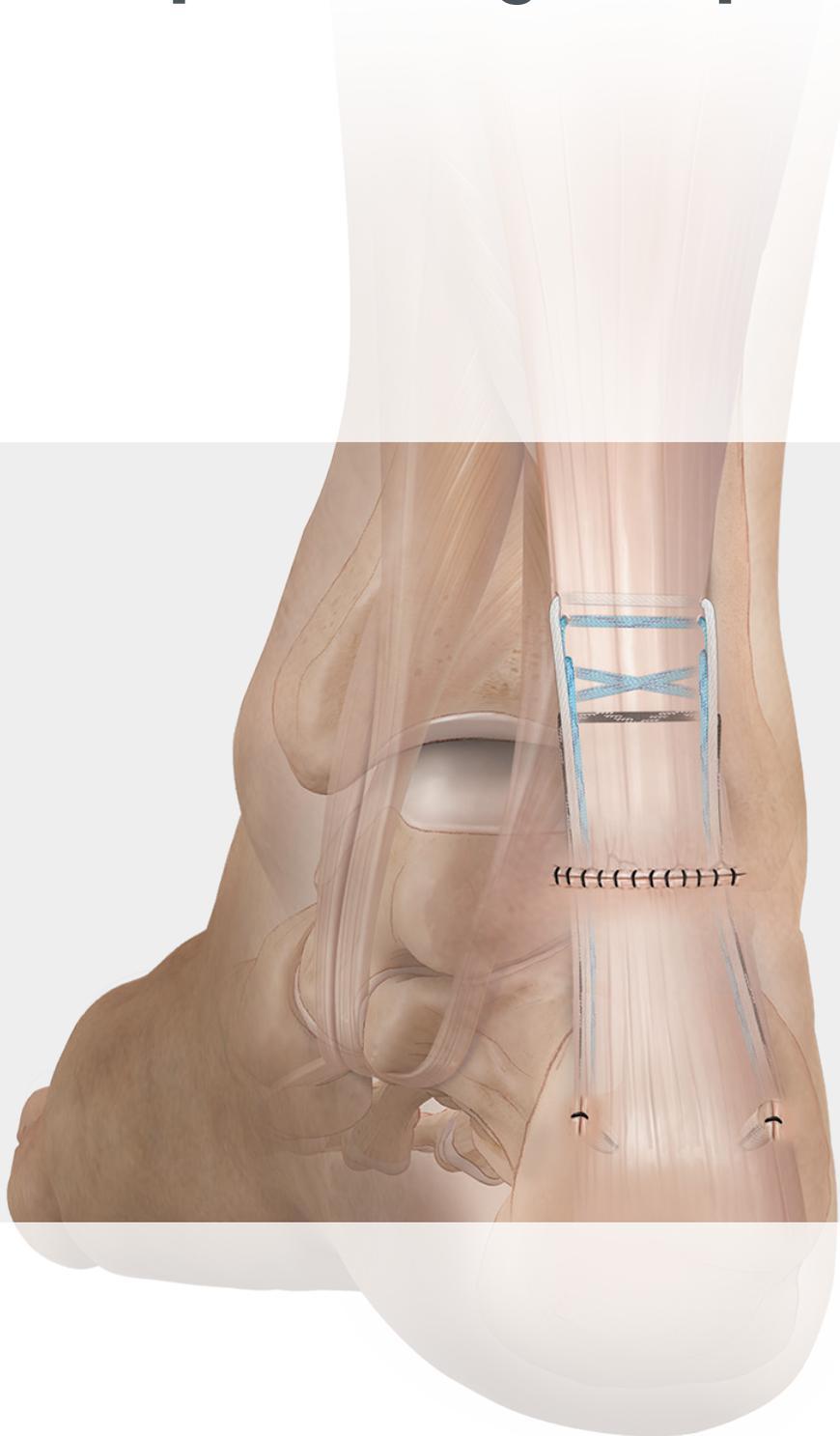


PARS Achilles Midsubstance SpeedBridge™ Implant System

Surgical Technique



PARS Achilles Midsubstance SpeedBridge™ Implant System

The PARS Achilles Midsubstance SpeedBridge implant system is a percutaneous, minimally invasive technique used to repair Achilles tendon ruptures. Using color-coded 1.3 mm SutureTape, the PARS system makes it easy to create a percutaneous locking stitch in the Achilles tendon, while staying inside the paratenon sheath.

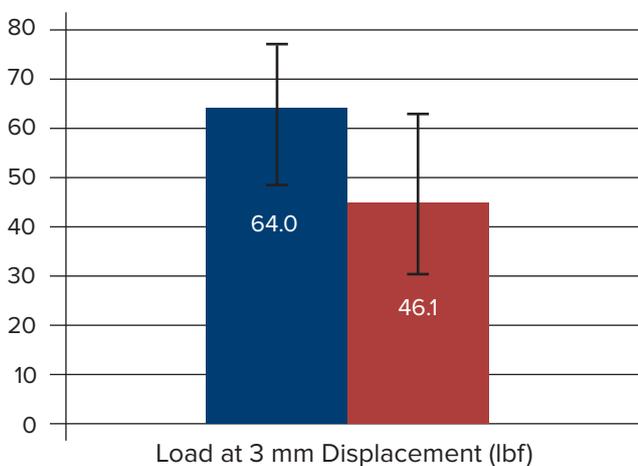
The PARS Achilles Midsubstance SpeedBridge system works with the PARS jig, a minimally invasive instrument that allows for percutaneous passage of SutureTape without a large extensile incision. The PARS Achilles Midsubstance SpeedBridge technique is performed with a knotless construct by fixating the SutureTape in the proximal tendon and using DX 3.9 BioComposite SwiveLock® anchors for distal fixation in the calcaneus.



SutureTape Compared to #2 Suture

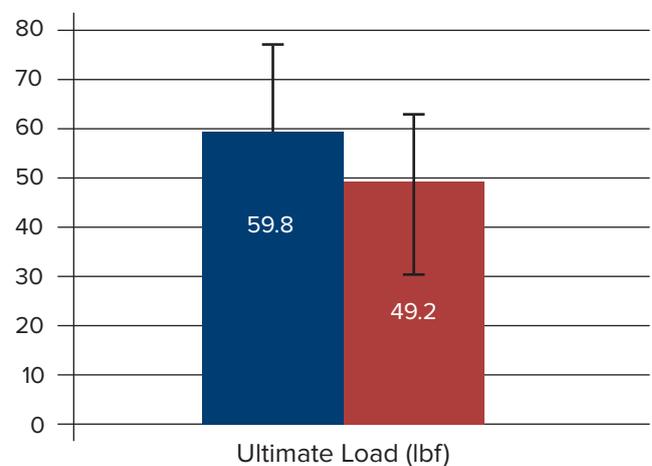
- Feels flat-out better than round suture
- Increased resistance to tissue pull-through¹
- Stronger knotted and knotless fixation¹
- Tighter, smaller knot stacks
- Better handling characteristics

Load at 3 mm Displacement¹



■ 1.3 mm SutureTape
■ #2 FiberWire® Suture

Tissue Pull-Through Ultimate Loads¹



■ 1.3 mm SutureTape
■ #2 FiberWire Suture

Features and Benefits



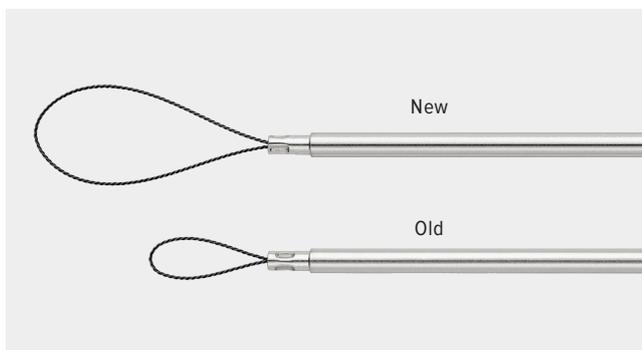
New, collagen-coated SutureTape comes in colors designed for easier intraoperative differentiation.



DX 3.9 mm BioComposite SwiveLock® anchors feature a laser-line window that indicates when the anchor is flush or 2 mm countersunk, allowing for more reproducible percutaneous insertion.

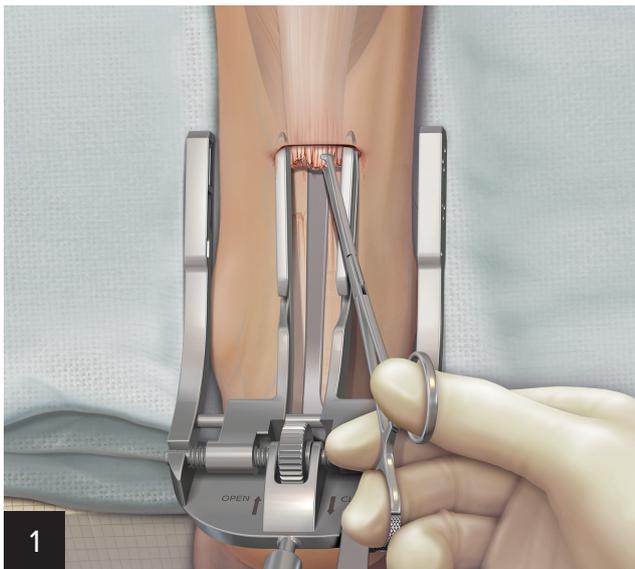


Cannulated drills and taps facilitate percutaneous calcaneus drill hole preparation.

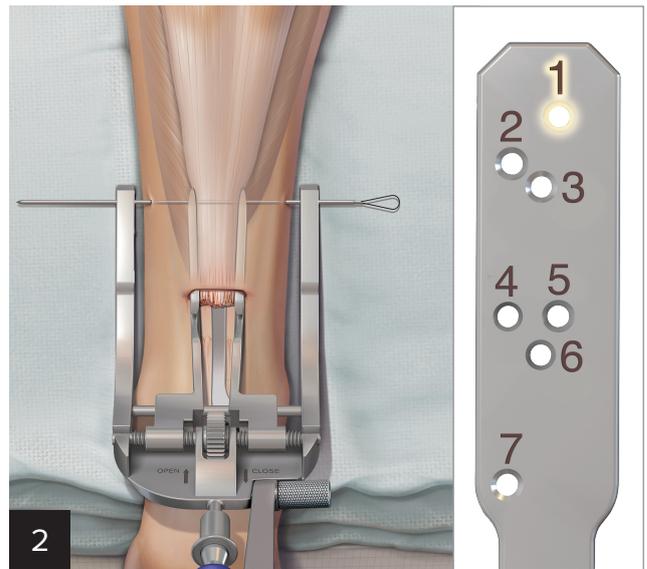


Larger PARS needle eyelets enable more reliable passing of the SutureTape.

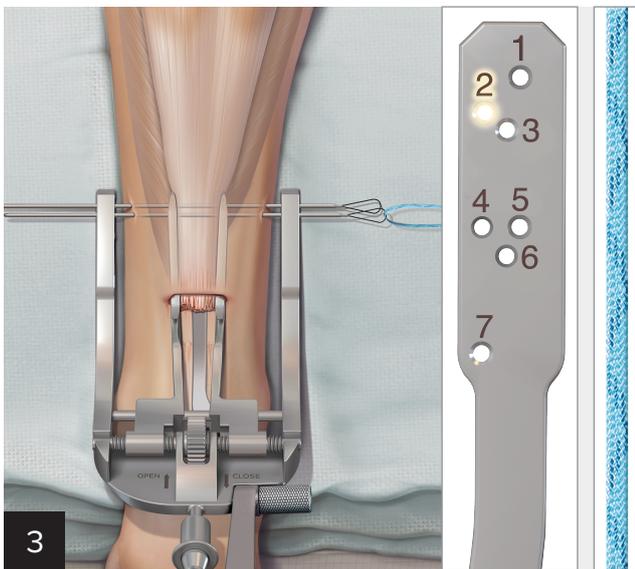
PARS Achilles Midsubstance SpeedBridge™ Implant System



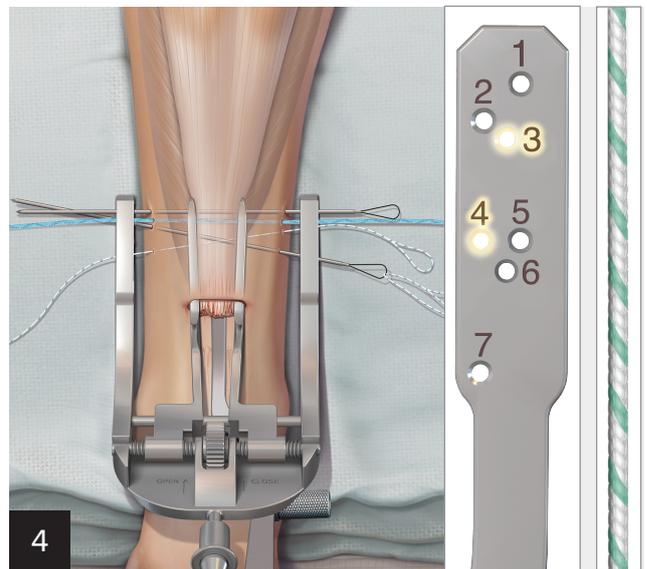
1 Make a percutaneous incision just proximal to the tendon rupture and insert the inner arms of the PARS jig inside the paratenon of the Achilles tendon.



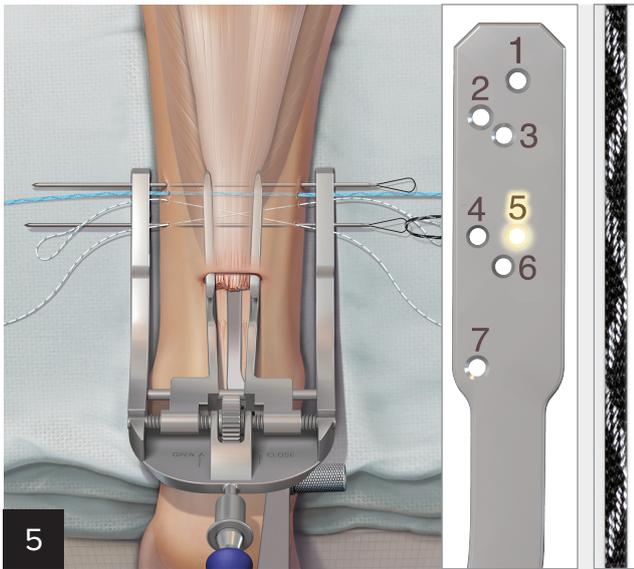
2 Pass the PARS needle with the nitinol loop through the #1 hole. Place manual pressure on the tendon while passing the PARS needle to enhance central placement of the SutureTape. Leave the #1 PARS needle in the #1 spot of the jig to stabilize the construct while passing all other SutureTape strands; pass the #1 white SutureTape last.



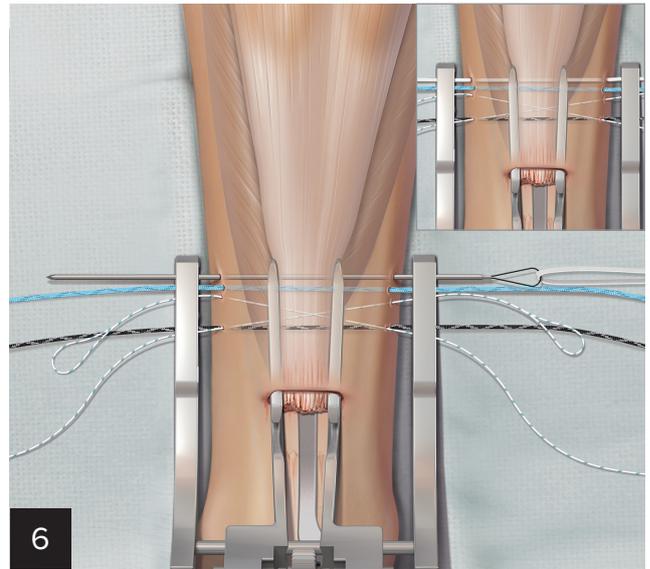
3 Pass the PARS needle with the nitinol loop through the #2 hole. Pull the blue SutureTape through the leg, leaving tails of equal length on both sides.



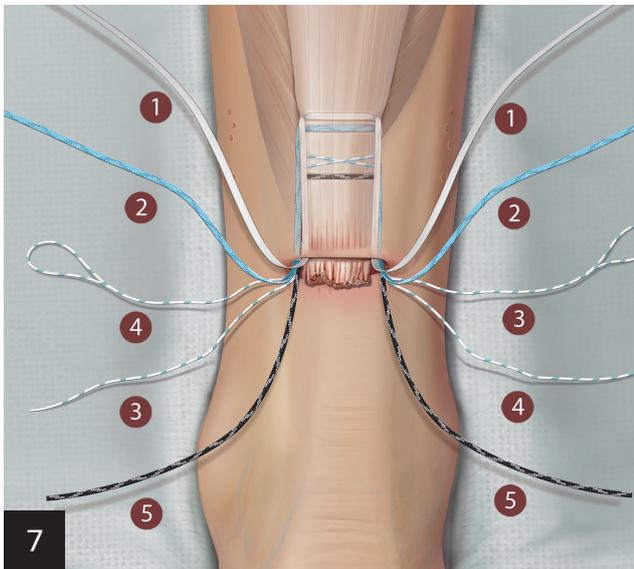
4 Pass the PARS needle with the nitinol loop through the #3 and #4 holes. Pull the white/green FiberLink™ suture with loops through the leg, leaving tails of equal length on both sides. Make sure there is a looped end on each side of the leg.



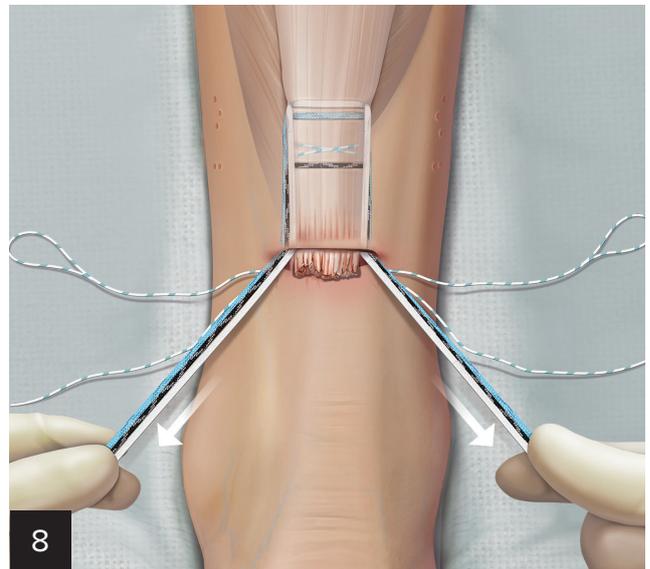
5 Pass the PARS needle with the nitinol loop through the #5 hole. Pull the black SutureTape through the leg, leaving tails of equal length on both sides.



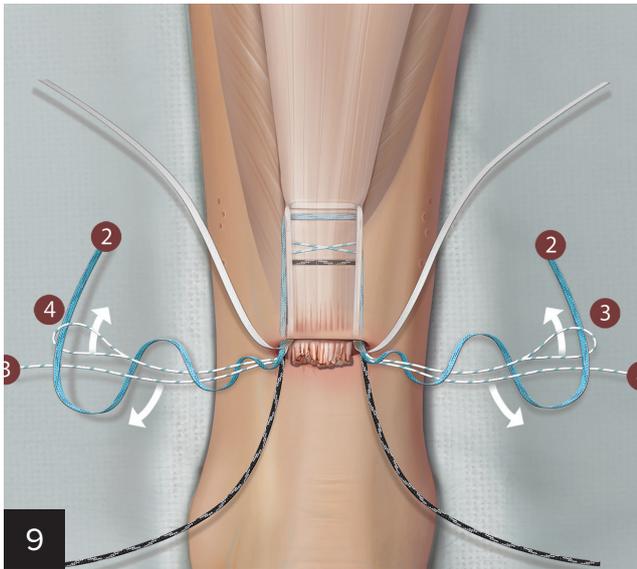
6 Load the white SutureTape in the #1 PARS needle and pass through the tendon.



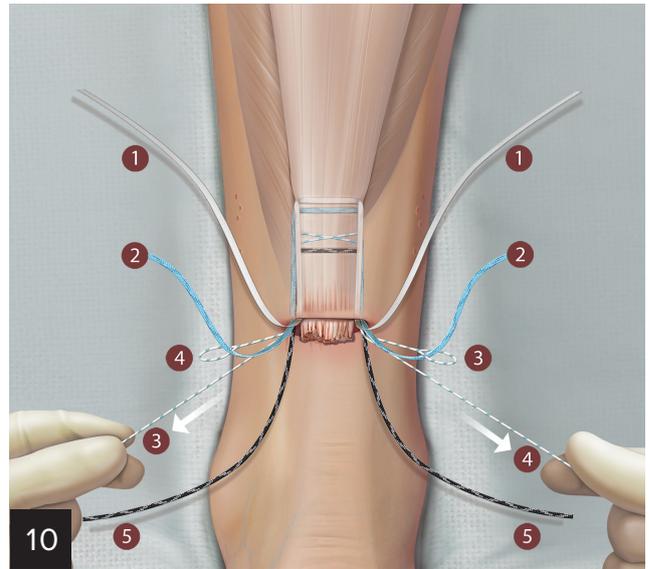
7 Remove the jig and organize the sutures the way they were originally placed through the PARS jig.



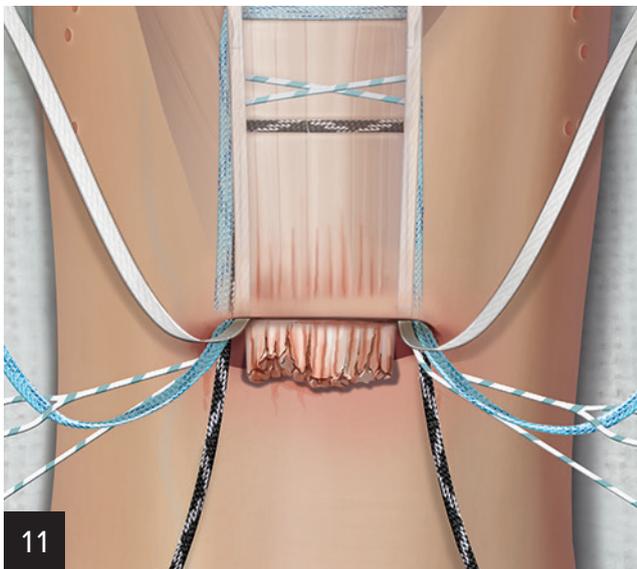
8 Pull each end of the SutureTape strands 10 times to ensure all creep is removed from the construct.



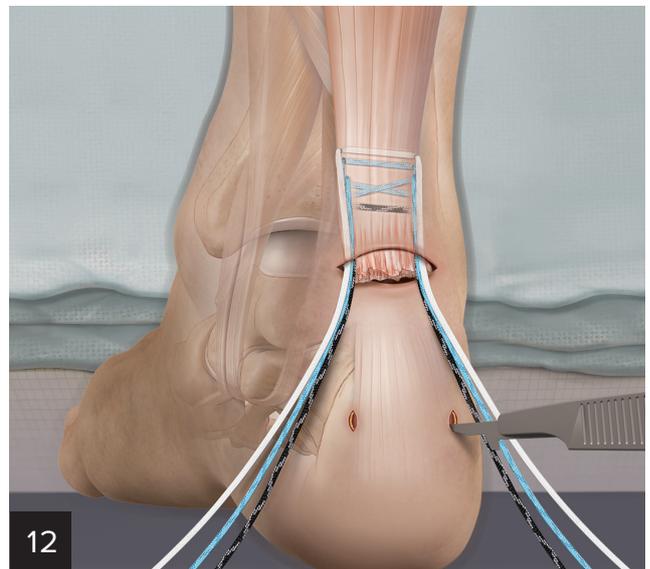
Pass the blue SutureTape **under and around** the #3 and #4 (white/green) FiberLink™ sutures **twice, in the same direction on both sides** and then through the loop of the white/green FiberLink suture.



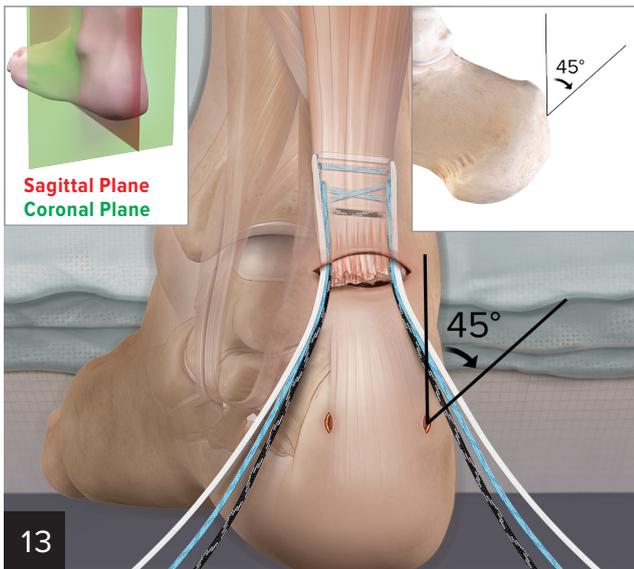
Pull the blue SutureTape through the Achilles tendon to the other side by pulling on the nonlooped side of the white/green looped sutures (#3 and #4).



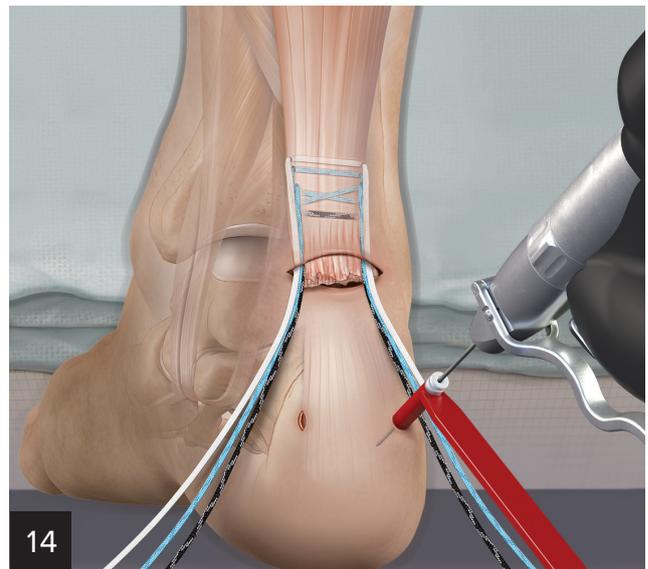
Pull on the blue SutureTape to lock the stitch in place. Two transverse sutures (#1 and #5) and one locked suture (#2) remain.



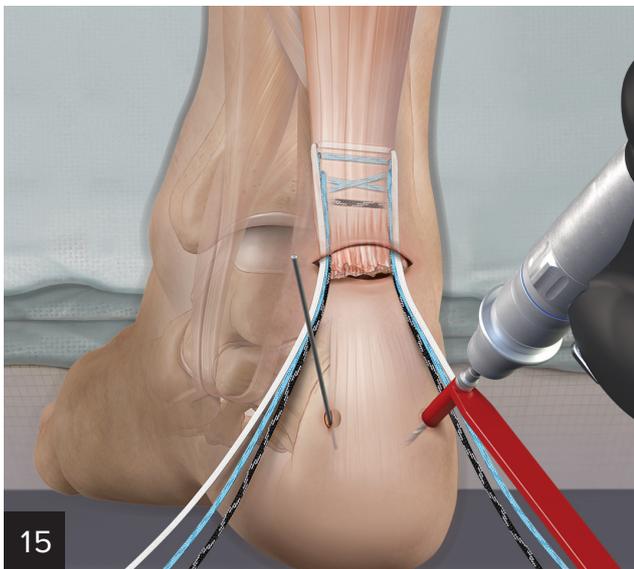
Make incisions 1 cm below the superior aspect of the posterior calcaneal tuberosity, medial and lateral to the Achilles tendon.



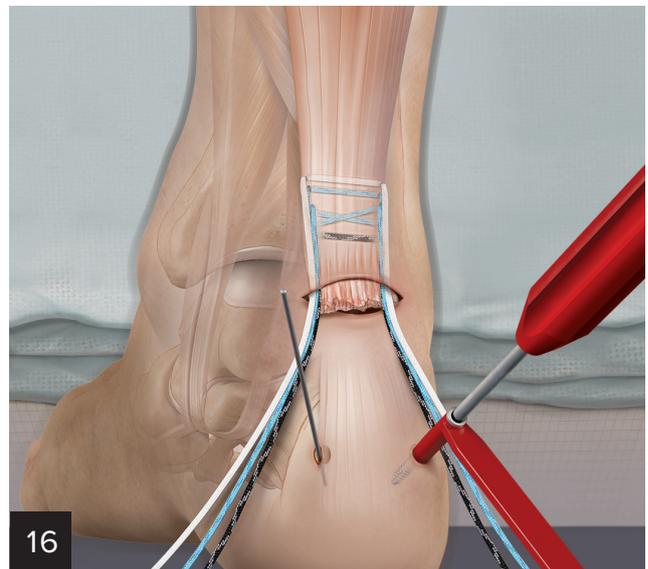
Within these stab incisions, insert the drill guide with the white guidewire sleeve down to the bone and insert the guidewire at 45° from the centerline of the Achilles in the coronal plane and 45° from posterior to anterior (sagittal plane).



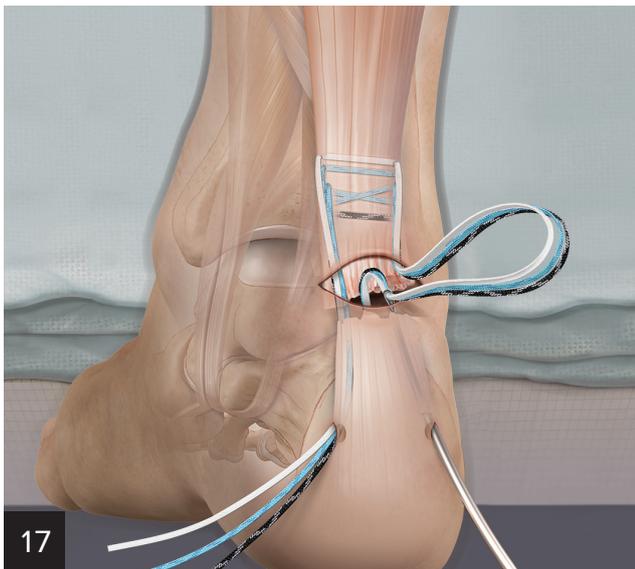
Insert the guidewire. Leaving the guide in place, remove the white guidewire sleeve.



Drill to the hard stop with the 2.6 mm cannulated drill (solid 2.6 mm drill option also available).

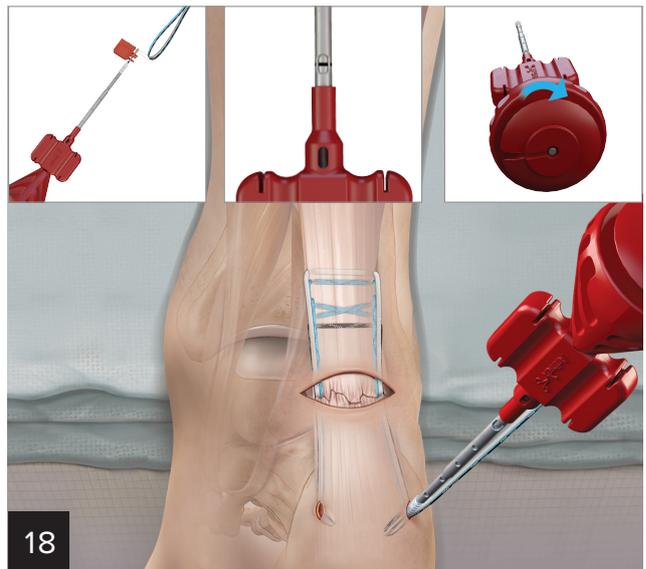


Leaving the drill guide in place, use the 3.9 mm tap to prepare the holes for the SwiveLock® anchors.



17

With the guidewires or PARS passing wires in the prepared bone tunnels, advance the Banana SutureLasso™ suture passer through the distal Achilles tendon and retrieve the proximal SutureTape.



18

Secure the SutureTapes to the distal Achilles with two DX 3.9 mm BioComposite SwiveLock® anchors with the foot in 10°-15° greater plantar flexion than the resting position of the contralateral foot. To insert the SwiveLock anchors, hold the square tab in place and turn the pear-shaped driver until you see the laser line in the window of the inserter. When the line appears, the anchor is flush. When the line is centered, the anchor is 2 mm countersunk.

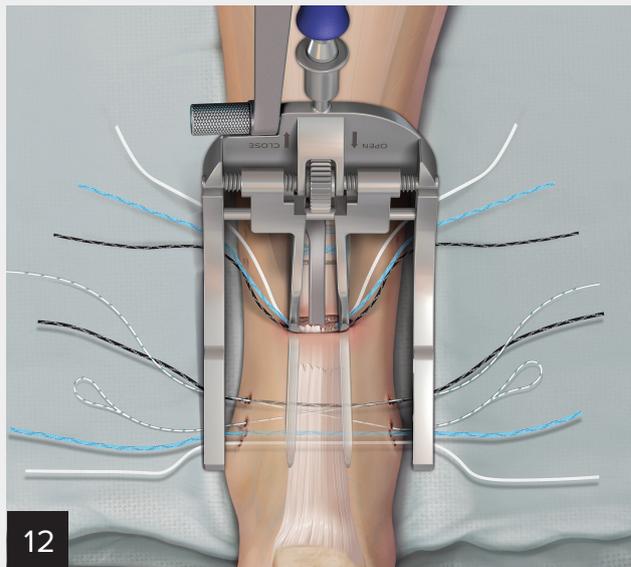


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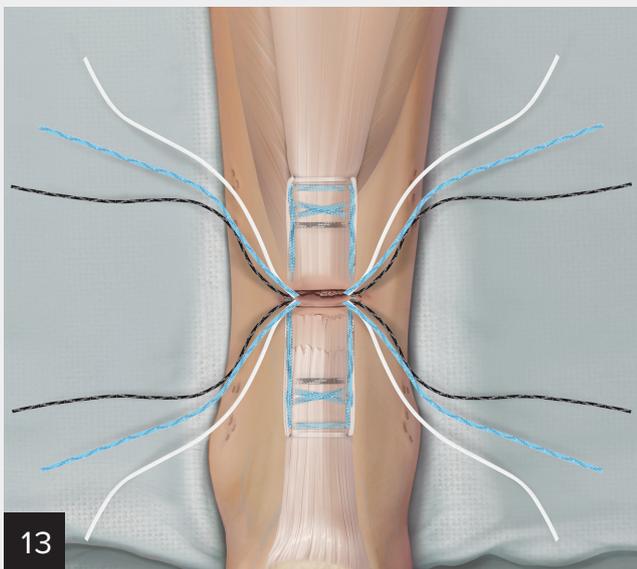
After final fixation, apply JumpStart® antimicrobial wound dressing on the incision. JumpStart wound dressing kills a broad spectrum of harmful pathogens, including multidrug-resistant and biofilm-forming bacteria to help reduce the risk of infection.^{2,3}

Technique Variation - PARS to PARS

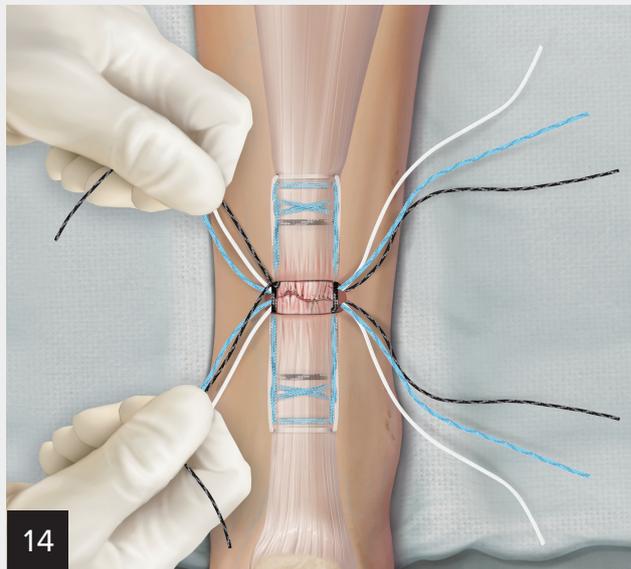
An alternative surgical technique option is presented on the following pages. Perform steps 1-11 as described in the general technique before transitioning to the alternate steps listed here.



Place the jig in the distal part of the incision and perform the exact steps as for the proximal side of the tendon.

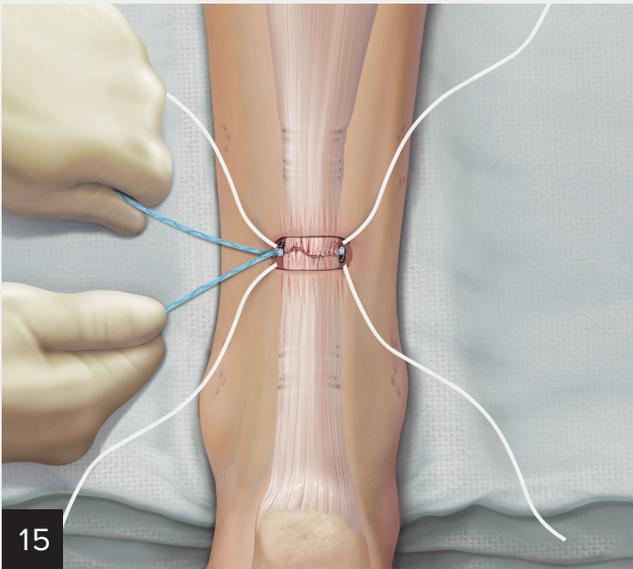


Three sutures remain proximally and three distally, ready for reapproximation of the tendon.

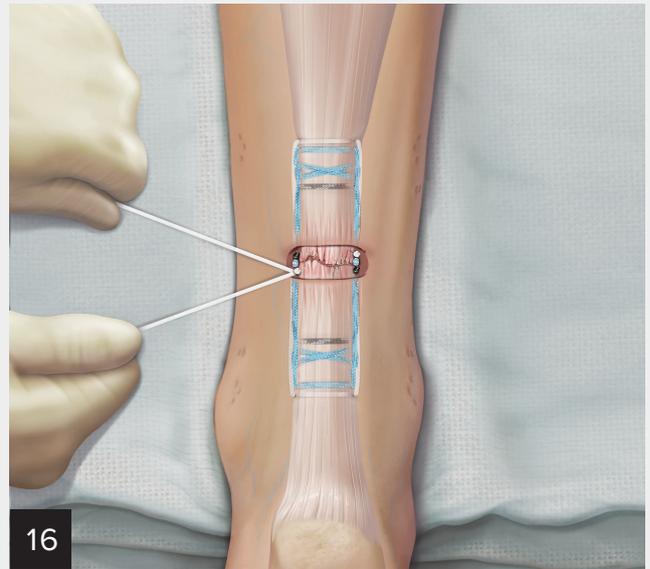


Tension appropriately, comparing to the contralateral foot, and tie the black SutureTape first on both sides of the leg. Three to four surgeon's knots are recommended.

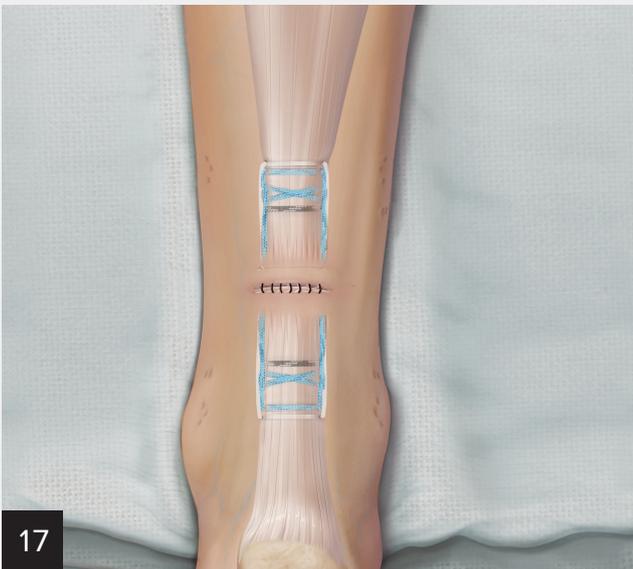
Note: The first side tied is the “stay” stitch, which will slide. Lock this knot down when tying the other side.



15 Tension appropriately, comparing to the contralateral foot, and tie the locked blue SutureTape on both sides of the leg. Three to four surgeon's knots are recommended.



16 Tension appropriately, comparing to the contralateral foot, and tie the white SutureTape last on both sides of the leg. Three to four surgeon's knots are recommended.

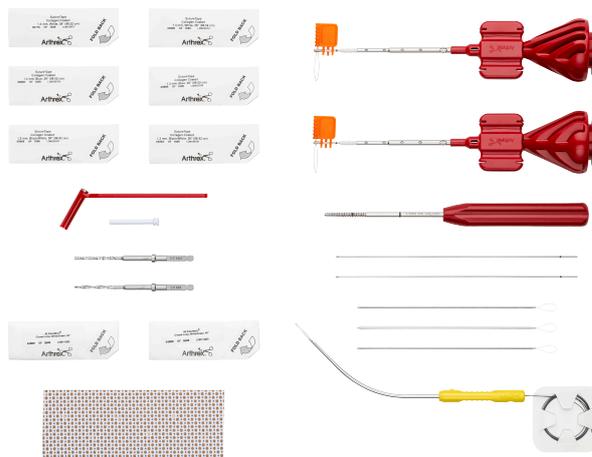


17 For the final repair, the wound can be closed with suture of choice. Postoperative routine is also surgeon's preference. Apply JumpStart® antimicrobial wound dressing on the incision to kill a broad spectrum of harmful pathogens, including multidrug-resistant and biofilm-forming bacteria to help reduce risk on infection.²⁻⁴

Ordering Information

Achilles Midsubstance SpeedBridge™ Implant System

Product Description	Item Number
PARS Achilles Midsubstance SpeedBridge Implant System	AR-9929BC-CP
Cannulated drill bit, 2.6 mm Solid drill bit, 2.6 mm Guidewire, qty. 2 Straight needles w/ nitinol loops, 1.6 mm, qty. 3 FiberWire® SutureTape, white, 1.3 mm, qty. 2 FiberWire SutureTape, blue, 1.3 mm, qty. 2 FiberWire SutureTape, black/white, 1.3 mm, qty. 2 #2 FiberWire suture, closed loop, white/green, qty. 2 JumpStart® single-layer dressing, 2 in × 5 in Cannulated tap for 3.9 mm SwiveLock® anchor DX 3.9 mm Biocomposite SwiveLock anchors, qty. 2 Banana SutureLasso™ suture passer w/ nitinol wire Drill guide, 3.9 mm	



Implant System, PARS Achilles Midsubstance SpeedBridge with JumpStart Dressing – AR-9929BC-CP

PARS Achilles Jig Instrument Set

Product Description	Item Number
PARS Achilles jig	AR-8860J
Driver handle w/ AO connection, cannulated	AR-13221AOC
PARS Achilles repair instrument case	AR-8860C
Tendon elevator (optional)	AR-8860J-01



PARS Achilles Jig
AR-8860J

JumpStart Single-Layer Dressing

Product Description	Item Number	Qty./Box
1 in × 1 in Fenestrated	ABS-4001	10
2 in × 2 in	ABS-4002	10
2 in × 5 in	ABS-4025	10
3 in × 3 in	ABS-4003	10
4 in × 4 in	ABS-4004	10
1.5 in × 8 in	ABS-4005	10
1.5 in × 10 in	ABS-4006	10
8 in × 8 in	ABS-4008	1
12 in × 12 in	ABS-4012	1



Tendon Elevator (optional)
AR-8860J-01

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.

References

1. Arthrex, Inc. LA1-00038-EN_B. Naples, FL; 2017.
2. Kim H, Makin I, Skiba J, et al. Antibacterial efficacy testing of a bioelectric wound dressing against clinical wound pathogens. *Open Microbiol J*. 2014;21:8:15-21. 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-S14. doi:10.12968/jowc.2015.24.Sup2.S10
4. 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.

JumpStart
Single-Layer
Dressing





This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience, and should conduct a thorough review of pertinent medical literature and the product's directions for use. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level and/or outcomes.

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