



**VersaWrap**<sup>®</sup>

Soft-Tissue Protection *Reimagined*



## The Challenges of Soft-Tissue Tethering

Soft tissue scarring is a result of the body's natural but overreactive response to injury including those that occur with surgical exposure or disturbance<sup>1</sup>

Subsequent procedures are often required to remove this unwanted tethering, and to facilitate movement, reduce pain, and improve quality of life

**85%**  
of surgical procedures are affected by excessive postoperative scarring<sup>2</sup>



## Break the Soft-Tissue Tethering Cycle

VersaWrap is an FDA-cleared bioresorbable hydrogel composed of hyaluronic acid and alginate that provides a conformable, permeable, non-swelling, and non-constricting layer of protection between target and surrounding tissues



Hyaluronic acid (HA) has known anti-inflammatory properties and plays a vital role in healing.<sup>3</sup> Hyaluronic acid immobilizes water on its surface, facilitating gliding, movement, and debris removal



Sourced from deep sea kelp, alginate provides a biocompatible matrix that gradually bioresorbs to locally expose embedded HA



The citric acid wetting solution relaxes the alginate / HA matrix into a conformable tissue adherent layer or gel



# One Product, Unparalleled Protection

VersaWrap offers comprehensive, unique protection for tendons, ligaments, skeletal muscles, and peripheral nerves (including nerve roots), and is cleared for use across all age groups



Tendon



Ligament



Muscle



Peripheral  
Nerve



Nerve Root

## Engineered to Optimize Healing

VersaWrap provides a **gliding surface** that reduces friction during the **critical healing period**, preventing unwanted tethering



### Gliding Surface

- Provides protective gliding surface throughout the healing process
- Negatively charged to repel cellular attachment and protein deposition



### Conformable

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



### Permeable

- Nano-porous
- Water within the hydrogel allows rapid exchange of oxygen, nutrients, and small molecules (e.g. growth factors)
- Limits infiltration of large molecules, proteins, and cells (fibroblasts) during initial healing stages



### Bioresorbable

- Bioresorbs where placed until healing is complete
- Bioresorbs without remodeling
- Bioresorption rate based on post-op movement and fluid turnover
- Alternative to collagen-based materials that may remodel and bulk



### Biocompatible

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

***NO tissue tracking required.***

***Suitable for patients with known cultural or physiological sensitivities to tissue***

## Point-of-Care Configurable

VersaWrap offers on-demand flexibility as the only soft-tissue protection implant that can be applied as a conformable sheet or flowable gel in a wet or dry field



### Sheet Application

- Sutureless
- Uniform layer
- Ultrathin, transparent
- Wraps circumferentially



### Gel Application

- Can be placed on tissues that are difficult to visualize
- Easy to apply in small openings
- Adjustable viscosity

*VersaWrap ensures that tissues can move freely, remaining untethered, thereby reducing additional surgeries and improving patient outcomes*

## Unrivaled Surgical Flexibility

### Upper Extremity

- Bicep tendon
- Brachial plexus
- Carpal / cubital tunnel
- Flexor / extensor tendon
- Nerve transposition and Tommy John surgery
- Neurolysis
- Tenolysis
- Trigger finger
- Ulnar nerve
- Zone 2 pulley



### Neck/Back

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

### Lower Extremity

- ATFL
- Achilles tendon
- Charcot
- Ganglion cyst
- Neurolysis
- PTFL
- Patellar tendon
- Peroneal tendon
- Quad tendon repair
- Superficial peroneal
- Tenolysis

### Trunk

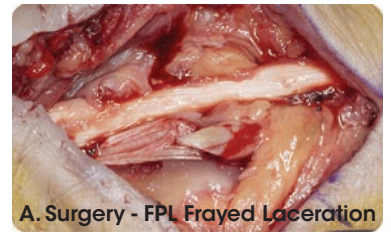
- Groin injuries
- Muscle approximation
- Nerve decompression
- Sports injuries

# Case Studies

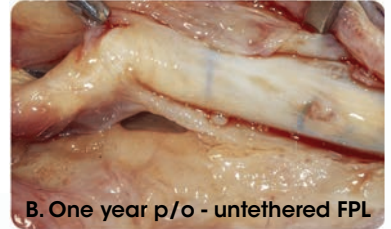
## Acute Zone V Flexor Tendon Laceration with Second Look One Year Later<sup>4</sup>

UPPER EXTREMITY

<b>Case Overview</b>	<ul style="list-style-type: none"> <li>• 68-year-old   Male   Gardener</li> <li>• Flexor pollicis longus (FPL) tendon laceration (image A)</li> </ul>
<b>Application</b>	VersaWrap sheet applied to repaired flexor tendon
<b>Follow-up</b> 10 weeks 1 year	<ul style="list-style-type: none"> <li>• Full composite fist with 30 degrees flexion</li> <li>• Resumed normal activity</li> <li>• Approximately one year later patient underwent open reduction and internal fixation for distal radius fracture</li> <li>• <b>Second look:</b> physician reported no adhesions where VersaWrap was previously implanted (image B)</li> </ul>



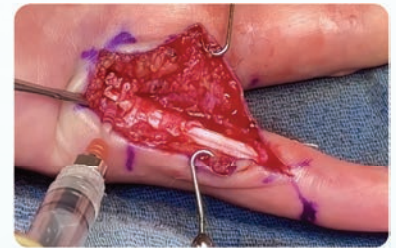
A. Surgery - FPL Frayed Laceration



B. One year p/o - untethered FPL

## Phalanx Fracture Flexor Tenolysis

<b>Case Overview</b>	<ul style="list-style-type: none"> <li>• 41-year-old   Female   Triathlete</li> <li>• Small finger flexor digitorum profundus (FDP) and flexor digitorum superficialis (FDS) flexor tenolysis</li> </ul>
<b>Application</b>	VersaWrap applied as a gel around flexor tendons and under pulley systems
<b>Follow-up</b> 6 weeks	<ul style="list-style-type: none"> <li>• Faster return of finger flexion</li> <li>• Less edema than expected</li> <li>• Able to tolerate more aggressive hand therapy</li> <li>• Successfully returned to triathlon training</li> </ul>



## Peroneal Tendon Dislocation Reconstruction

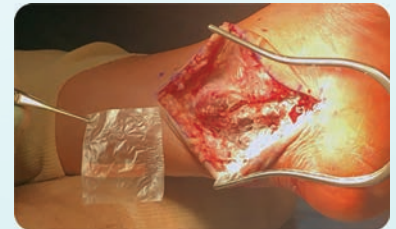
LOWER EXTREMITY

<b>Case Overview</b>	<ul style="list-style-type: none"> <li>• 44-year-old   Female   Runner</li> <li>• Superior peroneal retinacular tear (SPR)</li> </ul>
<b>Application</b>	VersaWrap sheet was placed around peroneal tendons prior to final SPR repair
<b>Follow-up</b> 3 months	<ul style="list-style-type: none"> <li>• Normal SPR restored</li> <li>• Pain-free and returned to sports activity</li> </ul>



## Tarsal Tunnel Release with Posterior Tibial Nerve Decompression

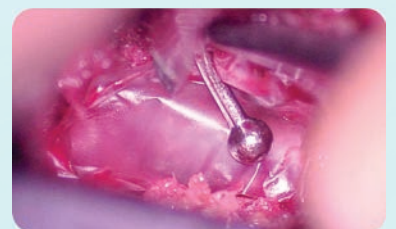
<b>Case Overview</b>	<ul style="list-style-type: none"> <li>• 72-year-old   Male</li> <li>• Flexor digitorum longus (FDL) tendon in the tarsal tunnel compressing neurovascular bundle</li> </ul>
<b>Application</b>	VersaWrap sheet placed over tarsal tunnel prior to closure to prevent scarring
<b>Follow-up</b> 3 months	<ul style="list-style-type: none"> <li>• Patient was pain free with no medial ankle tenderness and a negative Tinel's exam</li> </ul>



## Foraminotomy

NECK / BACK

<b>Case Overview</b>	<ul style="list-style-type: none"> <li>• 47-year-old   Male</li> <li>• Cervical foramen stenosis and radiculopathy</li> <li>• Underwent C5/6 cervical foraminotomy</li> </ul>
<b>Application</b>	VersaWrap sheet was applied over the nerve root
<b>Follow-up</b> 6 weeks	<ul style="list-style-type: none"> <li>• Return to daily living activities at two weeks and full exercise capability at six weeks</li> </ul>





Part Number	Product Type	Size
VTP-1201	VersaWrap Sheet	1 x 2 inch (2.5 x 5 cm)
VTP-2201	VersaWrap Sheet	2 x 2 inch (5 x 5 cm)



## Learn more about our technology

Scan the code | call 800-206-5586 | [alafairbiosciences.com](http://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.** Diamond, M. P., & Freeman, M. L. (2001). Clinical implications of postsurgical adhesions. *Human reproduction update*, 7(6), 567-576. <https://doi.org/10.1093/humupd/7.6.567> **3.** Kawano, Y., Patrulea, V., Sublet, E., Borchard, G., Lyoda, T., Kageyama, R., & 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.** McDermott, E. R., Bowers, Z., & Nuelle, J. A. (2022). The Application of Hyaluronic Acid/Alginate Sheet to Flexor Pollicis Longus Tendon Repair to Prevent Adhesion Formation: Second Look. *Cureus*, 14(12). DOI 10.7759/cureus.33147

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.

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