

Cardiothoracic Innovations

New Product Spotlight



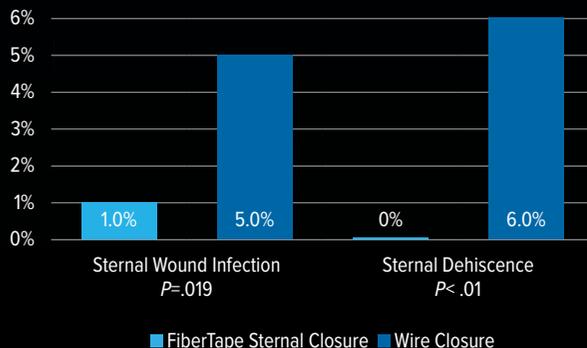
FiberTape® Sternal Closure

Make Metal Wire a Memory

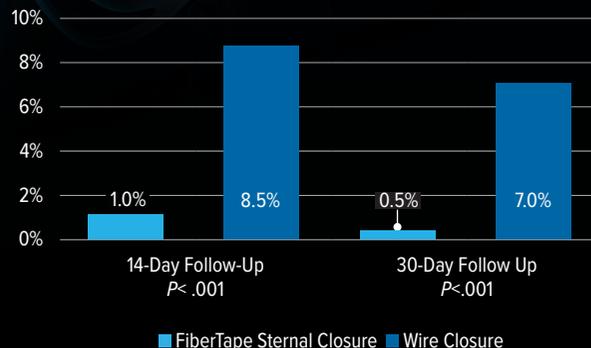
The unique design delivers broader bony compression, superior ultimate load strength, and lower risk of hardware complications associated with the use of stainless steel wires.¹ Stronger than metal, yet soft as suture—sternal and thoracic fixation redefined.



Incidence of Sternal Wound Infection and Dehiscence²



Incidence of Incisional Pain²



References

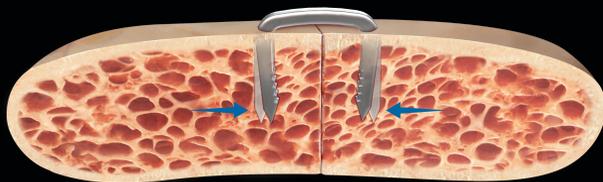
1. Arthrex, Inc. LA1-000131-en. Naples, FL; 2020.
2. Kumar U, et al. *JTCVS Tech*. 2025;31:97-104.

DynaNite[®] CT Nitinol Staples

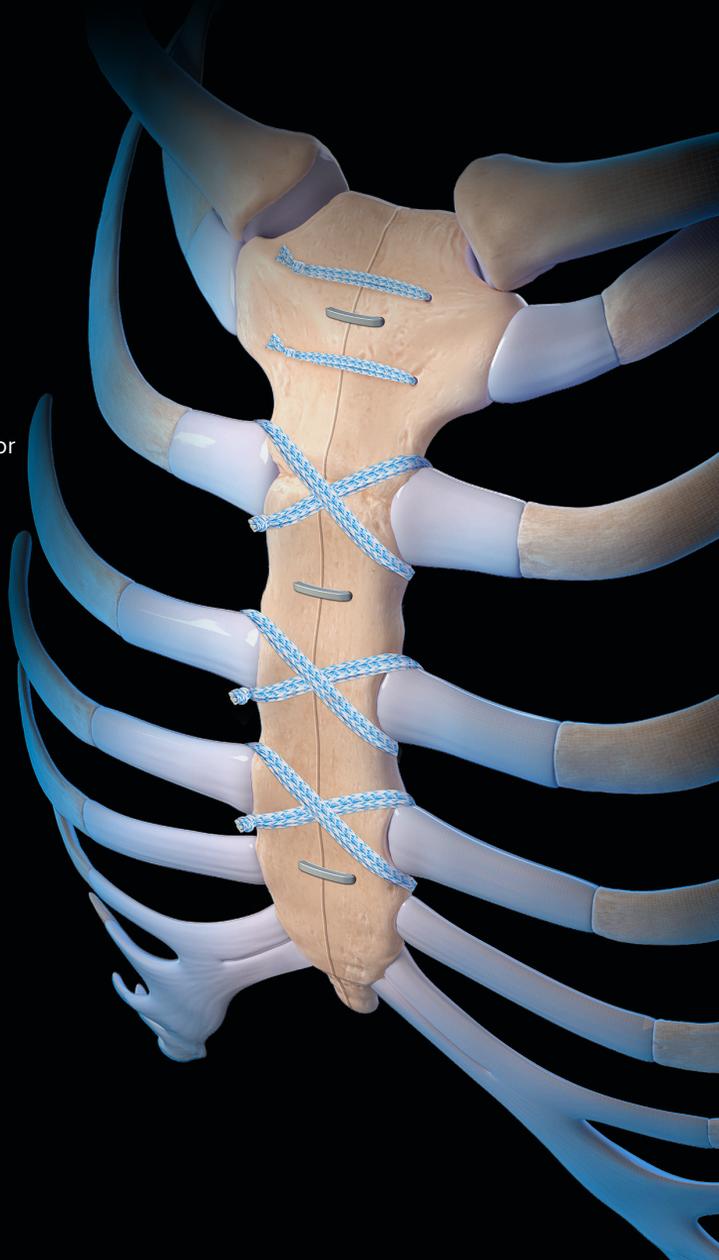
Active compression for sternal closure

As an intuitive complement to FiberTape[®] sternal closure, DynaNite CT nitinol staples deliver targeted sternotomy reinforcement and continuous compressive fixation to support healing.

- Supportive, low-complexity design — no additional plating or screws needed
- Low-profile 1 mm staple bridge height
- Streamlined instrumentation packaged in self-contained disposable kits



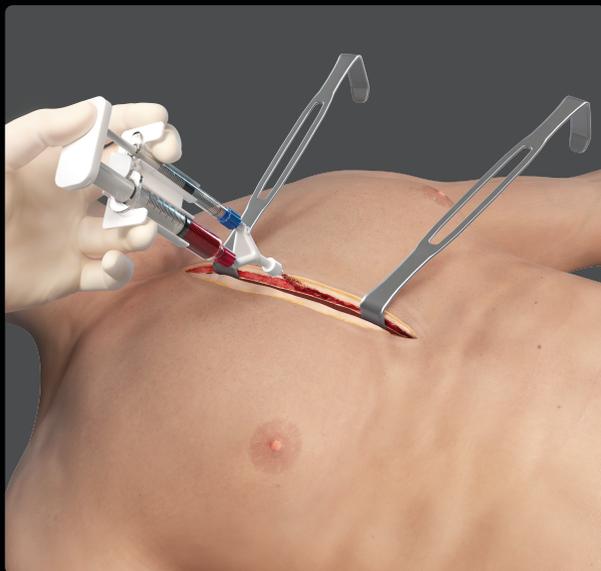
Once deployed, the nitinol staple arms help deliver controlled, targeted compression to the sternotomy



Angel[®] System

Automated and customized PRP formulations

The Angel system is the only fully automated system that uses 3-sensor technology (3ST) and one button automation to prepare customized formulations of platelet-rich plasma (PRP) from whole blood and PRP concentrate from bone marrow aspirate (BMA).



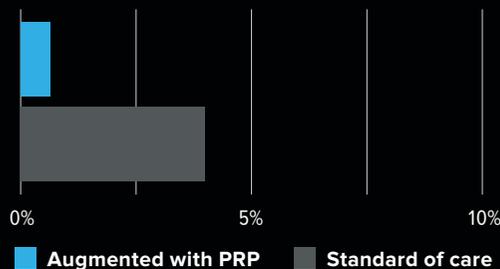
Angel PRP applied directly to the sternal bone



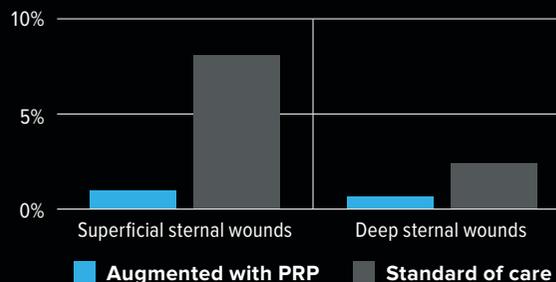
Platelet-Rich Plasma in Cardiothoracic Surgery

Application of PRP in sternal closure has been shown to promote earlier wound healing and improved postoperative outcomes¹⁻⁴

Hospital Readmission Rate (per 1000 patients)⁵



Sternal Wound Infection Rate (n = 2000)⁵



The mean cost of deep and superficial sternal wound is

\$1,257

for a single patient⁵

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

\$594

for a single patient⁵

References

1. Trowbridge CC, et al. *J Extra Corpor Technol.* 2005;37(4):381-386.
2. Englert SJ, et al. *J Extra Corpor Technol.* 2005;37(2):148-152.
3. Vang SN, et al. *J Extra Corpor Technol.* 2007;39(1):31-38.
4. Jameson CA. *LabMed.* 2007;38:39-42.
5. Patel AN, et al. *J Cardiothorac Surg.* 2016;11(1):62. doi:10.1186/s13019-016-0452-9

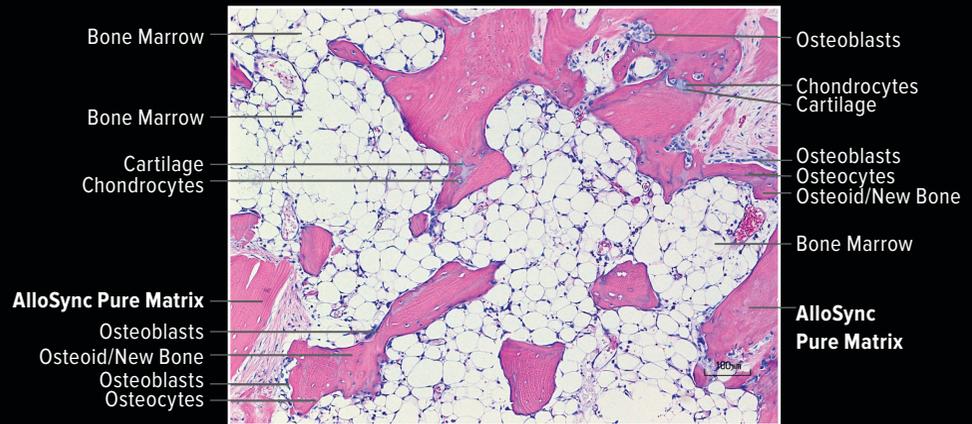
AlloSync™ Pure Demineralized Bone Matrix

Support sternal bone repair with osteoconductive and osteoinductive allograft

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



AlloSync Pure is histologically proven to contain all 5 elements of bone formation (Figure 1).¹



Reference

1. CellRight Technologies, LLC. Data on file (ConCelltrate™ 100 histology and in-vitro alkaline phosphate induction assay). Universal City, TX; 2017.

Figure 1. AlloSync Pure DBM Histology

Synergy Vision™ Surgical Video System

Dual-camera capability. Minimal OR footprint.

The Synergy Vision system combines high dynamic range (HDR), 4K imaging, NanoNeedle™ camera compatibility, fluorescence imaging, and dual-camera inside-outside visualization through a single console to support procedural efficiency in a compact footprint.

NanoVision™ Functionality

The NanoNeedle camera integrates directly with the Synergy Vision console as either a primary or secondary view and offers simultaneous 4K and Nano visualization on the same screen.

HDR

Experience enhanced contrast of surgical anatomy and ideal visualization with HDR.

Synergy Vision Connect™ Console

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

Fluorescence Imaging

Switch to fluorescence 4K imaging, available in multiple NIR modes and colors, with the touch of a button.



Synergy Exoscope

Near-Infrared Fluorescence 4K Imaging

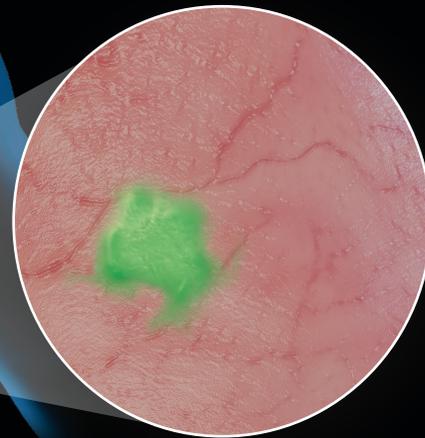
The Arthrex Synergy Exoscope is a reusable, autoclavable 0° 4K scope designed for real-time visible light and near-infrared (NIR) fluorescence imaging during open diagnostic and surgical procedures. When connected to the Synergy Vision™ system and Synergy Visionary™ camera head, it provides intraoperative visualization of vessels, blood flow, and tissue perfusion, following intravenous administration of indocyanine green (ICG).

- › Multiple imaging modes: white light, color + NIR overlay, monochrome, and NIR only
- › Up to 30 cm working distance and 42° wide field of view
- › Handheld or mounted use, compatible with the TRIMANO FORTIS® support arm

Cancer Illumination™ Visualization with the Synergy Vision™ Surgical Video System

When paired with pafolacianine (CYTALUX®), an FDA-approved prescription medication, surgeons are now able to visualize malignant and nonmalignant lesions that may have otherwise gone undetected.

These cells are illuminated through the use of the Synergy Vision system, allowing surgeons to visualize malignant and nonmalignant lesions via fluorescent spots.



CYTALUX is a registered trademark of On Target Laboratories.

JumpStart® Antimicrobial Wound Dressing

Infection Control and Accelerated Healing—All in One Dressing

- › Polyester substrate with embedded silver and zinc microcell batteries
- › JumpStart dressing combats biofilms and bacteria to lower infection risk¹
- › Bioelectric dressings deliver 35% faster healing with visibly better scars²
- › Up to 7-day wear time, resulting in fewer dressing changes and lower cost of care³
- › May be used in conjunction with negative-pressure wound therapy (NPWT) systems

Combining wireless electrical dressing with 5-day NPWT

cut cost of care by

20%

vs NPWT alone³



Hemisternotomy incision at 25 days following a 7-day JumpStart dressing application



References

1. Kim H, et al. *Mil Med.* 2016;181(5 Suppl):184-190. doi:10.7205/MILMED-D-15-00157
2. Blount AL, et al. *J Burn Care Res.* 2012;33(3):354-357. doi:10.1097/BCR.0b013e31823356e4
3. Ghatak PD, et al. *Adv Wound Care (New Rochelle).* 2015;4(5):302-311. doi:10.1089/wound.2014.0615

JumpStart® Antimicrobial Wound Dressing

to Combat Sternal Wound Infections

- › Sternal wound infections occur in 0.25%-5% of all cardiac surgery patients with median sternotomies¹⁻³
- › The most common pathogens found in deep sternal wound infections are staphylococci and gram-negative bacteria^{4,5}
- › Readmission of cardiac surgery patients for postoperative infections is roughly 4.3%³

Increased costs of care:

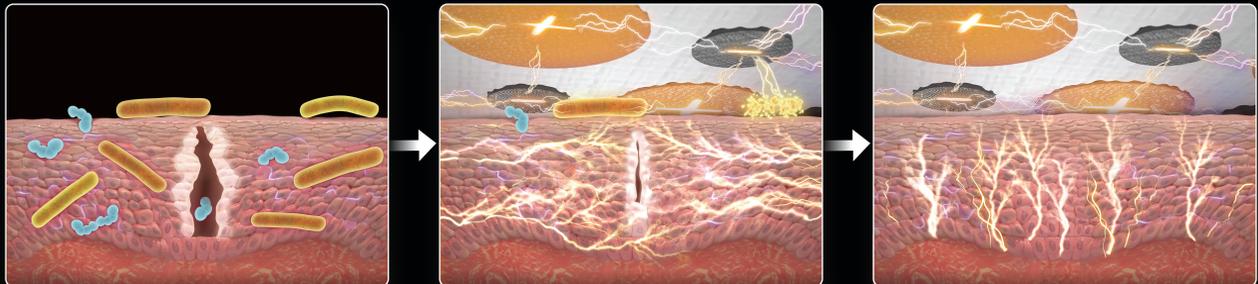
\$7,981

for superficial sternal wound infections and

\$111,175

for deep sternal wound infections³

The microcurrent technology of JumpStart dressing can reduce wound infection risk and promote healing⁶



References

1. Song Y et al. *J Cardiothorac Surg.* 2023;18(1):184. doi:10.1186/s13019-023-02228-y
2. Lazar HL, et al. *J Thorac Cardiovasc Surg.* 2016;152(4):962-72. doi:10.1016/j.jtcvs.2016.01.060
3. Downing M, et al. *JTCVS Tech.* 2023;14:19:93-103. doi:10.1016/j.xjtc.2023.03.019.
4. Kim H, et al. *Mil Med.* 2016;181(5 Suppl):184-90. doi:10.7205/MILMED-D-15-00157
5. Ma JG, et al. *J Thorac Dis.* 2018;10(1):377-387. doi:10.21037/jtd.2017.12.109
6. Blount AL, et al. *J Burn Care Res.* 2012;33(3):354-357. doi:10.1097/BCR.0b013e318223356e4



A Campus Designed for Surgical Skills Education

The expanded Arthrex world headquarters, located in Naples, FL, is an innovative, 60-acre, university-style campus designed to deliver an immersive and engaging medical education experience for visiting health care professionals. The Arthrex campus provides a one-of-a-kind learning environment for surgeons and health care professionals.



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