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implants

international magazine of oral implantology

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CBCT bone-densitometry
for pre-surgical decision-making

case report
Explantation of an implant in a heavy smoker

interview
The perfect link between man and technology

quintessence

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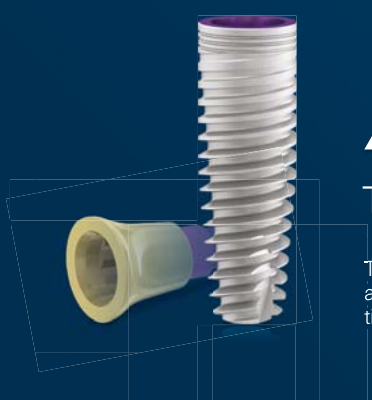

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Dr Rolf Vollmer

First Vice President and Treasurer of DGZI

The role of implantology in coming years

Early in the 70s I was active in the field of implantology and I was convinced that dental implantology could develop into a scientifically recognised dental discipline following a large number of "trial and error" attempts. This dream came true and DGZI already in 1993 introduced an implantologist's qualification by means of a standardised test. This was a completely new concept in Germany at that time. This qualifying examination has been named the "Implantology Specialist—DGZI".

Considering the current trends, particularly the age stomatology, it becomes obvious that implantology will play an important role in the rehabilitation of older patients in the next 20 years. Further considering the fact that a large number of edentulous patients exists in many countries, there is a significant potential for treating many people who could benefit from this type of treatment. As the aesthetic demands of patients increase, we can assume that even in cases of the traumatic loss of teeth, implantology is the treatment of choice. On the one hand, a trend towards simpler and cheaper implants is observed in the industry, while on the other hand even so-called market leaders offer special types of implants at excessively high prices. As a logical consequence, the complete treatment becomes very expensive due to high material costs. Due to these concepts like "All-on-4" to "All-on-One"/"All-in-One" are promoted or implants reduced in diameter and length. Demands on aesthetics have dramatically increased today.

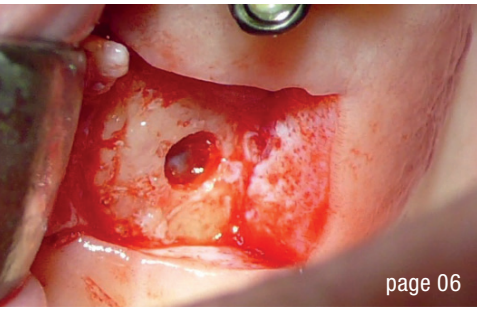
In my opinion, the current development has both its positive and negative aspects. I believe that it poses a particular problem for the newcomer because it suggests that implants can be inserted without problems into the jaw, perhaps with navigation, but without requiring a flap procedure. The comparison with the speed of vehicles should not be dismissed. Exceeding the speed limit on the highway may result in a fine. Exceeding the speed limit in implantology may lead to implant failure. I hope that the dental industry in future can help simplify the field of implantology by introducing standardised implant accessories or by consistently using existing standards. One example are the connecting screws (implant–abutment) which are only compatible with other systems in rare cases, as well as the corresponding screwdrivers or hex wrenches. A company should not need to prove its uniqueness by using connecting screws of a certain diameter or special threading with a particular pitch.

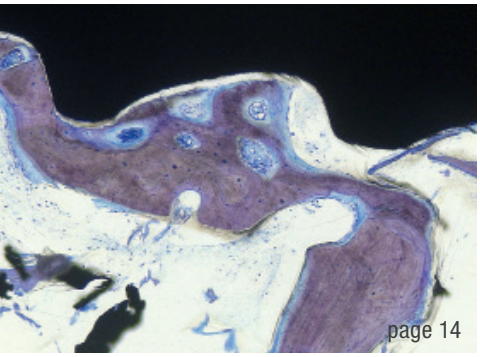
Let us see what is coming up in the next years and join our curriculum. The DGZI Curriculum as a first step in education will update you on the state of the art today and even experienced colleagues will have a chance to improve their knowledge.

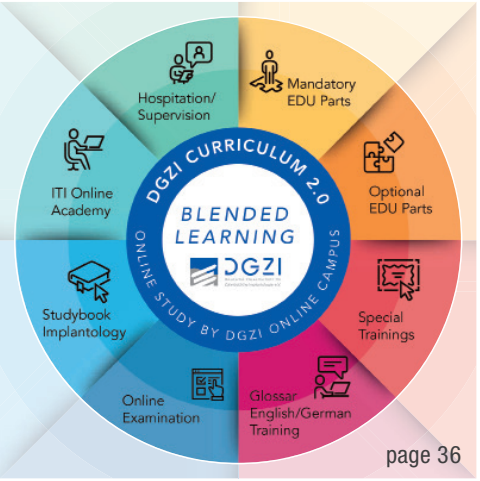
We hope to see you in Germany! Join our DGZI family!

With best regards

Dr Rolf Vollmer







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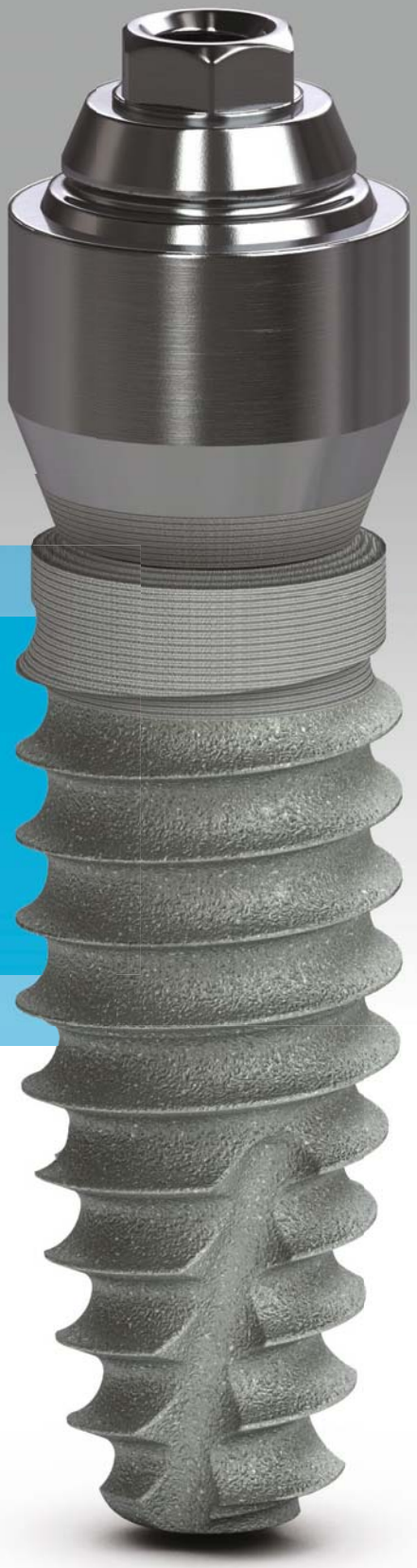

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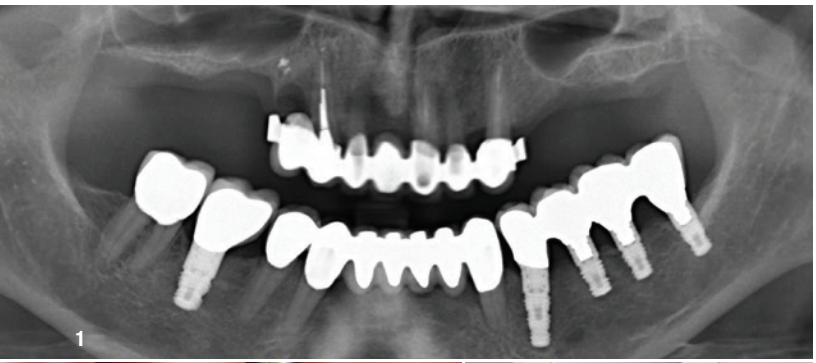
CBCT bone-densitometry for pre-surgical decision-making

Prof. Angelo Trödhan, Austria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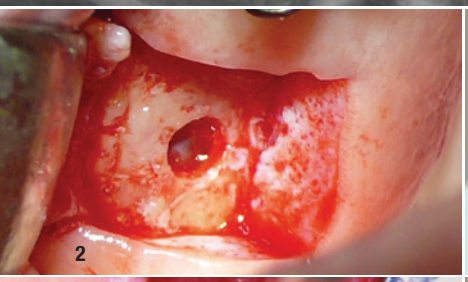
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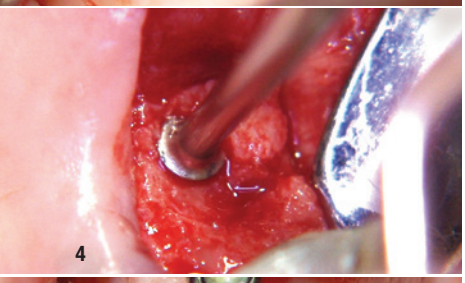
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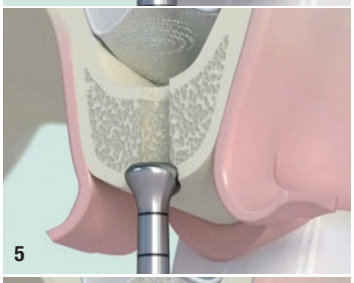
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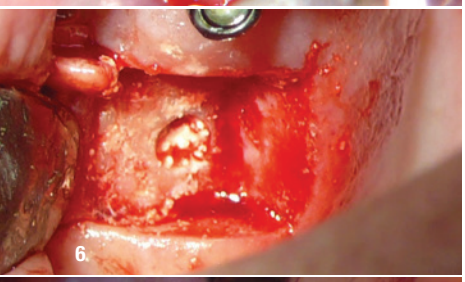
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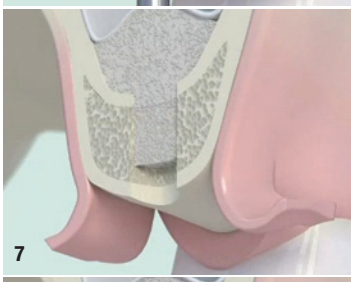
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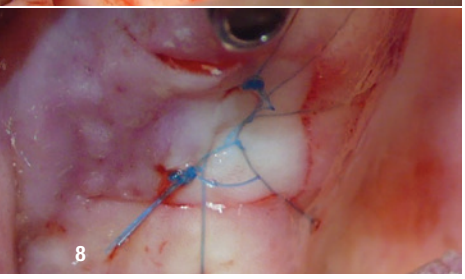
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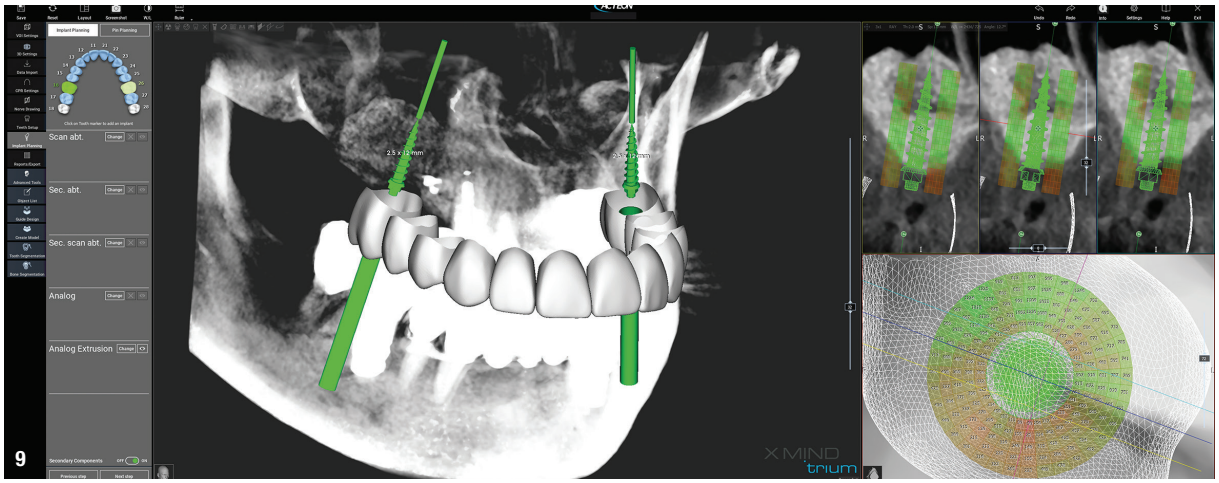
Introduction

The high prevalence of tooth-related diseases, a growing geriatric population and a rapidly growing awareness to replace lost teeth by dental implants force dentists, oral and maxillofacial surgeons to cope with promises made by implant manufacturers such as “new teeth in one hour”. While implant manufacturers try to maximise their sales numbers by such marketing strategies, it will always be the practitioner’s full responsibility to treat patients with strictly evidence-based treatment protocols, especially when it comes to the immediate functional loading of dental implants.

Esposito et al. (2007), Javed et al. (2010), Walker et al. (2011) and Cannizzaro et al. (2012) proved in reviews, Cochrane studies and split-mouth randomised clinical trials that primary implant stability—represented by insertion torque values (ITV)—shows a significant correlation between the biomechanical quality of bone and the risk of immediate and long-term implant failure when implants are loaded functionally at time of insertion.[1–4] Furthermore, experimental and clinical studies published by Turkyilmaz et al. (2007), Pommer et al. (2014) and Wada et al. (2016) proved a significant correlation between primary implant stability measured by ITV and computerised axial tomography (CAT) scan-based bone densitometry in native alveolar bone.[5–7]

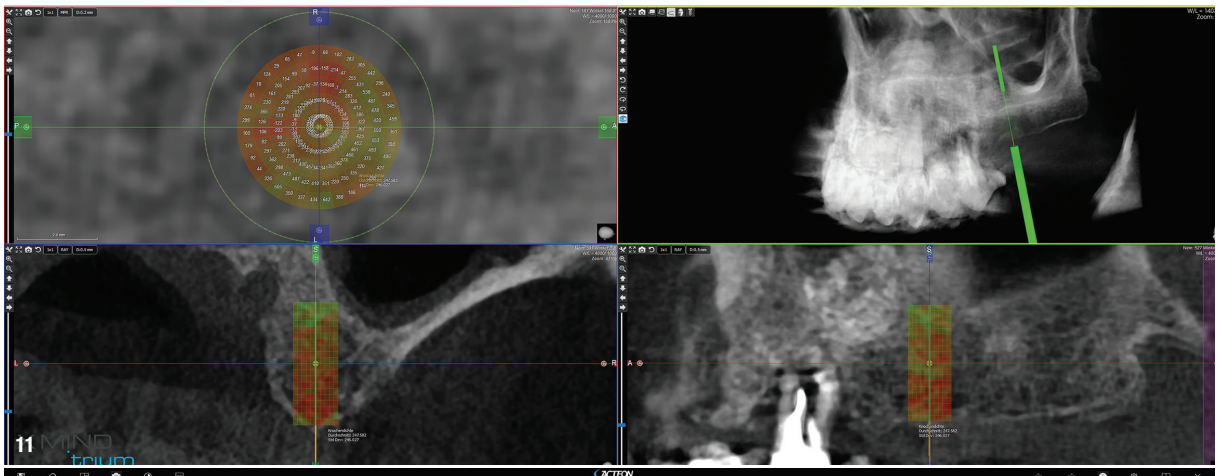
Since alveolar bone loss caused by natural atrophy or destructive iatrogenic procedures at the time of tooth extraction demands immediate (“alveolar ridge preservation”) or later (“guided bone regeneration”) bone augmentation procedures, Di Lallo et al. (2014) and Troedhan et al. (2014) in randomised clinical studies found a significant difference of primary implant stability when augmented alveolar bone was compared with native alveolar bone.[8,9] Recently, a randomised clinical study was performed by Troedhan et al. (2019) to investigate if a significant correlation between pre-surgical cone-beam computed tomography (CBCT) bone densitometry performed with X-Mind trium CBCT (ACTEON) and primary implant stability in augmented sinus sites could be proven.

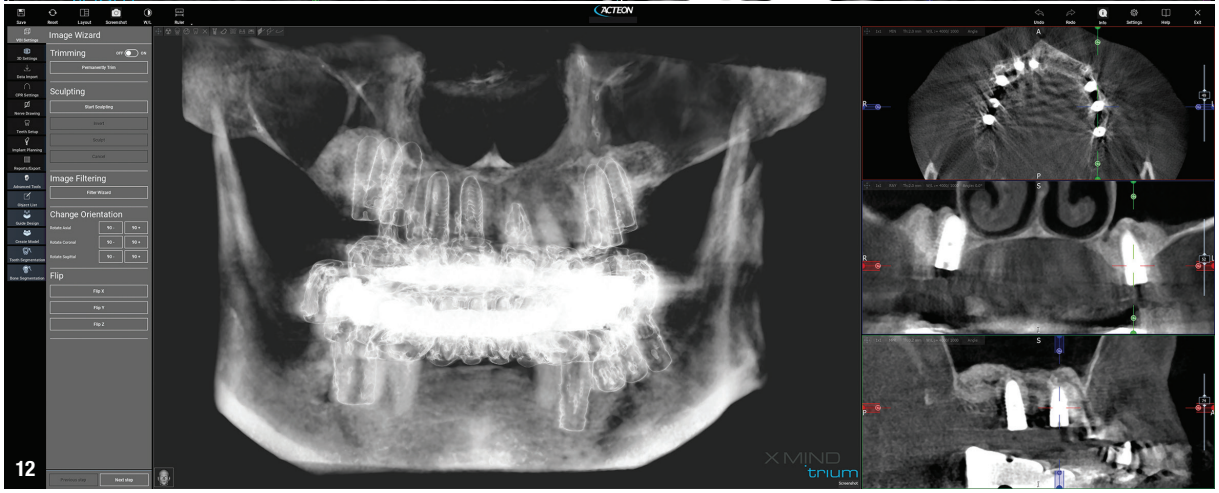


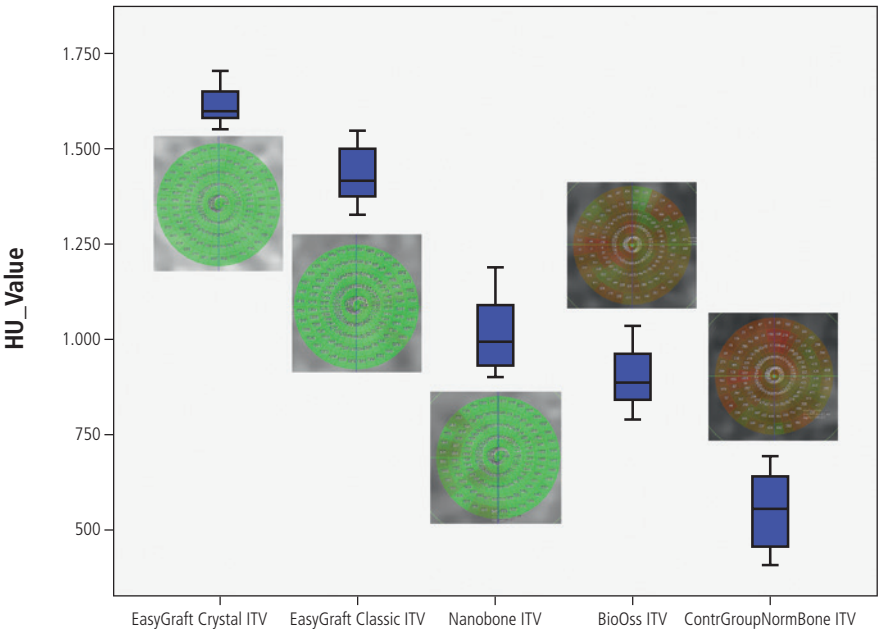
Study design

A randomised clinical study was conducted on 128 patients. 101 patients with less than 4 mm subantral crest-height underwent a uni- or bilateral transcrestal hydrodynamic ultrasound Piezotome sinus lift (INTRALIFT) with four different and randomly allocated bone graft materials (mono- or biphasic mouldable and self-hardening biomaterial, granular synthetic and xenogeneic bone substitute) in 114 INTRALIFT sites. The transcrestal Piezotome INTRALIFT provides the least risk of membrane-perforations and has proven to detach the periosteum of the sinus membrane cleanly from the bony base of the antrum, thus preventing biases of the study already at the stage of the surgery. The clean detachment of the periosteum from the bone base does not interfere with the regular bone regeneration in the subantral scaffold by dissection or lacerations of the periosteal layer of the sinus membrane, which carries the pre-osteoblast cell layer.[10–15]

Figure 1 shows a split-mouth case with a bilateral INTRALIFT procedure: after a small crestal “booklet”-flap of approx. 7 x 7 mm is detached, the sinus floor is safely







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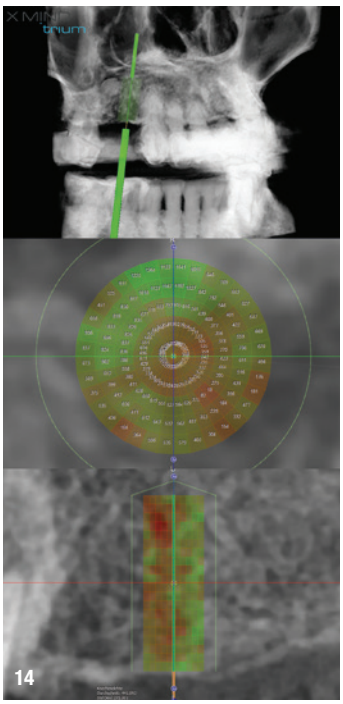

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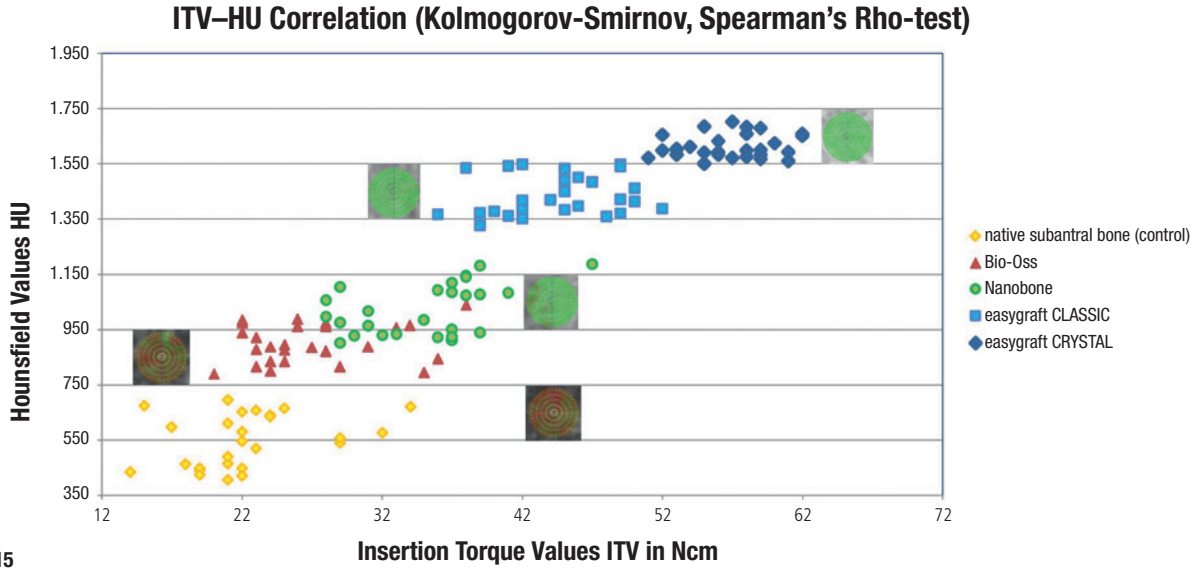
opened with ultrasound Piezotome tips (Figs. 2 & 3), the sinus membrane then detached by the hydrodynamic cavitation effect of the Piezotome-tip TKW5 plugged into the approach canal (Figs. 4 & 5) and the subantral scaffold filled with 2 cm of randomly assigned biomaterial (Figs. 6 & 7), followed by wound closure (Fig. 8). After a mean healing period of 8,4 months X-Mind trium CBCT scans were performed, the digital setup of the future bridge constructed with the AIS 3D app and the bone density determined in the sinus-lift site around a virtual implant (Fig. 9). Standardised implants (4 mm in diameter and 12 mm in length) were then inserted in the position of the virtual implant and insertion torque values (ITV) measured intra-surgically (test groups; Fig. 10). A total of 27 patients with sufficient native subantral crestal bone (min. crest width: 6 mm, height: 12 mm) were screened by X-Mind trium CBCT for bone density with the virtual implant (Fig. 11), the standardised implant inserted and the ITV recorded (control group). Figure 12 depicts the final result after implant insertion in the patient case shown in Figures 1–9.

Study outcomes

As can be seen in Fig. 13, the mean CBCT bone density values in Hounsfield units (HU) at the implant site dif-



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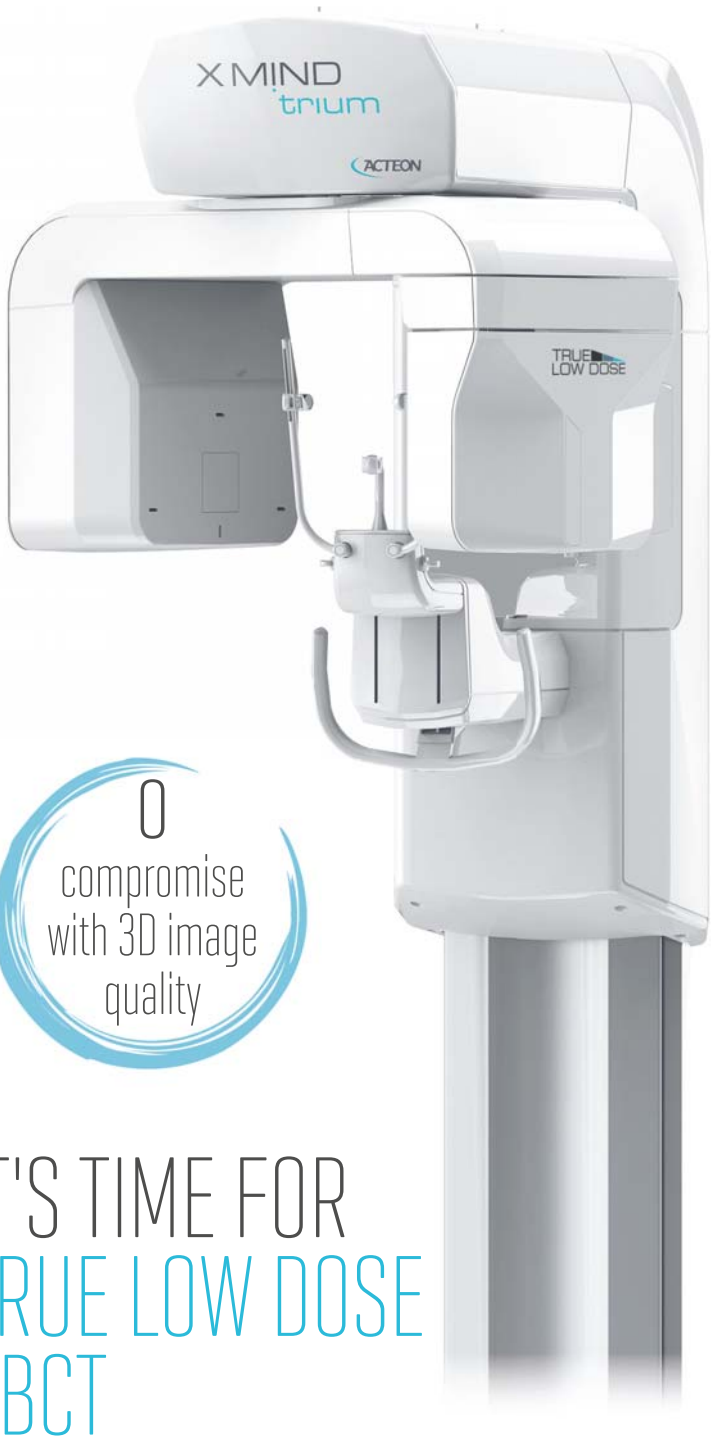

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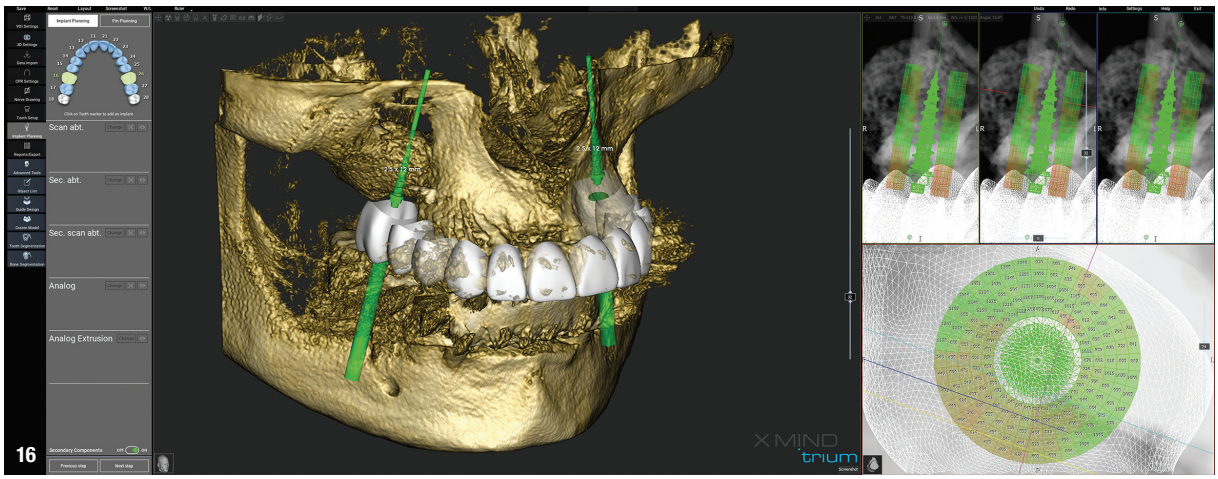

fered significantly ($p < 0.05$) between all four test groups and the control group. The precise numerical HU values are "translated" by AIS 3D app software and are also colour-coded for easier interpretation at first glance: the brighter the green the CBCT voxel matrix shows around the virtual implant, the higher the bone density, with a virtual neutral threshold of 500 HU. Contrary, the more reddish the CBCT voxel matrix around the digital implant is depicted, the worse the biomechanical bone quality (Fig. 14). The corresponding insertion torque values (ITV) of the inserted standardised implant measured at the location of the transcrestal INTRALIFT approach (Fig. 2) also differed significantly between all test groups and the control group. Figure 15 depicts the cumulative result of the correlation between HU and ITV values for all test groups and the control group.

Clinical implications

As the presented study proves, contemporary CBCT technology adds another outstanding feature to the general CBCT-based digital workflow as the first and only tool to safely determine the grade of primary implant stability to be expected at each individual implant site already in the planning phase before the treatment or surgery is performed (Fig. 16). By using CBCT-based bone densitometry as an integrated diagnostic step in the digital workflow, the clinician for the first time can decide individually for each patient and each implant site whether an implant insertion with immediate prosthetic loading might bear an unacceptable risk of early or delayed implant loss, and can therefore inform the patient accordingly based on evidence.

Additionally, the results of this study lead to another interesting conclusion: since different biomaterials lead to significantly different biomechanical bone qualities for regenerated bone with precisely correlated higher values in CBCT-based bone densitometry and insertion torque values, the scientific dispute if autologous, xenogeneic or synthetic bone graft should be considered as gold standard needs to take now a different pathway. In particular, native maxillary bone shows a very weak biomechanical quality and this weakness obviously can be substantially improved by biomaterials used for augmentations. Therefore, the clinician might be better advised to seek out the highest possible biomechanical quality of regenerated bone in GBR sites instead of pursuing complete bone regeneration by only native bone (which—histologically proven—is never the case even when using only autologous bone).

High-resolution CBCT devices, such as the X-Mind trium used in this study, seem to present an indispensable non-invasive and patient-friendly tool not only for enhanced diagnosis, treatment planning and the digital workflow but also for clinical research to add new knowledge to evidence-based dentistry.

Literature

about the author

Prof. Angelo Trödhan is a specialist in cranio- and maxillofacial surgery with a focus on traumatology, and reconstructive and cosmetic surgery of the face, and in dentistry. As a leading ultrasonic surgeon and scientist in ultrasonic surgery, dental implantology, bone augmentation and maxillofacial surgery, he is regularly invited to lecture at universities and congresses worldwide and to present at international workshops.

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Initial situation

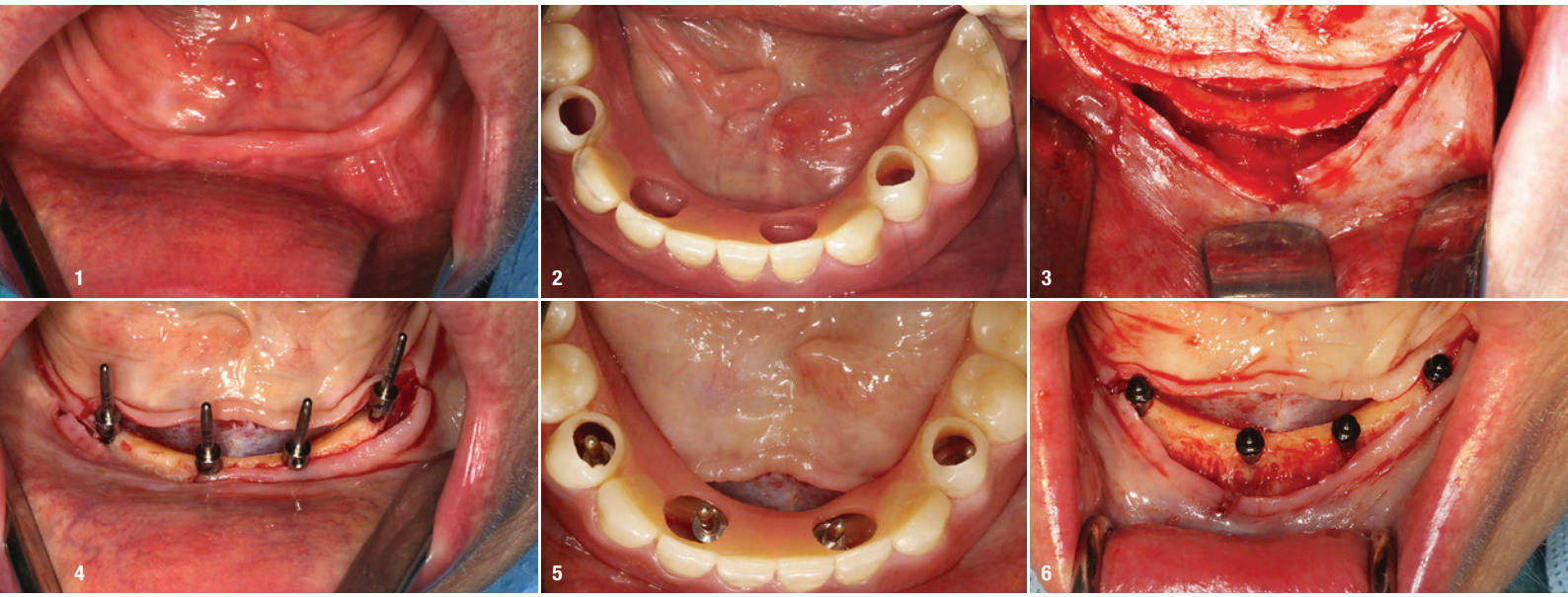
The patient, a healthy 66-year-old woman, presented with a thin mandibular ridge (Figs. 1 & 2). Her main complaint was the poor retention of the prosthesis, causing her pain and discomfort when chewing properly while eating. The same retention problem would also make her very uncomfortable at social events, since she was afraid of the prosthesis slipping when she laughed.

Treatment planning

During treatment planning with the use of Mini Implants (Straumann), two main situations have to be considered. The first situation is when there is enough bone and keratinised gingiva for the surgery to be performed in a flapless and minimally invasive approach. The second situation is when the patient does not have ideal anatomical conditions. In this case an open flap surgical approach must be considered to properly visualise the anatomical situation. This patient presented with overall thin mandibular bone volume. Mini Implants are the ideal solution for treating situations with low bone width. Although ridge augmentation could restore the ridge volume, it would considerably increase surgical morbidity, costs and treatment time. A CBCT examination was conducted to allow a more accurate assessment of the anatomical conditions. It indicated that the open flap approach would be the safest route for this patient and also revealed the ideal implant positions.

Surgical procedure

Following a crestal incision to preserve keratinised gingiva, the flap was carefully raised for proper visualisation of the bone contours (Fig. 3). The drilling protocol commenced with the osteotomy, to a depth of 6 mm, with the needle drill, and was followed by the use of parallel posts to check the three-dimensional orientation of the implant. After the correct axis had been confirmed, the osteotomy with the needle drill was completed up to the full implant length. At this point it was possible to determine the bone quality, which was perceived as very hard. Therefore, the implant bed preparation continued with a pilot



Figs. 1 & 2: Clinical evaluation showed a thin mandibular bone ridge. **Fig. 3:** Open flap. **Fig. 4:** Parallel pins. **Fig. 5:** Checking the implant bed with the prosthesis. **Fig. 6:** Mini Implants inserted.

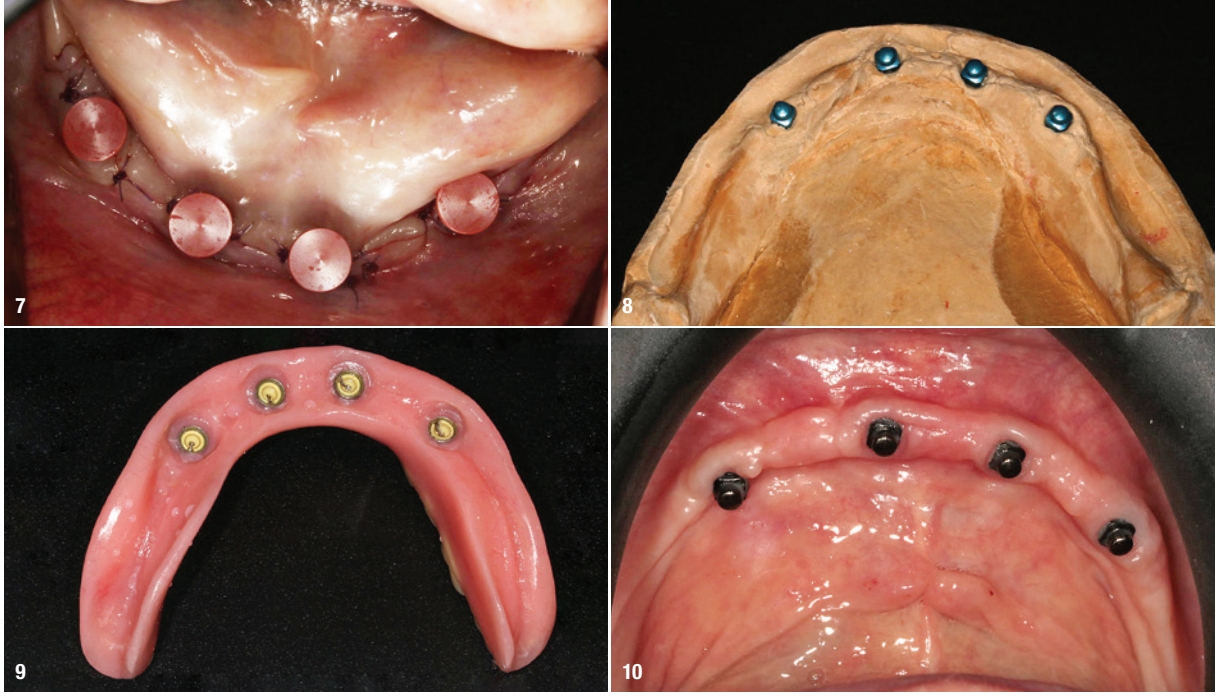


Fig. 7: Forming/fixing matrices placed on implants for impression taking. **Fig. 8:** Analogs with master cast. **Fig. 9:** Finalised prosthesis. **Fig. 10:** Clinical situation after a healing period of three months.

drill (2.2 mm in diameter) at full depth to reduce potential bone compression during implant placement. The parallel posts were used again for final orientation assessment (Figs. 4 & 5). The implant insertion started with the vial cap that comes attached to the Optiloc® retention system (Straumann). The vial caps are released at a torque of 5 Ncm. The implants were then placed in their final position using the ratchet (Fig. 6). All four implants reached primary stability at around 50 Ncm, enabling immediate loading of the implants with the prosthesis.

Prosthetic procedure

Immediately after the surgery, impression caps were snapped onto the implants (Optiloc®; Fig. 7), and the prosthesis was used as an impression tray as it is also possible to obtain the occlusal information this way. A standard master cast was created using the Mini Implants' respective analogs (Fig. 8). Instead of chairside, it was decided to carry out the pick-up procedure in the dental laboratory, making sure that the housings and inserts were properly set. The prosthesis is then meticulously polished and finished to minimise plaque adherence (Fig. 9). Owing to unusual post-op swelling, the prosthesis could not be properly seated on the same day. However, after five days the swelling had returned to normal and the prosthesis was seated without patient discomfort or soft-tissue disturbance.

Final result

The case described in this article shows a good outcome for the management of an edentulous situation, with four Mini Implants inserted in the lower jaw and with early loading. After three months, the control radiograph showed healthy osseointegration of the Mini Implants, as well as good gingival healing (Fig. 10). At this stage, the yellow retention inserts (light retention force) were replaced with green retention inserts (medium retention force), giving the patient more confidence to enjoy her meals.

Conclusion

The practitioner was satisfied with the surgical procedure and the treatment outcome with the Mini Implants. The surgery was comfortable for the patient, since the treatment was finalised fairly quickly in a single surgery and without bone augmentation. The patient was satisfied with the aesthetic outcome. She now enjoys a regular diet, which had not been possible before owing to the poor retention with a conventional denture and soft-tissue discomfort. The Mini Implant System has proven to be a good alternative to bone augmentation and will be the preferred option especially for edentulous patients with difficult anatomic situations.

about the author

Dr Sepehr Zarrine is a France-based dentist, who specialises in implant dentistry and complex cases involving immediate loading, bone grafting, and zygomatic implants. He currently practises in Saint-Dié-des-Vosges in France.

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Explantation of an implant in a heavy smoker

Literature

Dr Branislav Fatori, Dr Inge Schmitz & Prof. Werner Götz, Germany

Introduction

Dental implants are increasingly being used to restore missing teeth. Thanks to further developments in implantology, it is now possible to offer patients an individualised, optimal dental prosthesis. Despite an optimal surgical procedure, implant loss can occur. In the following article, the authors report one case of a heavy smoker in whom an implant had to be removed after 4.5 years owing to a material defect of the screw, despite excellent osseointegration.

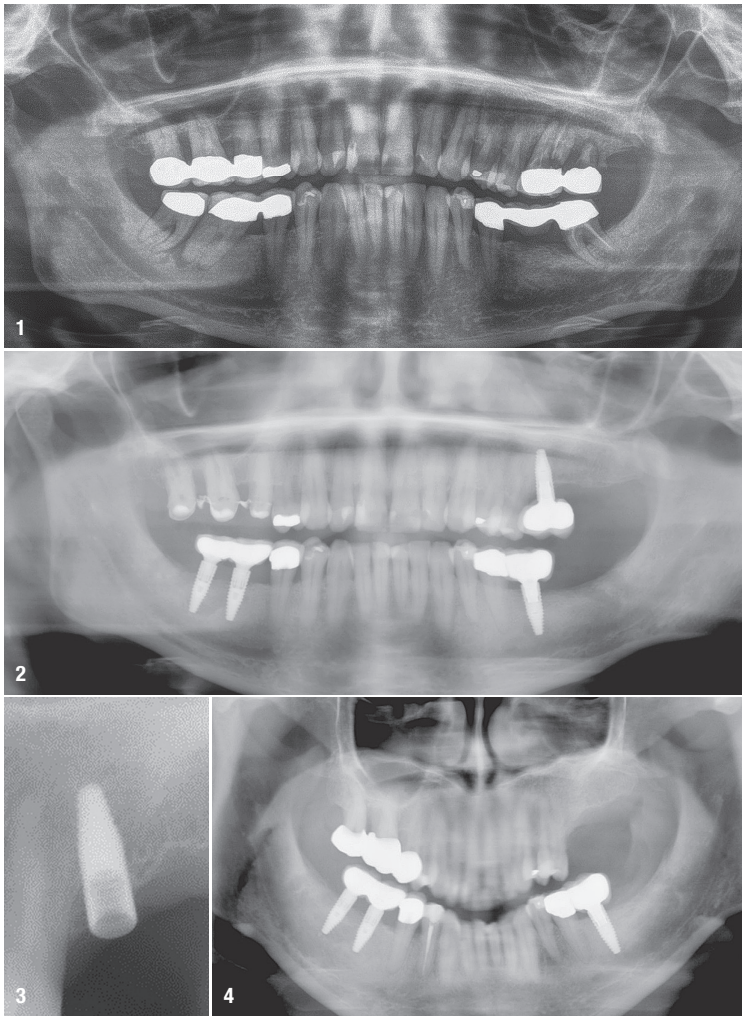

Fig. 1: Radiograph showing the situation before the initial implantation. **Fig. 2:** Radiograph showing the situation immediately after the initial implantation. **Fig. 3:** Part of a radiograph showing the fractured implant screw prior to removal. **Fig. 4:** Radiograph showing the situation after implant removal.

Heavy smoking (smoking of more than 20 cigarettes per day) is always considered a significant risk for successful long-term osseointegration of implants and is associated with higher rates of implant failure than in non-smokers. Smoking slows down the healing process and reduces the long-term prognosis and service life of dental implants to a substantial extent. In a large study conducted by Cavalcanti et al., it was demonstrated that the risk of implant loss is twice as high for heavy smokers as for non-smokers.[1] The ingredients of tobacco smoke increase susceptibility to gingivitis and periodontitis.

Initial clinical situation

The patient was female and aged 53. She was a smoker who reported that she smoked 30 cigarettes a day. The bone quality was D3 in the maxilla and D2 in the mandible (Fig. 1). Thorough patient education was carried out and the patient agreed to the publication of her case.

Materials and methods

Implantation

The implantation had been performed five years before with DENTAL RATIO implants (DRS International) of 4.1 mm in diameter and 12.0 mm in length in the maxilla and of 3.7 mm in diameter and 12.0 mm in length in the mandible (Fig. 2). The specific implant system used here allows for earlier loading compared with other systems owing to its specific surface structure. The implantation was carried out in a "multiple play" situation, and the implants were restored with conditionally removable screw-retained prostheses. A crestal incision was made while protecting the bone structures. Control follow-ups after implantation were done every week for the first six months and then every two years.

Intervention

After 4.5 years, the implant screw fractured and another intervention was required (Figs. 3 & 4). There was no peri-implantitis. The implant screw was sent in for his-

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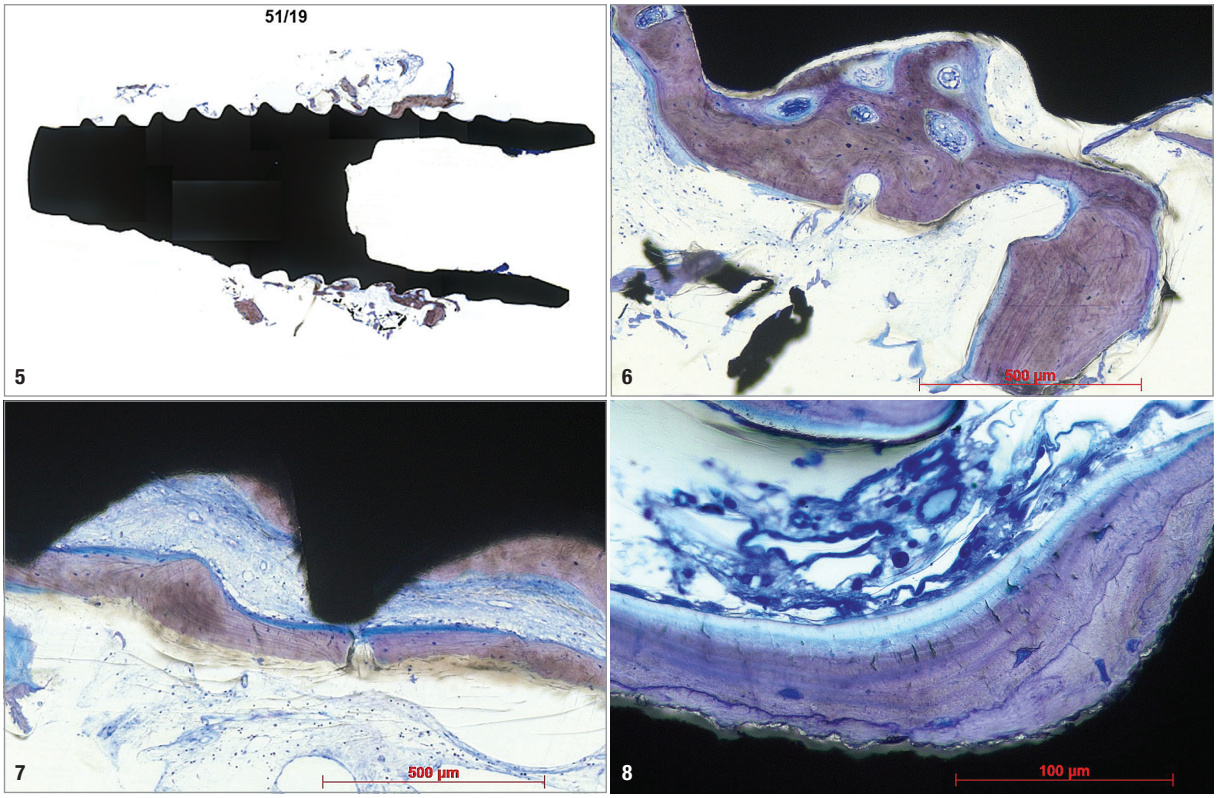

Fig. 5: Thin-section view of the explanted implant: there was cancellous bone and soft tissue attached at the middle and crestally; three to four upper threads were approximately 70 % covered with bone crestally; there was attached loose connective tissue and peripherally attached soft tissue consisting of loose connective tissue rich in vessels; some bone fragments were detected crestally. When magnified further, tight bone-to-implant contact was visible. **Fig. 6:** Higher magnification: the bone-to-implant contact was too tight, especially crestally under formation of a 5–10 nm wide amorphous interface; there was lamellar bone with vital osteocytes; osteocytes were near to the implant surface; on the outer bone surface, there were signs of osteogenesis with osteoblast seams and osteoid sediments; peripherally, there was slightly more dermal osteogenesis with formation of osteoblast condensations, osteoids and fragments of mature lamellar bone; there was loose connective tissue rich in cells and vessels with some mastocytes and fat cells; near to the implant, there was accumulation of focal vessels; there were small osteoclasts in a few places; crestally, there was resorption on the surface; no necrosis or infiltrates were detected. **Fig. 7:** Microscopic image of the explanted implant showing good bone-to-implant contact and successful osteogenesis. **Fig. 8:** Microscopic image of the explanted implant showing good vascularisation.

tological examination, for which the material was processed conventionally by means of thin-section microscopy according to Donath and dyed with toluidine blue. The histological examination based on particulate blocks of the explant showed good contact between the bone and explant (Figs. 5–8). Crestally, there was good osseointegration with good bone-to-implant contact. Near the implant, regular osteogenesis and peripheral contact osteogenesis could be observed. In addition, there was very good vascularisation in the peri-implant area. No necrosis or inflammatory tissue was detected. Bone augmentation by means of NanoBone (Artoss) was necessary for the replacement of the implant (Fig. 9).

Medication

After microbiological examination, an antibiotic (Clindamycin Aristo 600, Aristo Pharma) was administered (first one tablet three times a day and then one tablet twice a day until the day of surgery). In addition, the patient was instructed to rinse twice daily with Chlorhexamed (GlaxoSmithKline). For the postoperative period, 20 mg prednisolone were prescribed (first one tablet three times a day, then half a tablet three times a day and finally a quarter tablet three times a day). Five arnica globules were prescribed daily to reduce swelling. Directly after the operation, 40 mg of Dexa-ratiopharm (ratiopharm) were injected intramuscularly. Before the operation, the patient was advised to increase her intake of calcium, multivitamins and antioxidants in order to stabilise the immune system.

General approach to implant insertion

Local anaesthesia was achieved bilaterally with Ultracain D-S forte (Sanofi-Aventis Deutschland). Another mandibular anaesthesia was achieved with half an ampoule of Ultracain D-S forte. A 14C scalpel (Aesculap) was used for making the incision, with attention to the optimal preservation of the gingival mucosa.[2] With this incision, more keratinised gingiva is obtained, which leads to better healing of implants. The preparation of the osteotomies

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Implants 2

Practice stamp

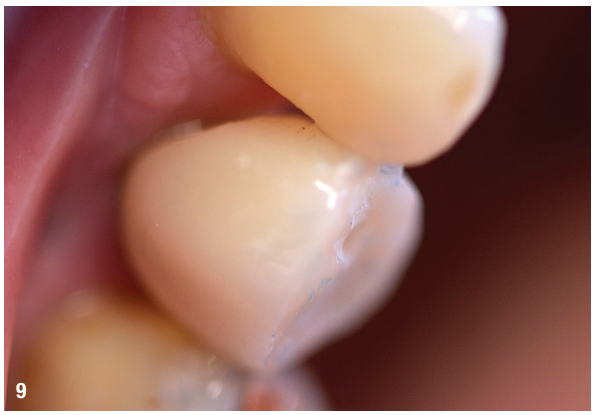

Fig. 9: Clinical situation showing the newly replaced implant.

was begun with the 1.80 mm pilot drill and continued with the 2.28 mm drill. For the final drilling, a 2 mm drill was used. The machine-cut implants were placed to a torque of 40 Ncm. To avoid unnecessary pressure on the jawbone, each implant was turned to the left for half a rotation. This provides optimal blood flow to the implant surface (DENTAL RATIO, MEISINGER) and can minimise or completely avoid bone necrosis. Finally, a periosteal slit was made to achieve flap closure without tension. The surgical site was sutured using vertical sutures (5/0 suture, RESORBA).

Follow-up appointments

The success of the implant surgery was evaluated in the follow-up examinations on the basis of the following criteria: no mobility of the implant, clear sound during the tapping test, inconspicuous periosteal test (Osstell), no pain during the healing period, no infections during osseointegration, and radiographically no evidence of gaps between the implant and the bony substance around it. In addition, a good macroscopic condition of the implant, low plaque accumulation and the absence of osteolytic signs on the control radiograph served as parameters for success. The osseointegration of the implants placed five years before could be described as good.

Discussion

The existing implant showed good osseointegration after 4.5 years. It can be argued that material properties rarely lead to explantation. The introduction of implants in smokers significantly influenced survival rates, the risk of postoperative infection and marginal bone loss. The results should be interpreted with caution owing to the presence of uncontrolled confounding factors in the included studies. Recent studies indicate that smoking is a major factor contributing to the failure of dental implants. The authors of this article aim to test the null hypothesis that implant failure rates, the risk of postoperative infection and marginal bone loss are no different in smokers compared with non-smokers.

Conclusion

Smoking has an impact on the general and oral health of patients. Tobacco has a rapid adverse effect on the outcome of all therapeutic interventions in the oral cavity. The osseointegration of implants is a risk in smokers, and the risk of peri-implantitis increases in these patients. Various protocols have been tested to evaluate implant survival in smokers. Although dental implants aimed at integrating with the human body have become the state of the art for dental restorations, they are still not always suitable for smokers owing to the aforementioned reasons. In order to further research on this topic, it is important to conduct an updated periodic review to summarise all of the relevant clinical research results.

Editorial note: Dr Inge Schmitz declares that she has no conflicts of interest in relation to this article. Dr Branislav Fatori would like to thank Ulf-Christian Henschen of DRS International (Langenfeld, Germany) and Dr Walter Gerike from Artoss (Rostock, Germany) for their support.

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Dr Branislav Fatori has more than 41 years of experience in implantology and has placed more than 8,000 implants. He was trained at prominent clinics around the globe. Also, he has worked as a long-term training consultant for professional societies and implant manufacturers.

Dr Inge Schmitz has worked at the Institute of Pathology of the Ruhr-University Bochum in Germany since 1990. Her main interests are implantology, stents, electron microscopy and osteology. She studied biology at the same University and completed her PhD at the University of Essen in Germany in 1989.

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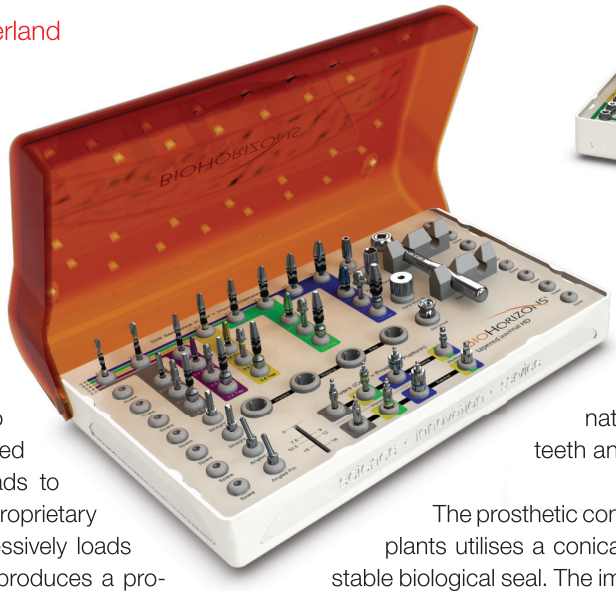
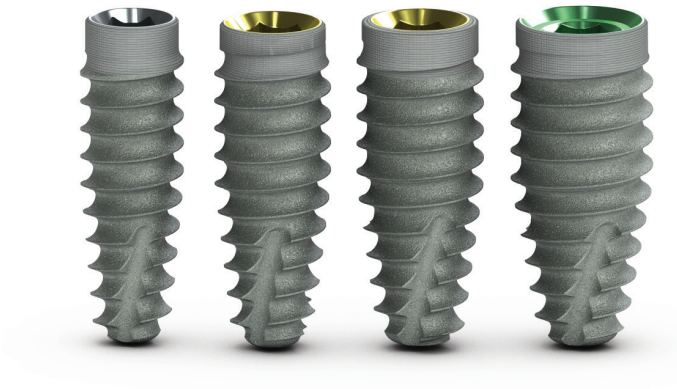
Predictable, immediate results with Tapered Pro implants

BioHorizons Camlog, Switzerland



Immediate implant treatment requires predictability. Tapered Pro implants have been developed based on over 10 years of tapered implant success. The unique design elements provide a predictable solution for immediate treatment. The Tapered Pro implant design features a tapered body and deep buttress threads to provide primary stability. The proprietary buttress thread design compressively loads bone, while the tapered body produces a progressive increase in insertion torque during implant placement. The end cutting, self-tapping thread design of the tapered region of the implant allows for controlled implant placement. These features also held to disperse bone chips throughout the osteotomy. The collar of the implant is designed with a reduced diameter to preserve vital bone, while maintaining a platform switching design. The unique Laser-Lok microchannels on the implant collar create a connective tissue attachment and retain crestal bone.



Laser-Lok is a proprietary surface treatment exclusively used on BioHorizons implants. Its success in maintaining soft tissue and retaining crestal bone levels can be attributed to over 25 years of research. The surface is developed using laser ablation to create circumferential, cell-sized microchannels around the collar of the implant. The optimal size of these channels allows for attachment and organisation of both osteoblasts and fibroblasts. Laser-Lok is the only surface shown to attract a physical, connective tissue attachment, mimicking the natural connections between teeth and surrounding tissue.

The prosthetic connection of Tapered Pro implants utilises a conical internal hex design for a stable biological seal. The implants are fully compatible with the current line of authentic BioHorizons abutments and prosthetic parts. The prosthetic geometry of both the implants and the abutments are colour-coded using anodisation, providing a simple and reliable method to match the correct components together. The Tapered Pro implants are also compatible with the BioHorizons surgical kit and the BioHorizons guided surgery kit. The protocols for osteotomy development utilise the current line of tapered drills, with protocols for placement in soft bone or dense bone. With the addition of Tapered Pro, BioHorizons broad portfolio of tapered implants provides solutions for all indications. Choose from narrow-diameter 3.0 mm implants to wide-diameter immediate molar implants or short 6 mm-length implants to 18 mm-length implants.

BioHorizons guided surgery system uses an open architecture design, providing compatibility with various software providers and guide manufacturers. For a traditional workflow, BioHorizons comprehensive surgical kit and wide range of prosthetics support the complete restorative process. Tapered Pro implants are offered in 3.8, 4.2, 4.6 and 5.2 mm diameters, with lengths ranging from 9 to 18 mm.

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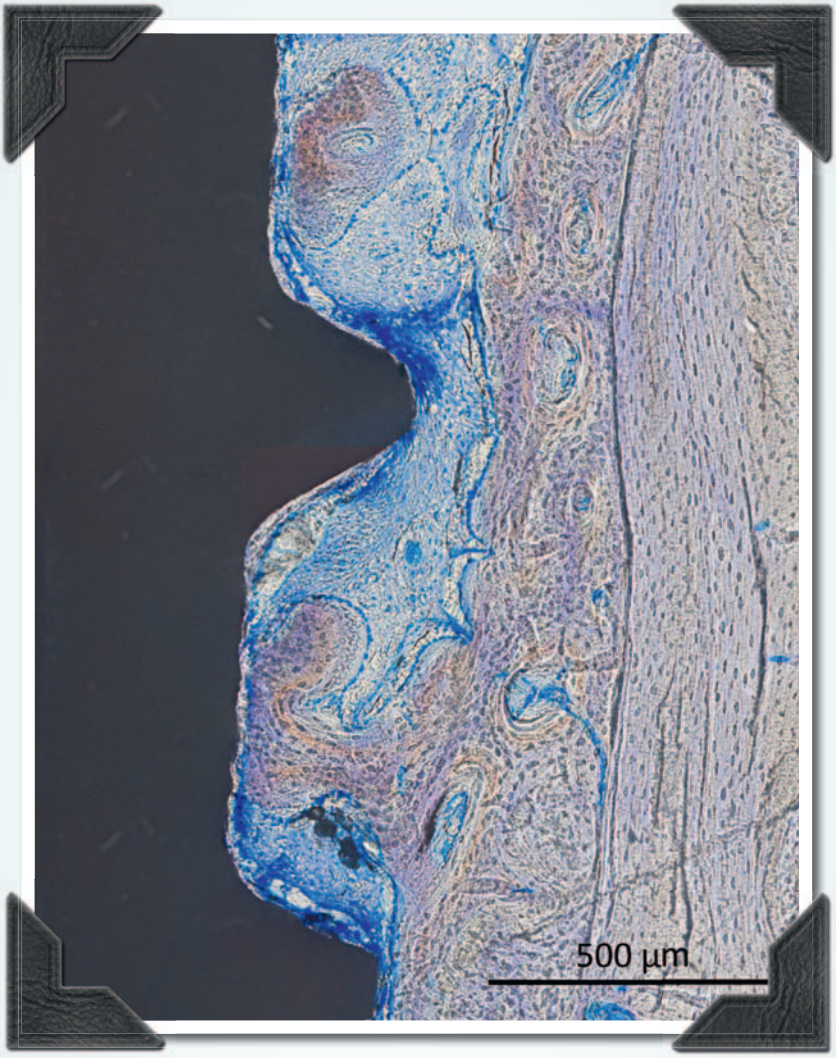

OUR TIZIO HYBRID IMPLANT
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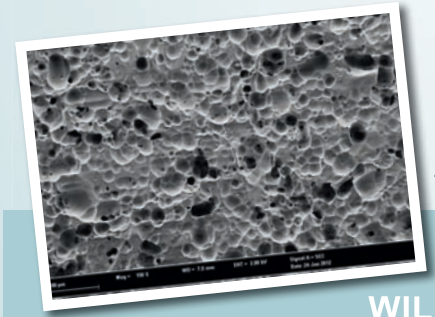

Generated roughness depths in the glass matrix form the prerequisites for the micromechanical bond**

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TIZIO HYBRID IMPLANTS
The Root of the Future

References:
* Large picture: University Medicine Rostock, Clinic for Oral Medicine Maxillofacial and Plastic Surgery
** Little picture: DOT GmbH

Improve your implant business case-by-case

Dentsply Sirona Implants, Sweden

Simplant Planning Service provides clinicians with a solution to improve their implant treatment business without compromising the clinical outcome of their case, as well as facilitating the more complex cases. With this service, clinicians stay in control of their implant planning cases, they have the possibility to rely on an experienced partner to build their business, and they get the tools needed to easily plan and safely execute a surgery.

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Clinicians really get the best of two worlds—pay-as-you-go access to the benefits of computer-guided implant treatment and Simplant expertise with no software investment and no long-term commitment. And all on a case-by-case basis.

about the manufacturer

Dentsply Sirona Implants is a solutions provider with more than 40 years of experience in all fields and technologies of implant dentistry, including surgical guides and digital planning. For more information about our comprehensive solutions for all phases of implant dentistry, visit us at dentsplysirona.com/implants.

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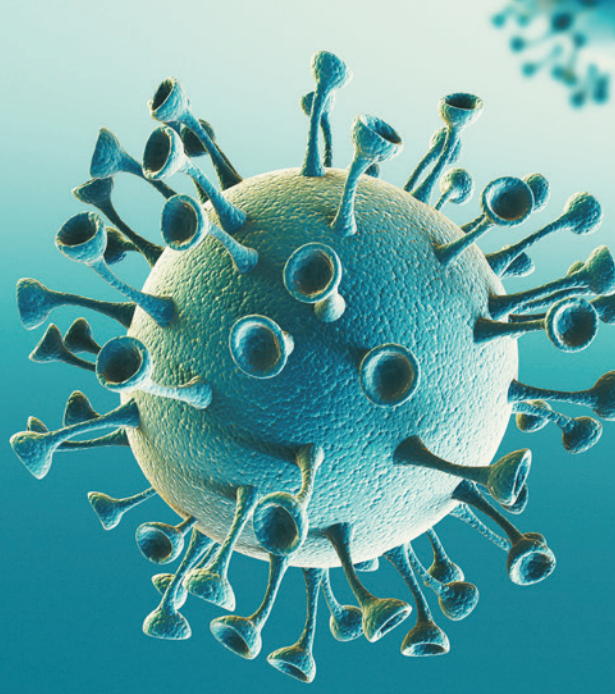

Practice strategies in the age of corona

Dr Anna Maria Yiannikos, Germany & Cyprus

Dear friends and colleagues,

We have all been facing an extremely unknown and difficult situation these past few weeks and yes, it is completely normal to be afraid and feel worried about your clinic's future in the post-coronavirus era. I would like to begin with a quote from Nelson Mandela, who said: "When conditions change, you must change your strategy and your mind. That's not indecisiveness, that's pragmatism."

Some may accuse us of being naive, if we continue to believe that patients in the future will behave the same way they did before the COVID-19 crisis, especially during surgical procedures. We should accept this as a fact. The fear of becoming infected has increased significantly in the past few weeks and is expected to remain heightened for the time being. The need for social distancing measures will remain strong. Unnecessary visits to friends, family and others will mostly be avoided and people will become more health-conscious. Cleanliness and proper hygiene should be paramount these days. In the following I will provide you with 7 essential tips, which, I believe, contain the most important advice I ever gave in an article.

1. Increase electronic engagement

For one thing, set up your website and general online presence in a way that makes it easy for people to book appointments online. In addition, offer new patients to send them the required medical documents via e-mail, so they can fill it out at home before coming to an appointment. They can return these completed forms by e-mail as well, in order to reduce waiting times at the reception area of your practice. Moreover, offer patients a quick video meeting with you via Viber, WhatsApp, FaceTime or Messenger, where they can express their dental issues ahead of a physical consultation. This builds trust, since patients can get to know you before an actual physical appointment and they will be reassured that they will receive exactly the treatment they need with you as their dentist. Further procedures can then be carried out at your clinic. Remember: people need encouragement to take action and you will be there for them when they do!

2. Make sure that your patients feel protected

Owing to the current pandemic, patients are most likely to be more aware of diseases and, of course, you should continue to take the protective measures that you would normally take during dental procedures—these are ever more important during the COVID-19 period. In addition, you may consider providing additional protective gear like shoe shields for walking around the clinic for your patients. This will make them feel safe and protected during appointments and it shows that their safety is important to you.

3. Reassure patients that they can rely on you

Especially in times like these where most people avoid crowded places and try to live by the concept of social distancing, it is vital for you to reassure them that it won't come to any delays in your clinic. Make sure that you establish a system that both reduces waiting times and keeps physical contact between patients at a minimum. In these uncertain times, it is important to assure patients that they won't be running into other patients at your clinic and thus bearing the risk of becoming infected.

4. Show empathy and give comfort

Some people are likely to lose their jobs as a result of the current pandemic, or at least experience a decline in their income. Therefore, showing empathy is vital. Comfort your patients like a friend would do. Apart from that, avoid losing loyal patients only because they are not able to afford certain procedures anymore owing to the current situation. You can minimise this risk by offering patients to prioritise certain dental conditions over others. This should happen in written form, where you need to include the important note that this treatment plan is based on recent findings and will be in place for no more than three months. However, remind them (preferably also in written form) that their dental problems will be likely to deteriorate further over time.

5. Look at things from a patients point of view

Many of you are probably anxious about the likely decline in the number of the cosmetic cases that you would normally have treated in the near future. And yes, the truth is that some people probably will not have the budget for cosmetic surgeries in the months ahead. Many people will reduce their social presence and thus there will not be many opportunities for them to proudly show off treatment results and their new smiles to others. Patients will only accept treatment proposals and spend money on them, if they understand these treatments are beneficial to their health (human beings are conscious about their personal health, after all).

Hence, start to emphasise the strong link between the immune system and dental health when speaking to patients. Try to see the world from their point of view: how does it feel, after living for so many days in lockdown and self-isolation, to face the daily fear of getting infected and/or being socially discriminated, if you behave in a wrong way? Wouldn't you be relieved that your favourite dental clinic implements processes that are aimed at benefitting the health of patients? Furthermore, it is our moral duty to enhance our patient's health, as well as to communicate this approach to them—not only on a theoretical level, but also practically.

6. Think more digitally

I would argue that the more your clinic embraces means of digital dentistry, the more it will thrive! Why? These days, patients will prefer fewer visits to doctors in order to minimise the exposure to possible viral dangers and the risk of getting infected. Hence, digital means such as CAD/CAM systems, or intra-oral scanners and cameras, which imply fewer physical patient contact and a more forward-thinking attitude, should be added to your clinic's armamentarium in order to set your clinic apart and attract new patients even in times of a pandemic.

7. Demonstrate your new processes

Start demonstrating the newly developed processes and rules for your clinic or practice by communicating them to your patients: send newsletters to the patients in your database, produce and post short videos of you and your staff using and applying these new processes and opt for social media channels that have the widest possible reach.

Remember—life will go on!

My dear colleagues, make this "stay home" period a productive one, since there will now be plenty of time to make all the necessary changes to your clinic's workflows and processes. It is important to remember that life will go on after this crisis. However, you need to adapt to and prepare for the post-pandemic era. Be proactive and start designing your own new set of rules. Those who understand this concept are more likely to prosper eventually. In my next article, I will delve more deeply into the implications the current pandemic has for dentists and their clinics in the future. Until then, remember: this is your time to get ready and prepare for the things to come! For any further questions, information, requests and guidance feel free to reach out to dba@yiannikosdental.com.

about the author

Dr Anna Maria Yiannikos (DDS, LSO, M.Sc., MBA) is one of the first two women worldwide to have obtained a master's degree in laser dentistry. She has owned a dental clinic for 30 years now and leads the innovative Dental Business Administration Mastership Course at RWTH Aachen University in Germany. She is an adjunct faculty member of the Aachen Center for Laser Dentistry.

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The perfect link between man and technology

In 2019, the novel implant system by the German implant manufacturing company TIZIO Hybrid Implants was unveiled for the first time. The implant is unique in that it combines the advantages of titanium and ceramics in one system. In this interview, Jennifer Wilken, CEO of the company based in Rostock at the shores of the Baltic Sea, talks about what sets their product apart and gives an outlook on what's to come for her company in the near future.

TIZIO HYBRID IMPLANTS
The Root of the Future

At IDS 2019, TIZIO Hybrid Implants presented itself to the world for the first time with a novel implant system. Hybrid implants like that have not been seen before. What was key reason behind developing a hybrid implant?
The idea of TIZIO Hybrid Implants is rooted directly in experience and draws from practicing dental technicians and dentists. We put great emphasis on a steady exchange with users. Development is characterised by interdisciplinary research with engineers, scientists and close involvement of university clinics on the one hand and by the professional exchange of information between medical professions on the other. In short: every developmental step is made based on direct feedback from practice. The vision of Prof. Günter Heimke at the DGOI congress in Hamburg in 1992 ("the goal is to have an implant body made from titanium on the inside, whereas the neck and the overall shape on the outside are made of ceramics") has finally become reality after more than 25 years.

We have been dedicating ourselves to the research and development of hybrid materials since 2005. We believe that one must not compromise the preservation of basic bodily functions. This is in keeping with our innovative and worldwide unique hybrid implant systems, which

Fig. 1: The TIZIO implant system will be available in two versions: as classic two-piece system (TIZIO F3), which enables implantation at bone level and covered healing, and as a system with an extended neck made of ceramics (TIZIO H6), which allows implantations at tissue level. In general, TIZIO offers a wide range of products for a variety of indications.

"We have been dedicating ourselves to the research and development of hybrid materials since 2005."

we have developed for dental and orthopaedic applications. Produced in Rostock by specialists with decades of experience in the industry, the individual systems will be launched in international markets. At the same time, we are constantly striving to find new solutions for dentists and patients in order to guarantee them the highest possible treatment safety and quality at all times. To this end, we collaborate with experts from various disciplines to research and develop innovative materials and processes, always driven by our guiding principle: "TIZIO—the perfect link between man and technology."

In order to combine the advantages of titanium and ceramics, you make use of the so-called glass soldering technique. What are the advantages of this technique and how does it work?
With the aid of glass soldering, it is now possible for the first time to bond titanium and ceramics together without creating gaps or bubbles in the process. The resulting hybrid implant behaves just like a monolithic material. Joining gaps associated with conventional bonding are now a thing of the past; the risk of peri-implantitis is reduced to almost zero. Long-standing limitations in the

> "Joining gaps associated with conventional bonding are now a thing of the past; the risk of peri-implantitis is reduced to almost zero."

fields of bonding and surface technology can now be overcome with glass soldering. The technique is well-established and has been scientifically proven in dentistry for more than a decade now. With the DCMhotbond product range (DCM GmbH), we are able to offer dental technicians innovative joining methods of pure, similar and also foreign materials.

Where do you see the current and future major challenges in dental implantology?
For more and more patients, biocompatibility becomes an increasingly decisive factor when choosing an implant system. As of yet, however, all-ceramic systems do not offer sufficient treatment safety and are limited to only a certain number of indications. This is why many practitioners opt for titanium implant systems instead of ceramic solutions. However, the titanium core of the hybrid implants offers practitioners great treatment safety and is thus an enormous gain for the treatment quality, since the patient's wish can ultimately be fulfilled. Innovative implant surfaces are also becoming increasingly more important. The overarching focus here is on faster osseointegration and the reduction of abrasion particles that may cause inflamed peri-implant tissue. TIZIO implants are additionally coated with a structured glass matrix from the outside by means of a thermal process. The diffused glass matrix creates a firm, material-locking bond with defined roughness depths that favour osteoconductivity. At the same time, chipping is reduced to a minimum as opposed to native ceramics and the accumulation of plaque is made more difficult. Recent studies indicate that dental biofilms adhere to the glass matrix less and, in addition, can be easily removed from it.

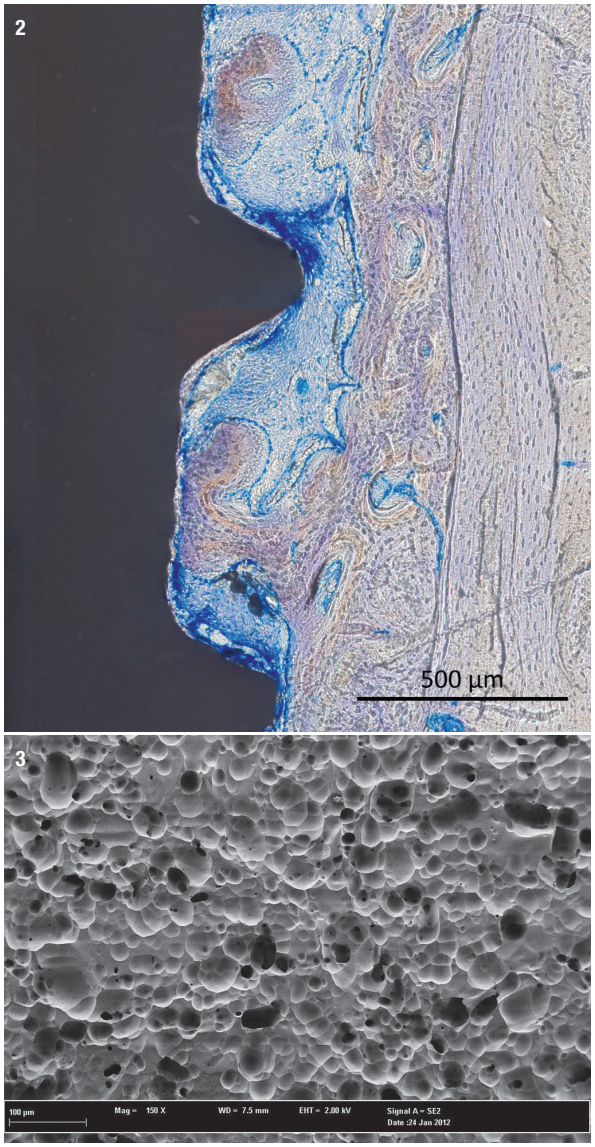

Fig. 2: Microscopic image of the TIZIO hybrid implant. (Source: Universitätsmedizin Rostock, Clinic of Dentistry, Oral and Maxillofacial Medicine). **Fig. 3:** Roughness depths in the glass matrix are the prerequisite for micromechanical bonding (Source: DOT GmbH).

Your implant system has now been successfully introduced and will be marketed in the near future. What are your goals for 2020 and 2021? Where do you see TIZIO Hybrid Implants at next year's IDS in Cologne?
What's particularly special is that the hybrid technology can be transferred to already existing implant systems. Almost every known interface on the market can be used with the TIZIO implant. This is particularly important for dentists who do not need to make adaptations in handling. They can continue to use conventional tools as well as the existing respective prosthetic solutions. At

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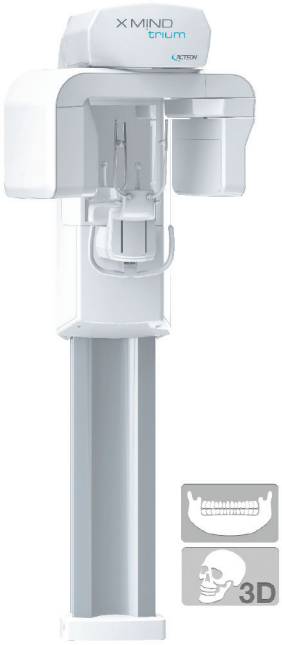

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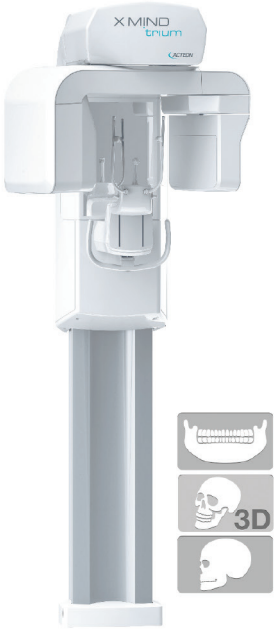

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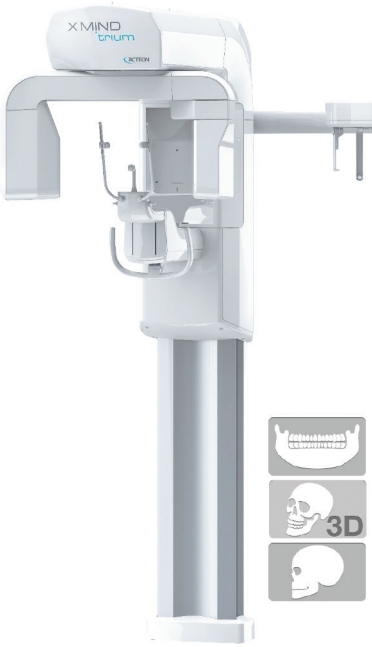

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TRUE LOW DOSE is the latest X-MIND trium CBCT innovation from ACTEON. A new algorithm associated with an innovative mechanism brings the X-ray sensor and source closer to the patient, which allows image acquisition with significantly reduced exposure time, resulting in a lower dose to the patient. The algorithm applied to these lower-dose projections improves contrast and decreases noise, thus accurately revealing the anatomical structures. With X-MIND trium and ACTEON Imaging Suite software, treatment becomes more efficient and safer, less traumatic and therefore less stressful. Bone density around the implant is assessed with a single click, allowing easier clinical decision-making. X-MIND trium has a small field of view (Ø 40 x 40) and provides ultra-high-resolution images (75 µm). X-MIND trium adapts to the growing needs of dental offices by pairing 2D panoramic with 3D imaging and digital cephalometric analysis when necessary. It is the ultimate Mac-compatible therapeutic tool that adapts to the practitioner's working environment.

ACTEON GROUP
17 avenue Gustave Eiffel, BP 30216
33708 Merignac Cedex, France
www.acteongroup.com

Straumann

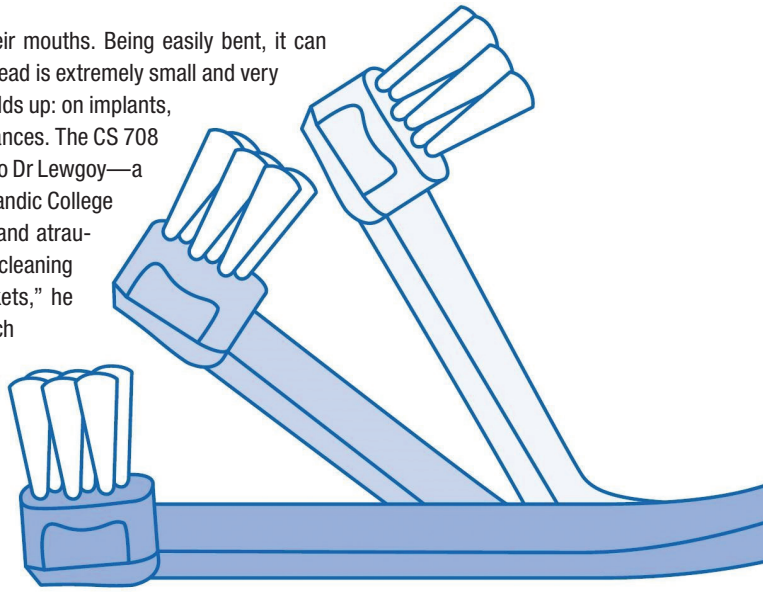
A reliable system grounded on premium quality

Smiling, laughing and eating naturally add to a quality of life that every edentulous patient would love to maintain. Straumann® Mini Implants offer these patients a less invasive, immediate removable fixation of their overdenture. Dentists can rely on a trusted brand that has a legacy in long-term scientific evidence. It allows dentists to offer more solutions to edentulous patients, even with severe reduced horizontal bone. Patients profit from a convenient retentive system, that is less prone to wear with various retention strength. The implant can be immediately loaded with the denture, meaning less visits and shorter procedures. The Straumann® Mini Implant is a one-piece implant made from Roxolid®, a groundbreaking strong material and SLA®, the best documented surface with long-term scientific evidence. It is available in Ø 2.4 mm diameter with 10, 12 and 14 mm length options and comes with an integrated Optiloc® prosthetic attachment for low maintenance and high patient comfort. A life-time guarantee is offered on Straumann® Mini Implants.

Institut Straumann AG
Peter Merian-Weg 12
4000 Basel, Switzerland
www.straumann.com

Curaden

Hitting the spot with the CS 708



The CS 708 is the solution for patients who cannot reach all areas of their mouths. Being easily bent, it can access difficult-to-reach areas, cleaning at just the right angle. The brush head is extremely small and very compact. Seven tufts of fine Curen filaments remove plaque wherever it builds up: on implants, fixed prostheses, archwires, orthodontic brackets, lingual orthodontic appliances. The CS 708 was developed by Drs Kirsten Warrer and Hugo Roberto Lewgoy. According to Dr Lewgoy—a specialist in oral and maxillofacial surgery and a lecturer at São Leopoldo Mandic College in Brazil—the CS 708 is the answer to the lack of easy-to-use, effective and atraumatic brushes for patients with implants. "The CS 708 is also perfect for cleaning around and between fixed orthodontic appliances, including lingual brackets," he says. The CS 708 in short: bendable brush head for cleaning difficult-to-reach spots; perfect for implants, fixed prostheses, orthodontic brackets, lingual orthodontic appliances; super-compact seven-tuft head; gentle and effective 0.12 mm Curen filaments; made in Switzerland.

Curaden Germany GmbH
Industriestraße 2–47
6297 Stutensee, Germany
shop.curaprox.com

Dentsply Sirona Implants

Versatility with the Astra Tech Implant System EV

Dentsply Sirona Implants continues to deliver innovation, versatility and clinical benefits in implant dentistry, based on the needs of customers and centred around well-documented and clinically proven implant systems. With the latest product development, the Astra Tech Implant System—one of the most well-documented implant systems in the market today, documented in over 1,000 publications in peer-reviewed journals—just got even better: Astra Tech Implant EV has a revised implant design change that comes with significant advantages—with a deeper implant thread design apically, it is easier to reach preferred primary stability and the handling experience is enhanced for easy installation. With this new change in design properties also comes the new name—Astra Tech Implant EV. Dentsply Sirona Implants continually strives to increase the application of implant therapy, based on science and without compromising safety and efficacy.

Dentsply Sirona Implants
Aminogatan 1
41321 Mölndal, Sweden
www.dentsplysirona.com/implants

Bicon

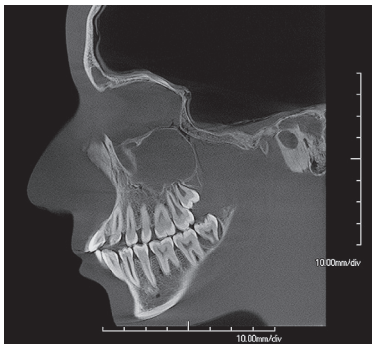
More than just an alternative to sinus lift and augmentation

The plateau design, which has been clinically proven for 35 years, and the self-locking tapered implant–abutment connection are the most important success factors of the popular Bicon SHORT Implant™ system. While screw implants can cause bone loss under unfavourable conditions, experts associate the so-called "plateau anchors" with possible bone gain. The plateau design, which offers at least 30 per cent more bone surface than comparable screw implants, makes all the difference. Studies indicate that the unique Bicon design favours the formation of mature lamellar Haversian bone. In addition, the biomechanical advantages of the plateaus optimise lateral force distribution, which supports bone preservation. The self-locking, bacteria-proof connection and the integrated platform-switching additionally promote the long-term success of the system in terms of function and aesthetics. With implant lengths of 5, 6, 8, and 11 mm, Bicon serves the entire range of indications in daily implant dentistry.

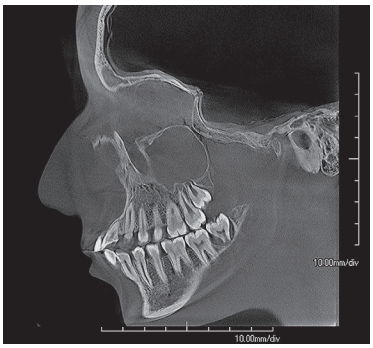
Bicon
501 Arborway

PreXion

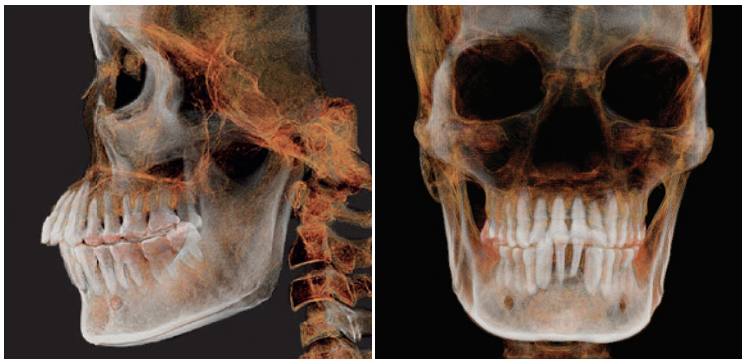
Superior 3D image quality with low radiation exposure



100 µm voxel size.



74 µm voxel size (PreXion3D EXPLORER).



3D image with a 150 x 160 mm field of view.

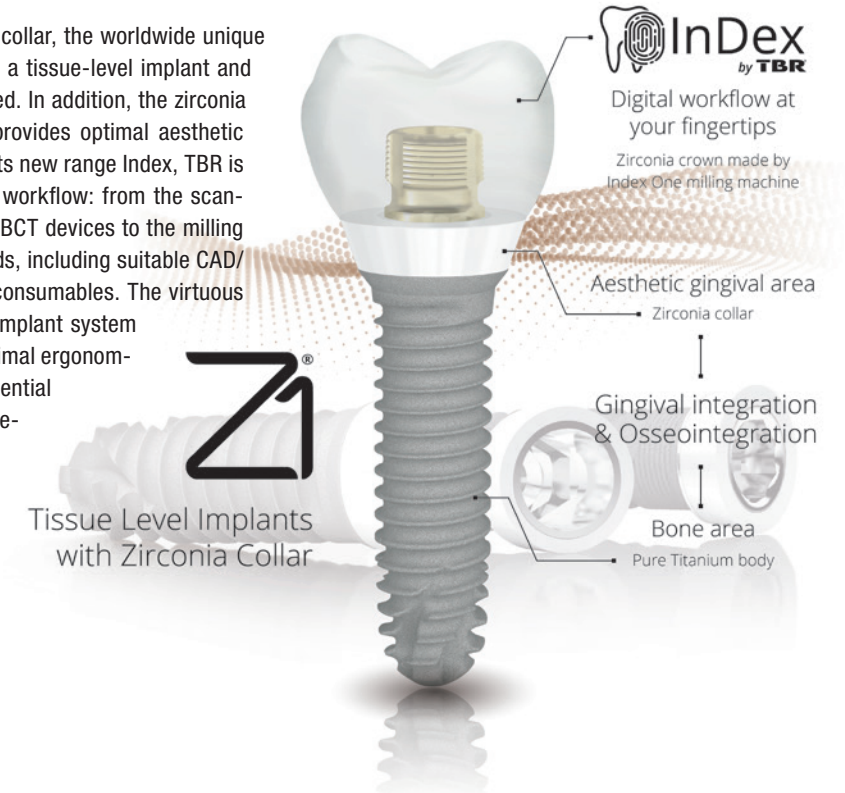
With many 3D-imaging systems today, good image quality is usually accompanied by high radiation exposure. Developed specifically for the European and US-American market, the new CBCT system PreXion3D EXPLORER offers the highest possible image quality at the lowest possible radiation levels. With a specifically controllable pulse generator, radiation is generated only when necessary to achieve the highest imaging quality. For a 20-second-long scan in ultra-HD 3D-mode, radiation exposure is only between 4.4 and 5.8 seconds. For a 10-second-long scan in standard scan 3D-mode, it is a mere 3.2 seconds. The small voxel size enables a more detailed representation of even the finest hard and soft tissue structures in ultra-high definition. The short image reconstruction times ensure a seamless workflow. The PreXion3D EXPLORER convinces with easy handling and extensive planning programmes that cover the entire range of indications. With the 3D-analysis function, fields of view (FOV) sizes of 50 x 50, 150 x 80 and 150 x 160 mm can be generated, offering numerous flexible diagnostic options for oral surgery, implantology, periodontology, endodontics, orthodontics, and general dentistry.

PreXion (Europe) GmbH
Stahlstraße 42
65428 Rüsselsheim, Germany
www.prexion.eu

TBR Dental

Tissue-level implant and digital workflow

Combining a titanium body and a zirconia collar, the worldwide unique Z1® implant offers many advantages. It is a tissue-level implant and thus only one surgical procedure is required. In addition, the zirconia collar promotes soft-tissue healing and provides optimal aesthetic results for the patient. With the launch of its new range Index, TBR is now offering clinicians a complete digital workflow: from the scanning phase with intra-oral scanners and CBCT devices to the milling phase with machines adapted to your needs, including suitable CAD/CAM software, associated materials and consumables. The virtuous combination of implantology with the Z1 implant system and the Index digital workflow ensures optimal ergonomics and shorter chair times, which is essential in the daily dental practice. Combine superior aesthetics and digital design with Z1 implants and TBR CAD/CAM Index dental solutions today!



TBR Dental Group
24, impasse René Couzinet
31500 Toulouse, France
www.tbr.dental

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Specialist in dental laser therapies

Next Start: **20th October 2020** | Aachen, Germany | 4 semesters

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RWTH International Academy
Kackertstraße 10 | 52072 Aachen | Germany
phone +49 241 80 23543 | fax +49 241 80 92525
info@academy.rwth-aachen.de
www.academy rwth-aachen.de

AALZ
Aachen Dental Laser Center

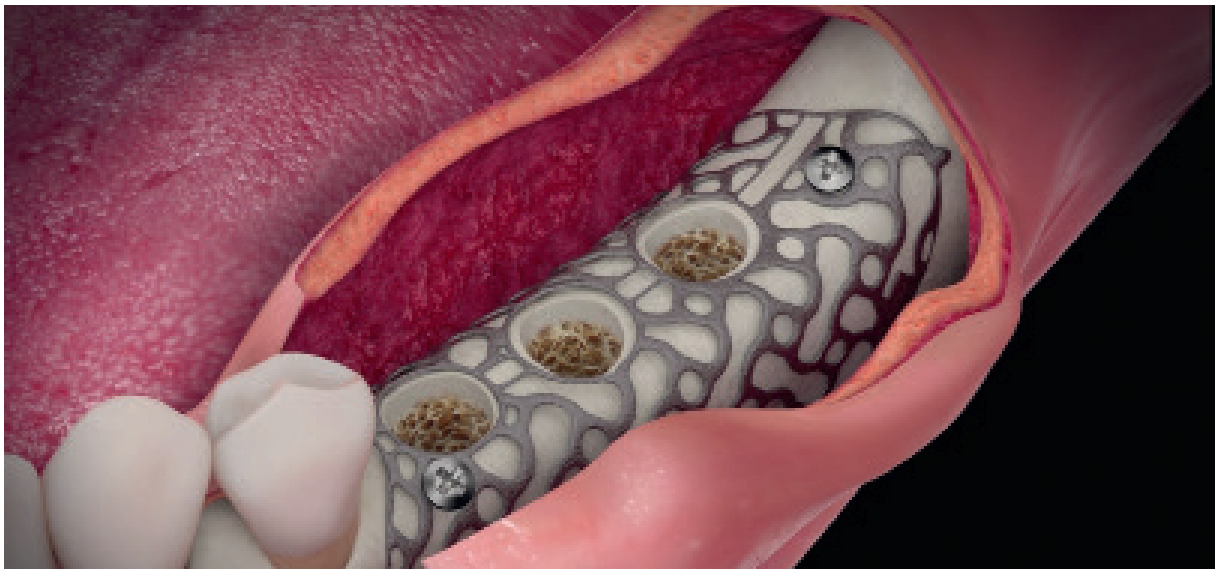
INTERNATIONAL ACADEMY | RWTH AACHEN UNIVERSITY

PROFESSIONAL EDUCATION PROGRAMMES

Your contact for more information: Leon Vanweersch • vanweersch@aalz.de - www.aalz.de

Geistlich Biomaterials

Combined implant and augmentation planning in 3D



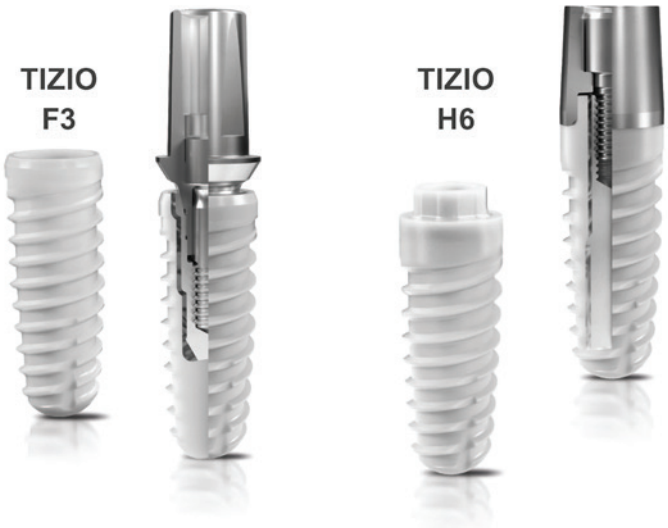
The titanium mesh ReOss® from Geistlich Biomaterials now offers practitioners the option of integrated implant positioning during surgery planning. When ordering a patient-specific 3D grid structure, which is created on the basis of CT or CBCT image data, implant positioning in 3D can be additionally requested. The Yxoss CBR® mesh can thus also be used as a template for orientation. Dr Marcus Seiler, developer of the system, states that practitioners can now forgo the use of a drill template when treating complex bone defects, such as horizontally and vertically combined bone defects. According to Sailer, the drill holes in the grid structure would also considerably simplify the insertion of bone grafting materials, which leads to shorter chair times as a result and the risk of the procedure is significantly reduced for the patient as well.

Geistlich Biomaterials Vertriebsgesellschaft mbH
Schneidweg 5
76534 Baden-Baden, Germany
www.geistlich.de

TIZIO Hybrid Implants

Implants made of titanium or ceramic?

Neither dental practitioners, nor patients need to be confronted any longer to this either-or-question. Thanks to the innovative glass soldering technique, it will henceforth be possible to create a firmly bonded compound between titanium and dental ceramic in order to merge the benefits of both materials. The titanium core inside the hybrid implant gives the usual safety and stability, as well as high prosthetic flexibility and ultimately the required treatment quality. The outer ceramic shell coated with a glass matrix ensures an optimal tissue compatibility, improved aesthetics furthermore less plaque accumulation and thus a lower risk of peri-implantitis. Simultaneously, we constantly aim for innovative solutions in order to give both, patients as well as dental practitioners, the highest possible therapeutic safety and quality. For this purpose, we perform research and development on innovative materials with people from various disciplines, being driven by our guiding principle: TIZIO – The best bonding between man and technology.



TIZIO Hybrid Implants GmbH
Breite Straße 16
18055 Rostock, Germany
www.tizioimplants.com

Camlog

New implant line providing confidence in the field of immediacy

In close collaboration with practising surgeons, Camlog has developed a new implant line to meet the demands for shorter treatment times, earlier prosthetic restoration, and fewer sessions. The PROGRESSIVE-LINE implant is suitable for all indications. The outer geometry of the new implant line, which is available for both CONELOG© and CAMLOG© connections, is geared to facilitate the implementation of treatment concepts such as immediate placement and restoration. The PROGRESSIVE-LINE is coupled with highly efficient protocols for the implant bed preparation in all bone types. Well thought-out features of this apically tapered implant, prove to be particularly advantageous in soft bone. Threads down to the apex make PROGRESSIVE-LINE ideal for immediate implantation and a coronal anchorage thread helps to master complex situations in reduced bone height. Additional features encompass a broadened thread height with strongly engaging threads, and flexible drill protocols which allow to adapt the stability according to the needs of the treatment plan. In addition, advanced drill designs offer efficient implant site preparation in dense bone—without requiring additional tools or a tap.

Camlog
Biotechnologies GmbH
Margarethenstr. 38
4053 Basel, Switzerland
www.camlog.com

LASERVISION

Lightweight magnifying goggle for laser treatment

Laser-safety loupes are especially required in dentistry. Due to the optical characteristics of a loupe the protection of the eyes is notably considered. When used in laser-assisted applications, loupes allow for an increase in the power- and energy density of the laser. Within dentistry, precise laser treatments and, as a consequence, successful treatment outcomes can be achieved using loupes. The new F27 magnifying eyewear combines the already proven F22 eyewear frame and a newly developed adapter with the magnifying glass of one of the leading German manufacturers. By virtue of the large number of available laser protection filters for this spectacle frame, a suitable magnifying glass can be configured for almost every laser application. Especially in combination with the HR2.5x/340 mm binocular loupe, the F27 can cover the entire range of dental laser applications. Additionally, laservision offers magnifiers with working distances of 420 and 520 mm for many more requirements. For further information on the available shields and filters for the innovative laser safety loupes, contact LASERVISION GmbH & Co. KG—we are always at your disposal.

LASERVISION GmbH & Co. KG
Siemensstraße 6
90766 Fürth, Germany
www.uvex-laservision.de

Training programme of the DGZI in cooperation with the GBOI

Time-saving—efficient—innovative

Dr Rolf Vollmer, Germany

Dear colleagues,

The German Association of Dental Implantology (DGZI) established and registered in 1970 is the oldest dental implantology association in Germany and represents in their more than 45 years of history practice-oriented and science-based implant dentistry and has set standards in oral implantology in Germany. DGZI is a non-profit association active in the field of dental implantology. DGZI is focusing its activities on the continuing education and training of dentists active in the field of dental implantology in Germany and abroad. The goal of these activities is to improve both quality and quality assurance as well as the safety of therapies in the interest of patients on the one hand, and providing factual information on existing and new therapeutic possibilities of implant-based tooth replacement on the other hand. Cooperation with universities and professional associations at home and abroad serve to support these objectives. Our DGZI curriculum as a continuing educational/post graduate programme is running in Germany for more than 20 years.

In addition to numerous scientific trainings and projects we always actively support our colleagues, dental technicians and the entire team with a premise of a professional association founded in 1970. With more than 4,000 members in Germany and more than 13,000 cooperative members worldwide, the DGZI is one of the international best networked implant specialist societies in Germany. As a modern professional company we offer a variety of training concepts and postgraduate training structures for the entire dental team. The international annual conference is the highlight in the implantology training landscape and beyond the borders of DGZI member's integral part of the training calendar of a variety of national and international dentists and their teams. Since 2002, the German Board of Oral Implantology (GBOI), also initiated by the DGZI, offers its training to dental colleagues from around the world.

The German Board's mission

The German Board of Oral Implantology (GBOI) is an independent organisation that is sponsored by the German Association of Dental Implantology. The Board's mission is to elevate the standards, and to advance the science and art of dental implantology by encouraging its study and improving its practice. The GBOI is chartered since

DGZI
Deutsche Gesellschaft für Zahnärztliche Implantologie e.V.

2002 by the DGZI. In fulfilling its purpose and objectives, the GBOI follows the German Dental Association's requirements like Federal Chamber of Dentists (BZÄK)/German Association of Oral and Maxillofacial Dentistry (DGZMK), German Consensus Conference of the most important scientific societies and associations of dental and oral implantology including DGZI.

GBOI
German Board of Oral Implantology

The international qualifications

"Expert in Oral Implantology" and "Specialist in Oral Implantology" are traditionally tested on the day before the annual conference and are accompanied by an international advisory and review team. With more than 400 "Specialists Implantology DGZI" DGZI has a very great potential of highly qualified practitioners in dental implantology, that set throughout Germany and Europe in their practices highest standards. DGZI offers the know-how to integrate scientific results in the short term in everyday practice by the close connection to the award of research projects with universities. Basis of each qualified implant training is the Curriculum Implantology DGZI, which is fully recognised by the German Consensus Conference (CC) Implantology.

Starting from 2014 we have a new, time-saving and innovative concept e.g. with home-learning parts and revised "conference style classes" modules. The curriculum of DGZI is one of the most successful curricula within the Consensus Conference (CC) Implantology for almost 20 years. The current Curriculum Implantology of DGZI is today an essential basis for the qualification of young dentists in Germany and Europe as well including modern learning techniques like the e-learning modules. Further training in online classes are available through the participation in the ITI Academy, which is available for all participants of our Curriculum Implantology. The so-called "Expert in Dental Implantology" for patients on the search for a suitable practitioner has a high priority.

Under the cooperation of the DGZI with Danube University Krems in Austria, the basis of a logical continuation of the curricular education—a Master of Science (M.Sc.) degree in Oral Implantology & Dental Surgery—is offered at special conditions for DGZI members on special individual request. The innovation power of the DGZI also finds expression with the "Team approach". The close cooperation with dental technicians and dental hygienists is an important part of a successful treatment concept.

In our training programme we have not only recorded the possibilities of your professional development, but in particular a concept of personal professional development in oral implantology. With the curriculum based and finalised on e-learning, you can extend your qualification to:

- "Expert in Dental Implantology" (CC),
- "Specialist Implantology DGZI"
- M.Sc. in Oral Implantology & Dental Surgery
- the ABOI Diplomate Status (as a further highlight of credentials after the successful finalised examination of the American Board of Oral Implantology/ Implant Dentistry)

The DGZI accompanies and promotes you on the way to your practice success! For your questions and suggestions our DGZI team and our partners in different countries are at your disposal.

contact

Dr Rolf Vollmer
First Vice President and Treasurer of DGZI
info.vollmer@t-online.de
sekretariat@dgzi-info.de

DGZI supports practitioners in

Becoming ABOI/ID Diplomates

In 2019 the American Board of Oral Implantology (ABOI) in the US decided to make the ABOI/ID Diplomate examination available for experienced dental practitioners internationally. The ABOI has an independent examination committee chartered by the American Academy of Implant Dentistry (AAID), the official US partner of DGZI. The DGZI board has defined the necessary conditions. Graduates of the "DGZI Curriculum Implantology", as well as holders of both "Expert in Dental Implantology" and "Specialist in Oral Implantology" certification are now eligible to apply for this examination to become ABOI/ID Diplomates. DGZI can offer its support on request in preparing for the written and oral examination through a preparatory seminar, in which situations similar to an examination are played through and specific contents for the oral examination are conveyed. The preparation for the written examination is based on our English language "Guide Book Implantology", which helps applicants to comfortably prepare for the examination via distance e-learning. The e-learning preparation can be started at short notice at any time.

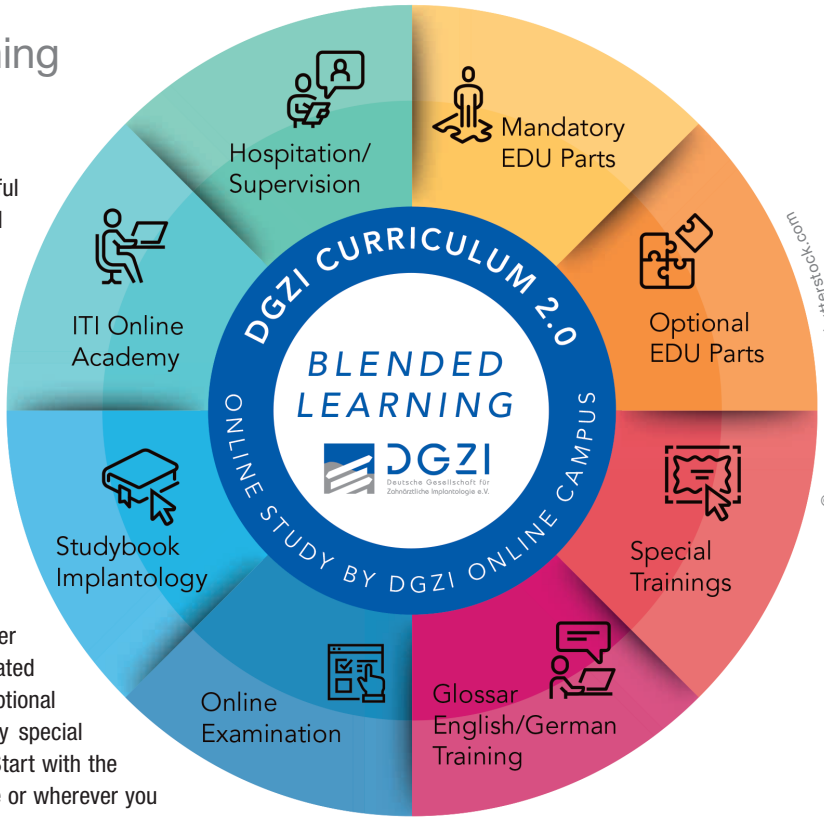
The first oral preparatory examination date is scheduled for the 50th International Annual Congress of DGZI, which will be held on 6 and 7 November in Bremen, Germany, and to which you are cordially invited. The examinations will take place one day ahead of the congress, on 5 November 2020. If you are interested in this new offer, please contact Dr Rolf Vollmer (First Vice President and Treasurer of DGZI) for more information via e-mail at info.vollmer@t-online.de.

Source: DGZI

DGZI Online Campus

International online training wherever you are

The structure and content of DGZI's successful implantology curriculum was revised in 2019. All participants now have access to the ITI Academy, where young dentists with little experience in implantology can learn the basics of implant dentistry. All participants in the curriculum will start their training in the new "DGZI Online Campus". This has been completely redesigned and enables e-learning from all devices and from anywhere you have online access. The theoretical basics of implant dentistry are well presented and taught in separate modules. Each module ends with a learning success check, which can be practised as often as required in advance in test examinations. After successful online training, three practice-related compulsory modules and two therapy-related optional modules follow. The curriculum is supported by special learning materials of the DGZI Online Campus. Start with the new concept of the DGZI online training at home or wherever you are—that is Blended Learning! Now at DGZI!



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Contact: sekretariat@dgzi-info.de; info.vollmer@t-online.de

American Board of Oral Implantology/Implant Dentistry
211 East Chicago Avenue, Suite 1100
Chicago, Illinois 60611-2616
Phone: 312-335-8793 | Fax: 312-335-9045

Application Route for International Practitioners

International implant practitioners looking to challenge the American Board of Oral Implantology/Implant Dentistry (ABOI/ID) board certification exam are required to apply through the below described Route.
To qualify to sit for the exam, international practitioners must fulfill the following application requirements.

Application Requirements:

- You have a minimum of seven (7) years of clinical practice experience in Implant Dentistry
- You have completed 75 cases of implant treatments and the implants have been fully re-stored and functional for a minimum of 1 year. This is a verbal requirement; you do not have to provide written proof of all 75 cases
- You have a minimum of 670 hours of Continuing Dental Education hours or Continuing Medical education hours that are specific to implant dentistry
  - 300 hours of the 670 of continuing education hours must be part of a continuum program in implant dentistry. The 300-hour requirement may be met by combining hours from multiple continuums, each containing a minimum of 60 hours of instruction. The ABOI defines a continuum as a series of implant specific CE courses given by the same sponsor which are in aggregate a minimum of 60 hours or more.

    The DGZI/GBOI program training will be counted as a continuum program.
  - **If you have completed an international specialty residency program and can provide evidence of completion, the specialty training will be counted as a continuum (Oral Surgeon, Maxillofacial surgeon).**
  - The other 370 hours of continuing education must be implant related in nature and may consist of the following categories:

Implant Surgery	Conscious Sedation	Pharmacology
Periodontology	Occlusion	Medical Emergencies
Computer Diagnostics	Treatment Planning	Bone/Soft Tissue Grafting

- You must provide evidence of an active dental license
- You are required to sit for the Part I Written and the Part II Oral Exam.

The ABOI/ID Board Certification application deadline is now December 1st of each calendar year. The applications for part I and part II can be found on the ABOI website at www.aboi.org. Once the part I application is completed, please send all requested documents via email to Diplomate@aboi.org. The Part II application and case submissions can be sent to Kathleen Huttner, khuttner@aboi.org, through Dropbox or WeTransfer.

If you have any questions, please contact the ABOI/ID or DGZI headquarters office.

Reflect on 50 years of implantology in Bremen this autumn

OEMUS MEDIA AG, Germany

On 6 and 7 November 2020, the 3rd Future Congress for Dental Implantology/50th International Annual Congress of the German Association of Dental Implantology (DGZI) will take place in Bremen in Germany. Under the theme "Visions in Implantology: 50 Years—From single Implant to digital Workflow", the professional association will be celebrating its 50th anniversary. It was in Bremen where a group of implantology enthusiasts helmed by dentist Hans L. Grafelmann founded the DGZI in 1970, the first European professional association dedicated to dental implantology. As one of the main highlights of the highly anticipated event, Presidents, chairmen and board members of the DGI, DGOI, BDO, DGZI as well as Past Presidents of numerous other professional societies will hold scientific lectures as part of the main programme.

Being the oldest dental expert society for dental implantology in Europe, the DGZI still breaks the mould today and proves its forward-thinking attitude with a highly modern congress concept. First-rate lectures, the live streaming of surgeries and dental procedures in high definition into the conference room and online, an extensive range of table clinics with hands-on appeal, an interactive digital poster presentation and a colourful industry exhibition by selected partners are an integral part of the autumn congress.

At the Bremen event, attendees will be given the opportunity to reflect on 50 years of implantology, discuss topical questions and paint a picture of prospective implantology in a fruitful interprofessional exchange with dental enthusiasts, renowned speakers and industry representatives from Germany and abroad. In addition, the organisers have developed a unique and updated congress structure in that the usual fragmentation of the congress into various podiums, workshops and side programmes will be eliminated. On both congress days, all lectures, panel discussions, live surgeries and table clinics will take place on the main podium, which also serves as exhibition area.

Parallel to the Future Congress of the DGZI, the annual meeting of the German Association for Laser Dentistry (DGL) will take place in Bremen. The two professional associations will share the congress infrastructure, industrial exhibition area and facilities for the table clinics. Additionally, there will be a special programme dedicated to oral hygiene.

For more information, go to www.dgzi-jahreskongress.de or contact the organiser at event@oemus-media.de. The DGZI and the organiser OEMUS MEDIA AG are looking forward to welcoming you to the Hanseatic city of Bremen this November.

contact

OEMUS MEDIA AG
Holbeinstraße 29
04229 Leipzig, Germany
Phone: +49 341 48474-0
event@oemus-media.de

50 Years – From single Implant to digital Workflow

VISIONS IN IMPLANTOLOGY

3RD FUTURE CONGRESS FOR DENTAL IMPLANTOLOGY

6–7 November 2020

Maritim Hotel & Congress Centrum Bremen/Germany

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event@oemus-media.de

Simultaneous translation German/English.
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event@oemus-media.de

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DGZI 50 YEARS

DGZI
Deutsche Gesellschaft für Zahnärztliche Implantologie e.V.

OEMUS MEDIA AG · Holbeinstraße 29 · 04229 Leipzig · Germany · Phone: +49 341 48474-308 · Fax: +49 341 48474-290 · event@oemus-media.de · www.oemus.com

Dr Xavier Struillou elected

New President of the EFP

Xavier Struillou is the new President of the European Federation of Periodontology (EFP), the global benchmark in periodontal science and practice and in implant dentistry. Associate Professor of periodontology at the University of Nantes in France, Dr Xavier Struillou succeeds Prof. Filippo Graziani from the University of Pisa in Italy at the top position of the EFP, a scientific organisation that brings together 37 national member societies and more than 16,000 periodontists and other oral healthcare professionals from Europe and around the world. A member of the executive committee of the EFP since 2017 and coordinator of European Gum Health Day 2018, Xavier Struillou is the first Frenchman to lead the EFP since Jean-Louis Giovannoli, who was the federation's first President back in 1992. Listening to EFP-affiliated societies and collaborating closely with them are high among Struillou's priorities: "At the EFP we aim to inspire our member societies, to guide them, and to serve them. The heart and the engine of our federation is our 37 affiliated societies. Their drive is the EFP's drive, and we are deeply indebted to them." For further information contact press@efp.org.

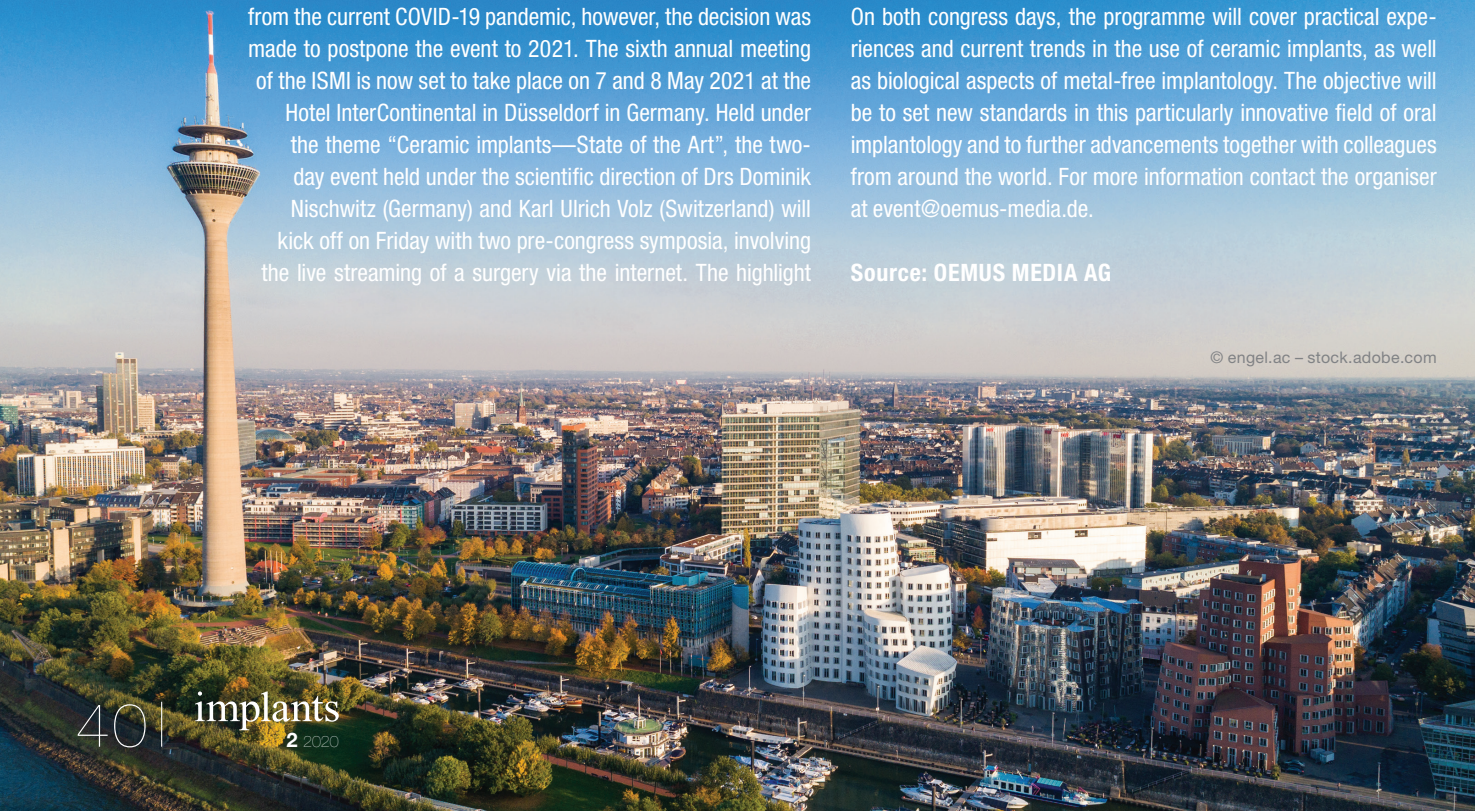
Source: European Federation of Periodontology

Annual meeting of ISMI

Postponed to 2021

The International Society of Metal Free Implantology (ISMI) initially planned to hold its 2020 annual congress in May in Berlin, Germany. Owing to the travel and other restrictions that have arisen from the current COVID-19 pandemic, however, the decision was made to postpone the event to 2021. The sixth annual meeting of the ISMI is now set to take place on 7 and 8 May 2021 at the Hotel InterContinental in Düsseldorf in Germany. Held under the theme "Ceramic implants—State of the Art", the two-day event held under the scientific direction of Drs Dominik Nischwitz (Germany) and Karl Ulrich Volz (Switzerland) will kick off on Friday with two pre-congress symposia, involving the live streaming of a surgery via the internet. The highlight of the first congress day will be the ISMI White Night, where both participants and speakers will be able to wind down in an informal atmosphere. Saturday will then be dedicated to scientific lectures. On both congress days, the programme will cover practical experiences and current trends in the use of ceramic implants, as well as biological aspects of metal-free implantology. The objective will be to set new standards in this particularly innovative field of oral implantology and to further advancements together with colleagues from around the world. For more information contact the organiser at event@oemus-media.de.

Source: OEMUS MEDIA AG



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Protection from COVID-19 with

3D-printed masks and face shields

Owing to mask supplies fast becoming exhausted, many healthcare professionals around the world are increasingly unable to comply with the recommended infection control practices. The shortage has prompted extended use and reuse of face masks in healthcare settings, thus increasing the professionals' risk of contracting SARS-CoV-2. To help ease the depleted supplies, many federal agencies have relaxed regulations on mask use and some institutions have taken the initiative to help those fighting on the front line against COVID-19 by producing 3D-printed face masks and shields. These masks are based on facial scanning, 3D imaging and 3D printing and consist of two 3D-printed reusable polyamide composite components, a face mask and a filter membrane support produced with the help of CAD. Additionally, the masks employ a disposable head fixation band and a filter membrane, both available from industrial manufacturers producing FFP2/3 protective masks, according to a recently published research article. In this article, the researchers note that clinical testing, including dermatological considerations, leakage and virological testing of the reusable components of the masks, has not been performed yet. This, according to them, is crucial before use, as are proper cleaning and disinfection control. The article was first published on 30 March 2020 in the *International Journal of Oral & Maxillofacial Surgery* and can be accessed online (Swennen GRJ, Pottel L, Haers PE. Custom-made 3D-printed facemasks in case of pandemic crisis situations with a lack of commercially available FFP2/3 masks, International Journal of Oral and Maxillofacial Surgery(2020),doi:https://doi.org/10.1016/j.ijom.2020.03.015).

Source: Dental Tribune International

FDA investigates into

Metals used in medical devices

Metals and metal alloys are commonly used in implanted medical devices and in inserts like amalgam dental fillings, and these materials are sometimes in contact with parts of the body for extended periods of time. Part of the FDA's evaluation to determine whether a medical device is safe and effective involves reviewing information about metals and other materials used in the device. The FDA have received adverse event reports that note biological responses to certain metals used in medical devices. Based on their evaluation, they believe the current evidence, although limited, suggests some individuals may be predisposed to develop a local or systemic immune or inflammatory reaction when exposed to certain metals contained in select implantable devices. Reported systemic symptoms include fatigue, rash, joint and muscle pain, and weakness. To better understand how patient respond to materials used in medical device implants and harness that information to improve the safety of devices in patients, the FDA is working to engage the public—in particular, scientists, patients, and healthcare providers—and industry stakeholders to determine the current state of the science, critical gaps in the existing science, and what approaches the FDA should consider.

Source: Food and Drug Administration (FDA)

Congresses, courses and symposia

EAO CONGRESS
EUROPEAN ASSOCIATION FOR OSSEOINTEGRATION

EAO Congress 2020

8–10 October 2020
Berlin, Germany
www.eao.org

50th DGZI International Annual Congress—Visions in Implantology

6–7 November 2020
Bremen, Germany
www.dgzi-jahreskongress.de

AAID Annual Conference

11–14 November 2020
Altlanta, GA, USA
www.aaid.com/Annual_Conference/

6th Annual Meeting of ISMI

7–8 May 2021
Düsseldorf, Germany
www.ismi-meeting.com

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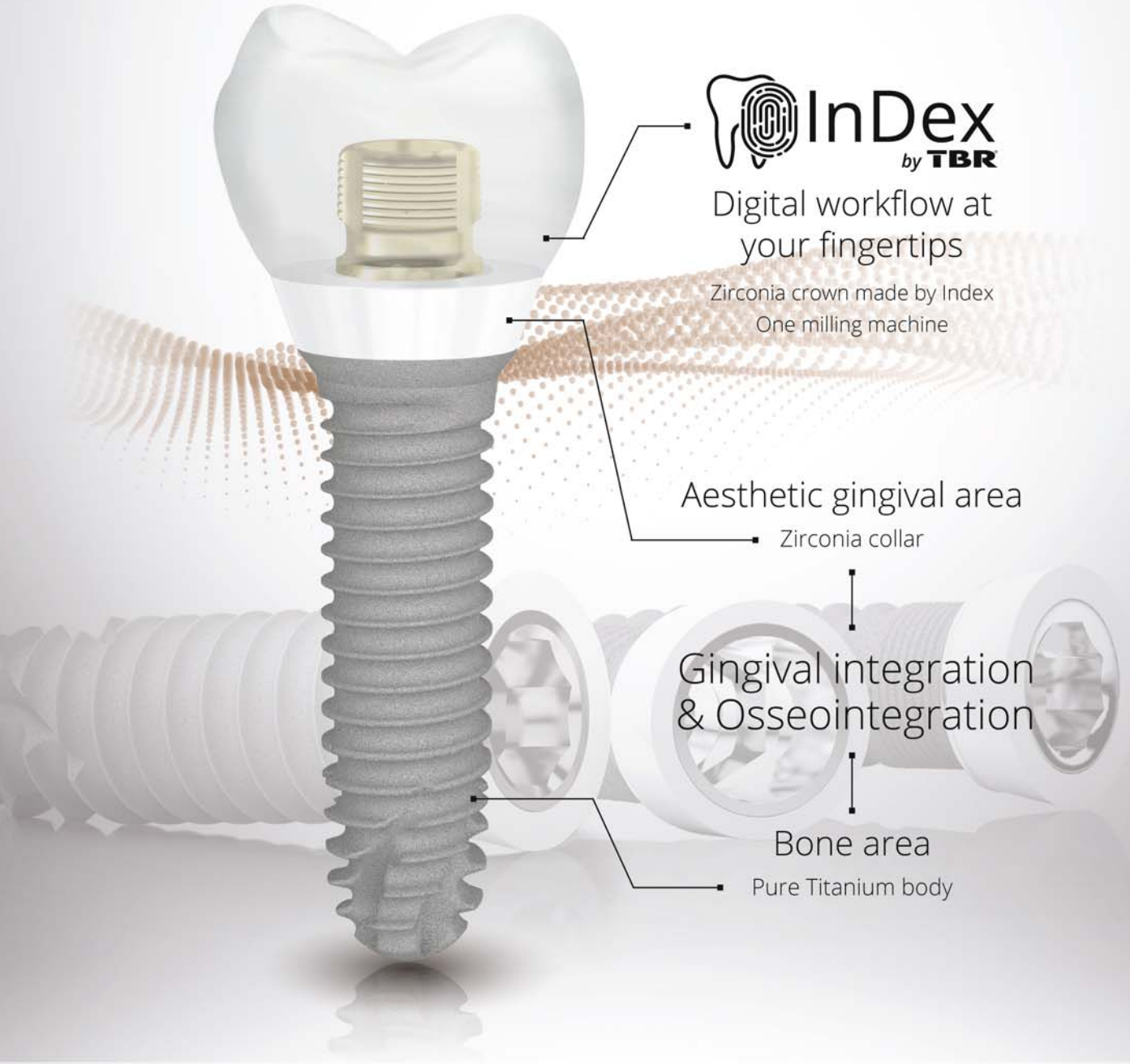

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