

LEADING REGENERATION

Geistlich
Biomaterials

Your cookbook for gaining keratinized tissue

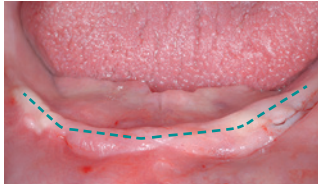
Geistlich Mucograft® in open healing

1 & 5 year
follow-up



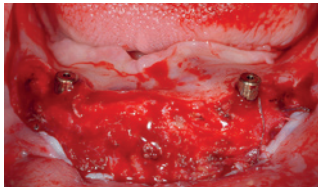
How to use Geistlich Mucograft® for gaining keratinized tissue?

Flap design & open healing



Analysis of the initial situation

This case shows a shallow vestibule and almost no keratinized tissue on the lower crestal part. The horizontal incision has to be made within the keratinized tissue (see depicted line).



Flap and wound bed preparation

Make sure you are cutting within the keratinized tissue: a split flap apically fixed is used here. Remove the muscles, scar fibers and ligaments before application of Geistlich Mucograft®.



Adaptation of Geistlich Mucograft®

Measure the defect carefully with a periodontal probe and cut Geistlich Mucograft® in dry state. In case of a big vestibuloplasty several pieces of Geistlich Mucograft® can be sutured side by side.



Suturing

The 3D collagen matrix is sutured directly onto the periosteum with 5.0 resorbable sutures and left exposed for open healing (healing by secondary intention).



10 days post-operation

Good healing: Granulation tissue and new soft-tissue are formed.



30 days post-operation

Excellent wound healing: complete integration and epithelialization of Geistlich Mucograft® as well as keratinization of the crestal aspect could be observed.



1 year follow-up

1 year post-operation

The resulting keratinized tissue fulfills its functionality and shows an esthetically pleasing result matching the structure and color of the surrounding tissues. In this case the mean width of the peri-implant keratinized mucosa was 4.0 mm, and a low shrinkage was assessed at 38%.



5 year follow-up

5 years post-operation

The mucogingival appearance remains stable. The resulting keratinized tissue fulfills its functionality and shows an esthetically pleasing result. No further shrinkage was detected.

How does Geistlich Mucograft® act?

The Biology

Band of keratinized tissue

- > Important to maintain functionality and esthetics^{1,2}
- > Enables patients to maintain good oral hygiene without irritation or discomfort^{1,2}

Migration of connective tissue cells

- > Signaling for keratinized tissue

Wound closure

- > Geistlich Mucograft® continues to support physiological process and promotes wound closure³⁻⁵, leading to a faster keratinization compared to free granulation⁶⁻⁸

Compact structure of Geistlich Mucograft®

- > Protects the wound during open healing and allows suturing

Porous structure of Geistlich Mucograft®

- > The underlying specialized collagen structure stabilizes the blood clot and enables soft-tissue ingrowth and cell migration from the surrounding tissue³⁻⁶

Wound healing

- > Stabilization of the blood clot^{5,6}
- > Vascularization^{3,4}
- > Soft-tissue cell ingrowth^{3,4}
- > The specialized collagen structure prevents scar formation⁵



The plus for your patient

- > Geistlich Mucograft® reduces the morbidity associated with the harvesting of autologous grafts.^{6,9-14}
- > Geistlich Mucograft® shows esthetically pleasing outcomes by having a positive impact on the color and texture of the newly formed soft-tissue.¹⁵⁻¹⁹

Migration of connective tissue cells

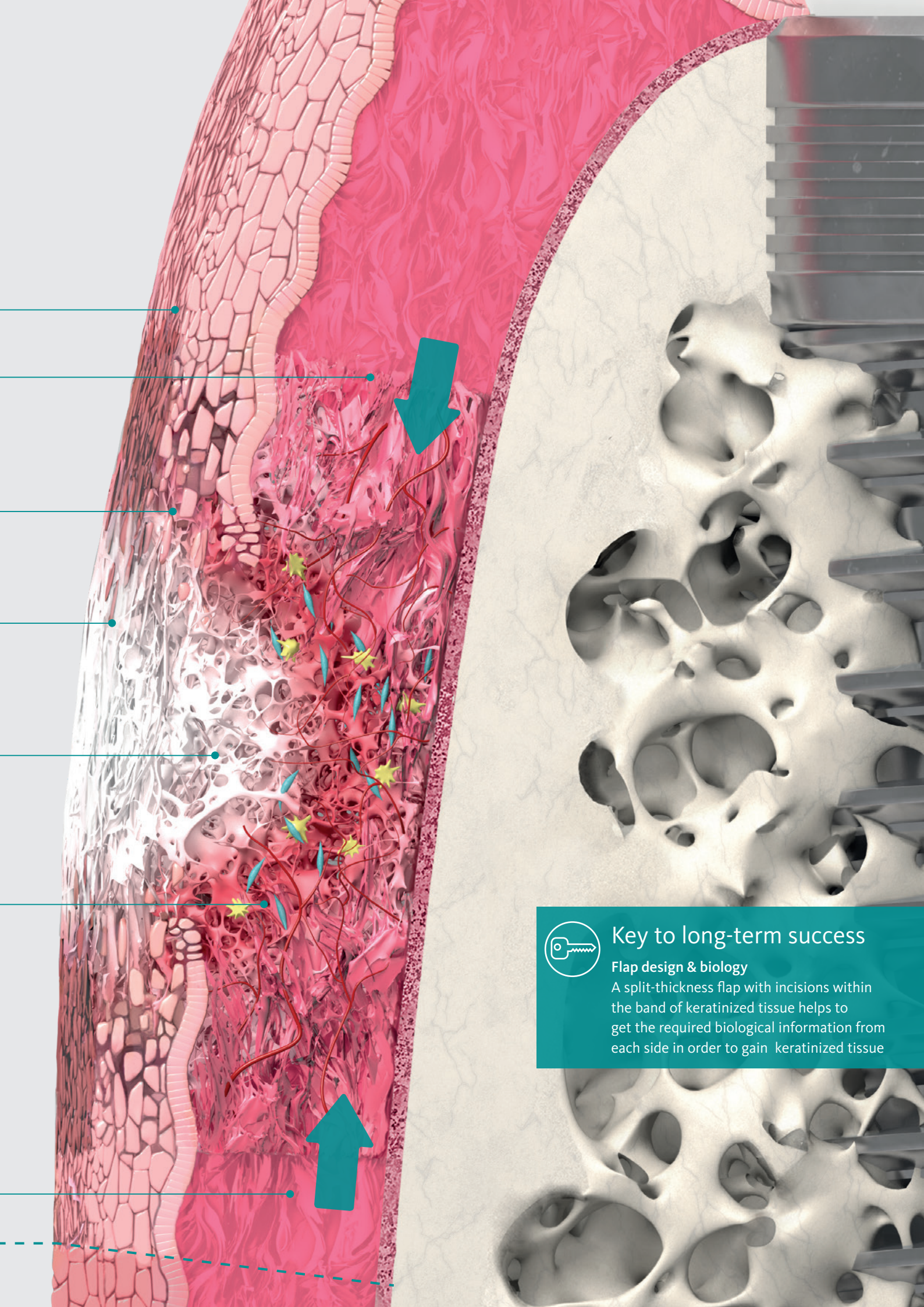
- > Signaling for keratinized tissue

Mucogingival line

Fibroblasts Macrophages Blood Vessels



Case by
Dr. Christian Schmitt,
Munich (Germany)



Key to long-term success

Flap design & biology

A split-thickness flap with incisions within the band of keratinized tissue helps to get the required biological information from each side in order to gain keratinized tissue



More details about our
distribution partners:
www.geistlich-biomaterials.com

Geistlich Pharma AG
Business Unit Biomaterials
Bahnhofstrasse 40
6110 Wollhusen, Schweiz
Phone +41 41 492 55 55
Fax +41 41 492 56 39
www.geistlich-biomaterials.com

**Affiliate Australia and
New Zealand**
Geistlich Pharma Australia
and New Zealand
The Zenith – Tower A,
Level 19, Suite 19.01
821 Pacific Highway
NSW 2067 Chatswood, Australia
Phone +61 1800 776 326
Fax +61 1800 709 698
info@geistlich.com.au
www.geistlich.com.au

**Affiliate Great Britain
and Ireland**
Geistlich Sons Limited
1st Floor, Thorley House
Bailey Lane
Manchester Airport
Manchester M90 4AB, Great Britain
Phone +44 161 490 2038
Fax +44 161 498 6988
info@geistlich.co.uk
www.geistlich.co.uk

Affiliate North America
Geistlich Pharma North America Inc.
202 Carnegie Center
Princeton, NJ 08540 USA
Phone toll-free +1 855 799 5500
info@geistlich-na.com
www.geistlich-na.com

Distribution Canada
HANSamed Ltd.
2830 Argentinia Road
Unit 5-8
L5N 8G4 Mississauga, Canada
Phone +1 800 363 2876
Fax +1 800 863 3213
orders@hansamed.net
www.hansamed.net

Which products to use?



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