Rehabilitation of irradiated patients with Straumann® SLA® and SLActive® implants: five-year follow-up

Study design

Randomized split-mouth study
Total 102 implants

SLA® SLActive®

20 patients
20 implants treated

45 years old

max. 5 months
after radiotherapy

4.5 years
after radiotherapy

12 months
Healing time before loading

5 years
loading duration

Aim

To evaluate the clinical and radiological parameters of SLA®/SLActive® surface implants in irradiated patients after the initial 12-month loading period up to 5 years.

Results

Mean crestal bone level change

Clinical considerations

• SLActive® Implants can be used in irradiated patients with a high predictability of success.
• At the time of the patients' deaths, all the remaining implants were still in place in these patients and considered successful according the Buser success criteria.
• Taking into account that the clinical performance and longevity of their implants would not be any different to the other implants in the study, had the patients survived, the implant survival rate would be: 96% for SLA® | 100% for SLActive®.
• The crestal bone level was stable within 5 years after placement and similar to data in non-irradiated patients.
• Lower implant survival rates in patients with oral cancer may be associated with a higher mortality rate rather than a lack of osseointegration.

Implant survival rate (5 years)

61.1 years
Mean age

SLA® SLActive®

52 implants
28 implants
24 implants

38°
39°

Mean crestal bone level change

Mesial
Distal

(baseline: post-surgical value)

75%
74%

SLA®
SLActive®

96%
100%