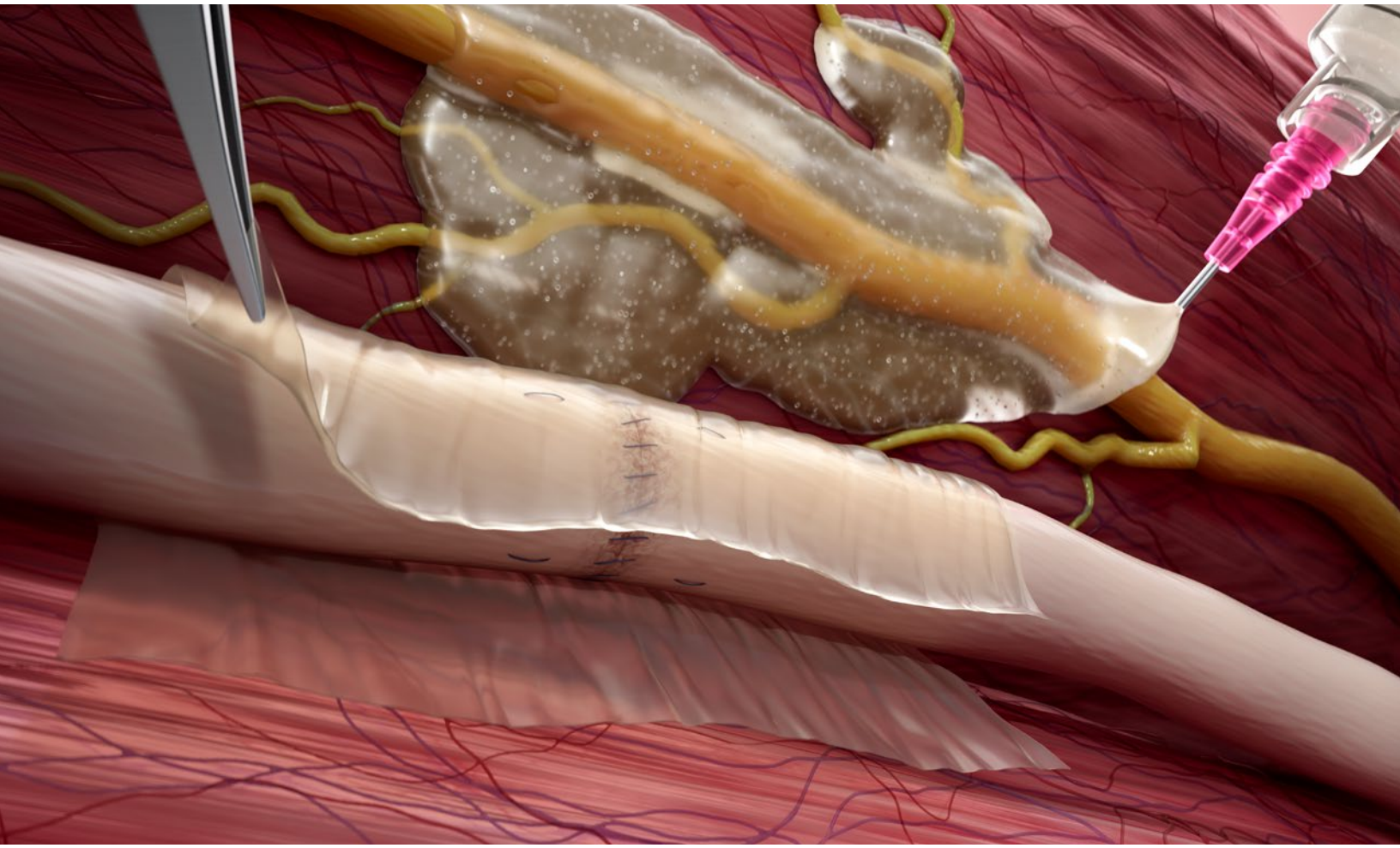
VersaWrap®
Hydrogel Sheet

VersaCoat™
Flowable Hydrogel



Soft-Tissue Protection ***Reimagined***


Tendon


Ligament


Muscle


Peripheral Nerve


Nerve Root


Adjacent to Implants

alafair BIOSCIENCES

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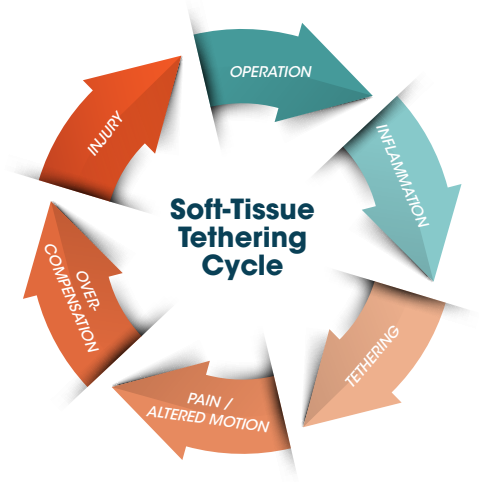
10 Key Publications

11 Product Formats

Soft-Tissue Tethering Impacts Patient Outcomes

Surgery is intended to restore function, yet the body's healing response often overreacts by tethering tissues that should be separated.[1,2]

Postoperative scarring binds anatomy to surrounding tissues, restricting independent soft tissue movement that patients need to recover. This restriction often leads to pain, reduced quality of life, and the need for additional procedures.



VersaCore™ Hydrogel Technology

VersaCore Hydrogel Technology is the platform science behind Alafair's soft-tissue protection portfolio.

The only soft-tissue protection platform composed of naturally derived high molecular weight hyaluronic acid and alginate. VersaCore Hydrogel Technology delivers a collagen-free, fully bioresorbable formulation that maintains a protective gliding surface throughout the critical healing period.

Hyaluronic Acid (HA)

- Known anti-inflammatory[3]
- Recruited to injury site, critical to healing[3]
- Immobilizes water on its surface, preventing cellular adhesion, facilitating gliding, movement, and debris removal

Alginate

- Known to upregulate anti-inflammatory and downregulate inflammatory responses[4]
- Provides a hydrophilic matrix that gradually resorbs to locally expose embedded, bioavailable hyaluronic acid

Hyaluronic Acid Facilitates Soft-Tissue Healing

Hyaluronic acid is a naturally occurring component of the extracellular matrix found throughout the human body.[3,5] At the site of injury, HA plays an essential role in tissue regeneration by maintaining hydration, facilitating debris removal, supporting structural integrity, and reducing the inflammatory response.[3,6,7]



VersaCore Hydrogel Technology Mechanism of Action

Entangled biopolymers begin to disentangle in the first few days following implantation. Ongoing fluid turnover and physical movement exposes the biopolymers to bodily fluid, resorbing via metabolic and hydrolytic activity. This cycle of disentanglement, exposure, and hydrolysis continues until all biopolymers are resorbed.

Engineered to Prevent Tethering and Optimize Healing

Soft-tissue protection requires more than a physical barrier. **VersaCore™ Hydrogel Technology** combines six distinct material properties that work together to prevent tethering, support natural healing, and leave only the body's own tissues behind.



Prevents Tethering

- Provides protective gliding surface
- Negative charge repels cellular attachment



Selectively Permeable

- Limits infiltration of proteins and cells
- Permits exchange of oxygen, nutrients, and small molecules (e.g., growth factors)



Stays Where Applied

- Mucoadhesive
- Sutureless
- Does not migrate



Bioresorbs Completely

- Bioresorbs as part of the natural healing process
- Alternative to collagen-based materials that may remodel and add bulk



Biocompatible

- No human or animal tissue
- Elicits little to no immune response
- Non-neurotoxic
- No tissue tracking requirements



Conformable

- Conforms to tissue and materials
- Ultrathin profile
- Non-swelling
- Non-constricting

Suitable for patients with known cultural or physiological sensitivities to animal or human tissue products

The New Standard for Post-Operative Tethering Prevention

Existing approaches to soft-tissue protection rely on collagen-derived, tissue-based materials not specifically designed to address post-operative tethering. Many remodel rather than resorb, add bulk rather than maintain a gliding surface, and carry the variability of animal or human-sourced materials. **VersaCore™ Hydrogel Technology** was purposely designed to fill this gap.

	Collagen-Derived SHEETS	Collagen-Derived GEL	Human Placental (Amnion)	Synthetic GEL	VersaCore™ Hydrogel Technology
Provides prolonged[4] hyaluronic acid	✗	✗	✗	✗	✓
Non-collagenous (no human or animal)	✗	✗	✗	✓	✓
Provide gliding surface	—*	✗	✗	✗	✓
Does not add bulk (Bioresorbs via hydrolysis)	✗	✗	✗	✓	✓
Minimally invasive application	✗	✓	✗	✓	✓
Transluscent	✗	✓	✗	✓	✓
Gel application	✗	✓	✗	✓	✓
Nerve and tendon protection (single device)	✗	✗	✗	✗	✓

*Commercially available collagen substrate with rapidly resorbing hyaluronic acid-based coating

One proven platform.
Two surgical formats.

VersaWrap®
Hydrogel Sheet



- Sustained gliding interface
- Continuous protective surface
- Conformable
- Translucent

- Sutureless
- Ultrathin
- Ready-to-use
- Bioresorbs 3-6 months*

*May persist for up to two years

Where to use

Open, planar, or circumferential anatomical sites
(e.g., peroneal tendon, nerve root, nerve transposition)

Continuous, exposed anatomy easily addressed with sheet format
(e.g., Achilles, wrist trauma, sports injury (iliopsoas))

Transforms to 0.5 mL syringe-deliverable gel via VersaWrap Application Kit

VersaWrap® Hydrogel Sheet* and VersaCoat™ Flowable Hydrogel** provide the freedom to choose the application method that best fits the tissue, the anatomy, and the complexity of the case.

VersaCoat™

Flowable Hydrogel



- Sustained gliding interface
- Precise application to discrete surfaces
- Minimal tissue manipulation
- Stays where applied

- Stable viscosity
- Easy-to-prepare
- Ready-to-use
- Bioresorbs 3-6 months*

*May persist for up to two years

Where to use

Complex anatomical sites requiring multiple, discrete soft tissue protection (e.g., multi-site repair, trauma)

Tighter openings where sheet placement is challenging (e.g., minimally invasive, beneath approximated tissues)

Available in 1 mL and 2 mL for greater coverage

Minimal manipulation of target tissues

*VersaWrap Tendon Protector / VersaWrap Nerve Protector
**VersaCoat Tendon Protector / VersaCoat Nerve Protector



Ligament

Unparalleled Protection

One portfolio. Complete coverage. **VersaWrap Hydrogel Sheet and VersaCoat Flowable Hydrogel** are cleared to protect tendons, ligaments, and skeletal muscles, and to manage peripheral nerves and the neural environment, across all age groups. Both devices may be placed adjacent to implants, hardware, and grafts, giving surgeons the confidence to protect every structure in the surgical field.



Muscle



Tendon

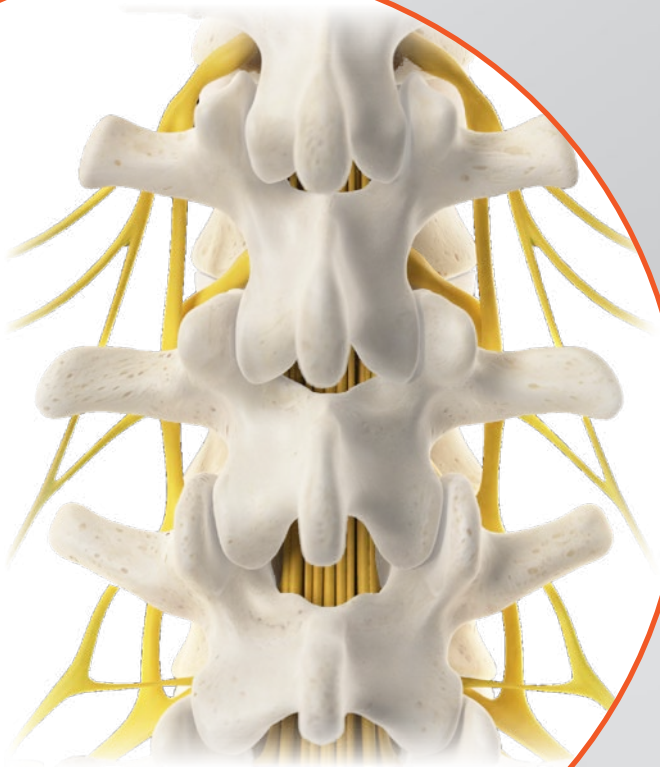


Peripheral Nerve



Adjacent to Implants

Cleared for Use Across All Age Groups



Nerve Root

Unrivaled Surgical Flexibility

Postoperative soft-tissue tethering threatens outcomes across every surgical specialty. **VersaWrap Hydrogel Sheet and VersaCoat Flowable Hydrogel** provide unparalleled soft-tissue protection where gliding is critical to recovery, from Achilles tendon repair to lumbar decompression.





Neck/Back

- Cervical decompression
- Foraminotomy
- Greater occipital decompression
- Lumbar discectomy
- Neurolysis
- PLIF / TLIF

Upper Extremity

- Biceps tendon repair
- Brachial plexus
- Carpal tunnel decompression
- Cubital tunnel decompression / Ulnar nerve transposition
- Flexor / extensor tendon repair
- Neurolysis
- Pulleys in Zone II
- Tenolysis
- Tommy John surgery / UCL reconstruction
- Trigger finger

Lower Extremity

- ATFL / CFL / PTFL
- Achilles tendon repair
- Charcot
- EHL repair
- Ganglion cyst removal
- Neurolysis
- Patellar tendon repair
- Peroneal tendon repair
- Tarsal tunnel decompression
- Deltoid ligament repair
- Superficial peroneal decompression
- Tenolysis

Trunk

- Groin injuries
- Muscle approximation
- Nerve decompression
- Sports injuries

The lists above reflect representative use cases across specialties

Clinical Confidence Built on Real-World Results

Confidence in new technology starts with proof. **VersaWrap® Hydrogel Sheet** has been implanted in more than 40,000 patients across upper extremity, lower extremity, and spine procedures, with a growing body of peer-reviewed evidence supporting its role in reducing post-operative tethering and improving functional outcomes.

40,000+
VersaWrap Hydrogel Sheet Implants

13
Published Peer Reviewed Studies

8+ Years
Clinical Utilization

> *"VersaWrap and VersaCoat are standard of care in my practice. Whether I'm wrapping the sheet around a tendon or applying gel onto an intricate nerve repair, I know the tissues are free to glide as they heal, giving my patients a smoother, more predictable recovery."*
>
> **Kent Ellington, MD, FAAOS**
> Orthopedic Surgeon, Foot and Ankle Institute OrthoCarolina

Select Bibliography

Lower Extremity

Application of Hyaluronic Acid/Alginate Sheet to Achilles Tendon Injuries to Prevent Peritendinous Adhesions	McCahon, Joseph AS, Tiffany N. Bridges, and Selene G. Parekh	*Foot & Ankle Surgery*
Bioresorbable Hyaluronic Acid Alginate Nerve Protector in Deep Peroneal Neurectomy for Treatment of Midfoot Arthritis	Badell, Jay S.	*Techniques in Foot & Ankle Surgery*

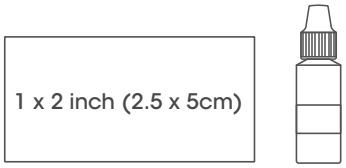
Upper Extremity

Clinical Outcomes and Safety Profile of a Novel Hyaluronic Acid/Alginate Hydrogel in Hand and Microsurgical Procedures	Arquette, Conner, Max Silverstein, Mitchell K. Ng, Bauback Safa, and Walter C. Lin	*Plastic & Reconstructive Surgery (PRS Go)*
Outcomes following use of VersaWrap nerve protector in treatment of patients with recurrent compressive neuropathies	Hones, Keegan M, David S. Nichols, Haley Barker, Elizabeth Cox, Jaime A. Hones, and Harvey Chim	*Frontiers in Surgery*

Spine

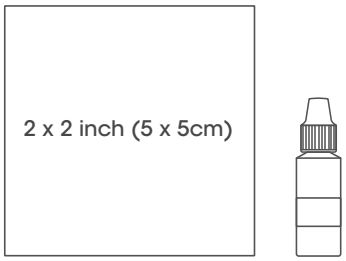
Results of a Bioresorbable Hydrogel Sheet Utilized as an Adhesion Barrier in Spine Surgery	Bruggeman, Adam and Kelly Van Schouwen	*JSM Neurosurgery & Spine*

VersaWrap® Hydrogel Sheet



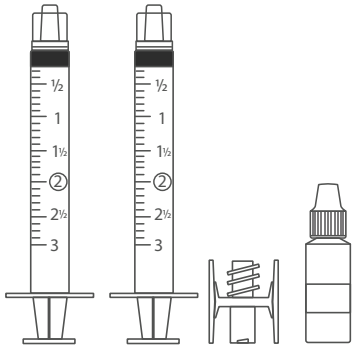
VersaWrap Hydrogel Sheet
VTP-1201

Includes:
- **1 ea:** Hydrogel Sheet 1 x 2 inch (2.5 x 5 cm)
- **1 ea:** Wetting Solution, 1 mL



VTP-2201

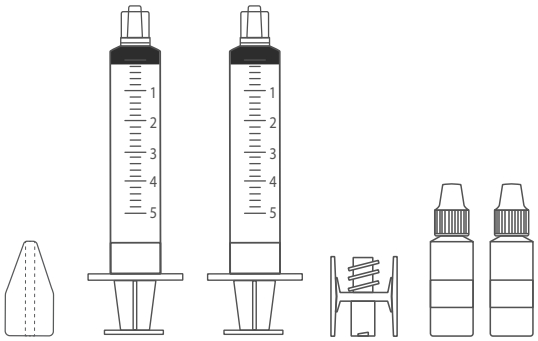
Includes:
- **1 ea:** Hydrogel Sheet 2 x 2 inch (5 x 5 cm)
- **1 ea:** Wetting Solution, 2 mL



VersaWrap Application Kit
VTP-2201A

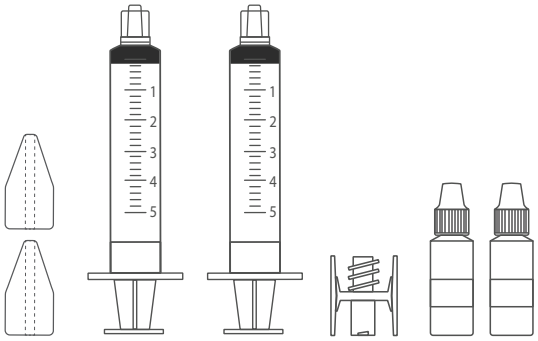
Includes:
- **2 ea:** Syringe, 3 mL
- **1 ea:** Syringe Connector
- **1 ea:** Wetting Solution, 1 mL

VersaCoat™ Flowable Hydrogel



VersaCoat Flowable Hydrogel 1 mL
VTP-12G1

Includes:
- **1 ea:** Hydrogel Pellet
- **2 ea:** Syringe, 5 mL
- **1 ea:** Syringe Connector
- **2 ea:** Wetting Solution, 1 mL



VersaCoat Flowable Hydrogel 2 mL
VTP-44G2

Includes:
- **2 ea:** Hydrogel Pellets
- **2 ea:** Syringe, 5 mL
- **1 ea:** Syringe Connector
- **2 ea:** Wetting Solution, 2 mL



Soft-Tissue Protection *Reimagined*

Contact

800-206-5586 | alafairbiosciences.com

References: 1. Elliot D & Giesen T. (2013) Treatment of unfavorable results of flexor tendon surgery: ruptured repairs, tethered repairs and pulley incompetence. Indian Journal of Plastic Surgery: Official Publication of the Association of Plastic Surgeons of India, 46(3), 458. DOI 10.4103/0970-0358.121931; **2.** Kulkarni OP., et al. (2106) The Immune System in Tissue Environments Regaining Homeostasis after Injury: Is (Inflammation) Always Inflammation? Mediators of Inflammation, Volume 2016, Article ID 2856213, 9 pages http://dx.doi.org/10.1155/2016/2856213; **3.** Kawano Y, Patrulea V, Sublet E, Borchard G, Iyoda T, Kageyama R, and Hanawa T. (2021) Wound healing promotion by hyaluronic acid: Effect of molecular weight on gene expression and in vivo wound closure. Pharmaceuticals, 14(4), 301. https://doi.org/10.3390/ph14040301; **4.** Hirt N., et al. (2025). A novel calcium alginate hydrogel formulation to enhance monocyte/ macrophage anti-inflammatory activity. International Journal of Biological Macromolecules, 306. https://doi.org/10.1016/j.ijbiomac.2025.141251; **5.** Fraser JRE, Laurent TC, Laurent UBG. (1997) Hyaluronan: its nature, distribution, functions and turnover. Journal of Internal Medicine. 1997;242(1):27-33; **6.** Carton F, Malatesta M. (2024) Nanotechnological research for regenerative medicine: The role of hyaluronic acid. International Journal of Molecular Sciences. 2024;25(7):3975.; **7.** Moseley R, Walker M, Waddington RJ, Chen WYJ. (2003) Comparison of the antioxidant properties of wound dressing materials. Biomaterials. 2003;24(9):1549-1557.

Always refer to the complete instructions for use for the complete clinical instructions.

The content of this brochure is for informational purposes only and is not intended to constitute medical advice. As with any medical device, there are multiple factors affecting patient outcomes, including post-operative recovery time and activity level. Patient outcomes may vary based upon, among other factors, the nature and extent of loss or damage, the time between injury or damage and surgery, and the natural course of the patient's recovery. The availability of these products is in the United States only. Warning: Applicable laws restrict these products to sale by or on the order of a physician.

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