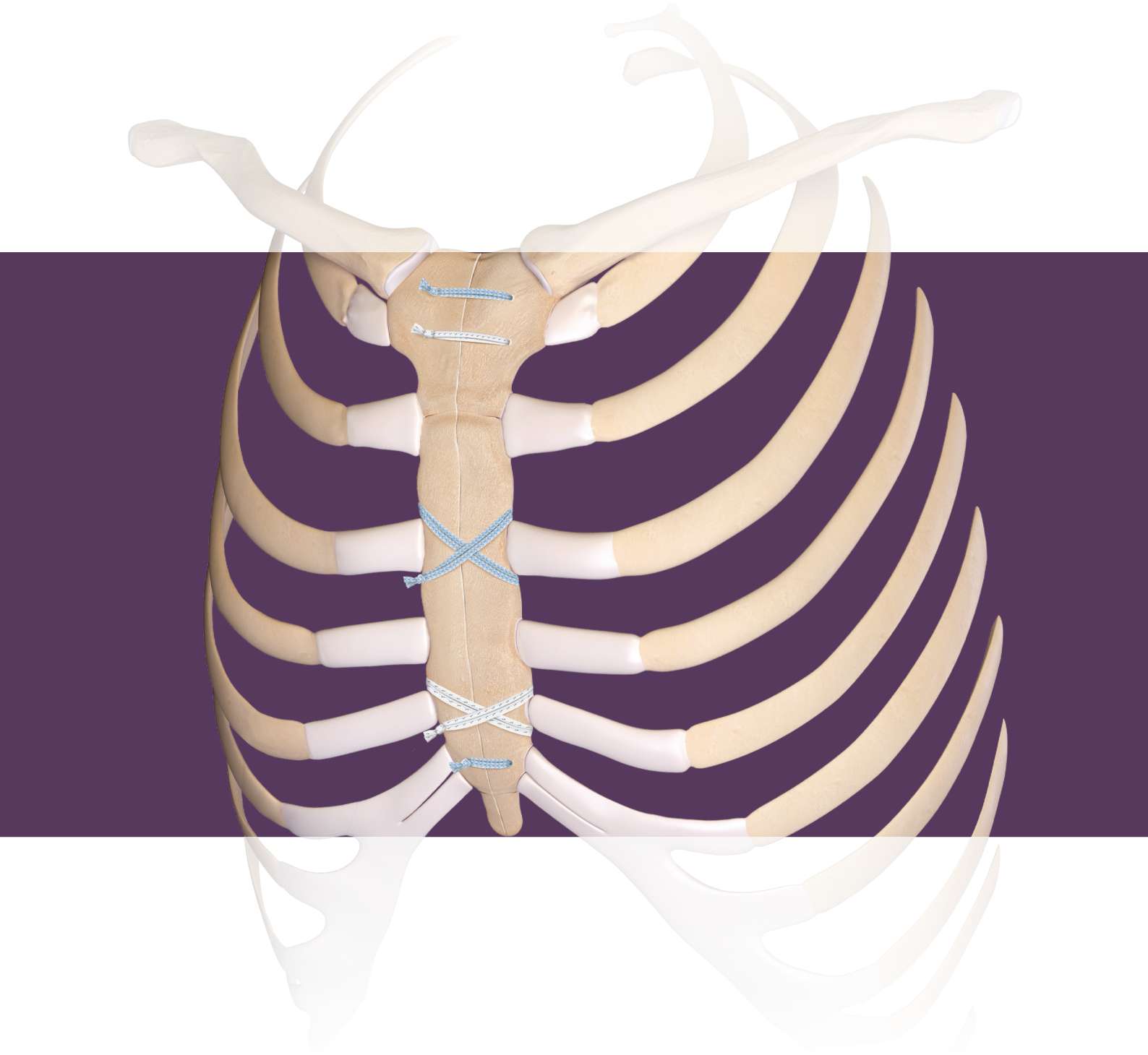
# FiberTape® Sternal Closure System

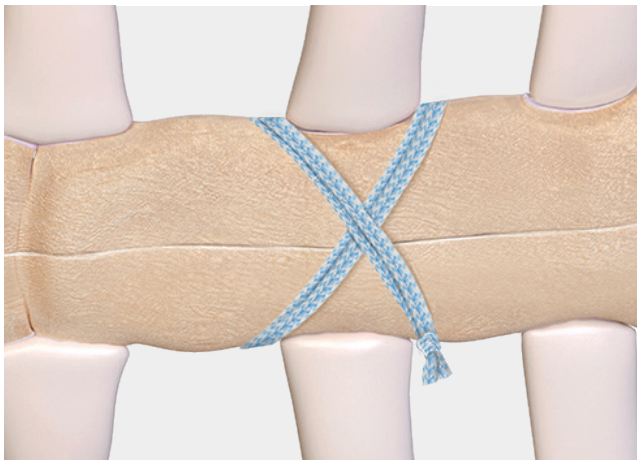
Median Sternotomy Closure Surgical Technique



Arthrex®

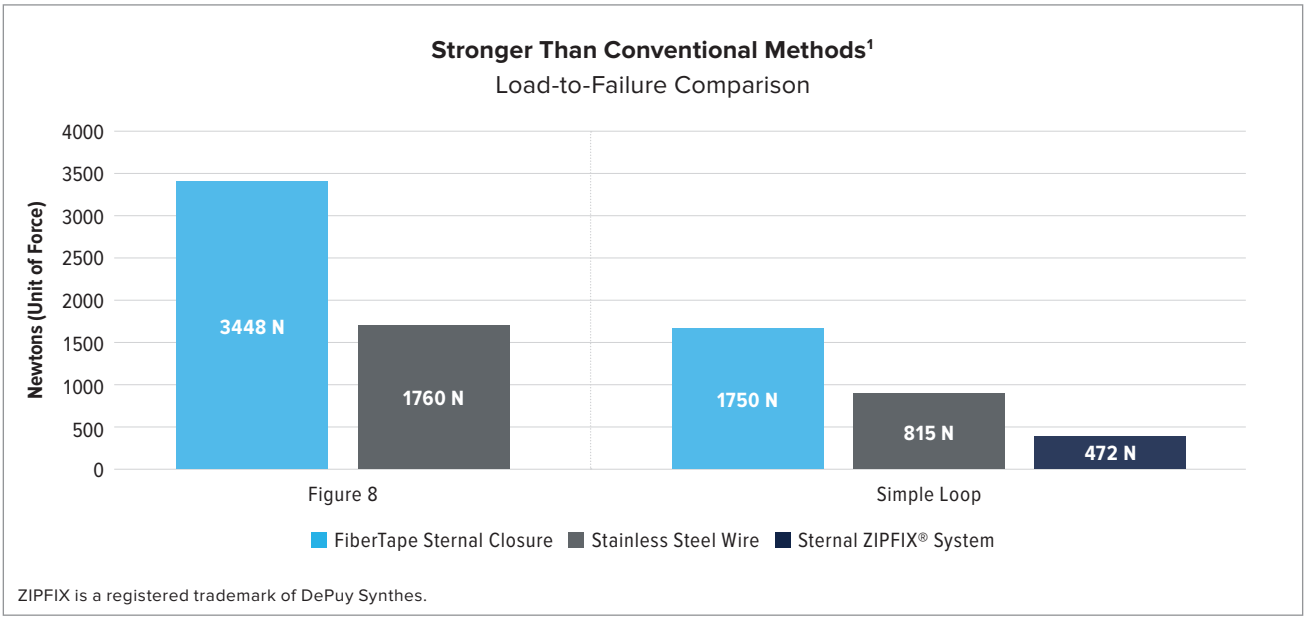
## FiberTape® Sternal Closure System

The FiberTape sternal closure system is a nonmetallic alternative to stainless steel wires traditionally used for sternal closure procedures. Its high-strength, all-suture design and biomechanical properties make the FiberTape sternal closure implant the ideal choice for managing the demands of median sternotomy fixation.



**Low-Profile, Broad Footprint Compression**
Flat suture design helps prevent bone cut-through.

**No Sharp Metal Ends**
Eliminates the risk of wire-stick injuries and potentially minimizes irritation for patients.

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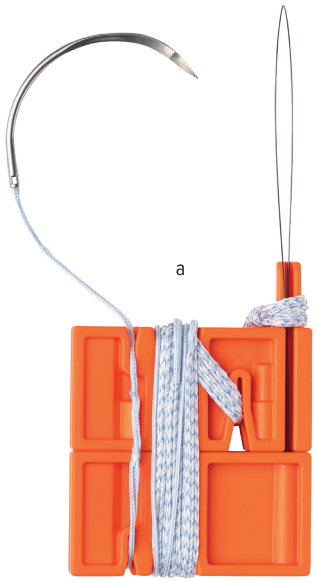
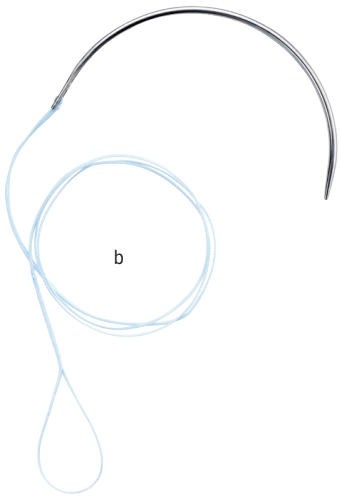



FiberTape® Sternal Closure Implant With Cutting Needle



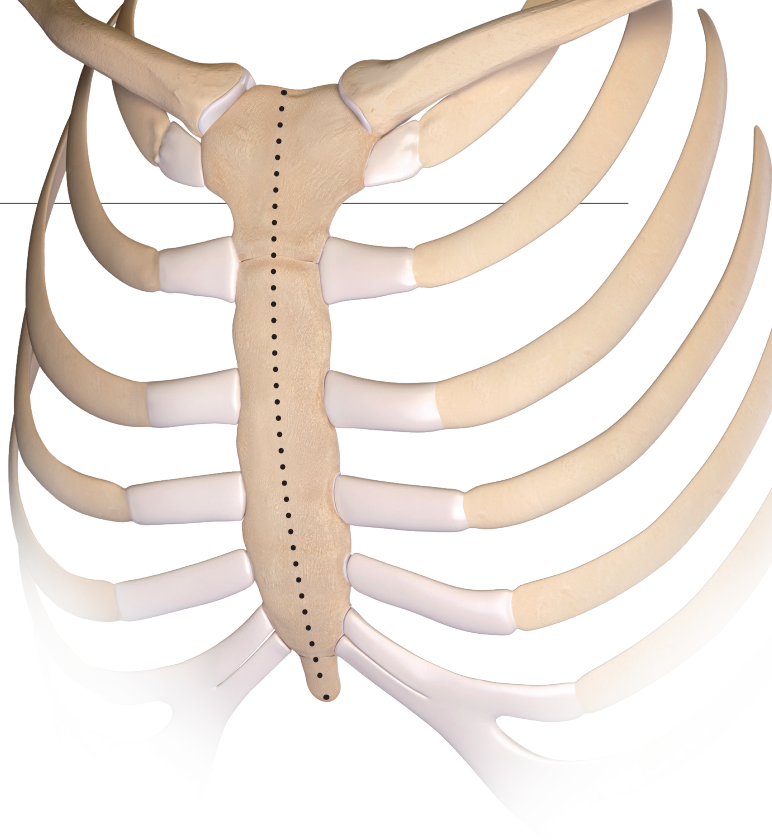

Blunt-Tip Passing Needle With Shuttle Suture

**Uniquely Designed for OR Efficiency**
For easy deployment through and around the sternum, suture is preassembled on a loading device with a swedged cutting needle and a pretied knot. If preferred, a blunt-tip passing needle with shuttle suture is also available for passing the FiberTape suture through the intercostal space and around the sternum.

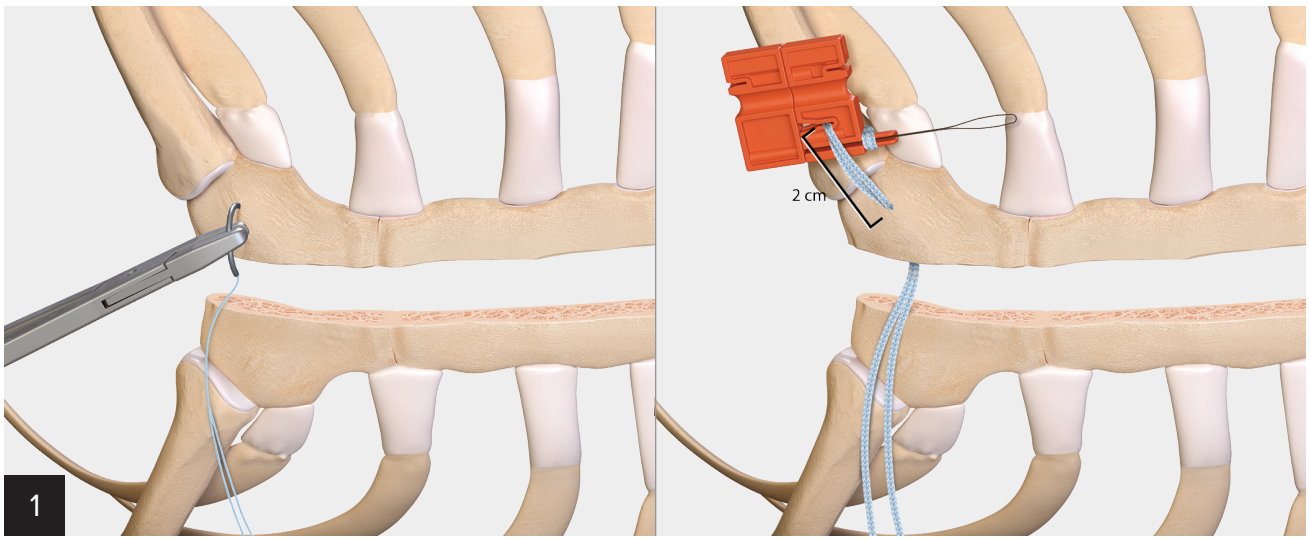

**Reproducible Results**
Dial in the right amount of compression with the easy-to-use tensioning device.

## Surgical Technique

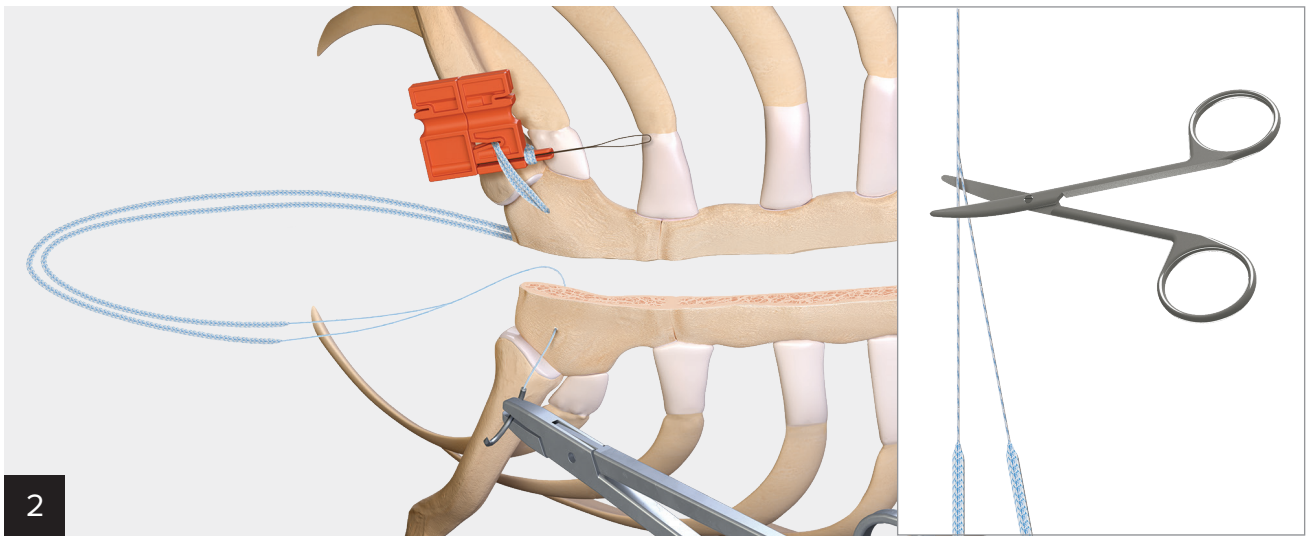
This surgical technique guide describes how to use FiberTape® sternal closure implants to approximate and stabilize the sternal halves created by a median sternotomy. This technique is performed using both simple interrupted and figure-8 stitch configurations.



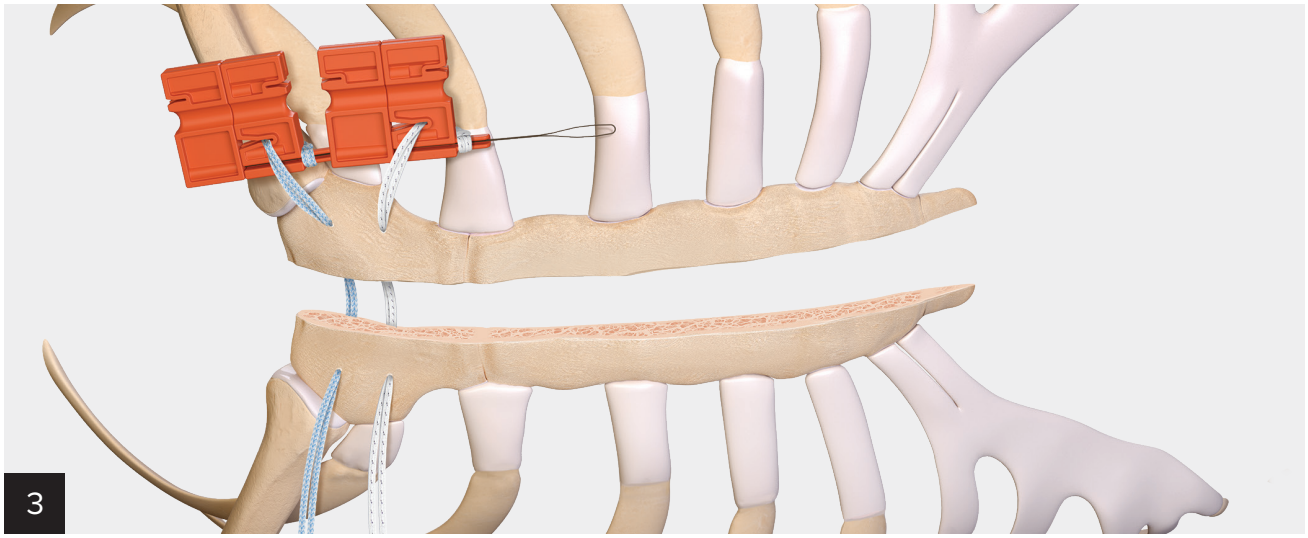
### Passing FiberTape Suture



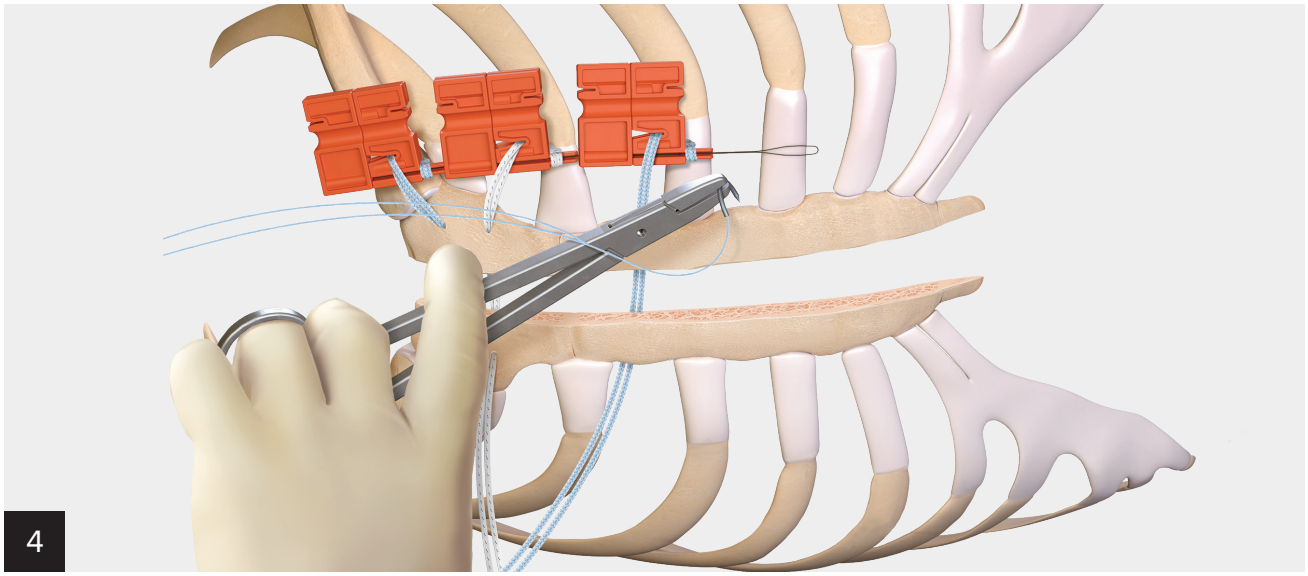

Begin by placing a simple interrupted stitch in the manubrium. With a needle driver, use the swedged passing needle of the FiberTape sutures to go through one half of the manubrium. Pull the tails of the FiberTape sutures to advance the loader close to the bone so approximately 2 cm to 3 cm of suture remains visible.



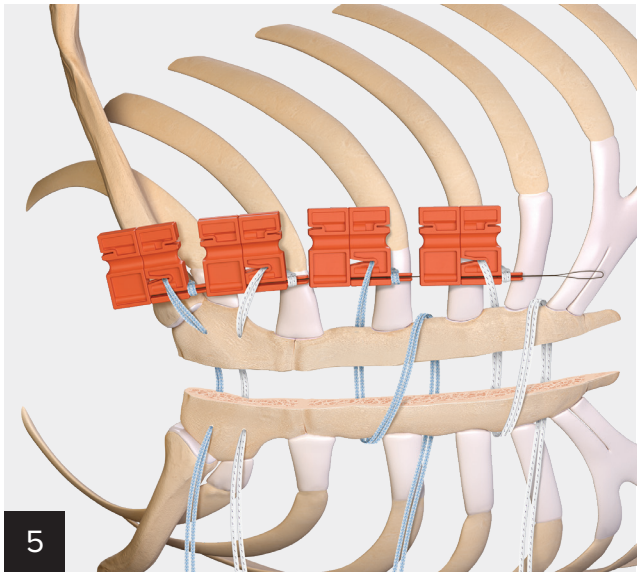

Pass the FiberTape suture up and through the same area on the other side of the manubrium to create a simple interrupted stitch. Remove the needle by cutting the suture at the swedge, creating two separate suture tails.



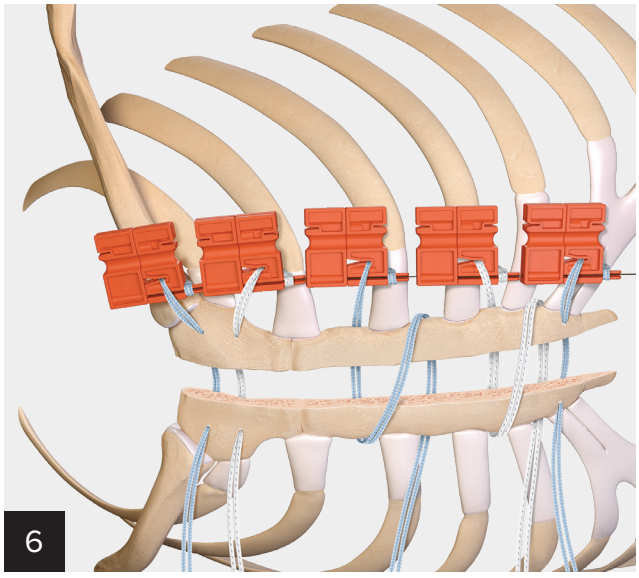

Pass a second simple interrupted suture through the manubrium in the same manner.



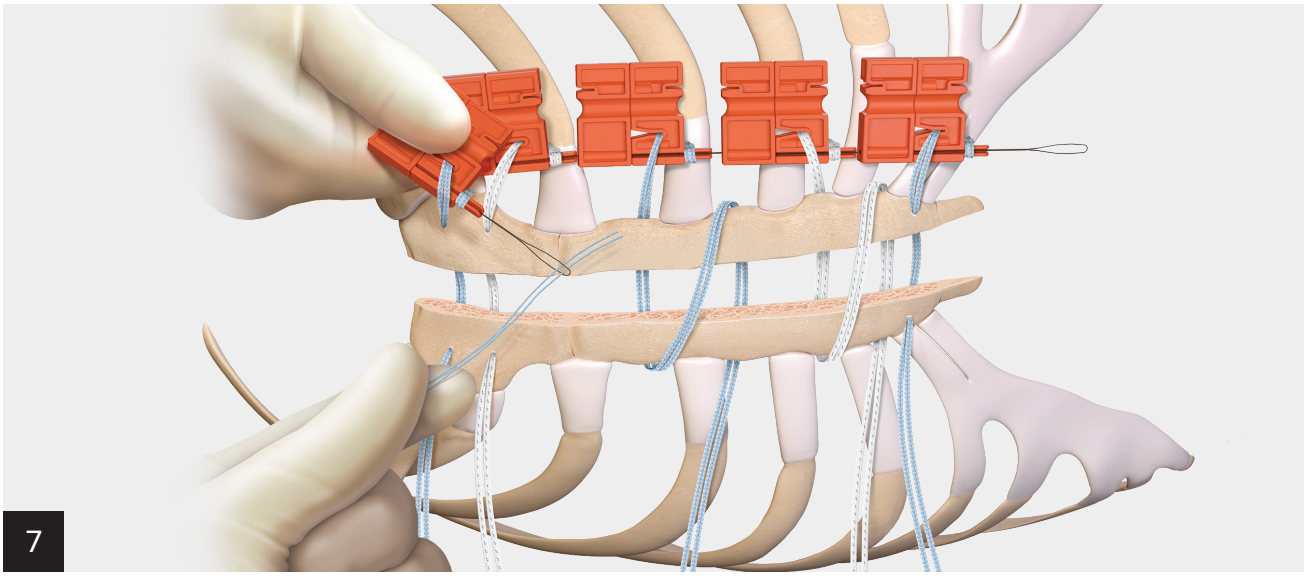

Pass a third FiberTape® suture around the body of the sternum through two intercostal spaces in a figure-8 pattern.



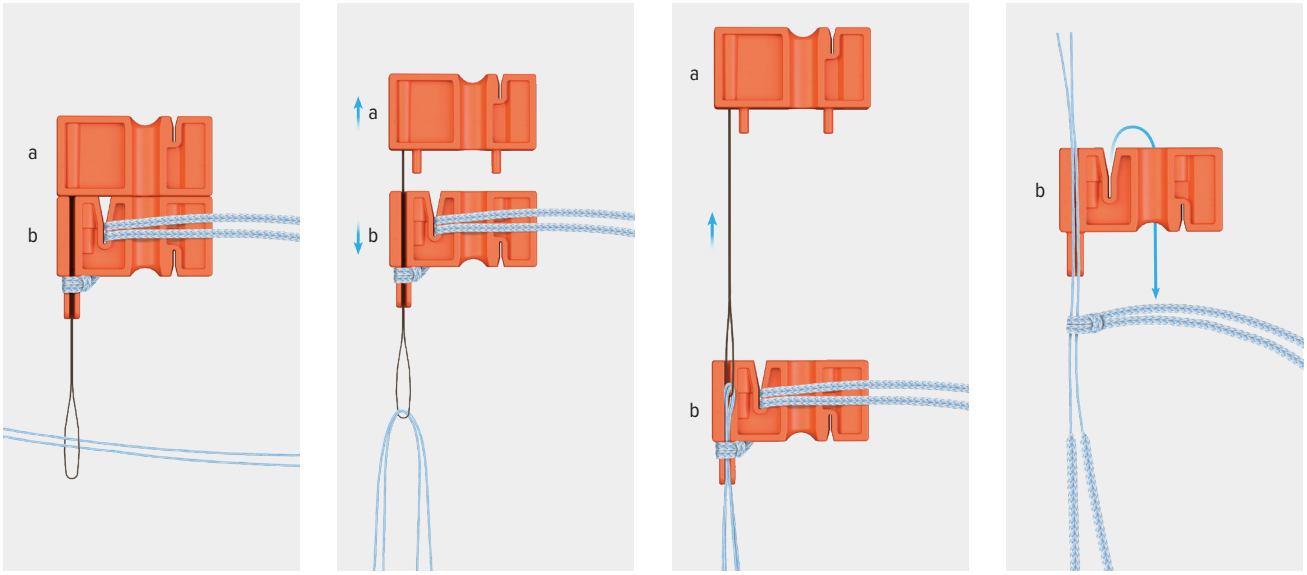

Advancing down the sternum, pass another figure-8 pattern with a fourth FiberTape suture.



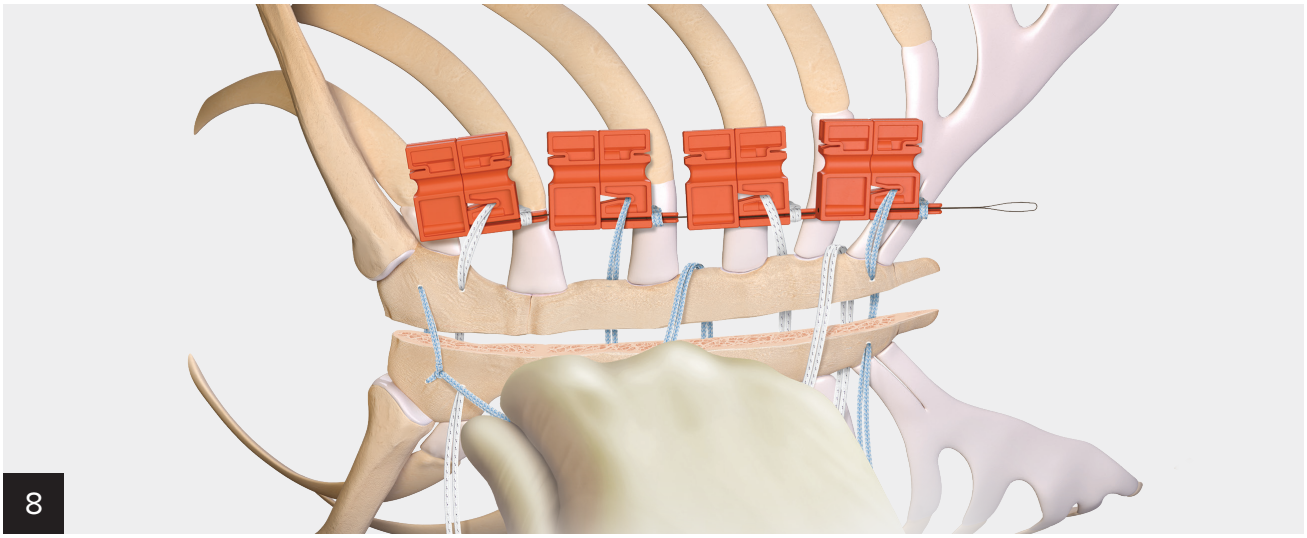

If necessary, a fifth FiberTape suture may be placed in either a simple interrupted or figure-8 pattern, depending on preference and patient anatomy.




After all the sutures are passed, shuttle the FiberTape® suture tails through the pretied knot on their respective loaders.

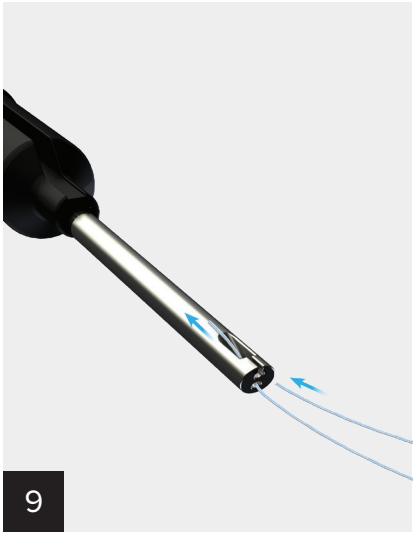



Place approximately 2 cm to 3 cm of the FiberTape suture tails into the nitinol loop attached to the loader. Separate the two tabs of the loader **(a,b)**, pulling the nitinol loop and the FiberTape suture tails through the knot. Once the tails are through the knot, uncleat the remaining suture and remove the knot from the loader.



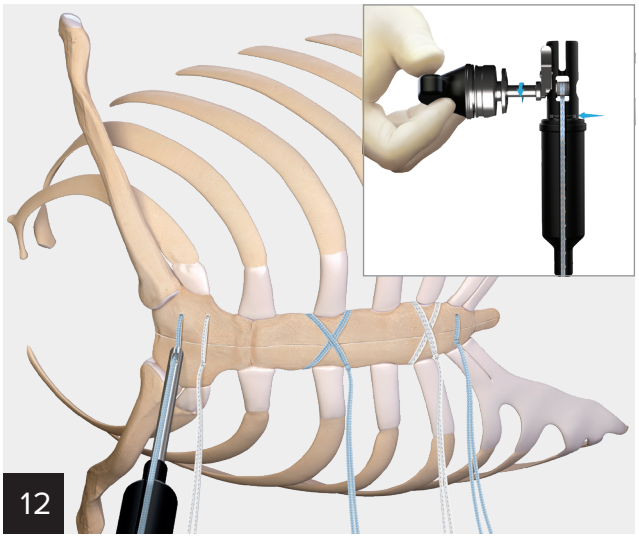

Slide the knot down to one side of the sternum and hand tighten. Continue this process for all the FiberTape® sutures.

**Tensioning FiberTape Suture**
Tension each suture using the FiberTape cerclage tensioner.

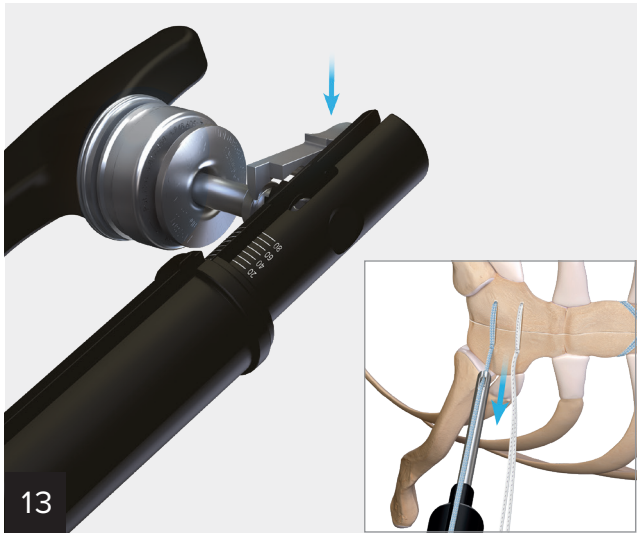





**Loading the Tensioner**
Starting with the first FiberTape suture in the manubrium, insert one suture limb through the bottom hole at the tip of the tensioner and the other limb through the slot on top. Load both suture limbs into the ratcheting hole near the handle.



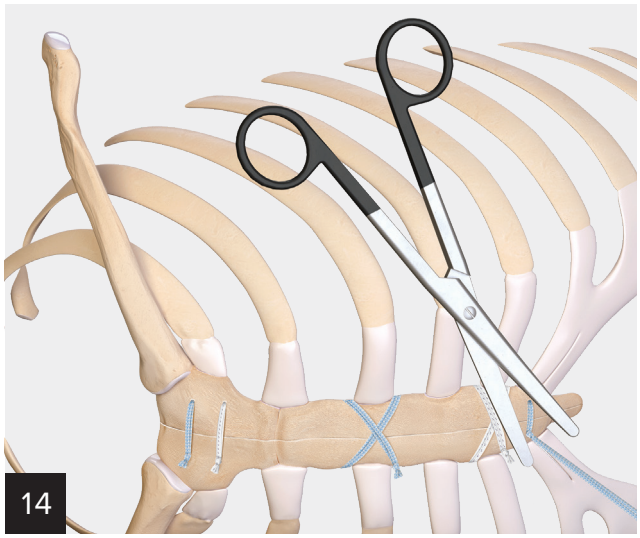

**Tensioning FiberTape Suture**
Place the tensioner against the knot and turn the handle to begin tensioning. Continue turning the handle to remove slack from the sutures and until an appropriate amount of tension is achieved.
**Note: Use caution to not overtension. To avoid damaging the knot, do not try to tension past the "80" mark on the tensioner.**




Once the desired amount of tension and compression is achieved, press and hold the release button while pulling the tensioner back to disengage the tensioner from the FiberTape suture limbs. Tie one half-hitch knot to secure the construct and aid in retaining tension. As long as only one half-hitch knot has been tied, additional tension can be applied with the tensioner.
**Note: The tensioner handle will spin when the release button is pressed. Consider holding the handle to slowly control releasing the tension.**

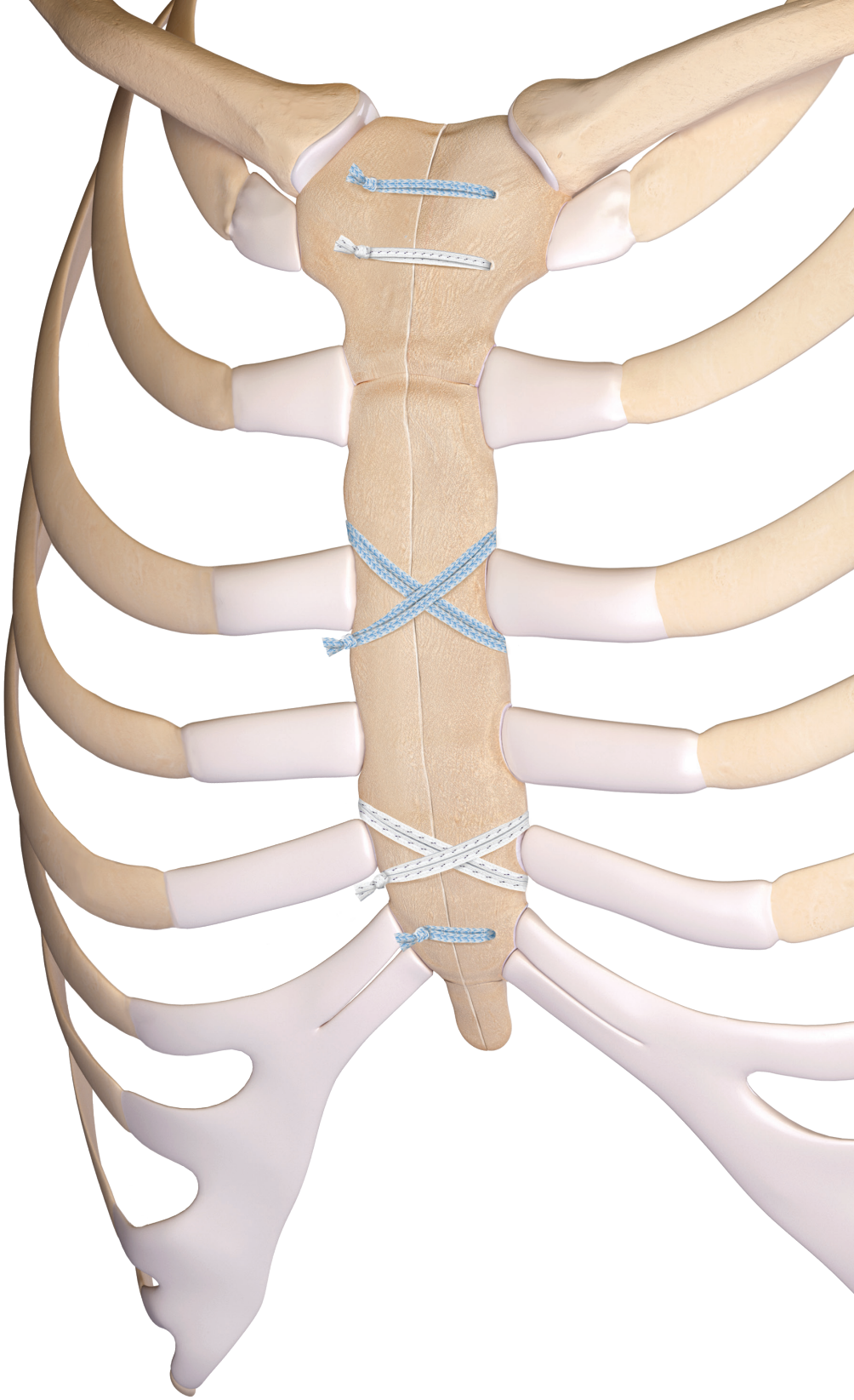
To continue reapproximating the sternum, tighten each FiberTape suture sequentially with the tensioner and tie a single half-hitch to lock each construct.

**Note: After tensioning each suture and applying the first half-hitches, each construct may be retensioned, if necessary, following the previous tensioning steps.**




Once the desired amount of compression is achieved and the sternal edges are approximated, it is important to tie two alternating half-hitches on top of each knot to lock and secure the FiberTape sternal closure constructs. Cut the suture limbs, leaving a 3 mm tail.

The FiberTape sternal closure system offers broad compression and strong, stabilized sternal closure. In addition, its all-suture, low-profile design is 100% radiolucent and easily removable, if necessary.



# Ordering Information

## Implants

| Product Description | Item Number |
|---|---|
| FiberTape® Sternal Closure w/ Cutting Needle | AR-**7288** |
| TigerTape™ Sternal Closure w/ Cutting Needle | AR-**7288T** |
| FiberTape Sternal Closure w/ Blunt Needle | AR-**7289** |
| TigerTape Sternal Closure w/ Blunt Needle | AR-**7289T** |

## Instruments

| Product Description | Item Number |
|---|---|
| Tensioner | AR-**7800** |
| Tensioner Handle | AR-**7801** |
| Disposable Tensioner | AR-**7820** |
| Blunt-Tip Passing Needle w/ Shuttle Suture | AR-**7816** |
| FiberWire® Scissor | AR-**11796** |
| FiberTape Cerclage Instrument Case | AR-**7800C** |

Products advertised in this brochure / surgical technique guide may not be available in all countries. For information on availability, please contact Arthrex Customer Service or your local Arthrex representative.

## Reference

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