Arthrex®

VersaGraft™ Presutured Tendon for Lateral Ankle Reconstruction

Lateral Ankle Reconstruction

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The VersaGraft™ presutured tendon is a preassembled, presized, sterile allograft tendon for use with the Lateral Ankle Reconstruction Implant System to achieve an anatomic reconstruction of the anterior talofibular and calcaneofibular ligaments with simple tensioning and rigid fixation. This presutured tendon was precisely assembled according to Arthrex specifications by highly trained tissue technicians to ensure the presutured tendon meets the requirements of the Lateral Ankle Reconstruction technique.

Diameter 4.5 ± .5 mm
Length 150 – 250 mm*
#2 FiberWire
Sterile (10^{-6} SAL)
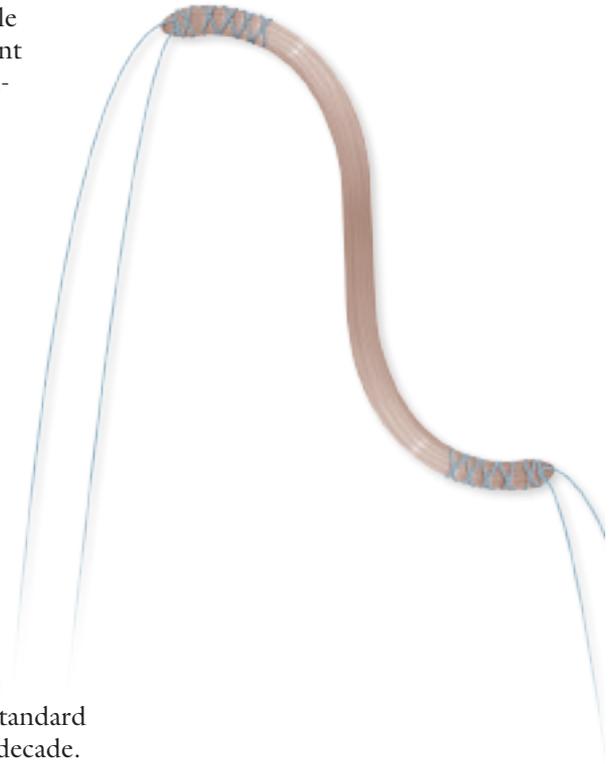
Lateral Ankle Reconstruction Implant System (AR-1675BC-CP)
The Lateral Ankle Reconstruction Implant System delivers the gold standard interference screw fixation that surgeons have counted on for over a decade. The implant system includes BioComposite Tenodesis Screws, instruments and accessories–reducing OR inventory and sterilization costs. By using the VersaGraft presutured tendon to recreate the ATFL and CFL ligaments, surgeons are able to achieve a reproducible, rigid and anatomic reconstruction necessary for patients with ligamentous laxity or surgical revisions.

Ruler

2.4 mm Guide Pins

Cannulated Drills

BioComposite Tenodesis Screw Driver 6.25 x 15 mm (white)

Nitinol SuturePassing Wire

BioComposite Tenodesis Screw Driver 5.5 x 15 mm (blue)

FiberLoop (3) and #2 FiberWire (1)

BioComposite Tenodesis Screw Driver 4.75 x 15 mm (green)
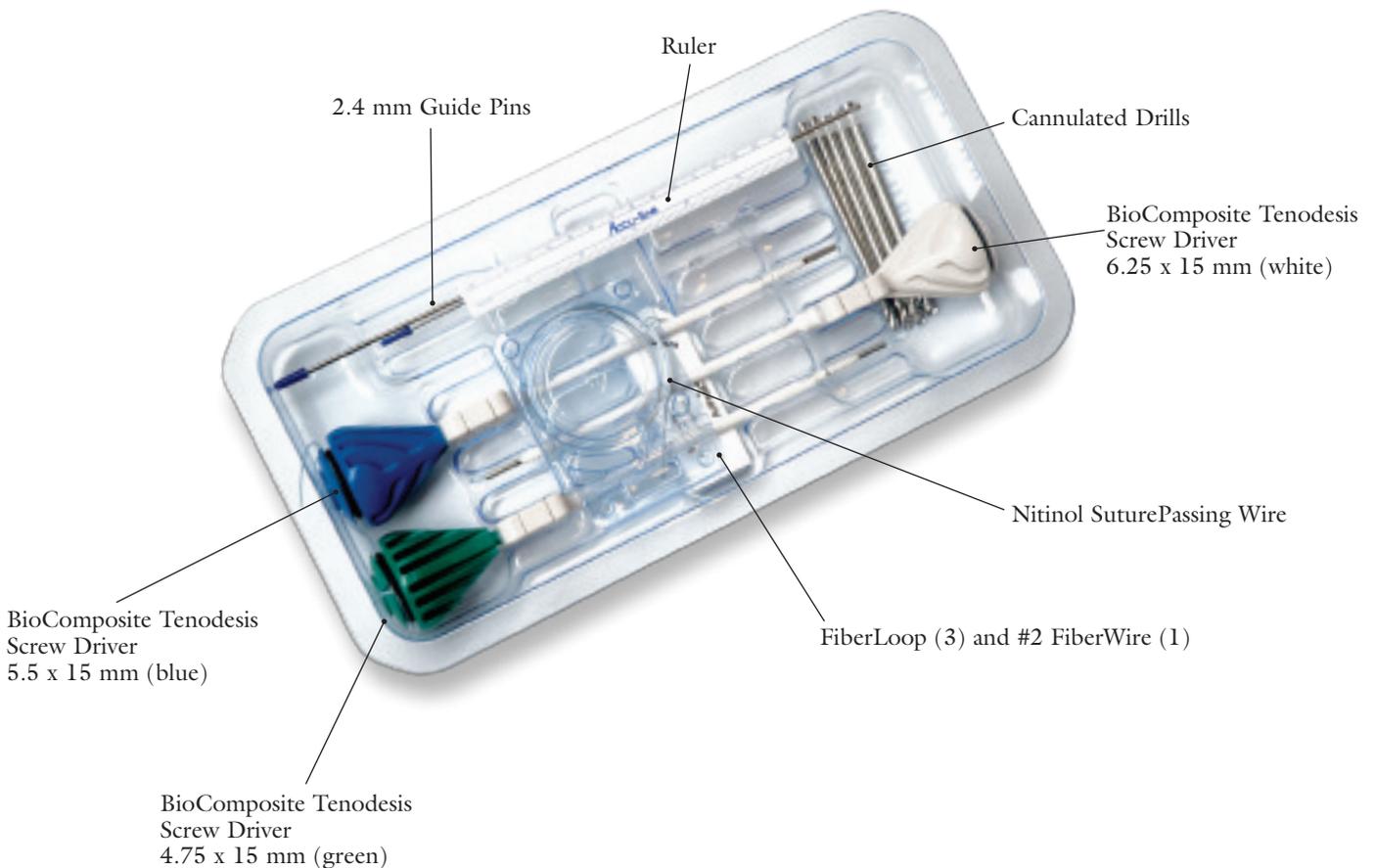
* The LifeNet Health Presutured Tendon for Lateral Ankle has a length of 150-160 mm.

An arthrotomy is made at the talofibular joint and is carried around the distal end of the fibula to the peroneal sheath. This sheath is opened and the peroneal tendons are retracted posteriorly. The capsule and periosteum over the distal fibula is elevated, exposing the previous insertion of the calcaneo-fibular (CFL) and anterior talofibular (ATFL) ligaments.
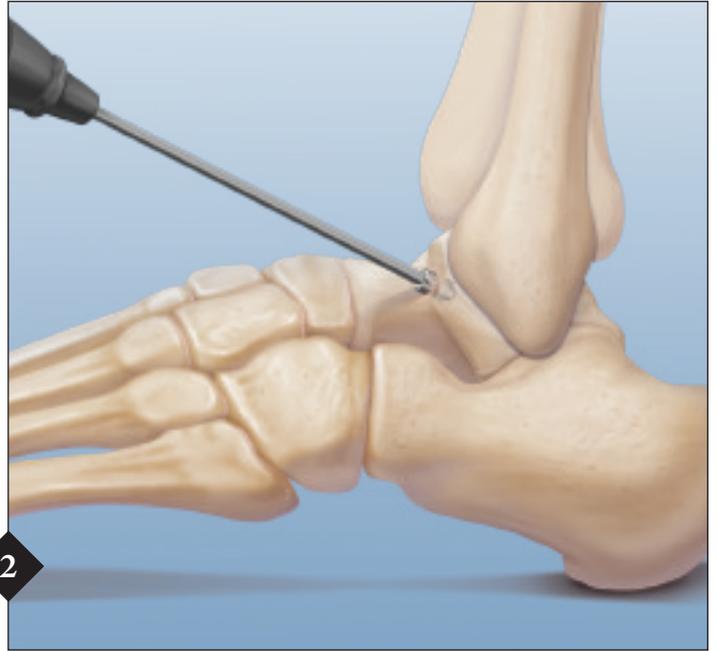
A 5.5 mm diameter x 17 mm long tunnel is drilled in the talus and a 5 mm tunnel is created in the fibula for passage of the graft.
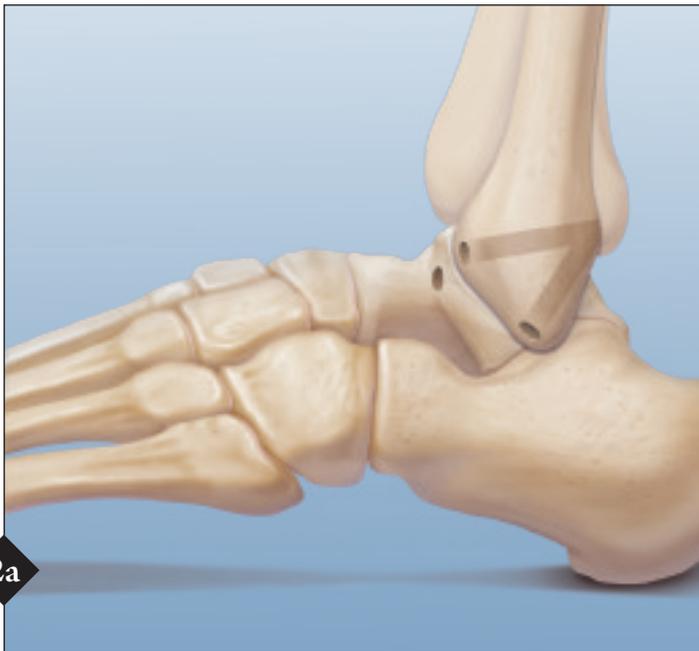
After anatomic attachment sites are determined, pilot holes are drilled with a 2.4 mm guide pin in the talar neck and calcaneus. Two options are described for reaming the fibular sockets. *Drill Technique Option a*: The fibular socket (ATFL arm) should start anterior to posterior, angling slightly proximal and exiting the posterior fibula. The CFL arm is drilled from the anatomic attachment site of the CFL on the tip of the fibula to the posterior fibula. This approach will increase the bone bridge between the ATFL arm and CFL arm of the construct.
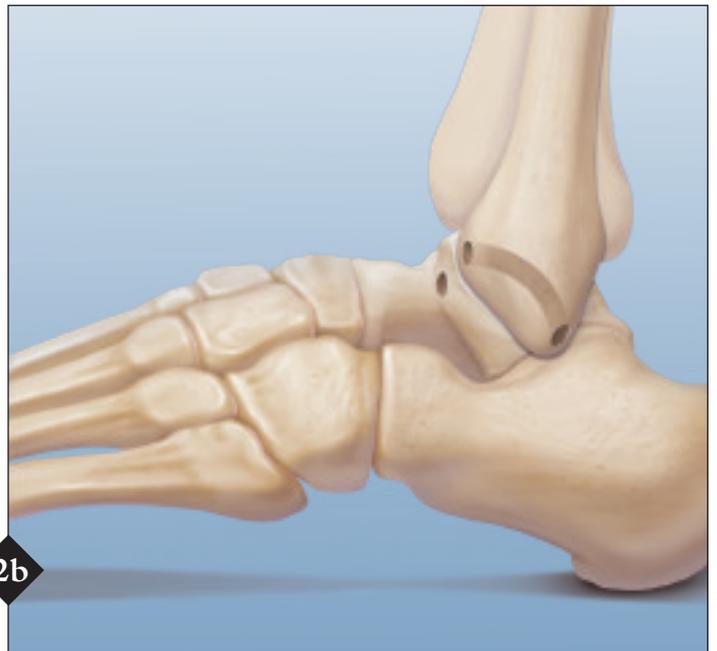
Drill Technique Option b: Using a 5 mm Cannulated Headed Reamer, drill from the anterior and distal fibula at the insertion point of the ATFL and CFL ligaments. These tunnels are connected using a curved curette.

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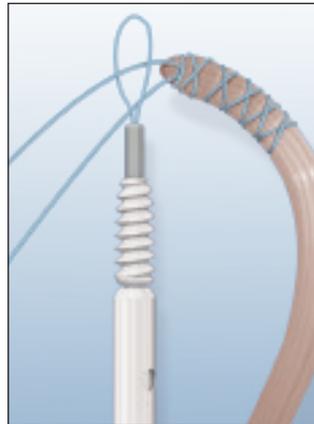
Using the sizing holes on the Bio-Tenodesis Driver's thumbpad, take an accurate diameter measurement of the tendon. Selection of the appropriate Bio-Composite Tenodesis Screw should be based on the diameter of the tendon, from the tip of the tendon to approximately 15 mm along the graft, at both ends.

Prior to placement of the talar screw or calcaneal screw, use the Nitinol wire and #2 FiberWire® to create a suture loop at the tip of the Tenodesis Driver. Snare the tip of the whip-stitched tendon 2 mm from the end of the graft. Place tension on the sutures exiting the back of the handle and wrap them once around the O-ring inside the cleat. It is important to maintain maximum tension between the driver tip and the tendon during initial placement of the tendon in the tunnel.

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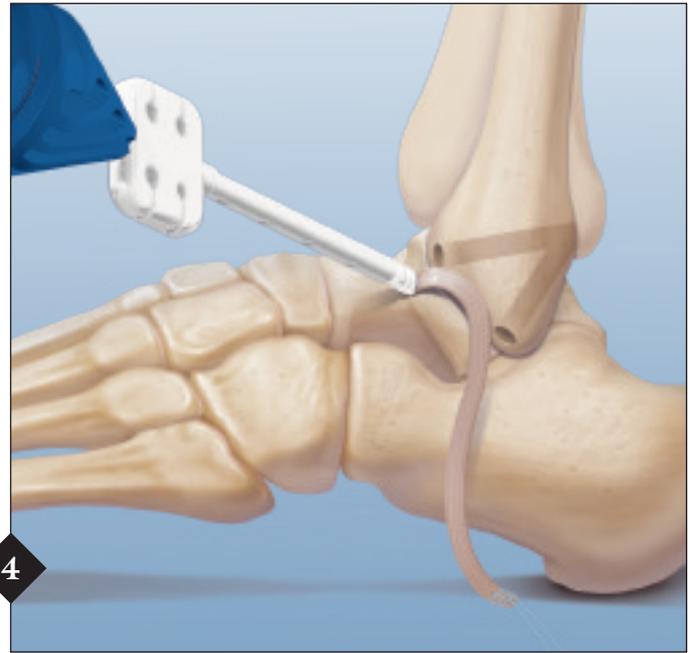
Place the driver tip with tendon into the bone socket. It is important that the tip of the driver, with the tendon attached, be placed in the tunnel until the proximal screw threads are in contact with the anterior cortex. Prior to turning the handle, make sure the tendon is seated properly in the tunnel. Turn the blue handle clockwise while holding the metal thumbpad stationary. The screw is seated properly when it is flush with the cortical bone. Remove the driver and tie the suture tails over the top of the screw. Cut the remaining suture.

5
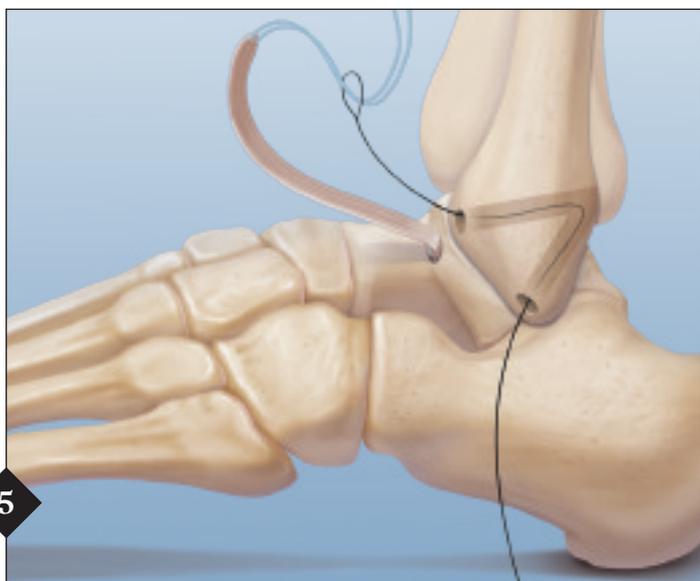
To pass the ATFL arm of the graft through the fibula, insert the nonlooped end of the Nitinol Suture Passing Wire through the anterior fibular drill hole and distally through the tunnel exiting the hole on the bottom of the fibula. With the Nitinol loop exposed, insert both tails of the traction stitch one inch from the tip. Pull the Nitinol loop through the fibular tunnel, passing the graft from proximal to distal. The tendon graft is now ready for proper anatomic tensioning and calcaneal screw placement.

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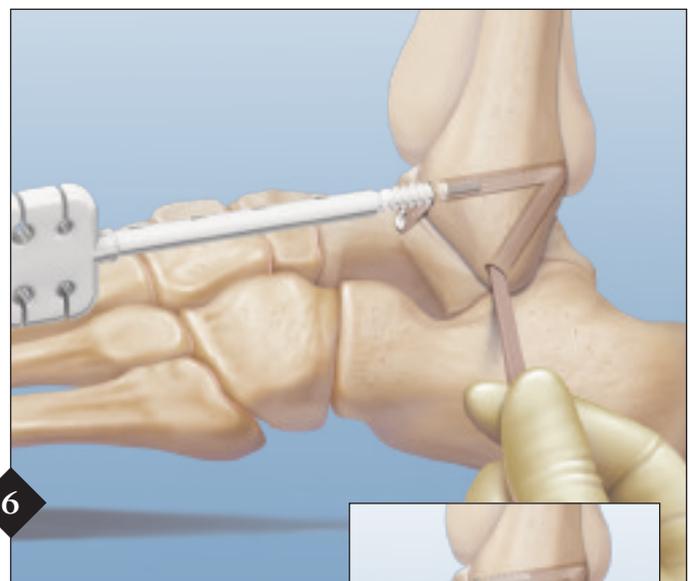
An optional screw can be placed into the anterior fibular tunnel to recreate the ATF ligament and to limit motion throughout the entire construct.
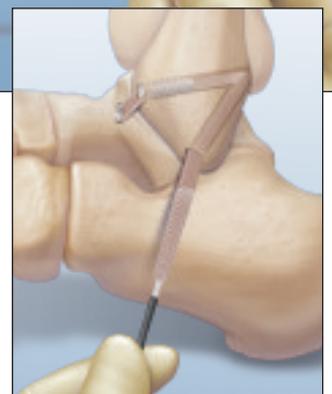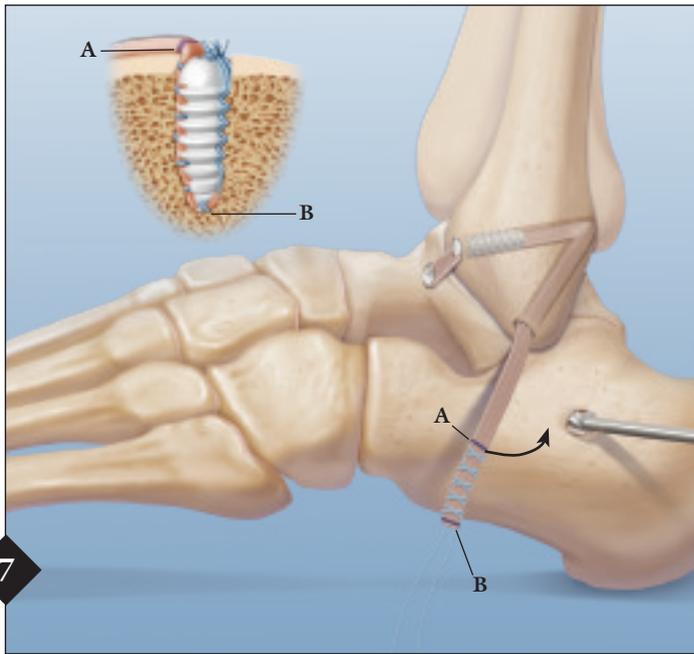
Tension the CFL arm with neutral ankle flexion and slight heel eversion and mark a blue line across the tendon where the graft should enter the calcaneal bone tunnel (A). Measure 17 mm down (2 mm more than length of a 5.5 mm x 15 mm screw) on the remaining tendon graft and place another blue mark (B). Whipstitch the portion of the tendon between the two blue lines and remove any excess tendon. Place the heel in slight eversion and the ankle in a neutral position prior to screw insertion. To insert the screw, hold the thumb-pad and turn the blue handle. Insert the screw until it is flush with the lateral cortex.

Alternative Fixation Method in Calcaneus
Using a 2.4 mm Beath Pin (w/eyelet), drill a pilot hole from the insertion point (CFL) posteromedially, exiting the medial cortex of the calcaneus. Overdrill the pilot hole with a 5.5 mm reamer to a depth of 17 mm. The suture on the end of the tendon is passed through the tunnel with the aid of the Beath Pin. This suture is tensioned, pulling the graft into the tunnel. The driver with a screw attached is placed over the graft and inserted, while tension is applied to the traction suture. The remaining traction suture is cut. Reference Step 8a for a close-up of the complete construct using this alternative fixation method.
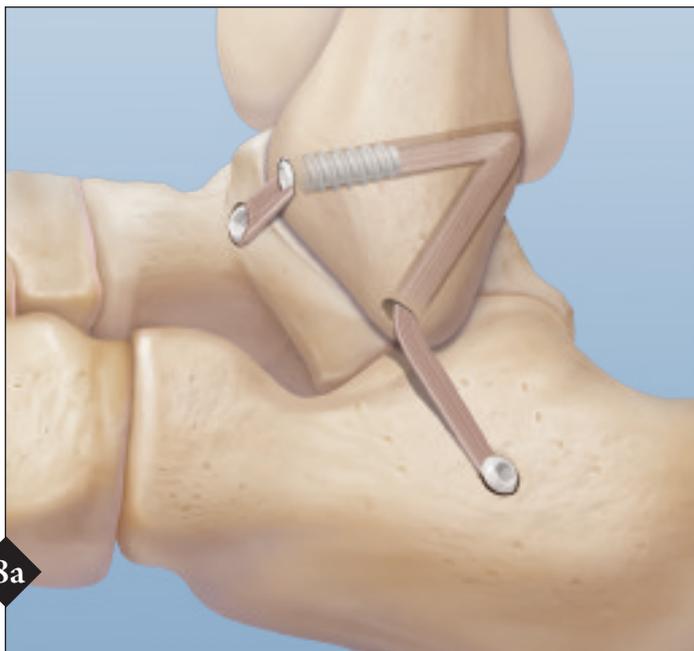
The construct is complete, using Option A fibular drilling techniques. A third screw can be placed into the fibular ATFL tunnel to minimize loss of fixation in the fibula.
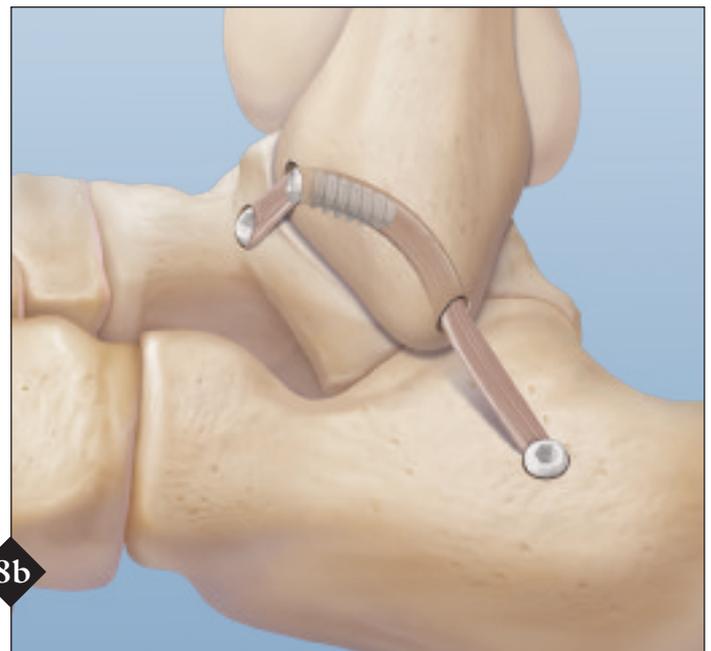
The construct is complete, using Option B fibular drilling techniques.

VersaGraft Presutured Tendon (contact your Arthrex representative for ordering assistance). Allografts are ordered separately through our tissue partners: JRF Ortho Orders 877-255-6727; LifeNet Health Orders 888-847-7831.

JRF Ortho Part Number: VRG-001
LifeNet Health Part Number: FPSST
*LifeNet Health Presutured Tendon for Lateral Ankle has a length of 150-160 mm

Ordering Information

Lateral Ankle Reconstruction Implant System (AR-1675BC-CP) includes:
BioComposite Tenodesis Screws on Disposable Tenodesis Drivers:
   4.75 mm x 15 mm (fibula)
   5.5 mm x 15 mm (talus)
   6.25 mm x 15 mm (calcaneus)
Guide Pins, 1.6 mm and 2.4 mm
#2 FiberWire, blue
6" Ruler
Nitinol Suture Passing Wire
Two FiberLoops w/Straight Needle
Cannulated Drills, 5, 5.5, 6 and 6.5 mm
QuickPass Tendon Shuttle

VersaGraft Presutured Tendon

Multimedia:

Comprehensive Foot & Ankle Surgical Technique	DVD-1103
Lateral Ankle Reconstruction, Ankle Arthroscopy and Talar OATS by Nicholas Abidi, M.D. (Web only)	DVD-1107

Literature:

Bio-Tenodesis Brochure	LB1-0505-EN
Modified Brostrom-Gould Technique for Lateral Ankle Ligament Reconstruction	LT0490
Five Comprehensive Solutions for Tendon and Ligament Reconstruction Using the Bio-Tenodesis Screw System	LB1-0005-EN
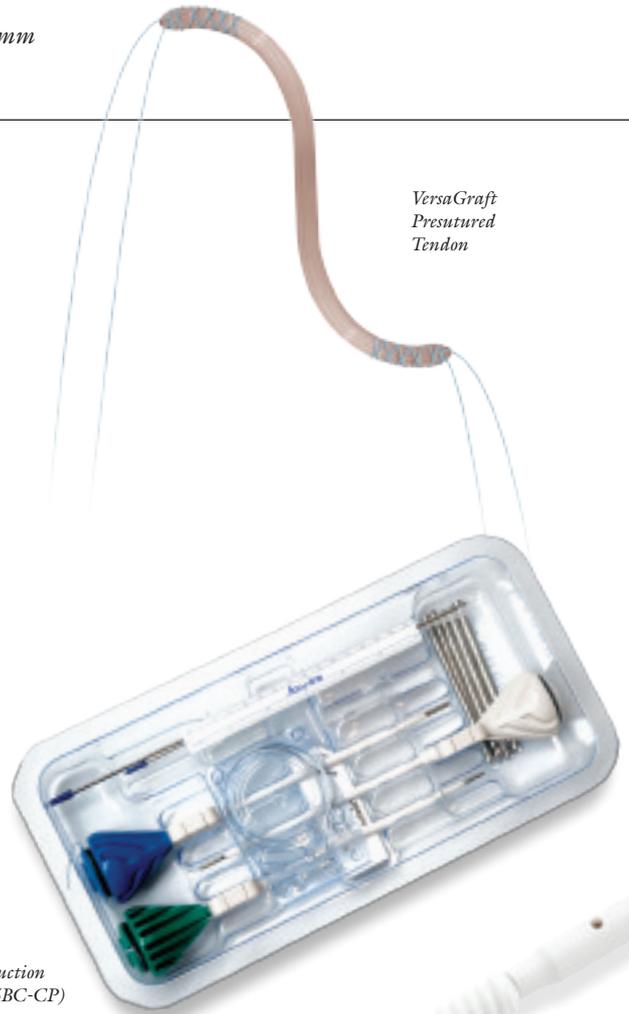
Lateral Ankle Reconstruction Implant System (AR-1675BC-CP)

BioComposite Tenodesis Screw

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