

Retrospective Real World Study Over 8±2.5 Years on 942 Implants Demonstrates Stable Bone Levels and Protective Properties of INICELL® Surface

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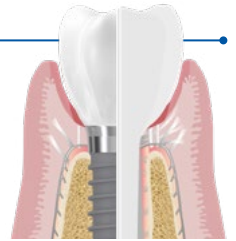


Background

Peri-implant marginal bone loss can occur due to natural remodeling processes or as a result of peri-implant diseases.

Rates of annual peri-implant bone loss vary widely and may be influenced by factors related to the patient or the implant.

The impact of the specific implant system on bone loss remains under discussion.



Aim

Retrospectively determine the long-term peri-implant bone level around Thommen Medical implants and investigate the influence of implant- and patient-related factors on the changes of marginal bone levels

Study Design



312 patients
60.3% affected by periodontitis
44% former smokers or smokers
5.1% diabetic



942 implants
ELEMENT & CONTACT
Standard & INICELL® surface



Mean follow-up:
8.03±2.5 years



Implant insertion



Prosthetic insertion



Baseline radiograph
within 6 months after
prosthetic insertion

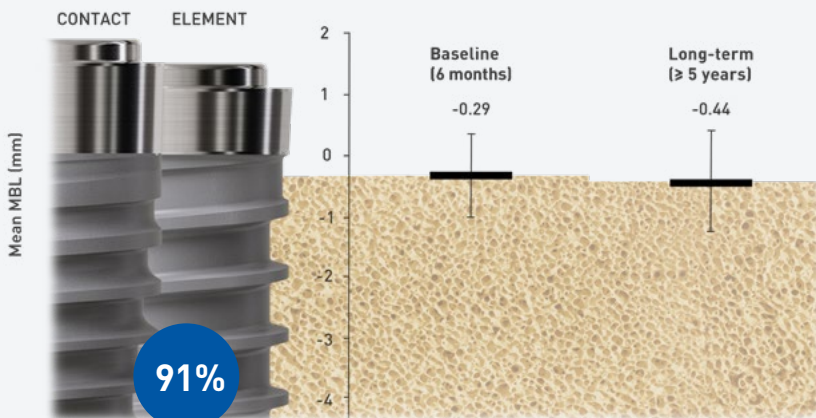


Long-term radiograph
at least 5 years after
implant insertion

Results

Stable marginal bone levels and protective effect of INICELL® demonstrated over 8 years

Stable marginal bone levels around 942 implants in a real-world patient cohort*



91% of implants showed either **bone gain** or a **bone loss of maximum 1 mm over 8 years***

Factors affecting radiographic change in MBL between two timepoints**



Positively affecting marginal bone levels

INICELL® implant surface (P=0.036)
Baseline MBL (P<0.0001)†



The use of INICELL® demonstrated a protective effect against peri-implant bone loss compared to implants with an unconditioned surface



Negatively affecting marginal bone levels

Use of oral bisphosphonates (P=0.036)
History of periodontitis (P=0.005)
Diabetes (P=0.047)
Quadratic term of baseline bone level (P<0.0001)†

Key Takeaways

- ✓ This extensive retrospective long-term analysis of 942 Thommen Medical implants reveals substantial stability in marginal bone levels, in a real-world patient cohort including many periodontitis patients and smokers, with the majority of implants showing no or minimal bone loss over time
- ✓ Implants featuring the conditioned superhydrophilic INICELL® surface showed a protective effect against peri-implant bone loss

*Data based on mean marginal bone levels (mMBL). mMBL was calculated by averaging the MBL values recorded on the mesial and distal aspects at baseline and long-term visits, respectively. CONTACT and ELEMENT shown with RC collar (1.5 and 1 mm, respectively) as example. 98.5% (928) of implants featured the RC collar, 1.5% (14) the MC collar [0.5 mm] **To assess the impact of patient and implant-related factors on the change in MBL from baseline to long-term, either the mesial or distal site with highest MBL change (hChMBL site) was identified for each implant. † Please read the original publication for more information. MBL, marginal bone level