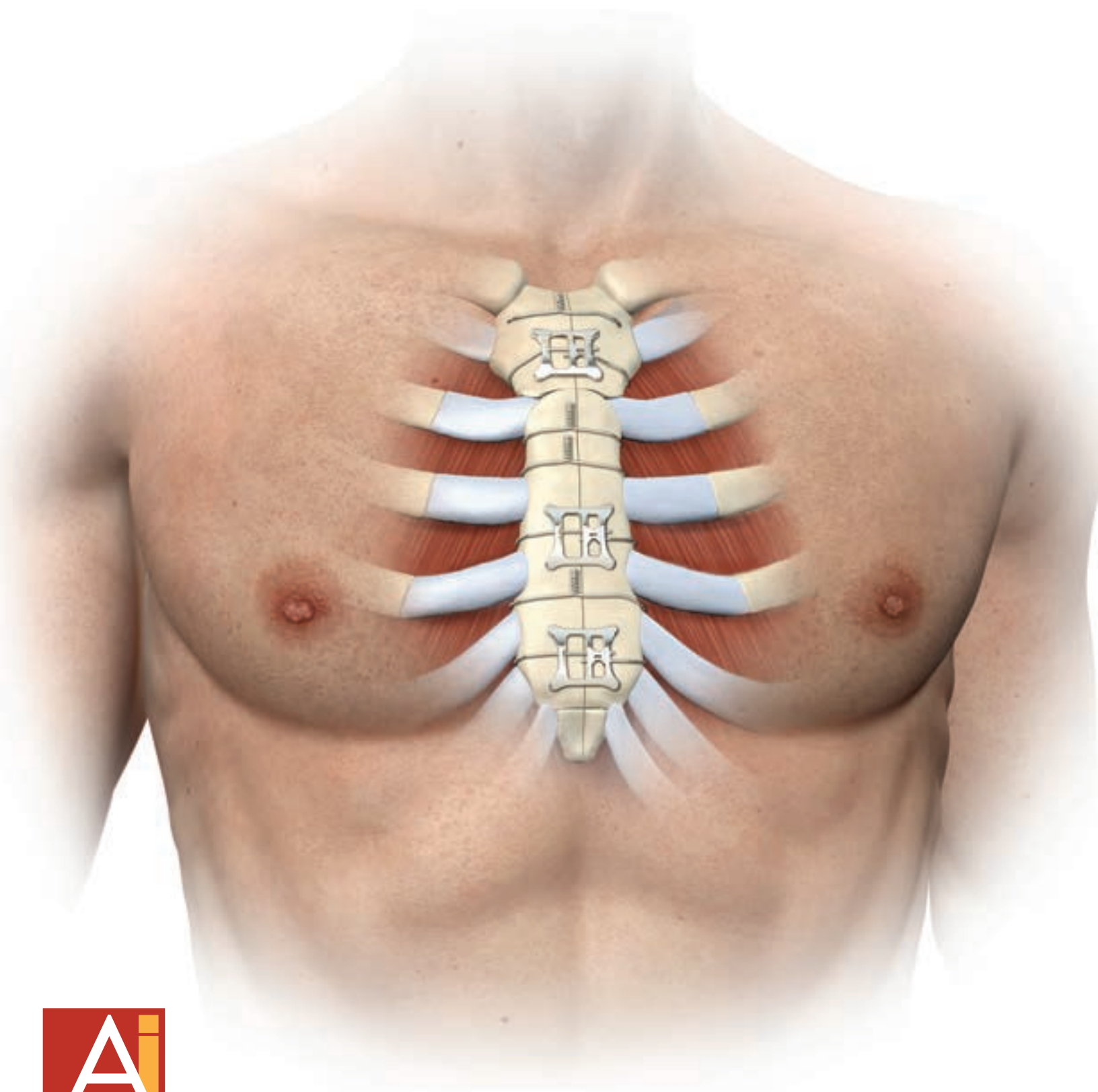


# AcuTie® II

The Next Generation  
Sternum Closure System



Innovative Solutions for Challenging Thoracic Procedures

AcuTie® II is the next generation sternum closure system that combines the simplicity of standard wire cerclage with increased compression, stability in multiple planes, lateral protection, and straightforward installation.



## **EASY TO USE**

Feed

Tension

Crimp

## **COMPLETE STABILITY**

Offers stability in all three planes

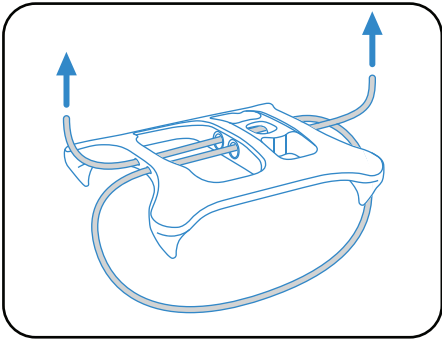
Enhances compression

Reduces stress on lateral edge

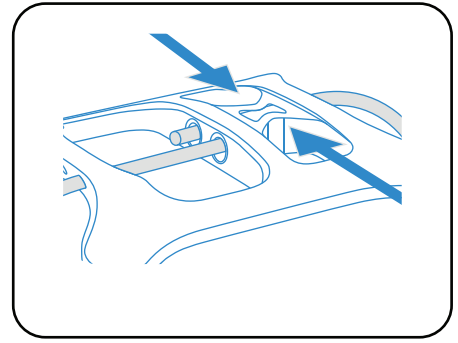
## **COST-EFFECTIVE**

Costs less than other plating solutions

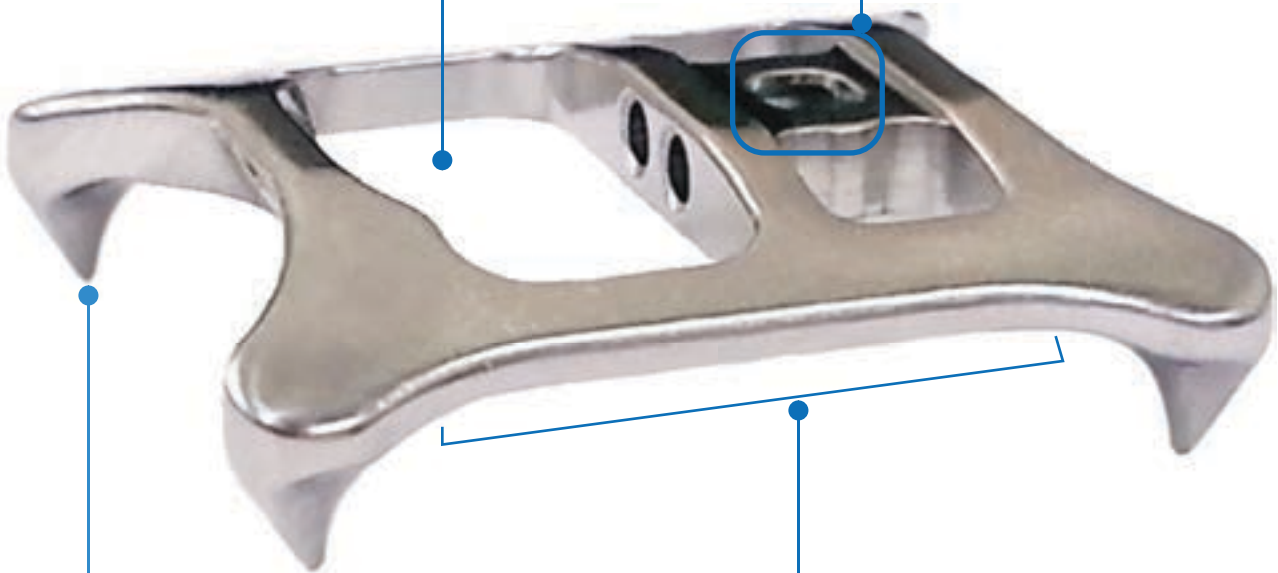
Installs in seconds



Easy installation and confident re-entry

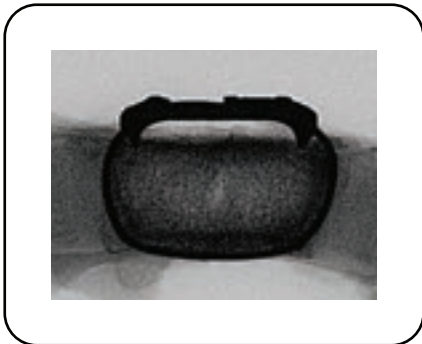


Crimp locks in compression and resists wire fatigue



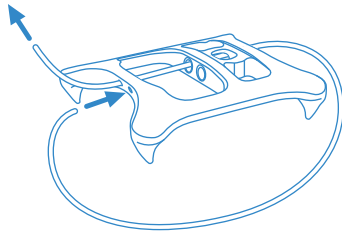
Optimized low profile for the sternum

Directional cleats penetrate the cortex to create stability



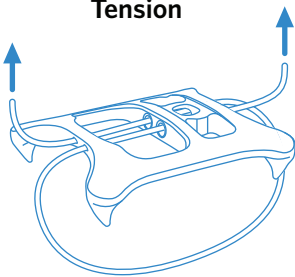
# EASY TO USE

## Feed



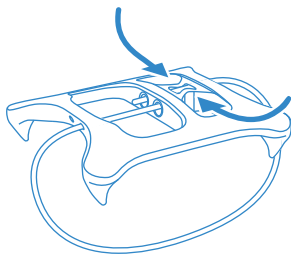
Feed standard sternotomy wire through the plate.

## Tension



The AcuTie tensioner provides compression at the osteotomy and imbeds the cleats into the sternum for stability.

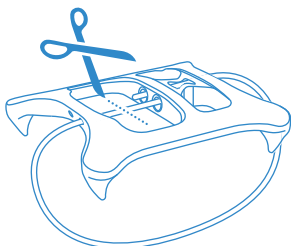
## Crimp



The AcuTie crimper allows one-step crimping to lock in wire tension.

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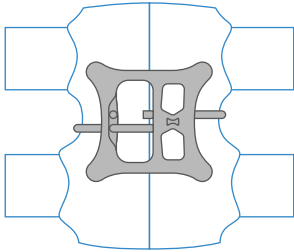
## Fast Re-Entry



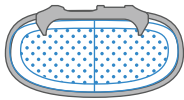
Fast re-entry is obtained if needed with the use of standard wire cutters.

# COMPLETE STABILITY

## AcuTie® II

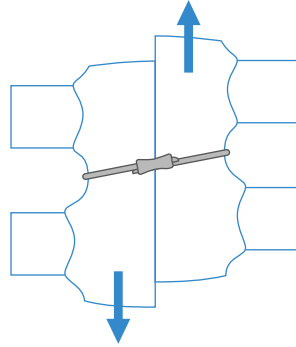


Resists forces in all directions

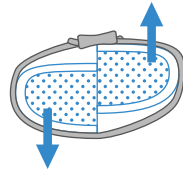


Repeatable, secure compression

## Wire, Cable, Straps

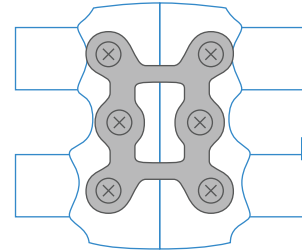


Poor resistance to anterior-posterior and rostral-caudal loading

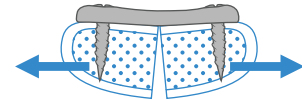


Low or variable compression

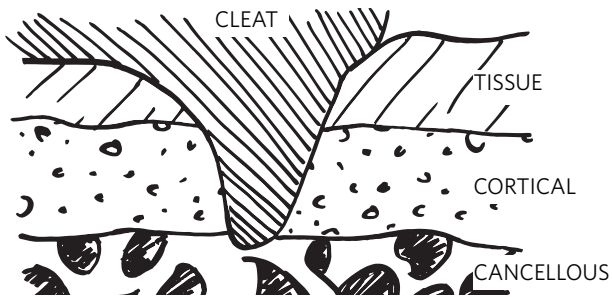
## Anterior Plates



Poor resistance to lateral loading at the deep sternal cortex

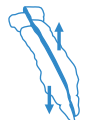
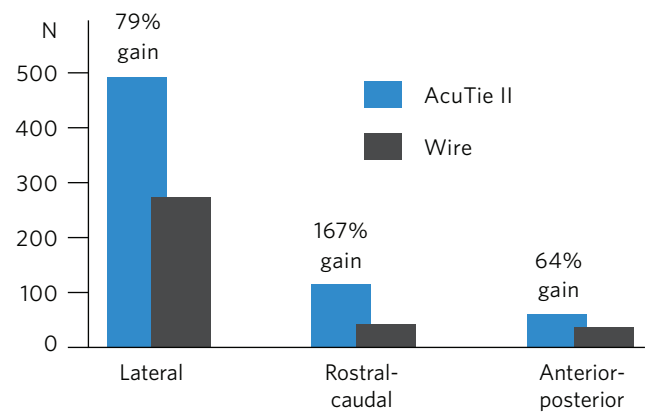


Variable or no compression

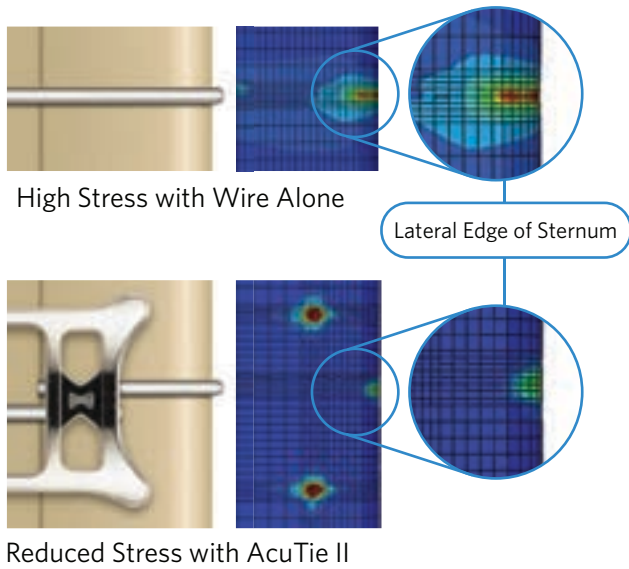


Cleats penetrate deep into the sternal cortex to provide stability in all three planes.

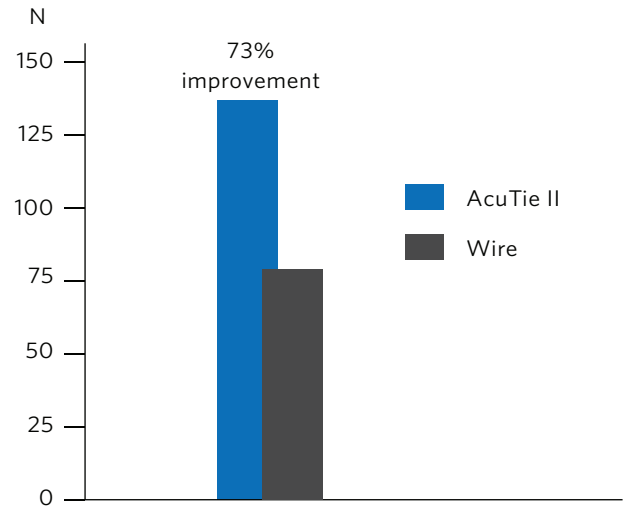
## Force to Create 2mm Displacement<sup>1</sup>



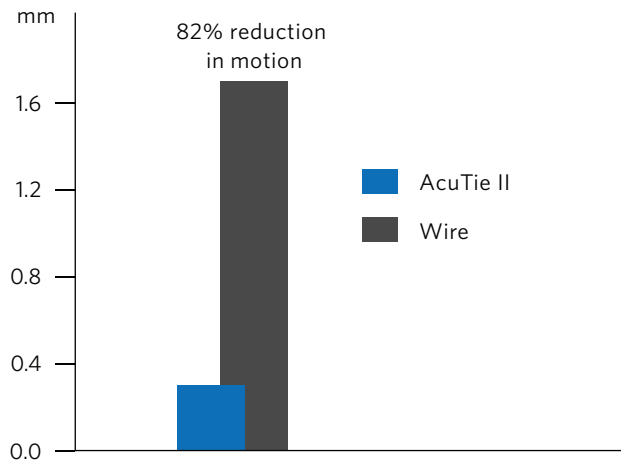
AcuTie II reduces stress on the lateral edge of the sternum leading to less tear-through.



### Force to Create Tear-Through <sup>1</sup>

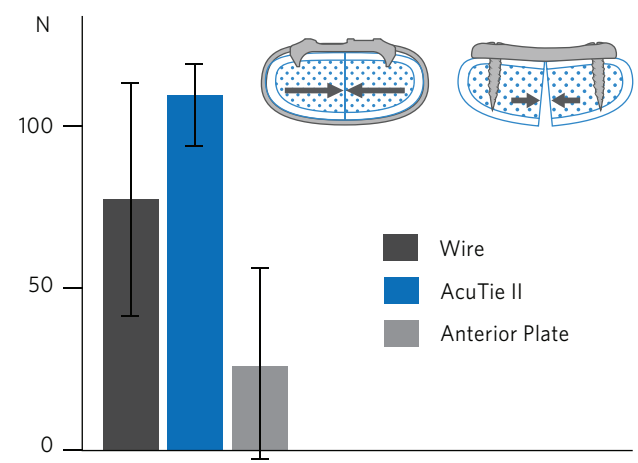


### Motion at 10,000 Cycles <sup>1</sup>



Plate's crimp feature eliminates fatigue and breakage caused by twisting and bending wires.

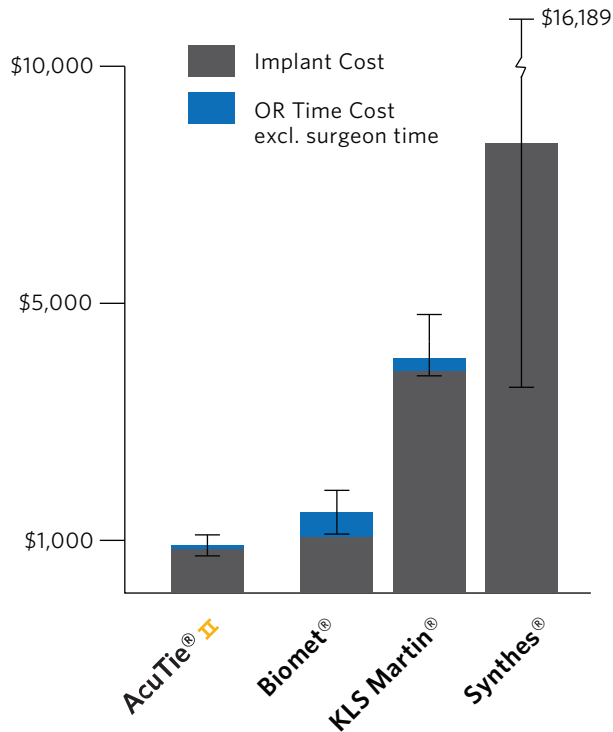
### Compression Force at the Osteotomy <sup>1</sup>



Compared to wire and other sternal plates, AcuTie II provides an increased compression force at the osteotomy.

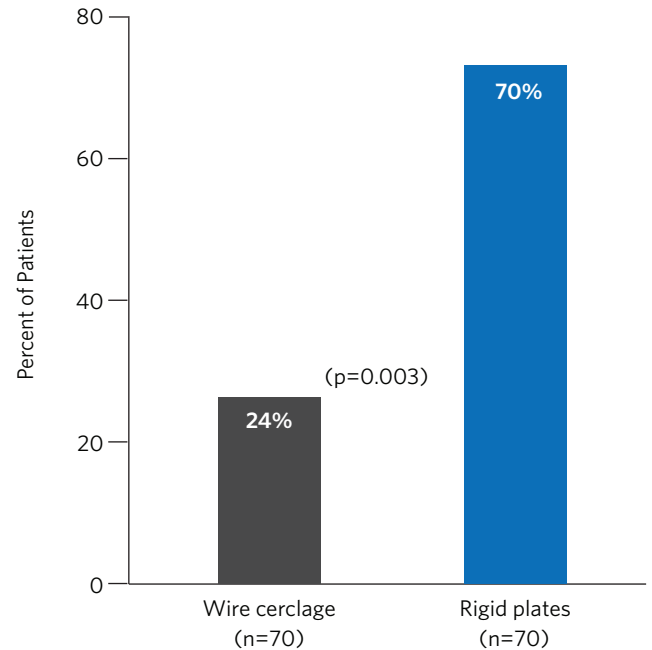
# COST EFFECTIVE

Case Cost<sup>3, 4, 7</sup>



AcuTie II can be installed in less than 90 seconds per plate. This may lead to **less OR time**, resulting in reduced hospital costs.

Sternal Union at 6 Months<sup>2, 5, 6, 7</sup>



**Increased sternal stability** with rigid plates improves healing over conventional twisted wire fixation.

- 1 Data on file at Acute Innovations®.
- 2 Hirose H, Yamane K, Youdelman BA, Bogar L, Diehl JT. Rigid sternal fixation improves postoperative recovery. *Open Cardiovasc Med J.* 2011;5:148-152.
- 3 Huh J, Bakaeen F, Chu D, Wall MJ. Transverse sternal plating in secondary sternal reconstruction. *J Thorac Cardiovasc Surg.* 2008;136:1476-1480.
- 4 Levin LS, Miller AS, Gajjar AH, Bremer KD, Spann J, Milano CA, et al. An innovative approach for sternal closure. *Ann Thorac Surg.* 2010;89:195-1999.
- 5 Raman J, Lehmann S, Zehr K, De Guzman BJ, Aklog L, Garrett HE, et al. Sternal closure with rigid plate fixation versus wire closure: a randomized controlled multicenter trial. *Ann Thorac Surg.* 2012;94:1854-1861.
- 6 Sargent L, Seyfer A, Hollinger J, Hinson R, Graeber G. The healing sternum: a comparison of osseous healing with wire versus rigid fixation. *Ann Thorac Surg.* 1991;52:490-494.
- 7 Song DH, Lohman RF, Renucci JD, Jeevanandam V, Raman J. Primary sternal plating in high-risk patients prevents mediastinitis. *Eur J Cardiothorac Surg.* 2004;26:367-372.



Back to health. Back to work. Back to **life.**



8055 NE Jacobson Street  
Suite 700  
Hillsboro, OR 97124

1-866-623-4137

+1-503-686-7200

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