



creosTM

nobelbiocare.com/en-us

YOU ARE WHAT
WE STAND FOR.

care

Enhancing the experience

easy-to-use

advanced

and on the rise

**Innovation is
our passion
but it's your reality
THAT DRIVES US.**

creos™ is the Nobel Biocare regenerative product portfolio,
built to meet your everyday needs. Join us and experience
the carefully designed, easy-to-use, effective solutions.

We aim to be the trusted regenerative partner for you
and your patients, because you are what we stand for.

Sideways to your side

effective

creos™ xenoprotect

A membrane with outstanding handling that facilitates bone gain



OUTSTANDING HANDLING^{1,2}

- Does not stick to instruments.
- Repositioning in-situ possible.
- Low surface expansion when hydrated.
- Both sides can face the defect.

HIGH MECHANICAL STRENGTH^{2,3,4}

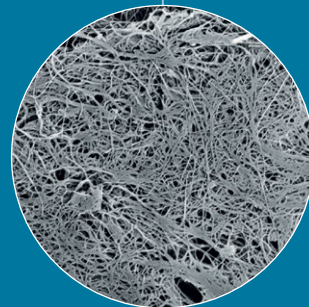
- Excellent suture retention.
- Highly tear-resistant.

ENDURING RESISTANCE TO DEGRADATION IN VIVO*³

- Manufacturing process intended to preserve the natural structure of the collagen fiber network, to confer a high resistance to degradation.

FACILITATES BONE GAIN^{2,3,5,6,7,8}

- Excellent tissue compatibility.³
- Good clinical results.⁵



"What I like is that the handling is very easy. The mechanical stability is very high and when it is rehydrated it adapts very well to the underlying bone"

Dr. Bastian Wessing, Germany

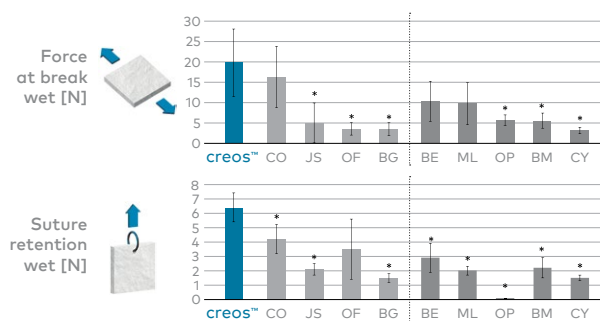
*As shown in an animal model (rat, subcutaneous)

High mechanical strength

In an in vitro study aiming to compare the mechanical strength of commonly used native non-chemically cross-linked and chemically cross-linked collagen membranes⁴:

- creos™ xenoprotect demonstrated the highest force at break, wet (21.2 N).
- creos™ xenoprotect had the highest suture retention, wet (6.1 N).

Comparison of commercial membrane in a hydrated state



Non cross-linked collagen membranes (NXL) – CX: creos™ xenoprotect [Nobel Biocare]; CO: Copios [Zimmer]; JS: Jason [botiss]; OF: Osseoguard Flex [3i]; BG: Bio-Gide [Geistlich]

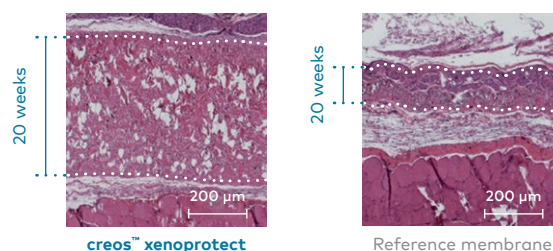
Cross-linked collagen membranes (XL) – BE: BioMend Extend [Zimmer]; ML: Mem-Lok [BioHorizons]; OP: OssixPlus [Datum Dental]; BM: BioMend [Zimmer]; CY: Cytoplast RTM [Osteogenics]

*Statistically significant

Enduring resistance to degradation in vivo without chemical cross linking³

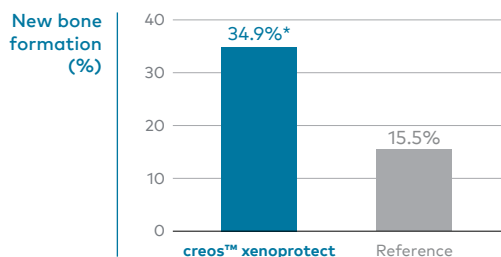
Manufacturing process intended to preserve the natural structure of the collagen fiber network, to confer a high resistance to degradation.³

In an animal model, after 20 weeks, the thickness of xenoprotect decreased only slightly, whereas the reference membrane showed a thickness loss of around 50%, confirming the higher stability of xenoprotect against biodegradation in vivo.³



Representative histological images at 20 weeks implantation in a rat model.

Facilitates new bone formation^{2, 3, 5, 6, 7, 8}



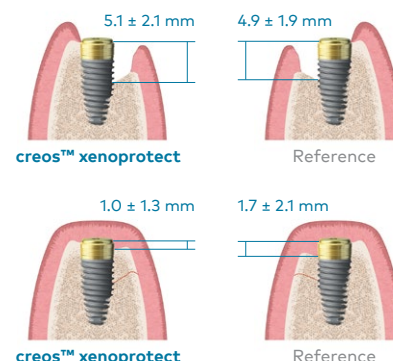
*Statistically significant

In a comparative in vivo study, creos™ xenoprotect demonstrated significantly higher new bone formation in the central portion of the defect.

This increase in bone formation was associated with significantly increased expression of the growth factor *Bmp2*, which has a strong role in osteogenesis.⁷

In a randomized controlled clinical trial, 24 patients were treated with creos™ xenoprotect and 25 with a reference membrane. In the creos™ xenoprotect group, the defect height reduced at 6-month re-entry by 81%. In the reference membrane group, the defect height reduced at 6-month re-entry by 62%.⁵

Schematic showing the defect height prior to treatment and 6 months after GBR



Scan the code for more resources.

creos™ xenogain

3 methods of application to meet
all your bone grafting needs



Regenerating bone
for 15 years

THREE DIFFERENT METHODS OF APPLICATION:



vial



bowl



syringe

SIMILAR TO HUMAN BONE

- Chemical composition: Ca/P ratio.
- Interconnected macropores.^{9, 10}

EASY HANDLING

- Homogenous particle size.⁹
- Hydrophilic for fast rehydration.^{11, 12}

SOLID FOUNDATION FOR DENTAL IMPLANT TREATMENT

- Osteoconductive properties.¹⁰
- Long-term volume stability.¹³
- Uneventful healing.^{8, 11, 12, 13, 14}



"I appreciated its handling properties
and I see its high hydrophilicity as a
biological advantage in sinus grafting
and peri-implant defect regeneration"

Dr. Werner Zechner, Austria



Bovine

creos™ xenogain collagen



block



syringe

Purified cancellous bovine bone mineral granules and 10% porcine collagen in block form and syringe.

The collagen helps to hold creos™ xenogain collagen in the
desired place.

Especially recommended for extraction socket management.



Bovine and
Porcine



Scaffold for successful regeneration

Preserved natural features of bone through optimized manufacturing process.¹⁰

CHEMICAL COMPOSITION

With a calcium phosphate ratio that reflects the composition in human bone and a structure with low crystallinity. The body accepts creos™ xenogain as a suitable framework for bone formation.⁹

PARTICLE SIZE

Homogenous particle size.⁹

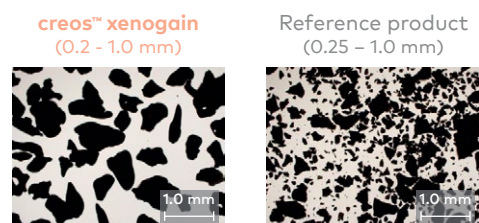
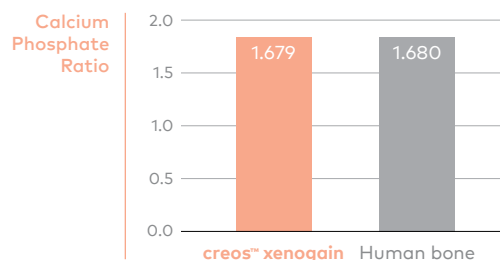
Maintains space for bone regeneration.¹²

PRESERVED NANOSTRUCTURE

Nanostructure preserved thanks to treatment at comparatively low temperature (600°C) and no sintering.¹⁰

MACRO AND MICRO-STRUCTURE

Interconnected macropores allow cells to invade bone grafts and micropores contribute to capillary liquid uptake (hydrophilicity).^{15, 16}

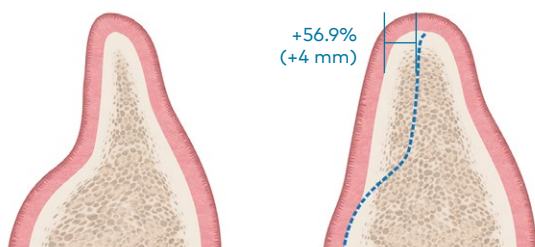


Photographic micrograph of creos™ xenogain and reference product showing the particle size distribution (magnification 20x)

Solid foundation for implant placement

The graft integrates with the newly formed bone, building a basis for successful implant placement.¹²

Initial situation before GBR 8 months post-surgery

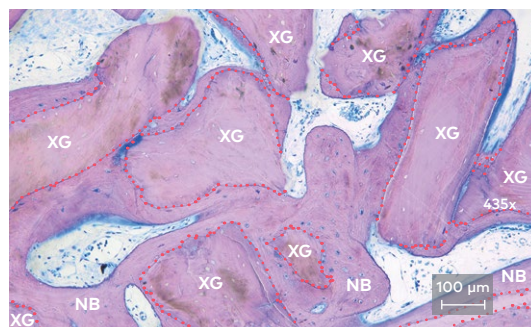


Schematic showing the defect and bone size prior to and after GBR

In a multicenter clinical study involving 46 patients, bone increase after 8 months was 4.0 mm (+56.9 % gain) and 4.7 mm (51.0 % gain) at 1 and 3 mm from the top of the crest, respectively.⁸

GBR led to robust bone regeneration during the 8 months of healing, enabling successful placement of 91 implants in 43 patients, with an average insertion torque of 37.8 ± 5.1 Ncm.⁸

Histological assessment of the trephine cores showed 37.3 % of new bone, 39.1 % of graft material, and 23.6 % of soft tissue (n = 6 cores, 3 patients).⁸



Histological cross section of the cellular components; NB – new bone, XG – graft, scale bar shown in the bottom right corner, red dashed line: bone to graft particle contact.



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for more resources.

creos™ allo.gain and allo.protect

**A wide range of allograft materials,
because all your cases are different**



BROAD ALLOGRAFT PORTFOLIO FOR DIFFERENT CLINICAL INDICATIONS*

- Mineralized and demineralized.
- Cortical and cancellous.



ALLO.GAIN DEMINERALIZED BONE MATRIX (DBM) PUTTY

- 100% pure demineralized allograft with no filler or inert carrier.
- Syringe type dispenser for easy application.



ALLO.PROTECT PERICARDIUM MEMBRANE

- Durable protection.

ENSURING SAFETY AND QUALITY LEVELS:

- A proprietary patented process of tissue cleaning and sterilization process.
- The tissue bank follows strict processing procedures in order to ensure safe tissue grafts of the highest quality for transportation.

*See Instructions For Use for full prescribing information, including indications, contraindications, warnings and precautions



creos™ allo.gain bone particulate: a wide range of options

MINERALIZED CORTICAL BONE

Offers a high density bone with particle size range from 0.125 mm to 1 mm and available volume of 0.25 cc to 2.0 cc.

MINERALIZED/DEMINERALIZED BONE

Blend of 70% mineralized and 30% demineralized cortical bone.

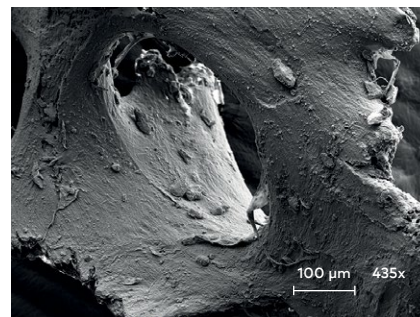
Corticocancellous bone: Blend of cortical and cancellous bone produced from sections of the ilium.

MINERALIZED CANCELLOUS BONE

A porous structured bone with particle size range from 0.25 mm to 1 mm and available volume of 0.25 cc to 2.0 cc.

DEMINERALIZED CORTICAL BONE

Demineralized high density bone with particle size range from 0.125 mm to 1 mm and available volume of 0.25 cc to 2.0 cc.



Mineralized cancellous bone.

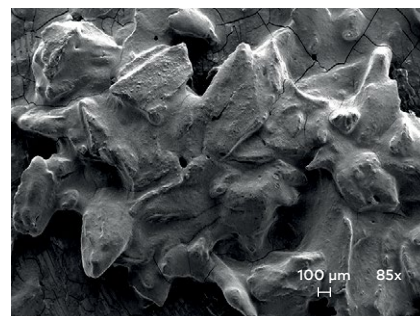
creos™ allo.gain demineralized bone matrix (dbm) putty

100% PURE ALLOGRAFT

The creos™ allo.gain dbm putty is 100% pure demineralized allograft with no filler or inert carrier.

AVAILABLE IN THREE VOLUMES

The creos™ allo.gain dbm putty is available in three different volumes: 0.5 cc, 1.0 cc and 2.5 cc. This means that the required amount can be used with minimal excess material.



Demineralized bone matrix (dbm) putty.

creos™ allo.protect pericardium membrane

THREE SIZES

creos™ allo.protect is available in three different sizes: 1.0 x 1.0 cm, 1.5 x 2.0 cm and 2.0 x 3.0 cm.

EASY TO HANDLE

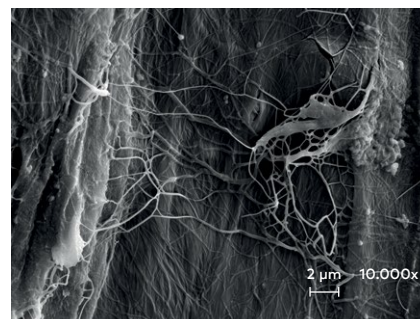
Easy to tack and suture with high tear resistance.
Rapid hydration and easy manipulation.
Maintains shape and size once placed.

DURABLE PROTECTION

Strong and stable due to the pore structure of native pericardium.

BIOCOMPATIBLE AND TISSUE FRIENDLY

Preservation of the native pericardium collagen matrix and its mechanical properties.



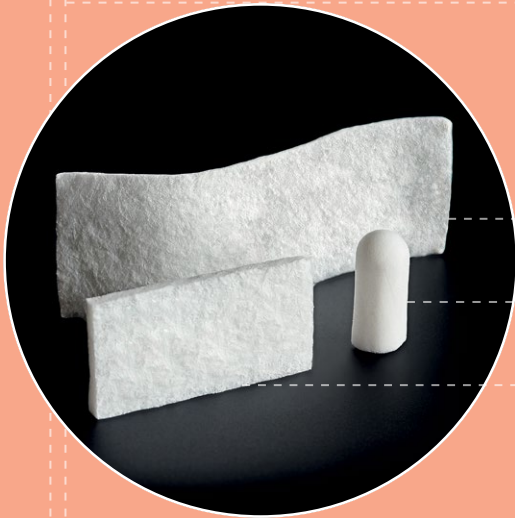
Pericardium membrane.



Scan the code
for more resources.

creos™ absorbable collagen dental wound dressings

Complementing your regenerative set



Three different shapes:

creos™ xenotape

creos™ xenoplug

creos™ xenocote



Soft, white, pliable, non-friable, absorbent sponges made from collagen obtained from bovine deep flexor (Achilles) tendons.

Indicated for application to moist or bleeding clean oral wounds created during dental surgery, to control bleeding and protect the surface of the wound from further injury.

Can be used during surgical procedures prior to wound closure or left in-situ.



Depending on the chosen wound dressings product, one or more of the following applications are suitable*:

- MINOR ORAL WOUNDS
- CLOSURE OF GRAFTED SITES
- REPAIR OF SCHNEIDERIAN MEMBRANE
- PALATAL DONOR SITES
- MUCOSAL FLAPS
- EXTRACTION SITES
- BIOPSY SITES



Arrive ready to use and are easy to handle.



Scan the code for more resources.

*See Instructions For Use for full prescribing information, including indications, contraindications, warnings and precautions.

Products

creos™ xenoprotect

porcine collagen membrane

Size	Article No.
15x20 mm	N1520
25x30 mm	N2530
30x40mm	N3040

creos™ xenogain

deproteinized bovine bone matrix

Weight	Granule size	Volume	Vial	Bowl	Syringe
0.25 g	Small (0.2-1.0 mm)	0.36 cc	N1110	N1110-B	N1210
	Large (1.0- 2.0 mm)	0.54 cc	N1111	N1111-B	N1211
0.50 g	Small (0.2-1.0 mm)	0.82 cc	N1120	N1120-B	N1220
	Large (1.0- 2.0 mm)	1.27 cc	N1121	N1121-B	N1221
1.00 g	Small (0.2-1.0 mm)	1.71 cc	N1130	N1130-B	
	Large (1.0- 2.0 mm)	2.69 cc	N1131	N1131-B	
2.00 g	Small (0.2-1.0 mm)	3.64 cc	N1140	N1140-B	
	Large (1.0- 2.0 mm)	5.74 cc	N1141	N1141-B	

creos™ xenogain collagen

creos™ xenogain + 10% porcine collagen type I

Size	Block size	Article No.
100 mg	6 x 6 x 6 mm	N1320
250 mg	7 x 8 x 9 mm	N1330
500 mg	9 x 10 x 11 mm	N1340

Size	Syringe size	Article No.
250 mg	4,6 x 40 mm	N1410
500 mg	5,6 x 45 mm	N1420

creos™ allo.gain & allo.protect

allo.gain
bone particulate

allo.gain
dbm putty

allo.protect
pericardium
membrane

	min/ demin cortical	corticocancellous		mineralized cancellous		mineralized cortical			demineralized cortical		dbm putty		pericardium membrane	
	Medium 0.25-1 mm	Medium 0.25-1 mm	Large 0.5-1 mm	Medium 0.25-1 mm	Large 0.5-1 mm	Small 0.125-0.85 mm	Medium 0.25-1 mm	Large 0.5-1 mm	Small 0.125-0.85 mm	Large 0.5-1 mm	0.50 cc	N6110	1.0x1.0 cm	N7110
0.25 cc		N4510	N4511	N4210	N4211	N4110	N4111	N4112	N4310	N4311	1.00 cc	N6120	1.5x2.0 cm	N7120
0.50 cc	N4410	N4520	N4521	N4220	N4221	N4120	N4121	N4122	N4320	N4321	2.50 cc	N6130	2.0x3.0 cm	N7140
1.00 cc	N4420	N4530	N4531	N4230	N4231	N4130	N4131	N4132	N4330	N4331				
2.00 cc	N4430	N4540	N4541	N4240	N4241	N4140	N4141	N4142	N4340	N4341				

creos™ wound dressings

creos™ xenotape

Configuration/size	Thickness	Article No.
1 in x 3 in (2.5 cm x 7.5 cm)	0.3–0.8 mm	WD62200
(10 per dispenser)		

creos™ xenoplug

Configuration/size	Article No.
0.375 in x 0.75 in (1 cm x 2 cm)	WD62202
(10 per dispenser)	

creos™ xenocote

Configuration/size	Thickness	Article No.
0.75 in x 1.5 in (2 cm x 4 cm)	2–4 mm	WD62201
(10 per dispenser)		

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