Trust is based on keeping promises.

Dear readers

Numerous dentists, surgeons, periodontists and dental technicians around the world place their trust in us every year. When you spontaneously choose a Straumann solution, the reasons – whether conscious or subconscious – are quite simple. It is precisely these criteria behind the decision that have given our company its reputation: scientific reliability stretching back decades, high quality standards, technical precision with ease of handling, and a capacity for innovation which never loses sight of continuity and sustainability. Whether an implant procedure or regenerative treatment, Straumann offers all the necessary solutions to ensure excellent esthetic results and long-term treatment success for your patients, based on restorative requirements and biological principles.

Every year, we launch more key products, which complement and further round out our portfolio. As a result, Straumann has created an efficient system for ensuring high-quality research and development, and for continuously optimizing products and dental workflows. The company is supported in this by its highly committed team of internal specialists, who collaborate with a network of renowned scientists and dental experts across all specialties. Our customers are supported exclusively by our customer-oriented, competent sales organization in 67 countries worldwide, and the tailored services of our MORE THAN IMPLANTS™ customer program.

This is all part of Simply Doing More for Dental Professionals – a promise we are committed to keeping anew everyday at all of our locations. And it is also the prerequisite for your trust in our products and solutions. So when you make a “spontaneous” decision to choose Straumann as your partner, this signals our achievement of the aim of these efforts.

Yours sincerely,

Frank Hemm

Head Sales Europe, Middle East and Latin America

Frank Hemm
Interview with David L. Cochran on the perspectives of even more efficient and more predictable regenerative methods.

The new Straumann® CARES® Mono Scanbody for more comfort and a further optimized digital workflow.

Andreas Filippi on his experiences as participating investigator in the non-interventional study on the Straumann® Bone Level Implant.
## Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRAUMANN® EMDOGAIN</td>
<td>4</td>
<td>Advances in periodontics and periodontal regeneration</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Interview with David L. Cochran, USA</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Clinical case study by Robert Levine, USA</td>
</tr>
<tr>
<td>STRAUMANN® STANDARD PLUS NARROW NECK® CROSSFIT™</td>
<td>20</td>
<td>Clinical case study by Sergio Piano, Italy</td>
</tr>
<tr>
<td>STRAUMANN® CARES® GUIDED SURGERY</td>
<td>24</td>
<td>Report on coDiagnostix™ J. Fleiner et al., Germany</td>
</tr>
<tr>
<td>STRAUMANN® CARES® DIGITAL SOLUTIONS</td>
<td>30</td>
<td>The new Straumann® CARES® Mono Scanbody</td>
</tr>
<tr>
<td>NIS ZUM STRAUMANN® BONE LEVEL IMPLANT</td>
<td>36</td>
<td>Interview with Andreas Filippi, Switzerland</td>
</tr>
<tr>
<td>SIMPLY DOING MORE</td>
<td>44</td>
<td>The new Straumann websites</td>
</tr>
<tr>
<td></td>
<td>46</td>
<td>Literature alerts</td>
</tr>
<tr>
<td>EVENTS</td>
<td>50</td>
<td>Preview: EAO 2012 in Copenhagen</td>
</tr>
<tr>
<td></td>
<td>52</td>
<td>Straumann EAO Satellite Symposium</td>
</tr>
<tr>
<td>INTERNATIONAL TEAM FOR IMPLANTOLOGY</td>
<td>54</td>
<td>Overview of national congresses</td>
</tr>
<tr>
<td>PREVIEW</td>
<td>56</td>
<td>Straumann’s 10th Anniversary at AEEDC Dubai</td>
</tr>
</tbody>
</table>
INTRODUCTION

Advances in periodontology and periodontal regeneration
From tissue repair to regeneration

The focus of periodontal treatment has shifted over time from a philosophy based on tissue repair to one based on tissue regeneration. This shift has particular significance in cases of advanced periodontitis when severe attachment and bone loss has occurred. In such cases, periodontal therapeutic procedures include various forms of surgical intervention. Those surgical periodontal techniques directed towards regeneration have the complete formation of lost periodontal tissues as their ideal outcome.

Improved outcomes with regenerative materials

Ample evidence is available that demonstrates periodontal regeneration surgery may have improved outcomes when materials are added to aid in the stimulation of host tissues. In cases of wide periodontal defects, bone graft materials are often used to help support tissue regeneration. A review of the literature indicates that combinations of various bone graft material and Straumann® Emdogain can achieve better outcomes than either material alone. Several research groups around the globe have focused on the mechanism of action of Emdogain alone and Emdogain combined with bone graft materials in order to better understand the positive outcomes achieved with these materials.

Groundbreaking translational research by Dr. Cochran

A preeminent research group led by Dr. David L. Cochran has investigated over a number of years Emdogain at the basic science level, in animal experimental studies, and in human clinical trials. Dr. Cochran combines a vast clinical and academic experience working with a variety of biologic materials. This work has been translational in that discoveries have been moved from the science laboratory to the clinic resulting in improved patient care.

Read the interview with Dr. Cochran where he shares with us his professional experience and research findings as well as his insights into the future of periodontology.
The future is very promising for biologic materials to regenerate the periodontal tissues.

Dr. Cochran, what is the ultimate goal of periodontal therapy?
The ultimate goal of periodontal therapy is to maintain the teeth in a healthy functional state for the life of the patient. Research over the last few years demonstrates that such an outcome has far reaching implications for the patient. For example, healthy teeth mean that the patient has less inflammation in their bodies and this has been shown to reduce the risk of many other potential systemic problems. This topic has also been discussed among periodontal societies trying to understand the influence of inflammatory gum disease on cardiovascular problems, control of diabetes and even pre-term births for example. In other words, the risk for systemic problems is decreased when a patient maintains healthy teeth. We do not always think about it but healthy teeth also influence what we can eat. This also has significant ramifications, for example: healthy teeth allow us to masticate (chew) our food well which reduces the risk for gastrointestinal problems and therefore increases one’s quality of life.

Lastly, a nice healthy smile promotes high self-esteem which is certainly helpful. All of these issues have been discussed in the literature and reinforce the critical importance of a healthy periodontal condition.

What advances have been made in periodontal therapy?
I would say that there have been two major advances in periodontal therapy that have resulted in paradigm shifts in our field. The first advance was the realization that the periodontal tissues could be regenerated versus simply repairing the tissue after periodontal disease has occurred and that periodontal regeneration can be enhanced with materials like Emdogain and other protein products. In the old days we used to clean around people’s teeth both non-surgically and surgically and try to reduce inflammation and simply try to prevent further loss of the periodontal structures. Now we know that we can not only reduce inflammation and prevent further tissue loss, we can now actually regrow some of the periodontal tissues and the protein factors such as those found in Emdogain can help us do this better and more predictably.

Another product on the market derived from blood platelets takes advantage of a single protein growth factor plus bone graft to help regenerate periodontal tissues while the powerful bone morphogenetic protein factor found in our bone tissue and used in spinal fusion as well as the leg bones is now used in the oral cavity to grow bone in the sinus and in extraction sites so that dental implants can be placed.

The future is sure to bring more proteins to stimulate periodontal tissue regeneration. For example, in collaboration with researchers at Straumann, we have been analyzing some...
of the proteins that make up Emdogain and shown that they have powerful effects on both angiogenesis\(^5,6,7\) – the growth of new blood vessels which is necessary for any new tissue growth – and osteoinduction\(^8\) – the formation of new bone. In addition, some interesting periodontal regeneration studies have been conducted in Japan on another protein growth factor – the fibroblast growth factor – which also facilitates the growth of blood vessels and is currently in clinical trials. Furthermore, another protein factor related to bone morphogenetic protein that also stimulated periodontal regeneration – the growth and differentiation factor – has been studied in Europe and within our group. All of these studies suggest that

---

**Fig. 1**
When Straumann\(^*\) Emdogain is applied the enamel matrix derived proteins precipitate on the root surface to form a matrix layer.

**Fig. 2**
The matrix stimulates the attraction and proliferation of periodontium.

**Fig. 3**
The cells secrete natural and specific cytokines and autocrine substances promoting the necessary proliferation.

**Fig. 4**
Supporting cells are attracted and differentiate into cementoblasts which start with the formation of the cement matrix in which the periodontal fibers will be fixed.

**Fig. 5**
The newly formed cement layer increases in thickness, extending the periodontal ligament.

**Fig. 6**
Within months, the defect fills with newly formed periodontal ligament.

---

Figs. 1–8: How Straumann\(^*\) Emdogain helps to regenerate the periodontium over time
the future is very promising for biologic materials to regenerate the periodontal tissues including bone, cementum and the periodontal ligament.

“It’s now a two-way street with the teeth influencing the body as well as the body influencing the teeth.”
David Cochran

The second advance was the knowledge that periodontal tissue loss occurred due to inflammation and not due to the bacteria that live around the teeth. Corollation being that periodontal inflammation can have effects on systemic health as I noted above 10,11.

We used to understand that systemic problems influenced the teeth, but only recently did we understand that the teeth – actually periodontal inflammation – influenced the rest of the body.

In other words it’s now a two way street with the teeth influencing the body as well as the body influencing the teeth. A good example of this was that for years periodontists knew that patients with uncontrolled diabetes had lots of infections with pus around their teeth and lots of bone loss thus, their systemic disease – diabetes – influenced the health of their teeth. Now we understand that periodontal disease can influence the patient’s ability to control their sugar level meaning that the condition of the teeth can influence the body’s ability to control their diabetes 20.

What are the potential benefits of using Straumann® Emdogain in periodontal therapy?

The use of Emdogain to stimulate periodontal regeneration has been extremely well documented in the literature for over 15 years. These studies include in vitro, animal and human clinical trials and reveal that there are positive effects on the cells that are responsible for the regeneration of the cementum, bone and periodontal ligament. Studies in animals show histologically that all the periodontal tissues are regenerated 5.
“Emdogain is a very well documented periodontal regenerative material in the literature having more documentation certainly than any other protein used for periodontal regeneration.” David Cochran

In fact in studies that we performed in baboons, significant new cementum, bone and periodontal ligament was formed well above a notch in the root placed at the base of the periodontal defects. In some cases these tissues virtually filled the entire defect. Other histological results demonstrated that when Emdogain was added to autogenous bone grafting around wider defects around the baboon teeth, significant stimulation of tissue regeneration occurred.

Other studies have shown that Emdogain not only stimulates bone and cementum formation, it also stimulates the growth of new blood vessels (angiogenesis), a process required for any new tissue formation.

To summarize, two important aspects are noteworthy in regards to Emdogain. One is that this is a very well documented periodontal regenerative material in the literature having more documentation certainly than any other protein used for periodontal regeneration and two, that this material alone and combined with bone grafts has sufficient convincing evidence of safety and efficacy that the FDA has approved it for use in multiple indications.

What would be your recommendations to practitioners who perform periodontal surgery?

In spite of knowing a lot about the effects of the proteins that comprise Emdogain, much less is known about the clinical application of this material and how it may be optimized in its use. Meticulous scaling and root planing is certainly recommended followed by the use of the neutral divalent cation chelator, ethylene diamine tetra-acetic acid.

Following this, the Emdogain is first applied on the root and on the bony margins of the defect when the bleeding has been controlled. If a bone graft is used, secondly place the graft in a dappen dish and coat the graft particles with Emdogain prior to placing it in the defect around the tooth.

Lastly, it is a good idea to place any Emdogain left over the defect and under the periodontal flaps since we know that the Emdogain proteins will promote healing by stimulating new blood vessels.

A number of years ago we published a paper showing that when Emdogain is added to allograft bone grafts, you increase the osteoinductive effect of the graft.

For this reason and all of the positive effects associated with these proteins when combined with a bone graft, adding some allograft or autogenous bone to the procedure appears to be a prudent part of the therapy.

* Intrabony, Mandibular class II furcation and Recession defects. ** Straumann® PreiGel™
“Emdogain in smaller size should allow the clinician to use the material more often since it will be less costly when added to bone grafting procedures.”
David Cochran

Emdogain will soon be available in a smaller size. In which indications would you use it?
I am excited about the availability of a smaller size of Emdogain. This size should allow the clinician to use the material more often since it will be less costly when added to bone grafting procedures. In addition, the smaller size will allow its use in smaller defects and for soft tissue grafting procedures involving even one or two teeth. Because these proteins have been so well documented for so long, it only makes sense to take advantage of the proteins to enhance a patient’s regenerative periodontal outcomes.

How important is the combination of Emdogain and bone grafts for a positive clinical outcome?
As noted above, we have shown using histology from animal experiments that Emdogain combined with bone grafts can stimulate the osteoinductive – and presumably the cementoinductive – effect of the bone graft. Furthermore, in severe periodontal defects in the baboon, we observed that the periodontal regeneration achieved was really remarkable. New cementum formation was prominent in the notch of the root and extended very far coronally. Dr. Robert Schenk taught me that new bone formation requires a solid base such as a bone graft particle or an osteoconductive implant surface such as SLA®. Our studies have indicated that allograft bone particles or autogenous bone graft particles are very effective at providing that base for new tissue formation and 14. Thus, when I have an opportunity in my periodontal regenerative procedures, I try to add some bone graft. Adding the graft with Emdogain also helps to stabilize the wound clot and in combination with Emdogain’s proven effect on angiogenesis, seems to me to be the most effective procedure to stimulate periodontal regeneration.

Are there any other thoughts you would like to share on the topic?
My final thoughts are that our main goal is to improve the care of our patient treatments. Emdogain is a mixture of proteins that has over 15 years of examination in studies supporting its positive effects on periodontal regeneration. In recent studies where we have taken certain proteins out of the Emdogain mixture suggest that these proteins have potent effects on bone and cementum and on the ability to grow blood vessels into the wound.

Interestingly – although the bone forming activity may involve some bone morphogenetic proteins – the majority of this effect seems to come from different proteins in Emdogain such as enamelin and ameloblastin, two enamel proteins that most of us don’t know much about. Most of our studies also suggest that the combination of the proteins in Emdogain is more effective than the separated components or even some of its components combined.
“It is a really exciting time for periodontics and I feel that we are on the tip of the iceberg in producing even more predictable and effective therapy for our patients.” David Cochran

Our studies thus far reinforce that Emdogain is a powerful material to stimulate periodontal regeneration but, at the same time, we have a lot to learn about these proteins and their clinical application. It is a really exciting time for periodontics and I feel that we are on the tip of the iceberg in producing even more predictable and effective therapy for our patients and helping them to maintain their natural dentition.

Doctor Cochran, thank you for this interview.

References: The complete list of references to this text can be viewed on the Straumann website: www.straumann.com/stargetref.pdf
A 50-year-old, non-smoking female presented with 8 mm of facial recession #23. A Class II Miller Recession Defect was noted. The patient refused orthodontic therapy to correct anterior crowding. The first phase of treatment included nonsurgical periodontal therapy.

Thorough root debridement and flattening of the root surface was completed followed by Straumann® Prefgel (2 minutes) to prepare the root for Straumann® Emdogain.

The root was thoroughly rinsed and air-dried prior to the application of Emdogain®. Incisions were made at the level of the cement enamel junction (CEJ) to create a mesial and distal pedicle followed by vertical releasing incisions and partial thickness dissection. The individual pedicles were created and then sutured together as a double pedicle.

The maxillary left premolar palatal area was used for the donor tissue for the subepithelial connective tissue graft. After harvesting, the CTG was then sutured to the interproximal papillae and laterally to stabilize the graft. Emdogain® was applied over the CTG and into the vestibule prior to coronally position the double pedicle graft. A periost-
teal releasing incision was made to coronally position the pedicle for tension-free suturing over the CT graft. The pedicle was intentionally positioned slightly coronal to the CEJ. At twelve days, healing was excellent. At 3 months, 100% root coverage was achieved with 0.5 mm probing depth on the mid-buccal of #23. An increase in attached gingiva was achieved.

Fig. 1: Presentation of a 50-year-old, healthy, non-smoking female with #23 recession. 0 mm of KG is measured as well as 8 mm of facial attachment loss. A Class II Miller Recession Defect is noted. Fig. 2: Close-up of #23 area. Fig. 3: After thorough root debridement, PrefGel® is applied for 2 minutes. Emdogain® is added onto the root surface after irrigation for 30 seconds and air-drying. Fig. 4: Incisions are made at the level of the CEJ to create a mesial and distal pedicle with
vertical releasing incisions. A partial thickness dissection is completed deep into the vestibule. **Fig. 5:** The two individual pedicles have been formed and are lying passively in the vestibule. **Fig. 6:** Emdogain® is reapplied onto the root surface. The DP has been created by suturing of the pedicles together. **Fig. 7:** The donor site. **Fig. 8:** The final graft measuring 10 × 7 mm. **Fig. 9:** The CTG is sutured to stabilize the graft. Emdogain® is applied over the CTG prior to coronally positioning the DP. **Fig. 10:** A periosteal releasing incision is made to allow tension-free suturing. **Fig. 11:** The DP is coronally positioned and sutured. **Fig. 12:** The maxillary left palate at 12 days post-op. **Fig. 13:** 12-day post-op of #23. **Fig. 14:** 3-month post-op. 100% root coverage has been achieved with 0.5 mm probing depth on the mid-buccal of #23.
STRAUMANN® EMDOGAIN® 015
DESIGNED TO REBUILD

- Cost effective treatment option
- Combine with various* bone grafting material
- Excellent clinical results1,2,3
- Clinical long-term benefit4,5
- Improved patient satisfaction6,7

*BoneCeramic™, autograft, allograft, bone-derived xenograft, β-Tricalcium phosphate or bioactive glass

NEW
EMDOGAIN® 015
FOR EVERYDAY

0.7 ml
0.3 ml
0.15 ml

4 Heden et al. J. Periodontol. 2006;77:295 – 301

COMMITTED TO
SIMPLY DOING MORE
FOR DENTAL PROFESSIONALS
Replacement of the lower incisors: immediate positioning and restoration of two Straumann® NNC Roxolid® implants

Initial findings and treatment plan
A 55-year-old male patient presented a marked mobility of the lower incisors with a shallow probing depth in a reasonably healthy periodontal condition (Fig. 1). The patient requested a reliable fixed prosthesis avoiding, if possible, the use of a removable temporary one.

The treatment plan called for the extraction of the lower incisors with the immediate placement of two Straumann® Narrow Neck CrossFit® (NNC) Roxolid® implants in sites 32–42. If primary stability was then attained, the plan was to place an immediate temporary screw-retained-bridge to replace the lower incisors.

Pre-operative planning
In line with a previously-made diagnostic wax-up, a temporary bridge, not in contact with the upper jaw, was produced (Fig. 2). A simple resin reference template was then used in order to place the bridge in the correct position (Fig. 3). The same reference template, with holes aligned with the implant sites, was employed during the surgical procedure to visualize the tooth set-up and ensure correct implant placement (Fig. 4).

Surgical procedure
The relevant teeth were then extracted and, after having carefully checked the integrity of the sites, a flapless approach for implant placement was chosen.
With the use of the resin reference template, the first drilling was precisely performed (Fig. 5). The second drilling (Fig. 6) was then accurately checked for correct placement according to planned position (Fig. 7). Since both fixtures exceeded the torque value of 35 Ncm, it was possible to put the immediate restoration into place.

Titanium temporary abutments, matched to the NNC implants, were adapted to the clinical situation by shortening them (Fig. 8) and the temporary bridge was placed in the planned position by using the resin guide once again. After having protected the soft tissue with a dental dam, the bridge was relined around the temporary abutments (Fig. 9). Once removed from the mouth, the bridge was then screwed onto NNC analogs (Fig. 10), the empty spaces were filled, any excess resin was removed and the temporary restoration was finally polished in order to reproduce the correct emergence profile (Fig. 11).

At the end of the surgical session, the temporary bridge had a satisfactory appearance with a precise fit on both NNC implants (Fig. 12). The temporary bridge was then screwed at 15 Ncm.

**Prosthetic procedure**

After 10 weeks of healing, the X-ray showed good bone integration (Fig. 13). The bridge was subsequently removed.
and the soft tissues around the implants were seen to be healthy (Fig. 14).

Therefore, the next step of making the final impression using NNC-specific transfer copings, was carried out (Fig. 15). By screwing the coping on the implants (Fig. 16), the impression was taken using a customized open tray (Fig. 17).

Then, for the final bridge, a screw-retained modality was selected in order to obtain the maximum space for the ceramic covering since, if a cement-retained modality had been used, it would have taken up more space also having to accommodate the abutments.

A golden alloy framework was subsequently created by the dental technician and checked in the patient’s mouth to ensure satisfactory marginal precision and fit (Fig. 18).

Next, a natural appearance was approached by matching the position and shape of the bridge to that of the original lower incisors before their extraction (Figs. 19, 20).

The final step was the positioning of the bridge in the patient’s mouth resulting in an accurate and esthetically pleasing match with the surrounding teeth, as shown in the frontal view (Fig. 21). The bridge was then screwed at 35 Ncm and the holes closed up with composite filling material.
The final X-ray confirmed the precision of the implant positioning and the correct prosthetic fit (Fig. 22).

Acknowledgement
The author wishes to acknowledge the contributions of Alessandro Giacometti, Dental Technician in Genoa/Italy, for the excellent execution of the lab work.

Dr. Sergio Piano
Dental surgeon and prosthodontist. Full-time private practice in Genoa/Italy. Speaker and lecturer, nationally and internationally, on Implantology and Esthetics. Author of several papers on the same topics. ITI Fellow.
With coPeriodontiX™, Straumann launches a software for the first time for the three-dimensional evaluation of parodontal bone status using cross-sectional image data (DVT). Focal point is the measurement of bone progression prior to, during and after treatment, as well as monitoring to measure the effectiveness of regenerative measures.

X-ray images have always proven a valuable tool in parodontological diagnostics [1, 2]. Usually two-dimensional imaging processes, such as bitewing images, intraoral images of single teeth or panoramic tomography are used for these purposes. All these processes are able to provide important diagnostic pointers, but none of them are without fundamental limitations [3], even at high quality images.

It is against this background that digital volume tomography (DVT) has gained increasing importance over the past few years and is now firmly entrenched in certain areas of modern dentistry [4, 5]. In today’s parodontology, DVT allows for precise answers to a number of diagnostic issues relating to structural bone changes in the dento-alveolar area [12]. High-resolution and overlap-free imaging of teeth and bone structures as well as their pathological deterioration play a major role here [6, 8, 9, 10].

The principle of radiological bone measurement

As no satisfactory software-based solutions existed to date for standardized use in the parodontological evaluation of cross-sectional data (DVT, CT), a software implementation was developed in cooperation with Straumann under the name of coPeriodontiX™ and is now presented for the first time in its current version 8.0 for daily clinical use. The principle of standardized evaluation follows the X-ray 6-point measuring principle in analogy to clinical assessment. By positioning a digital 3D coordinate system, placed centrally on the tooth to be measured, the software automatically generates transversal cross sections of the tooth (Figs. 1a, b).

Using settable, defined landmarks, the distance along the axis of the tooth is measured automatically at 6 measuring...
points circumferentially around the tooth (vestibular and oral, with mesial, central and distal measurement in each case) to
give a 360° evaluation of crestal bone status. The enamel
dentin junction and crestal alveolar bone serve as reference
landmarks (Figs. 2a, b). In the case of multiple-rooted teeth
any possible pathological furca involvement can be clearly
evaluated using a special 360° panorama view as well as
metrically measuring the degree of furca involvement (Fig. 3).
All findings can be provided individually in graphic or table
format, as desired (Figs. 4a, b).

Imaging processes in dentistry: 2D versus 3D

The main disadvantage of conventional 2D image process-
ing is the two-dimensional display of three-dimensional
anatomical structures. Important morphological aspects as
well as their pathological changes to the tooth-supporting
alveolar ridge can only be detected at advanced stages of
deterioration, or even not at all, due to overlapping images.
The amount of bone available can only be determined with
a certain degree of accuracy in the approximal spaces, the
detection as well as quantitative determination of double- to
triple-walled bone defects often remains a diagnostic chal-
lenge, even in case of high quality X-ray images [7]. In this
context, coPeriodontiX™ is intended to provide the clinical
user with a valuable tool and allows precise and standard-
ized evaluation of three-dimensional cross-sectional images
as part of parodontological diagnosis in addition to the in-
dispensable clinical exploration.

The central focus is on the measurement of available bone
mass prior to, during or after treatment, as well as moni-
toring following the treatment of vertical parodontal de-
fects and furca involvement, for example, by regenerative
measures.

LIMITATIONS OF DVT

« Artifacts
A major problem with all cross-sectional imaging methods
remains the generation of image artifacts. Typically, high-
density structural elements in the investigated object (i.e. metallic restorations, root pins, implants, osteosynthesis plates) lead to obliterating and hardening artefacts in beam direction. [13] Under circumstances these may impair the diagnostic assessment of directly adjacent structures (i.e. approximal spaces, peri-implant region), and may in part even mimick pathological structures.

» Effective radiation dose

The radiation dose for patients undergoing dental digital volume tomography largely depends on the DVT system, the type of detector used, as well as the exposition parameters of the X-ray itself. As a rule, “image intensifier systems” produce a slightly lower dose than “flat panel detector systems” [11].

Here the effective dose—in terms of risk management—can be reduced considerably by selecting an image volume adjusted to the area of exploration [14]. Scientific studies have shown that the dose [15–18] of digital volume tomography may well resemble the magnitude of intra-oral film status for a single tooth (with up to 14 individual images) and at the same time offer a considerably higher information content in direct comparison [6].

Nonetheless, strict indications according to the ALARA (as low as reasonably achievable) principle should be adhered to under all circumstances when employing DVT to minimize the exploration risk for the patient.
» Imaging accuracy and precision

When defining the precision and measuring accuracy for parodontological issues, a certain degree of deviation between the clinical situation and the resulting radiological information is inevitable but can be regarded as being clinically acceptable [6, 19, 21].

Regarding the reliability of radiological measurements initial study results [22] showed an overall measuring imprecision of two to three times the voxel size, regardless of previous knowledge in dental radiology of the users involved. Depending on the number of roots, measuring accuracies of between 0.26 to 0.34 mm recorded for single-root teeth, and between 0.27 to 0.55 mm for multiple-root teeth.

The effect of the individual user component did not prove to be significant. In principle, these values permit the conclusion that a basic accuracy at this level, compared to measuring imprecision during clinical diagnosis of the patient, can well be considered consistent and regarded as being acceptable from a clinical point of view.

» Conclusion

Especially for complex issues, the use of DVT can be viewed as a valuable diagnostic tool in modern parodontology applying the ALARA principle. The un-
distorted and non-overlapping three-dimensional imaging of the tooth-supporting alveolar ridge by methods such as DVT has the potential of playing a major role in parodontological diagnostics – under the precondition of robust scientific evidence. In this context, the coPeriodontiX software described here offers a first opportunity for supporting users in the detection of dental, parodontal as well as ossary deterioration. In specific this includes highly complex cases, and coPeriodontiX™ may also be an interesting option for surgical restoration (Straumann® Emdogain, BoneCeramic, Membragel).

Finally it should be mentioned explicitly that the software described here does under no circumstances replace clinical diagnosis, but should rather be viewed as a useful radiological means of support. Last but not least, this includes the option of portraying the soft tissue of the intraoral gingiva profile using Surface Scan data, for example, iTero™ (Fig. 5).

Perspectively, a number of further clinical studies are currently being conducted taking into account numerous diagnostic parameters to examine the technical features of presently marketed DVT systems (i.e. image resolution, image quality, creation of artifacts) and to exploit the existing diagnostic potential of DVT fully in the future, especially for its use in parodontological issues.

References: The complete list of literature to this text can be viewed on the Straumann website: www.staumann.com/stargetref.pdf
CONNECT YOUR COMPETENCIES

STRAUMANN® CARES® GUIDED SURGERY – GLOBAL EXCELLENCE MEETS LOCAL EXPERTISE

- Local template fabrication for a verified fit and short delivery times
- Your freedom of choice with an open system
- Straumann® CARES® caseXchange™: Seamless communication

NEW UPDATE
STRAUMANN
coDiagnostiX™ 8.5

COMMITTED TO
SIMPLY DOING MORE
FOR DENTAL PROFESSIONALS
NEW STRAUMANN® CARES® MONO SCANBODY

One piece to enhance the digital workflow
Digitizing prosthetic processes can improve the clinical and esthetic outcomes of dental restorations from both a professional and business perspective. Traditional impression-taking, casting and waxing techniques may lead to inconsistent restoration quality due to errors occurring during the process. This may result in poor clinical and esthetic outcomes, time-consuming adjustments during seating or even repeated patient visits.

Greater convenience for dentists and patients
In order to achieve excellent restorative results, Straumann® CARES® Digital Solutions offers a new and unique digital workflow for customized implant restorations, combining the precision of a validated workflow with the flexibility of an open system. Within this digital workflow, Straumann is now introducing an optimized auxiliary part, offering greater convenience for both the dentist and the patient: the Straumann® CARES® Mono Scanbody.

Features
The new scanbody consists of a single scanning component and the fixation screw meaning:
- increased convenience for the dentist and the patient due to a single component including self-retaining screw
- increased accuracy due to less components which need to be placed into the patient’s mouth

Accurate scan data for a precise design
As part of the intraoral scanning procedure at the implant site, the Straumann® CARES® Mono Scanbody is designed to provide accurate scan data for the precise design of customized Straumann® CARES® Abutments or screw-retained bars and bridges.

As a result, the digital impression allows immediate quality control by the dentist, and is designed to result in an excellent impression being sent to the laboratory. Furthermore, due to the reduced number of small components, the workflow with the new Straumann® CARES® Mono Scanbody has been improved, reducing discomfort for the patient and enhancing handling for the clinician. It eliminates or reduces impression retakes and restoration remakes, ensuring that seating appointments are efficient due to the excellent occlusion and contact-points of the restoration.
WORKFLOW DESCRIPTION

Intraoral scan
The dentist places the Straumann® CARES® Mono Scanbody in the patient’s mouth by positioning it with the integrated self-retaining screw into the Straumann implant. The dentist then takes an intraoral scan with iTero™ or the 3M™ ESPE™ Lava™ C.O.S. (Chairside Oral Scanner)* intraoral scanner and sends the digital data to the Straumann® CARES® partner laboratory.

Design of the abutment
The dental laboratory designs the customized Straumann® CARES® Abutment using Straumann® CARES® Visual Software and sends the data to the Straumann® Milling Center for production.

Finalization of the restoration
The milled Straumann® CARES® framework is now the base for the finalization of the dental restoration using the Straumann® CARES® Abutment, iTero™ model or 3M™ SLA model and the Straumann® repositionable implant analog.

Placing of the restoration
Finally, the dentist places the final dental restoration in the patient’s mouth.
STRAUMANN® CARES® DIGITAL SOLUTIONS
Product information

The new Straumann® CARES® Mono Scanbody will be available as of July 2012 in all countries where the Straumann® CARES® CADCAM System has been launched. It is available for all platforms of the Straumann® Dental Implant system (Bone Level and Soft Tissue Level lines): NN, RN, WN, NC, RC and the new Straumann® Standard Plus Narrow Neck Crossfit® Implant (NNC).

The new Straumann® CARES® Mono Scanbody is designed to deliver accurate scanning results for intraoral and extraoral use. Additionally, it will be compatible with the intraoral scanning systems iTero™ by Cadent and 3M™ ESPE™ Lava™ C.O.S.*

The current Straumann® Scanbody is still available. For hardware and software compatibility please refer to the overview below.

<table>
<thead>
<tr>
<th>Implant Platform</th>
<th>Material Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>NN</td>
<td>048.167</td>
</tr>
<tr>
<td>RN</td>
<td>048.168</td>
</tr>
<tr>
<td>WN</td>
<td>048.169</td>
</tr>
<tr>
<td>NC</td>
<td>025.2915</td>
</tr>
<tr>
<td>RC</td>
<td>025.4915</td>
</tr>
<tr>
<td>NNC</td>
<td>048.173</td>
</tr>
</tbody>
</table>

**Software and hardware compatibility**

- **Straumann® CARES® Mono Scanbody**
  - Straumann® Scanner CS2
  - Straumann® CARES® Visual 6.2 (validierter Workflow) im System 7.0

- **Straumann® Scanbody**
  - Straumann® Scanner CS2 etkon Scanner es1
  - Straumann® CARES® Visual 5.0 or higher – all versions currently available, except 7.0

- **Straumann Hardware**
  - Straumann® Scanner CS2
  - Straumann® CARES® Visual 6.2 (validierter Workflow) im System 7.0
  - Straumann® CARES® Visual 5.IO, 6.0 and 6.2

**Möglich mit Straumann® CARES® Visual 6.2 (validierter Workflow) im System 7.0**

*connectivity available by second half of 2012 iTero™ is a trademark of Cadent Ltd., Israel. 3M™, ESPE™ and Lava™ are trademarks of 3M or 3M ESPE AG. Used under license in Canada.
**INTERVIEW**

"The NIS design provides a true reflection of reality"

Interview with Prof. Andreas Filippi, oral surgeon at the University Clinics of Dental Medicine at the University of Basel (Switzerland).

*Straumann is known in the field for its soft tissue level implants. What were your thoughts when you heard about the Straumann® Bone Level Implant line that was launched in 2007?*

This was the right decision, and the move was overdue. Progress needed to be made, particularly in the esthetic zone. In patients with a high smile line and thin mucosa – sensitive situations from a surgical and esthetic perspective – there were repeated cases in which Standard or Standard Plus implants were not quite sufficient. Other companies have shown that platform switching works – and as such, the decision to expand the product range in this direction was the right one. As a result of this move, the range was enhanced without diluting the product philosophy but creating significantly more scope, also in the area of prosthetics and in particular with sensitive cases.

*What did you think when you saw the Bone Level Implant for the first time?*

When I first saw the implant on x-ray images I was surprised by how short it was, which is of course a result of the fact that it has no neck. The concept of using this new implant while leaving almost all the familiar instruments completely unchanged was one that simplified the changeover to bone level implants. The usual tools remained the same, and the overall principle was identical—all that was different was the tap and die.

*Has your use of bone level implants changed in any way over the last five years?*

Not necessarily. Any implantologist who tries out new products and is relatively tech-savvy assesses the potential right from the beginning and uses the implant wherever it is authorized. Over time I have identified three distinct types of user: there are those who resolve almost all situations with bone level implants, and those who work very little at the bone level and prefer implants at soft tissue level. I belong to the third camp: I use bone level implants in the anterior zone and in those sensitive situations I mentioned earlier. For implants outside the esthetic zone or wherever significant vertical bone loss has been suffered, I generally value the tulip design of the soft tissue level implant, particularly also because exposure is easier than with bone level implants. The latter have to be inserted more deeply, and in patients with thicker mucosa, exposure is more difficult than with a soft tissue level implant.

*The Straumann® Bone Level Implant has a different thread from Straumann® Soft Tissue Level Implants, and a tapered design. What has been the effect of this on the surgical procedure?*

This was straightforward for me in that we were already using Straumann® Tapered Effect Implants previously, and were familiar with the tools: we were already required to use a tap with the tapered effect implant, and we also had experience with the die. However, anyone who has not previously worked with the tapered effect implant risks forgetting the tap, thereby making it impossible to insert the implant in a way that helps to conserve tissue. I have also seen the die from tissue level implants being used in error. Such situations can be
avoided, however, if the assistant is familiar with the surgical procedure and makes the appropriate instruments available.

“The concept of using this new implant and leaving almost all the familiar instruments completely unchanged was one that simplified the changeover to bone level implants.” Andreas Filippi

How did the implant work clinically? With no problems whatsoever, which was to be expected. I would have found it extremely surprising if the transition from the Soft Tissue Level Implant line via the Tapered Effect Implant to the Straumann® Bone Level System had resulted in any major issues with functionality, as the part of the bone level implant that sits in the bone is almost identical to the tapered effect implant. It is simply important to ensure that sufficiently long gingiva formers or closure caps are used. If the implant is allowed to heal subgingivally, more time should also be reserved for exposure. This is most likely the biggest difference in application.

How do you view the Straumann® Bone Level Implant in comparison with other bone level implant systems? There are various aspects, not least the particularly fitting concept of “never change a running system”. Regardless of the specific implant surfaces, the organization behind them and the cost, the preference is for systems that can be managed well clinically and achieve excellent results with patients. There are various manufacturers which offer an impressive range of products in this area and have published, or will publish, the corresponding long-term data. Implant designs have become increasingly similar, not only with regard to platform switching but also with micro-rough surfaces, screw designs and the cylindrical outer contour. The difference is in the detail, the price and the connection between the abutment and the implant. For me, the Straumann® Bone Level Implant is undoubtedly one of the best platform switching implants on the market. Straumann is a company that thoroughly researches its products before launching them on the market. The essential feature as far as I am concerned therefore lies in the philosophy: it can be assumed that any new product launched by Straumann has been subjected to thorough preclinical and clinical testing, engendering a high level of confidence in the product. Users do not feel as if they themselves are “testing” the product, but that they have in their hands a fully developed product that can be safely put to use in the interest of the patient.

You talk about the research and development of new products. How do you see the future of implantology? I am convinced that the future lies in short implants—the days of implants being 12 to 14 mm long are over. Having experienced such positive results with even shorter implants, I barely even use 10 mm implants nowadays. After all, studies show that the greatest stress on the implant in the bone is located in just the upper 4 mm. A further aspect for me is the standardization of the screwdrivers needed for the various implant systems. In our clinic we often see patients who have received a dental implant somewhere or other in the world, and if the abutment has become loose it is often very difficult to identify the implant type and find the appropriate screwdriver within the necessary time frame. What is more, implant records should be provided throughout the world so that subsequent treatment providers can access all the relevant information at any time.
Straumann carried out a non-interventional study with the Straumann® Bone Level Implant in which 852 patients received a total of 1,532 implants. What do you think about this kind of study?

A study design such as this provides a true reflection of reality. An individual university clinic with a standardized implant procedure can generate extremely high success rates with few complications, but this is not necessary a reflection of day-to-day reality. Carrying out a study of this kind, with such a large number of dental professionals who do not operate identically and do not have the same infrastructure, is undoubtedly a more valid approach to identifying whether the implant actually works in daily practice. From a scientific perspective, a further advantage is the ability to generate a very high case volume within a short time.

“From a scientific perspective, a further advantage of the NIS is the ability to generate a very high case volume within a short time.” Andreas Filippi

An NIS also brings certain challenges.

Absolutely. The resulting data set is highly heterogeneous, with inconsistencies occurring in the completion of the documentation and leading to the significant dispersion of the data. It is true to say that, from a scientific perspective, a data set of this kind is not of the same quality as a standardized clinical study in which the same dentist always completes the documentation and follows a clearly defined procedure. Nevertheless, however, the way in which the data are obtained, or rather the consequence with which the data are recorded, clearly reflects dental reality in practice and in the clinics.

How were the data collection process with the patient and the collaboration with Straumann structured?

For us, data collection is relatively straightforward in that we already arranged recall consultations for implant patients anyway, as is also standard practice in other university dental clinics. This means that all patients who have received an implant from us are seen by us at least once a year, making post-operative care relatively straightforward. Collaboration with Straumann was, as always, uncomplicated, not only due to our geographical proximity but also because the people involved were already familiar with each other from their longstanding collaboration. The process was both pragmatic and unbureaucratic right from the beginning, when contact was established and the study initialized. We were given online access for data entry, and the study design was defined, as was the number of necessary implant cases. On the whole we were therefore able to integrate this study very easily into our day-to-day dental work.

Do you have any recommendations for future studies of this format?

One recommendation would be to train participants and issue specific guidelines for this purpose. We had a comparable situation with Straumann® MembraGel, and the corresponding user meeting. Recipients of this kind of training who then go on to train other dentists can talk to each other and determine how to ensure that a consistent message is communicated, resulting in greater clarity regarding the limits to the amount of freedom available to the individual treatment provider. This aspect also applies to data collection: in this NIS there were differences among the users with regard to the consistency of data collection. For those who are ultimately responsible for evaluating the data set, it is of course...
always preferable for the users to have collected data that are equivalent in terms of motivation and the care taken in the data collection process.

Would you recommend participation in a study of this kind to your colleagues? Yes, in principle I would recommend participation in an NIS to colleagues who have sufficient case volume in the indication being investigated. There are practices in which an NIS can be implemented well in everyday work because documentation work is already carried out regularly and efficiently. This is less the case in practices that make more clinical use of implants, without producing any documentation beyond x-ray images.

Professor Filippi, many thanks for your time.

---

NON-INTERVENTIONAL STUDY (NIS) CONCERNING THE STRAUMANN® BONE LEVEL IMPLANT

Key figures: 852 patients, 1,532 implants, 123 study centers in 9 countries

Study objective: To investigate the clinical success of Straumann® Bone Level Implants in daily practice.

Study type: in a non-interventional study, no restrictions on the study design are imposed on the participants; the implant can be used within all authorized indications and in all patients who do not fall within the predefined general exclusion criteria.

Duration of study: 3 years

Status: publication of 1-year data in the first quarter of 2012

---

NEW STRAUMANN WEBSITES

A website with an edge
Coinciding with the publication of the 2012 Annual Report, entitled “Bite”, Straumann launched its new online presence in February. The new company websites have a clear focus on the sizeable information requirements of our key target groups: customers, patients and investors.

Rapidly accessible information
The fully editorially revised content has been incorporated in a fresh, modern design. A simplified and clearly laid out user interface enables easy orientation. Target group-specific information is rapidly accessible on the pages via numerous links and various access points.

The right offer for everyone
The company website www.straumann.com is aimed at journalists, investors and jobseekers, and content is available in English and German. Information on Straumann products and solutions is available for dentists and laboratories on the relevant Straumann country-specific websites (e.g. www.straumann.co.uk). Patients can also find information here on tooth replacement solutions and regenerative treatment options. The new websites for the US and Germany are already live; the old websites for all other countries will be replaced by redesigned websites in the course of this year.

State-of-the-art knowledge
External partners with a proven track record in the relevant areas were consulted regarding the design concept, the development of the information architecture and the technical implementation.

We look forward to you visiting us online!

www.straumann.com
LITERATURE ALERTS
Selected literature of potential interest from recently published journals

**STRAUMANN® EMDOGAIN**


Monocortical bone defects were prepared in the mandibles of 18 minipigs and grafted using autogenous bone, biphasic calcium phosphate (BCP), BCP+polyethylene glycol (PEG), BCP+PEG+EMD, PEG+BCP+parathyroid hormone (PTH), or PTH-RGD+PEG+BCP. The defects were covered with a non-resorbable membrane and evaluated after 2, 4 and 8 weeks. In comparison to BCP and PEG+BCP, there appeared to be no significant effect of EMD, PTH or PTH-RGD. The highest amount of new bone formation was shown by autogenous bone graft.


Buccal plate extraction socket defects were treated with mineral collagen bone substitute scaffold alone or with rhPDGF-BB or enamel matrix derivative (EMD), or by a combination of EMD and bone ceramic in 16 patients. Grafting was performed at the time of extraction with advancement of the buccal flap, and trephine cores were taken after 5 months. New bone healing was observed around the biomaterial scaffolds. No significant differences in bone formation were found between the groups, but there was a tendency towards more new bone with rhPDGF-BB.


Periodontal ligaments and cementum 5 mm from the coronal part of the roots were removed from 32 incisors from seven dogs, but tissue in the apical part was preserved. The teeth were then immediately transplanted or were transplanted after culture with or without EMD for 6 weeks. Periodontal healing was evaluated after 8 weeks. Junctional epithelium downgrowth was significantly smaller for the cultured teeth, and there was significantly more new cementum covering...
the root-planed surfaces in the EMD group (72.2 ± 8.6%) compared to the culture only group (29.1 ± 22.9%) and the control (0.3 ± 1.1%) groups. New connective tissue attachment was therefore increased by the use of EMD.

STRAUMANN® DENTAL IMPLANT SYSTEM


In the mandibles of five dogs, 60 Straumann implants with either machined or SLA collars (30 of each) were placed to form six subgroups (A to C with machined collars, D to F with SLA collars). The implants were placed 2 mm above the bone crest (groups A and E), 1 mm above the bone crest (groups C and D), 3 mm above the bone crest (group B) or at the bone crest (group F). Healing screws were placed on the day of surgery and were loosened and re-tightened monthly. After 6 months, the mean crestal bone loss values were -0.52 ± 0.40 mm for group A, +0.16 ± 0.40 mm for group B, -1.28 ± 0.21 mm for group C, -0.43 ± 0.43 mm for group D, -0.03 ± 0.48 mm for group E and -1.11 ± 0.27 mm for group F. The difference between groups A and E, and between groups C and D, was significant. Peri-implant crestal bone loss may therefore be reduced by a completely SLA-surfaced implant.


A total of 60 Straumann SLA implants were placed in 14 patients and loaded after 6 weeks; peri-implant bone and mucosal conditions were assessed over 5 years. There were two implant failures and four implants lost to follow-up, so 13 patients with 54 implants were evaluated after 5 years. The 5-year cumulative success rate was 96.7% and the mean crestal bone loss was 0.77 mm. Early loading of implants after 6 weeks was therefore highly predictable.

Implant abutments on Straumann Bone Level were fabricated from composite resin with non-retentive veneers milled from ceramic or composite resin with intaglio surfaces that were acid-etched or silanated or particle-abraded and silanated. The fitting surface of the abutment was particle-abraded, cleaned and silanated. Isometric chewing was simulated at 40, 80, 120, 160, 200, 240 and 280 N for 20,000 cycles each and the abutments were loaded to fracture or to a maximum of 140,000 cycles. The average fracture load was 243 N and 206 N for ceramic and composite resin abutments, respectively, with significantly different survival rates of 21% and 0%, respectively. The survival rate for composite resin abutments was found to be similar to that for zirconia abutments from a previous study.


Straumann Standard Plus SLActive implants were placed in the posterior maxilla of 27 patients using the osteotome sinus floor elevation technique. RFA was measured at surgery and every week for 6 weeks, after which only implants with an RFA value of ≥ 65 were loaded. Of 42 implants placed, 40 were loaded after 6 weeks (early loading), all of which survived for up to 2 years with no clinical or radiographic complications. Early loading is therefore suitable for SLActive implants placed via the osteotome sinus floor elevation technique if adequate stability is confirmed.


The length of 32 Straumann implants (standard implants of length 10 mm) placed in posterior mandibles was measured from 17 post-operative panoramic radiographs using digital calipers and the magnification factor calculated. The calculated magnification factor of 1.27 ± 0.01 (1.28 ± 0.01 and 1.27 ± 0.01 in the premolar and molar regions, respectively) was lower than that given by the manufacturer (1.3). Excellent intraobserver reliability and good interobserver reliability was observed. The results indicated that panoramic radiographs can be used to evaluate preoperative implant length, but the magnification factor should be verified with other panoramic units.

STRAUMANN® SLActive


Immediate loading of two bar-plinted Straumann SLActive implants with a mandibular overdenture (converted from a conventional denture) was performed in 124 edentulous patients. Resonance frequency analysis (RFA) was performed during the evaluation period to assess implant stability. For an
evaluation period of 12–40 months, the implant survival rate was 98.8%; three implants were lost. A significant increase in implant stability was observed during the osseointegration period. Mandibular overdenture relining was necessary in 3% of patients, while 11% of patients required relining of the opposite maxillary denture. Loading of SLActive implants with a mandibular overdenture on the day of implant placement can therefore be successful.


Straumann Bone Level implants of either Ti or Ti-Zr (Roxolid) (six of each, both with the SLActive surface) were randomly placed in the mandibles of nine dogs and subjected to submerged healing. Radiographs were taken at placement and after 2, 4 and 8 weeks, and histologic and histomorphometric measurements were performed. The mean bone loss after 8 weeks was $0.02 \pm 0.33$ mm for titanium and $0.09 \pm 0.33$ mm for Ti and Ti-Zr implants, respectively, and the mean first BIC was $0.29 \pm 0.42$ mm and $0.26 \pm 0.32$ mm, respectively. Peak BIC was $83.4 \pm 5.9\%$ at 4 weeks for Ti and $86.9 \pm 6.8\%$ at 8 weeks for Ti-Zr. No significant differences were found between the two groups at any time point, indicating similar osseointegration between the two implants.

**Patient information brochure on iTero™**

The brochure Digital Impressions with iTero™ informs patients about the benefits offered by the state-of-the-art iTero™ System compared with conventional impression methods in terms of comfort and precision.

**Item no. 151.143**

**Languages:** English, German, French, Italian, Spanish, Portuguese, Dutch, Swedish, Norwegian, Danish, Finnish, Czech.
COPENHAGEN

Denmark has received much praise due to its lifestyle and liveliness. It is therefore not astonishing that the capital Copenhagen – the center of the very dynamic Øresund region – is known as one of the cities with the highest quality of life worldwide. Whether you are into world-famous Danish design, top-class gastronomy, culture, entertainment or other attractions (not forgetting the famous Danish beer), your stay in Copenhagen will surely be memorable.

www.visitcopenhagen.com

10-13 OCTOBER 2012 IN COPENHAGEN, DENMARK

“20 years – what have we learned?”

www.visitcopenhagen.com
20th Anniversary Meeting of the European Association for Osseointegration (EAO)

A special event
This 20th edition of the annual EAO meeting is special and provides the opportunity to look both at the past as well as into the future. The program contains a variety of pre-congress courses and sessions, all focusing on topics highly relevant for clinicians working in the field of implant dentistry. Short oral presentations, research competitions, and posters will also update us on the most recent research achievements relevant for implant therapy. Interactive sessions, such as discussions of cases published on the EAO website prior to the congress, will be included for the first time.

Straumann – contributing from the start
A large trade exhibition and a range of industry satellite symposia have also been included in the program. Straumann has been attending as one of the five Founding Gold Sponsors from the very beginning, i.e. when the first EAO meeting took place in Leuven, Belgium, in 1992. At this year’s Symposium – “Implants for Life” – Straumann will focus on the key success factors of implant treatment.

STRAUMANN EAO SATELLITE SYMPOSIUM

„Implants for Life“: key success factors for implant treatment
“Simply Doing More” is Straumann’s philosophy in serving the implant dentistry community. At Straumann, we focus our efforts on successful outcomes for patients and clinicians. In this year’s Satellite Symposium, highlights of the key success factors for implant treatment in both the surgical and restorative phase will be presented by well-known clinicians and speakers who will share evidence-based support and clinical examples with the audience. **Chair:** Ronald Jung, Switzerland. See Page 52/53

---

"Implants for Life"¹: key success factors for implant treatment

Key success factors in the surgical phase
Dr. med. dent. Ronald Jung, Associate Prof. and Vice Chairman at the Department of Fixed and Removable Prosthodontics and Dental Material Sciences, Center for Dental and Oral Medicine, University of Zurich. Visiting Associate Professor at the Department of Periodontics, Health Science Center, University of Texas, San Antonio/USA.

Abstract: Prerequisite for an optimal solution is a thorough risk analysis of the patient’s case profile in order to evaluate an adequate implant treatment plan, which is in compliance with the patient’s clinical, esthetic as well as his economic needs. Modern tools will be presented which can facilitate this planning phase as well as the surgical procedure. For a successful surgical phase, it is of utmost importance to identify the critical parameters of the individual patient situation in order to avoid failures. This decision process encompasses the planning, extraction, implant selection, augmentation and management of the soft tissue. In order to achieve optimal functional and esthetic outcome, it is crucial to generate stable peri-implant tissue conditions. Therefore the surgeon can choose between different implant types, surfaces, sizes, and has well-established options for regeneration of lost bone and soft tissue using GBR technology (Guided Bone Regeneration). Successful treatment options using well-known as well as novel technology materials will be presented which are proven to achieve long-term success for dental implants, as well in functional as in aesthetic parameters.

Key success factors in the restorative phase
Will Martin, DMD, MS. Associate Professor in the Departments of Oral and Maxillofacial Surgery and Prosthodontics and Director of the Center for Implant Dentistry at the University of Florida’s College of Dentistry, Gainesville/Florida.

Abstract: Evidence-based success has resulted in increasing utilization of dental implants in the treatment of all forms of edentulism. This success has led to higher expectations by our patients in having durable, natural-looking and longer lasting implant restorations. With this, we are also faced with continual advances in techniques, materials and technology that promise to provide increased productivity while improving clinical outcomes. While it is our responsibility to deter-

¹ see page 51
mine the restorative approach that is best indicated for a given clinical situation, several restorative factors have been shown to play a key role in successful long-term outcomes. Whether through communication (with the surgeon or technician), execution (provisional and impression procedures) or delivery (materials and maintenance), a commitment to consistency can lead to predictability. This short presentation will highlight these factors through sharing evidence-based support and clinical examples with the audience.

GIOVANNI SALVI, SWITZERLAND

Key success factors to provide long-term success and satisfaction in implant therapy

Dr. med. dent. Giovanni E. Salvi. Associate Professor and Vice Chairman and Graduate Program Director of the Department of Periodontology at the University of Bern/Switzerland.

Abstract: Several titanium dental implant systems have been developed and used for the rehabilitation of partially or fully edentulous subjects. The success of dental implants is based on the establishment of osseointegration. Studies have documented that osseointegration is dependent on the implant surface characteristics, with roughened implant surfaces yielding higher percentages of bone-to-implant contact compared with implants with smoother surfaces. From a clinical point of view, high survival and success rates have been obtained with sandblasted and acid-etched (SLA®) titanium surfaces in a variety of situations ranging from early loading to implants inserted in areas of poor bone quality. In addition to the implant surface characteristics, long-term success of dental implants is also dependent on the risk profile of the patient. Conditions such as poor oral hygiene, smoking, susceptibility to periodontitis, lack of compliance with maintenance care and diabetes were identified as risk indicators for peri-implantitis. It should be noted, however, that the prevalence of peri-implantitis has been inconsistently reported in the literature due to the lack of universally accepted definitions. The aim of this presentation is to summarize available evidence on the conditions associated with long-term survival and success of dental implants.

INFORMATION

DATE Thursday, 11 October 2012
TIME 16:45 – 18:45 hrs
VENUE Auditorium 11 – 12
LANGUAGE English

Please check our website for the speakers’ abstracts, résumés and program updates: www.straumann.com/eao2012
ITI National Congresses
2012 — 2013

A great year for knowledge and networking
ITI National Congresses represent the best way to combine networking with catching up on the latest in implant dentistry. With plenty of ITI National Congresses in the coming months, there are many opportunities to consolidate your knowledge, earn credit points and meet the top speakers in your region or country.

Check out all our upcoming congresses at www.iticongress.org.

<table>
<thead>
<tr>
<th>ITI Congress Iberia</th>
<th>May 10–12, 2012</th>
<th>Santiago de Compostela, Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITI Congress Japan</td>
<td>June 2 – 3, 2012</td>
<td>Tokyo, Japan</td>
</tr>
<tr>
<td>ITI Congress Brazil</td>
<td>September 7 – 8, 2012</td>
<td>Campinas, Brazil</td>
</tr>
<tr>
<td>ITI Congress Finland</td>
<td>September 14 – 15, 2012</td>
<td>Helsinki, Finland</td>
</tr>
<tr>
<td>ITI Congress Taiwan</td>
<td>September 15 – 16, 2012</td>
<td>Taipei, Taiwan</td>
</tr>
<tr>
<td>ITI Congress Canada</td>
<td>September 21 – 22, 2012</td>
<td>Toronto, Canada</td>
</tr>
<tr>
<td>ITI Congress Greece</td>
<td>September 29 – 30, 2012</td>
<td>Athens, Greece</td>
</tr>
<tr>
<td>ITI Congress Middle East</td>
<td>December 7 – 8, 2012</td>
<td>Abu Dhabi, UAE</td>
</tr>
<tr>
<td>ITI Congress France</td>
<td>February 7 – 9, 2013</td>
<td>Val d'Isère, France</td>
</tr>
<tr>
<td>ITI Congress Turkey</td>
<td>March 8 – 9, 2013</td>
<td>Ankara, Turkey</td>
</tr>
<tr>
<td>ITI Congress North America</td>
<td>April 4 – 6, 2013</td>
<td>Chicago, USA</td>
</tr>
<tr>
<td>ITI Congress Sweden</td>
<td>April 12 – 13, 2013</td>
<td>Stockholm, Sweden</td>
</tr>
<tr>
<td>ITI Congress Denmark</td>
<td>April 19, 2013</td>
<td>Nyborg, Denmark</td>
</tr>
<tr>
<td>ITI Congress Benelux</td>
<td>April 19 – 20, 2013</td>
<td>Antwerp, Belgium</td>
</tr>
<tr>
<td>ITI Congress South East Asia</td>
<td>May 16 – 17, 2013</td>
<td>Bangkok, Thailand</td>
</tr>
<tr>
<td>ITI Congress Argentina &amp; Uruguay</td>
<td>June 14 – 15, 2013</td>
<td>Buenos Aires, Argentina</td>
</tr>
<tr>
<td>ITI Congress Austria</td>
<td>June 21 – 22, 2013</td>
<td>Salzburg, Austria</td>
</tr>
<tr>
<td>ITI Congress Korea</td>
<td>July 6 – 7, 2013</td>
<td>Seoul, Korea</td>
</tr>
<tr>
<td>ITI Congress Australasia</td>
<td>July 26 – 27, 2013</td>
<td>Sydney, Australia</td>
</tr>
<tr>
<td>ITI Congress Southern Africa</td>
<td>July 26 – 27, 2013</td>
<td>Pretoria, South Africa</td>
</tr>
<tr>
<td>ITI Congress Mexico</td>
<td>September 26 – 27, 2013</td>
<td>Mexico City, Mexico</td>
</tr>
<tr>
<td>ITI Congress Italy</td>
<td>September 27 – 28, 2013</td>
<td>Italy</td>
</tr>
</tbody>
</table>
Do your patients want more?

Implant dentistry has earned its place as one of the standard treatment options available to dental practitioners and, today, patients expect more of oral health and esthetics. It is in the best interests of every practitioner to have a broad range of skills associated with implant dentistry at their disposal. The ITI Education Weeks are offered by leading academic institutions around the world in partnership with the ITI – an independent academic organization dedicated to all aspects of implant dentistry.

ITI Education Weeks offer:
- optimal environment in which to listen, look and learn new skills
- top international educators at state-of-the-art facilities
- evidence-based course content
- hands-on and live surgeries/prosthetic sessions.

Get more information about the ITI Education Weeks and our academic partners at www.iti.org/educationweek

Sign up for an ITI Education Week and earn CE credits that really count.

The International Team for Implantology (ITI) is an independent academic organization dedicated to spreading knowledge and promoting evidence-based methodologies related to implant dentistry. Join this international multidisciplinary network of experts and find out how the ITI can help to broaden your professional horizons.

ITI International Team for Implantology | Peter Merian-Weg 10 | 4052 Basel | Switzerland | www.iti.org
PREVIEW

Straumann’s 10th Anniversary at AEEDC Dubai
More than 28,000 dental professionals from 120 countries attended the UAE International Dental Conference & Arab Dental Exhibition (AEEDC) in Dubai from January 31 to February 2, 2012. The conference consisted of more than 105 lectures, 8 workshops and 20 specialized courses delivered by more than 110 specialists and experts.

His Highness Sheikh Hamdan Bin Rashid Al Maktoum, Deputy Ruler of Dubai, Minister of Finance and President of the Dubai Health Authority officially inaugurated the fair. The Sheikh took a tour in the exhibition area where 900 companies from 80 countries displayed their latest products, technologies and equipment. The tour included a stop at the Straumann booth where he was greeted by Charbel Saad, Straumann’s Area Sales Director for the Middle East and Dr. Zaki Abu Shaheen, General Manager of Al-Hayat Pharmaceuticals, Straumann’s distributor for the United Arab Emirates.

Straumann’s presence in the Middle East

Straumann has been present at AEEDC Dubai for ten consecutive years and has organized numerous educational events, such as the Comprehensive License Certification Courses (CLCC) in Implant Dentistry in collaboration with its scientific partner the ITI and the UAE Ministry of Health. At this year’s AEEDC, Prof. Jürgen Becker from the University of Düsseldorf conducted a practical workshop on Straumann Membragen® which was well received by more than 50 dentists. Straumann will continue to be present at top level dental events, such as the upcoming 2nd ITI Congress Middle East in Abu Dhabi (UAE) and thus emphasizes its commitment to the customers and patients in the Middle East region.

Next events to make a note of:

**ITI CONGRESS MIDDLE EAST ABU DHABI (UAE)**

**DATE** December 7 – 8, 2012
**WEBSITE** www.itl.org/congressmiddleeast

**AEEDC DUBAI (UAE)**

**DATE** February 5 – 7, 2013
**WEBSITE** www.aeedc.com

**COMPREHENSIVE LICENSE CERTIFICATION COURSE (CLCC) IN IMPLANT DENTISTRY**

**DATE** Dates for 2012 are fully booked. For 2013 dates, please send an e-mail to:
**INFO** education@straumann.com
STARGET DIGITAL for iPad, screen and as PDF

STARGET for iPad
With video functionality and context-relevant extra material. Available free in the App Store in German, English, Spanish, French and Italian language.

STARGET on the screen
Browse STARGET comfortably on the screen like a printed version: www.straumann.co.uk/starget, select option “interactive version” there.

STARGET as PDF
STARGET can also be downloaded as PDF version from our website: www.straumann.co.uk/starget
CONFIDENCE IN LIMITED SPACE

STRAUMANN® NARROW NECK CrossFit®

The Straumann Soft Tissue Level solution to address space limitations
- Confidence when placing small diameter implants
- Wide range of treatment options
- Simplicity in daily use

COMMITTED TO SIMPLY DOING MORE FOR DENTAL PROFESSIONALS