



**SigmaGraft**



# **InterCollagen<sup>®</sup> Guide**

Resorbable Collagen Membrane

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InterCollagen® Guide is a porcine-derived resorbable collagen membrane intended for periodontal and/or dental surgeries. When used in conjunction with a graft material for a guided bone regeneration procedure, the membrane acts as a barrier that restricts the entry of rapidly proliferating non-osteogenic cells within the bony defect while allowing the ingrowth of slow-growing bone-forming cells. This resorbable barrier gets remodeled and/or incorporated by the host tissue.

InterCollagen® Guide's dense fibrous architecture enhances mechanical strength and increases durability, and yet it is easily sutured, highly drapable, and can be trimmed to the required size.

## Application & Handling

### Hydration

InterCollagen® Guide can be hydrated in blood or sterile saline solution. It can also be applied dry, a common method used with application of the graft material in lateral augmentation of defects on the outer ridge contour. The InterCollagen® Guide can adapt to any surface contours and can be easily repositioned should the need arise.

### Placement

InterCollagen® Guide has a bilayer structure which provides dual function. One side has a smooth texture which acts as a barrier to prevent soft tissue growth while the other side, rougher in texture with open pores, facilitates the ingrowth of bone forming cells, nerve, and blood vessels. Although not required, it is recommended to place the smooth side towards the gingiva and the rough side towards the bone for maximum results. Trim and place InterCollagen® Guide to overlap the defect by at least 2-3 mm to prevent lateral ingrowth of

gingival connective tissue.

### Application

- InterCollagen® Guide can be trimmed to the desired dimensions using a pair of scissors when needed. It could also be beneficial to use templates when trimming in order to minimize waste.
- Regardless of the direction of the stretch, InterCollagen® Guide demonstrates an exceptional tear resistance. It can be pinned, sutured, or even screwed effortlessly without rupturing. Because of this reason, additional fixation is unnecessary in most cases due to the outstanding drapability of the membrane to the bony walls.
- As much as possible, avoid the exposure of InterCollagen® Guide since bacterial resorption will substantially decrease the efficacy of the membrane to act as a barrier. Should a dehiscence occur, formation of free granulation tissue usually can still help heal the wound without complications.

## Indications for Use

InterCollagen® Guide, alone or in combination with suitable augmentation materials e.g. autogenous bone, allogeneic, xenogeneic or alloplastic bone replacement materials, can be used in guided bone regeneration (GBR) and guided tissue regeneration (GTR) procedures as a biodegradable barrier:

- In the context of a treatment of fenestration defects
- In case of dehiscence defects
- After apicoectomy and resection or retained teeth
- In extraction sockets after tooth extractions
- In case of immediate or delayed augmentation around implants in extraction sockets

## Properties

Attribute	Description
Source	Porcine pericardium
Composition	Native collagen type I and III
Thickness	0.1 - 0.3 mm
Structure	Natural multilayered collagen structure
Storage temperature	59 - 86 °F / 15 - 30 °C
Degradation time	13 weeks in a canine model
Fixation	Generally not required due to good surface adaptation, but possible (pinning, suturing, screwing)

## Features & Benefits

### High Suture Strength

Despite a low thickness of 0.13 mm, the membrane retains a high suture strength of at least 5N due to minimal processing.

### Slow Degradation Time

The resorbable membrane is substantially resorbed by 13 weeks in a canine model.

### Easy Handling & Application

Can be easily trimmed to size in dry or wet conditions; drapable and can be pinned and sutured.

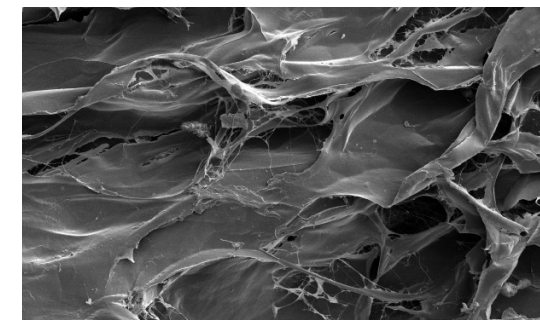
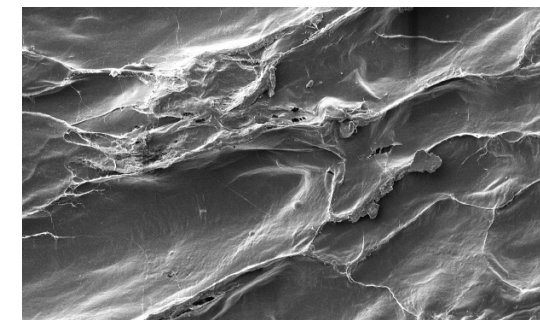
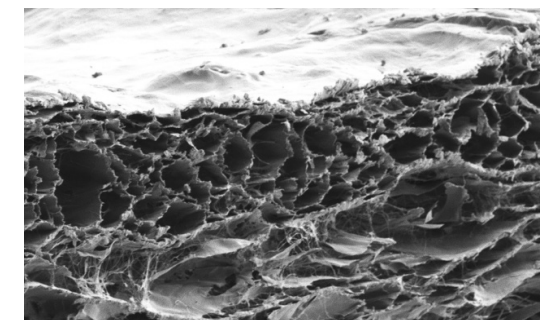
### Dual Function

Bilayer structure provides dual function:

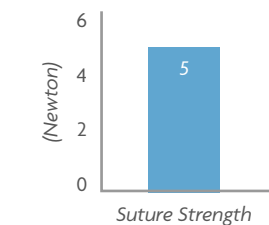
- Smooth side acts as a barrier that prevents soft tissue growth
- Open-pore structure on the rough side facilitates growth of bone forming cells, nerve, and blood vessels

### Available in the following sizes

SKU	Size
ICG1520	15 x 20 mm
ICG2030	20 x 30 mm
ICG3040	30 x 40 mm



The multi-scale porous structure provides favorable environment for the growth of cells and tissues and formation of extracellular matrix (ECM) while also allowing nutrient exchange and blood vessel ingrowth.



## Successful Bone Augmentation with Simultaneous Early Implant Placement

Dr. David M. Kim  
Boston, MA  
United States

### Patient History

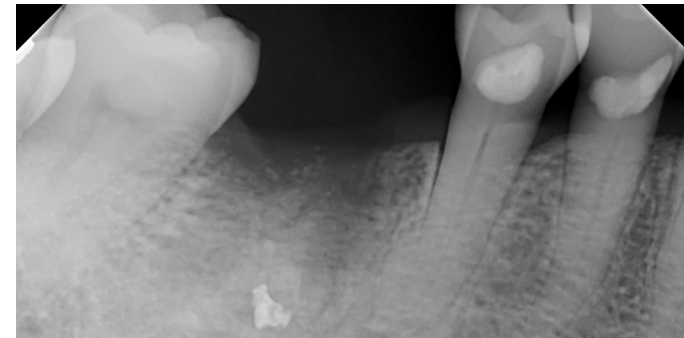
A 78-year-old healthy female patient presented with failing RCT and radiographic evidence of bone loss around the mandibular right first molar.

### Conclusion

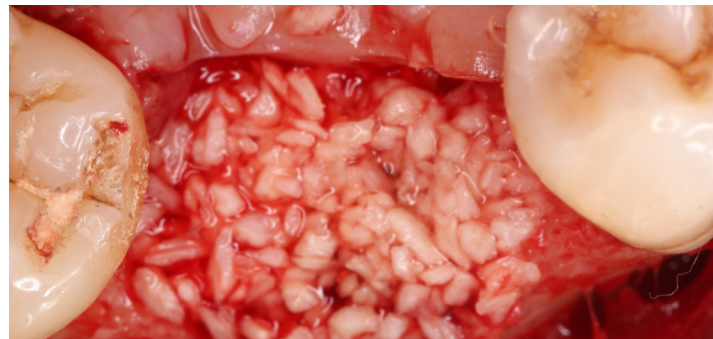
The infected tooth was extracted, and the early implant placement with simultaneous bone augmentation was done 8 weeks later. The second stage at 3 months revealed a remnant of membrane in addition to excellent bone growth above the cover screw.



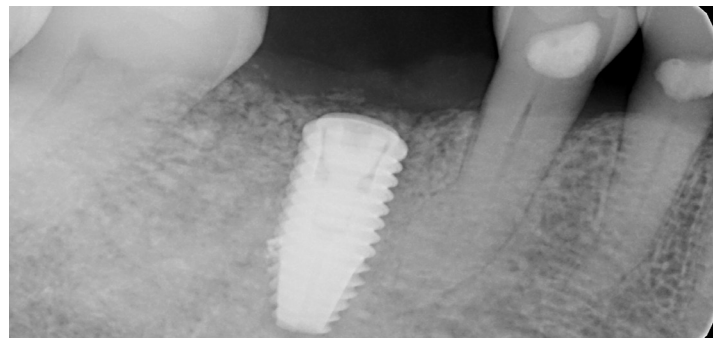
Pre-operative X-ray.



Pre-extraction X-ray.



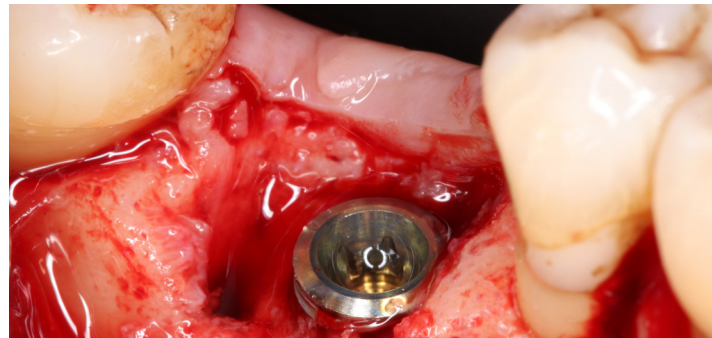
SigmaOss® Placement.



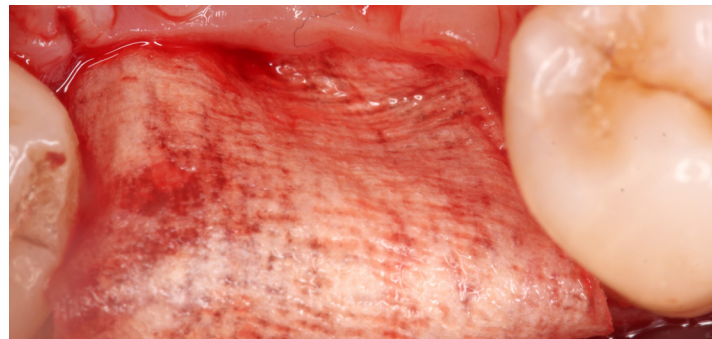
An immediate post-bone grafting PA.



A view of the bone defect.



An early implant placement



InterCollagen® Guide placement.



Soft tissue healing 3 months after the bone augmentation.

## Alveolar Ridge Preservation after Tooth Extraction + Transcrestal Sinus

Dr. Homa H. Zadeh  
Woodland Hills, CA  
United States

### Process & Conclusion

Extraction and alveolar ridge preservation (ARP) of tooth #3 using Inter-Oss collagen and protecting the socket opening with Sigma Guide plus Platelet Rich Fibrin. This allowed for open healing in order to preserve mucosal tissues. After 5 months of healing, the ridge contour was well preserved.



Post-operative view and X-ray.



Placement of InterOss® Collagen.



Placement of InterCollagen® Guide and fixation.



Follow-up at 5 months.



Pre-implant X-ray.



Placement of implant and post-implant X-ray.



Implant crown restoration.



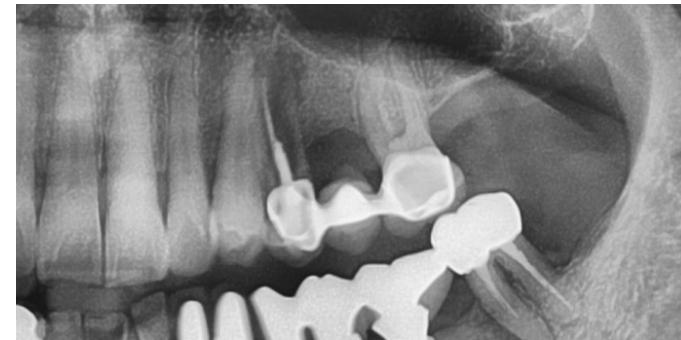
Immediate post-operative X-ray and at 1 year.

## Ridge augmentation and implant placement via crestal sinus lift

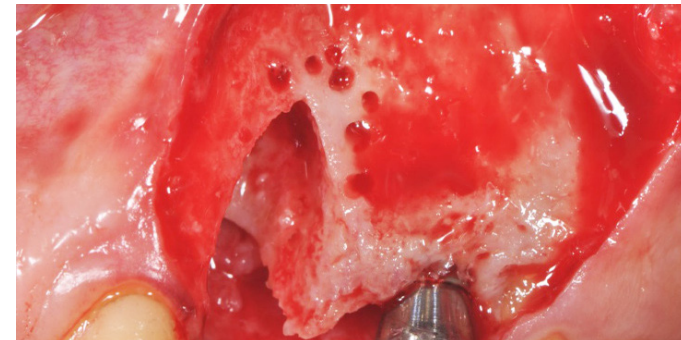
Dr. Byung Do Ham  
Kainos Dental Clinic  
South Korea

### Patient History

Patient had a missing tooth and another that required extraction due to a root fracture. An implant was prescribed for the former via crestal sinus lift and bone grafting for the latter to repair the damaged wall caused by the fracture; another implant was to be installed once the bone is restored.



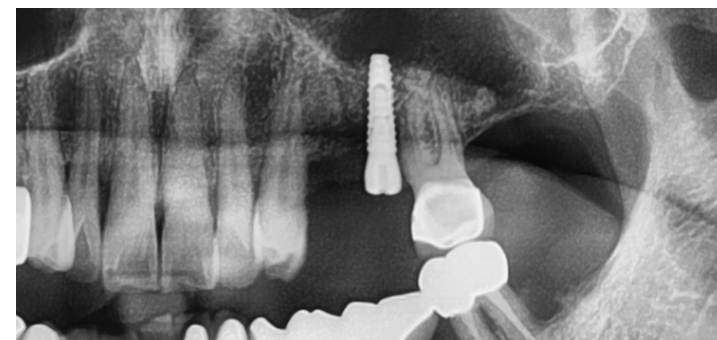
Pre-operative X-ray.



Placement of implant via crestal sinus lift.



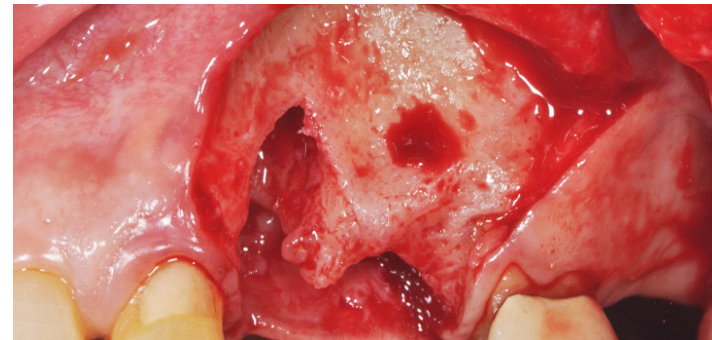
InterCollagen® Guide placement.



Pre-implant X-ray at 6 months.

### Conclusion

An implant was placed immediately after the sinus lift, using InterOss®, to replace the missing tooth, and the socket left by the fractured root was filled with InterOss® before wrapped with InterCollagen® Guide. Re-entry at 6 months showed newly formed bone, allowing for the additional implant.



A view of the bone defect.



Post-extraction view.



Post-surgical view.



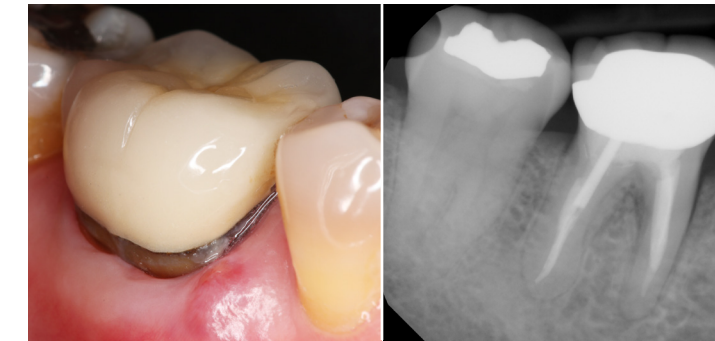
Pre-implant view at 6 months.

## Ridge Preservation with InterOss® Collagen Block in Buccal Bone Loss

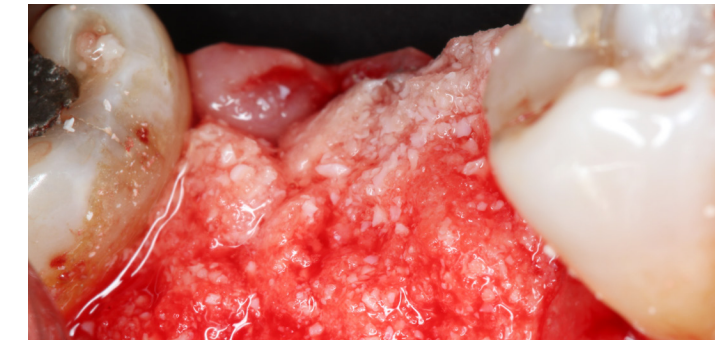
Dr. David M. Kim  
Boston, MA  
United States

### Patient History

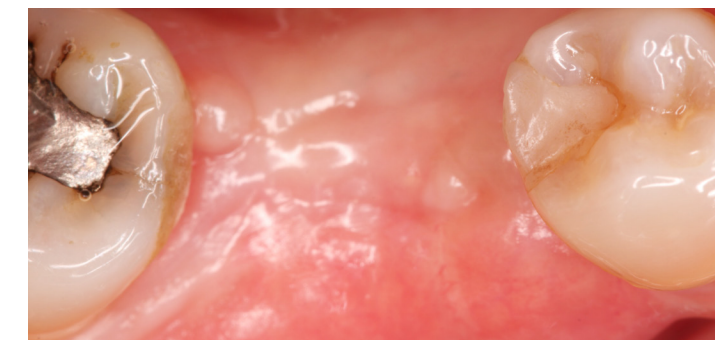
A 57-year-old healthy female presented with buccal swelling at tooth #30. A periapical radiograph revealed a suspected mesial root fracture.



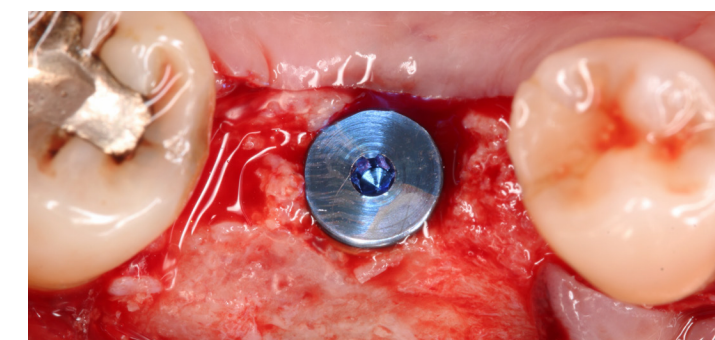
Pre-operative view and X-ray.



InterCollagen® Block was used to regenerate bone.



Follow-up at 6 month.



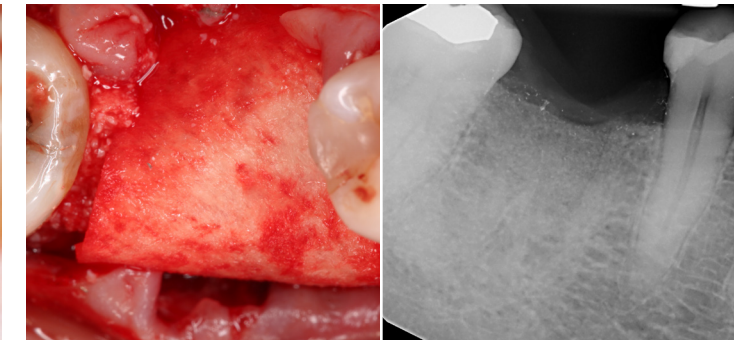
A dental implant was placed into the regenerated bone.

### Conclusion

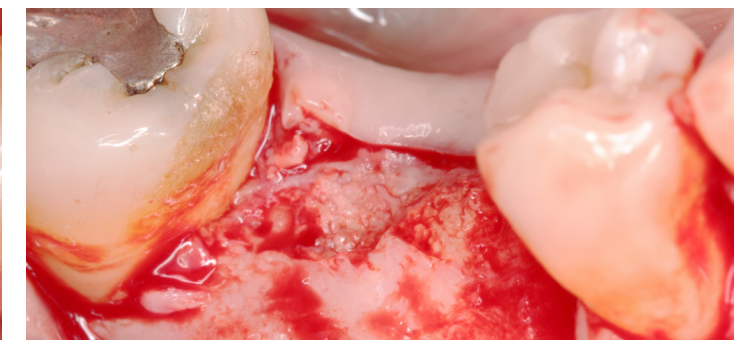
Tooth #30 was extracted for root fracture with bone loss. Alveolar ridge preservation (ARP) with InterOss® Collagen Block and InterCollagen® Guide enabled successful bone regeneration. After 6 months, a dental implant was placed, resulting in excellent clinical and histological outcomes.



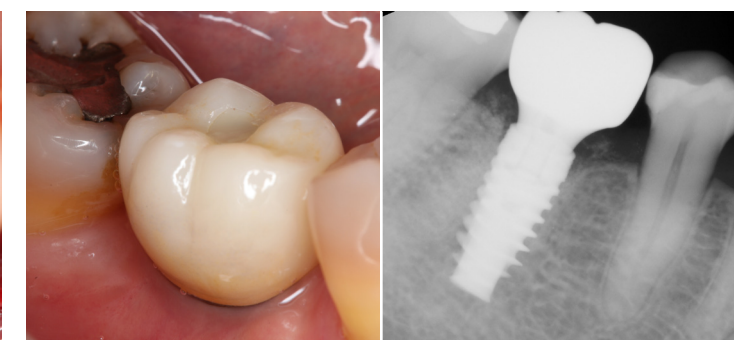
A full-thickness buccal flap showed severe bone loss near mesial root.



InterCollagen® Guide membrane placement and post-operative X-ray.



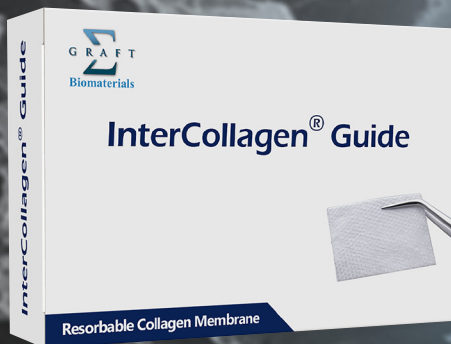
InterOss® Collagen Block was successful in repairing the lost bone volume.



Implant crown restoration.



**SigmaGraft**  
MADE IN USA 



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