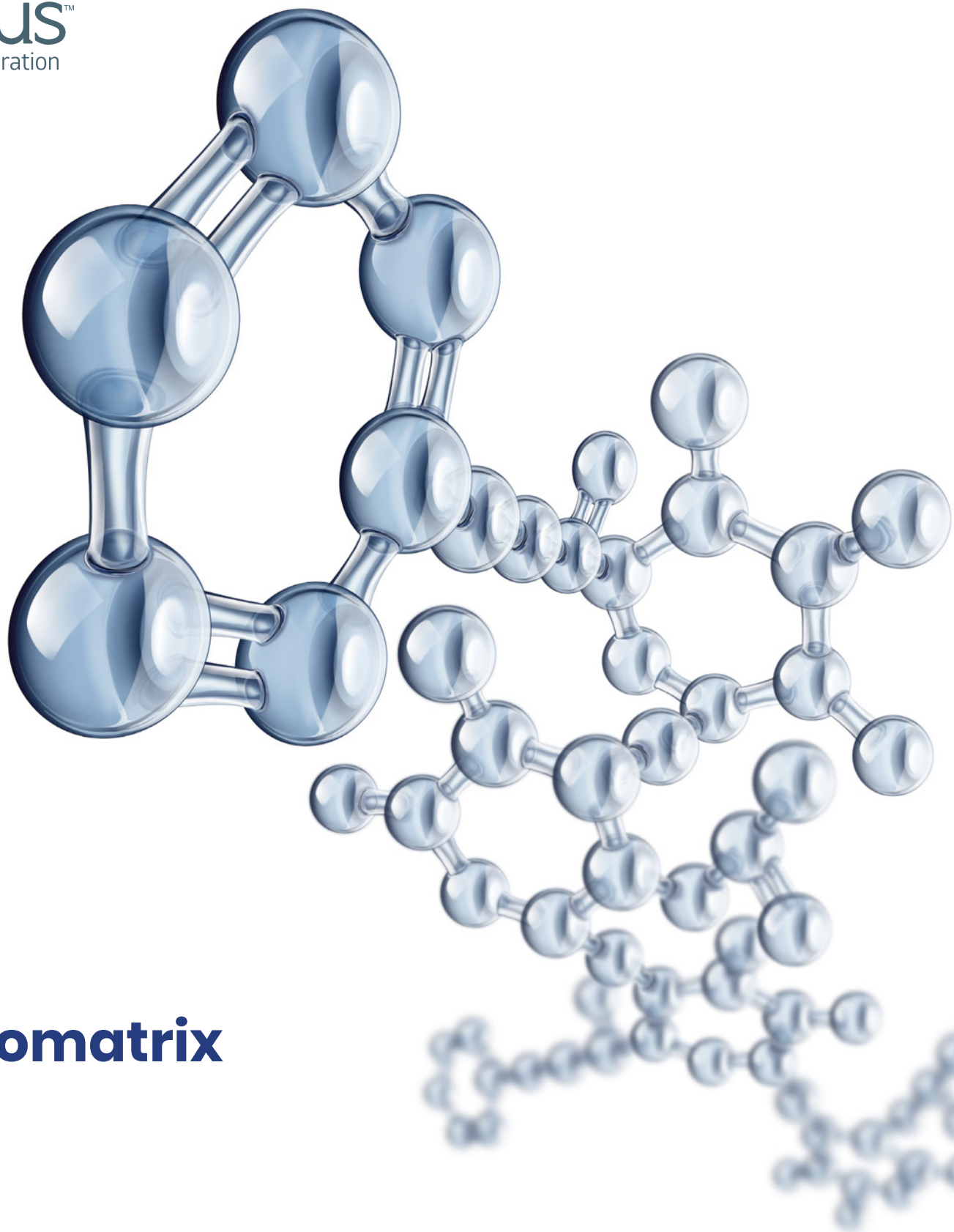


 Pipeline Medical


Tissue Regeneration



Hyalomatrix

By the numbers:

**Nearly 15%
of Medicare
patients**

have at least one type of wound or wound-related infection.¹

**25% of open
abdomen cases**

suffered an infection, abdominal abscess or intestinal fistula, showed one study.²

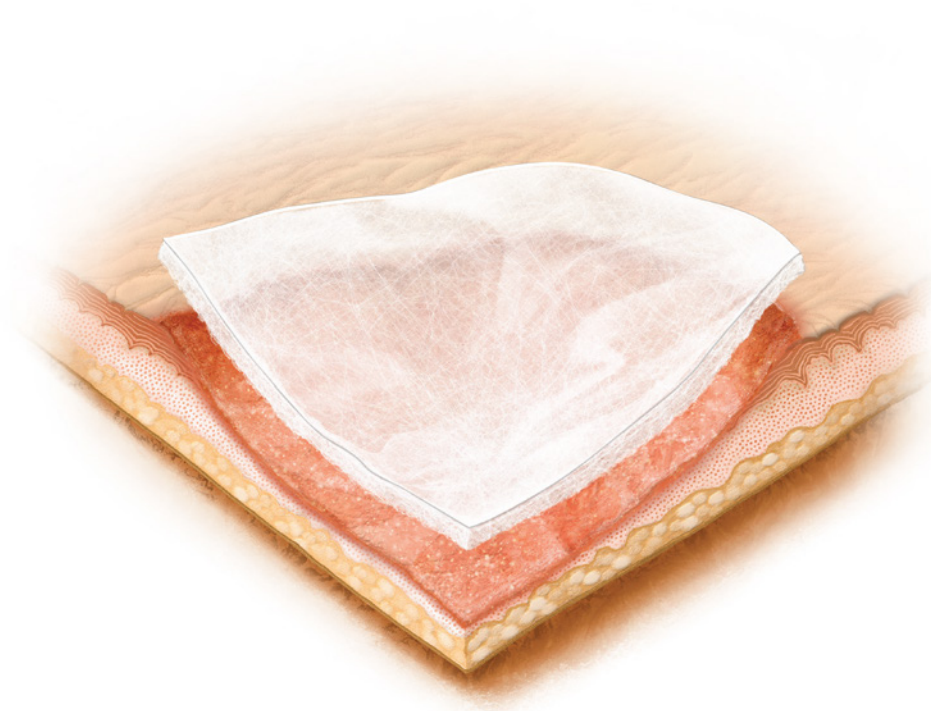
**\$5 to \$24 billion
of total Medicare
spending**

is for reimbursement of inpatient wound care.¹



Looking for transformative solutions to stimulate tissue regeneration?

It's all about outcomes. The challenges you face drive us to continually search for transformative solutions in tissue regeneration. Our shared goal to optimize the pace and quality of healing led to the discovery of **Hyalomatrix, a groundbreaking regenerative matrix based on hyaluronic acid (HA).**



Hyalomatrix delivers a unique esterified form of hyaluronic acid.

Helps you facilitate each stage of the healing process.^{3,4,5}

It provides the foundation for skin grafting and re-epithelialization.

Acts as a scaffold for cellular infiltration and capillary growth during tissue regeneration—without cross-linking.⁶

This innovative solution may help reduce the risk of infection.

Rebuilds a well-vascularized neodermis as fast as possible, which may help protect your patients from infection.^{3,7,8}

Hyalomatrix promotes quality healing.

Provides a healthy wound bed for healing by successful grafting or secondary intention, which may help reduce patient discomfort and hospital stay.^{3,8}

The science and innovation behind tissue regeneration with Hyalomatrix.

Hyalomatrix harnesses the natural tissue regeneration properties of hyaluronic acid to facilitate healing.

Why hyaluronic acid?

A major component of the extracellular matrix, HA promotes tissue regeneration in two unique ways:

Hydrodynamic effect of HA

Binds 1,000 times its weight in water.

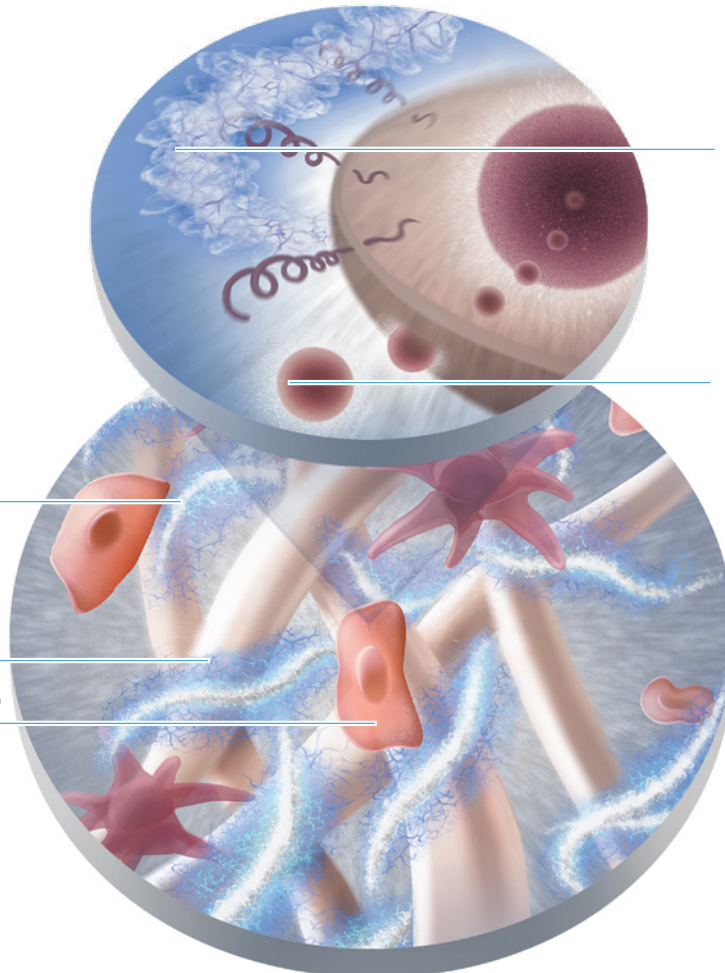
Creates water-rich space within the newly formed tissue for orderly dermal reconstruction.⁹

Enables optimal cellular migration.^{9,10}

Biological effect of HA

Promotes a productive inflammatory phase by stimulating cell receptors.^{11,12}

Increases pro-inflammatory cytokines to help activate and recruit native cells.^{11,12}



Artist's representation

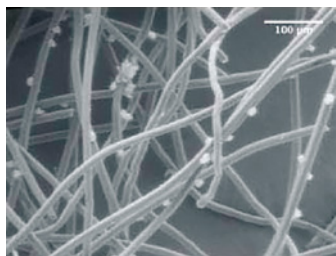
What is HYAFF®?

Hyaluronic acid's unique role in wound healing led to the development of HYAFF, an esterified form of HA that is exceptionally long-lasting.

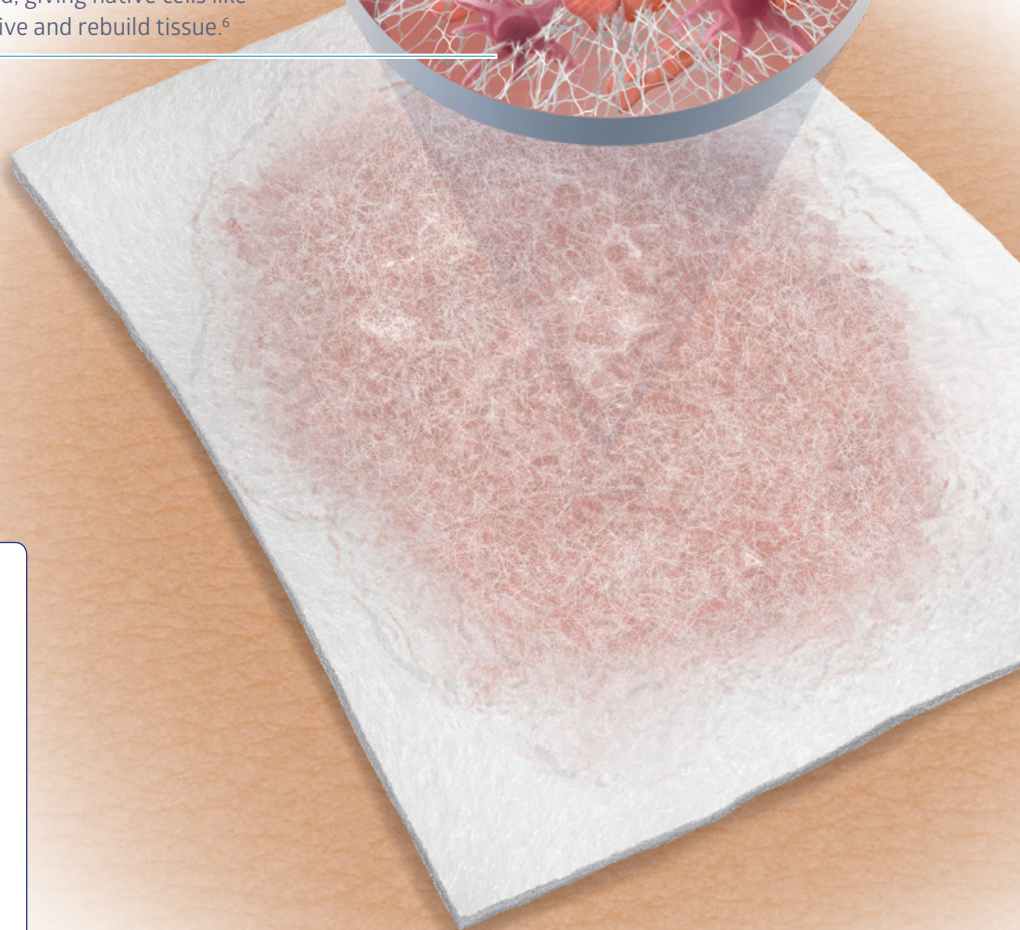
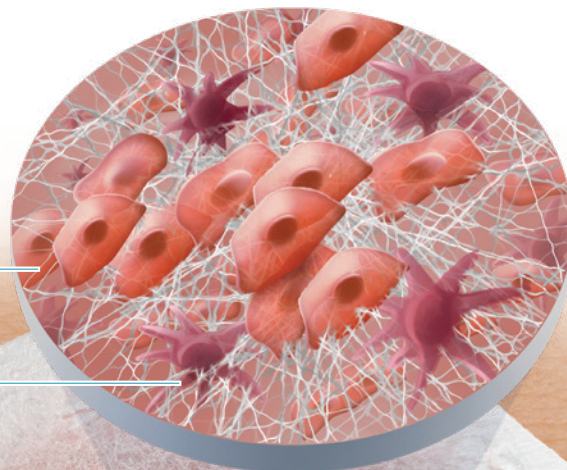
Scaffolding effect of HYAFF

Without cross-linking, the open scaffold allows cellular infiltration and capillary growth.⁶

Manufactured into a fibrous 3-dimensional scaffold, giving native cells like fibroblasts and endothelial cells a place to live, thrive and rebuild tissue.⁶



Scanning electron microscopy shows endothelial cells growing within the HYAFF scaffold in vitro.⁶



Artist's representation

Hyalomatrix at a glance

- Completely esterified HA engineered to last between 14 – 21 days in the wound bed.
- Manufactured into an open, fibrous scaffold to support cellular ingrowth.
- Semipermeable silicone membrane - controls water vapor loss and protects the wound.
- Integrates with and is resorbed by surrounding tissue.

Well-established and well-documented.

The roles of hyaluronic acid, HYAFF and Hyalomatrix are supported by more than 800 peer-reviewed papers.¹³

750+ Exploratory research studies on hyaluronic acid

45 HYAFF technology studies

24 Hyalomatrix clinical studies

Recent clinical studies

Use of Hyaluronic Acid-Based Biological Bilaminar Matrix in Wound Bed Preparation: A Case Series

In this case series, complex surgical wounds treated with Hyalomatrix were shown to achieve a well-vascularized neodermis and complete healing within an average of 40 days.⁸

Simman R, Mari W, Younes S, Wilson M. ePlasty. 2018 Feb 22;18:e10. Full article: <http://www.eplasty.com/images/PDF/eplasty18e10.pdf>

Limb Trauma: The Use of an Advanced Wound Care Device in the Treatment of Full-thickness Wounds

This observational study measures the induction capabilities of Hyalomatrix on producing granulation tissue suitable for split-thickness skin grafts in severe extremity injuries.¹⁴

Vaianti L, Marchesi A, Palitta G, et al. Strat Traum Limb Recon. 2013;8(2):111-115. Full article: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3732675/>

Indications

- Surgical wounds (donor sites/grafts, post-Mohs surgery, post-laser surgery, podiatric, wound dehiscence)
- Trauma wounds (abrasions, lacerations, skin tears)
- Partial- and full-thickness wounds
- Second-degree burns
- Draining wounds
- Chronic vascular ulcers
- Tunneled/undermined wounds
- Pressure, venous, diabetic ulcers

Contraindications

Individuals with a hypersensitivity to hyaluronan and/or its derivatives, or silicone.

Real-life skin injuries treated with Hyalomatrix.

Patient case study
Trauma injury¹⁴

60 days to complete healing*

Skin injury: Traumatic lesion with exposed bone and tendon

- A. After surgical debridement
- B. Application of Hyalomatrix
- C. 42 days: Newly formed tissue after removal of Hyalomatrix
- D. One month: >90 % of the meshed skin graft had taken



A



B



C



D

Case study and photos courtesy of: Dr. L. Vaienti
*Individual results will vary

Patient case study
Surgical wound¹⁵

6 months to complete healing*

Skin injury: Full-thickness surgical wound

- A. After debridement
- B. Application of Hyalomatrix and PHMB
- C. Progression of healing
- D. 6 months after initial debridement and skin graft



A



B



C



D

Case study and photos courtesy of: Dr. Daniel L. Kapp
*Individual results will vary

Together, we can transform injured skin into healthy skin.

Discover transformative solutions designed to stimulate tissue regeneration.
Visit MedlineCorius.com or contact your Medline Corius Representative today.

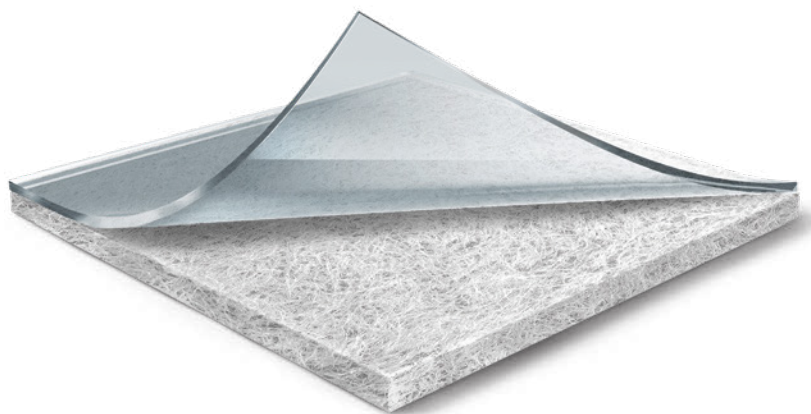
How to order:

Hyalomatrix®

Item no.	Description	Pkg.	Total cm ²
MSS4011	Hyalomatrix, 2.5 x 2.5 cm	10/bx*	6.25 cm ²
MSS4011H	Hyalomatrix, 2.5 x 2.5 cm	1/ea*	6.25 cm ²
MSS4022	Hyalomatrix, 5 x 5 cm	10/bx*	25 cm ²
MSS4022H	Hyalomatrix, 5 x 5 cm	1/ea*	25 cm ²
MSS4044	Hyalomatrix, 10 x 10 cm	1/bx*	100 cm ²
MSS4048	Hyalomatrix, 10 x 20 cm	1/bx*	200 cm ²

*One device per pouch

HPCS: Q4117, Hyalomatrix per cm²



References

- Nussbaum SR, Carter MJ, Fife CE, et al. An Economic Evaluation of the Impact, Cost and Medicare Policy Implications of Chronic Non-healing Wounds. *Value in Health*. 2018;21(1):27-32. Available at: <https://www.sciencedirect.com/science/article/pii/S1098301517303297?via%3Dihub>. Accessed August 6, 2018.
- Miller RS, Morris JA, Diaz JJ, et al. Complications After 344 Damage-Control Open Celiotomies. *Jour Trauma*. 2005;59(6):1365-1371. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/16394910>. Accessed August 6, 2018.
- Caravaggi C, Grigoletto F, Scuderi N. Wound Bed Preparation With a Dermal Substitute (Hyalomatrix® PA) Facilitates Re-epithelialization and Healing: Results of a Multicenter, Prospective, Observational Study on Complex Chronic Ulcers (The FAST Study). *WOUNDS*. 2011;23(8):228-235. Available at: http://www.medscape.com/viewarticle/749515_1 Accessed June 18, 2018.
- Voigt J, Driver VR. Hyaluronic Acid Derivatives and Their Healing Effect on Burns, Epithelial Surgical Wounds, and Chronic Wounds: a Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Wound Repair Regen*. 2012 May-Jun;20(3):317-31. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/22564227> Accessed June 18, 2018.
- Longinotti C. The Use of Hyaluronic Acid-Based Dressings to Treat Burns: A Review. *Burn Trauma* [Epub ahead of print] [cited 2014 Oct 16]. Available from: http://burntrauma.com/temp/BurnTrauma24162-6158285_170622.pdf Accessed June 20, 2018.
- Pasquinelli G, Vinci MC, Gamberini C, et al. Architectural Organization and Functional Features of Early Endothelial Progenitor Cells Cultured in a Hyaluronan-Based Polymer Scaffold. *Tissue Eng Part A*. 2009;15(9):2751-62.
- Caravaggi C, Barbara A, Sganzeroli A, et al. Safety and Efficacy of a Dermal Substitute in the Coverage of Cancellous Bone After Surgical Debridement for Severe Diabetic Foot Ulceration. *EWMA J*. 2009;9(1):11-4.
- Simman R, Mari W, Younes S and Wilson M. Use of Hyaluronic Acid-Based Biological Bilaminar Matrix in Wound Bed Preparation: A Case Series. *ePlasty*. 2018; 18:e10. Available at: http://www.eplasty.com/index.php?option=com_content&view=article&id=1924&catid=15&Itemid=116. Accessed June 18, 2018.
- Erbatur S, Coban YK, Aydin EN. Comparison of Clinical and Histopathological Results of Hyalomatrix Usage in Adult Patients. *Intl Jour Burns and Trauma*. 2012;2(2):118-125. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3462522/>. Access June 18, 2018.
- Frenkel JS. The Role of Hyaluronic Acid in Wound Healing. *Intl Wound Jour*. 2014;11:159-163. Available at: <https://pdfs.semanticscholar.org/f9a7/aaa8a2454cfa7a09d38ff92e68d3ee3c9675.pdf>. Accessed July 11, 2018.
- Fakhari A, Berklund C. Applications and Emerging Trends of Hyaluronic Acid in Tissue Engineering, as a Dermal Filler, and in Osteoarthritis Treatment. *Acta biomaterialia*. 2013;9(7):7081-7092. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3669638/>. Accessed July 11, 2018.
- Litwiniuk M, Krejner A, Grzela T. Hyaluronic Acid in Inflammation and Tissue Regeneration. *Wounds*. 2016;28(3):78-88. Available at: <https://www.woundsresearch.com/article/hyaluronic-acid-inflammation-and-tissue-regeneration>. Accessed July 11, 2018.
- Literature review of peer-reviewed published papers on HA, HYAFF and Hyalomatrix. Data on file.
- Vaienti L, Marchesi A, Palitta G, et al. Limb Trauma: The Use of an Advanced Wound Care Device in the Treatment of Full-Thickness Wounds. *Strat Traum Limb Recon*. 2013;8(2):111-115. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3732675/>. Accessed August 3, 2018.
- Data on file with surgeon.



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