

Media release

New Straumann implants reduce treatment invasiveness

- *Straumann launches Roxolid® SLActive® implants in a new range of sizes to help avoid bone augmentation, saving trauma, discomfort, and cost*
- *Patients are more willing to undergo dental implant treatment if bone augmentation can be avoided*
- *Small implants with high strength and excellent osseointegration open up new treatment possibilities*
- *New '4mm Short Implant' backed by 5-year clinical results*
- *All Roxolid SLActive implants supplied with new Loxim™ Transfer Piece for easier handling*

Basel, 1 October 2013: Straumann today announced that it is introducing Roxolid SLActive implants in a new range of sizes that help dental professionals to avoid bone augmentation procedures, saving patients trauma, discomfort, time and money.

The key to the new implants is the unique material Roxolid, which is considerably stronger than pure titanium¹, the most widely-used dental implant material. Furthermore, in combination with the SLActive surface, Roxolid has demonstrated superiority to other high-strength materials with regard to osseointegration in a preclinical trial².

Since its initial market launch at the end of 2009, Roxolid has been introduced in most major markets but only with Straumann 3.3mm implants, which are designed for use in narrow spaces or where limited bone is available. Experience gained in an extensive clinical program, has provided the basis for Straumann to supply all its implants in Roxolid with the goals of minimizing invasiveness and making treatment possible for patients with insufficient bone. Consequently, Straumann Soft Tissue Level and Bone Level Implants are now available in Roxolid in 3.3, 4.1 and 4.8 mm diameters. All feature the SLActive surface for accelerated osseous healing and all feature the new Loxim Transfer Piece for easier handling.

New short implant

Straumann is also launching a new short implant, which is just 4 mm in length – making it the company's smallest implant. This implant has been evaluated for more than 5 years in a clinical trial³ and has shown excellent performance. Designed to avoid extensive augmentation procedures in patients with insufficient vertical bone for conventional implants, the new implant is available in Europe, Australia and New Zealand, in a soft tissue level design and in 4.1 mm and 4.8 mm diameters. Introductions in North America and elsewhere are planned and will follow regulatory clearances.

¹ Compared with grade 4 annealed (specifications from standard ASTM F67) and cold-worked titanium (data on file).

² Saulacic N, Bosshardt DD, Bornstein MM, Berner S, Buser D: Bone apposition for a titanium-zirconium alloy implant as compared to two other titanium-containing implants. Eur Cell Mater 2012; 23:273-286.

³ Slotte Christer et al, Four-mm implants supporting fixed partial dentures in the posterior mandible. 5-year results from a multicenter study. Presented at the 20th Annual Scientific Meeting of the European Association of Osseointegration, 10-13 October 2012, Copenhagen, Denmark.

The need for a new material

Pure titanium is well known for its biological compatibility with the human body, its ability to integrate with bone, its resistance to corrosion, and its strength. However, its mechanical properties are limited in the case of small diameter implants or components. This prompted the search for alternatives that offered biomechanical strength with unimpaired osseointegration. Roxolid is an alloy of titanium and zirconium, the only two metals commonly used in implantology that have been shown not to inhibit the growth of osteoblasts, the bone-forming cells that are essential for osseointegration⁴. In contrast to other alloys, Roxolid can be combined with Straumann's SLActive surface technology, which enhances osseous healing. Roxolid thus combines high tensile and fatigue strengths with excellent osseointegration and has been designed to increase reliability and confidence with small diameter implants^{5,6,7,8}.

Backed by one of the most extensive clinical programs

For more than 5 years, Roxolid has been undergoing a broad program of clinical and pre-clinical trials. With 17 publications, including 8 published clinical studies and 9 pre-clinical studies this is one of the largest research programs ever undertaken by a dental implant company. The trials include double-blind randomized controlled studies and Non-Interventional-Studies to assess the performance of Roxolid implants in daily practice. Implant performance in narrow spaces and in the anterior region have also been investigated.

In general, success and survival rates have been extremely high. For instance, in a multicenter study⁶ of Roxolid small diameter implants, the survival rate was 99% at 3 years. Furthermore, the average crestal bone loss reported is minimal.

Loxim – perfecting handling

In recent years Straumann has worked hard to perfect implant handling, adding convenience with uncompromised precision and reliability. Roxolid SLActive implants are supplied with Loxim, a new transfer piece that detaches faster and easier from the implant after placement in the patient – making the surgeon's job easier. Loxim requires an exceptionally high standard of precision and was developed in collaboration with an international team of expert dental surgeons from different practice settings and universities.

Roxolid SLActive implants are now available in Europe, North America, Australia and New Zealand, both as bone or soft tissue level options. Further markets will follow pending regulatory approvals.

More about Roxolid: www.straumann.com/roxolid

⁴ Steinemann SG. Titanium – the material of choice? *Periodontol* 2000. 1998 Jun;17:7-21.

⁵ Barter S, Stone P, Brägger U.: "A pilot study to evaluate the success and survival rate of titanium-zirconium implants in partially edentulous patients: results after 24 months of follow-up." *Clin Oral Implants Res*. 2012 Jul;23(7):873-81.

⁶ Al-Nawas B, Brägger U, Meijer HJ, Naert I, Persson R, Perucchi A, Quirynen M, Raghoobar GM, Reichert TE, Romeo E, Santing HJ, Schimmel M, Storelli S, ten Bruggenkate C, Vandekerckhove B, Wagner W, Wismeijer D, Müller F.: A double-blind randomized controlled trial (RCT) of Titanium-13Zirconium versus Titanium Grade IV small-diameter bone level implants in edentulous mandibles--results from a 1-year observation period. *Clin Implant Dent Relat Res*. 2012 Dec;14(6):896-904.

⁷ Benic GI, Gallucci GO, Mokti M, Hammerle CHF, Weber H-P, Jung RE: Titanium-zirconium narrowdiameter versus titanium regulardiameter implants for anterior and premolar single crowns: 1-year results of a randomized controlled clinical study, *J Clin Periodontol*. 2013 Aug 14. Epub ahead of print.

⁸ Gottlow J, Dard M, Kjellson F, Obrecht M, Sennerby L. Evaluation of a new titanium-zirconium dental implant: a biomechanical and histological comparative study in the mini pig. *Clin Implant Dent Relat Res*. 2012 Aug;14(4):538-45.



About Straumann

Headquartered in Basel, Switzerland, Straumann (SIX: STMN) is a global leader in implant, restorative and regenerative dentistry. In collaboration with leading clinics, research institutes and universities, Straumann researches, develops and manufactures dental implants, instruments, prosthetics and tissue regeneration products for use in tooth replacement and restoration solutions or to prevent tooth loss. Straumann currently employs approximately 2300 people worldwide and its products and services are available in more than 70 countries through its broad network of distribution subsidiaries and partners.

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