

bone & tissue
regeneration

botiss
biomaterials

maxgraft[®] +HyA

ALLOGENIC BONE SUBSTITUTE MATERIAL
WITH HYALURONATE

+

HyA

biomaterials

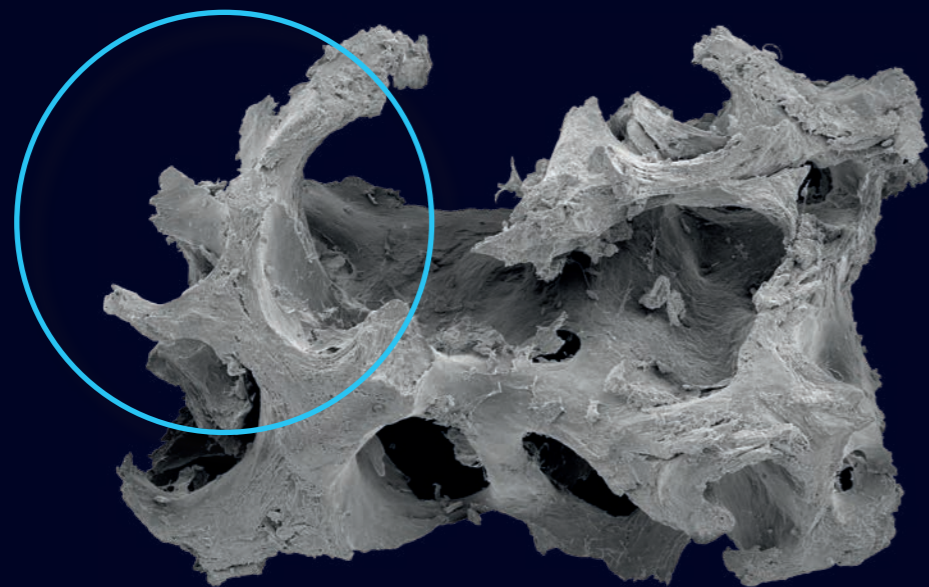


maxgraft®

PROCESSED HUMAN ALLOGRAFT

A unique product combination for unmatched

ease in handling and **enhanced clinical outcomes**¹



NATURAL BONE REGENERATION
WITH A **PLUS**

¹Kloss et al. (2024) Int J Implant Dent. 10(1):42.



HYALURONATE

HyA

Hyaluronic acid (HyA) is a natural polysaccharide found in the extracellular matrix of various tissues, playing a crucial role in hydration, lubrication, and cell signaling².

Innovation: maxgraft® **+HyA** combines the allogenic bone substitute material (maxgraft®) with sodium hyaluronate (NaHyA), a more soluble and stable form of HyA.

Functionality: NaHyA exhibits extraordinary liquid-binding properties due to the numerous hydrophilic groups (-OH, -COO-) present in its molecular structure³.

Efficiency: NaHyA incorporated into the bone graft allows for seamless preparation of sticky bone upon hydration.

²Garantziotis et al. (2019) Matrix Biol. 78-79:1-10.

³Necas et al. (2008) Vet Med-Czech. 53(8):397-411.

Four variants for a wide-range of clinical scenarios

CORTICO-CANCELLOUS app. 70% cortical for improved volume stability
Small 0.25 - 1.0 mm

NEW SIZE

CORTICO-CANCELLOUS FINE

Suited for contained/narrow defects and accelerated graft remodeling, also in combination with bovine bone.

XS < 0.25 mm

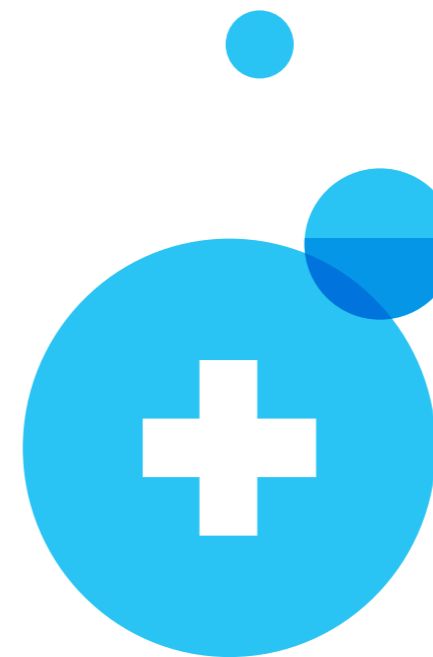
SPECIFICATIONS maxgraft® +HyA*

Art.-No.	maxgraft® Particle Size	Type	Content
39005XS	< 0.25	cortico-cancellous	1 x 0.5 ml
39010XS	< 0.25	cortico-cancellous	1 x 1 ml
39020XS	< 0.25	cortico-cancellous	1 x 2 ml
39005S	0.25 - 1.0 mm	cortico-cancellous	1 x 0.5 ml
39010S	0.25 - 1.0 mm	cortico-cancellous	1 x 1 ml
39020S	0.25 - 1.0 mm	cortico-cancellous	1 x 2 ml

Manufacturer responsible for market authorization:
 Cells + Tissuebank Austria, Krems, Austria



Find your
local distributor
 on botiss.com



INDICATIONS

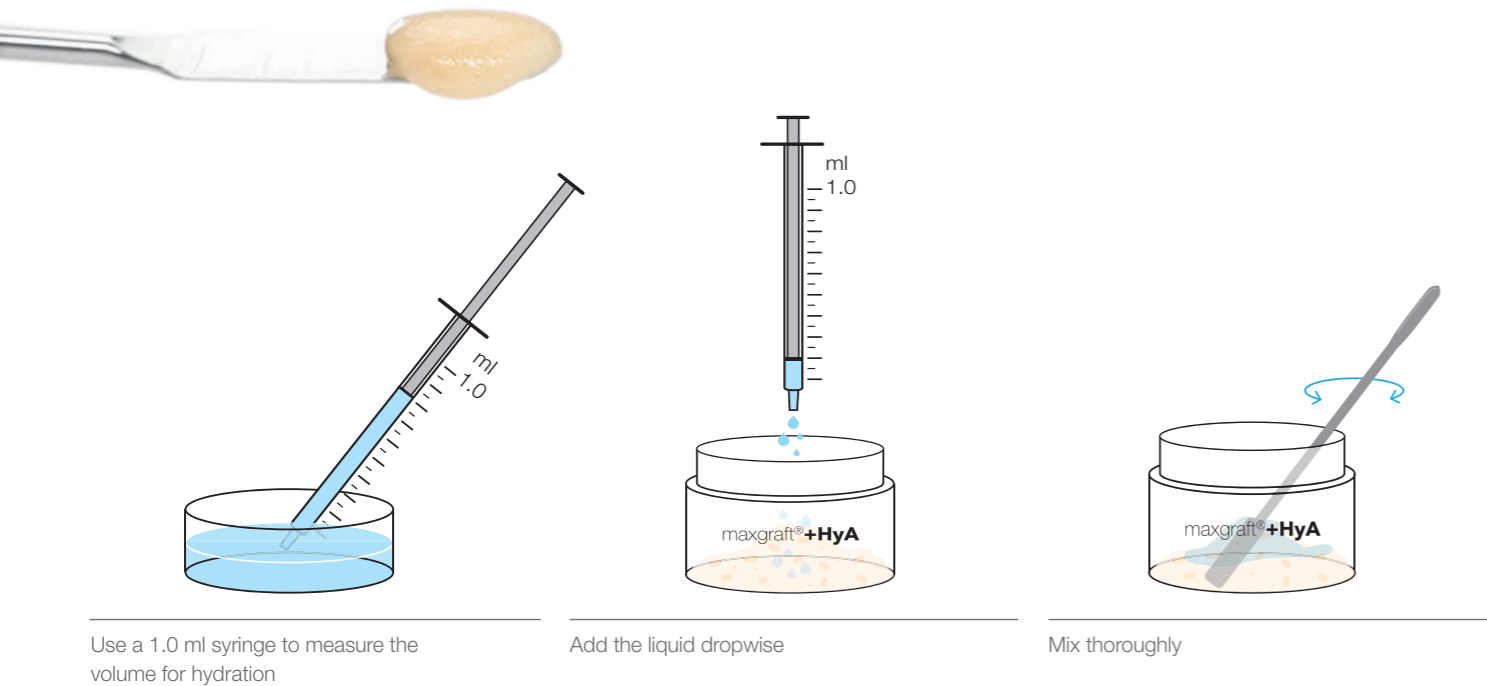
Implantology, Periodontology, Oral and CMF Surgery

- Periodontal osseous defects
- Regeneration of extraction sockets (socket preservation)
- Regeneration of missing bone tissue around dental implants
- Regeneration of gaps around block grafts
- Sinus augmentation
- Horizontal and vertical augmentation

A few drops away to
your **sticky allograft!**

HYDRATION

Approx. **0.8 ml saline solution per 1 ml maxgraft® +HyA**
Check detailed recommendations in the user manual



HANDLING TIPS

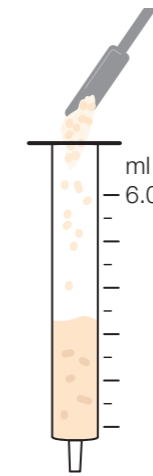
- Use a 1 ml syringe to measure the volume for hydration
- Aim for a sticky and relatively dry consistency rather than a liquid one



See how
it works

maxgraft® +HyA (XS) SOLUTIONS FOR YOUR NEEDS

> **OPTION 1**
maxgraft® +HyA (XS)
with a **syringe**
for **small** or **narrow defects**



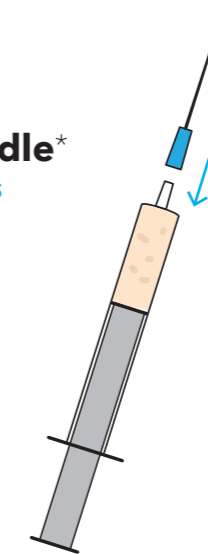
Transfer into a conventional
5-6 ml Luer tip syringe **after hydration**



Recommended for small defects,
e.g., periodontal defects

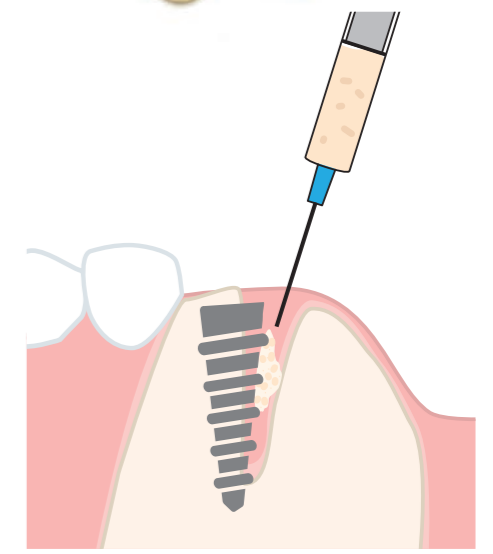
hydrate > **inject** > regenerate

> **OPTION 2**
maxgraft® +HyA (XS)
with a conventional **blunt needle***
to reach **deeper** into **narrow defects**



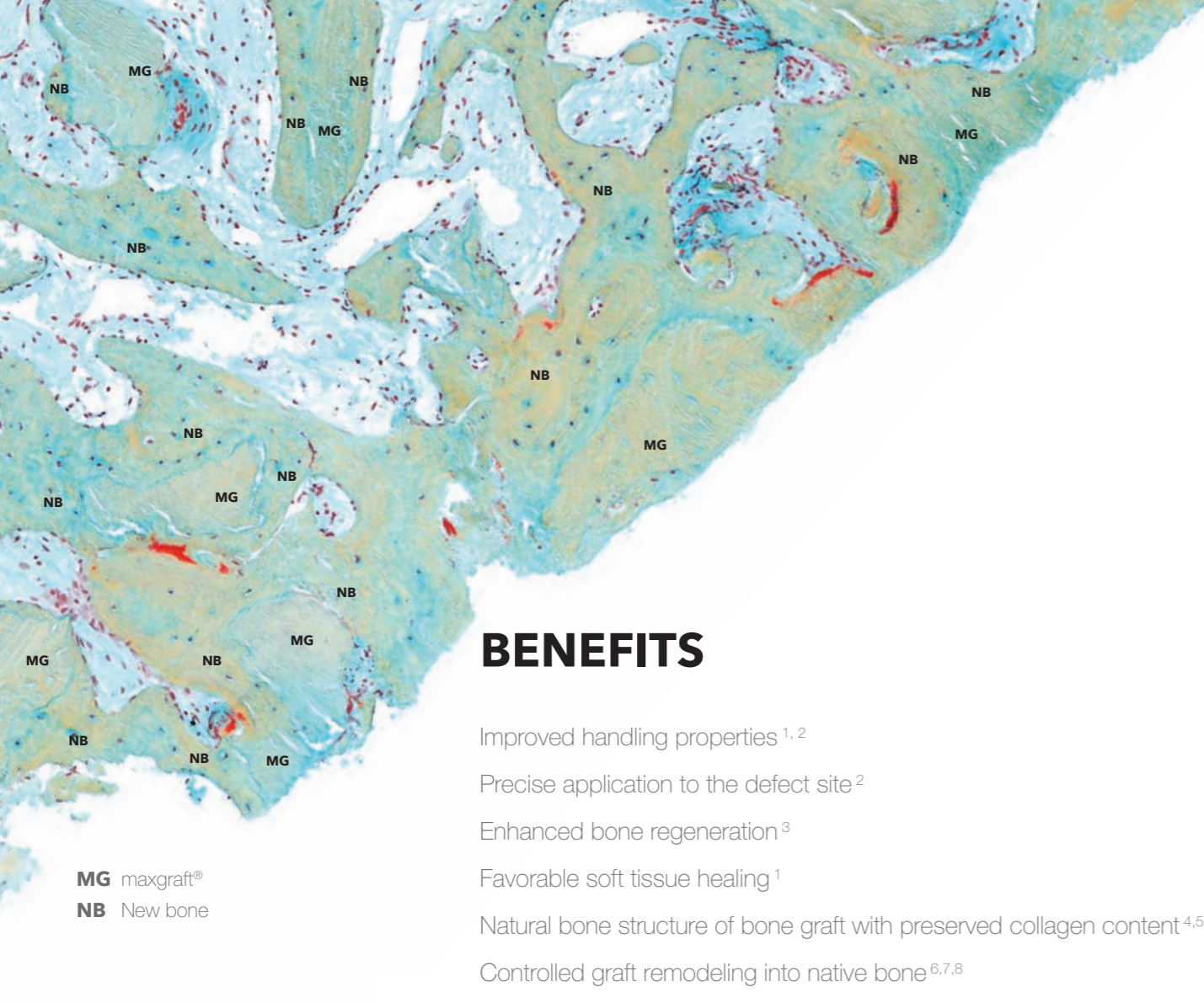
TIP: For a smoother flow through
the needle, add a few extra drops of
liquid while rehydrating the granules.

Simply connect the needle with the Luer tip
of the syringe and inject



Recommended for narrow defects,
e.g., in gaps around immediate implants

* Ideally 14G/ø 2.1 mm. Example of a suitable needle: transcendent™ Dental Needle 2.1 x 39 mm. Art.No. 162062



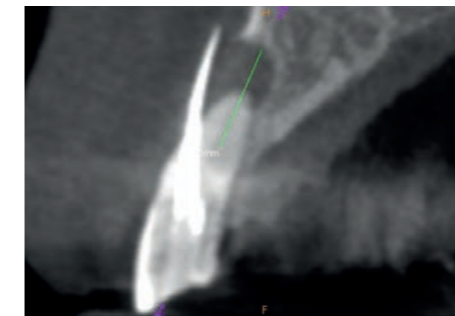
BENEFITS

- Improved handling properties ^{1,2}
- Precise application to the defect site ²
- Enhanced bone regeneration ³
- Favorable soft tissue healing ¹
- Natural bone structure of bone graft with preserved collagen content ^{4,5}
- Controlled graft remodeling into native bone ^{6,7,8}

MG maxgraft®
NB New bone

CLINICAL CASE BY PD Dr. Dr. Frank Kloss, Lienz, Austria

maxgraft® +HyA (S) – RIDGE PRESERVATION OF A COMPROMISED EXTRACTION SOCKET IN THE ANTERIOR MAXILLA



Initial situation



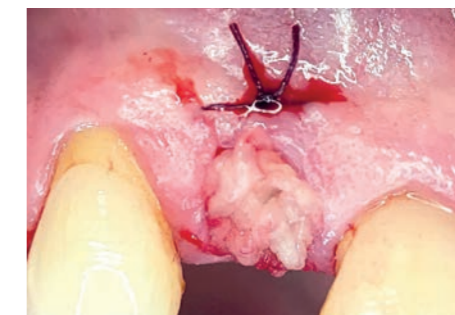
Tooth extraction and socket debridement



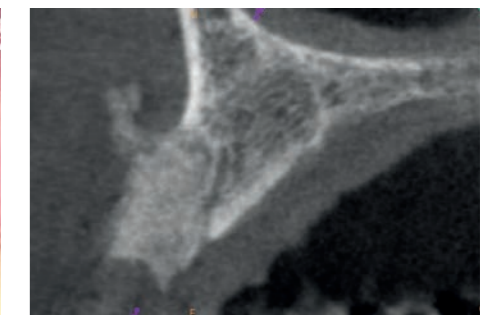
Cancellous maxgraft® +HyA (S) upon rehydration with saline solution



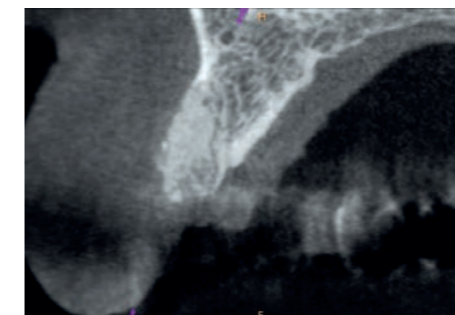
Filling the socket with maxgraft® +HyA (S)



Socket coverage with A-PRF



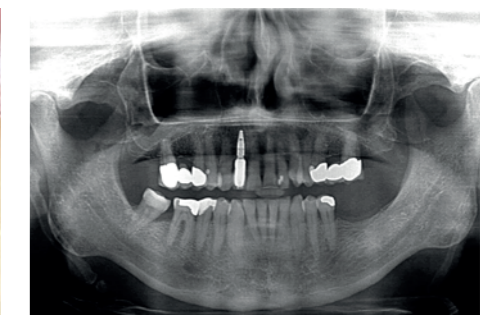
Immediate post-operative x-ray



Four months post-operative



Vital bone and adequate bone volume for implant placement



Control panoramic x-ray one year post-operative



¹ Data on File. Limited Market Release. Users Feedback on Handling and Initial Healing Period 08/2023.

² Data on File. Limited Market Release. Clinical Case Documentation.

³ Kloss et al. (2024) Int J Implant Dent. 10(1):42.

⁴ Trajkovski et al. (2018) Materials. 11(2):215.

⁵ Barbeck et al. (2019) Materials. 12(19):3234.

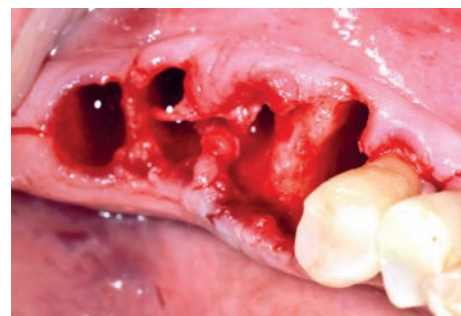
⁶ Data on file. Histological analysis.

⁷ Solakoglu et al. (2019) Clin Implant Dent Relat Res. 21(5):1002-1016.

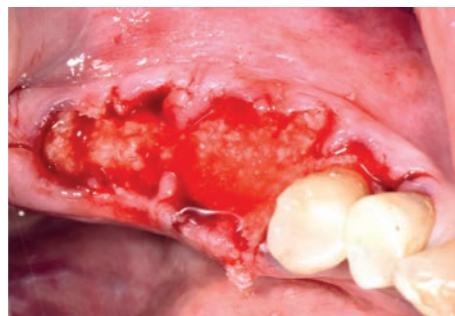
⁸ Wen et al. (2020) J Periodontol. 91(2):215-222.

CLINICAL CASE BY Dr. Reto Morger, Eschenbach, Switzerland

maxgraft® +HyA (S) – RIDGE PRESERVATION FOLLOWING MULTIPLE TOOTH EXTRACTIONS
IN THE POSTERIOR MAXILLA IN A BISPHOSPHONATE PATIENT



Multiple tooth extractions



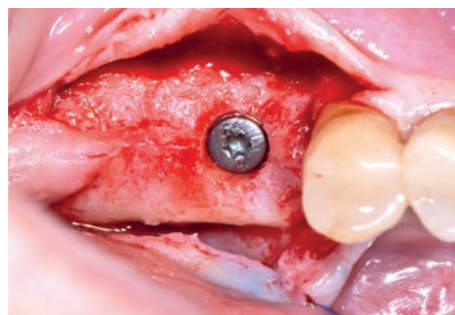
Grafting the defect area with cancellous maxgraft® +HyA (S)



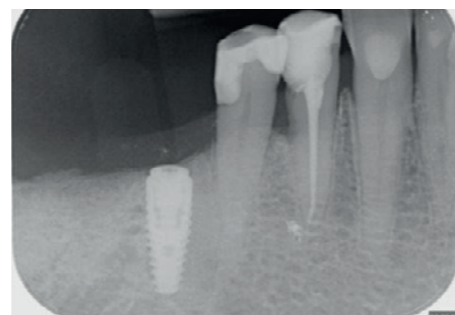
Covering with Jason® membrane and primary closure



Re-entry at four months showing vascularized dense bone



Implant placement



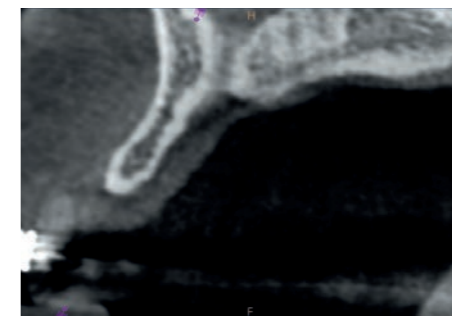
Post-operative control radiograph

CLINICAL CASE BY PD Dr. Dr. Frank Kloss, Lienz, Austria

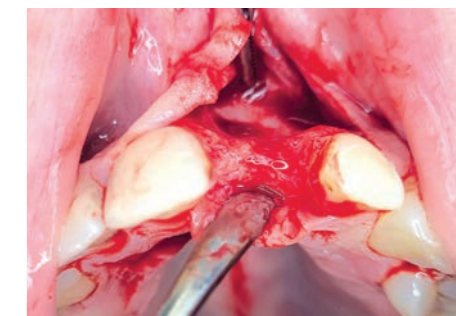
Cortico-cancellous maxgraft® +HyA – 2-STAGE GBR IN THE ANTERIOR MAXILLA



Missing central incisor



Initial situation – severe horizontal deficiency



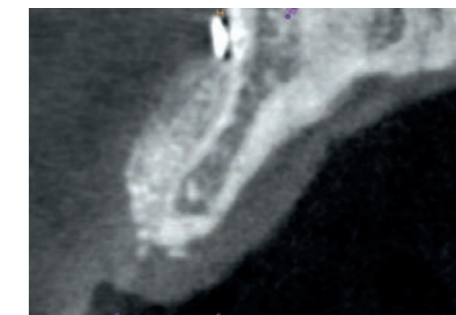
Defect site before grafting



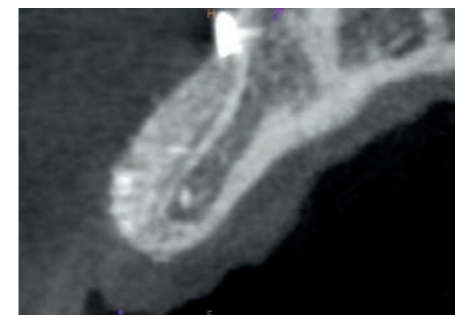
Cortico-cancellous maxgraft® +HyA upon rehydration with saline solution



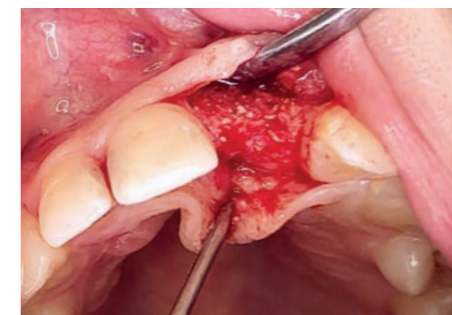
Applying the bone graft followed by coverage with Jason® membrane



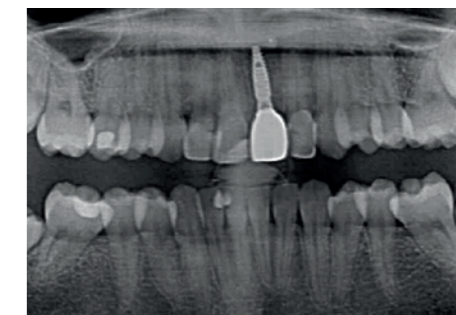
Post-operative control radiograph



Control radiograph at three months showing stable bone volume and substantial increase in width



Re-entry and implant placement at six months



Stable conditions at one year follow-up



Clinically and aesthetically successful outcome

CLINICAL CASE BY Dr. Bartosz Matejkowski, Warsaw, Poland

Cortico-cancellous maxgraft® +HyA – IMPLANT PLACEMENT WITH SIMULTANEOUS LATERAL AUGMENTATION



Initial situation



Implant placement and tacking of Jason® membrane



Cortico-cancellous maxgraft® +HyA upon rehydration with saline solution



Graft application



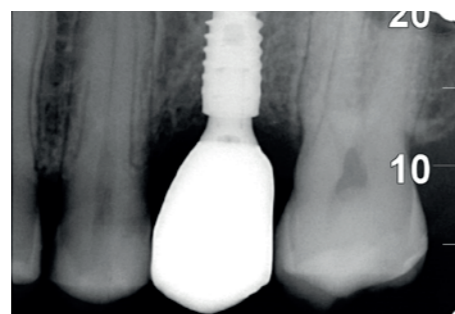
Primary closure



Five months post-operative healthy peri-implant soft tissue



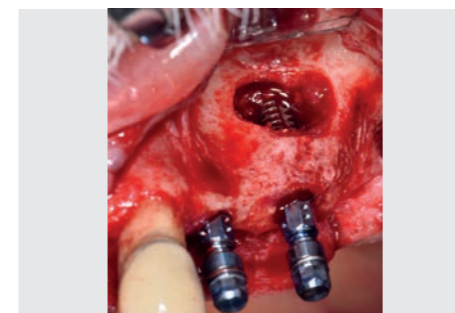
Five months post-operative definitive restoration



Control radiograph

CLINICAL CASE BY Dr. Reto Morger, Eschenbach, Switzerland

maxgraft® +HyA (L) and cerabone® plus (L) – SINUS LIFT WITH SIMULTANEOUS IMPLANT PLACEMENT AND LATERAL AUGMENTATION



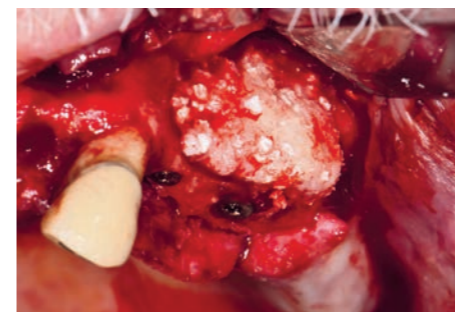
Preparation of the lateral window and implant placement



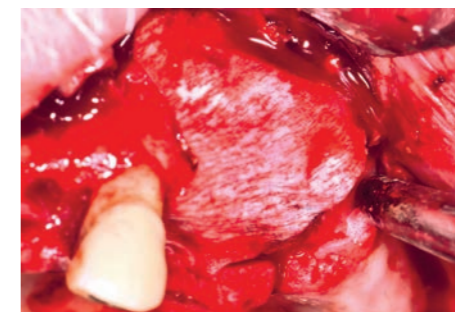
Mixing 1:1 maxgraft® +HyA (L) and cerabone® plus (L)



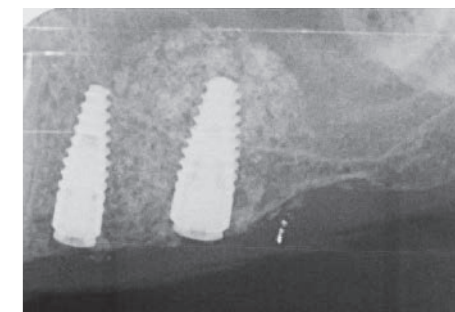
Grafting the maxillary sinus



Lateral augmentation



Coverage with Jason® membrane



Post operative control radiograph

CLINICAL CASE BY Dr. Sebastian Jędraszczyk, Szczecin, Poland

maxgraft® +HyA (XS) – FILLING JUMPING GAPS ALONG WITH IMMEDIATE IMPLANT PLACEMENT



Initial situation Tooth extraction Immediate implant placement



Filling the gaps with maxgraft® +HyA (XS) Sealing-socket abutment (SSA) with mucoderm® punch SSA in place



Immediate post-operative radiograph Situation four months post-operative Four months post-operative radiograph showing stable bone levels



Emergence profile Definitive restoration Radiograph with definitive restoration

CLINICAL CASE BY Dr. Sarah Schneider, Rostock, Germany

maxgraft® +HyA (XS) COMBINED WITH EMDOGAIN® – TREATMENT OF LOCALIZED PERIODONTAL DEFECT



Localized pockets and open furcation on tooth 16 Initial situation Open flap scaling and root planning



Application of PREFGEL® (24% EDTA) and subsequent cleaning with saline solution maxgraft® +HyA (XS) was hydrated as per protocol before being transferred to a conventional syringe Applying Emdogain® on the root surface and augmentation with maxgraft® +HyA (XS)

CLINICAL CASE BY Dr. Sarah Schneider, Rostock, Germany

maxgraft® +HyA (XS) COMBINED WITH EMDOGAIN® – LOCALIZED PERIODONTAL DEFECT



Periodontal defect 36/37



Initial situation



Scaling and root planning



Application of PREFGEL® (24% EDTA) and subsequent cleaning with saline solution



Rehydration of maxgraft® +HyA (XS) and transferring it into a conventional syringe



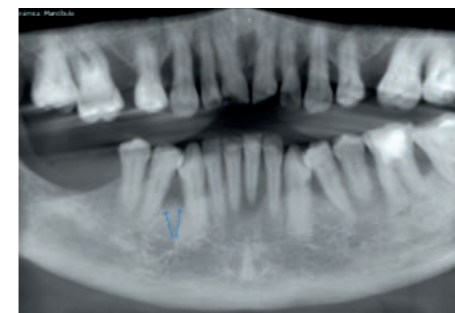
Application of Emdogain® on the roots, augmentation with maxgraft® +HyA (XS), and coverage with Emdogain®



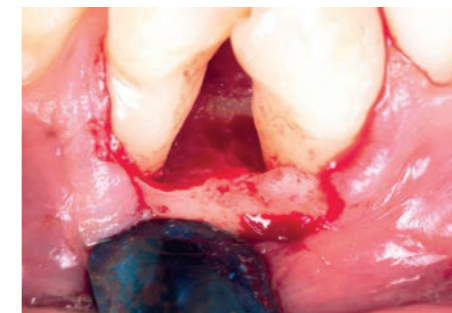
Wound closure with final Emdogain® application

CLINICAL CASE BY Dr. Stuardo Valenzuela Manfredi, Chile

maxgraft® +HyA (XS) MIXED WITH EMDOGAIN® – INTRABONY DEFECT



Intrabony defect at tooth 45/46



Defect site after scaling and root planning



Application of PREFGEL® (24% EDTA) and subsequent cleaning with saline solution



Augmentation with maxgraft® +HyA (XS) mixed with Emdogain®



17 days of healing



Situation six months post-operative showing stable gingival margin



Six months post-operative radiograph showing bone fill in the intrabony defect

boosting
dental
regeneration

cerabone[®] **plus**

100% PURE BOVINE BONE MINERAL
WITH HYALURONATE

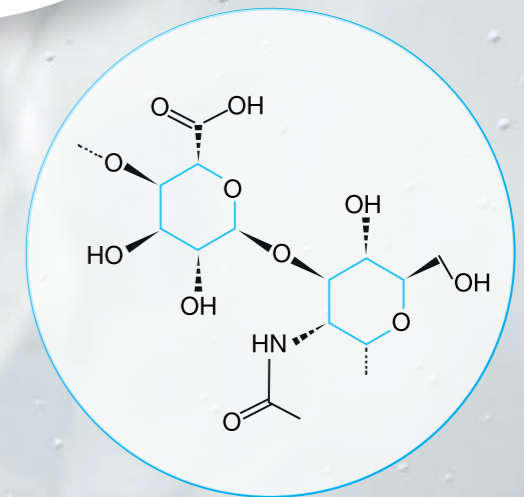


+

HyA

maxgraft[®] **+HyA**

ALLOGENIC bone substitute material



Hyaluronic Acid

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Innovation. Regeneration. Aesthetics.

soft tissue

education

hard tissue

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