

Biomaterials@Straumann®

When one option
is not enough.





Contents

BONE SUBSTITUTES

Straumann® AlloGraft granules	
Processed human allograft	6
Straumann® AlloGraft Custom Block	
Customized allogenic bone block	7
Straumann® AlloGraft Ring	
Processed allogenic bone ring	8
Straumann® XenoGraft	
Natural bovine bone grafting	9
Straumann® XenoFlex	
Bovine bone and porcine collagen	10
Straumann® BoneCeramic®	
Alloplastic biphasic calcium phosphate	11

MEMBRANES

Straumann® Jason® membrane	
Collagen membrane obtained from porcine pericardium	12
Straumann® Membrane Flex	
Collagen membrane from porcine peritoneum	13
Straumann® Membrane Plus™	
Collagen membrane from bovine tendon	14

SOFT TISSUE REGENERATIVE

Straumann® AlloGraft Dermal Matrix	
Cell-occlusive membrane	15

BIOMATERIALS

Straumann® Emdogain®	
Enamel matrix derivative	16

Biomaterials@Straumann®

When one option is not enough.

Decades of experience in dentistry and oral regeneration propelled us to understand and meet the diversity of needs, indications and preferences. The right solution in implantology and periodontology is designed to fit the individual. Straumann offers a complete portfolio of biomaterials that meet your expectations and those of your patients.

COMPLETE REGENERATIVE SOLUTIONS.

Treatment concepts in modern dentistry are getting more complex, taking a holistic view on the clinical situation and the desired outcome. We believe that providing complete solutions for tooth replacement will help you achieve the best possible results.

One-size-fits-all is not enough. Your daily practice shows that you need a complete range of integrated regenerative solutions with predictable positive outcomes for all biological situations and indications in implantology and periodontology.

AN UNPARALLELED RANGE OF REGENERATIVE SOLUTIONS TO SUPPORT IMPLANT AND PERIODONTAL PROCEDURES.

From bone augmentation to esthetically optimal soft tissue results, we offer a substantial range of long-term proven materials (allograft, xenograft, synthetic bone substitute, collagen membrane dermis) and Straumann® Emdogain®, the regeneration solution for periodontology.

Engineered to predictably and reliably regenerate soft and hard tissue, this expanding range of flexible solutions is designed to provide patients with the functional and esthetic result they desire. It is the total regenerative solution that can potentially elevate the patient experience and your practice success.

Straumann® Bone Substitutes and Membranes

<div>Highly Recommended</div> <div>Recommended</div> <div>Indicated</div> <div>Not Indicated</div>								
	Peri-implant/ Dehiscence Defect	Fenestration Defect	Sinus Lift	Extraction Socket	Horizontal Defect	Furcation Defect	Intraosseous Defect	Vertical Defect
Straumann® AlloGraft Ground Cortical	Highly Recommended	Highly Recommended	Recommended 1	Indicated	Recommended	Indicated	Indicated	Indicated
Straumann® AlloGraft Demineralized Ground Cortical	Indicated	Indicated	Indicated	Indicated	Indicated	Recommended	Recommended 2	Recommended
Straumann® AlloGraft Min/ Demin Ground Cortical	Highly Recommended	Highly Recommended	Recommended	Indicated	Recommended	Recommended	Recommended	Recommended
Straumann® AlloGraft Ground Cancellous	Recommended	Recommended	Indicated	Recommended	Indicated	Recommended	Highly Recommended	Highly Recommended
Straumann® AlloGraft Cortical/Cancellous Mix	Recommended	Indicated	Highly Recommended	Recommended	Highly Recommended	Indicated	Indicated	Indicated
Straumann® AlloGraft Custom Block	Not Indicated	Not Indicated	Not Indicated	Not Indicated	Highly Recommended	Not Indicated	Not Indicated	Highly Recommended
Straumann® AlloGraft Ring	Not Indicated	Not Indicated	Highly Recommended	Highly Recommended	Recommended	Not Indicated	Not Indicated	Highly Recommended
Straumann® XenoGraft	Indicated	Indicated	Highly Recommended	Highly Recommended	Highly Recommended	Indicated	Highly Recommended	Recommended
Straumann® XenoFlex®	Indicated	Indicated	Highly Recommended	Highly Recommended	Highly Recommended	Indicated	Highly Recommended	Recommended
Straumann® BoneCeramic®	Recommended 3	Recommended	Highly Recommended 4	Recommended 5	Highly Recommended 6	Indicated	Indicated	Indicated
Straumann® Jason Membrane	Highly Recommended	Highly Recommended	Highly Recommended	Highly Recommended	Highly Recommended	Highly Recommended	Highly Recommended	Highly Recommended
Straumann® Membrane Flex™	Highly Recommended	Recommended	Highly Recommended	Highly Recommended	Recommended	Recommended	Recommended	Recommended
Straumann® Membrane Plus™	Recommended	Recommended	Highly Recommended	Recommended	Highly Recommended	Indicated	Indicated	Indicated

Recommendations in this table are based on material characteristics and scientific data (where available). They indicate which Straumann products are best suited to treat the specified defects prior to or after dental implant placement.



Straumann® AlloGraft Granules

Processed human allograft



Courtesy of Robert Miller, DMD, Fort Lauderdale, FL

Straumann® AlloGraft is an established and reliable alternative to autologous bone. Straumann AlloGraft is processed by LifeNet Health®, the worldwide leading tissue bank and organ procurement organization. It's the trusted bone regeneration solution most similar to a patient's own bone that provides a strong start and greater confidence for you and your patients.

FEATURES AND BENEFITS

- A true alternative to autologous bone, eliminating donor site complications such as morbidity, infection or post-operative pain
- Storable at room temperature for 3 years (from date of packaging)

Straumann® AlloGraft is recommended for Implantology, periodontology and oral and cranio-maxillofacial (CMF) surgery for the following procedures:

- Ridge augmentation, ridge reconstruction
- Filling of intraosseous defects
- Extraction sockets
- Sinus floor elevation

AlloGraft Ground Cortical Min/Demin Mix (80/20)		
Art.No.	Granule size	Content
070.234	250-1000 µm	0.5 cc
070.235	250-1000 µm	1.0 cc
070.236	250-1000 µm	2.0 cc

Available in the following sizes:

AlloGraft Ground Cortical		
Art.No.	Granule size	Content
070.206	250-710 µm	0.5 cc
070.207	250-710 µm	1.0 cc
070.208	250-710 µm	2.0 cc
070.218	250-1000 µm	0.25 cc
070.219	250-1000 µm	0.5 cc
070.220	250-1000 µm	1.0 cc
070.221	250-1000 µm	2.0 cc
070.230	250-1000 µm	2.5 cc

AlloGraft Cancellous		
Art.No.	Granule size	Content
070.229	250-1000 µm	0.25 cc
070.212	250-1000 µm	0.5 cc
070.213	250-1000 µm	1.0 cc
070.214	250-1000 µm	2.0 cc
070.231	250-1000 µm	2.5 cc
070.215	1000-2000 µm	0.5 cc
070.216	1000-2000 µm	1.0 cc
070.217	1000-2000 µm	2.0 cc

AlloGraft Demineralized Ground Cortical		
Art.No.	Granule size	Content
070.222	250-1000 µm	0.25 cc
070.223	250-1000 µm	0.5 cc
070.224	250-1000 µm	1.0 cc
070.225	250-1000 µm	2.0 cc

AlloGraft Cortical Cancellous Mix (50/50)		
Art.No.	Granule size	Content
070.226	250-1000 µm	0.5 cc
070.227	250-1000 µm	1.0 cc
070.228	250-1000 µm	2.0 cc
070.232	250-1000 µm	2.5 cc

Straumann® AlloGraft Custom Block

Customized allogenic bone block



Courtesy of Dr. Michele Jacotti,
Brescia/Italy

The Straumann® AlloGraft Custom Block is an innovative, customized allogenic bone block which is individually designed and adjusted to the desired 3-dimensional bone contour. Based on planning data and clinician approved, the bone-builder is produced by a milling machine and is provided in sterile condition ready for implantation. The ideal bone substitute for rebuilding 3-dimensional defects and reconstructing the ridge, allowing a patient-friendly treatment.

FEATURES AND BENEFITS

- Designed using patient-specific CAD/CAM file and custom milled for each case for a seamless fit to the patient's defect
- Flawless match between the Custom Block and the recipient's ridge is created, which reduces surgical treatment time
- Optimizes contact area between graft and the bone to facilitate revascularization



Dr. Dr. Oliver Blume,
maxillofacial surgeon, oral surgeon,
implantologist, Praxis im Tal, Dr. Back & Blume,
Munich/Germany

« The CAD/CAM prefabricated allogenic bone blocks (delivered sterile) offer a new option for managing patients with 3-dimensional (horizontal and vertical bone loss) and other difficult bone defects with a minimum of trauma. Outstanding results can be achieved especially in the esthetic zone in the maxilla thanks to the volume maintenance of the blocks. »

Straumann® AlloGraft Custom Block is recommended for

Implantology, oral and maxillofacial surgery for the following procedures:

- Extensive bone defects
- Atrophic maxilla/mandibula
- Horizontal/vertical augmentation

Available in the following:

Art.No.	Description
CB-001	Straumann® AlloGraft Custom Block
CB-002	Design for Straumann® AlloGraft Custom Block

Straumann® AlloGraft Ring

Processed allogenic bone ring



Courtesy of Dr. Bernhard Giesenhagen,
Kassel/Germany

A pre-fabricated ring of processed allogenic cancellous bone that is placed press-fit into a trephine drill-prepared ring bed. This is an innovative solution for 3-dimensional vertical augmentation of bone defects allowing a single-stage graft and implant placement. The simultaneous implant placement saves you and your patient time and a surgical step compared to a conventional bone block, eliminating the need for a second harvesting site and shorter time-to-teeth. The Straumann® AlloGraft Ring technique can be used with the Straumann® Bone Level and Bone Level Tapered implants. Different heights and outer/inner diameters are available.

FEATURES AND BENEFITS

- Simultaneous bone augmentation and implant placement significantly reduces treatment time compared with a bone block.
- Ring design is ideally suited for reconstruction of the anatomical shape of the jaw.
- Pre-fabricated milled allograft ring compatible with 3.3 & 4.1 Straumann BL & BLT implants, helping to reduce chair time



Dr. Bernhard Giesenhagen,
implantologist and academic teaching partner at
**Johann Wolfgang Goethe-Universität Frankfurt/
Germany**

« I've been using the bone ring technique since 2005 and have so far successfully set more than 1000 autologous and 200 allograft bone rings. The introduction of allograft bone rings into the market has enabled me to reduce surgery time considerably. Clinically, the allograft bone rings have the same success rate as autogenous bone rings. The significant benefits of this technique are that augmentation and implantation can be performed in a single step. It is significantly less invasive than most other augmentation techniques and I can prevent the patient from needing a second procedure. The healing time is reduced by around six months compared to a bone block. »

Straumann® AlloGraft Ring is recommended for
Implantology for the following procedures:

- Vertical augmentation (3-dimensional defects with low-grade horizontal augmentation)
- Single-tooth gap
- Edentulous space
- Sinus lift

Available in the following sizes:

Art.No.	Description
BR-001	AlloGraft Ring Ø 6.0 mm/3.3 mm, H 10.0 mm
BR-002	AlloGraft Ring Ø 7.0 mm/3.3 mm, H 10.0 mm
BR-003	AlloGraft Ring Ø 7.0 mm/4.1 mm, H 10.0 mm

The instruments and the special Closure and Fixation Caps which are used for the Straumann AlloGraft Ring technique are available.

Straumann® XenoGraft

Natural bovine bone grafting



Photos courtesy of Dr. Keun Young Chang

Straumann® XenoGraft is methodically processed from bovine bone and extensively tested to eliminate antigenicity and provide a favorable environment for new bone growth. Its slow resorption rate delivers extended stability—a critical advantage in cases that require a strong scaffold for long-term tissue support or esthetic needs.

FEATURES AND BENEFITS

- Optimal balance of calcium and phosphate, comparable to human bone
- Excellent hydrophilicity enabling rapid uptake of blood
- Slow resorption rate provides extended stability

Straumann® XenoGraft is recommended for

Implantology, oral surgery and periodontology and craniomaxillofacial surgery (CMS) for the following procedures:

- Sinus floor elevation
- Horizontal augmentation
- Ridge preservation
- Peri-implant defects
- Extraction sockets
- Intraosseous defects

Available in the following sizes:

Bovine-derived particulate		
Art.No.	Granule size	Content
S1-0210-025	200-1000 µm	0.25 g/0.55 cc
S1-0210-050	200-1000 µm	0.5 g/1.3 cc
S1-0210-100	200-1000 µm	1.0 g/2.4 cc
S1-0210-200	200-1000 µm	2.0 g/4.5 cc
S1-1020-025	1000-2000 µm	0.25g/0.68cc
S1-1020-050	1000-2000 µm	0.5g/1.55cc
S1-1020-100	1000-2000 µm	1.0g/2.9cc
S1-1020-200	1000-2000 µm	2.0g/5.0cc

Straumann® XenoFlex

Bovine bone and porcine collagen



Photos courtesy of Dr. Chong-Pyung Chung

Tested to eliminate antigenicity and provide a favorable environment for new bone growth, Straumann® XenoFlex is a combination of 90% bovine bone mineral (100% pure hydroxyapatite) with 10% porcine Collagen type I. Its slow resorption rate delivers extended stability – a critical advantage in cases that require a strong scaffold for long-term tissue support and esthetic needs. The collagen fibers facilitate the adhesion of proteins and signals molecules from the blood to the embedded granules to further improve the fast bony integration of Straumann® XenoFlex.

FEATURES AND BENEFITS

- Pliable one-piece block for ease of handling & application
- Optimal balance of calcium and phosphate, comparable to human bone
- Dependable volume stability

Straumann® XenoFlex is recommended for

Implantology, oral surgery and periodontology and craniomaxillofacial surgery (CMS) for the following procedures:

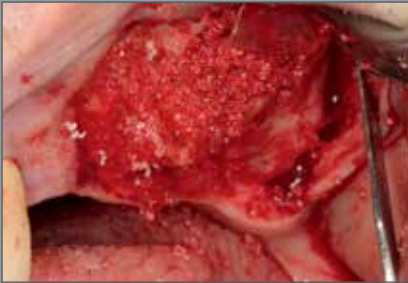
- Sinus floor elevation
- Horizontal augmentation
- Ridge preservation
- Peri-implant defects
- Extraction sockets
- Intraosseous defects

Available in the following sizes:

Art.No.	Particle size	Content
NI-0110-005	6 × 6 × 3 mm	50 mg
NI-0110-010	6 × 6 × 6 mm	100 mg
NI-0110-025	7 × 8 × 9 mm	250 mg
NI-0110-050	9 × 10 × 11 mm	500 mg
NI-0110-025S	4.6 × 40 mm	250 mg
NI-0110-050S	5.6 × 45 mm	500 mg

Straumann® BoneCeramic®

Alloplastic biphasic calcium phosphate



Courtesy of Dr. A. Stricker, Konstanz/Germany

Straumann® BoneCeramic® is one of the most documented alloplastic bone substitutes on the market, offering a scaffold with resorption for vital bone regeneration without compromising on volume preservation. With its slow and controlled resorption properties and its homogenous composite of HA and β -TCP (60/40%), it is an excellent choice for you and your patients in virtually any clinical situation. Since it is fully synthetic, the quality is consistent and reproducible.

FEATURES AND BENEFITS

- Sterile biphasic calcium phosphate
- Osteoconductive
- 90% interconnected porous structure to allow for ingrowth of bone forming cells and nutritive blood vessels
- Slow and controlled resorption properties with a 60/40 mixture of hydroxyapatite (HA) and β -tricalcium phosphate (β -TCP)
- Extensively clinically documented in different indications
- Easy handling

Straumann® BoneCeramic® is recommended for Implantology, periodontology and oral surgery for the following procedures:

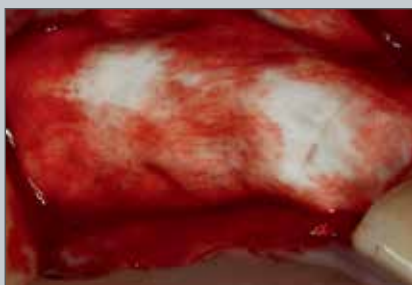
- Sinus lift
- Bony defects of the alveolar ridge
- Intraosseous defects
- Peri-implant defects
- Extraction sockets

Available in the following sizes:

Art.No.	Granule size	Content
070.203	400-700 μ m	0.25 g
070.204	500-1000 μ m	0.5 g
070.205	500-1000 μ m	1.0 g

Straumann® Jason® membrane

Collagen membrane from porcine pericardium



Courtesy of Prof. Dr. Dr. Daniel Rothamel,
Dusseldorf/Germany

Jason® membrane is a ultra-thin pericardium membrane (~0.15) featuring remarkable tear resistance and excellent surface adaptation. The unique composition and collagen structure of the pericardium is preserved during the production process leading to a prolonged barrier effect without chemically cross-linking.

FEATURES AND BENEFITS

- High tensile strength allowing for easy fixation (pinning, sewing)
- Thin membrane facilitates soft tissue manipulation, particularly in challenging thin biotypes
- Easily to manipulate and to cut to size even in wet conditions
- Versatile application under dry or wet conditions without having to care about the membrane sticking to itself
- Animal studies indicate a natural pro-longed barrier-time of 3 to 6 months*



Prof. Dr. Dr. Daniel Rothamel,
Head of Department, Oral and Maxillofacial
Plastic Surgery, Johanniter Hospital Bethesda
Mönchengladbach, Germany

«After eight years of intensive clinical use, the Straumann® Jason® pericardium membrane has proven to provide the required outcome, especially in larger augmented areas. In my experience, this combination with a slowly resorbable bone graft material provides ideal volume maintenance and bone formation up to the outline of the graft.»

Straumann® Jason® membrane is recommended for

Implantology, periodontology and oral and craniomaxillofacial (CMF) surgery for the following procedures:

- Implant dehiscence
- Sinus lift
- Support of the Schneiderian membrane
- Fenestration defects
- Extraction sockets
- Horizontal and vertical augmentation
- Alveolar ridge reconstruction
- Intraosseous defects (1-3 walls) and furcation defects (class III)

Available in the following sizes:

Art.No.	Description
BS-681520	15×20mm
BS-682030	20×30mm
BS-683040	30×40mm

*Based on rat study / data on file at Botiss Biomaterials.

Straumann® Membrane Flex™

Collagen membrane from porcine peritoneum



Courtesy of Dr. Shanker Iyer

Straumann® Membrane Flex™ provides flexibility and strength in an easy-to-handle, easy-to-suture barrier for soft tissue support and graft containment. Meticulously manufactured from highly purified intact porcine collagen and minimally cross-linked, it's biocompatible and predictably resorbable. It conforms to defects and contours—plus, it's easy to reposition. Once in place, it can be firmly anchored to surrounding tissue with minimal risk of tearing or detachment, thanks to its high suture pullout strength.*

FEATURES AND BENEFITS

- Proven biomechanical strength enhances fixation assurance*
- Can be placed dry or hydrated
- Can be easily repositioned for precise placement
- Protects the graft area from unwanted soft tissue infiltration during the initial phase of healing, while still allowing for healthy nutrient transfer

Straumann® Membrane Flex™ is recommended for

Implantology, periodontology, and oral surgery for the following procedures:

- Socket preservation
- Horizontal and vertical ridge augmentation
- Fenestration and dehiscence defects
- Intraosseous and furcation defects
- Sinus lift

Available in the following sizes:

Art.No.	Description
070.008	15 × 20 mm Straumann® Membrane Flex™
070.009	20 × 30 mm Straumann® Membrane Flex™
070.010	30 × 40 mm Straumann® Membrane Flex™

*Data on file with manufacturer

Straumann® Membrane Plus™

Collagen membrane from bovine tendon



Courtesy of Dr. Sungmin Chang

Straumann® Membrane Plus™ enhances graft stabilization and bone growth by providing soft tissue support and space maintenance over a predictable time-frame. Meticulously manufactured from bovine material that is one of the purest forms of collagen. It's treated and sterilized to be biocompatible, and cross-linked for predictable resorption rates. With its easy handling characteristics, it's designed to be the easy way to provide critical support.

FEATURES / BENEFITS

- Composed of multiple layers of type 1 collagen, providing soft tissue support
- Predictably resorbs after 6 months, eliminating the need for a second surgery for removal
- Cross-linking allows for reliable performance even if exposed
- Provides support for peri-implant dehiscence defects, fenestration defects, sinus lifts, and horizontal or ridge augmentations

Available in the following sizes:

Art.No.	Description
GCM1020	10×20 mm Straumann® Membrane Plus™
GCM1520	15×20 mm Straumann® Membrane Plus™
GCM2030	10×30 mm Straumann® Membrane Plus™

Straumann® Membrane Plus™ is recommended for

Implantology, periodontology and oral surgery for the following procedures:

- Sinus lift
- Ridge augmentation
- Intraosseous defects
- Extraction sockets
- Furcation defects
- Peri-implant defects

Straumann® AlloGraft Dermal Matrix

Cell-occlusive natural membrane



Straumann® AlloGraft Dermal Matrix is an acellular dermal matrix excellent for GTR/GBR and oral soft tissue correction in areas such as periodontal defects and ridge preservation.

FEATURES / BENEFITS

- Packaged sterile with an SAL of 10^{-6} for increased patient safety
- Storage at ambient temperature; no refrigeration needed
- $\geq 97\%$ of DNA removed while retaining native growth factors, collagen and elastin
- No rehydration needed
- Effective site remodeling

Straumann® AlloGraft Dermal Matrix is recommended for

Implantology, oral surgery and periodontology and craniomaxillofacial surgery (CMS) for the following procedures:

- Membrane (bone graft containment)
- Gingival recession
- Implant preparation
- Ridge preservation
- Periodontal defects
- Soft tissue repair/correction
- Furcation defects
- Peri-implant defects

Available in the following sizes:

Art.No.	Description
DM-150	0.76-1.25 mm thickness, 10x10 mm
DM-100	0.76-1.25 mm thickness, 15x20 mm
DM-151	0.76-1.25 mm thickness, 10x40 mm
DM-101	0.76-1.25 mm thickness, 20x40 mm
DM-250	1.26-1.75 mm thickness, 10x10 mm
DM-200	1.26-1.75 mm thickness, 15x20 mm
DM-251	1.26-1.75 mm thickness, 10x40 mm
DM-201	1.26-1.75 mm thickness, 20x40 mm

Straumann® Emdogain®

Enamel matrix derivative



Periodontitis is associated with a loss of tooth-supporting tissues which is irreversible and the main reason for tooth loss if left untreated. Emdogain® is the gold standard when it comes to inducing the regeneration of lost periodontal tissues in a safe, easy and predictable way. Long-term clinical studies have demonstrated that Emdogain® can effectively help save teeth and revert gingival recessions.^{7,8,9,10}



Before treatment



20 years after treatment with Straumann® Emdogain®

Courtesy of Prof. Carlos Nemcovsky



Before treatment



8 months after treatment with Straumann® Emdogain®

Courtesy of Prof. Giovanni Zucchelli

FEATURES AND BENEFITS

- Induces true regeneration of periodontium as evidenced by human histological studies^{8,9,10}
- Patients report less post-surgical discomfort^{9,10}
- Easy to apply, even when defect is difficult to access
- Shows less complications compared to membranes¹¹



Prof. Dr. David Cochran,
Implantologist, San Antonio/USA

« Emdogain® is a unique set of proteins that has been shown to stimulate periodontal regeneration at the histological level. It can function either alone or when mixed with a bone graft. »

Straumann® Emdogain® is indicated for the treatment of the following conditions:

- Intrabony defects due to moderate or severe periodontitis
- Mandibular degree II furcations with minimal interproximal bone loss
- Gingival recession defects in conjunction with surgical coverage procedures such as coronally advanced flap
- Minimally invasive surgical technique in esthetic zones for intrabony defects
- Wide defects in conjunction with a bone graft material

Available in the following sizes

Art.No.	Description
Multi packs: Emdogain® + PrefGel®	
075.114W	3 × Straumann® Emdogain® 0.3 ml + 3 × Straumann® PrefGel® 0.6 ml
075.116W	3 × Straumann® Emdogain® 0.7 ml + 3 × Straumann® PrefGel® 0.6 ml
Five packs	
075.098W	5 × Straumann® Emdogain® 0.15 ml
PrefGel®	
075.203W	5 × Straumann® PrefGel® 0.6 ml

Straumann® Emdogain®: The Numbers

> 20 years on the market

> 2 million
patients treated*

> 600 clinical
& 1,000 scientific
publications**

#1 in tissue
regeneration***



Stable results documented
over 10 years in 2 indications ^{7,8,9,10}

*Based on the number of syringes sold to date, globally

**According to PUBMED search for "Emdogain" or "enamel matrix derivative"

***Millennium Research Group, Dental Biomaterials/Med tech 360/market analysis, 2016; page 123

Notes

[illegible]

Notes

REFERENCES

- ¹ Kolerman R, et al. Histomorphometric analysis of newly formed bone after maxillary sinus floor augmentation using ground cortical bone allograft and internal collagen membrane. J Periodontol. 2008;79(11):2104-2111.
- ² Hoidal MJ, et al. Clinical evaluation of demineralized freeze-dried bone allograft with and without enamel matrix derivative for the treatment of periodontal osseous defects in humans. J Periodontol. 2008;79:2273.
- ³ Schwarz F et al. Guided bone regeneration at dehiscence-type defects using biphasic hydroxyapatite + beta tricalcium phosphate (Bone Ceramic) or a collagen-coated natural bone mineral (Bio-Oss Collagen): an immunohistochemical study in dogs. Int J Oral Maxillofac Surg. 2007;36(12):1198-1206.
- ⁴ Cordaro L et al. Maxillary sinus grafting with Bio-Oss or Straumann Bone Ceramic: histomorphometric results from a randomized controlled multicenter clinical trial. Clin Oral Implants Res. 2008;19(8):796-803.
- ⁵ Mardas N et al. Alveolar ridge preservation with guided bone regeneration and a synthetic bone substitute or a bovine-derived xenograft: a randomized, controlled clinical trial. Clin Oral Impl Res. 2010;21(688-698).
- ⁶ Mardas N et al. Radiographic alveolar bone changes following ridge preservation with two different biomaterials. Clin Oral Implants Res. 2011;22(4):416-423.
- ⁷ Sculean A, Kiss A, Miliauskaite A, Schwarz F, Arweiler NB, Hannig M. Ten-year results following treatment of intra-bony defects with enamel matrix proteins and guided tissue regeneration. J Clin Periodontol. 2008 Sep;35(9):817-24.
- ⁸ McGuire MK, Scheyer ET, Nunn M. Evaluation of human recession defects treated with coronally advanced flaps and either enamel matrix derivative or connective tissue: comparison of clinical parameters at 10 years. J Periodontol. 2012 Nov;83(11):1353-62.
- ⁹ McGuire, MK, Nunn, M Evaluation of human recession defects treated with coronally advanced flaps and either enamel matrix derivative or connective tissue. Part 1: comparison of clinical parameters. J Periodontol. 2003; 74(8); 1110-1125.
- ¹⁰ McGuire, MK, Cochran, DL Evaluation of human recession defects treated with coronally advanced flaps and either enamel matrix derivative or connective tissue. Part 2: histological evaluation. J Periodontol. 2003; 74(8); 1126-1135.
- ¹¹ Richard T. Kao, Salvador Nares, and Mark A. Reynolds, Periodontal 2015: Periodontal Regeneration – Intrabony Defects: A Systematic Review from the AAP Regeneration Workshop.

Straumann North American Headquarters

Straumann USA, LLC
60 Minuteman Road
Andover, MA 01810
Phone 800/448 8168 (US) • 800/363 4024 (CA)
Fax 978/747 2490
www.straumann.us • www.straumann.ca

ifu.straumann.com

© Straumann USA, LLC 2018. All rights reserved.

Straumann® and/or other trademarks and logos from Straumann® that are mentioned herein are the trademarks or registered trademarks of Straumann Holding AG and/or its affiliates. All rights reserved. LifeNet Health is a registered trademark of LifeNet Health, Virginia Beach, VA