Product Information

Straumann® SLActive®
Performance Beyond Imagination
Maximizing Treatment Success
IMMEDIATE LOADING
High predictability in immediate loading

COMPROMISED PATIENTS
Emerging success in Diabetic and Irradiated Patients

ENHANCED BONE GRAFTING*
Significantly higher formation of new bone aggregate

*Based on results of a pre-clinical study in animals (minipig); the preclinical testing is not correlated to long-term clinical outcomes in humans.
For over six decades, Straumann® has made significant contributions to progress in the field of dental implants. Through pioneering innovation, we have redefined the boundaries of possibility for dental professionals and patients. We have made faster treatment, shorter healing time, and better outcomes a reality.¹ Now, the extensive healing potential of SLActive® can be seen even in challenging patients and treatment protocols.

As dental implants are now becoming a mainstream treatment option, clinicians face ever-increasing patient expectations. Patients expect successful treatment results irrespective of their bone quality, age, lifestyle, or medical history.

Achieving predictable treatment outcomes has been the main focus of the SLActive® clinical development strategy. Together with leading clinicians worldwide, Straumann has studied the clinical performance of SLActive® implants under the most challenging medical conditions and treatment protocols to demonstrate the outstanding healing capacity of the SLActive® surface. As new insights emerge and new data becomes available, discover how you can benefit from the high performance SLActive surface to support your patients’ healing capabilities.

IMPLANT SURVIVAL RATE IN IMMEDIATE LOADING AFTER 10 YEARS²

98.2% survival rate

Randomized controlled multicenter study (96 patients, 127 implants)
Immediate loading with long-lasting results.

New long-term data from a randomized, controlled, multicenter study demonstrate the impressive performance of SLActive® with immediate loading. In fact, the SLActive® Implants delivered a 10-year survival rate of 98.2% in this challenging protocol.²

Ever increasing patient expectations continue to drive demand for faster, safer and more efficient treatment protocols. Immediate loading allows the clinician to place a prosthetic restoration on the same day as the implant. This approach allows a patient to benefit from the restoration straightaway. However, this demanding protocol carries a higher risk of failure due to premature loading of a healing implant.
STUDY CONCLUSION

- SLActive® implants provide a long-term highly predictable treatment option
Discover the high performance of the SLActive® surface
One of the most challenging patient groups for implant treatment includes patients who have undergone a combination of tumor surgery, chemotherapy and radiotherapy*. Irradiation leads to decreased bone vascularity, impaired osteoblastic activity and reduced bone vitality which severely compromise bone quality in these patients. The fragile mucosa and the risk of osteoradio-necrosis present further challenges. However, from a quality-of-life perspective, this patient group stands to benefit the most from implant supported prosthetic rehabilitation. SLActive® showed a 100% success rate in irradiated patients in a recent randomized clinical trial (RCT). Based on published reviews, no other implant surface has demonstrated such a success rate in this patient group within an RCT setting. Remarkably, the 5-year follow-up of the trial showed that none of the surviving patients had an SLActive® implant failure. The effective implant survival rate was an outstanding 100%.

** SLActive® PERFORMANCE IN IRRADIATED PATIENTS

Randomized Clinical Trial:
- 102 implants, 20 patients (1 year/19 patients, 5 years/15 patients)
- Post-surgery, radiotherapy and chemotherapy for oral carcinoma

1-year follow-up:

<table>
<thead>
<tr>
<th>Implant Type</th>
<th>Implant Success Rate (%)</th>
<th>Implant Survival Rate, Adjusted*** (%)</th>
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<tbody>
<tr>
<td>SLA®</td>
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5-year follow-up:

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One patient was excluded from the study due to tumor recurrence. Therefore, the graph is based on 19 patients with 97 implants.

Excludes four additional patients who died due to cancer. Therefore, the graph is based on 15 patients with 79 implants.

* Patients previously irradiated in the head and neck should follow the recommendations for the clinician treating patients previously irradiated in the head and neck. Communication with the patient’s oncologist and cumulative irradiation dose should be less than 50 Gy. Implants should be placed no less than 14 days prior to radiation treatment.


*** Adjusted, excluding the patients deceased due to cancer mortality.

Patients with diabetes have reduced wound healing capacity,\textsuperscript{15,16} putting dental implants at risk, particularly if the patient is unaware of the condition. Worldwide, 1 in 11 adults has diabetes, while among adults 60 years of age and older, the prevalence is twice as high.\textsuperscript{17}

Over the past 30 years, the number of people with diabetes in the US has quadrupled and, according to the US Center for Disease Control (CDC), the figure could increase to as many as one in every three adults by 2050.\textsuperscript{18} In an estimated 50% of people with type 2 diabetes, the disease remains undiagnosed.\textsuperscript{17}

NEW RESEARCH SHOWS THAT SLActive\textsuperscript{®}
DEMONSTRATES HIGH ANTI-INFLAMMATORY POTENTIAL:

- Roxolid\textsuperscript{®} SLActive\textsuperscript{®} surface stimulates an early antiinflammatory cell response.\textsuperscript{30}
GROWING CLINICAL EVIDENCE OF HIGHLY PREDICTABLE PERFORMANCE OF SLActive® IN DIABETIC PATIENTS:

A new clinical study\textsuperscript{19,20} that compared SLActive® performance in patients with and without diabetes showed uncompromised performance of SLActive® implants:

- 100% implant success rate in the diabetic group
- Bone changes similar to those in healthy individuals
- Despite the observed lower levels of bone quality all implants in this study showed good primary stability

STUDIES PERFORMED WITH STRAUMANN® SLACTIVE® IMPLANTS SUPPORT THEIR PERFORMANCE IN PATIENTS WITH POORLY AND WELL CONTROLLED TYPE 2 DIABETES.

With a total of 215 implants placed in patients with poorly controlled type 2 diabetes and well-controlled type 2 diabetes over all studies, only 2 SLActive implants (2/191 = 98.9% survival) and one SLA control (1/24 = 95.8% survival) failed in type 2 diabetic patients\textsuperscript{21-29}. Restoration was uneventful and clinical, as well as inflammatory parameters, were comparable independent of the diabetic status of the patients. SLActive® implants have also been shown to be a viable option in conjunction with bone augmentation in the maxillary anterior and premolar region. Taken together, this data strongly supports the use of Straumann Implants with an SLActive® surface in patients:

- with well or poorly controlled type 2 diabetes mellitus
- in anterior and premolar regions
- in the maxilla or mandible
- with or without bone augmentation

Given the ever rising prevalence of type 2 diabetes, how can clinicians address this risk, particularly in older patients?
Promotion of Bone Regeneration in bone defects

Bone defects can greatly compromise the predictability of osseointegration. In a recent preclinical study, SLActive® showed significantly higher formation of new bone aggregate within eight weeks compared to the standard Straumann® SLA® hydrophobic surface.*

Buccal bone to implant contact was significantly higher in SLActive® groups as compared to standard SLA®, highlighting the benefit of SLActive® to support faster bone integration, in coronal circumferential defects.

BONE AGGREGATE FORMATION AT 8 WEEKS.

Histological views of bone aggregate (new bone and grafting material) 8 weeks post-grafting.

*Based on results of a pre-clinical study in animals (minipig); the preclinical testing is not correlated to long-term clinical outcomes in humans.
The Surface with success built in SLActive® designed to deliver:

- Faster osseointegration* to enhance confidence in all treatments
- Reduced healing times from 6-8 weeks to 3-4 weeks**
- Increased predictability in stability-critical treatment protocols

* Compared to SLA
** From single-tooth to edentulous

Please contact your local sales representative to get more information about the advantage of the SLActive® surface now or visit slactive.straumann.com
REFERENCES


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