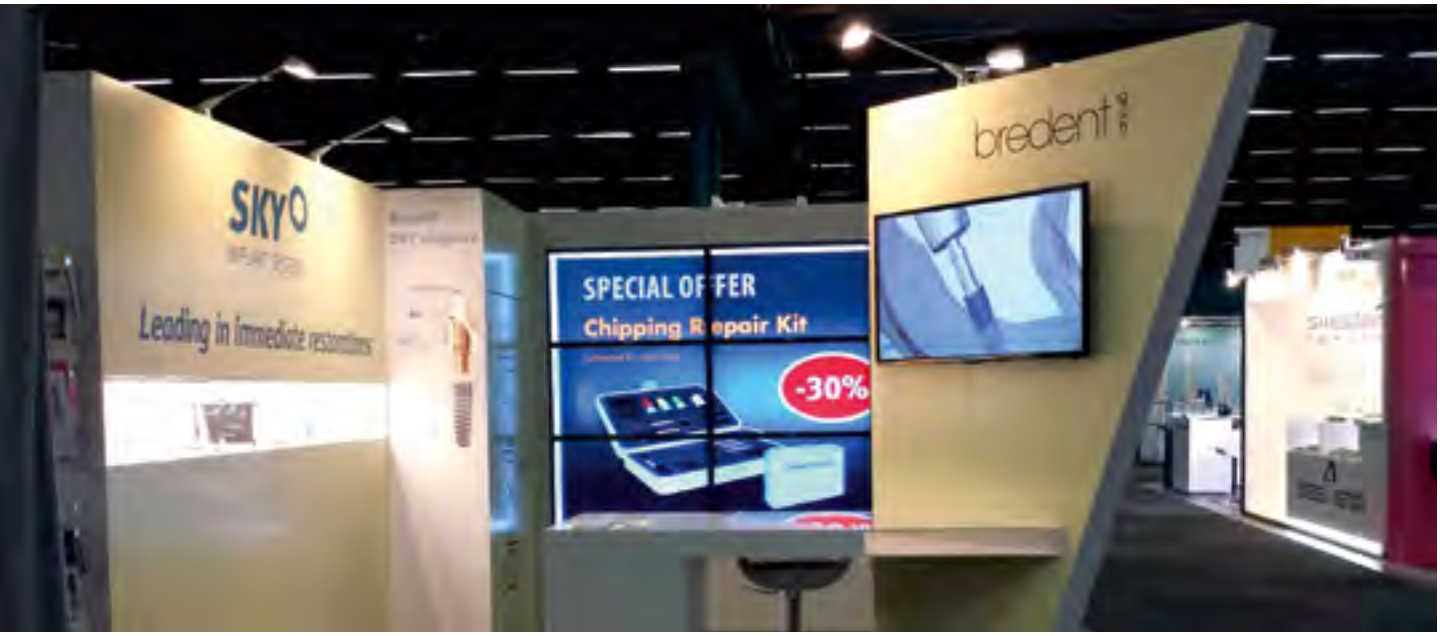
"Leading in immediate restorations" was the core message presented on the exhibition wall in a prominent way. bredent medical has a competitive edge in the field of immediate restorations. SKY fast & fixed for potentially edentulous jaws and BioHPP SKY elegance for patients with single-tooth gaps are well-known immediate-restoration treatment modes that have been successfully on numerous patients. The bredent medical solution differs from that of its competitors in that it involves materials with physiological properties (BioHPP, a PEEK-based, ceramically reinforced high-performance polymer) that facilitate prosthetic restorations with excellent load stability – using perfectly matched products and systems for implant dentistry and prosthetics from a single source, clinically proven and scientifically validated.

Six new poster presentations by bredent medical demonstrated immediate restorations and physiological prosthetics. They included positive results of a three-year study on implant-supported BioHPP restorations and study results from the University of Graz showing very stable bone and soft-tissue conditions following immediate restoration with the whiteSKY implant and a CAD/CAM crown. *Professor Maté-Sánchez de Val's* poster presentation on the excellent biocompatibility of BioHPP received the bursary grant award. More details and other posters can be found on the bredent medical website (www.bredent-medical.com).

Next year, bredent medical will be at the 25th Annual Scientific Meeting of the EAO in Paris to present their new products and innovations.

More information

bredent medical GmbH & Co.KG
www.bredent-medical.com



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Thommen Medical course in Tegernsee, Germany

Challenges in modern implantology – aesthetic and functional restoration

It is the responsibility of all dentists to keep learning and to expand the range of their qualifications and skills by following the latest developments in the dental field and by participating in training courses. Bartłomiej Szczodry, DDS, had the opportunity to participate in Dr Siegfried Marquardt's course "Challenges in modern implantology – aesthetic and functional restoration" at his clinic in Tegernsee, Germany. This is his report.

I was one of a group of highly motivated dentists from Poland to participate. The low number of participants promoted an uninhibited exchange of views, which made the training very effective and ensured we received answers to all of those questions we were encouraged to ask.

The training programme was comprehensive and covered two full days of training, split between theory and practice. On the first day of the course, we learned more about the techniques of implant placement in the aesthetic zone and about soft-tissue management near planned prosthetic restorations. *Dr Marquardt* shared with us his expansive expertise and knowledge regarding the technique of uncovering implants and taking precise impressions to produce custom abutments. The participants then had the opportunity to apply their newly gained knowledge in practical workshops.

The second day touched on issues concerning prosthetic rehabilitation and functional restoration in the broadest sense:

- Functional and anatomic aspects
- Communication with technicians
- Natural head position

I was given the opportunity to acquaint myself with the behavioural protocol applied by *Dr Marquardt* in his day-to-day practice. His attention to detail, his method of analyzing occlusal relations and his holistic approach to patients all made a deep impression on me.

These training sessions and courses provide new knowledge and boost qualifications – and they are an excellent opportunity for discussions and for exchanging views with other participants.

Bartłomiej Szczodry, DDS

The participants of the Thommen Medical course on challenges in modern implantology with Dr Siegfried Marquardt (2nd from left), who appreciated the highly motivated and disciplined group.

Dr Siegfried Marquardt teaching.

Photo: © Bern Tourismus

5th International Zeramex Congress, Bern, 16 January 2016

"Myths and facts – Zeramex in everyday practice"

Much has been reported, written and retold about ceramic implants. But what is myth and what are the hard facts? The answers to these and many other current issues in the field of ceramic implants will be presented at the 5th International Zeramex Congress in Bern on 16 January 2016, to which Dentalpoint AG invites interested visitors.

Top-notch speakers such as *Professor Dieter Bosshardt*, *Dr Urs Brodbeck*, *Dr Kai Höckl*, *Professor Siegfried Jank*, *MDT Vanik Kaufmann* and *Dr Michael Tegtmeier* will report on their experience with ceramic implants in daily practice. The focus of the presentations will be on the new 100 per cent metal-free, two-piece screw-retained Zeramex P6 implant. The first clinical applications will be presented as well as the most recent study results.

On the eve of the congress, visitors will have the opportunity to meet at the Ceramex Flying dinner in the special ambience of the old industrial complex "Dampfzentrale" right on the river Aare.

Zirconia Meeting at the University of Bern

At the Zirconia Meeting 2016 of the University of Bern, participants will learn more about the zirconia technology in oral implantology. Held on Friday, January 15, the meeting will be led by *Professors Daniel Buser* and *Urs Brägger*. Speakers from the universities of Bern, Geneva and Freiburg will report on preclinical and clinical experience with zirconia implants and present the prosthetic aspects of zirconia within the broad field of implant prosthetics. For more information on this event, visit the website of the University of Bern at www.ccde.ch.

More information and registration

Dentalpoint AG
www.zra.mx/Kongress2016

Interview with Professor Myron Nevins, Chairman of Osteology Monaco 2016

Answers to open questions – for better treatment of patients

Professor Myron Nevins, USA, is one of the Chairmen of Osteology Monaco 2016. In an interview he explained what he considers the most important topics to be addressed in the scientific programme, and why dentists should visit the international symposium in April 2016.

Professor Myron Nevins

Professor Nevins, the scientific programme of the 2016 Osteology Symposium with its motto "Learning the 'WHY' and the 'HOW' in regenerative therapy" addresses the many open questions that dentists still face in everyday work in the practice. Which are the most important questions in oral regeneration to be discussed in Monaco?

All regenerative procedures require surgical skills, knowledge of the appropriate steps and the use of biomaterials that have proven to be successful. It is important that clinicians and practitioners not only understand the basics, but also hear about the latest developments and techniques in oral regeneration. With the International Osteology Symposium, we aim to provide this information, as well as to answer as many open questions as possible.

The programme covers a broad range of topics in oral regeneration. Which of them are especially important to you?

I would like to point out the two interactive sessions we have organized for Osteology Monaco. On Friday, the focus will be on decision-making after tooth extraction, the second session on Saturday is about treatment of demanding gingival recessions – two very important topics for practitioners. We have invited renowned experts to discuss these topics and provide answers to questions regarding indications, surgical techniques, tips and tricks. Questions can be submitted in advance, but the audience is also welcome to ask during the session.

One topic of the scientific programme is "teeth for a lifetime". What does this involve?

Keeping one's teeth a life long means never becoming edentulous. This can be accomplished predictably with the patients' natural dentition or by supplementing with implants. But in this session we will focus on the preservation of the patient's own teeth, i.e. how we can preserve periodontally compromised teeth, how regenerative therapies improve tooth prognosis, as well as the advances and limitations in treating furcation defects.

An extensive poster exhibition and a research forum will present the latest results in basic and clinical research. How important are these results from research for the practitioner?

It is necessary to first perform pre-clinical research that can then be translated into clinical research to then be applied in practice for the patient's benefit. This process takes a significant period of time and has to clear regulatory hurdles. At the Osteology Symposium in Monaco a platform is provided for researchers to present and discuss their results with other researchers on the one hand, but also to encourage the exchange between scientists and practitioners on the other, which is important for both groups working hand-in-hand towards the same goal: to provide optimal treatment for patients.

If your colleagues ask you why they should attend Osteology Monaco, what do you tell them?

Dentists should attend Osteology Monaco to help provide better treatment for their patients by learning about the latest developments in oral regeneration, through discussions and interaction with their colleagues.

Thank you very much for this interview, Professor Nevins.

Dr Heike Fania

3rd MIS Global Conference, Barcelona, 26–29 May 2016

Call for young clinicians' clinical cases

The 3rd MIS Global Conference: 360° Implantology will be held in Barcelona from 26 to 29 May 2016. The conference has been carefully designed to expand knowledge and introduce real innovation under the title of "VConcept: Set the volume of bone and soft tissue" and will include lectures, clinical case presentations and hands-on workshops.

The main theme of the conference, the VConcept, will be presented by experienced professionals, who will provide a broad range of background information on current evidence-based therapeutic trends in implant dentistry. The speakers will present the most recent treatment modalities associated with the MIS approach to "making it simple", mainly with the V3 implant system.

MIS has also announced a clinical case/technique presentation opportunity for young clinicians (the main author should be no more than 40 years old), focusing on challenging situations in oral implantology. The top-ranked cases will be presented on the first day of the conference. The best of the case presentations will receive awards as follows:

- First prize: Invitation to a course with *Dr Eric Van Dooren*, including flight and accommodation.
- Second prize: Invitation to a course with *Professor Stefen Koubi*, including flight and accommodation.
- Third prize: Invitation to a course at MIS Headquarters, including flight and accommodation, or a voucher for MIS products worth USD 1,000.

All cases will be reviewed and pre-approved by the scientific committee of the MIS Global Conference. Interested dentists are requested to submit their case documentations by 15 February 2016 (michal@mis-implants.com). All cases must be in English.

More information and registration

MIS Implants Technologies Ltd.
www.mis-implants.com

Interview with Dr Wolfgang Bolz and Professor Hannes Wachtel – part 2

"Patients voice a desire for fixed teeth"

After more than 30 years of clinical practice and teaching experience in the fields of general dentistry, periodontics and oral implantology, Dr Wolfgang Bolz and Professor Hannes Wachtel can draw on an immense treasure of in-depth knowledge in their clinic in Munich (implaneo). In EDI Journal 3/2015, Nobel Biocare DACH representatives Zorica Markovic (Marketing Communications and PR) and Thomas Stahl (Head of Marketing and Products) had spoken about the technical aspects of the All-on-4 concept with these two exceptional dentists. Both stressed the importance of patient consultations and patient management before, during and after treatment, which are at least as important for success as clinical and technical expertise.

You have treated nearly 800 patients with All-on-4 in only seven years. How do you explain the fact that there are so many patients with pertinent indications just here in the Munich area?

Wachtel: This influx of potential patients has surprised us as well. But we know from epidemiological studies such as the DMS III and IV oral health studies and the SHIP study that there is a great need for this kind of care, especially among the older population. Just look around to see how many older people are wearing poorly functioning conventional removable dentures; and when you ask them, they will often voice a desire for fixed teeth. This is why we not only implemented All-on-4 in our own clinic, but we also want to arouse our fellow dentists' enthusiasm for this treatment method. We therefore offer special training courses. All-on-4 is not something for which you write a referral, it is something that you do in your own practice and with your own team.

Bolz: It is important to get information on this treatment modality to the patient. To this end we employ special treatment coordinators who accompany the patient, from the initial consultation to the recall management and after treatment. These highly trained dental assistants can answer all the questions a patient may have. We therefore get a "conversion rate" from initial inquiry to the first dental appointment of 45 per cent, and still 40 per cent to the actual surgery. We provide patient information through the Internet and radio advertising – an external call centre is handling some 2,000 calls a month just for us – and information meetings that between 30 and 50 patients attend every month. All of this tells you something about the pent-up demand per se. We have increased our caseload almost tenfold within three years, without any aggressive marketing.

Wachtel: Many colleagues still have an aversion to the word "marketing". But for us it means that we have a vision: All patients who are already edentulous or soon will be should be able to benefit from this concept and the ensuing great improvements in their quality of life. These patients should be made aware of the fact that fixed dentures can be provided in a day.

So what is your procedure once the patient comes to your office for treatment?

Wachtel: We actually employ three anaesthesiologists. The older the patient, the greater the chance of multi-morbidity, and the more important it is to have a well-trained anaesthesiologist on hand. In addition, we have special dental hygienists who facilitate frequent recalls. If our patients show up for a recall three times a year, they receive a special six-year warranty.

How do you approach patients during your consultations?

Bolz: We distinguish between three typical clinical situations in which patients tend to come to us. First, there are fully edentulous patients who essentially cope with their removable dentures but

Professor Hannes Wachtel

Dr Wolfgang Bolz

experience deteriorating function due to advanced jaw atrophy. Here you can use a small number of implants – possibly a single one in the mandible (!) – to improve the situation and restore function and the patient's quality of life. But this means that the patient will still have a removable denture.

Secondly, there are fully edentulous patients who cannot cope with their removable dentures and hope to receive fixed teeth again. In these cases, fixed, implant-supported dentures are indicated.

Thirdly, there are those patients who have fixed or removable dentures that are non-functional, with more or less compromised abutments. This situation develops slowly for patients over time. Often fear, shame, disappointment, lost confidence, the idea of lengthy and intensive treatments play an important role. It is in these very cases that rapidly provided fixed restorations without augmentation and with low morbidity are so enormously beneficial. Three-dimensional planning, planning software as NobelClinician and special implants as well as zygomatic implants help resolve these situations, hopeless as they might appear at the beginning.

Wachtel: There are individual counselling protocols for each of these cases.

What is the procedure that the treatment coordinators guide the patients through?

Bolz: Treatment coordinator 1 will be specifically in charge of the initial consultation, present the concept and provide patient guidance, depending on the individual situation. If the patient is able to imagine this type of rehabilitation for him- or herself, an examination by a dentist and an assistant will follow. After this examination, treatment coordinator 2 comes in and provides additional information to the patient, including costs and health-insurance aspects. Psychology plays an important role in this phase – any uncertainties or fears must be addressed at this point. Not until the patient has completed all the preparations and is fully satisfied with the information will an appointment be made and the treatment planned and prepared.

The number of edentulous patients is bound to decrease due to significantly improved prevention and better nutrition – may your concept not be rendered obsolete over the long run?

Wachtel: In the Western world – to say nothing about other regions – the need for restorations will actually increase, contrary to what some statistics say, simply because statisticians tend to be oblivious to the effect of increasing longevity in their studies. Rising life expectancy keeps catching up with our, admittedly significantly improved, methods of tooth conservation.

Bolz: Periodontal diseases are on the increase, but only two per cent of the affected patients present for systematic periodontal treatment. One would anticipate that the others will end up being edentulous at one point. And: Half of our All-on-4 patients today are under 60 years old.

Thank you very much for this interview.

Zorica Markovic, Thomas Stahl

Course on All-on-4

The patient journey to fixed teeth in one day
The severely atrophic maxilla restored with zygomatic implants

Two-day course (in English)
4–5 March 2016, 8:00-17:00
fortbildung@nobelbiocare.com · www.implaneo.com

Geistlich celebrated at the EAO

1,000th scientific publication

There are now no fewer than 1,000 scientific publications involving biomaterials from Geistlich. One reason to say "thank you" at the EAO Stockholm.

At the EAO Stockholm, from 24 to 26 September 2015, Geistlich Biomaterials celebrated the 1,000th scientific publication that included their products – a major event for a company that attaches great importance to science and research. So the 1,000th scientific publication was commended during the Geistlich symposium on Thursday morning. Symbolic prizes were awarded for various particularly outstanding studies.

"And the winner is ..."

- The prize for the 1,000th study itself – focusing on sinus-floor elevation – was awarded to *Professor Friedrich Neukam* (Germany) on behalf of the team of authors.
- A group from the University of Milan was honoured for its 17-year follow-up to a case of peri-implantitis. *Dr Pier Paolo Poli* accepted the prize.
- Switzerland is home to the randomized clinical study with the longest follow-up (12–14 years). The accolade went to *Professors Christoph Hämmerle* and *Ronald Jung*.
- *Professors Jan Lindhe* and *Tord Berglundh* (Sweden) were jointly awarded the prize for having written the most-quoted study involving biomaterials from Geistlich.

More prizes will follow in 2016 – the anniversary year of Geistlich Bio-Oss and Geistlich Bio-Gide. Geistlich donates 1,000 Swiss francs to the organization Doctors of the World for every study honoured.

Mario Mucha, Geistlich COO, also extended his gratitude at the EAO to those who use Geistlich products in their daily work. To date, more than ten million patients have been treated with biomaterials from Geistlich.

More information

Geistlich Pharma AG
www.geistlich-biomaterials.com

Team Finland Health at Medica

Finnish SMEs presented their innovations

Team Finland Health attended the November 2015 Medica fair in Düsseldorf together with over a dozen start-ups and small and medium enterprises representing the Finnish healthcare sector.

At Medica, the Finnish team consisted of sixteen interesting start-ups and SMEs with proven business concepts that want to take the next step on the road to internationalization. "The companies provide solutions for healthcare professionals for safer and more efficient health care", said *Heidi Pekkala*, Programme Manager, Team Finland Health. The companies represent the wide spectrum of the Finnish health sector's expertise, from medical technology to software and services. They provide solutions, for example, for patient security, air decontamination and laboratory automation.

Its expertise in the health sector has become one of the key strengths of Finland. Over the past years, the country's health technology exports have grown twice as fast as the global growth rate. Health technology already makes up for almost half of all Finland's high-tech exports, and the country is one of the few that export more medical technology than they import. Finland has had much experience in information and communications technology, and many ICT professionals have found a way to combine their digital and mobile knowledge with health technology.

Straumann and Sirona collaborate to offer dental practices and labs a broader range of CAD/CAM prosthetic options

Agreements signed

Straumann and Sirona Dental Systems have signed a collaboration agreement that enables dental practices to produce individualized implant prosthetics chairside using Straumann Variobases supported by Sirona's Cerec system. Sirona lab customers will be able to use Straumann's centralized milling option as a "trusted partner" in the Sirona inLab workflow.

Straumann is a manufacturer of dental implants for which it offers a comprehensive range of abutments to connect the implant with the prosthetic crown, bridge or denture. The company also offers high-precision CAD/CAM prosthetics that are produced at its milling centers and can be ordered through its open software platform. Cerec is a chairside CAD/CAM system offering solutions for restorations, orthodontics and implantology. In the latter category, Cerec has introduced innovative workflows allowing for the chairside production of customized implant abutments and crowns.

In recent years, there has been an increase in the popularity of simple titanium-bonding-base abutments (TiBases). Straumann has responded to this trend by introducing its Variobase family of abutments with original connections, which now includes a specially designed Variobase for Cerec users. Sirona's Cerec system enables dentists and dental labs to produce a variety of cost-effective TiBase CAD/CAM prosthetics for implants chairside.

Marco Gadola, CEO of Straumann commented: "Our aim is to ensure that patients with Straumann implants also receive prosthetics with Straumann original connections, which are produced to our specifications, fit perfectly and are covered by our warranty. We are pleased that we can now offer Cerec users this option with Sirona's support as well as the possibility for Sirona inLab customers to conveniently order high-end prosthetics from our milling centers in Germany, the US, Japan and Brazil." Straumann Variobases for Cerec are available in Europe, North America, Australia and New Zealand, with other countries to follow pending regulatory approvals. In the near future, Straumann expects to launch a new version with an optimized emergence profile which is compatible with existing material blocks used in the Cerec system. The Straumann Variobase will be fully supported by the Cerec workflow when the software update has been completed early in 2016.

In a second agreement, the companies have settled mutual patent disputes, allowing Sirona to continue offering its own existing TiBase design for Straumann implants and permitting Straumann to use Sirona's mirror anatomy software functionality for designing prosthetic teeth in its CAD/CAM Cares Visual software.

More information

Straumann Holding AG · www.straumann.com

OsseoSpeed Profile EV implant by Dentsply Implants

Follow nature's contour

Situations with sloped ridges have traditionally meant a compromise between buccal and lingual marginal bone preservation and aesthetics. With the introduction of the OsseoSpeed Profile EV implant, this clinical challenge is solved. The specially shaped implant makes it possible to achieve 360° bone preservation around the implant.

The hopes and dreams of the patients are not primarily to get an implant. Rather, the treatment supports a greater need – the ability to dare to smile again with confidence, to socialize naturally with family and friends and, quite simply, to enhance the quality of life. Since the first implants were developed 50 years ago, this innovation has enriched the lives of people worldwide. And the development is constantly moving forward, with new solutions that improve people's wellbeing.

At the same time, there are cases and situations where there are greater challenges to satisfy both aesthetics and function. One such situation is when you have patients with sloped ridges. The occurrence is common, and it has been a challenge to find aesthetically pleasing and long-term functional solutions for these patients.

The OsseoSpeed Profile EV implants provide an opportunity to efficiently create aesthetic, functional and patient-friendly solutions.

There are several reasons for this. It is a clinical reality that the bone crest resorbs after tooth extraction or tooth loss. It is also well known that remodeling has been shown to be more pronounced on the buccal side than on the lingual side, often resulting in a sloped alveolar ridge. This condition occurs even if a standard implant is immediately placed in the extraction socket.

There has previously been no optimal solution for treating patients in sloped ridge situations. When a standard implant is placed level with the lingual bone, the implant neck is exposed and the aesthetic result is compromised on the buccal side. On the other hand, when a standard implant is positioned level with the buccal marginal bone, unsupported lingual marginal bone will be lost and the mesial and distal marginal bone levels as well as soft tissue height are compromised.

Today, these challenges are met with an innovative implant concept, developed to follow the alveolar ridge and designed to help reduce the need for bone augmentation procedures. The OsseoSpeed Profile EV implant, part of the Astra Tech Implant System EV from Dentsply Implants, provides an opportunity to efficiently create aesthetic, functional and patient-friendly solutions.

More information

Dentsply Implants
www.dentsplyimplants.com
www.jointheev.com

The product information produced here editorially is based on information provided by the manufacturer and has not been checked for accuracy by the editor.

Cito mini by Dentaurum Implants

3 steps to success

Dentaurum Implants expands its range of implantological products with the new Cito mini line. It is a system of one-piece implants that allows minimally invasive insertion in only three steps. As many implants can be loaded immediately, patients can enjoy their new quality of life a lot sooner. The one-piece Cito mini ball head implants are available in three diameters (1.8/2.2/2.5 mm) and two lengths (11.0/13.0 mm).

The line consists of six implants. The instrument set contains three drills that facilitate atraumatic preparation of the implant bed in a manner specially tailored to bone quality. Users can regulate the drilling depth individually to achieve maximum primary stability. Cito mini implants feature the scientifically proven self-tapping thread geometry known from the tioLogic ST implant system. The cylindrical-conical geometry of the implants ensures perfect load distribution and long-term stabilization of hybrid prosthesis.

Transgingival insertion

Cito mini implants allow transgingival and minimally invasive insertion. In many cases, depending on the initial situation, augmentation procedures can be avoided with these one-piece ball head implants. This will significantly reduce patient stress, which will convince more patients to choose this treatment. As many of these implants can be loaded immediately, patients can enjoy their new quality of life a lot sooner. Even older patients can now benefit from the advantages of implant treatment. It is also an affordable alternative to conventional implant therapy.

Pick-up concept for secure handling

All Cito mini drills and components are stored in a space-saving and ergonomic tray. The pick-up concept facilitates efficient and secure handling. With Cito mini, clinicians can decide freely which prosthetic steps to carry out at chairside and which in the laboratory.

More information

Dentaurum Implants GmbH · Turnstraße 31 · 75228 Ispringen · Germany
info@dentaurum-implants.de · www.dentaurum-implants.de

Piezomed by W&H

Maximum precision for surgical applications

In surgical procedures, maximum human and mechanical precision is of the utmost importance. There is a high demand for reliable solutions offering support to surgeons performing even the most complex tasks. Minimally invasive procedures involving minimum patient pain and short recovery periods are now the focus of product development in the field of oral and maxillofacial surgery. W&H has been exploring piezo technology for many years – even if this still appears to be a relatively new field of technological research given the company's 125-year history.

The latest result of the successful W&H development efforts in the field of oral surgery is the new Piezomed piezosurgical device. Based on state-of-the-art piezo technology, the device employs high-frequency microvibrations. Thanks to close cooperation with internationally renowned users, W&H has been able to refine the existing technology to the point where Piezomed is considerably more precise than all other systems previously available on the market.

The focus with the innovative Piezomed surgical device is on the rapid, precise processing and ablation of bone substance. Thanks to the patented automatic instrument detection, safety takes on a whole new meaning for the user.

To optimally accommodate the broad spectrum of tasks performed by surgeons, Piezomed is also equipped with state-of-the-art technology and a range of 24 different working tips. The teeth on the bone saws, specially developed by W&H, give users excellent cutting performance. Bone blocks can be harvested with minimal bone loss, optimally complementing the minimally invasive process.

Another technological highlight is the patented automatic instrument detection system, which selects the correct power class when the instrument is inserted. The risk of overloading the instrument is significantly reduced, meaning that the user can concentrate fully on the patient and the surgical procedure.

Maximum precision in surgical applications and atraumatic treatment are just a few of the advantages of this state-of-the-art piezo-drive technology. Piezomed allows W&H to satisfy the varied requirements of users and patients alike and to make a considerable contribution to minimally invasive treatments.

More information

W&H Dentalwerk Bürmoos GmbH
Ignaz-Glaser-Straße 53
5111 Bürmoos
Austria
office@wh.com · www.wh.com

iSy Implant system by Camlog

Attractive implant sets offer even more options

iSy is the inexpensive quality system by Camlog. It is slim and flexible and convincingly combines ease of handling, an efficient workflow and economical prices. Now Camlog has extended the iSy Implant system in response to requests by many users who wanted to use the iSy Implants in even more cases.

The iSy Implant system now also offers short (7.3 mm) implants, screw versions of the Esthomic gingiva formers and additional prosthetic components.

Short (7.3 mm) iSy Implants have been added to the product range. They are suitable for cases with limited bone volume and extend the indication spectrum of the system. Other additions to the line include the Esthomic gingiva formers, which can be screwed directly into the implant, and the option of impression-taking at the implant level using open and closed impression posts, plus numerous prosthetic components and instruments.

The new iSy Esthomic abutments allow aesthetically cemented reconstructions. Their emergence profile is congruent in shape with the Esthomic gingiva former and impression posts in open- and closed-tray procedures. The manufacturer has also released the iSy Implant base for final restorations. These extensions give the treatment team even more options whilst staying true to the original iSy concept and its benefits of simplicity and efficiency.

The concept of the iSy Implant system is based on implant sets that include not only one or four implants but also valuable additional components such as the iSy Implant bases, which are pre-mounted in the implant, a single-patient form drill, gingiva formers and multifunctional caps for scanning, impression-taking and temporary restorations. The gingiva formers and multifunctional caps are made of PEEK and are simply mounted on the implant base.

More information

Camlog Biotechnologies AG
Margarethenstrasse 38
4053 Basel
Switzerland
info@camlog.com
www.camlog.com · www.isy-implant.com

SKY fast & fixed bridge kit by bredent medical

Immediate restorations – more quickly and easily now

Immediate restorations in jaws with a decreasing number of teeth have become fast and simple with the SKY fast & fixed bridge kit by bredent medical. This compact and comprehensive kit helps provide temporary bridges in either jaw immediately after surgery, avoiding time-consuming adjustments and remakes of existing restorations and combining materials to accelerate and simplify the treatment.

The SKY fast & fixed therapy was developed in cooperation with experienced implantologists, prosthodontists and dental technicians. It is an optimized immediate-restoration concept for ridges with a decreasing number of teeth.

More than 22,000 patients have been successfully treated in dental practices since 2007. The treatment has been scientifically proven in clinical studies. It provides value to users and patients alike: implant placement in the local bone using angled implants ensures long-term implant success. The abutments are placed on the implants already during surgery, so a second procedure is not required. Abutment changes and additional gingival trauma are avoided. This saves time and money and reduces patient stress. A fast temporary bridge is the key to success of a SKY fast & fixed restoration, as many patients are unwilling to accept tooth gaps over several months following treatment with a removable restoration. With the SKY fast & fixed bridge kit, bredent medical offers a solution that enables the dentist and dental technician to provide these restorations more quickly and easily.

The new SKY fast & fixed bridge kit facilitates the fabrication and customization of temporary bridges for either jaw. It eliminates the need to combine multiple materials and to adjust existing restorations. The compact kit contains all components required for the long-term provisional and is present already during surgery.

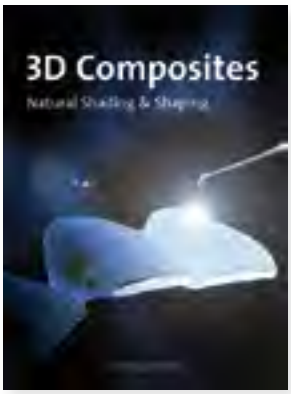
The visio.lign materials of the SKY fast & fixed bridge kit provide a stable and aesthetic temporary bridge. The novo.lign veneers in the visio.lign system plus the crown-and-bridge material have been available since 2008 and proven reliable and suitable. More than 5.8 million teeth have been integrated in more than 750,000 restorations. In addition to veneers in A3 shade, the set includes the top.lign professional resin recommended by bredent, which thanks to its enhanced mechanical properties makes metal substructures unnecessary. The resin has also been approved for definitive dental restorations. The ordering process, too, is much simpler and faster thanks to the SKY fast & fixed bridge kit.

More information

bredent medical GmbH & Co.KG
Weißenhorner Straße 2 · 89250 Senden · Germany
info-medical@bredent.com
www.bredent-medical.com

teamwork bookshop

3D Composites – Natural Shading & Shaping
by Ulf Krueger-Janson



Contains an instruction sheet for an uncomplicated layer construction as well as hints for the correct handling of the appropriate materials and tools.

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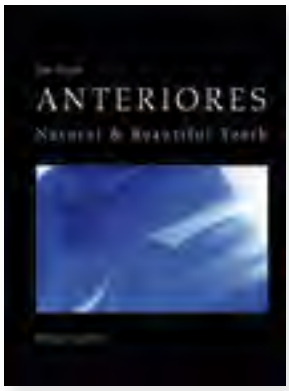
Anteriores – Natural & Beautiful Teeth
by Jan Hajtó



This collection can be a great help for communication between the dentist, patient and the dental technician.

270 pages, 950 pictures

149,– € plus shipping

Past << Future: Envision 77 Heart Beats
by Naoki Hayashi

Master ceramist Naoki Hayashi presents a portfolio of beautiful restorations in a unique book reflecting his high quality work and unique style.

320 pages with excellent four color photographs

349,– € plus shipping

Crown – Bridge & Implants: The Art of Harmony
by Luc Rutten & Patrick Rutten

The authors show the way to a perfect red and white esthetic by using pictures and a cross section out of their daily work in the laboratory.

296 pages, 1300 pictures

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Best Price

Individualitas Naturae Dentis
by Knut Miller

This valuable workbook supports and inspires dentists in their quest to consciously replicate the individual shapes of the natural tooth.

139 pages, 154 pictures

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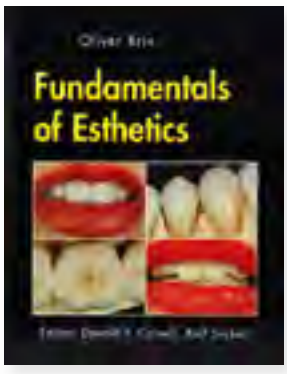
Fundamentals of Esthetics
by Oliver Brix



Reader-friendly format and ample illustrations are designed to illuminate the way to practicable solutions. Available in English, French and German.

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Bioimplon Hypro-Sorb M

Product
Hypro-Sorb M

Indication
GBR/GTR

Distribution
Bioimplon GmbH
Friedrich-List-Str. 27
35398 Gießen
Germany
info@bioimplon.de
www.bioimplon.de

The innovative Hypro-Sorb M is a bilayer and biphasic membrane of pure bovine crystalline atelocollagen for use in guided bone regeneration/guided tissue regeneration (GBR/GTR). Bioimplon's research team and global opinion leaders in the dental field have collaborated in designing a semi-rigid membrane with excellent material properties and handling characteristics. The 0.3-mm membrane with its rough and smooth sides is tear-resistant and hydrophilic. These properties allow perfect adherence to and positioning at the wound site. The membrane has a sufficiently extended barrier function and is naturally resorbed within six months.

Hypro-Sorb M is made of 99.9 per cent type I atelocollagen, a modified collagen from which immunogenic telopeptides have been biochemically eliminated. The atelocollagen ensures maximum biocompatibility, a mild bacteriostatic effect and good tolerance by human tissue.

Dentsply Implants TitaniumBase EV

Product
TitaniumBase EV

Indication
CAD/CAM restorations

Distribution
Dentsply Implants
www.dentsplyimplants.com

Acting on an increased need for dental laboratories to design and manufacture CAD/CAM restorations using their preferred workflow, Dentsply Implants introduces TitaniumBase EV*. This treatment solution provides dental professionals with the opportunity to deliver good results to whom it matters the most – the patients.

TitaniumBase EV combines the proven design of a titanium abutment and the benefits of an individually designed ceramic component. Specifically, TitaniumBase EV provides high mechanical integrity and offers a strong and stable base for the ceramic restoration.

It is important that new solutions are built upon well-documented implant systems that are proven in the long term. Being manufactured with the highest precision, TitaniumBase EV meets the important requirement of the Conical Seal Design, one of the proven interdependent features of the Astra Tech Implant System BioManagement Complex. The TitaniumBase EV digital workflow and library files are developed for the 3Shape Dental System. TitaniumBase is also available for Dentsply Implants' Ankylos and Xive implant lines.

* TitaniumBase EV is available in all markets accepting the CE mark.

Calendar of Events

	Event	Location	Date	Details/Registration
2/2016	**11th BDIZ EDI Expert Symposium**	Cologne Germany	7 February 2016	BDIZ EDI www.bdizedi.org
	AO Annual Meeting	San Diego USA	18–20 February 2016	Academy of Osseointegration www.osseo.org
	Chicago Dental Society Midwinter Meeting	Chicago USA	25–27 February 2016	Chicago Dental Society (CDS) www.cds.org
4/2016	**Dental Salon**	Moscow Russia	18–21 April 2016	Dentalexpo www.dental-expo.com
	International Osteology Symposium 2016	Monaco	21–23 April 2016	Osteology Foundation www.osteology-monaco.org
	Dentaurum International Dental Conference	Berlin Germany	22–23 April 2016	Dentaurum Implants www.dentaurum.com
5/2016	**1st World Congress of TRI Dental Implants**	Istanbul Turkey	5–7 May 2016	TRI Dental Implants www.tri-implants.com
	2nd Congress Quintessenza Edizioni	Verona Italy	26–28 May 2016	Quintessenza Edizioni www.quintessenzaedizioni.com
6/2016	**6th International Camlog Congress**	Krakow Poland	9–11 June 2016	Camlog www.camlog.com
9/2016	**FDI Annual World Dental Congress**	Poznan Poland	7–10 September 2016	FDI World Dental Federation www.fdiworldental.org
	EAO Annual Scientific Congress	Paris France	29 September – 1 October 2016	European Association for Osseointegration www.eao.org/eao-congress
10/2016	**11th International Conference of the DGÄZ**	Tegernsee Germany	6–8 October 2016	DGÄZ www.america-meets-europe.com

EDI – Information for authors

EDI – the interdisciplinary journal for prosthetic dental implantology is aimed at dentists (and technicians) interested in prosthetics implantology. All contributions submitted should be focused on this aspect in content and form. Suggested contributions may include:
· Case studies
· Original scientific research
· Overviews

Manuscript submission
Submissions should include the following:
· two hard copies of the manuscript
· a disk copy of the manuscript
· a complete set of illustrations
Original articles will be considered for publication only on the condition that they have not been published elsewhere in part or in whole and are not simultaneously under consideration elsewhere.

Manuscripts
Pages should be numbered consecutively, starting with the cover page. The cover page should include the title of the manuscript and the name and degree for all authors. Also included should be the full postal address, telephone number, fax number, and electronic mail address of the contact author. The second page should contain an abstract that summarizes the article in approximately 100 words.
Manuscripts can be organized in a manner that best fits the specific goals of the article, but should always include an introductory section, the body of the article and a conclusion.

Figures and tables
Each article should contain a minimum of 20 and a maximum of 50 original color slides (35 mm) or digital photos, except in unusual circumstances. The slides will be returned to the author after publication. Slides should be numbered on the mount in the sequential numerical order in which they appear in the text (Fig. 1, Fig. 2, etc.). Radiographs, charts, graphs, and drawn figures are also accepted. Figure legends should be brief one or two-line descriptions of each figure, typed on a separate sheet following the references. Legends should be numbered in the same numerical order as the figures. Tables should be typed on separate sheets and numbered consecutively, according to citation in the text. The title of the table and its caption should be on the same sheet as the table itself.

References
Each article should contain a minimum of ten and a maximum of 30 references, except in unusual circumstances. Citations in the body of the text should be made in numerical order. The reference list should be typed on a separate sheet and should provide complete bibliographical information in the format exemplified below:
[1] Albrektsson, T.: A multicenter report on osseointegrated oral implants. J Prosthet Dent 1988; 60, 75-82.
[2] Hildebrand, H. F., Veron, Chr., Martin, P.: Nickel, chromium, cobalt dental alloys and allergic reactions: an overview. Biomaterials 10, 545-548, (1989).
[3] Johanson, B., Lucas, L., Lemons, J.: Corrosion of copper, nickel and gold dental alloys: an in vitro and in vivo study. J Biomed Mater Res 23, 349, (1989).

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

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There are no page charges. The publisher will cover all costs of production and provide the primary author with five free copies of the journal issue in which the article appears.

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Take a closer look at the Ridge Preservation approach: animated video

www.geistlich-pharma.com/xsapproach

[1] Pubmed January 2015: search term "extraction socket and (Bio-Oss or Bio-Gide)"
[2] Cardaropoli D, et al. Int J Periodontics Restorative Dent. 2014 Mar-Apr;34(2):211-7.
[3] Schlee M, Esposito M. Eur J Oral Implantol. 2009 Autumn;2(3):209-17.

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