

# Product Spotlight

Cardiothoracic and Biologic Advancements



**Arthrex**<sup>®</sup> 

The Arthrex logo features the brand name in a bold, sans-serif font, followed by a registered trademark symbol. To the right of the text is a stylized white icon of a surgical instrument, possibly a grasper or forceps, with a curved handle and a pointed tip.

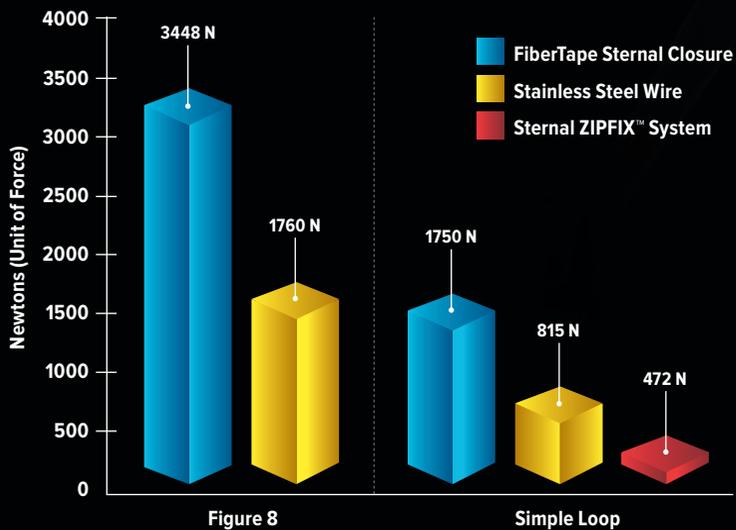
# FiberTape<sup>®</sup> Sternal Closure

Make Metal Wire a Memory

Composed of UHMWPE and polyester braid to provide an **all-suture alternative** for secure sternal closure with **superior compression** and **ultimate load strength** compared to metal wires and other systems.<sup>1</sup>

## Stronger Than Conventional Methods<sup>1</sup>

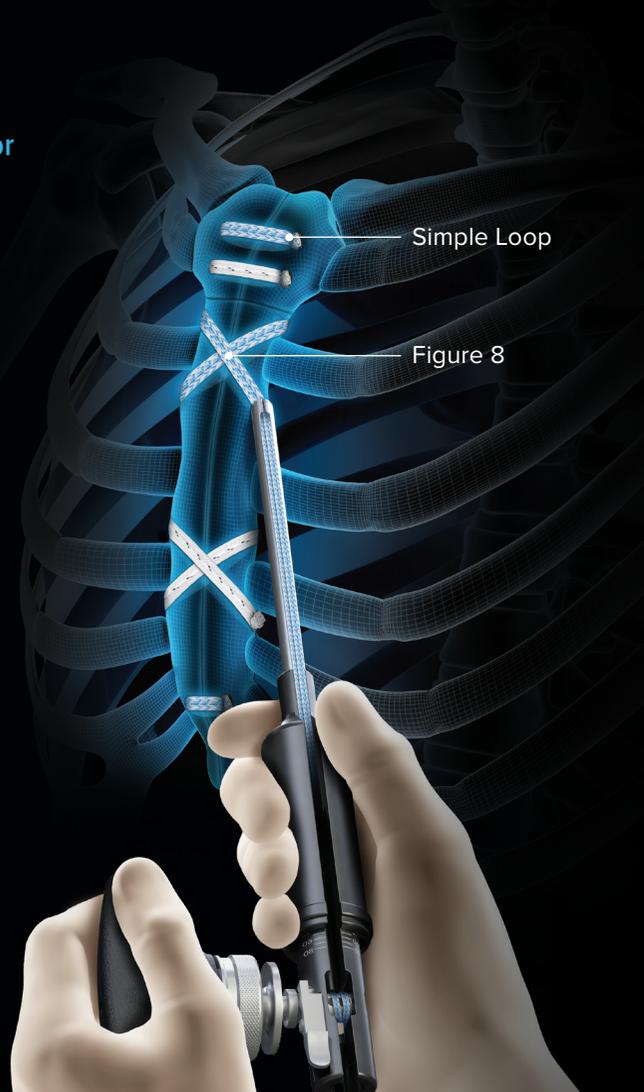
### Load-to-Failure Comparison



ZIPFIX is a trademark of DePuy Synthes.

#### Reference

1. Arthrex, Inc. Data on file (APT 5056). Naples, FL; 2021.



# Stronger Than Metal Yet Soft as Suture

Offering a broad footprint for better bone compression, the FiberTape® Sternal Closure System has shown significantly improved complication rates compared to metal wires, including decreased occurrences of sternal dehiscence and sternal wound infections.<sup>1</sup>

## FiberTape Sternal Closure

Loading device with pretied knot simplifies deployment



**Broad Footprint and No Sharp Metal Ends**  
Resists bone cut-through and eliminates risk of wire-stick injuries



## FiberTape Sternal Closure Tensioner

Delivers controlled, reproducible compression

## Reference

1. Coster JN, Chan EG, Furukawa M, Sanchez PG. Experience using a flexible reinforced fiber suture for sternal closure in bilateral lung transplantation recipients undergoing bilateral transverse thoracostomy. *JTCVS Tech*. 2022;14:168-170. doi:10.1016/j.jtc.2022.05.006

# Comprehensive PRP Systems

## Angel® System

The Angel cPRP system is the only fully automated system with proprietary 3-sensor technology for preparation of adjustable cellular concentrations of platelet-rich plasma (PRP) from whole blood and cPRP from bone marrow aspirate (BMA).

## ACP Max™ PRP System

The ACP Max triple-syringe system uses a double-spin regimen to produce PRP from 30 mL, 60 mL, or 90 mL of whole blood, resulting in up to 12 $\times$  over baseline platelet concentration and a greater than 97% reduction of neutrophils.<sup>1-3</sup>

## Arthrex ACP® Double-Syringe System

The Arthrex ACP (autologous conditioned plasma) double-syringe system allows for rapid and efficient concentration of platelets from 15 mL of whole blood, providing a PRP that is low in neutrophils in just 5 minutes.



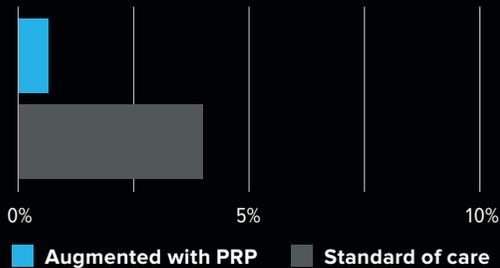
### Reference

1. Arthrex, Inc. Data on file (APT-5368). Naples, FL; 2021.
2. Arthrex, Inc. Data on file (APT-5535). Naples, FL; 2022.
3. Arthrex, Inc. Data on file (APT-5756). Naples, FL; 2022.

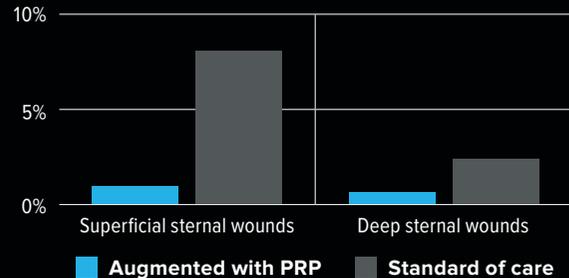
# Platelet-Rich Plasma (PRP) in Cardiothoracic Surgery

Application of PRP in Sternal Closure Has Been Shown to Promote Earlier Wound Healing and Improved Postoperative Outcomes<sup>1-4</sup>

Hospital Readmission Rate (per 1000 patients)<sup>5</sup>



Sternal Wound Infection Rate (n = 2000)<sup>5</sup>



The mean cost of deep and superficial sternal wounds for a single patient is

**\$1,256,960**

This cost is **reduced by >50%** when augmented with PRP to an average of

**\$593,791**

for a single patient<sup>5</sup>

## References

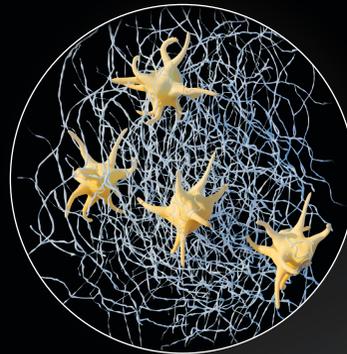
1. Trowbridge CC, Stammers AH, Woods E, Yen BR, Klayman M, Gilbert C. Use of platelet gel and its effects on infection in cardiac surgery. *J Extra Corpor Technol.* 2005;37(4):381-386.
2. Englert SJ, Estep TH, Ellis-Stoll CC. Autologous platelet gel applications during cardiovascular surgery: effect wound healing. *J Extra Corpor Technol.* 2005;37(2):148-152.
3. Vang SN, Brady CP, Christensen KA, et al. Autologous platelet gel in coronary artery bypass grafting: effects on surgical wound healing. *J Extra Corpor Technol.* 2007;39(1):31-38.
4. Jameson CA. Autologous platelet concentrate for the production of platelet gel. *LabMed.* 2007;38:39-42.
5. Patel AN, Selzman CH, Kumpati GS, McKellar SH, Bull DA. Evaluation of autologous platelet rich plasma for cardiac surgery: outcome analysis of 2000 patients. *J Cardiothorac Surg.* 2016;11(1):62. doi:10.1186/s13019-016-0452-9

# Thrombinator™ System

Autologous Thrombin-Rich Sealant at the Point of Care

**The Thrombinator system applies and expedites the clotting cascade to produce an autologous serum that activates platelets and produces a gel sealant.**

- Serum activates platelets to produce a gel that serves as a binding agent to improve handling of bone grafts
- Serum may be developed using whole blood, platelet-poor plasma, or platelet-rich plasma
- Variety of viscous mixing and delivering application systems



# AlloSync™ Bone Grafting Solutions

Multiple Allograft Bone Offerings to Support Bone Repair



## AlloSync Pure Demineralized Bone Matrix

- Derived from 100% human allograft bone with no extrinsic carriers and verified for osteoinductivity
- Physician-controlled viscosity for a more putty or viscous graft, based on hydration
- May be hydrated with choice of autologous fluid, such as concentrated bone marrow aspirate (cPRP from BMA), or platelet-rich plasma (PRP)

## AlloSync Demineralized Cancellous Sponges, Strips, and Cortical Fibers

- Sponges and strips composed of 100% cancellous bone and fibers composed of 100% cortical bone
- Maintains natural bone architecture with interconnected porosity
- Advanced demineralization process exposes collagen, proteins, and natural growth factors, and is tested to verify osteoinductivity



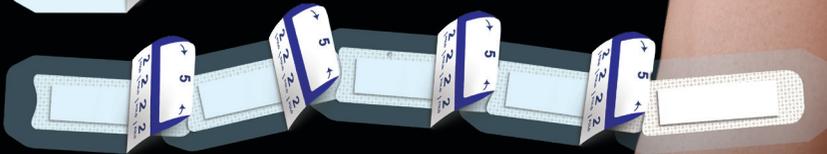
# JumpStart<sup>®</sup>

ADVANCED MICROCURRENT TECHNOLOGY™

- Polyester substrate with embedded microcell batteries made of elemental silver and elemental zinc
- Kills and protects against multiple gram-positive and gram-negative bacteria<sup>1-4</sup>
- Applied pre- or postoperatively to help reduce risk of infection<sup>5</sup>
- Water-resistant; up to 7-day wear time
- JumpStart FlexEFit<sup>®</sup> dressing's buildable design covers incisions of any length and angle



JumpStart FlexEFit  
Wound Dressings



## References

1. Banerjee J, Das Ghatak P, Roy S, et al. Silver-zinc redox-coupled electrochemical wound dressing disrupts bacterial biofilm. *PLoS One*. 2015;10(3):e0119531. doi:10.1371/journal.pone.0119531
2. Kim H, Makin I, Skiba J. Antibacterial efficacy testing of a bioelectric wound dressing against clinical wound pathogens. *Open Microbiol J*. 2014;8:15-21. doi:10.2174/1874285801408010015
3. Kim H, Izadjoo MJ. Antibiofilm efficacy evaluation of a bioelectric dressing in mono- and multi-species biofilms. *J Wound Care*. 2015;24(Suppl 2):S10-4. doi:10.12968/jowc.2015.24.Sup2.S10
4. Long DR, Bryson-Cahn C, Pergamit R, et al. 2021 Young investigator award winner: anatomic gradients in the microbiology of spinal fusion surgical site infection and resistance to surgical antimicrobial prophylaxis. *Spine*. 2021;46(3):143-151. doi:10.1097/BRS.0000000000003603
5. Miller BS, Olszewski AM, Bedi A. A microcurrent dressing reduces cutibacterium acnes colonization in patients undergoing shoulder arthroplasty or arthroscopy: a prospective case series. *HSS J*. 2023;19(1):92-96. doi:10.1177/15563316221100989

# JumpStart<sup>®</sup> Antimicrobial Wound Dressing

to Combat Sternal Wound Infections

- Sternal wound infections occur in 0.25%-5% of all cardiac surgery patients with median sternotomies<sup>1-3</sup>
- The most common pathogens found in deep sternal wound infections are staphylococci and gram-negative bacteria<sup>4,5</sup>
- Readmission of cardiac surgery patients for postoperative infections is roughly 4.3%<sup>3</sup>

Increased costs of care:

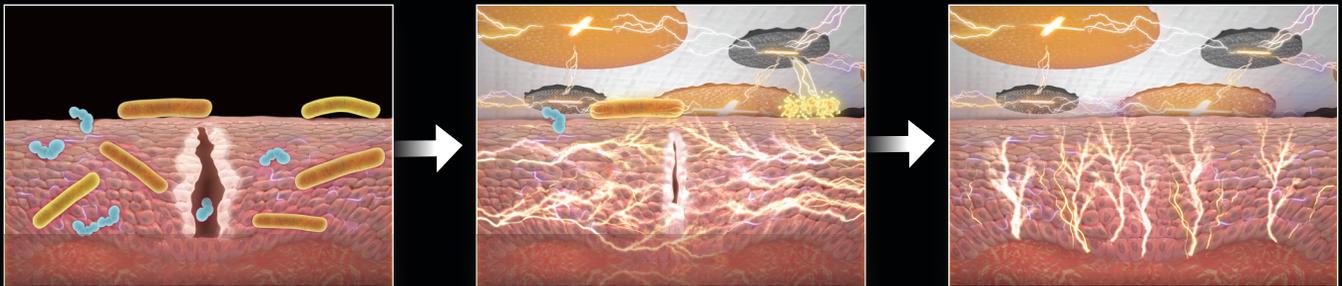
**\$7,981**

for superficial sternal wound infections and

**\$111,175**

for deep sternal wound infections<sup>3</sup>

The microcurrent technology of JumpStart dressing can reduce wound infection risk and promote healing<sup>6</sup>

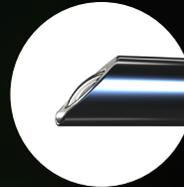


## References

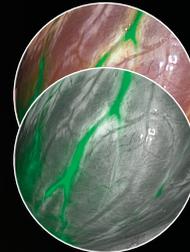
1. Song Y et al. Review on risk factors, classification, and treatment of sternal wound infection. *J Cardiothorac Surg.* 2023;18(1):184. doi:10.1186/s13019-023-02228-y
2. Lazar HL, Salm TV, Engelman R, Orgill D, Gordon S. Prevention and management of sternal wound infections. *J Thorac Cardiovasc Surg.* 2016;152(4):962-72. doi:10.1016/j.jtcvs.2016.01.060
3. Downing M, Modrow M, Thompson-Brazill KA, Ledford JE, Harr CD, Williams JB. Eliminating sternal wound infections: why every cardiac surgery program needs an hate infections team. *JTCVS Tech.* 2023;14:19-93-103. doi:10.1016/j.jtc.2023.03.019.
4. Kim H, Park S, Housler G, Marcel V, Cross S, Izadjoo M. An overview of the efficacy of a next generation electroceutical wound care device. *Mill Med.* 2016;181(5 Suppl):184-90. doi:10.7205/MILMED-D-15-00157
5. Ma JG, An JX. Deep sternal wound infection after cardiac surgery: a comparison of three different wound infection types and an analysis of antibiotic resistance. *J Thorac Dis.* 2018;10(1):377-387. doi:10.21037/jtd.2017.12.109
6. Blount AL, Foster S, Rapp DA, Wilcox R. The use of bioelectric dressings in skin graft harvest sites: a prospective case series. *J Burn Care Res.* 2012;33(3):354-357. doi:10.1097/BCR.0b013e31823356e4

# Synergy Vision™ Imaging System

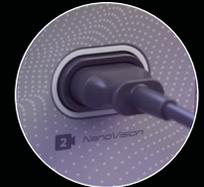
Designed With the Latest Imaging Technology to Deliver Optimal and Revolutionary Results



Pano scope



Fluorescence imaging



Nano Vision port

## Pano™ Scope

Quickly and easily switch between traditional 30° and 70° views to an ultrawide view at the touch of a button. The Pano scope allows surgeons to visualize more anatomy on a single screen while minimizing the need for additional portals or scopes.

## Nano Vision™

The NanoNeedle Scope integrates directly to the Synergy Vision console as either a primary or secondary camera, allowing for a simultaneous 4K and Nano visualization on the same screen.

## Synergy Vision Connect™ Console

Allowing for 6 inputs and 4 outputs, the Synergy Vision Connect system offers built-in OR integration capabilities for in-room switching and routing.

## High Dynamic Range (HDR)

The Synergy Vision imaging system offers high dynamic range. Eliminating hot spots as well as dark areas, HDR imaging provides consistent illumination across the entire screen.

## Fluorescence Imaging

Switch to fluorescence 4K imaging with the touch of a button. Easily toggle through different modes and colors, depending on the fluorescence application and individual surgeon preference.

## Cancer Cell Visualization with Cytalux®

After Cytalux has been administered in accordance with the manufacturer's guidelines, the drug binds to and illuminates cancerous cells when used with the Synergy Vision fluorescence imaging system.

# Introducing Cancer **Illumination**™ with the Synergy Vision™ Imaging System

When paired with pafolacianine (Cytalux®), an FDA-approved prescription medication, surgeons are now able to visualize cancer cells that may have otherwise gone undetected.

These cells are illuminated through the use of the Synergy Vision system, allowing surgeons to visualize these cancerous cells via fluorescent spots.



# The Arthrex Experience™



## A Campus Designed for Surgical Skills Education

As an innovation leader, Arthrex is excited to expand our technology into cardiothoracic surgery and partner with you to foster continued innovation and education. Each year, thousands of health care professionals from around the world attend our expert-led programs at our state-of-the-art medical education facilities. With 60 cadaveric wet lab stations, a modern research lab, a wide range of meeting spaces, and an onsite hotel, the Arthrex campus is designed to deliver an immersive and engaging surgical skills experience.

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