



+ Proven Cartilage Repair Solutions

Across multiple joints

Smith+Nephew



CARGEL ♦
Bioscaffold



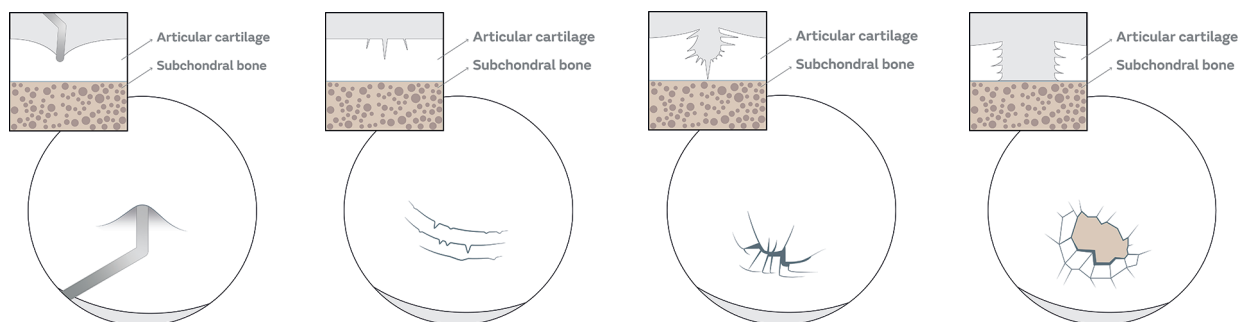
COBLATION ♦
FLOW 50 ♦
Wand with FLOW~IQ[®] Technology



MOSAICPLASTY
Autogenous Osteochondral
Grafting System

Lasting solutions in the repair of cartilage defects

Localized articular cartilage defects in weight-bearing joints are common yet sometimes difficult to treat. Smith+Nephew offers time-tested solutions for your patients.



ICRS Grading Scale*

Grade I

Cartilage with softening and swelling

Grade II

Partial-thickness defect with fissures on the surface that do not reach subchondral bone or exceed 1.5cm in diameter

Grade III

Fissuring to the level of subchondral bone in an area with a diameter more than 1.5cm

Grade IV

Exposed subchondral bone

COBLATION[◇]
FLOW 50[◇]
Wand

FLOW 50 + CARGEL[◇] + MOSAICPLASTY[◇]



*Source: International Cartilage Regeneration & Joint Preservation Society. Available at: <https://cartilage.org/patient/about-cartilage/what-is-cartilage-damage/>

CARGEL[®]

Bioscaffold

Proven results in cartilage repair

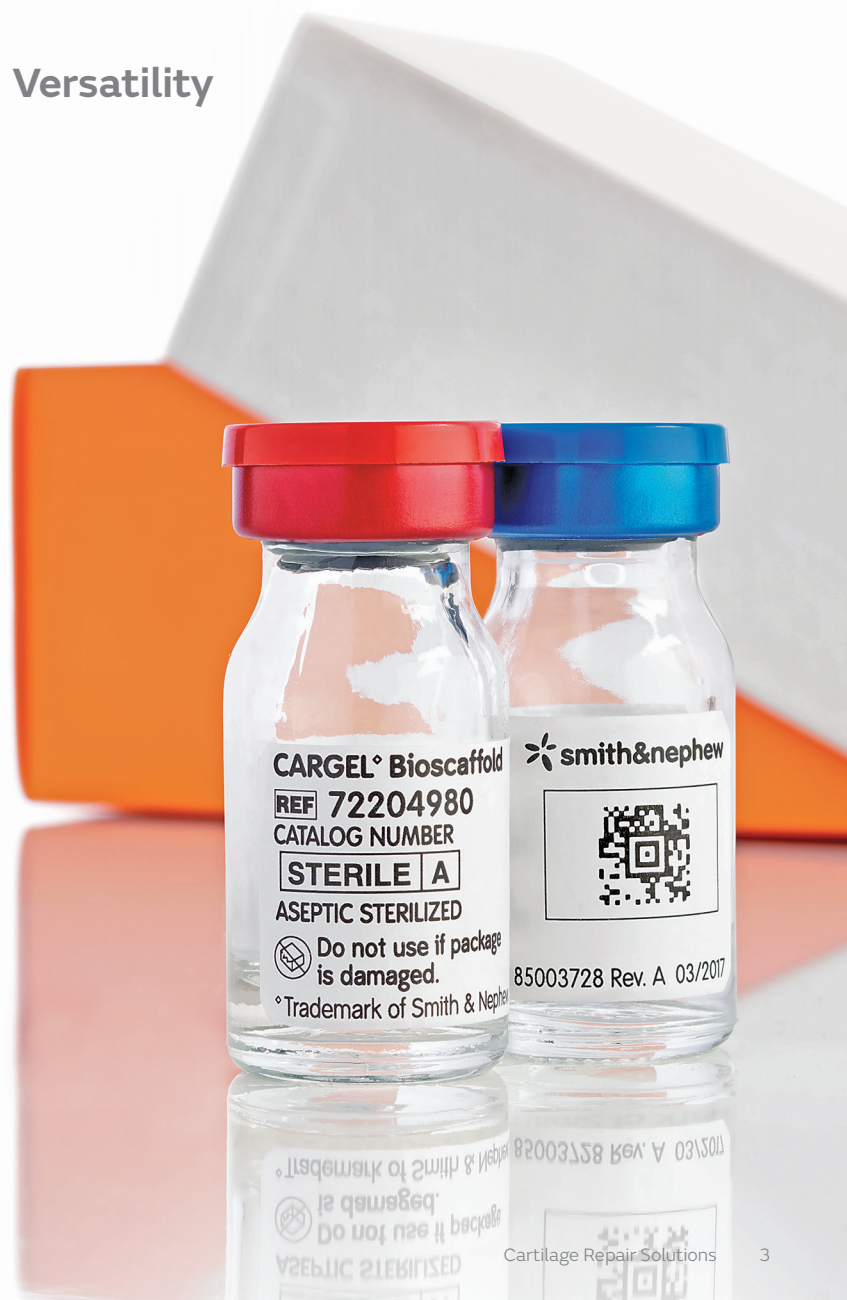
CARGEL Bioscaffold is an easy, ready-to-use product applied during a single-step bone marrow stimulation procedure. It's prepared by mixing a buffer, a chitosan solution and the patient's whole blood to create a liquid bioscaffold, that has resulted in superior cartilage repair.^{1,2*}

How does CARGEL Bioscaffold work?

- Physically stabilizes a more voluminous blood clot^{1-3*}
- Provides a structural framework for subsequent cellular in-growth²⁻⁴
- Impedes blood clot retraction^{1,2,4,5}
- Generates an adhesive bond between the clot and the surrounding cartilage^{3,6}

Proven Performance + Simplicity + Versatility

CARGEL Bioscaffold is not available in the United States and its territories.
*As compared to microfracture alone.



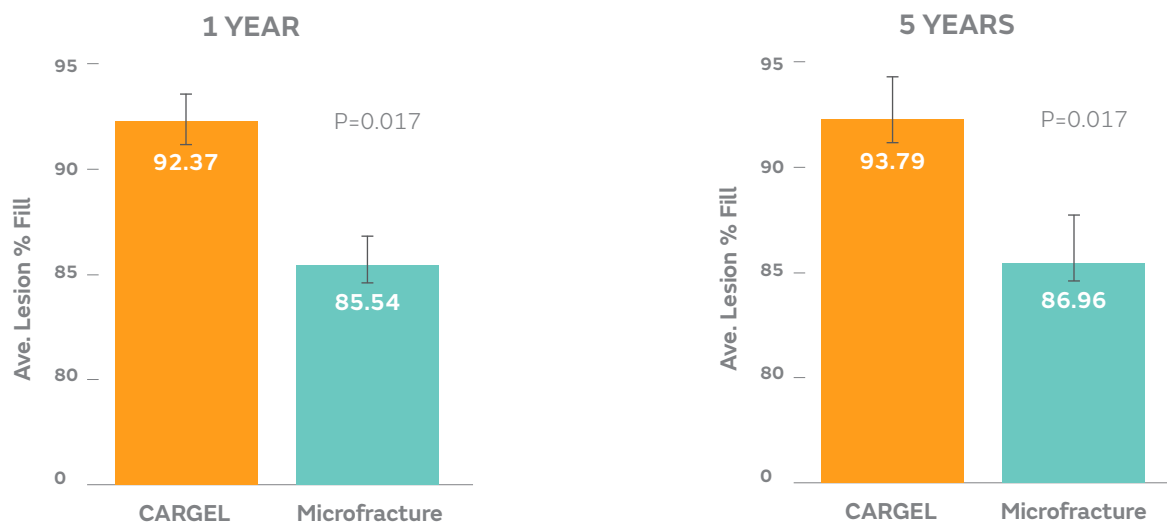
PROVEN PERFORMANCE

CARGEL[®] Bioscaffold's cartilage repair performance is proven through high quality clinical evidence as demonstrated in Level I, randomized, controlled clinical trials at one and five years.^{1,5}

+ Greater quantity of repair tissue^{1,5}

Statistically significant difference in % fill over five years with CARGEL Bioscaffold compared to microfracture alone.

Longitudinal Lesion % Fill

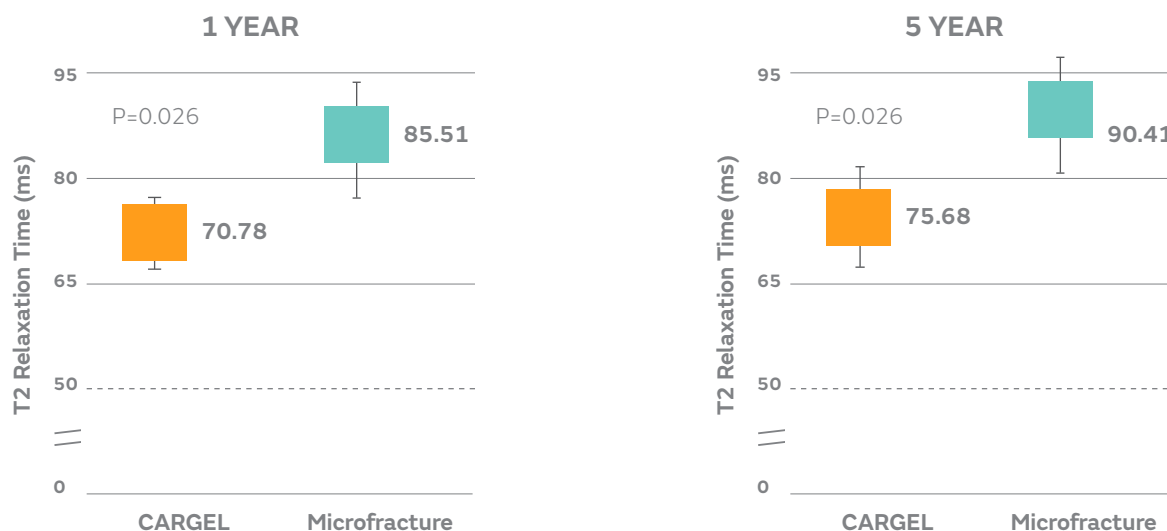


NOTE: Values represent means adjusted for lesion volume and the standard error.

+ Better quality of repair tissue^{1,5}

Statistically significant difference in T2 relaxation time* over five years with CARGEL Bioscaffold compared to microfracture alone.

Longitudinal Repair Tissue



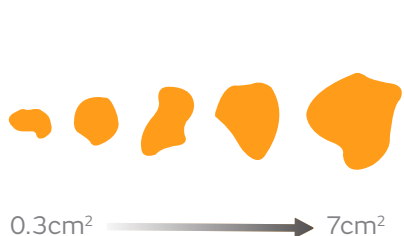
NOTE: Values represent means adjusted for lesion volume and the standard error.

*Lower scores for T2 indicate superior quality, with ~50ms considered the average value for a control posterior region on the same condyle.

VERSATILITY

Available for use arthroscopically or through a mini-open technique, and applicable in a broad range of lesions in all synovial joints,* CARGEL[®] Bioscaffold is highly versatile and adaptable.

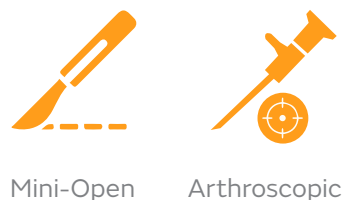
SIZE + SHAPE*



INDICATIONS



PROCEDURES⁴



SIMPLICITY

CARGEL Bioscaffold is designed to be easy to use and is applied as a liquid, allowing it to conform to any lesion shape. This one-step process eliminates the need for sizing, shaping, cutting, gluing and suturing, which is common with solid scaffolding technologies.



PREPARE: The lesion is surgically prepared using a combination of standard microfracture techniques and COBLATION[®] technology.

MIX: These steps can be done by a non-sterile nurse while the lesion is being surgically prepared.

DELIVER: Administer the CARGEL Bioscaffold/ blood mixture to the lesion.

*Please refer to the Instructions for Use (IFU) for a complete list of indications and contraindications. In all approved countries (with the exception of Canada) CARGEL Bioscaffold is indicated for all synovial joints. In Canada, CARGEL Bioscaffold is indicated for the repair of Grade 3 or 4 cartilage lesions of the femoral condyles with areas of $\geq 2\text{cm}^2$. CARGEL Bioscaffold is not available in the United States and its territories.

COBLATION[◇] FLOW 50[◇]

Wand

Optimal control for site preparation backed by 10 years of clinical data^{7-9*}

Patients treated with COBLATION technology for chondroplasty in the knee experienced:

- Significantly less pain reported from six hours through one year post-op^{7*,A}
- Better clinical outcomes reported from six weeks through 10 years post-op^{7-9*,B}
- Reduction in risk for knee arthroplasty at four years^{9*}

Additionally, COBLATION technology decreases the propagation of cartilage defects compared to untreated control in an animal model.^{10,11}



FASTER
patient
recovery.^{7*}



BETTER
patient
outcomes.^{7-9*}



SAFE**
for use in
chondroplasty.^{12,13,C}

A. $P < 0.005$

B. $P \leq 0.014$

C. In a retrospective study of 840 surgeries.

*Compared to mechanical debridement. In a randomized, controlled study for knee chondroplasty in patients with a grade 3 chondral lesion and concomitant meniscal tears.

**Market-indicated for use on all soft tissue types including the knee.

MOSAICPLASTY

Autogenous Osteochondral Grafting System

Safe + Effective + Reliable¹⁴

The MOSAICPLASTY procedure was designed to be an efficacious, reproducible and cost-effective means of restoring chondral defects.

The technique is a single-step procedure that involves obtaining small osteochondral cylindrical grafts from the less weight-bearing periphery and transporting them to the prepared defect site.¹⁴



SIZE + SHAPE



0.3cm² → 9cm²

INDICATIONS



Knee



Ankle

PROCEDURES¹⁵



Open



Arthroscopic

Ordering information

CARGEL® Bioscaffold	
Reference #	Description
72204980	CARGEL Bioscaffold
B. Braun Dispensing Pin	
72204937	Dispensing Pin
Microfracture Pick	
72202119	Microfracture Pick XL, 30°
72202120	Microfracture Pick XL, 45°
72202210	Microfracture Pick XL, 45°
Open Ring Curette	
72202584	Open Curette XL, reverse cut 6.0mm
SPIDER2 Limb Positioner	
72203299	SPIDER2 Limb Positioner
72203300	Switch Drape (case of 20)
72203301	SPIDER2 Battery Pack
72203840	SPIDER2 Battery Charger
7210570	Piggy Back Connector (2 per box, required for all sterile procedures)
Leg Accessories	
72203235	SPIDER Leg Accessory (left)
72203236	SPIDER Leg Accessory (right)
72203239	3D SPIDER Connector (one required for each Leg Accessory)
72203238	SPIDER Leg Stabilization Kit (case of 10)
MOSAICPLASTY System	
7205532	MOSAICPLASTY Complete System
7205605	MOSAICPLASTY Precision System
Tubular Chisels (five to ten patient uses)	
7207099†	2.7mm Tubular Chisel
7207098†	3.5mm Tubular Chisel
7207097†	4.5mm Tubular Chisel
7205493	6.5mm Tubular Chisel
7205494	8.5mm Tubular Chisel
Chisel Guards	
7207208†	2.7mm Chisel Guard
7207209†	3.5mm Chisel Guard
7207210†	4.5mm Chisel Guard
7205499	6.5mm Chisel Guard
7205500	8.5mm Chisel Guard
Drill Guides - five to ten patient uses	
7207215†	3.5mm Drill Guide
7207216†	4.5mm Drill Guide
7205501	6.5mm Drill Guide
7205502	8.5mm Drill Guide

† MOSAICPLASTY Precision System Components

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Trephines (optional—for hard bone)	
Reference #	Description
7207089	2.7mm Trephine
7207088	3.5mm Trephine
7207087	4.5mm Trephine
7205497	6.5mm Trephine
7205498	8.5mm Trephine
7207103	Trephine Adaptor 2.7, 3.5, 4.5mm
7205515	Trephine Adaptor 6.5, 8.5mm
Harvesting Tamps	
7207107†	2.7mm Harvesting Tamp
7207106†	3.5mm Harvesting Tamp
7207105†	4.5mm Harvesting Tamp
7205495	6.5mm Harvesting Tamp
7205496	8.5mm Harvesting Tamp
Drill Bits (single use)	
7207212	3.5mm Drill Bit
7207213	4.5mm Drill Bit
7205503	6.5mm Drill Bit
7205504	8.5mm Drill Bit
Dilators	
7205509†	2.7mm Dilator
7205510†	3.5mm Dilator
7205511†	4.5mm Dilator
7205512	6.5mm Dilator
7205513	8.5mm Dilator
Delivery Tamps	
7207205†	2.7mm Delivery Tamp
7207206†	3.5mm Delivery Tamp
7207207†	4.5mm Delivery Tamp
7205505	6.5mm Delivery Tamp
7205506	8.5mm Delivery Tamp
Accessories	
7205507	MOSAICPLASTY Complete Sterilization Tray
7205604	MOSAICPLASTY Precision Sterilization Tray
MOSAICPLASTY DP Disposable System*	
7209234	3.5 Disposable Harvesting Set
7209235	4.5 Disposable Harvesting Set
7209236	6.5 Disposable Harvesting Set
7209237	8.5 Disposable Harvesting Set
WEREWOLF® COBLATION®	
72290037	COBLATION FLOW 50° Wand
72290043	WEREWOLF Controller

* Requires the use of the graft placement drill guides, dilators and delivery tamps. Each set includes a disposable chisel, tamp and drill bit.

WEREWOLF COBLATION is manufactured by ArthroCare Corporation, 7000 West William Cannon Drive, Austin, TX 78735, USA. All other products listed here are manufactured by Smith & Nephew.

1. Shive M, Stanish W, McCormack R, et al. "BST-CarGel® Treatment Maintains Cartilage Repair Superiority over Microfracture at 5 Years in a Multicenter Randomized Clinical Trial," *Cartilage*. 2015; 6(2):62-72. 2. Rhee C, Amar E, Glazebrook M, et al. Safety Profile and Short-term Outcomes of BST-CarGel as an Adjunct to Microfracture for the Treatment of Chondral Lesions of the Hip. *Orthop. J. Sports Med.* 2018;6(8):1-6. 3. Methot S, Changoor A, Tran-Khanh N, et al. Osteochondral Biopsy Analysis Demonstrates That BST-CarGel Treatment Improves Structural and Cellular Characteristics of Cartilage Repair Tissue Compared With Microfracture. *Cartilage*. 2015;7(1):16-27. 4. Steinwachs M, Waibl B, Mumme M. Arthroscopic Treatment of Cartilage Lesions With Microfracture and BST-CarGel. *Arthroscopy Tech.* 2014; 3(3):399-402. 5. Hoemann CD, Sun J, McKee, et al. Chitosaneglycerol phosphate/blood implants elicit hyaline cartilage repair integrated with porous subchondral bone in microdrilled rabbit defects. *Osteoarthritis Cartilage*. 2006;15(1):78-89. 6. Stanish WD, McCormack R, Forriol F. Novel Scaffold-Based BST-CarGel Treatment Results in Superior Cartilage Repair Compared with Microfracture in a Randomized Controlled Trial. *J Bone Joint Surg.* 2013;95:1640-50. 7. Spahn G, Kahl E, Mückley T, et al. Arthroscopic knee chondroplasty using a bipolar radiofrequency based device compared to mechanical shaver: results of a prospective, randomized, controlled study. *Knee Surg Sports Traumatol Arthrosc.* 2008;16:565-573. 8. Spahn G, Hofmann GO, von Engelhardt LV. Mechanical debridement versus radiofrequency in knee chondroplasty with concomitant medial meniscectomy: 10-year results from a randomized controlled study. *Knee Surg Sports Traumatol Arthrosc.* 2016;24:1560-1568. 9. Spahn G, Klinger HM, Muckley T, Hofmann GO. Four-year results from a randomized controlled study of knee chondroplasty with concomitant medial meniscectomy: mechanical debridement versus radiofrequency chondroplasty. *Arthroscopy*. 2010;26:S73-S80. 10. ArthroCare 2014. ArthroCare FLOW 50 Cartilage Debridement Evaluation in a Chronic Goat Model. 60156_A. 11. Gambardella R, Burrer A, Mangin S, et al. COBLATION treatment limits surface fibrillation in partial-thickness cartilage lesions: an experimental study. International Cartilage Repair Society Annual Meeting; September 24-27, 2016; Sorrento, Italy. 12. Gharaibeh M, Szomor A, Chen DB, et al. A Retrospective Study Assessing Safety and Efficacy of Bipolar Radiofrequency Ablation for Knee Chondral Lesions. *Cartilage*. 2018;9(3):241-247. 13. Voloshin I, Morse KR, Allred CD, et al. Arthroscopic evaluation of radiofrequency chondroplasty of the knee. *Am J Sports Med.* 2007;35(10):1702-1707. 14. Espregueira-Mendes J, Pereira H, Sevivas N, et al. Osteochondral transplantation using autografts from the upper tibio-fibular joint for the treatment of knee cartilage lesions. *Knee Surg Sports Traumatol Arthrosc.* 2012;20:1136-1142. 15. Hangody L, Dobos J, Baló E, et al. Clinical Experiences With Autologous Osteochondral Mosaicplasty in an Athletic Population. *AJSM*. 2010;38(6):1125-33.