

# PARS Quadriceps Tendon Repair

Surgical Technique



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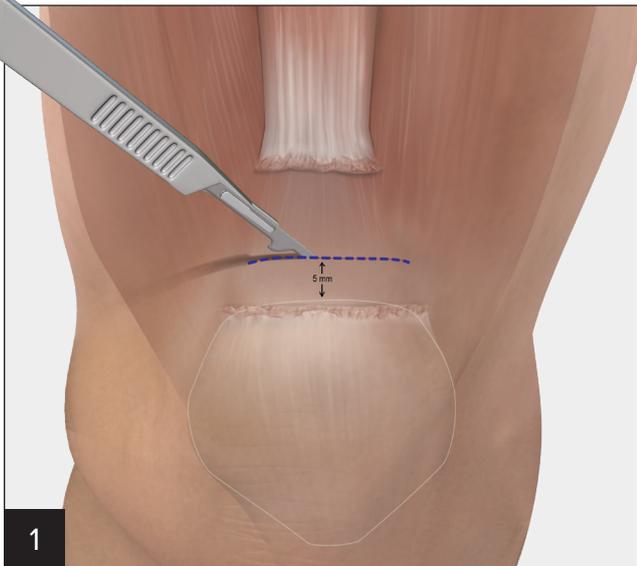
## Introduction

Ruptures of the quadriceps, patellar, and Achilles tendons are common in elite and recreational athletes. Most surgeons will elect to treat these injuries surgically to lessen the risk for rerupture, while providing the opportunity for a quicker recovery and convenient rehabilitation. Historically, open techniques have been used for rupture repairs but may be complicated by wound-healing issues and infection. The Percutaneous Achilles Repair System (PARS) is a percutaneous and minimally invasive technique for quadriceps, patellar, and Achilles tendon ruptures.

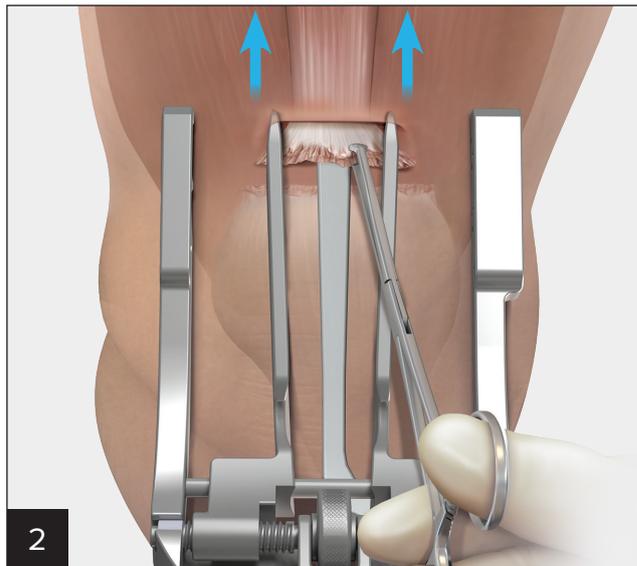
This technique guide will focus specifically on the quadriceps tendon, though the principles of fixation do not change. The PARS system provides the opportunity for consistently reliable capture of the distal aspect of the quadriceps tendon and uses color-coded FiberWire® and FiberTape® sutures. The anatomically contoured guide is reusable, while the suture and passing needles come packaged in one convenient kit. The PARS system provides the option of using transverse or locking sutures, or both. The colored FiberWire sutures offer a more organized approach to identifying and securing matched pairs.

Michael Bradley, MD  
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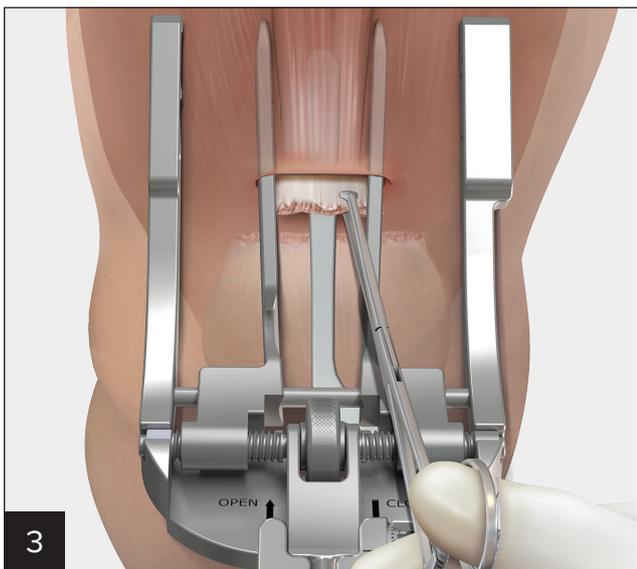
# PARS Quadriceps Repair



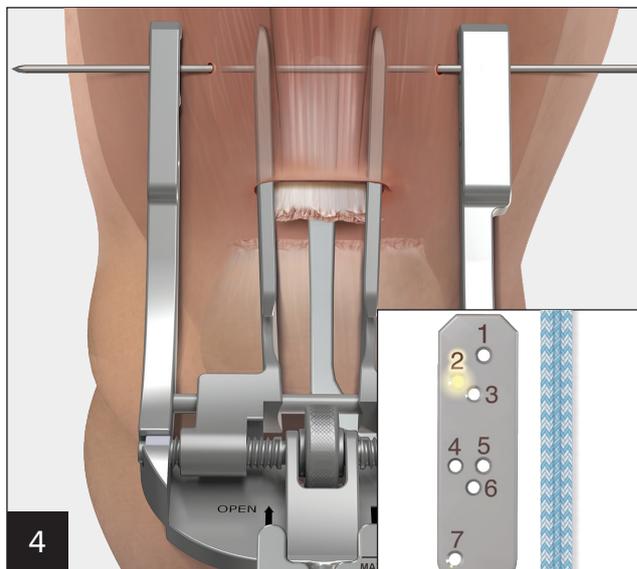
1 Place the incision approximately 5 mm proximal to the patella.



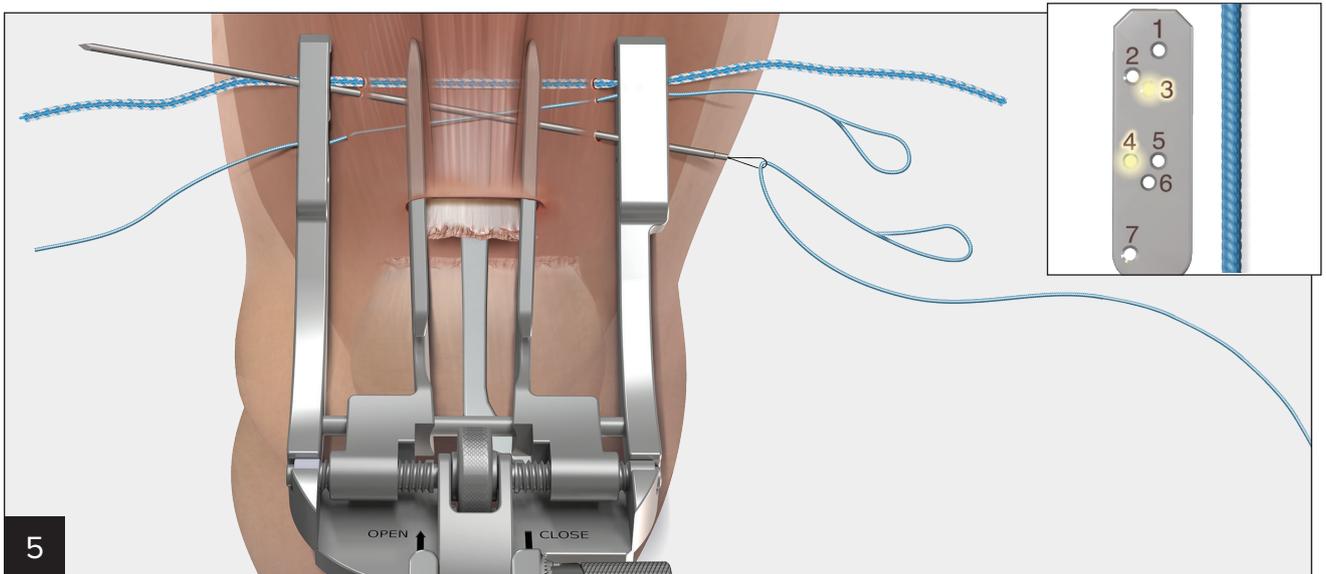
2 Place the inner arms of the jig within the peritenon of the quadriceps tendon. Place the elevating arm of the quadriceps PARS jig posterior to the tendon, lifting it up between the arms. Once inside the peritenon, open the inner arms by adjusting the wheel to allow for easy advancement of the jig. Advance the jig until the inner arms are surrounding viable tendon.



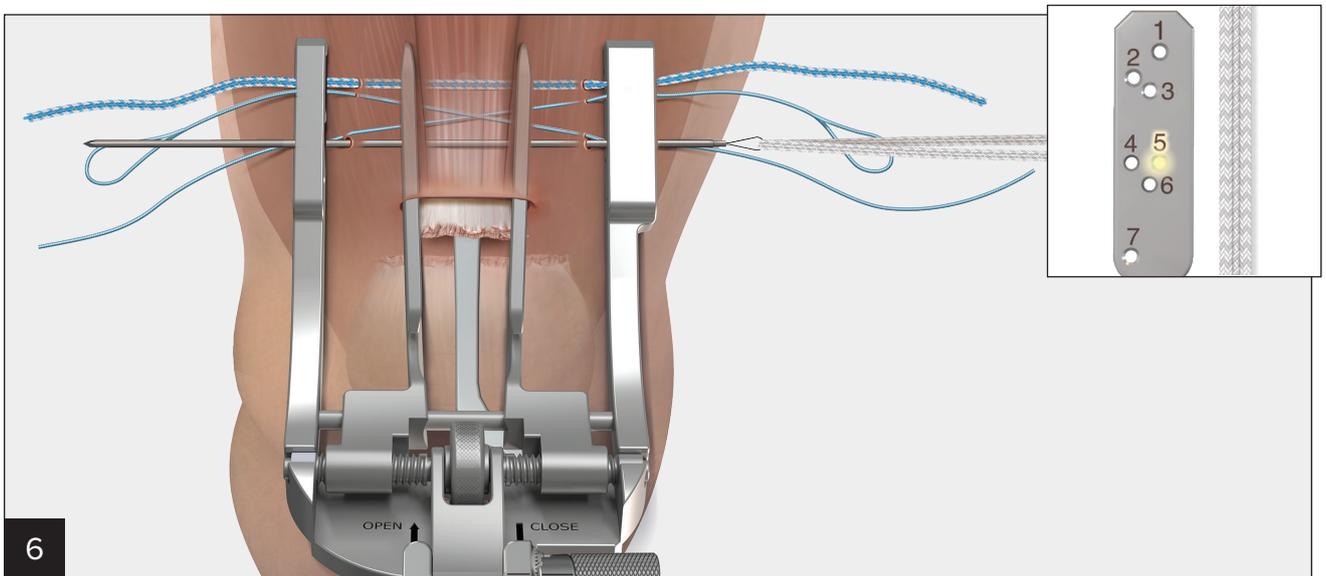
3 Advance the jig proximally.



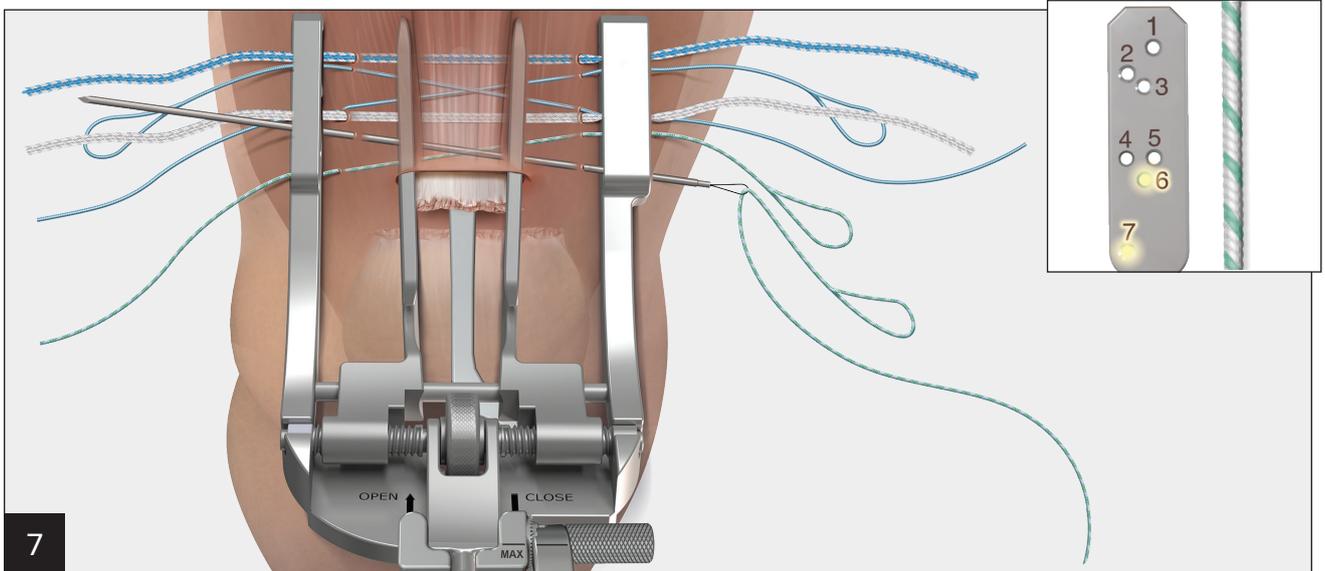
4 Pass the guide pin with the Nitinol loop through the straight #2 hole. Pull the blue 2 mm FiberTape® suture through the tissue and the opposing jig hole, leaving tails on both sides.



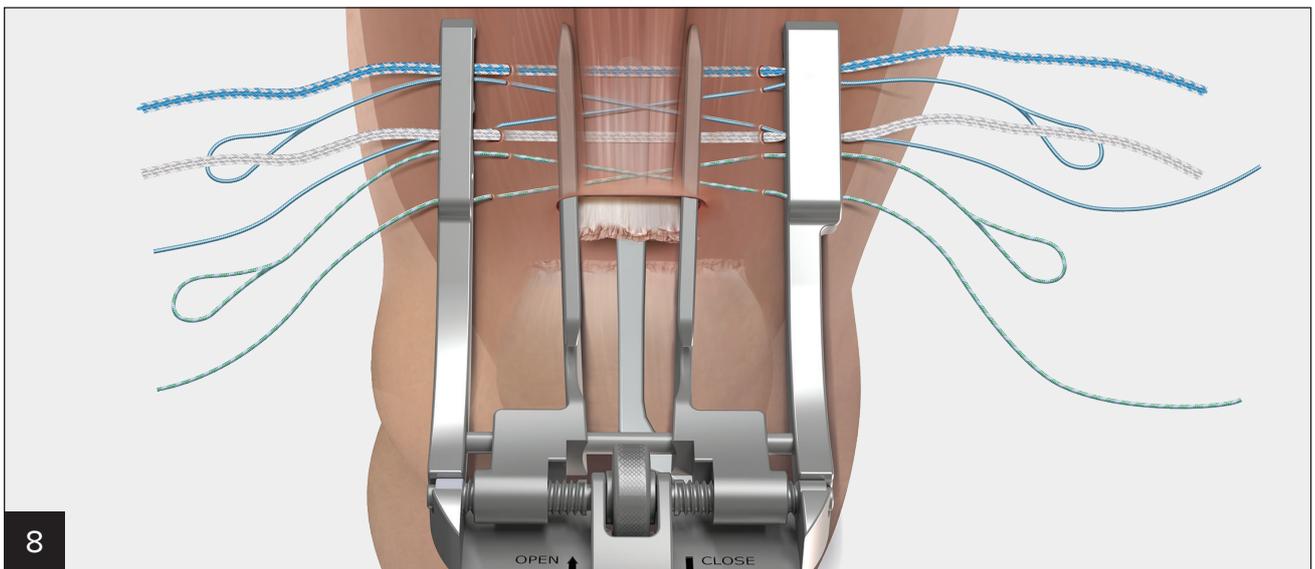
Pass two guide pins with the Nitinol loops through the angled #3 and #4 holes. Pull the blue FiberWire® suture with loops through the tissue, leaving equal tails on both sides. Make sure that there is one looped end on each side of the leg.



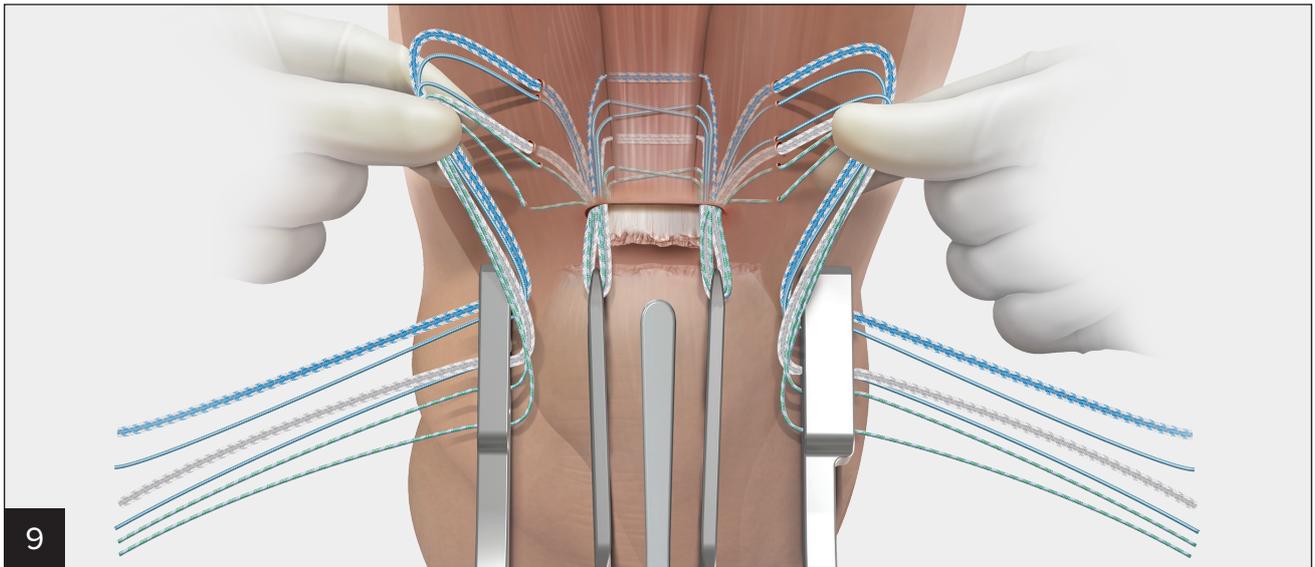
Pass the guide pin with the Nitinol loop through the straight #5 hole. Pull the white/black 2 mm FiberTape® suture through the tendon, leaving equal tails on both sides.



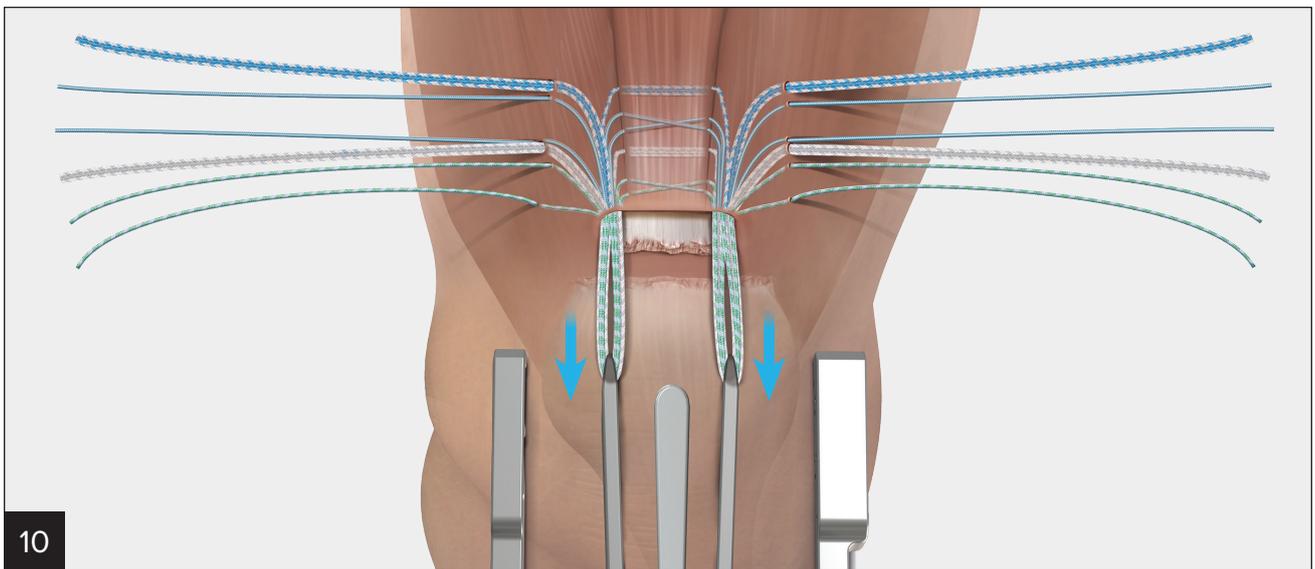
7  
 Pass two guide pins with the Nitinol loops through the angled #6 and #7 holes. Pull the green FiberWire® suture with loops through the tissue, leaving equal tails on both sides. Make sure that there is one looped end on each side of the leg.



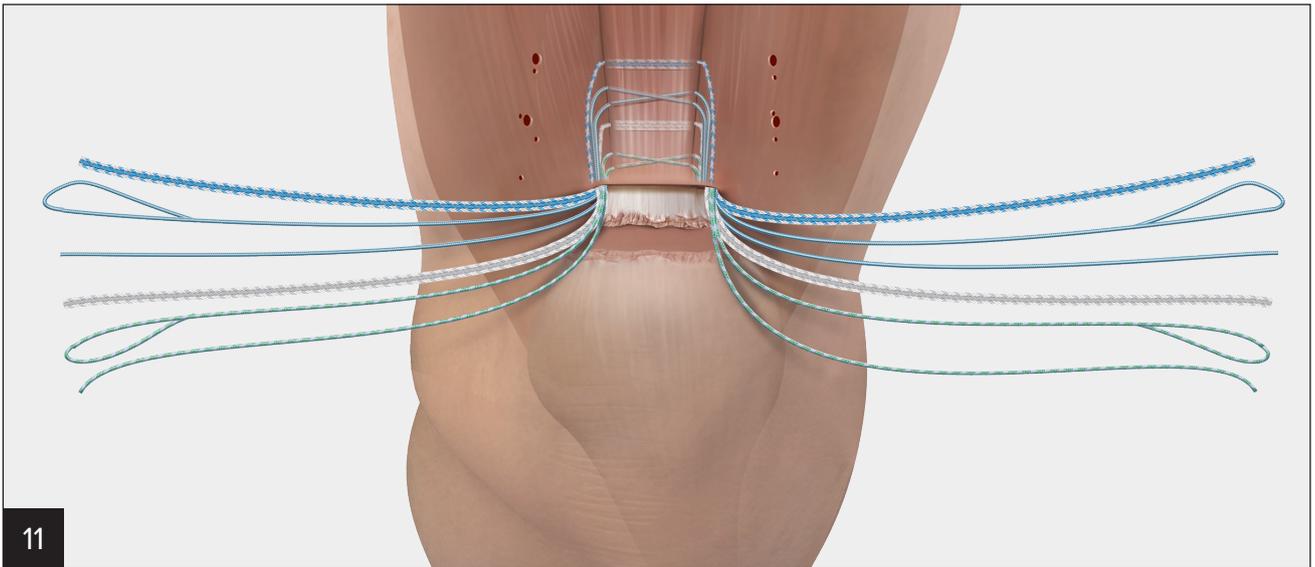
8  
 Final construct prior to removal of the jig.



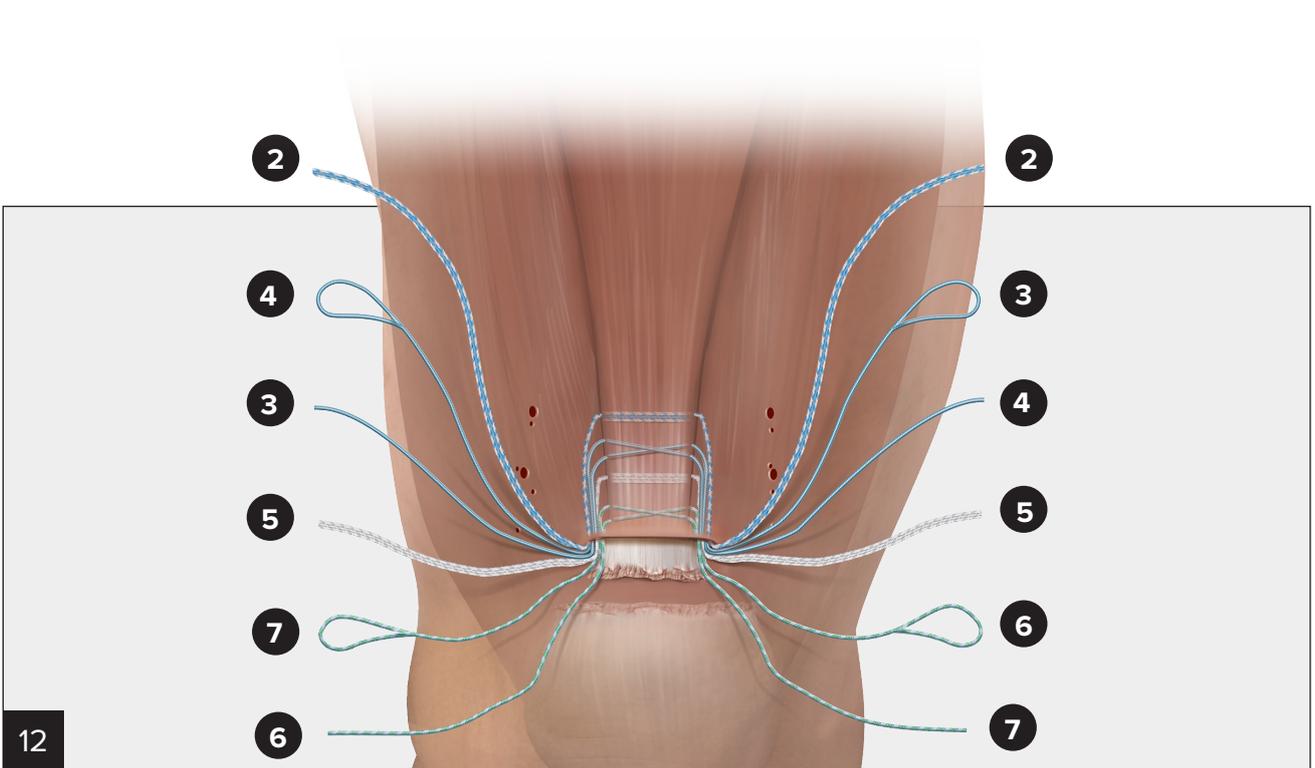
Pull the jig slowly out of the operative site. The sutures on the right side of the jig can be pulled toward the midline to ease jig removal.



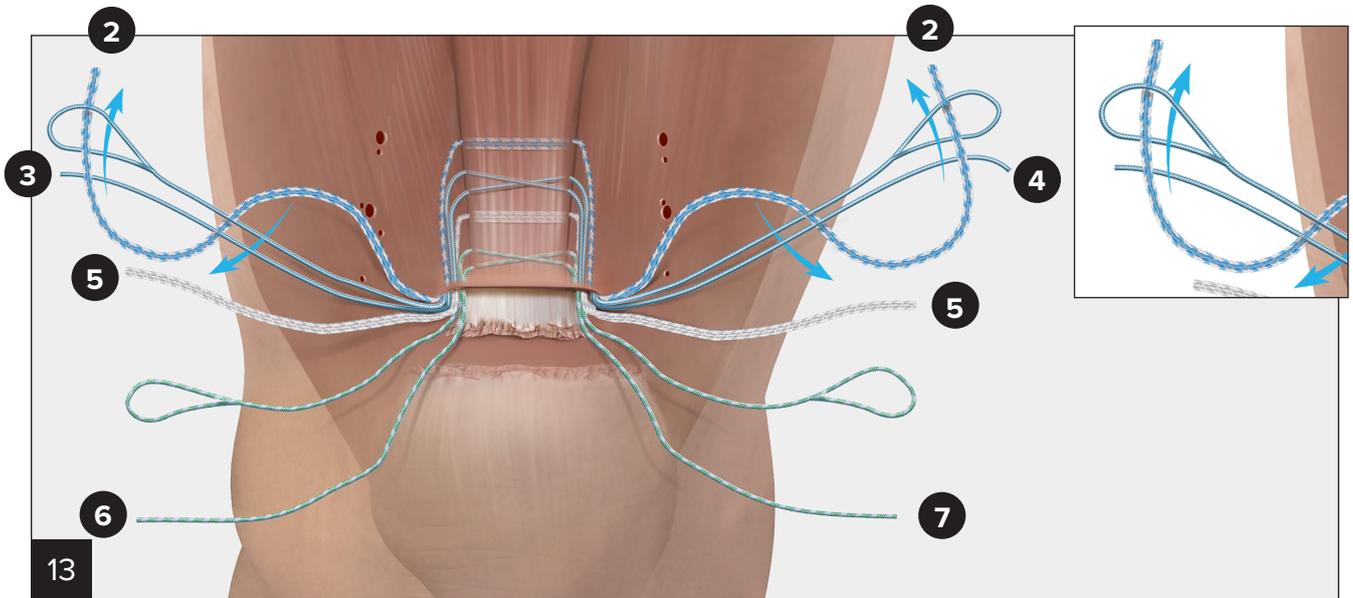
Continue to pull the jig distally until all suture limbs are removed from the operative site.



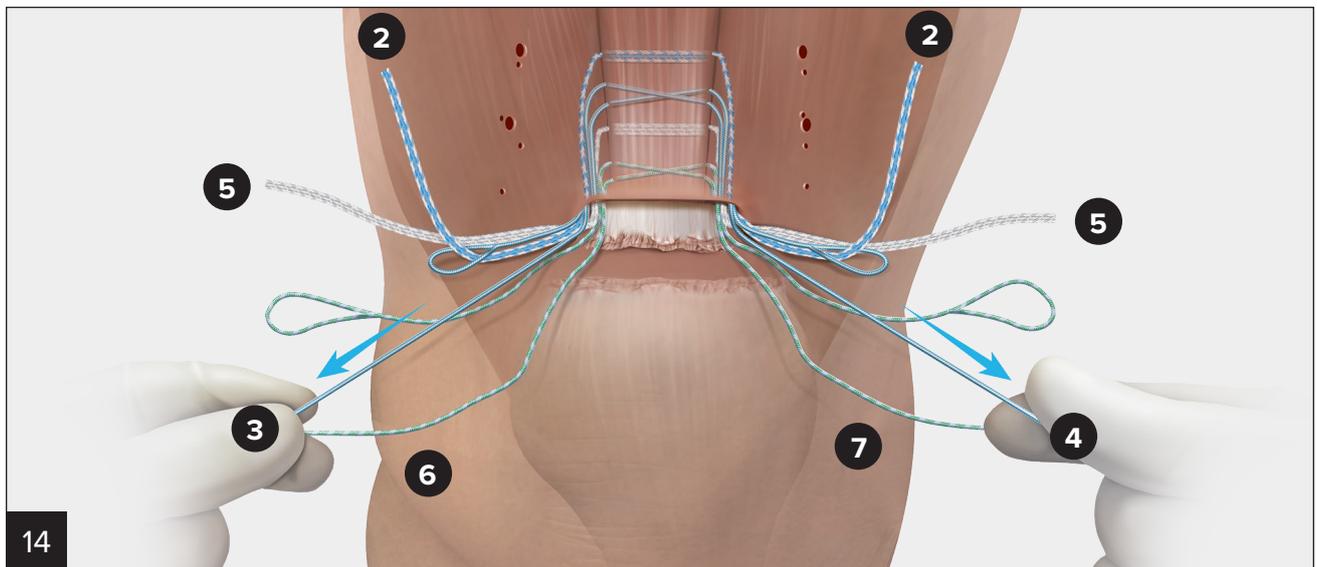
Suture configuration after all limbs have been removed from the operative site.



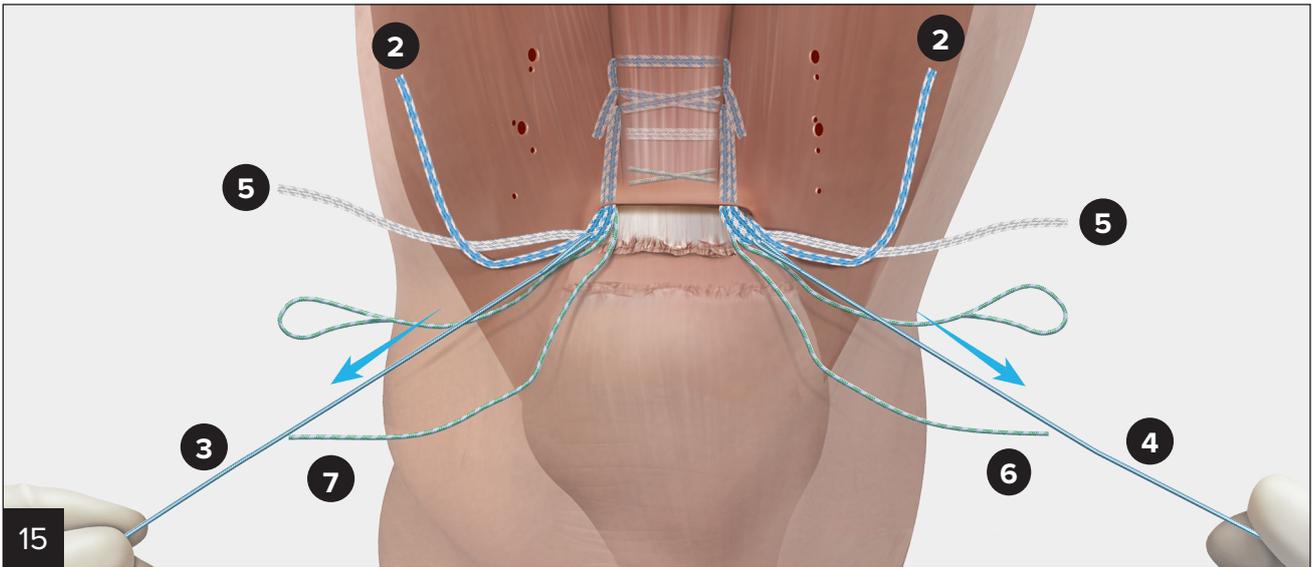
Organize the sutures the way they were originally placed through the PARS jig.



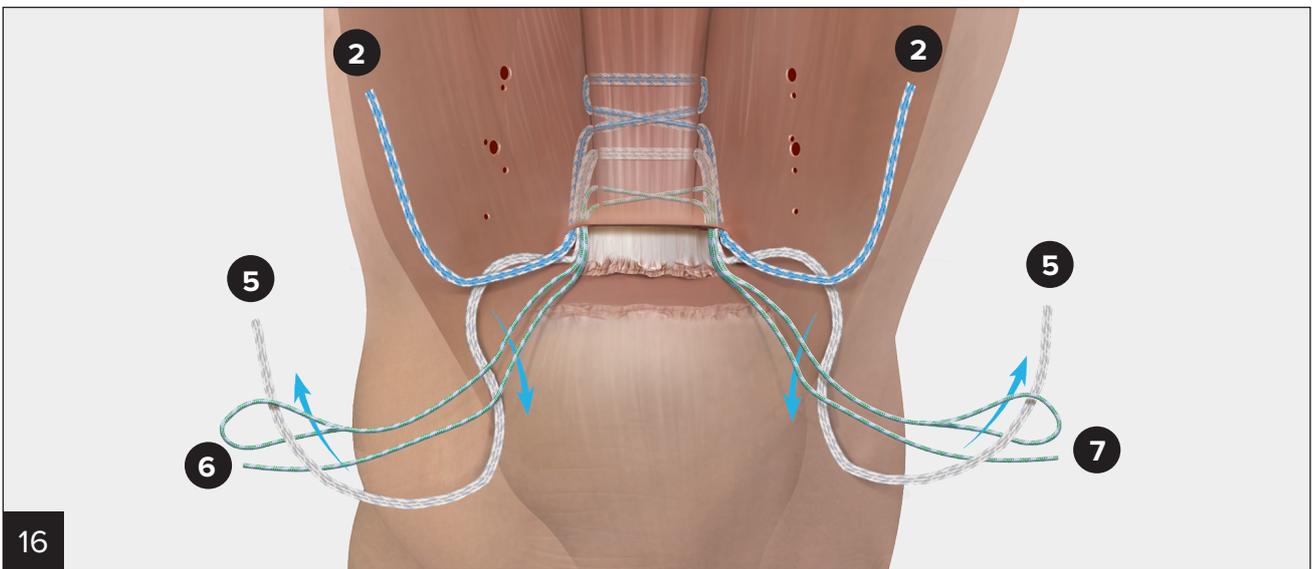
Pass the blue FiberTape® suture UNDER the (3) and (4) looped sutures and back through the loop of the blue looped suture.



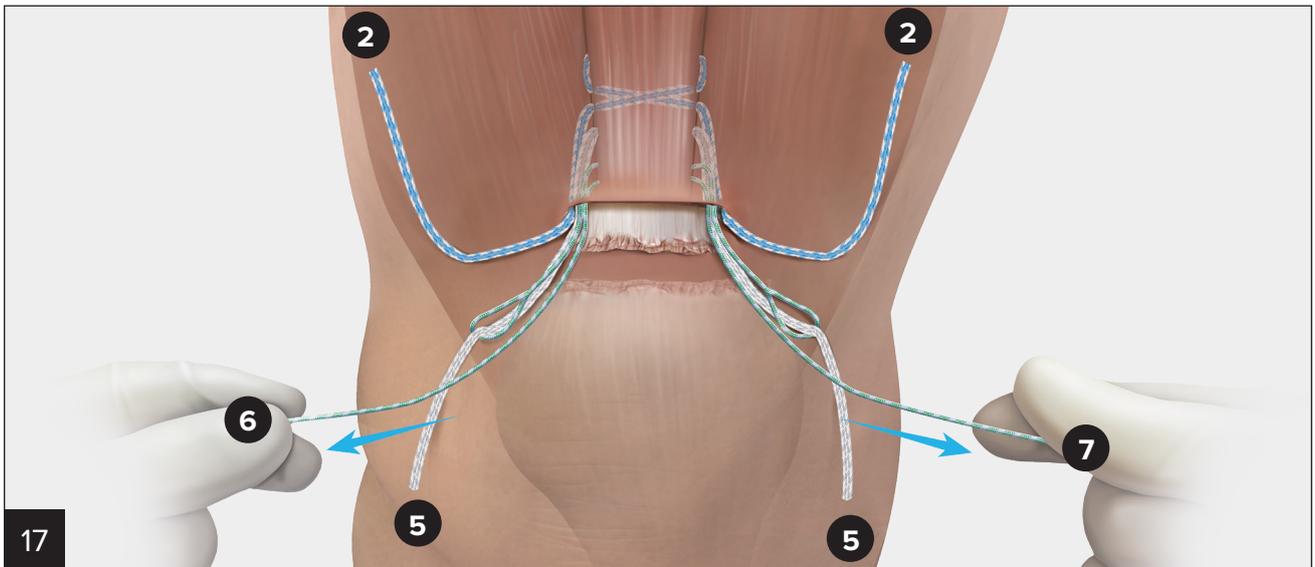
Pass the blue FiberTape sutures through the tendon by pulling the nonlooped ends of blue FiberWire® sutures (3) and (4).



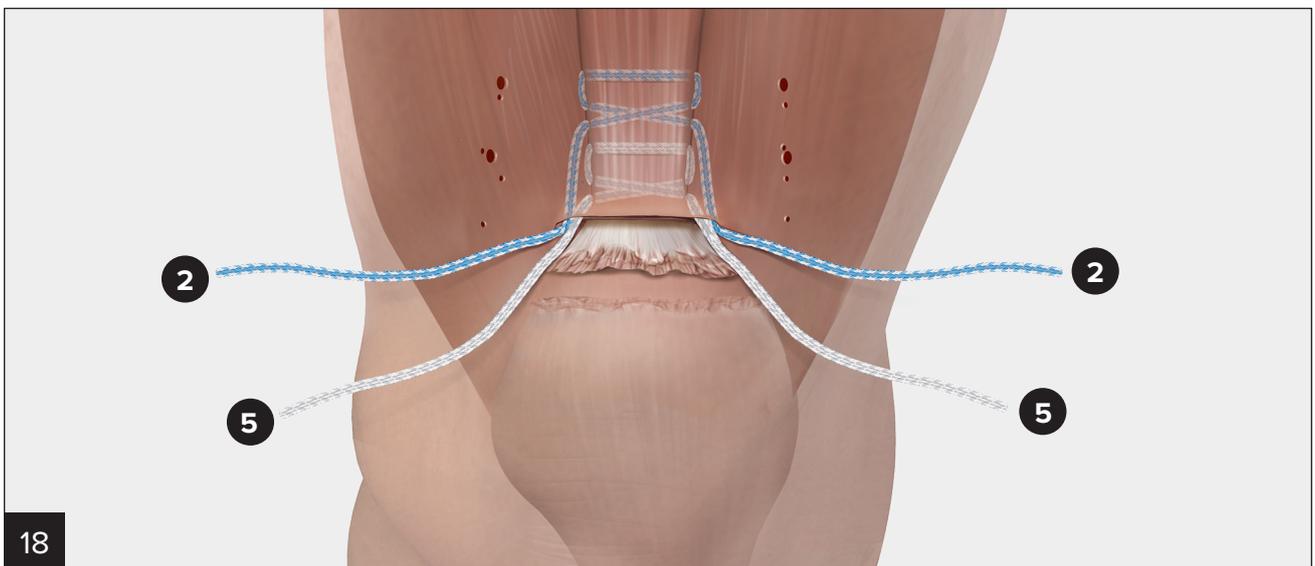
Continue pulling on the blue FiberWire® suture to lock the stitch in place. The blue FiberTape® suture tails can be further tensioned to complete the locking stitch.



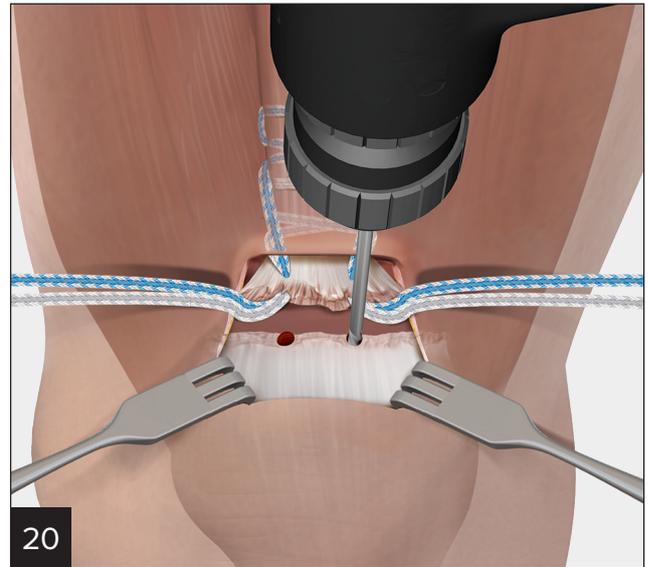
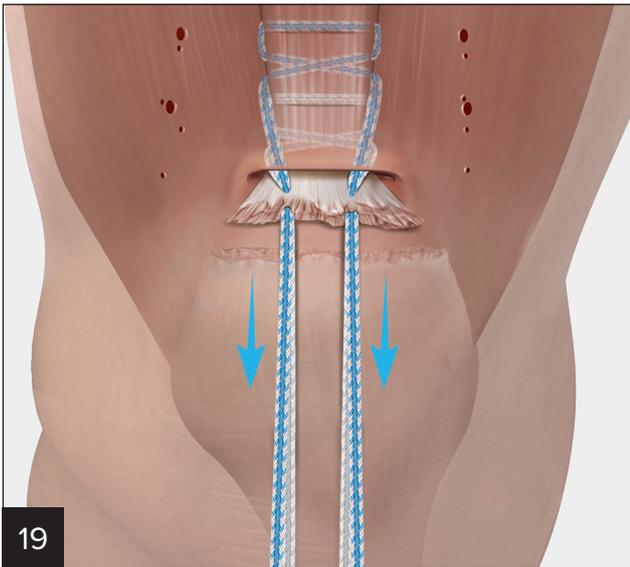
Pass the white/black FiberTape suture UNDER the (6) and (7) looped sutures and back through the loop of the green looped suture.



Pass the white/black FiberTape® sutures through the tendon by pulling the nonlooped ends of white/green FiberWire® sutures (6) and (7). The FiberTape sutures can be further tensioned to complete the locking stitch.

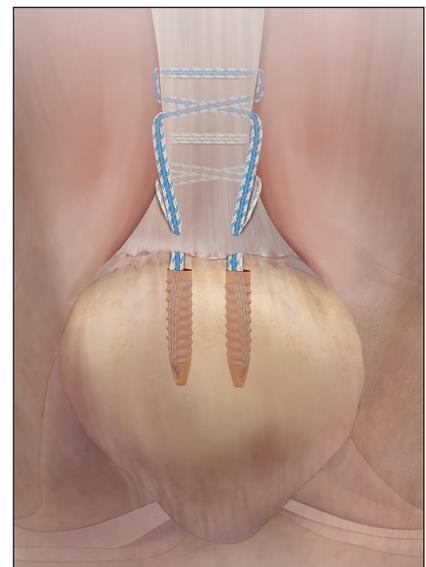
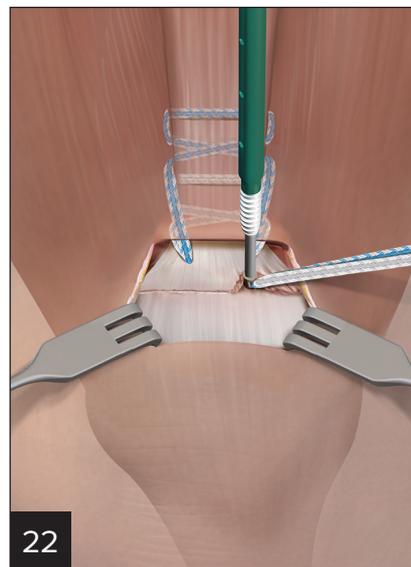
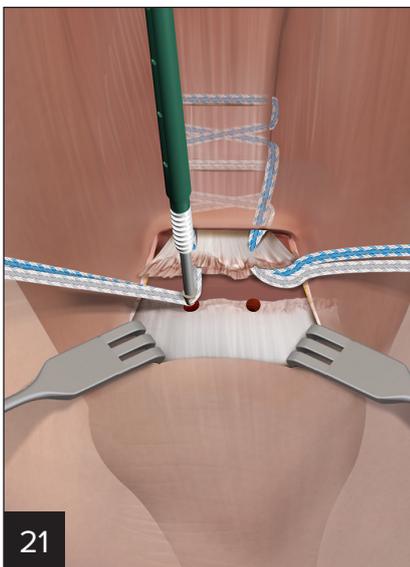


Use a retractor to visualize suture placement to ensure purchase within the tendon.



Pull the FiberTape® sutures to the patella, approximating the location of the quad tendon attachment and marking these locations. Use a passing needle to pass the FiberTape sutures through the quad tendon about 5 mm apart, adjacent to where they will enter into the patella.  
**Note: Pass the needle through the most distal aspect of the tendon, where it will reapproximate to the superior pole of the patella.**

Drill two holes into the superior aspect of the patella with a spade-tip reamer, approximately 5 mm apart.



Thread one limb of each color FiberTape suture into an eyelet of a 4.75 mm BioComposite SwiveLock® anchor. Screw the SwiveLock anchor into the patella, anchoring the quad tendon.

Repeat this procedure with the remaining FiberTape sutures on the opposite side of the tendon. It is important to ensure good tendon-to-bone contact to promote healing.

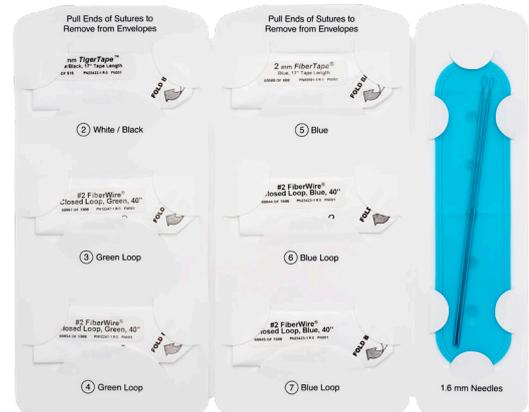
**Final Repair:** The wound can be closed with the suture of choice. Postoperative routine is left to the surgeon preference.

## Ordering Information

Product Description	Item Number
<b>PARS Jig Instrument Set</b>	<b>AR-8860S</b>
PARS Jig	<b>AR-8860J</b>
PARS Tendon Elevator	<b>AR-8860J-01</b>
Driver Handle w/ AO Connection, cannulated	<b>AR-13221AOC</b>
PARS Repair Instrument Case	<b>AR-8860C</b>
Product Description	Item Number
<b>PARS Quad Suture Kit (a)</b>	<b>AR-8929</b>
One #2 FiberTape® Suture, 38 in, blue	
One #2 FiberTape Suture, 38 in, white/black	
Two #2 FiberWire® Suture, w/ loops, 40 in, blue	
Two #2 FiberWire Suture, w/ loops, 40 in, green	
Two 1.6 mm Straight Needles w/ Nitinol Loops	
One Spade-Tip Drill	
One Punch/Tap	
Two 4.75 mm BioComposite SwiveLock® Anchors	

Products may not be available in all markets because product availability is subject to the regulatory approvals and medical practices in individual markets. Please contact Arthrex if you have questions about the availability of products in your area.

(a)



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