

BioBrief

VERTICAL AND HORIZONTAL
BONE AUGMENTATION

Shaun R. Young, DMD

Mandibular Ridge Augmentation Using Customized Titanium Mesh

leading regeneration

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Geistlich

The Situation

A 60-year-old healthy male presented with a failing lower left bridge. Due to a long history of missing teeth, he had a significantly atrophic mandibular ridge. We decided to use a customized titanium mesh to achieve the necessary vertical and horizontal bone augmentation for dental implant rehabilitation.

The Approach

The goal of this procedure was to regenerate sufficient bone to place restoratively driven dental implants. Due to the horizontal and vertical ridge deficiency, we used a customized titanium mesh to predictably achieve this outcome.

Autogenous bone collected with SafeScrapper Twist and Geistlich Bio-Oss® filled the Yxoss CBR® Protect and a Geistlich Bio-Gide® collagen membrane covered the mesh.

The Risk Profile

	Low Risk	Medium Risk	High Risk
Patient's health	Intact immune system	Light smoker	Impaired immune system
Patient's esthetic requirements	Low	Medium	High
Restorative status of adjacent tooth	Intact		Restored
Width of tooth gap	1 tooth (≥ 7 mm)	1 tooth (≤ 7 mm)	2 teeth or more
Bone anatomy of the alveolar ridge	No defect	Horizontal defect	Vertical defect

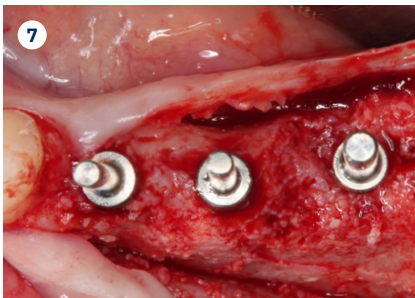
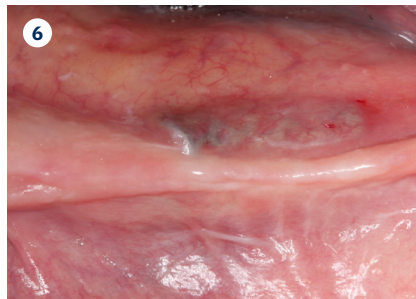
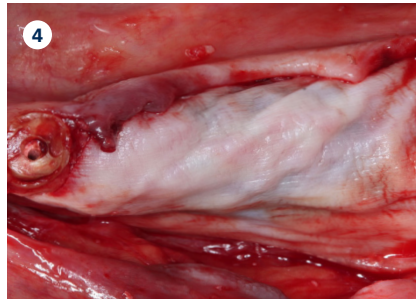
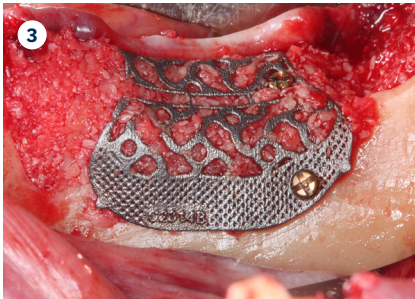
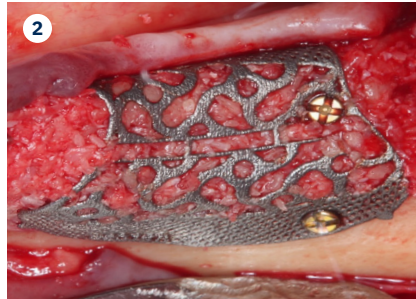
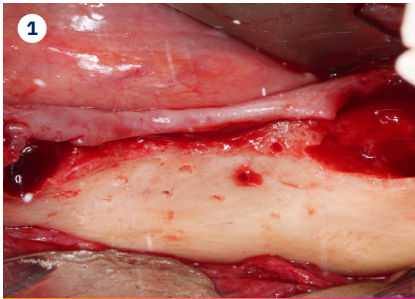
Shaun R. Young, DMD | Tampa, FL Oral Maxillofacial Surgeon

Dr. Shaun Young, an Oral and Maxillofacial Surgeon based in Tampa, Florida, specializes in complex ridge augmentation, immediate implants, and All-on-X full arch rehabilitation. He earned his Doctor of Dental Medicine degree from the University of Florida and completed his OMFS residency at Emory University in Atlanta, Georgia, where he served as Administrative Chief Resident. Dr. Young brings his expertise to a full-scope group practice, serving Tampa, Clearwater, and New Port Richey, Florida.



“Success in these cases primarily depends on proper mesh design and careful handling of soft tissue to ensure zero-tension primary closure.”

The Case



- 1 Pre-op mandibular ridge after the extraction of teeth #17 and #20. Note the significant horizontal ridge deficiency.
- 2 Yxoss CBR® Protect Customized Bone Regeneration Titanium Mesh in place, secured with two Stryker screws, 1.2 mm in diameter and 6 mm in length.
- 3 Note the excellent adaptation of the Yxoss CBR® Protect and that the edges are apical to the adjacent bony sockets.
- 4 Geistlich Bio-Gide® (resorbable collagen membrane) draped over the Yxoss CBR® Protect to separate osteoblasts from fibroblasts.
- 5 Implants restored with single-unit crowns.
- 6 Six months post ridge augmentation.
- 7 Guide pins in place for implants #19, #20, and #21, with adequate ridge height and width.
- 8 Screw-retained final implant crowns with healthy keratinized tissue on the facial side.

The Outcome

A left mandibular ridge deficiency was corrected using a Yxoss CBR® Protect Customized Bone Regeneration Titanium Mesh, designed from the patient's CBCT scan.

“ Guided bone regeneration using Yxoss CBR® Protect to correct vertical and horizontal mandibular ridge deficiencies is a predictable procedure.”

Geistlich Pharma North America, Inc.
Princeton, NJ 08540
Customer Care Toll-free: 855-799-5500
info@geistlich-na
<https://geistlich.us>

Keys to Success

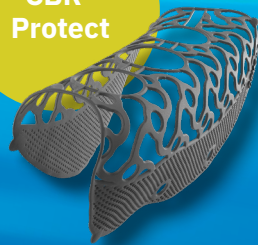


- Proper mesh design, ensuring that the mesh is 1.0-1.5 mm away from adjacent teeth and at least 0.5 mm apical to the adjacent bony sockets
- Proper soft tissue flap and release to obtain zero-tension primary closure
- Stabilizing the customized mesh with a minimum of two screws
- Grafting with at least 50% autogenous bone
- Using a native collagen membrane over the titanium mesh



“The most important instrument is a Woodson elevator, which aids in soft tissue release and condensing bone within the titanium mesh.”

**Yxoss
CBR®
Protect**



**SafeScraper
TWIST
VOLUMIZER**



For more information, please visit:
www.geistlich.us

CAUTION: Federal law restricts these devices to sale by or on the order of a dentist or physician.

For more information on contraindications, precautions, and directions for use, please refer to the Instructions for Use at:
<https://www.geistlich.com/dental-professionals/e-ifu>