bone substitutes

hard tissue

bone & tissue regeneration

botiss biomaterials

XENOGRAFTS

cerabone®

THE NATURAL BOVINE BONE SUBSTITUTE

cerabone® is a long-term stable, particularly safe bone substitute, which is produced from the femoral heads of cattle by a unique 1200°C manufacturing process utilizing heat and water only (free of chemical additives). The human-like bone structure of cerabone® with its three-dimensional pore-network and bioactive surface promotes the adhesion and invasion of bone forming cells resulting in complete integration of the granules into newly formed bone matrix.

PROPERTIES

- 100% pure natural bone mineral
- 1200°C maximum safety
- Human-like bone structure
- Rough, hydrophilic surface favoring optimal cell adhesion and blood absorption
- High volume stability
- Easy handling

INDICATIONS:

IMPLANTOLOGY, PERIODONTOLOGY AND ORAL AND CMF SURGERY: Sinus lift / Horizontal and vertical augmentation / Periodontal bone defects / Peri-implant defects / Socket and ridge preservation / Furcation defects (class I and II)

cerabone® **plus**

WITH **HYALURONATE**

cerabone® plus combines the established bovine bone grafting material cerabone® with the well-known properties of hyaluronic acid. cerabone® plus forms a sticky bone material upon hydration that provides unique application comfort by allowing both easy uptake and delivery to the site of application.

PROPERTIES

Osteoconductivity and volume stability of cerabone® **plus** proven properties of hyaluronate

- Sticky and malleable following hydration
- Efficient defect filling and time-saving application
- Easy defect contouring
- Minimized displacement of single granules during application

INDICATIONS:

IMPLANTOLOGY, PERIODONTOLOGY AND ORAL AND CMF SURGERY: Horizontal and vertical augmentation / Peri-implant defects / Periodontal intrabony defects / Socket and ridge preservation / Sinus lift / Furcation defects (class I and II)

ALLOGRAFTS

maxgraft®

PROCESSED HUMAN ALLOGRAFT

maxgraft® is a sterile and safe allograft product from selected human organ and tissue donors. processed by the Cells+ Tissue-bank Austria. The human collagen is responsible for fast integration and healing as well as flexibility of block grafts. The excellent bio-logical regeneration capability of maxgraft® results in a predictable clinical outcome.

PROPERTIES

- Natural mineralized collagen
- Preserved biomechanical properties
- Osteoconductive properties supporting natural and controlled tissue remodeling
- Bone augmentation without autograft harvesting
- No donor site morbidity
- 5 years shelf life at 5-30°C

INDICATIONS:

IMPLANTOLOGY, PERIODONTOLOGY AND ORAL AND CMF SURGERY: GRANULES: Localized augmentation of the ridge for future implant placement / Reconstruction of the ridge for prosthetic therapy / Filling of osseous defects, such as extraction sockets / Elevation of maxillary sinus floor / Regeneration of peridontal bone defects / BLOCKS: A highly effective alternative to traditional block grafting / Ridge augmentation

maxgraft® cortico

ALLOGENIC CORTICAL STRUTS FOR THE SHELL TECHNIQUE

maxgraft® cortico is a prefabricated plate made of processed allogenic bone. Similarly to the autogenous bone, it can be used for the shell technique. maxgraft® cortico was developed to avoid the donor-site morbidity and to prevent the time-consuming harvesting and splitting of autologous cortico-cancellous bone blocks.

PROPERTIES

- Osteoconductive properties supporting natural and controlled tissue remodeling
- Preservation of biomechanical properties
- High volume stability and resorption protection
- Five years shelf life at 5-30°C

INDICATIONS:

IMPLANTOLOGY, ORAL AND CMF SURGERY: Vertical augmentation / Horizontal augmentation / Complex three-dimensional augmentations / Single tooth gaps / Fenestration defects

SYNTHETICS

maxgraft® bonering

PROCESSED ALLOGENIC BONE RING

maxgraft® bonering is a prefabricated cancellous ring from human donor bone. The ring allows implant placement and bone augmentation in one step. Therefore the ring technique requires no second surgical procedure. It shortens treatment time till full restoration about by months and therefore increases patient acceptance.

PROPERTIES

- One step procedure – simultaneous bone augmentation and implant placement
- Reduced surgical and treatment time
- High patient acceptance

INDICATIONS:

IMPLANTOLOGY, ORAL AND CMF SURGERY: Vertical augmentation (in combi-nation with low-grade horizontal augmentation) / Single tooth gap / Edentulous space / Sinus floor elevation (4 mm - 1 mm residual bone height)

maxgraft® bonebuilder

CUSTOMIZED ALLOGENIC BONE BLOCK

The individually designed allogenic bone block enables complex horizontal and vertical augmentation by using the latest 3D-CAD/CAM technology. The perfect three-dimensional precision fit significantly reduces valuable surgery time, making autologous bone harvesting and manual adjustment unnecessary, thus diminishing the donor-site morbidity.

PROPERTIES

- Osteoconductive properties supporting natural and controlled tissue remodeling
- Preservation of biomechanical properties
- Sterile without antigenic effects
- Five years shelf life at 5-30°C

INDICATIONS:

IMPLANTOLOGY, ORAL AND CMF SURGERY: Horizontal and vertical augmen-tation / Extensive bone defects / Atrophic maxilla and mandibula

maxresorb®

SYNTHETIC BIPHASIC CALCIUM PHOSPHATE

maxresorb® shows an ideal homogenous, biphasic, composition of 60% hydroxyapatite (HA) and 40% beta-tricalcium phosphate (β-TCP). This composition is reflected in the controlled resorption of maxresorb®, which results in an initial integration of the particles followed by a continous resorption.

PROPERTIES

- Synthetic and resorbable
- Controlled resorption/remodeling
- Rough and hydrophilic surface
- High interconnected porosity
- 60% HA/40% ß-TCP
- Osteoconductive

INDICATIONS:

IMPLANTOLOGY, PERIODONTOLOGY AND ORAL AND CMF SURGERY: Sinus lift / Ridge augmentation / Intraosseous defects / Socket preservation / Osseous defects / Furcation defects

maxresorb® inject

SYNTHETIC INJECTABLE BONE PASTE

Owing to its specific composition, the viscous properties of maxresorb® inject allow perfect shaping, molding, fitting and complete bonding to the surrounding bone surface of the defect. maxresorb® inject is a non-hardening and ready to use bone paste. The syringe design allows direct and easy application to the defect site. Once applied, maxresorb® inject is gradually replaced by new bone.

PROPERTIES

- Non-hardening bone paste
- Synthetic, safe and resorbable
- Easy handling and ready to use
- Viscous and moldable
- Optimal adaptation to surface contours
- Active HA nanoparticles
- Contains maxresorb® granules (60% HA/40% β-TCP)

INDICATIONS:

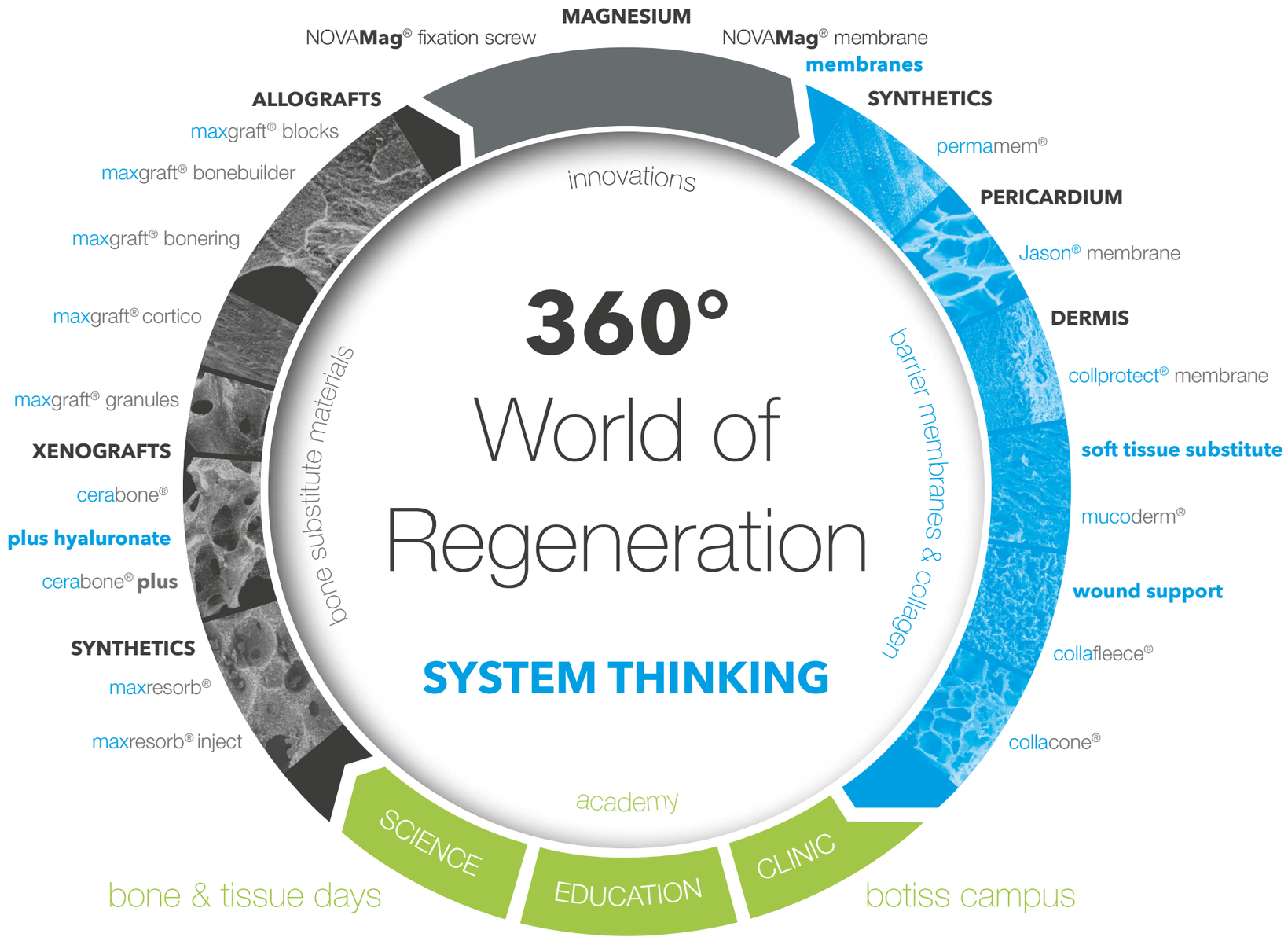
IMPLANTOLOGY, PERIODONTOLOGY AND ORAL AND CMF SURGERY: Sinus lift / Intraosseous defects / Socket preservation / Osseous defects / Regeneration of small and contained defects

bone & **tiss**ue regeneration

botiss regeneration system

bone & tissue regeneration

botiss biomaterials



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PRODUCT PORTFOLIO
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INNOVATION

NOVA**Mag**® product line

RESORBABLE MAGNESIUM MEMBRANES & FIXATION SCREWS

The NOVAMag® membrane and NOVAMag® fixation screws are completely resorbable and biodegradable and are available in various sizes. The membrane is composed of pure magnesium combining the benefits of the mechanical strength of the metal and its biodegradability into a unique barrier membrane for guided bone and tissue regeneration. The biodegradable magnesium alloy used for the NOVAMag® fixation screw and its surface treatment is designed to slow down resorption and to retain mechanical strength during the initial wound healing phase, thereby providing a sufficient stabilization of the barrier membrane or bone graft.

PROPERTIES

- Biodegradable metal
- Synthetic
- Resorbable barrier membrane and fixation screws
- Controlled degradation (i.e., no early disintegration, no encapsulation)
- No removal surgery necessary resulting in fewer surgical interventions and less chair time

INDICATIONS:

STOMATOLOGY, MAXILLOFACIAL SURGERY, IMPLANTOLOGY, PERIODONTOLOGY AND ORAL SURGERY
Surgical bone defects and bone wall defects / Sinus lift / Socket preservation / Ridge augmentation / Ridge reconstruction for prosthetic treatment / Fenestration defects / periodontal bone defects (1 to 3 walls, furcation defects) / Augmentation in conjunction with immediate or delayed implant placement / After apicectomy, cystectomy, resection of retained teeth and resection of other bone lesions

SYNTHETIC

permamem®

HIGH-DENSITY PTFE BARRIER MEMBRANE

Non-resorbable, biologically inert and biocompatible membrane made of high-density polytetrafluoroethylene (PTFE). permamem® maintains its structural characteristics both during the initial implantation and over the whole healing time. Due to its dense structure the membrane acts as an efficient barrier against bacterial and cellular penetration, and can therefore be used for open healing in certain indications.

PROPERTIES

- 100% synthetic PTFE barrier membrane
- Ultra-thin (~0.08 mm)
- Impervious to bacteria due to dense structure
- Easily removable due to minimal tissue ingrowth into the surface structure
- No need for primary soft tissue closure (indication-dependent)
- Easy recovery thanks to blue color
- Rounded edges for minimal tissue trauma

INDICATIONS:

IMPLANTOLOGY, PERIODONTOLOGY AND ORAL AND CMF SURGERY:
Socket and ridge preservation (open healing) / Horizontal and vertical augmentation / Fenestration and dehiscence defects / Intraosseous defects (1 to 3 walls) / Furcation defects (class I and II)

COLLAGEN

Jason® membrane

NATIVE PERICARDIUM GBR / GTR MEMBRANE

Jason® membrane is a native collagen membrane obtained from porcine pericardium, developed and manufactured for dental tissue regeneration. It is very thin and provides a naturally long barrier function based on the specific composition and structure of the pericardial collagen fibres. Owing to the preservation of the natural biomechanical properties of the pericardium, Jason® membrane exhibits beneficial handling characteristics such as a remarkable tear resistance and effective surface adaptation.

PROPERTIES

- Naturally long barrier function
- Multi-directional strength and tear resistance
- No artificial cross-linking
- No stickiness after hydration
- Excellent surface adaptation
- Easy manipulation
- Can be applied dry or wet
- Low thickness, no swelling upon hydration

INDICATIONS:

IMPLANTOLOGY, PERIODONTOLOGY AND ORAL AND CMF SURGERY:
Horizontal and vertical augmentation / Ridge reconstruction / Socket and ridge preservation / Sinus lift / Fenestration and dehiscence defects / Intraosseous defects (1 to 3 walls) / Furcation defects (class I and II)

collprotect® membrane

NATIVE COLLAGEN MEMBRANE

collprotect® membrane is a native collagen membrane made of porcine dermis, which is intended for dental bone and soft tissue regeneration. The natural, hemostatic effect of collagen enables early wound stabilization and supports the natural healing. Moreover, the collprotect® membrane displays a good surface adaptation and tissue integration and is ideal for most indications where an intermediate stability and easy handling are required.

PROPERTIES

- Natural compact, open porous collagen structure
- No artificial cross-linking
- Natural rough surface for cell adhesion and migration
- Pores facilitate blood vessel ingrowth and angiogenesis
- Controlled degradation
- Natural collagen supports blot clot formation/wound healing
- Easy application in dry or wet status

INDICATIONS:

IMPLANTOLOGY, PERIODONTOLOGY AND ORAL AND CMF SURGERY:
Protection and covering of the Schneiderian membrane / Sinus lift / Socket preservation / Horizontal ridge augmentation / Fenestration and dehiscence defects / Intraosseous defects (1 to 3 walls) / Furcation defects (class I and II)

mucoderm®

3D-STABLE SOFT TISSUE (COLLAGEN) GRAFT

Acellular collagen matrix that offers a safe alternative to autologous soft tissue transplants in a diverse range of soft tissue grafting indications. mucoderm® is derived from porcine dermis that undergoes a multi-step purification process. After implantation mucoderm® is continuously remodeled into patients own soft tissue.

PROPERTIES

- Rapid revascularization and tissue integration
- Soft tissue regeneration/augmentation avoiding palatal autograft harvesting
- Complete remodeling into patient's own tissue in ~6-9 months
- Can be easily applied and fixed by sutures
- Can be cut into procedure-specific shape

INDICATIONS:

IMPLANTOLOGY, PERIODONTOLOGY AND ORAL AND CMF SURGERY:
Recession coverage / Soft tissue grafting in combination with GBR/GTR / Broadening of attached gingiva / Closure of extraction sockets / Thickening of peri-implant soft tissue / Oral wound coverage after transplant harvesting or tumour surgery

collafleece®/ collacone®

COLLAGEN HEMOSTAT (SPONGE / CONE)

Wet-stable, porcine collagen with highly efficient hemostatic properties. The natural porous collagen structure supports the hemostasis and controls the natural healing of the wound.

PROPERTIES

- Stabilization of blood clot and efficient local hemostasis
- Maintains integrity in the presence of blood and during application
- Fast resorption (2-4 weeks)
- Easy application
- Wound protection
- Supports wound healing

INDICATIONS:

IMPLANTOLOGY, PERIODONTOLOGY AND CMF SURGERY:
Minor oral wounds / Biopsy harvesting sites / Bone block and soft tissue transplant harvesting sites / Extraction sockets / Internal sinus lift

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collagen & barriers

soft tissue

bone & tissue regeneration

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