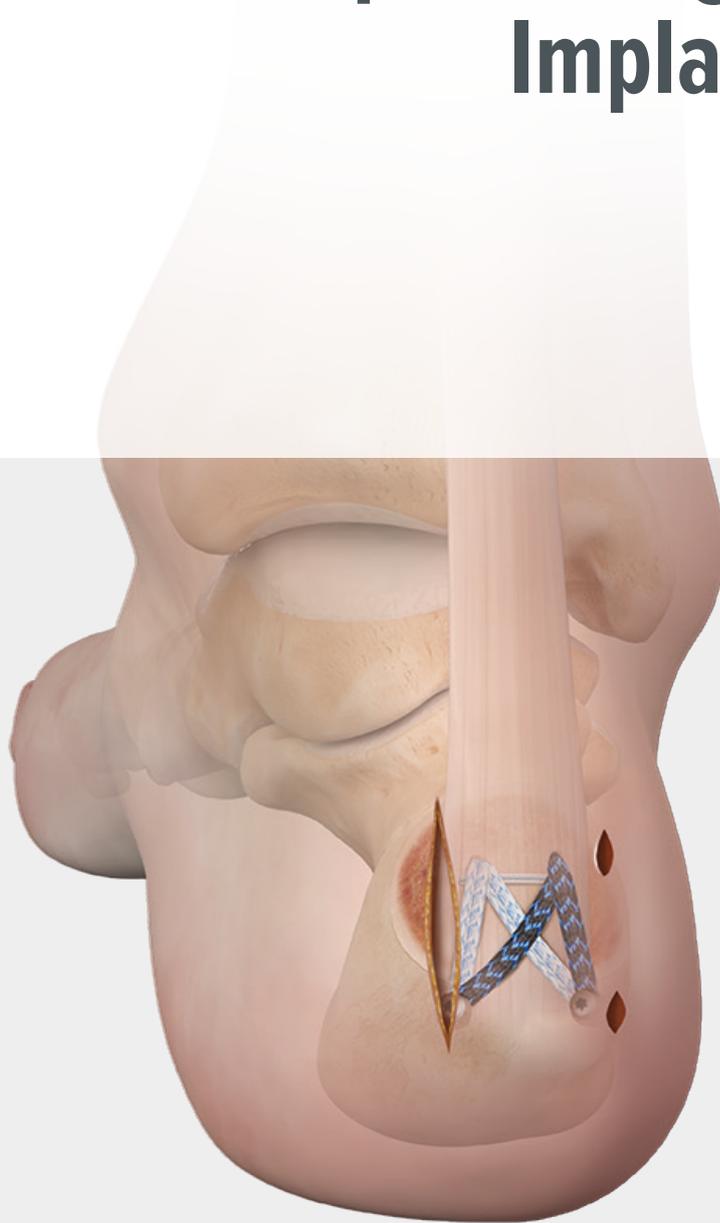


Mini-Open MIS FiberTak[®] Achilles SpeedBridge[™] Repair Implant System

Surgical Technique

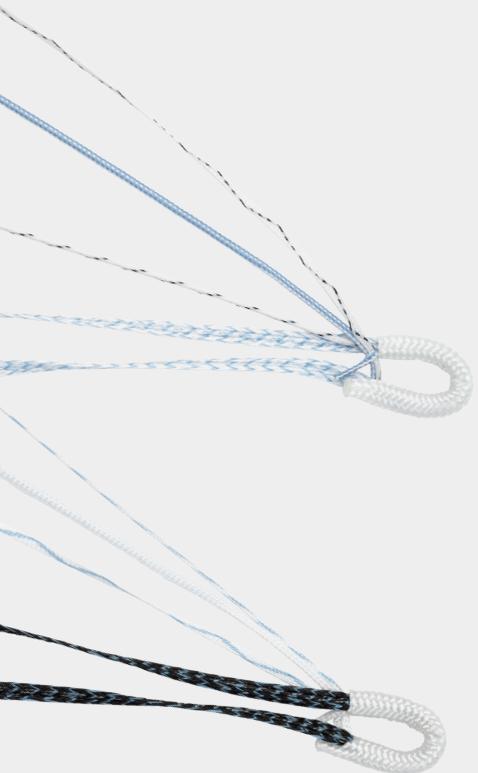


New!

The Mini-Open FiberTak[®] Achilles SpeedBridge[™] Repair Implant System

Introduction

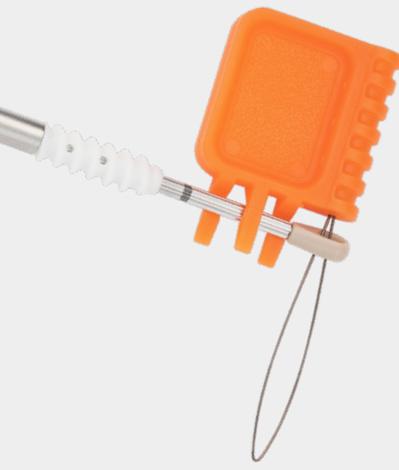
The **new** MIS FiberTak Achilles SpeedBridge implant system is a novel concept in Achilles reattachment following Haglund's debridement. This repair enables an hourglass pattern of FiberTape[®] suture to be laid over the tendon's distal end in a completely knotless 4-anchor configuration. The Achilles SpeedBridge repair provides rigid tendon fixation with improved tendon-to-bone opposition, allowing for immediate postoperative weightbearing and range of motion.¹



2.6 mm Knotless FiberTak DX anchor w/ 1.7 mm collagen-coated FiberTape suture

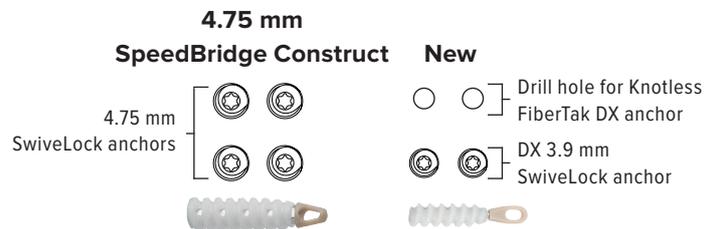


DX 3.9 mm BioComposite SwiveLock anchor



Features and Benefits

- **New** 2.6 mm Knotless FiberTak DX anchors and 3.9 mm BioComposite SwiveLock[®] anchors
- **25%** less material than the original SpeedBridge construct²

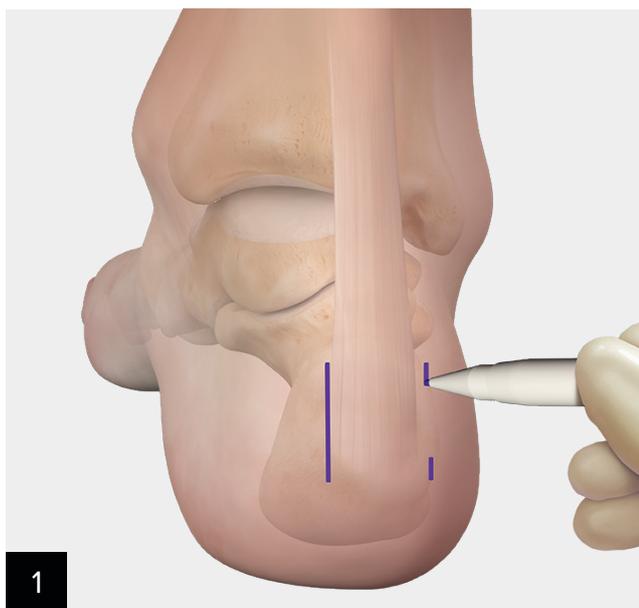


- Double the biomechanical strength of the 4.75 mm SwiveLock SpeedBridge construct, with knotless tensionable technology²
- Cannulated instruments for a percutaneous approach
- Shorter inserters with laser line and window to assist in depth of DX 3.9 mm BioComposite SwiveLock anchors
- **New** 1.7 mm collagen-coated FiberTape suture with differentiating colors
- Hexalobe driver on DX 3.9 mm BioComposite SwiveLock anchors for high insertional torque in hard bone³

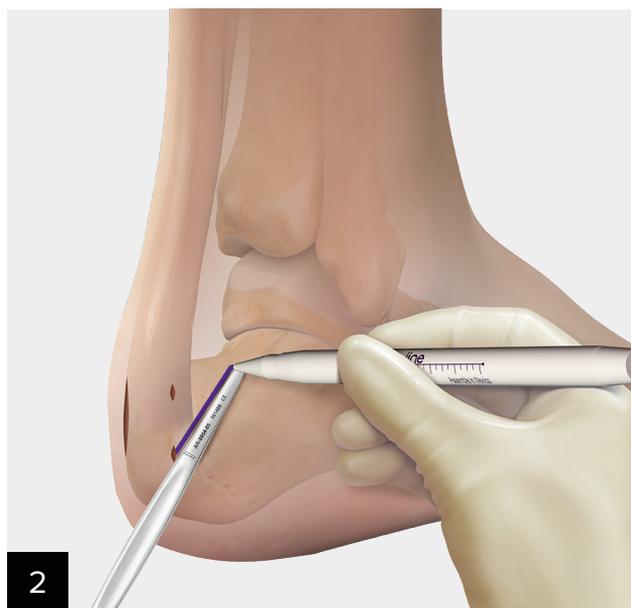
The Mini-Open FiberTak® Achilles SpeedBridge™ Repair Implant System

AR-9928BCK-MIS





With the patient in a prone position, use fluoroscopy to mark out the proximal and distal portals at the 2 and 5 o'clock positions and the medial mini-open incision from the 10 to 7 o'clock position when viewing posteriorly, so they are at the desired level for bone resection. Place the distal portal at the distal portion of the resection and the proximal portals just distal to the fibular line.



Under fluoroscopy, draw the projected plane of resection of the posterior/superior calcaneal tuberosity (Haglund's) with the most distal extent starting at the distal portal. Make incisions at each of the portal sites and medial mini-open incision site.

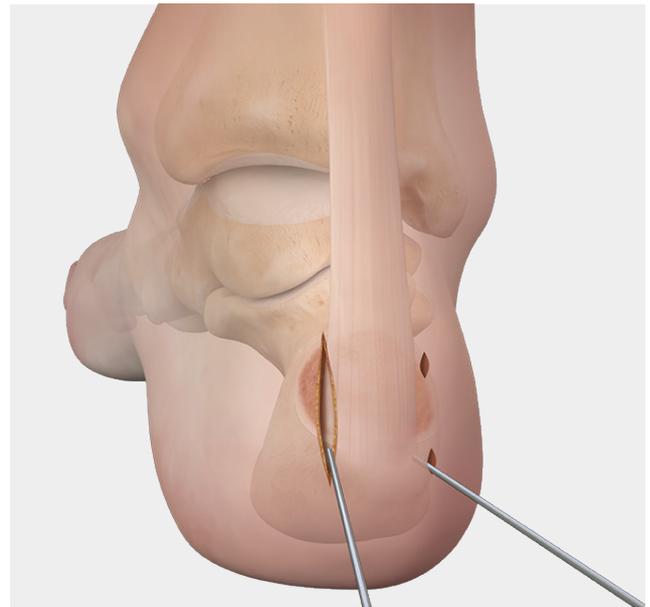


Use the MIS elevators to develop a plane between the Achilles tendon and calcaneal tuberosity at each portal site, then use the Sayre elevator to free up the space between the skin and the Achilles tendon.

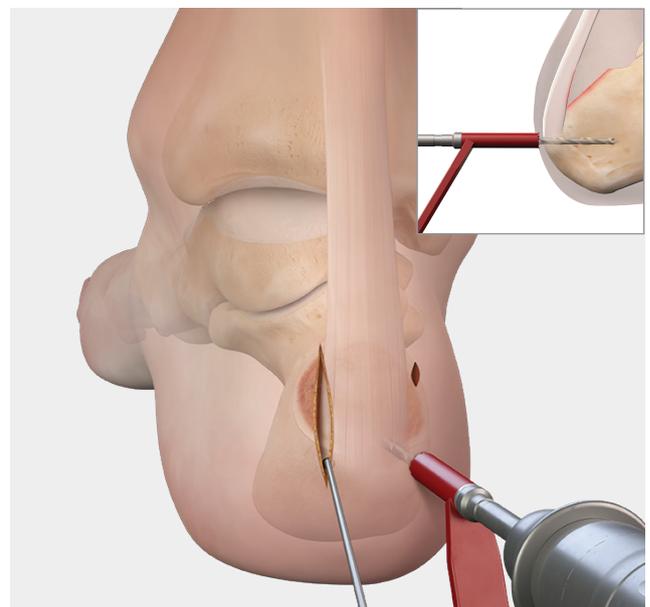
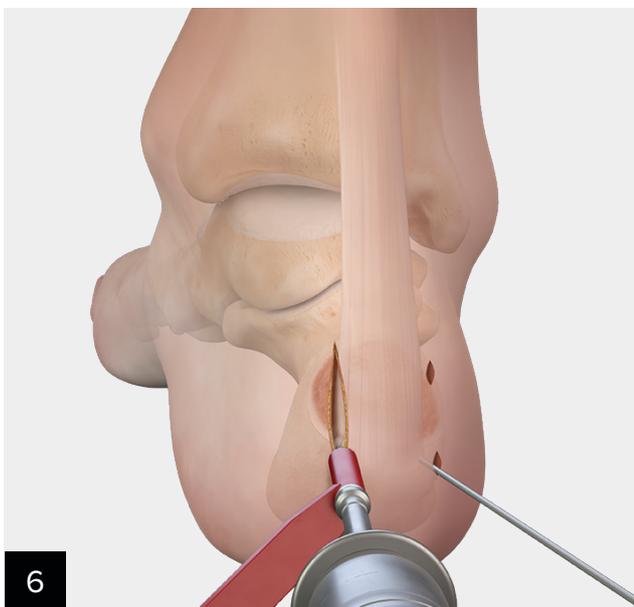


Introduce the 4.3 mm MIS conical burr deep to the tendon through the distal portals, resecting bone in the projected plane using a sweeping motion. Remove all excess bone with outflow irrigation or suction.

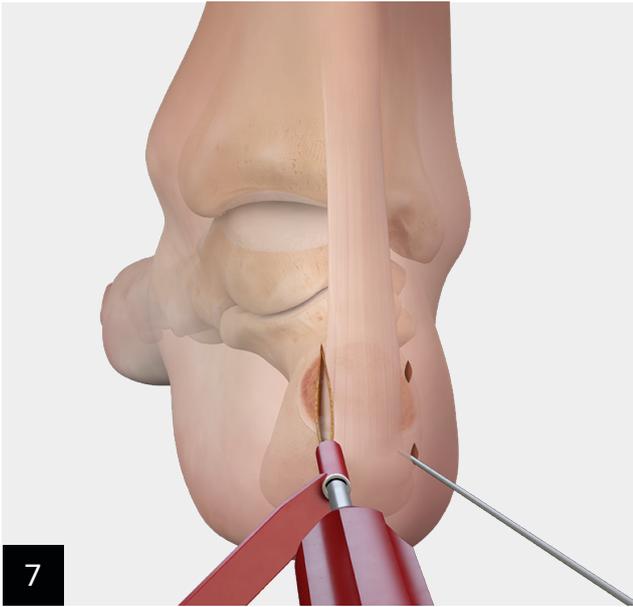
Note: If there is significant calcification within the Achilles, a banana blade and pituitary rongeur can be used to help remove the bone from the tendon through the medial mini-open incision.



Through the distal portals and medial mini-open incision, drill the 1.35 mm K-wires for the DX 3.9 mm BioComposite SwiveLock® anchor using fluoroscopic guidance showing the depth of the K-wire insertion. The drill guide with the centering sleeve can also be used for more precise placement.

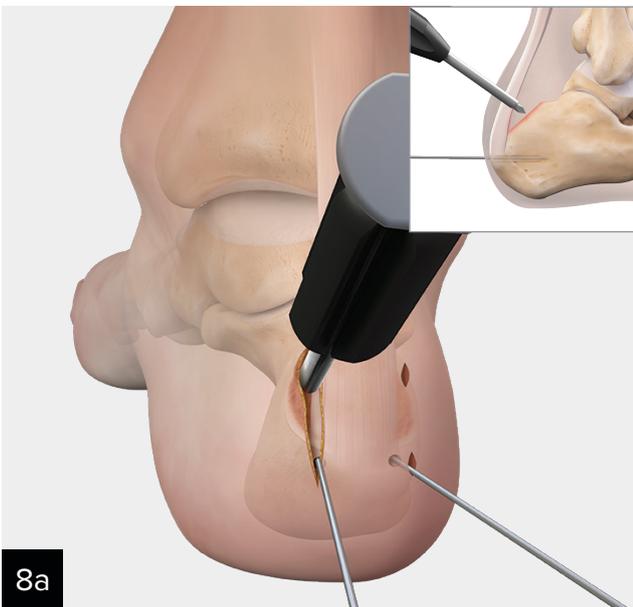


Using the 3.9 mm SwiveLock guide and 2.6 mm cannulated drill, drill to the positive stop on the drill, meeting the back of the guide through both medial mini-open incision and lateral portals. Ensure the drill guide is adjacent to bone.

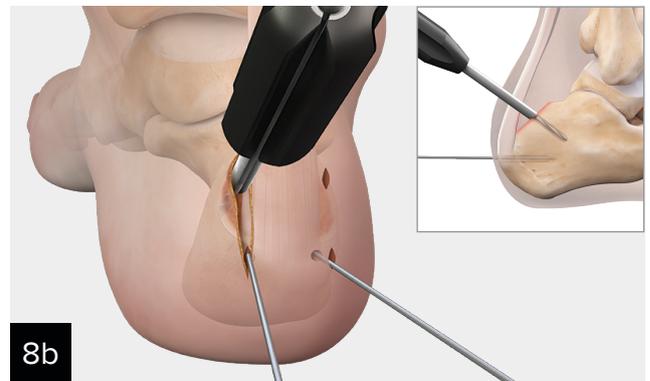


Use the 3.9 mm cannulated tap to tap over the K-wires to the laser line. The drill guide adjacent to bone assures accurate depth of the tap.

Optional 3.9 mm quick connect cannulated power tap is sold separately.



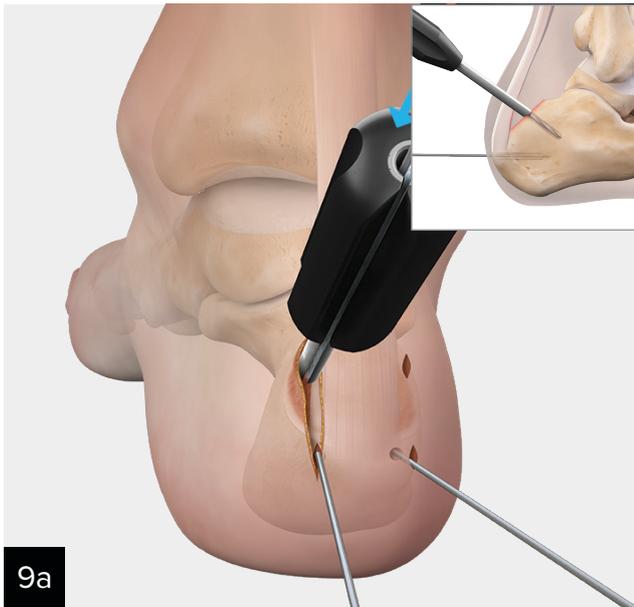
Use the black-handled guide and obturator to move through the soft tissue and down to bone for targeted placement of the proximal anchors through the proximal portals and mini-open incision. Remove the obturator and place the guide slot-side down so the proximal anchors will not converge with the distal anchors.



When the guide is placed on the calcaneus where the Haglund's deformity has been removed, its beveled edge will help ensure the correct plane.

Note: Using fluoroscopy, confirm the lateral view showing appropriate drill guide insertion.

Keeping the position of the guide in place, drill with the long 2.6 mm drill to the positive stop on the drill where it meets the back of the guide. Remove the drill, leaving the guide in place.



Insert the 2.6 mm Knotless FiberTak® DX anchor and mallet the handle of the inserter until the large laser line on the inserter meets the back of the guide.

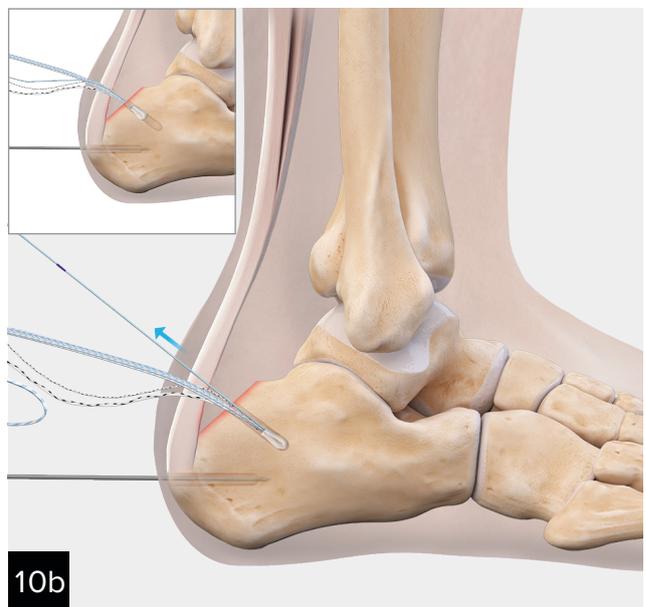
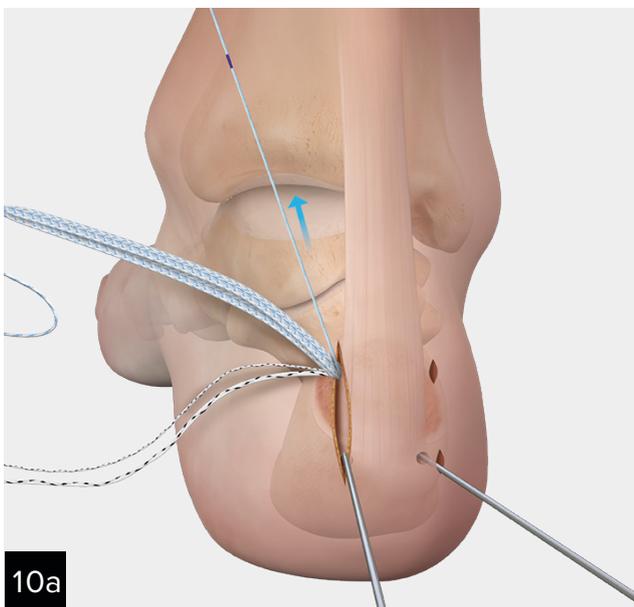
Note: Do not mallet flush to a positive stop on the guide, as this will plunge the guide and anchor too deep and create a hole too large for the anchor.



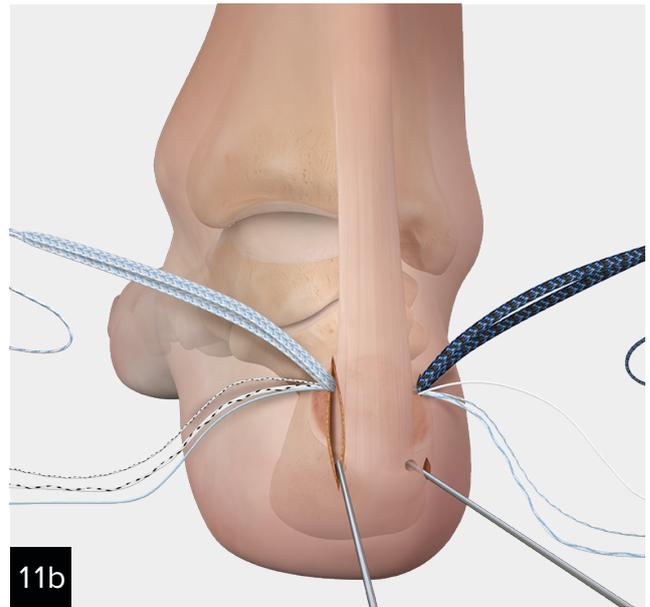
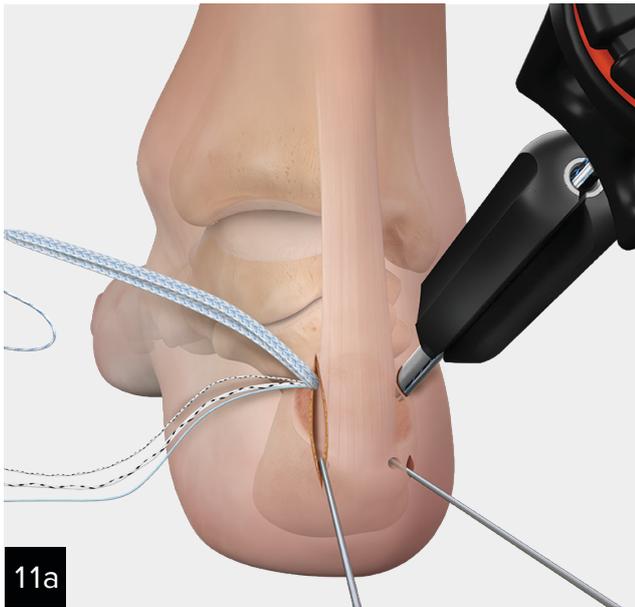
Undo the rubber O-ring from the back of the handle and remove the needle and sutures from the inserter. Remove the inserter.

Note: Do not twist the inserter to remove.

All sutures will slide out of the slot on the guide, which can then be removed.

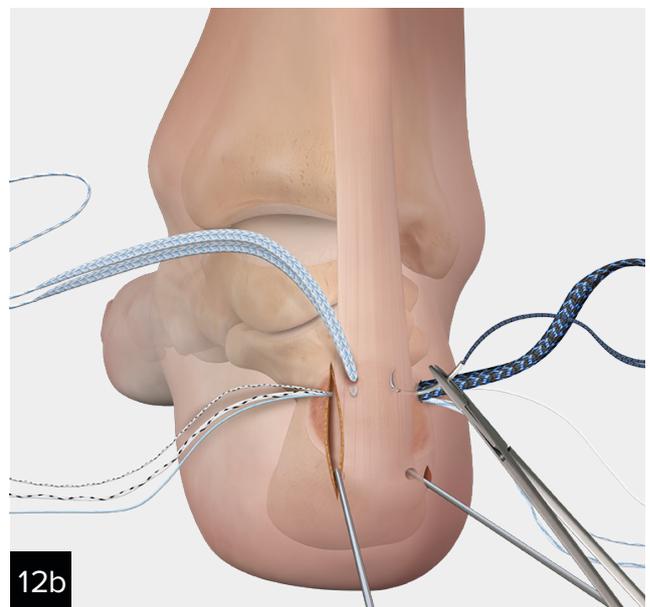
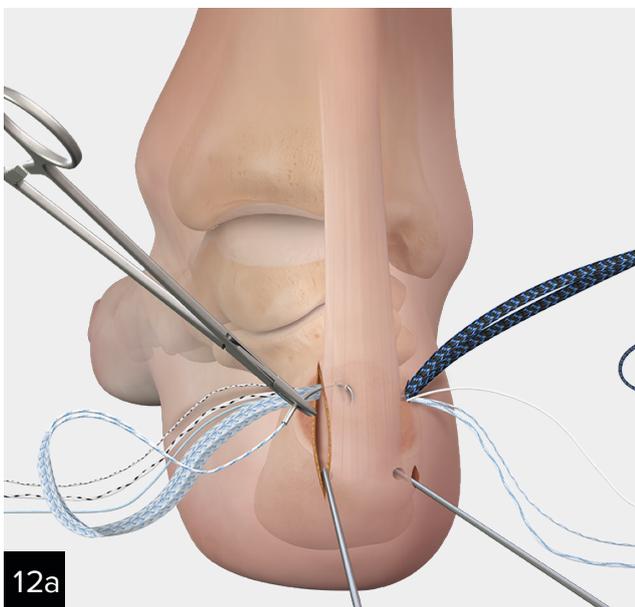


Pull gently on the sutures to ensure the anchor is in good bone, but **do not** fully set the anchor.



Repeat the previous steps for the second anchor. Using fluoroscopy, drill and insert the second 2.6 mm Knotless FiberTak® DX anchor. **Optional:** You may self-punch this anchor without drilling. Do not use for hard bone patients.

Pull gently on the second anchor's sutures to ensure it is in good bone, but **do not** fully set the anchor.

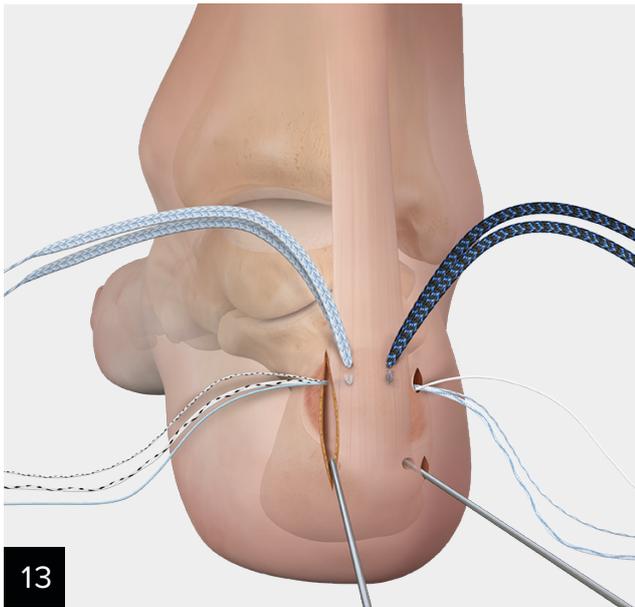


Separate the swaged FiberTape® sutures with needles from the knotless repair sutures. Suture management is key.

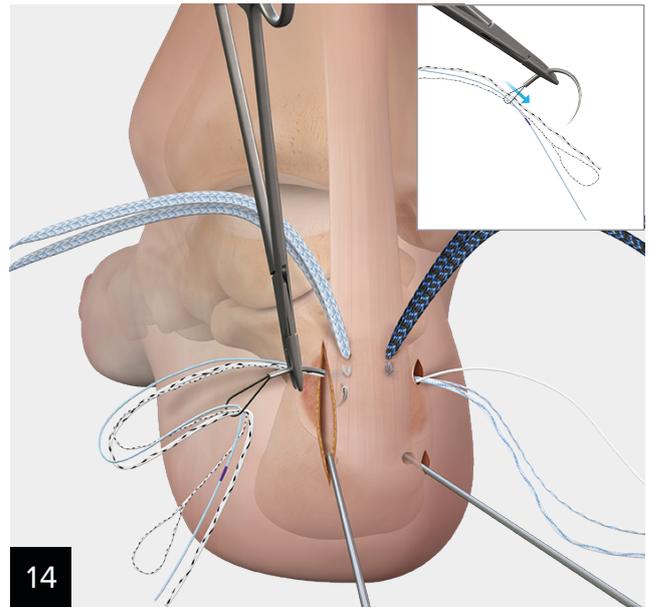
Pass the **blue** 1.7 mm collagen-coated FiberTape suture with the attached needle through the proximal and medial mini-open incisions, medial side of the Achilles tendon, and skin in one pass.

In one pass, pass the **black/blue** 1.7 mm collagen-coated FiberTape suture with attached needle through the proximal and lateral portals, lateral side of the Achilles tendon, and skin.

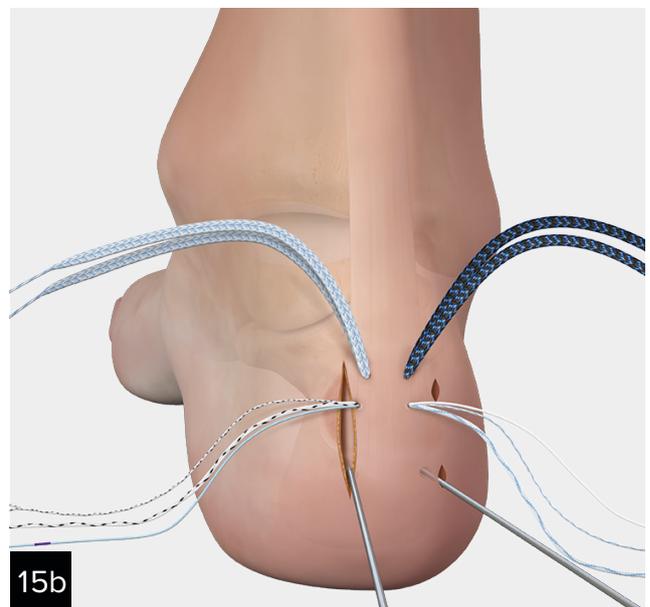
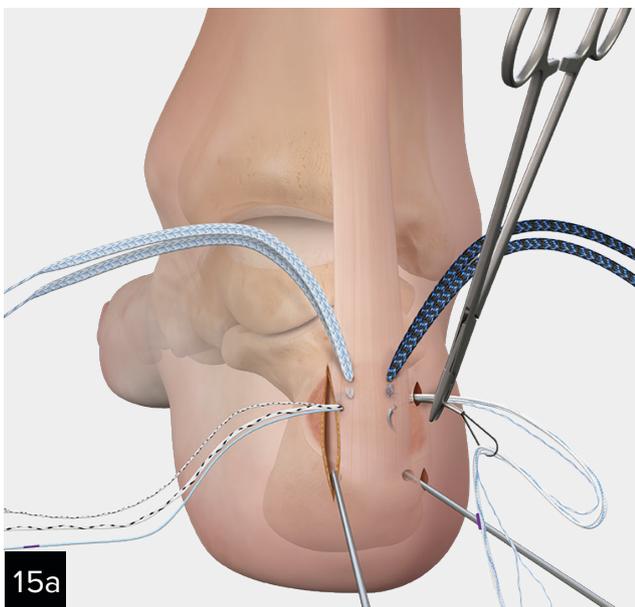
Ensure both FiberTape sutures are equally spaced through the tendon and skin.



Cut needles off the FiberTape® sutures at the swedge. This will leave 2 separated ends on each FiberTape suture.

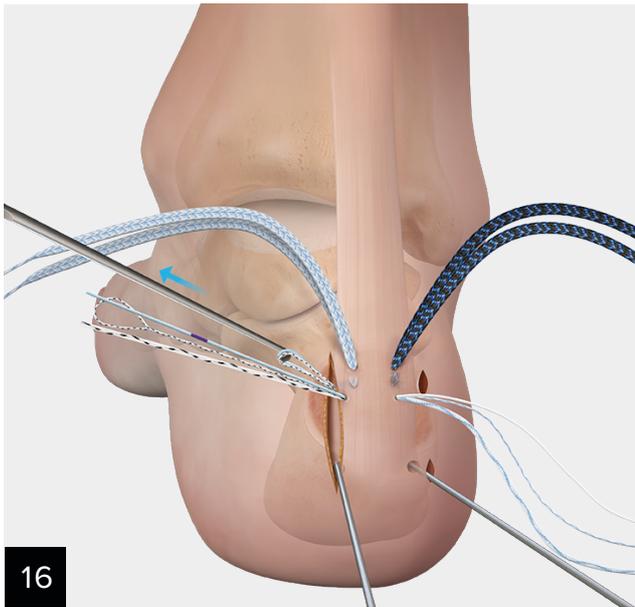


Take the free needle with the nitinol loop and load all 3 knotless sutures from the medial anchor through the nitinol loop. Pass through the proximal medial mini-open incision, Achilles tendon, and skin just distal and slightly medial to the **blue** FiberTape suture.



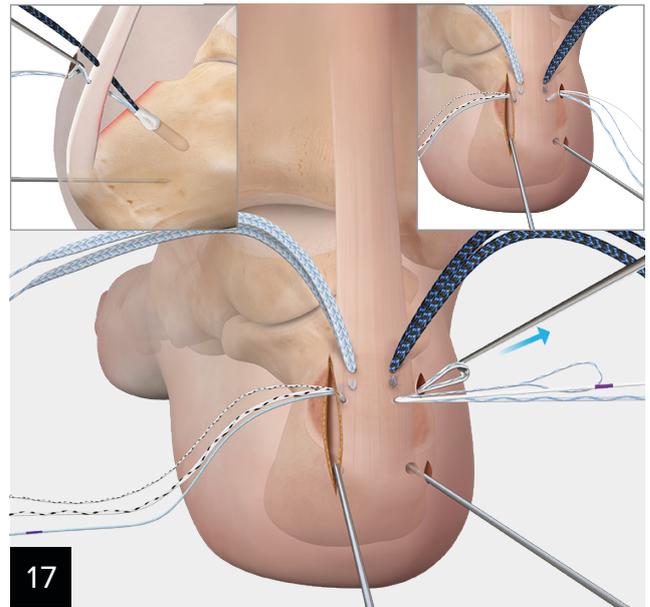
Repeat step 14 on the lateral side. Take the free needle with the nitinol loop and load all 3 knotless sutures from the lateral anchor through the nitinol loop. Pass through the proximal lateral portal, Achilles, and skin just distal and slightly lateral to the **black/blue** FiberTape suture.

Ensure that the knotless sutures are equally spaced through the tendon and skin.



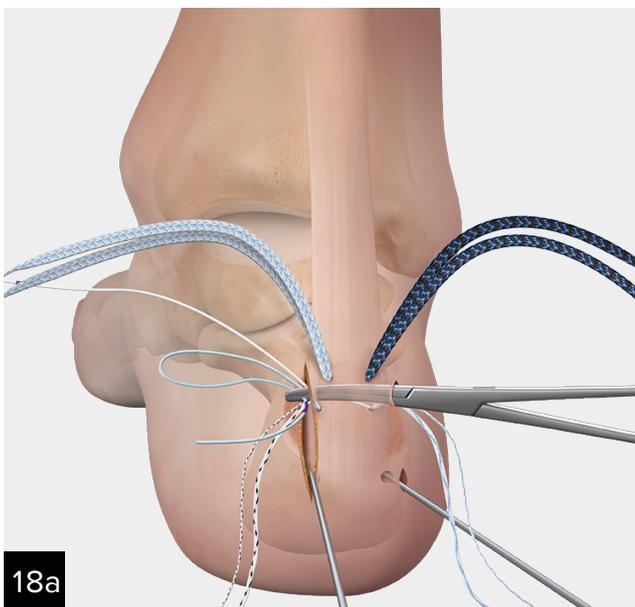
16

Using a hook probe, shuttle the medial knotless sutures into the space between the skin and Achilles tendon and out through the proximal medial mini-open incision.



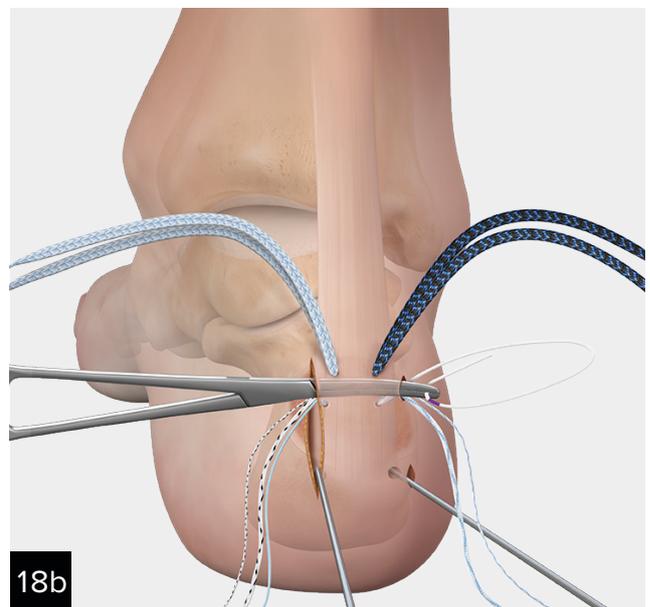
17

Repeat step 16 on the lateral side. Use the hook probe to shuttle the lateral knotless sutures into the space between the skin and the Achilles tendon and out through the proximal lateral portal.



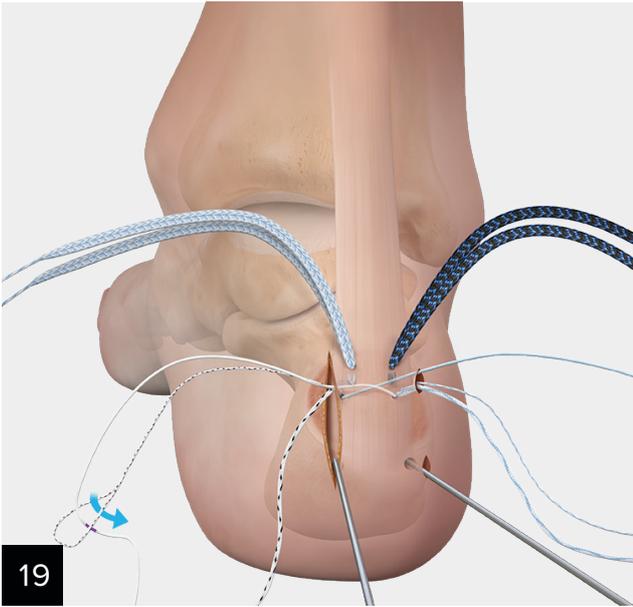
18a

Using a hemostat, shuttle the **blue** working knotless suture with the purple marking from the medial to the lateral proximal portal.



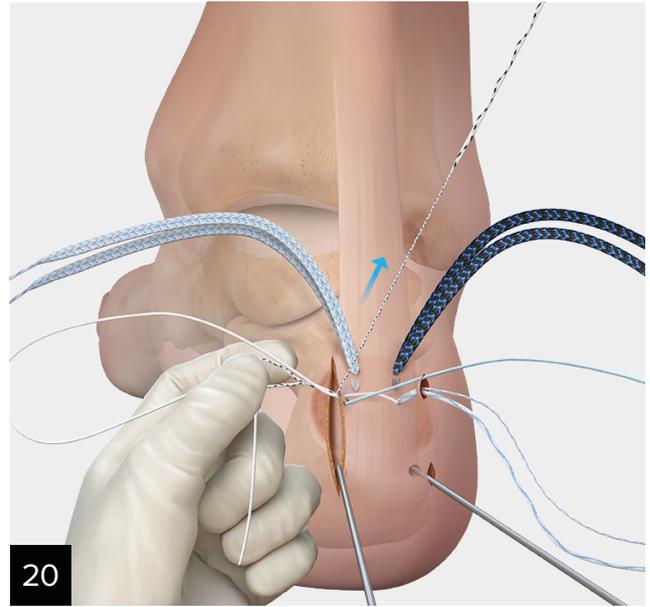
18b

Next, shuttle the **white** working knotless suture with purple marking from the lateral to the medial proximal mini-open incision.



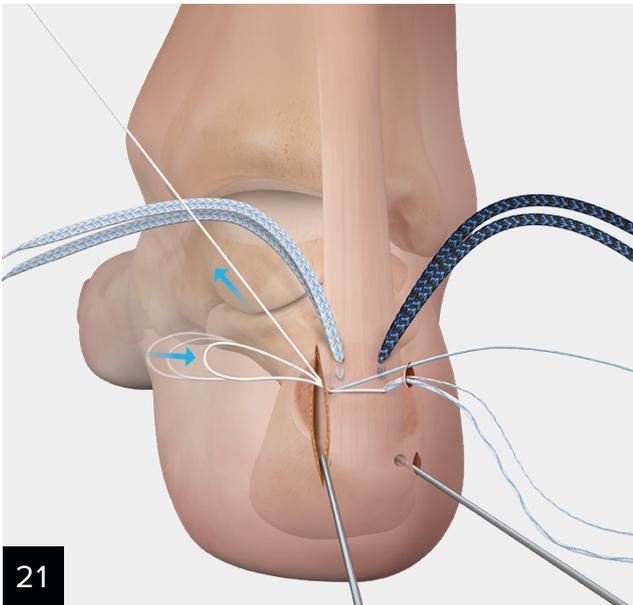
19

Using the loop end of the **white/black** shuttling suture, load the **white** knotless suture through the looped end and double over at the purple marking on the white knotless suture.



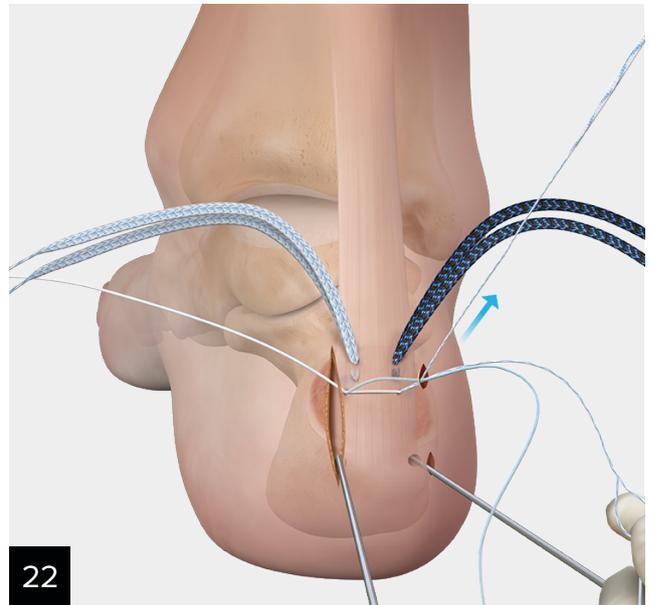
20

Pinch and hold at the loop and purple marking. With the tape end of the **white/black** shuttling suture, pull axially in line with the insertion of the anchor until resistance is met. Use short jigs until the working knotless suture is shuttled all the way out of the mini-open incision.



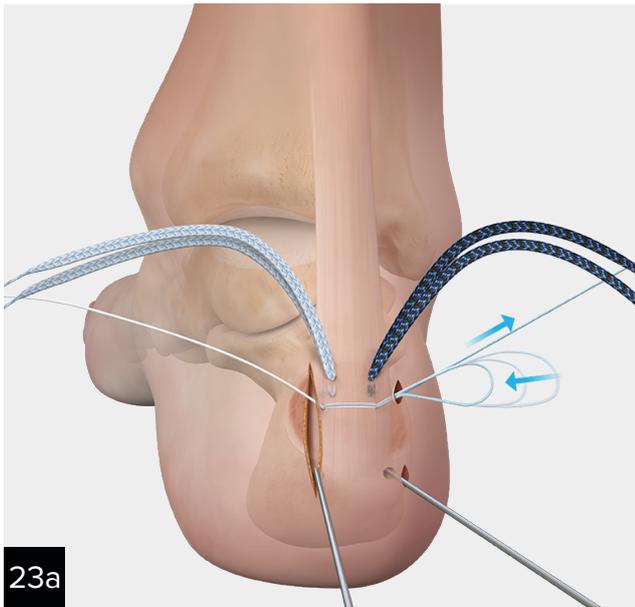
21

To avoid any twisting of remaining suture, ensure the **white** knotless working suture is cinched with care by holding it as it moves down into the mini-open incision. **Do not tension** all the way down before shuttling the contralateral sutures.



22

Using the loop end of the **white/blue** shuttling suture on the lateral side, load the **blue** knotless suture through the looped end and double over at the purple marking on the **blue** knotless suture. Pinch and hold at the loop and marking.



23a

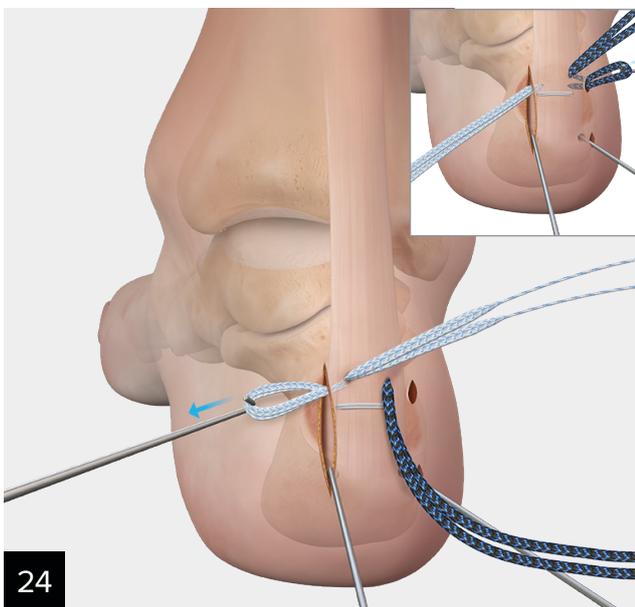
With the tape end of the **white/blue** shuttling suture, pull axially in line with the insertion of the anchor until resistance is met. Use short jigs until the working knotless suture is shuttled all the way out of the portal.



23b

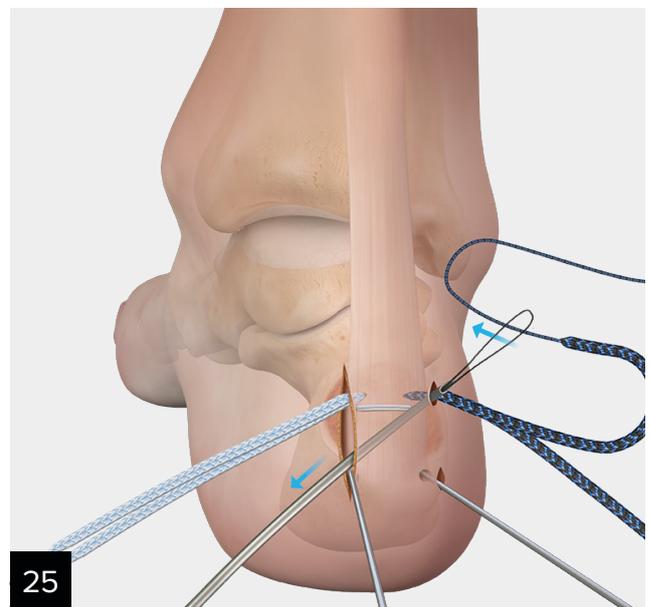
To avoid any twisting of remaining suture, ensure the **blue** knotless working suture is cinched with care by holding as it moves down into the portal.

Complete final tensioning of the knotless rip-stop.



24

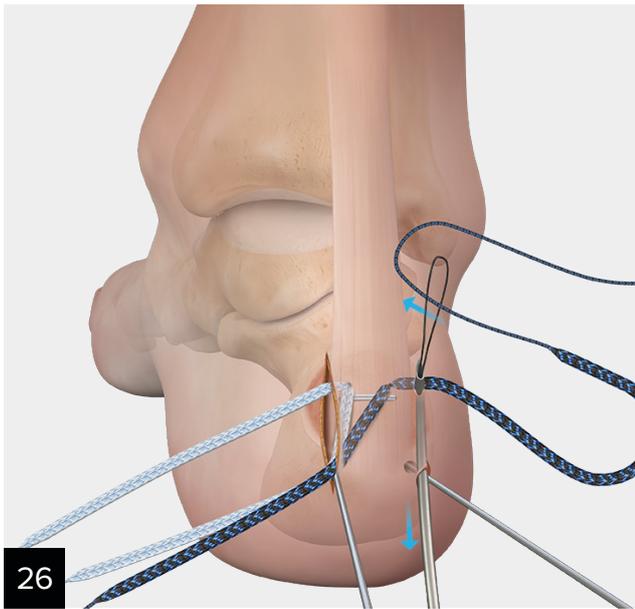
Using the hooked probe, retrieve both blue ends of the FiberTape® suture through the medial mini open incision between the skin/tendon and both **black/blue** FiberTape sutures between the skin/tendon through proximal lateral portal.



25

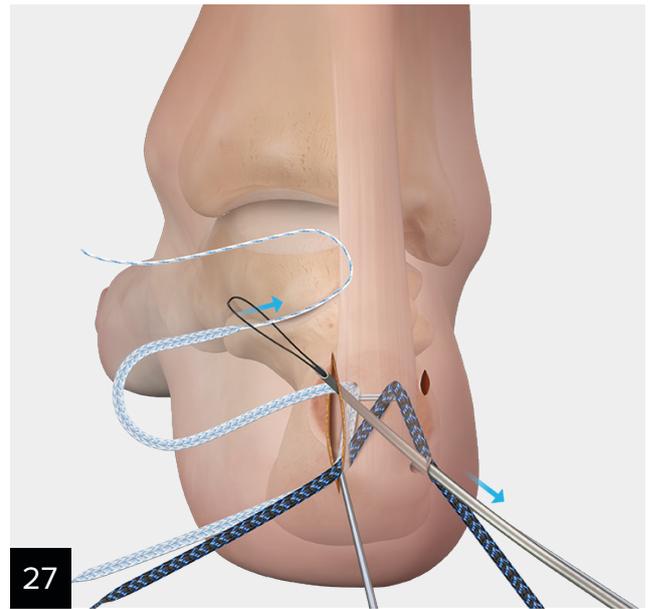
Next, use the Banana SutureLasso™ suture passer to retrieve one black/blue FiberTape suture end from proximal-lateral to distal-medial between the skin and tendon.

Note: Ensure the tip of the Banana SutureLasso suture passer does not pierce the FiberTape suture, skin, or Achilles tendon.



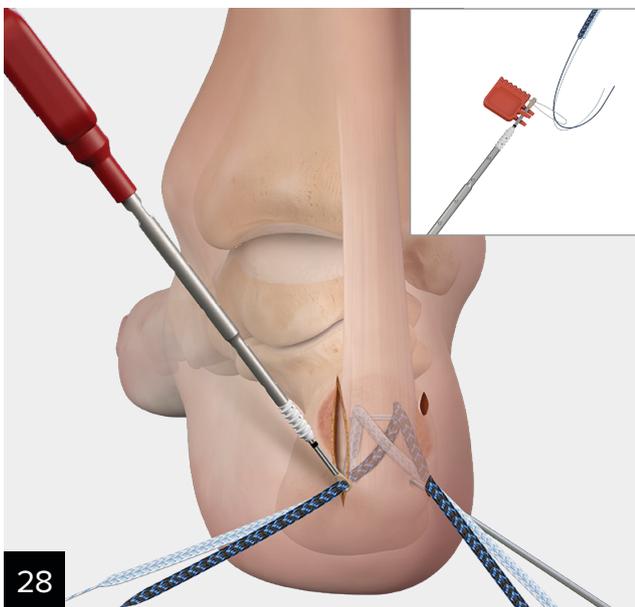
26

Use the Banana SutureLasso™ suture passer to retrieve 1 **black/blue** FiberTape suture between the skin and the tendon, from proximal-lateral, to distal-lateral.



27

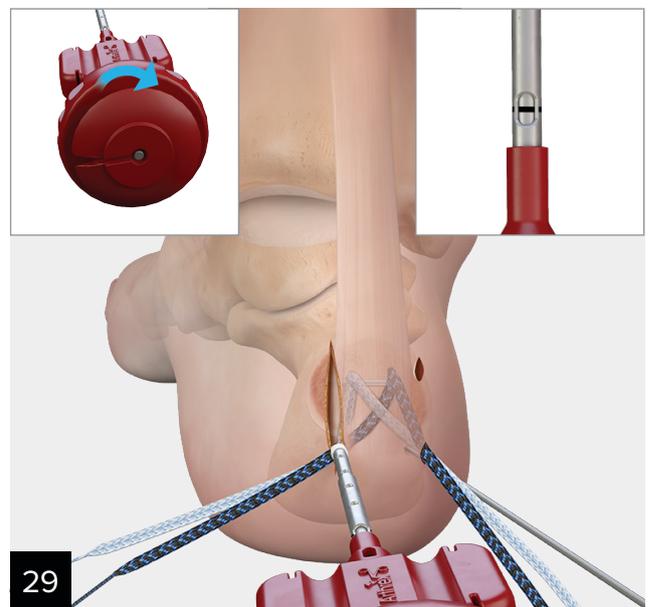
Use the Banana SutureLasso suture passer to retrieve 1 **blue** FiberTape suture between the skin and the tendon, from proximal-medial, to distal-lateral.



28

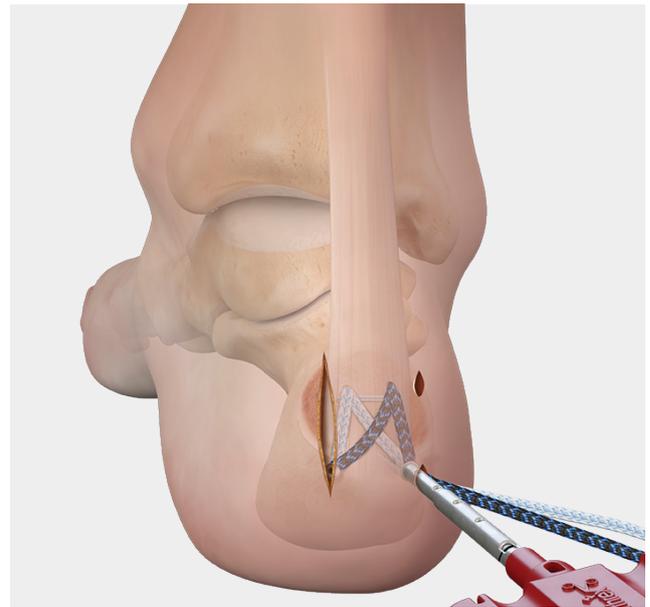
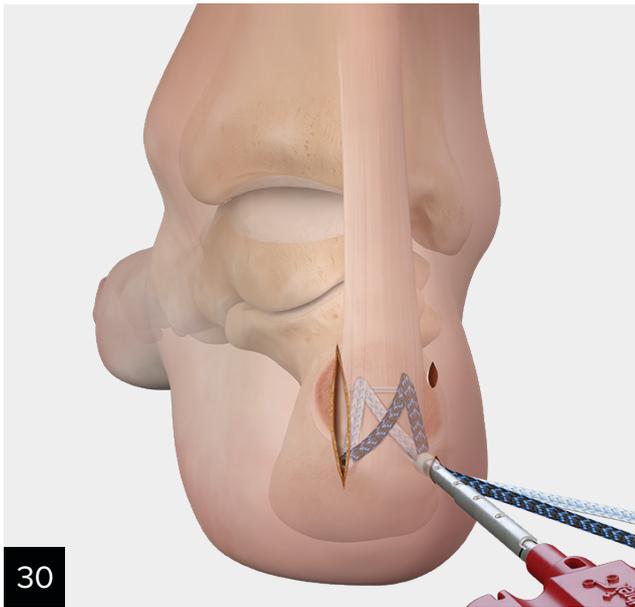
Using the orange tab on the DX 3.9 mm BioComposite SwiveLock® anchor, pull the two ends of the FiberTape suture through the eyelet to load the anchor. Align the anchor in the same trajectory as the K-wires where holes were drilled and tapped previously through the distal medial mini-open incision.

Note: Ensure the eyelet holes are facing up and down so the FiberTape suture slides easily.

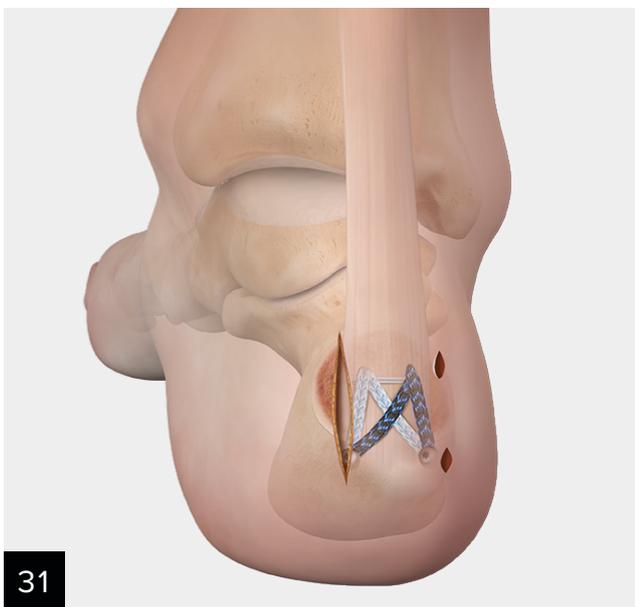


29

Remove the K-wire and insert the DX 3.9 mm BioComposite SwiveLock anchor and mallet into where the tip of the anchor meets bone. Hold the paddle and twist the handle of the inserter until the laser line on the inserter meets the laser line in the window of the inserter, making sure the anchor is 2 mm countersunk. Remove the inserter.



Repeat step 28 for the second DX 3.9 mm BioComposite SwiveLock® anchor.



Cut sutures to complete the mini-open FiberTak® Achilles SpeedBridge™ repair.



Close each of the mini-open incision portals with a monofilament suture using a running stitch and simple knots to approximate the skin.

Ordering Information

MIS BioComposite Knotless FiberTak® Achilles SpeedBridge™ Repair Implant System

Product Description	Item Number
2.6 mm Knotless FiberTak® DX Anchor, w/ 1.7 mm FiberTape® loop, blue MTS w/ needle	AR-9928BCK-MIS
2.6 mm Knotless FiberTak DX Anchor, w/ 1.7 mm FiberTape loop, black/blue MTS w/ needle	
DX 3.9 mm BioComposite SwiveLock® Suture Anchors, qty. 2	
Bone Tap, cannulated	
Slotted Drill Guide	
Obturator	
K-Wire Targeting Sleeve	
Drill Guide	
K-Wires, 1.35 mm, qty. 2	
Drill Bit, cannulated, 2.6 mm, short	
Drill Bit, 2.6 mm, long	
Free Needle w/ Nitinol Loop, qty. 2	
Banana SutureLasso™ Suture Passer	
Burr, 4.3 mm	
Hook Probe	

MIS BioComposite FiberTak Achilles SpeedBridge Repair Implant System, 3.9 mm

Product Description	Item Number
DX 3.9 mm BioComposite SwiveLock Suture Anchor, w/ 1.7 mm FiberTape loop, blue MTS w/ needle	AR-9928BH-MIS
DX 3.9 mm BioComposite SwiveLock Anchor, w/ 1.7 mm FiberTape loop, black/blue MTS w/ needle	
DX 3.9 mm BioComposite SwiveLock Suture Anchors, qty. 2	
Bone Tap, cannulated	
Slotted Drill Guide	
Obturator	
K-Wire Targeting Sleeve	
Drill Guide	
K-Wires, 1.35 mm, qty. 2	
Drill Bit, cannulated, 2.6 mm, short	
Free Needle w/ Nitinol Loop, qty. 2	
Banana SutureLasso Suture Passer	
Burr, 4.3 mm	
Hook Probe	

References

1. Arthrex, Inc. Data on file (APT-01462, APT-00924, APT-01140). Naples, FL; 2007-2019.
2. Arthrex, Inc. Data on file (APT-05964). Naples, FL; 2023.
3. Arthrex, Inc. Data on file (APT-06030). Naples, FL; 2023.



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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