The future of fusions is here -
with the **MagnetOs™** Portfolio:

MagnetOs Granules
MagnetOs Putty
MagnetOs Easypack Putty
MagnetOs Flex Matrix

MagnetOs is a bone graft like no other: thanks to its NeedleGrip™ surface technology, it grows bone even in soft tissues.* This surface technology provides traction for our body's vitally important 'pro-healing' immune cells (M2 macrophages).[1,2†‡]

This in turn, unlocks previously untapped potential to stimulate stem cells - and form new bone throughout the graft.[3-5†§]

The growing body of science behind NeedleGrip is called osteoimmunology. But for surgeons and their patients it means one thing: a more predictable fusion.[2†¶]

MAGNETOS
for predictable fusions

Kuros Biosciences

MagnetOs **Granules**

Strong foundation & proven

MagnetOs Granules is the basis for all MagnetOs formulations and has been 510(k)-cleared since 2017. This foundational technology has paved the way for more than 25,000 patients treated and counting; all supported by an unprecedented blend of scientific, preclinical, and clinical studies through our global research program, Project Fusion.[6]

Harnessing the immune system

MagnetOs is capable of polarizing macrophages from the M1 proinflammatory to the M2 pro-healing phenotype, which is known to influence bone growth through secretion of proteins such as BMP-2. MagnetOs has been shown in pre-clinical studies to form bone even in soft tissue* without added cells or growth factors.[1,2,7†‡] These features combine to make MagnetOs an active player in providing predictable fusions.

Equivalent to autograft

In fact, MagnetOs Granules as a standalone bone graft has reached higher fusion rates than the gold standard of autograft. This is based on results of an observer blinded, randomized, controlled, intrapatient, multi-center clinical trial of instrumented posterolateral fusions, as assessed by fine-cut CT scans at one year follow-up.[6]

The MagnetOs Granules technology is also proven to be equivalent to autograft for spinal fusions in multiple pre-clinical models.[3,4,6†¶]

Product code	Volume (cc)	Granule size (mm)
703-021-US	10	1 - 2
703-045-US	20	1 - 2
703-026-US	20	2 - 4

MagnetOs **Easypack Putty**

Ready-to-use

MagnetOs Easypack Putty comes ready-to-use in an open-ended syringe for instant application into the palm of your hand. No further preparation is needed – thus saving you and your team precious minutes in the operating room.

Easy to mold

Because of its unique thermo-sensitive polymer binder, MagnetOs Easypack Putty is easy to mold. This allows you to follow the contours of bony defects and fill those that are irregular in shape or size.

Designed to stay put

You don't need to compromise on efficacy for the sake of perioperative performance. MagnetOs Easypack Putty has been formulated to resist irrigation during surgery and minimize post-operative graft migration.[6] This is a putty that stays put and can be used as an extender to autograft in the posterolateral spine and intervertebral disc space.‖

Product code	Volume (cc)	Granule size (mm)
703-048-US	1.5	1 - 2
703-050-US	2.5	1 - 2
703-051-US	5	1 - 2
703-053-US	10	1 - 2
703-054-US	15	1 - 2

MagnetOs **Putty**

Easy to store, handle, & apply

Unlike frozen allografts, MagnetOs can be stored at ambient temperature (max. 45°C / 113°F) with no special requirements.[8] MagnetOs Putty is ready-to-use straight out of the package with no preparation time or thawing needed. The carrier is designed to maximize handling properties, so you can twist, tear, and mold it into any shape desired before implantation and remain confident that it will stay in place and resist migration and irrigation.[8]

Free of animal & human tissues

MagnetOs Putty contains no animal or human-derived tissue - just like MagnetOs Granules and MagnetOs Easypack Putty.[8-10] This alleviates patient concerns during consent for use of allograft or xenograft-derived products in surgery.

One product for spine & orthopedics

This is a versatile graft that is indicated for standalone use at all levels of the posterolateral spine, in the intervertebral disc space and in the extremities and pelvis.[8‖]

Product code	Volume (cc)	Dimensions (mm)	Granule size (mm)
703-029-US	1	18 L x 8 W x 7 H	1 - 2
703-043-US	2.5	28.5 L x 11 W x 8 H	1 - 2
703-035-US	5	40 L x 18 W x 7 H	1 - 2
703-038-US	10	40 L x 36 W x 7 H	1 - 2

MAGNETOS
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MagnetOs **Flex Matrix**

Flexible

MagnetOs Flex Matrix features an open fibrillar - and more flexible - design comparable to native collagen, rather than the cross-linked, sheet-like morphology often seen in other bone grafts.

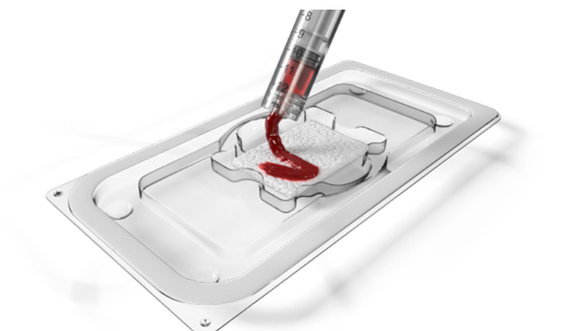
Practical & versatile

Because it features the fibrillar structure of natural collagen, MagnetOs Flex Matrix retains its strength and shape while remaining flexible. It's convenient to handle. It isn't brittle when dry; nor does it break up and become soggy when wet.[6] All of which makes this product incredibly versatile. Simply tear it, mold it, and fold it any way you need to fill irregularly shaped bone defects, gaps, and voids.

High wickability & granule-volume percentage

MagnetOs Flex Matrix absorbs up to ten times as much BMA as a leading competitor's bone graft - providing more cells to support bone growth. It also carries and retains a higher volume percentage of granules.[6] Wet cohesivity is designed into this bone graft so that granules don't shed easily, even when hydrated and can be used in the posterolateral spine and intervertebral disc space.‖

Product code	Volume	Dimensions (mm)	Granule size (mm)
703-056-US	Small	≥ 28 L x 28 W x 3 H	0.25 - 1
703-057-US	Medium	≥ 48 L x 35 W x 3 H	0.25 - 1
703-058-US	Large	≥ 96 L x 35 W x 3 H	0.25 - 1
703-059-US	Extra Large	≥ 96 L x 35 W x 4.5 H	0.25 - 1



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References: 1. Duan, et al. *eCM.* 2019;37:60-73. **2.** Van Dijk, et al. *eCM.* 2021;41:756-73. **3.** Van Dijk, et al. *JOR Spine.* 2018;e1039. **4.** Van Dijk, et al. *J Biomed Mater Res.* Part B: Appl Biomater. 2019;107(6):2080-2090. **5.** Van Dijk, et al. *Clin Spine Surg.* 2020;33(6):E276-E287. **6.** Data on file. **7.** Van Dijk, et al. *J Immunol Regen Med.* 2023;19:100070. **8.** *Instructions for Use* (IFU) MagnetOs Putty (US). **9.** *Instructions for Use* (IFU) MagnetOs Granules (US). **10.** *Instructions for Use* (IFU) MagnetOs Easypack Putty (US).

* In large animal models

† Results from in vivo laboratory testing may not be predictive of clinical experience in humans. For important safety and intended use information please visit kurosbio.com.

‡ MagnetOs is not cleared by the FDA as an osteoinductive bone graft.

§ For a 510(k)-cleared synthetic bone graft.

¶ MagnetOs has been proven to generate more predictable fusions that two commercially available alternatives in an ovine model of posterolateral fusion.

‖ When used in intervertebral body fusion procedures, MagnetOs must be used with an intervertebral body fusion device cleared by FDA for use with a bone void filler.

MagnetOs Granules Indications For Use

MagnetOs Granules is an implant intended to fill bony voids or gaps of the skeletal system, i.e., the extremities, pelvis, intervertebral disc space, and posterolateral spine. These osseous defects may be surgically created or the result of traumatic injury to the bone and are not intrinsic to the stability of the bony structure. When used in posterolateral spine, extremities and pelvis, MagnetOs Granules may be used standalone or mixed with autograft, blood, and/or bone marrow. When used in intervertebral body fusion procedures, MagnetOs Granules must be used with an intervertebral body fusion device cleared by FDA for use with a bone void filler and hydrated with blood. MagnetOs Granules may also be mixed with autograft.
MagnetOs Granules resorbs and is replaced with bone during the healing process. CONTRAINDICATIONS Use of MagnetOs Granules synthetic bone void filler is CONTRAINDICATED in the presence of one or more of the following clinical situations:

- To treat conditions in which general bone grafting is not advisable;
- In conditions where the surgical site may be subjected to excessive impact or stresses, including those beyond the load strength of fixation hardware (e.g., defect site stabilization is not possible);
- In case of significant vascular impairment proximal to the graft site;
- In case of severe metabolic or systemic bone disorders that affect bone or wound healing;
- In case of acute or chronic infections in the operated area (e.g., soft tissue infections, osteomyelitis);
- In case of pre-existing calcium metabolism disorder (e.g., hypercalcemia);
- When intraoperative soft tissue coverage is not planned or possible;
- In direct contact with the articular space;
- In case of treatment with pharmaceuticals affecting calcium metabolism..

MagnetOs Putty Indications For Use

MagnetOs Putty is an implant intended to fill bony voids or gaps of the skeletal system i.e., the extremities, pelvis, intervertebral disc space and posterolateral spine. These osseous defects may be surgically created or the result of traumatic injury to the bone and are not intrinsic to the stability of the bony structure. MagnetOs Putty may be used standalone or mixed with autograft. When used in intervertebral body fusion procedures, MagnetOs Putty must also be used with an intervertebral body fusion device cleared by FDA for use with a bone void filler. MagnetOs Putty resorbs and is replaced with bone during the healing process. CONTRAINDICATIONS Use of MagnetOs Putty synthetic bone void filler is CONTRAINDICATED in the presence of one or more of the following clinical situations:

- To treat conditions in which general bone grafting is not advisable;
- In conditions where the surgical site may be subjected to excessive impact or stresses, including those beyond the load strength of fixation hardware (e.g. defect site stabilization is not possible);
- In case of significant vascular impairment proximal to the graft site;
- In case of severe metabolic or systemic bone disorders that affect bone or wound healing;
- In case of acute or chronic infections in the operated area (e.g. soft tissue infections, osteomyelitis);
- In case of pre-existing calcium metabolism disorder (e.g., hypercalcemia);
- When intraoperative soft tissue coverage is not planned or possible;
- In direct contact with the articular space;
- In case of treatment with pharmaceuticals affecting calcium metabolism.

MagnetOs Easypack Putty Indications For Use

MagnetOs Easypack Putty is intended to filly bony voids or gaps of the skeletal system, i.e., the intervertebral disc space, and posterolateral spine. The osseous defects may be surgically created or the result of traumatic injury to the bone and are not intrinsic to the stability of the bony structure. In the intervertebral disc space and posterolateral spine, MagnetOs Easypack Putty must be used with autograft as a bone extender. When used in intervertebral body fusion procedures, MagnetOs Easypack Putty must also be used with an intervertebral body fusion device cleared by FDA for use with a bone void filler.
MagnetOs Easypack Putty resorbs and is replaced with bone during the healing process.
CONTRAINDICATIONS Use of MagnetOs Easypack Putty synthetic bone void filler is CONTRAINDICATED in the presence of one or more of the following clinical situations:

- To treat conditions in which general bone grafting is not advisable;
- In conditions where the surgical site may be subjected to excessive impact or stresses, including those beyond the load strength of fixation hardware (e.g., defect site stabilization is not possible);
- In case of significant vascular impairment proximal to the graft site;
- In case of severe metabolic or systemic bone disorders that affect bone or wound healing;
- In case of acute or chronic infections in the operated area (e.g., soft tissue infections, osteomyelitis);
- In case of pre-existing calcium metabolism disorder (e.g., hypercalcemia);
- When intraoperative soft tissue coverage is not planned or possible;
- In direct contact with the articular space;
- In case of treatment with pharmaceuticals affecting calcium metabolism.

MagnetOs Flex Matrix Indications For Use

MagnetOs Flex Matrix is intended to fill bony voids or gaps of the skeletal system, i.e., the intervertebral disc space and posterolateral spine. The osseous defects may be surgically created or the result of traumatic injury to the bone and are not intrinsic to the stability of the bony structure. In the intervertebral disc space and posterolateral spine, MagnetOs Flex Matrix must be hydrated with Bone Marrow Aspirate (BMA) and used as an extender to autograft bone. When used in intervertebral body fusion procedures, MagnetOs Flex Matrix must also be used with an intervertebral body fusion device cleared by FDA for use with a bone void filler. MagnetOs Flex Matrix resorbs and is replaced with bone during the healing process. CONTRAINDICATIONS Use of MagnetOs Flex Matrix synthetic bone void filler is CONTRAINDICATED in the presence of one or more of the following clinical situations:

- MagnetOs Flex Matrix must not be used in patients with a history of anaphylaxis, history of multiple allergies, known allergies to bovine collagen, or who are being treated for desensitization to meat products because this product contains bovine collagen;
- To treat conditions in which general bone grafting is not advisable;
- In conditions where the surgical site may be subjected to excessive impact or stresses, including those beyond the load strength of fixation hardware (e.g., defect site stabilization is not possible);
- In case of significant vascular impairment proximal to the graft site;
- In case of severe metabolic or systemic bone disorders that affect bone or wound healing;
- In case of acute or chronic infections in the operated area (e.g., soft tissue infections, osteomyelitis);
- In case of pre-existing calcium metabolism disorder (e.g., hypercalcemia);
- When intraoperative soft tissue coverage is not planned or possible;
- In direct contact with the articular space;
- In case of treatment with pharmaceuticals affecting calcium metabolism.

Manufactured by **Kuros Biosciences BV**
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