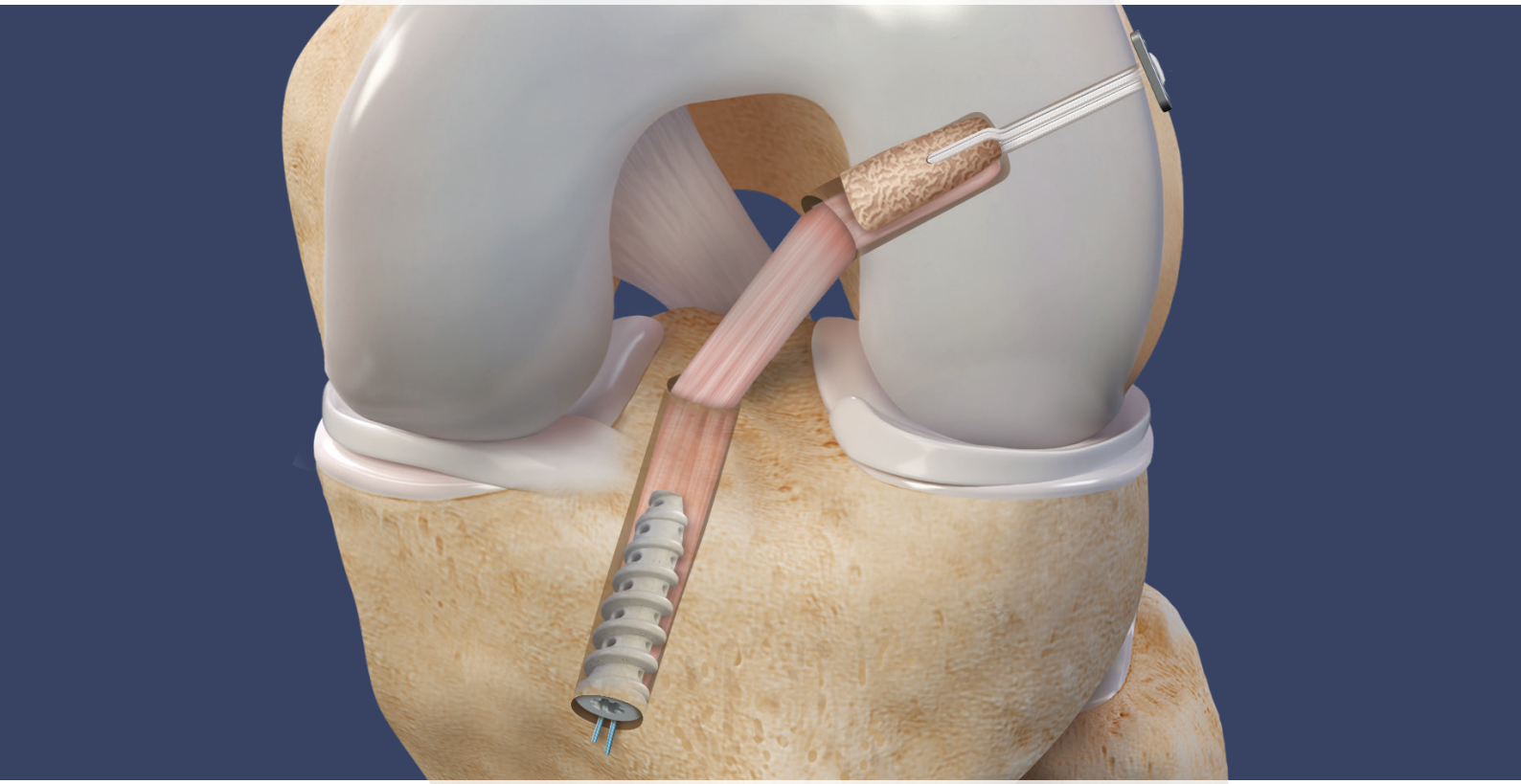
ACL Reconstruction With BTB TightRope® Graft Fixation

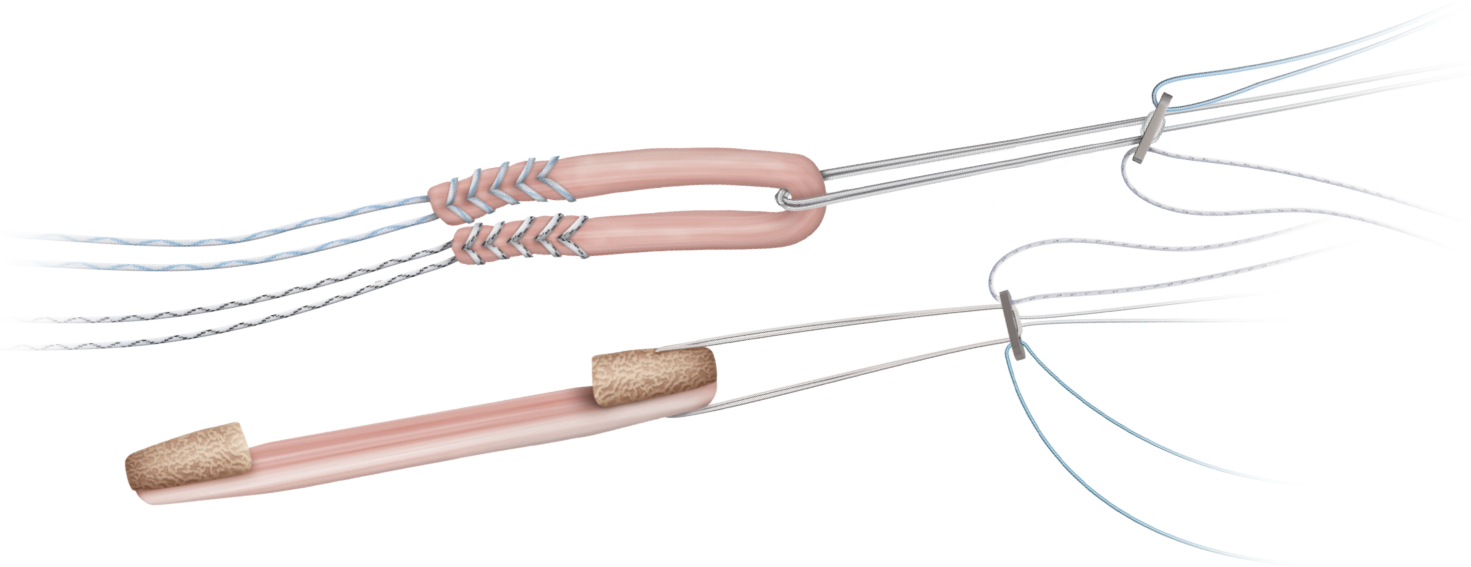
Surgical Technique



Arthrex®

ACL Graft Simplicity and Strength

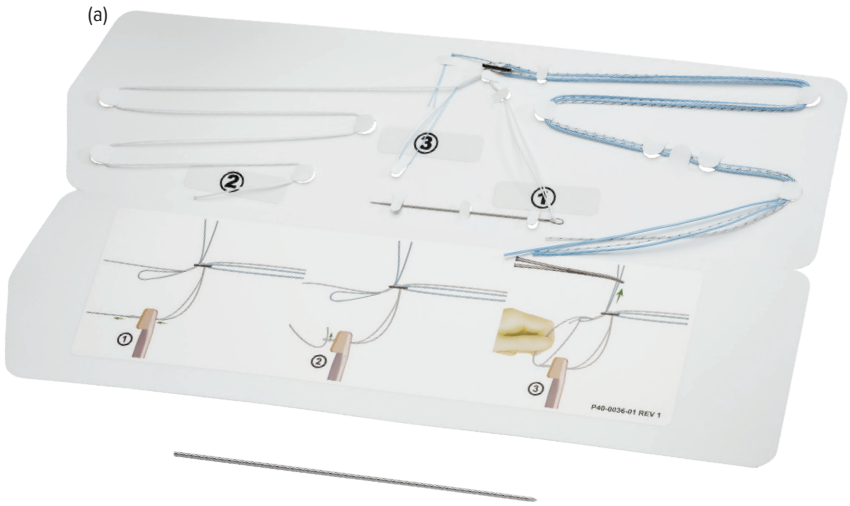
The simplicity and strength of the ACL TightRope® RT-J graft fixation can now be used with bone-tendon ACL grafts. Clinical and biomechanical results show outcomes and performance comparable to interference screws.[1] The construct offers the same adjustable, 4-point locking system as the ACL TightRope RT construct but allows placement through a small drill hole in the cortical bone block. The TightRope button facilitates dependable, cortical fixation and the adjustable loop allows the graft to be pulled into the femoral socket as deep as needed for ideal graft tunnel-matching. The BTB TightRope implant also allows fixation of BTB grafts into anatomic femoral sockets that can be difficult to reach with traditional interference screws. Using the BTB TightRope button, the bone block is able to heal circumferentially within the socket, unimpeded by an interference screw.

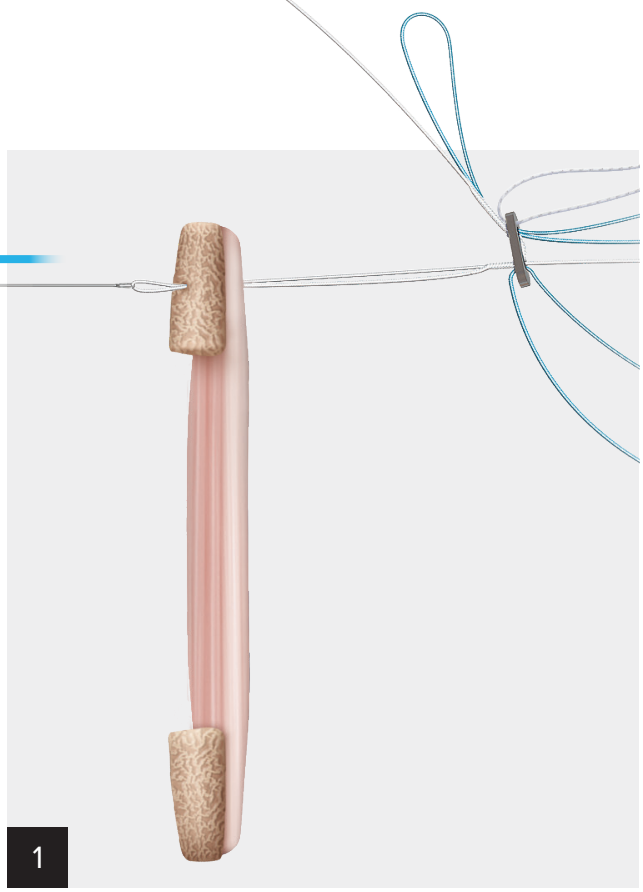


Graft Preparation and Implant Loading

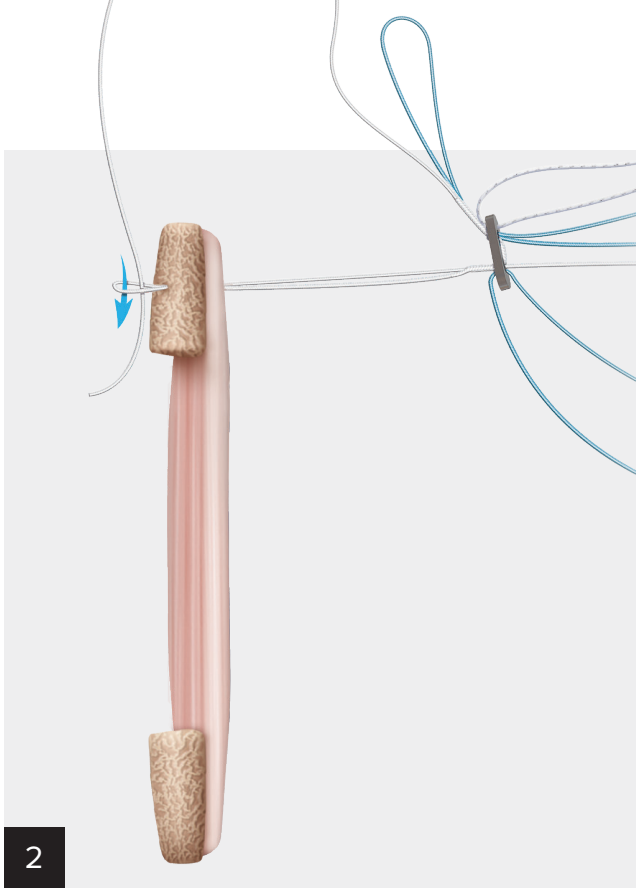
It is recommended to use the BTB TightRope implant for bone blocks of 10 mm in diameter and 20 mm in length. Use the 2 mm drill pin to place a hole 10 mm from the end of the bone block, perpendicular to the cortical bone. The BTB TightRope implant is packaged in a special card to facilitate assembly. Step-by-step instructions are also included on the card (a).

(a)

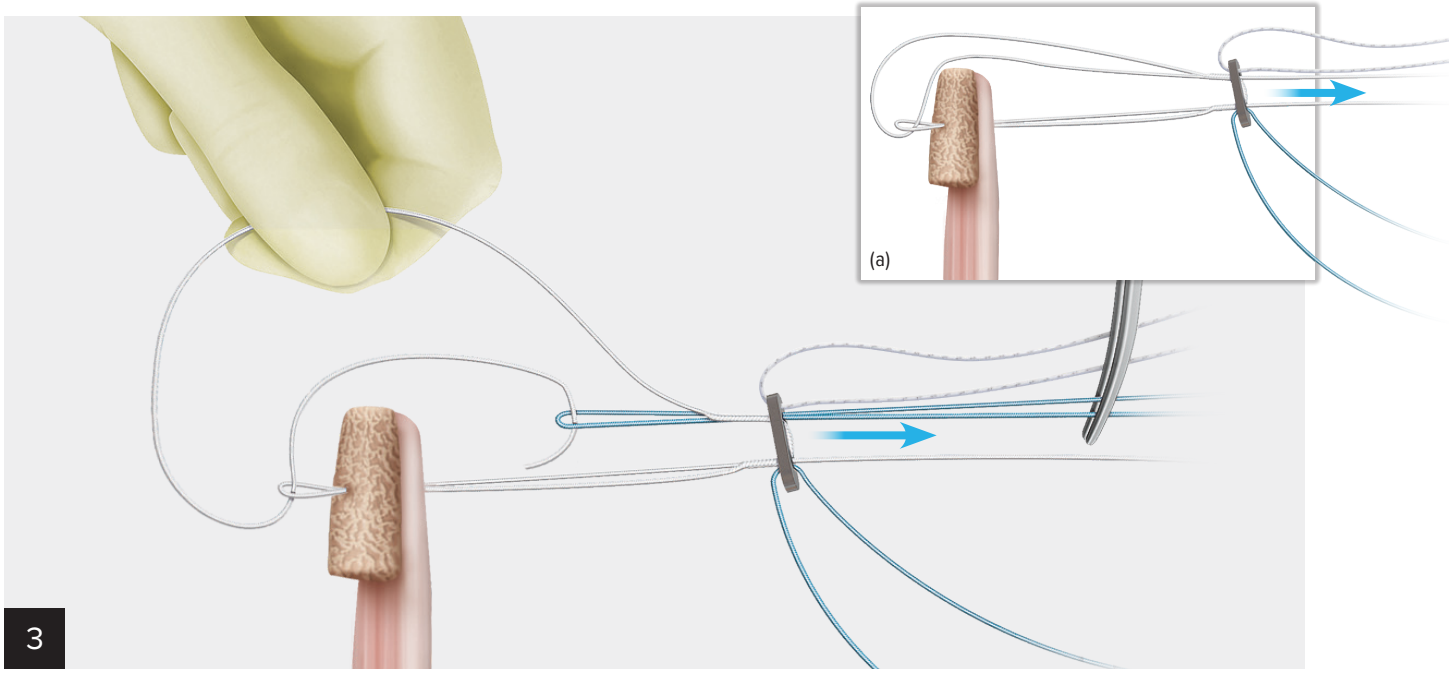




Use the attached needle to pass the looped limb of the TightRope® implant through the bone block. Once passed, cut the wire off the needle and remove the needle. Take care not to damage implant during cutting.

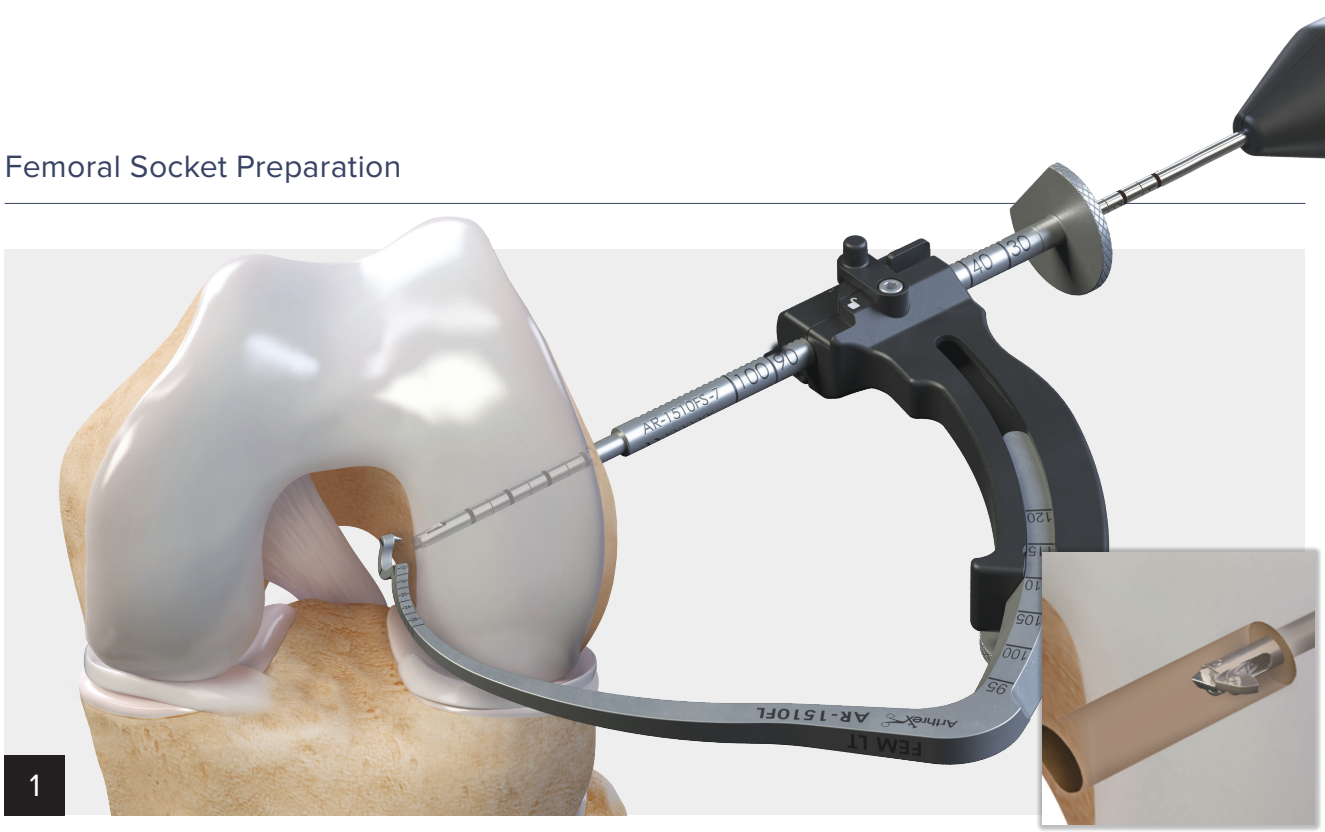


Pass the straight limb of the TightRope implant through the first loop.



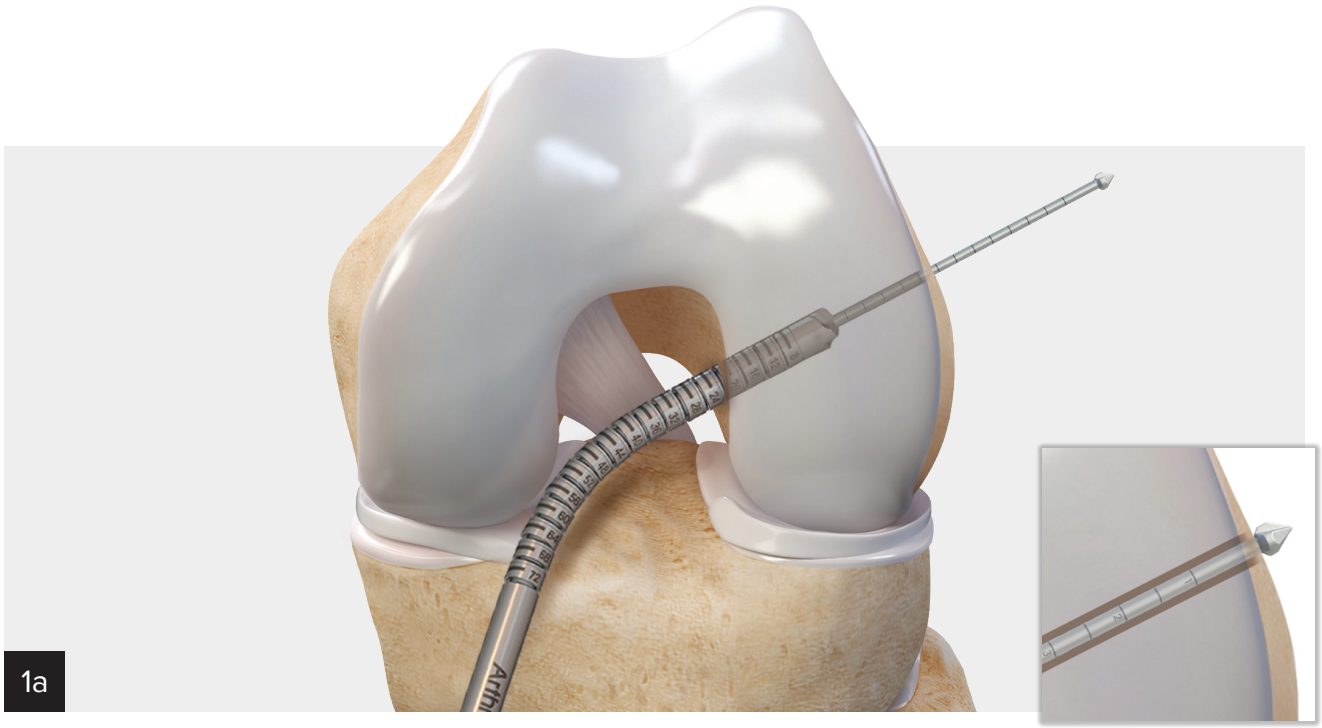
Place 1 cm of the tip of the straight limb into the blue passing suture loop and fold it over. Pull the tails of the passing suture loop to deliver the straight limb through the suture splice and button. **Note: As the suture is passed through the splice, there will be resistance. Use a hemostat to pull the passing suture while holding firm countertension on the straight suture.** Pull on the newly created shortening strand to even up the loop lengths before implantation (a).

Femoral Socket Preparation



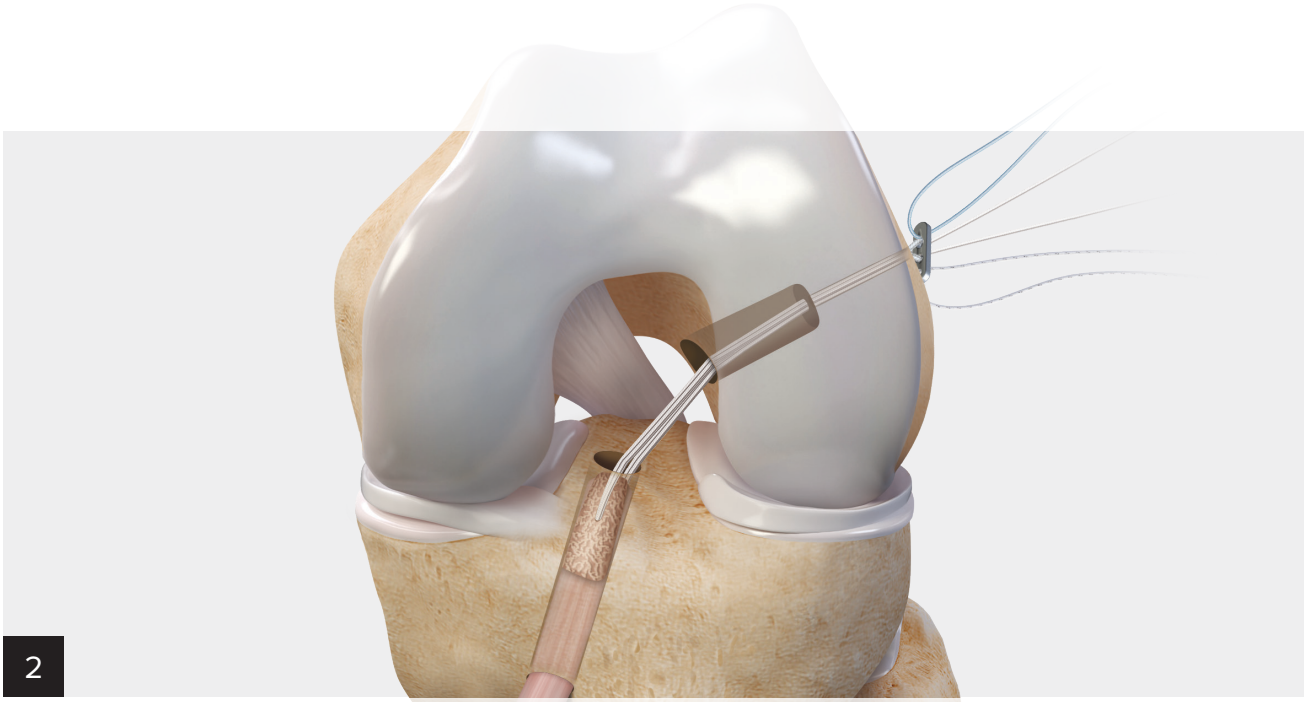
1

FlipCutter™ III Drill Option: The femoral socket can be prepared in a retrograde fashion using the FlipCutter III drill and RetroConstruction™ guide system.



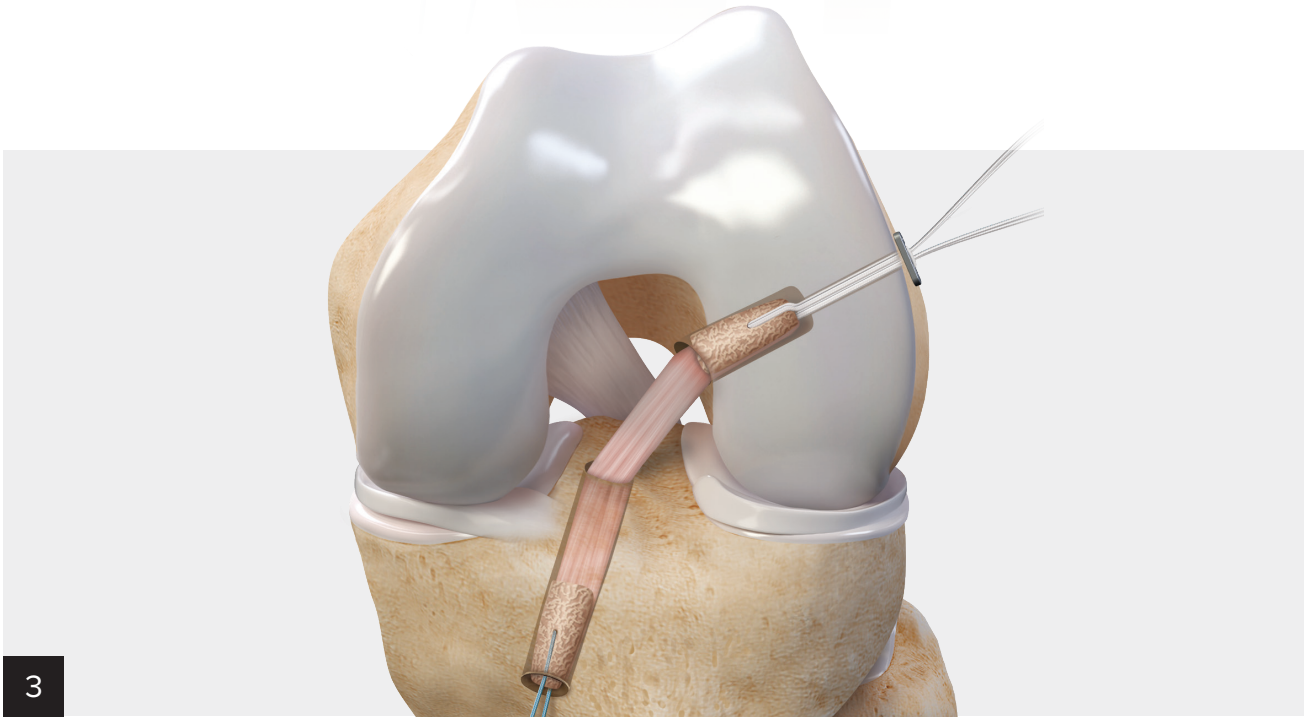
1a

Flexible Reamer Option: The socket can also be prepared in an antegrade fashion with the ACL TightRope® drill pin and flexible reamers.



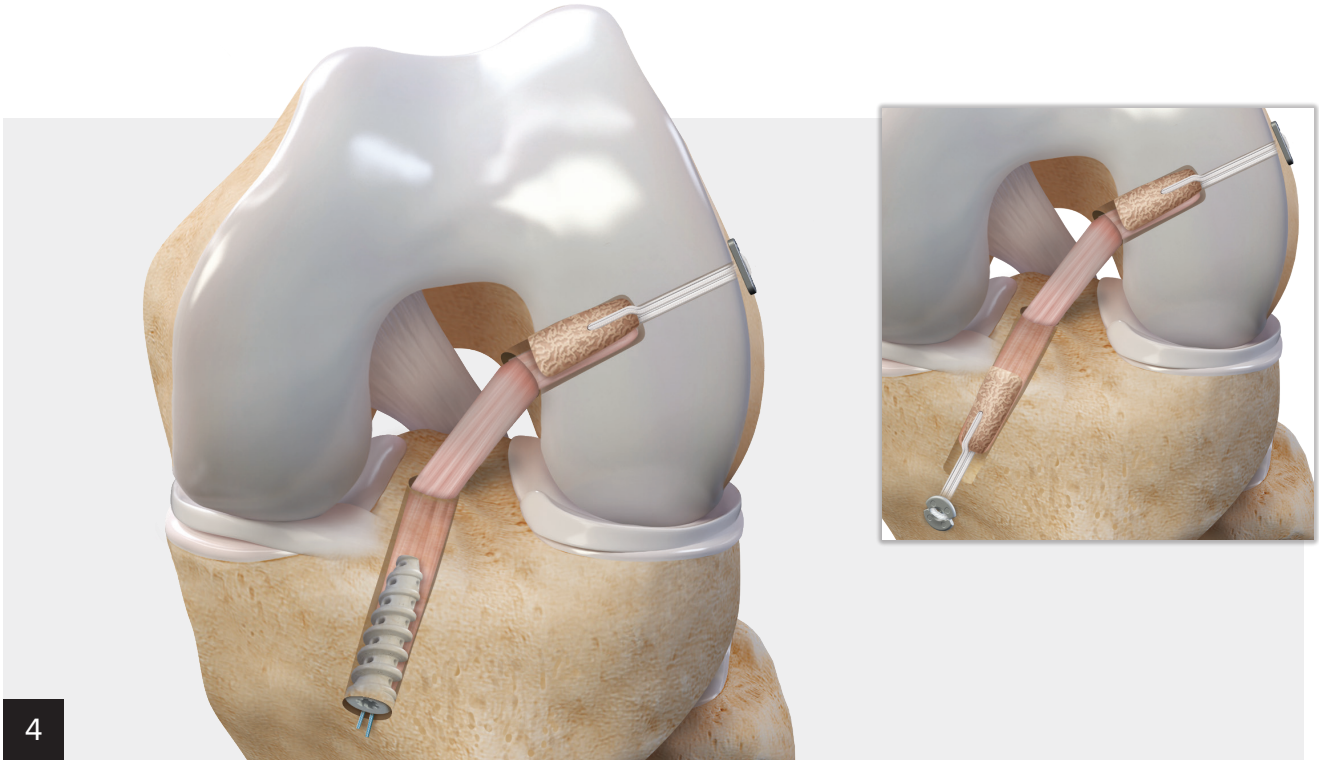
2

Pass the blue passing suture, white/black flipping suture, and white tensioning strands together through the femur. Pull even tension on the sutures. Clamp the sutures together and pull to advance the button. Pull the button through the femur. The white/black flipping suture can be used to confirm deployment of the button on the cortex. A line on the implant marked at the intraosseous length may be helpful to signal that the button has exited the femur. The button can also be viewed through the medial portal as it exits the femoral cortex.



3

Hold slight tension on the tibial graft sutures during graft advancement. To advance the graft, pull on the tensioning strands one at a time, alternating approximately 2 cm on each side. When the femoral bone block is visible in the joint, stop advancing the graft and align the bone block with the femoral tunnel using a grasper or probe. Once the graft is fully seated, pull firmly back on the graft to check fixation. **Note: Once the graft is seated, do not continue pulling the tensioning strands. If tunnels are divergent, it may be helpful to use a probe through the lateral portal to facilitate implant and graft passage out of the tibia and into the femoral socket.**



4

Fix the tibial side of the graft and retension the femoral BTB TightRope implant if additional graft tension is desired. Cut the femoral BTB TightRope shortening strands. An open TightRope ABS implant and appropriate concave ABS button can be used for tibial fixation if an all-inside technique is preferred.

Ordering Information

Implants

Product Description	Item Number
TightRope® Implants	
BTB TightRope Implant w/ flipping suture	AR-**1588BTB-J**
Open TightRope ABS Implant	AR-**1588TN-1**
TightRope ABS Button, 11 mm	AR-**1588TB-3**
TightRope ABS Button, 14 mm	AR-**1588TB-4**
TightRope ABS Button, 20 mm	AR-**1588TB-5**
FastThread™ BioComposite Interference Screws	
6 mm × 20 mm (used with 6 mm driver)	AR-**4020C-06**
7 mm-10 mm × 20 mm Screws	AR-**4020C-07 – 10**
7 mm-12 mm × 30 mm Screws	AR-**4030C-07 – 12**
FastThread PEEK Interference Screws	
6 mm × 20 mm (used with 6 mm driver)	AR-**4020P-06**
7 mm-10 mm × 20 mm Screw	AR-**4020P-07 – 10**
7 mm-12 mm × 30 mm Screw	AR-**4030P-07 – 12**

FastThread Instruments

Product Description	Item Number
Interference Screw Insertion Kit	
Interference Screw Insertion Kit (includes dilator and 1.1 mm trocar-tip guidewire)	AR-**1249TK**
Drivers for 7 mm - 12 mm screws	
Fixed Handle Driver (for 20 mm and 30 mm screws)	AR-**1996CD**
Quick Connect Driver (for 20 mm and 30 mm screws)	AR-**1996CD-1**
Fixed Handle Driver (for 20 mm screws only)	AR-**4020D**
Quick Connect Driver (for 20 mm screws only)	AR-**4020D-1**
Flexible Shaft Quick Connect Driver (for 20 mm screws only)	AR-**4020DF**
Nonratcheting Screwdriver Handle	AR-**1999NR**
Ratcheting Screwdriver Handle	AR-**1999**
Drivers for 6 mm × 20 mm screws	
Fixed Handle Driver	AR-**4019D**
Quick Connect Driver Shaft	AR-**4019D-1**
FastThread Taps	
Fixed Handle Taps, 6 mm-10 mm	AR-**4020HT-06 – 10**
Quick Connect Tap Shafts, 6 mm-10 mm	AR-**4020T-06 – 10**
Flexible Quick Connect Tap Shafts, 6 mm-10 mm	AR-**4020TF-06 – 10**

FlipCutter® Drilling Option

Product Description	Item Number
FlipCutter III Drill, 6 mm-12 mm	AR-**1204FF**
RetroConstruction™ Drill Guide Set	AR-**1510S**
Double-Loaded BTB TightRope Implant w/ Short FlipCutter Kits, 7 mm-11 mm	AR-**1288BTB-70 –** AR-**1288BTB-110**

Flexible Reamer Option

Product Description	Item Number
Curved Guide for Flexible Pins	AR-**1800F**
Flexible TightRope® Drill Pin	AR-**1298FLX**
Flexible Reamer w/ Flexible Guide Pin, 7 mm-11 mm	AR-**1400F-70 –** AR-**1400F-110**
Flexible Reamer w/ Flexible TightRope Drill Pin, 7 mm-11 mm	AR-**1401F-70 –** AR-**1401F-110**

Low-Profile Reamer Option

Product Description	**Item Number**
Low-Profile Reamers, 5 mm-11 mm	AR-**1405LP –** AR-**1411LP**
ACL TightRope Drill Pin, open eyelet, 4 mm	AR-**1595T**
ACL TightRope Drill Pin, closed eyelet, 4 mm	AR-**1595TC**

Accessories

Product Description	**Item Number**
Suture Retriever	AR-**12540**
FiberWire® Cutter	AR-**12250**
TightRope Suture Cutter	AR-**4520**
#2 FiberWire Suture, 38 in, 2 strands (1 blue, 1 white/black)	AR-**7201**
#2 FiberLoop® Suture	AR-**7234**
#2 TigerLoop™ Suture	AR-**7234T**
FiberStick™ Suture, #2 FiberWire Suture, 50 in (blue), one end stiffened	AR-**7209**
GraftPro® Board	AR-**2950D**
GraftPro Posts	AR-**2950AP**
GraftPro Case	AR-**2950DC**

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. DOC1-000030-en-US. Naples, FL; 2019.

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