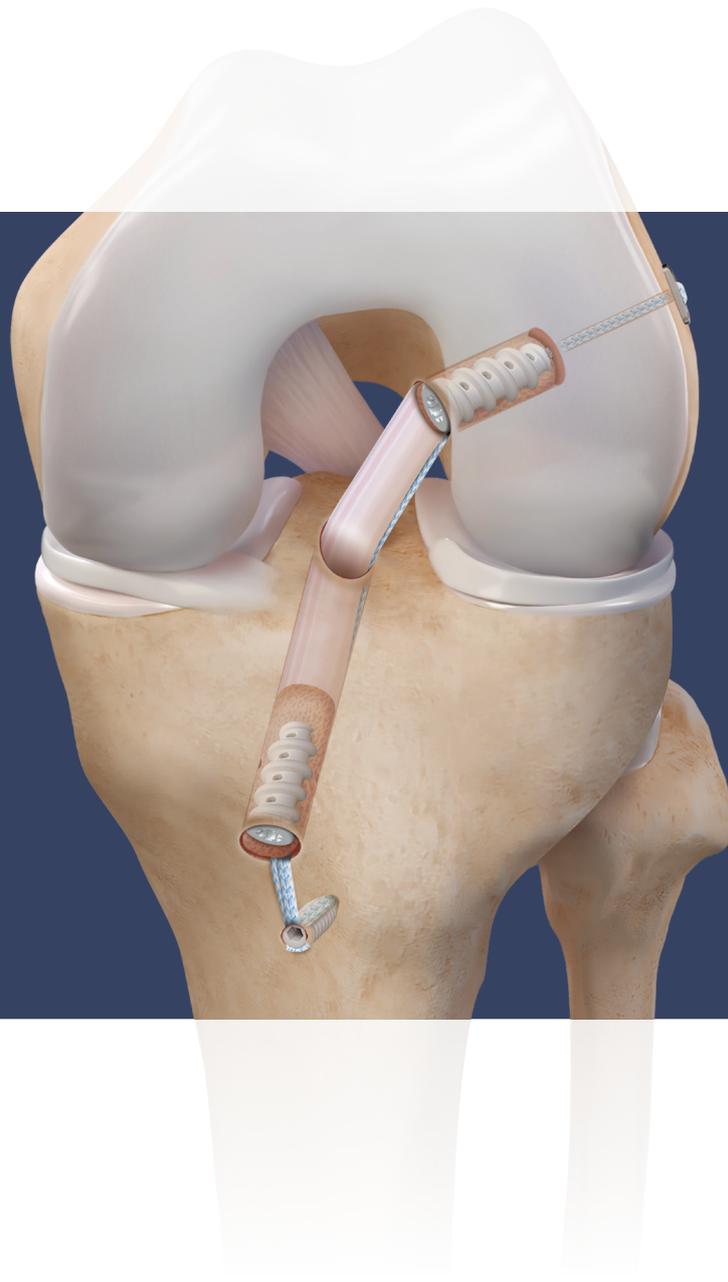
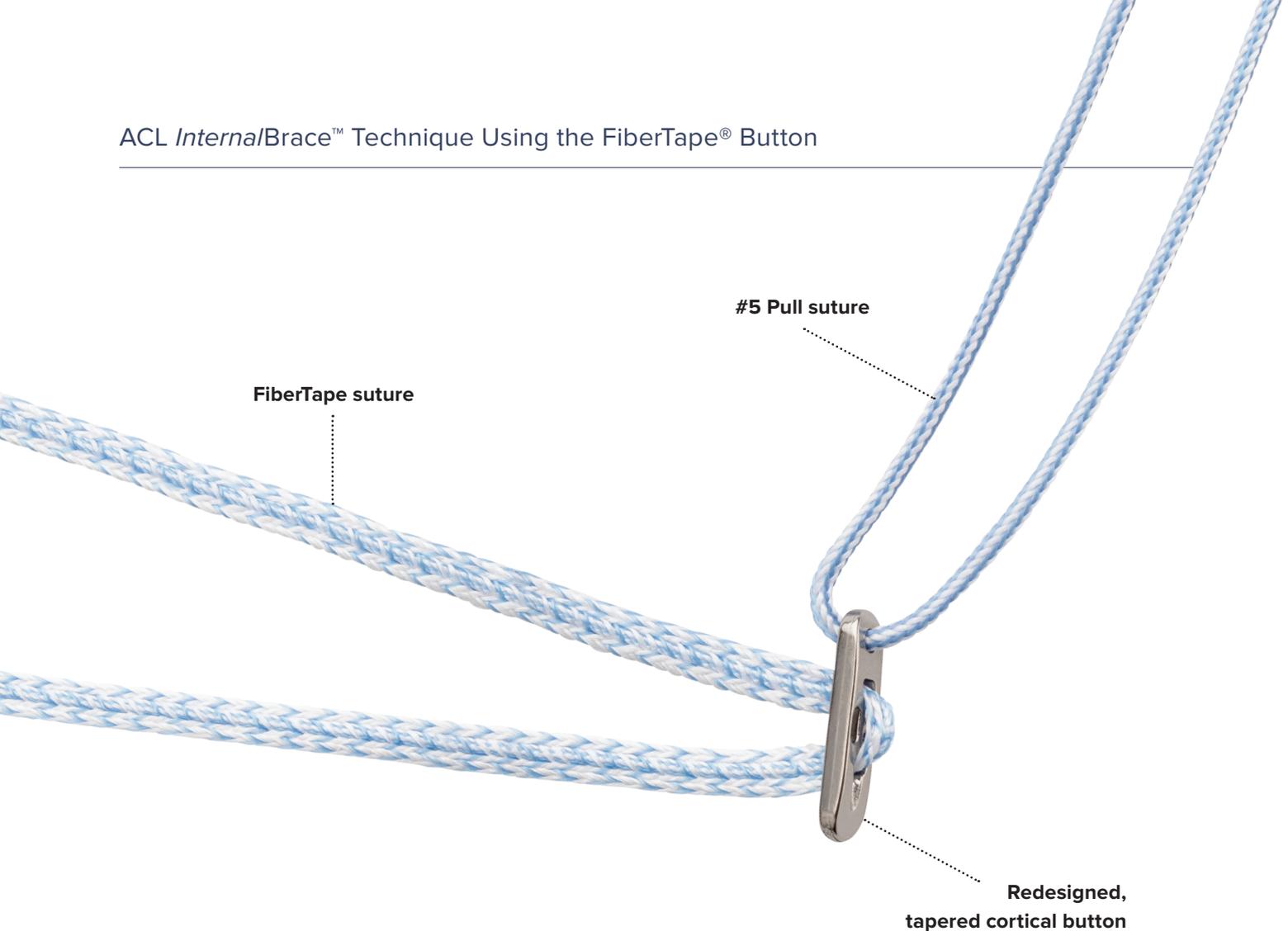


BTB ACL Reconstruction With the *Internal/Brace*[™] Technique Using the FiberTape[®] Button

Surgical Technique



Arthrex[®] 

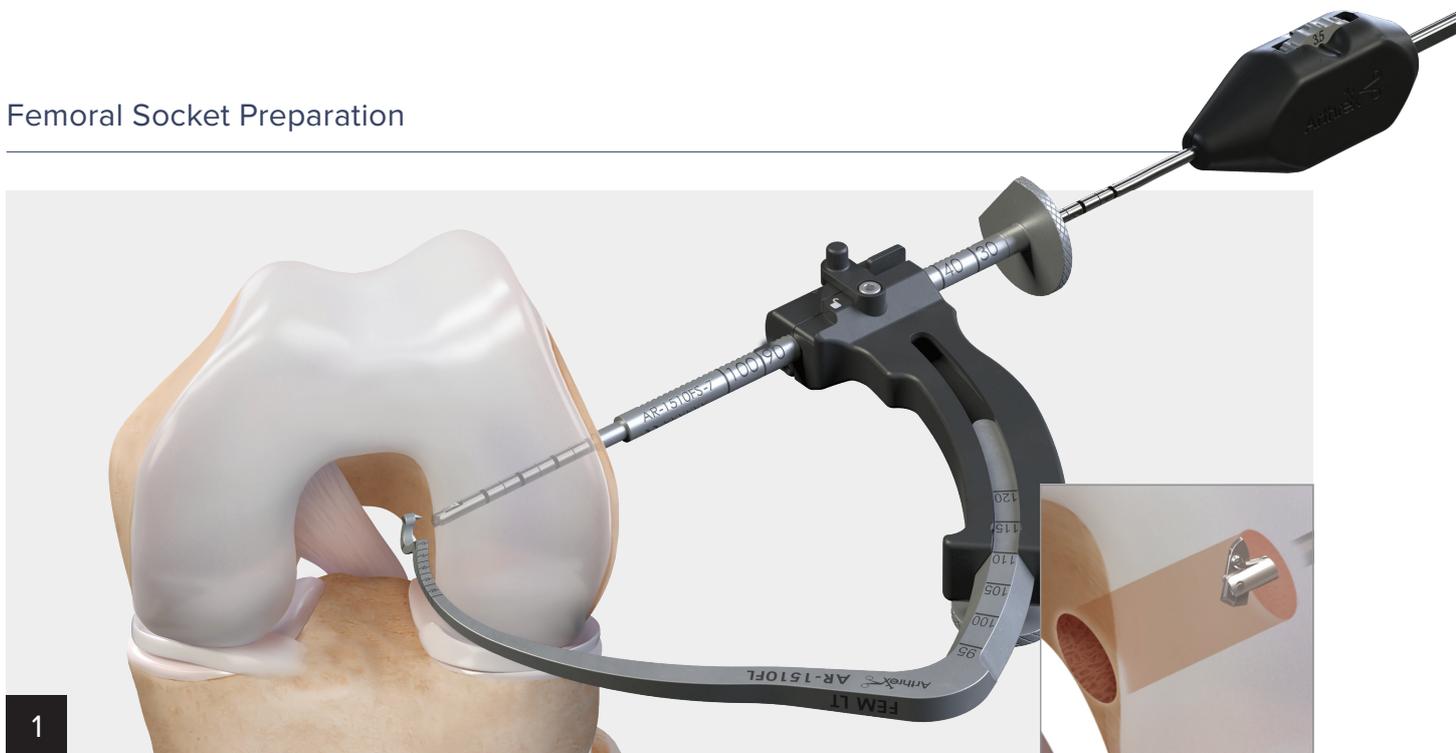


The FiberTape button facilitates a simplified and reproducible technique for augmenting ACL reconstructions with cortical fixation and FiberTape suture.

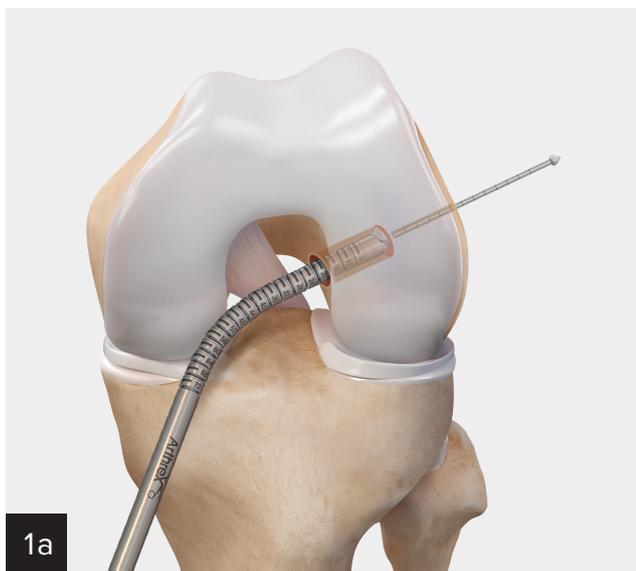
- SutureTape augmentation has been shown to result in statistically significant improvements of time-zero biomechanical properties in terms of increased stiffness (104% increase) and ultimate load at failure (57% increase) while not negatively affecting cyclic elongation, which may reduce the graft failure rate in a clinical setting.¹
- Adding an *Internal/Brace* repair to an ACL graft can potentially improve graft strength, especially for protection in the early accelerated rehabilitation period when the graft is most vulnerable.
- The *Internal/Brace* technique has demonstrated significantly improved time-zero cyclic displacement, stiffness, and ultimate load to failure.²

Internal/Brace™ surgical technique is intended only to support the primary ligament reconstruction and is not intended as a replacement for the standard of care using biologic augmentation in a primary reconstruction. *Internal/Brace* surgical technique is intended only for soft-tissue-to-bone fixation and is not cleared for bone-to-bone fixation.

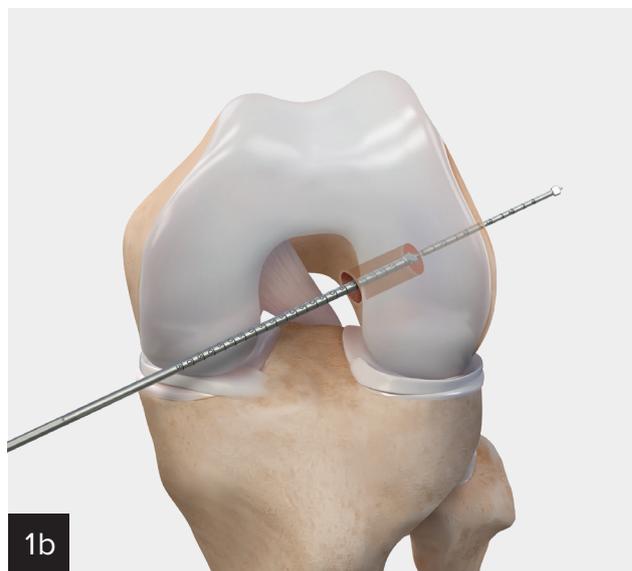
Femoral Socket Preparation



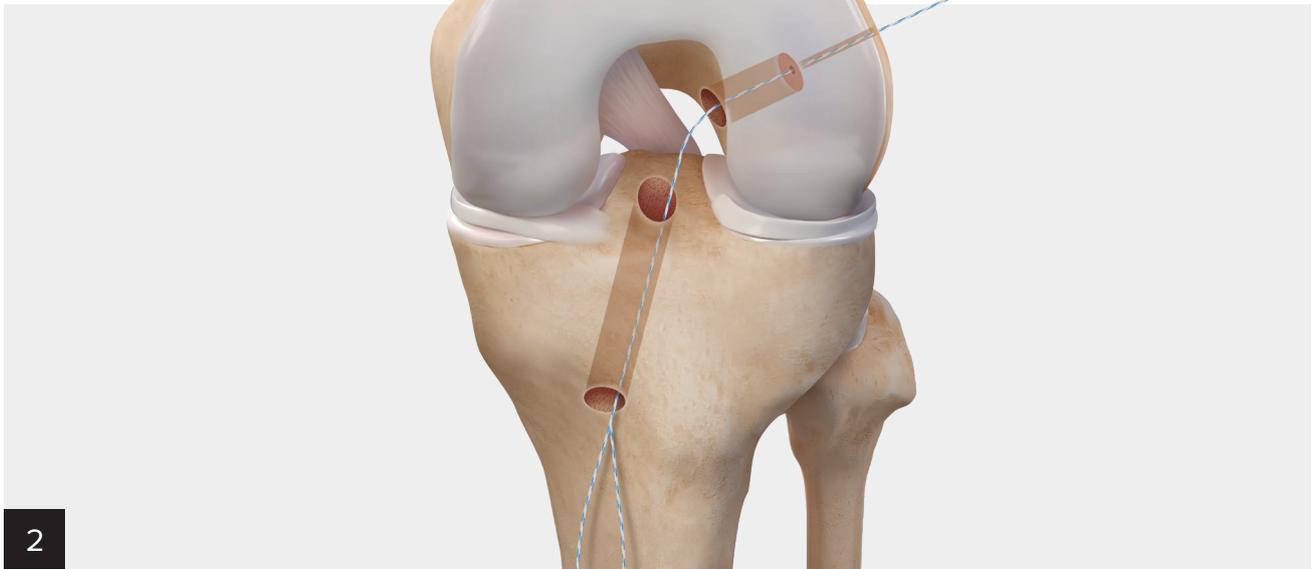
FlipCutter® III drill option: The femoral socket can be prepared in a retrograde fashion using the FlipCutter III drill and RetroConstruction™ guide system.



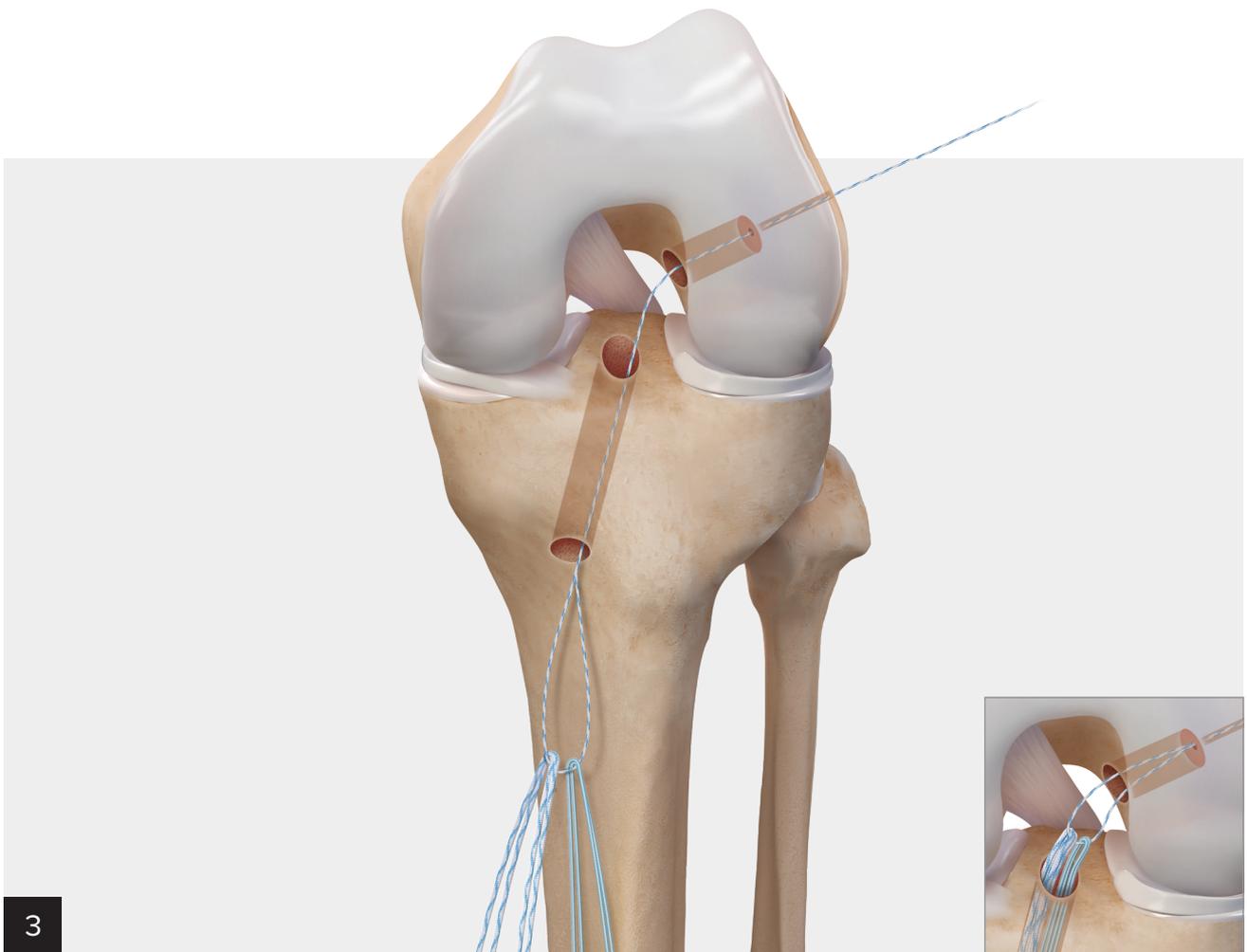
Flexible reamer option: The socket can be prepared in an antegrade fashion with the ACL TightRope® drill pin and flexible reamers.



Low-profile reamer option: The socket can be prepared in an antegrade fashion with the ACL TightRope drill pin and low-profile reamers.



Pass FiberSnare® suture to facilitate graft and FiberTape® button passage.

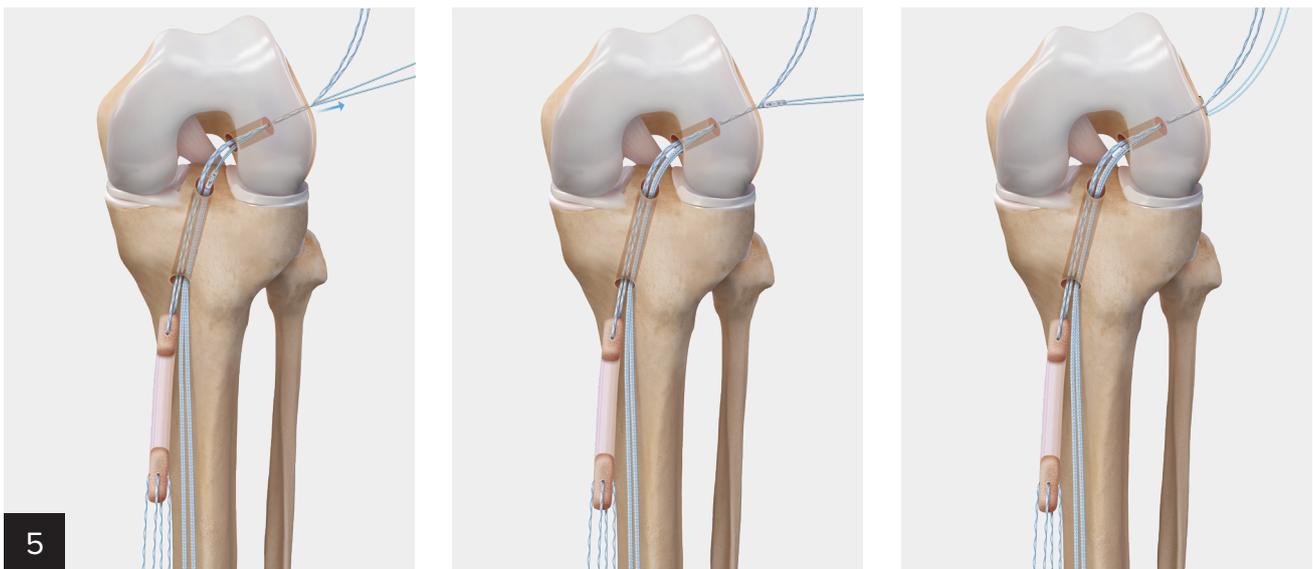


Load FiberTape button passing suture and graft passing sutures through the loop of the FiberSnare suture.



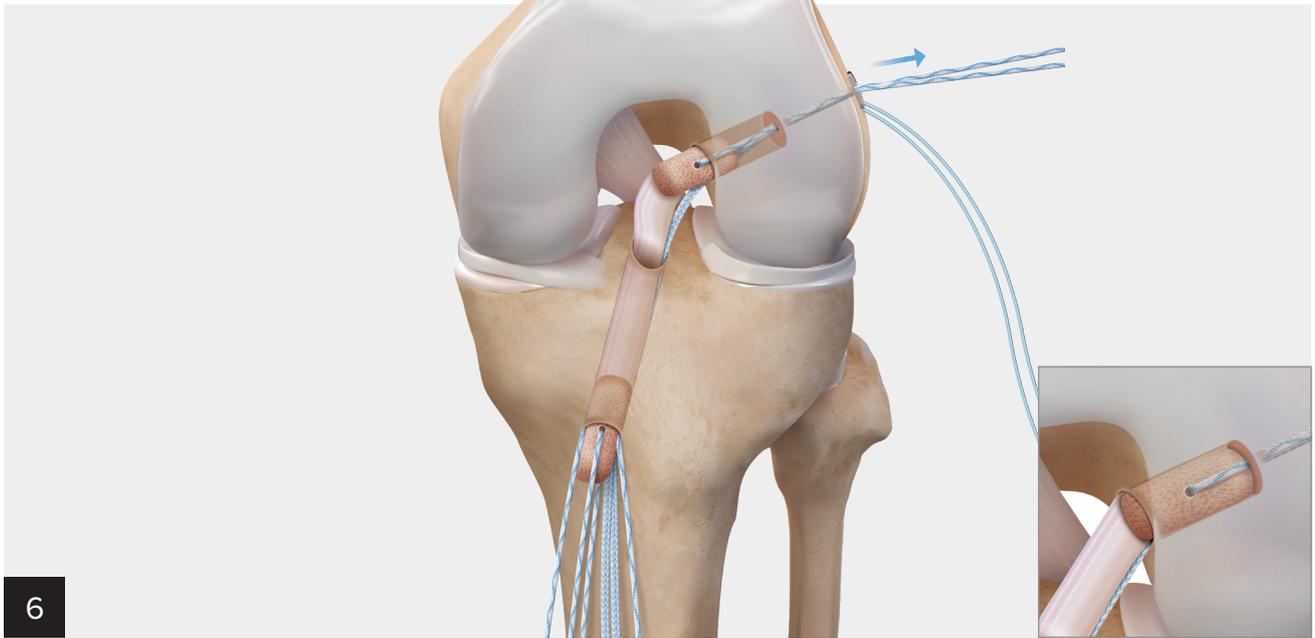
4

Using the FiberSnare® suture, shuttle the tails of the FiberTape® button and the graft sutures together through the tibia and femur.



5

Pull the blue FiberTape button passing suture to bring the button through the femur. 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. Pull the distal ends of the FiberTape suture to confirm fixation on the cortex.



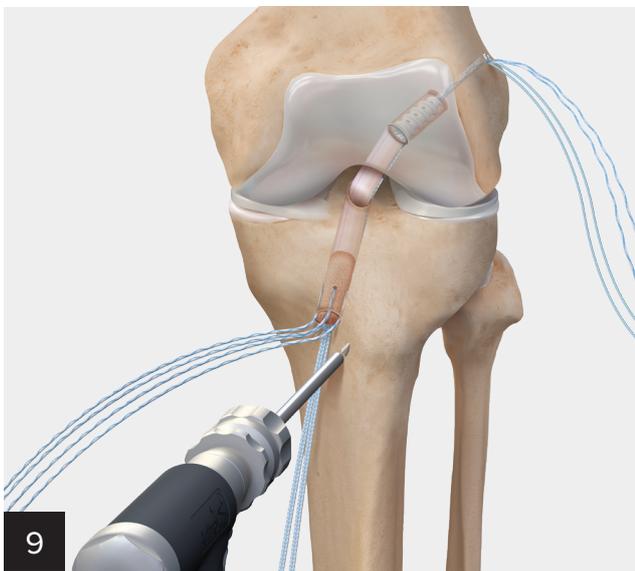
With the FiberTape® button in place, pull the graft sutures and advance the graft into place.



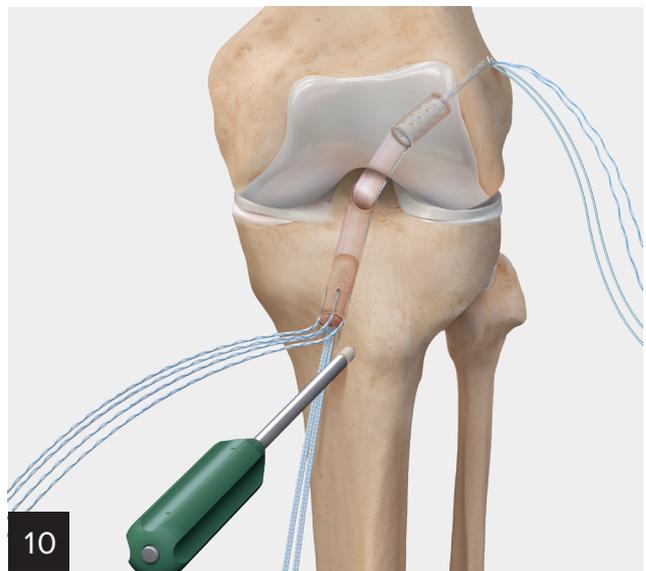
Place a 1.1 mm nitinol guidewire into the femoral socket. Tap the socket with a FastThread™ interference screw tap of a compatible size, and advance the screw to the appropriate depth.



If resistance is encountered when removing the screwdriver, unlock the slap hammer mechanism by twisting the knob on the back of the SlapDriver handle counterclockwise. Forcefully slide the handle away from driver tip in a slap-hammer fashion. Repeat as needed until the SlapDriver screwdriver is removed.



Use the spade-tip drill from the ACL Backup Kit to drill into the tibia to the depth of the drill collar. This represents an approximate depth of 20 mm.



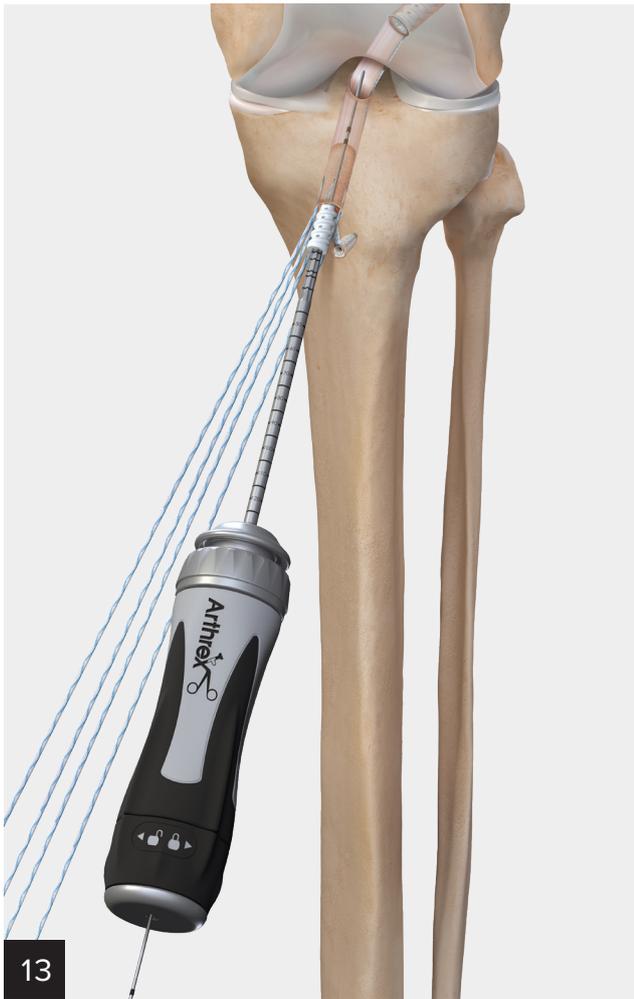
Use the disposable 5.2 mm tap to prepare the drill hole.



With the leg in full extension, pass the FiberTape® suture through the eyelet of the 4.75 mm BioComposite SwiveLock® anchor. Push the anchor into the drill hole until the eyelet is fully seated. Maintain tension on the suture limbs and screw the anchor into the tibia. After removing the driver, keep the knee in extension and remove the retention suture from the anchor.



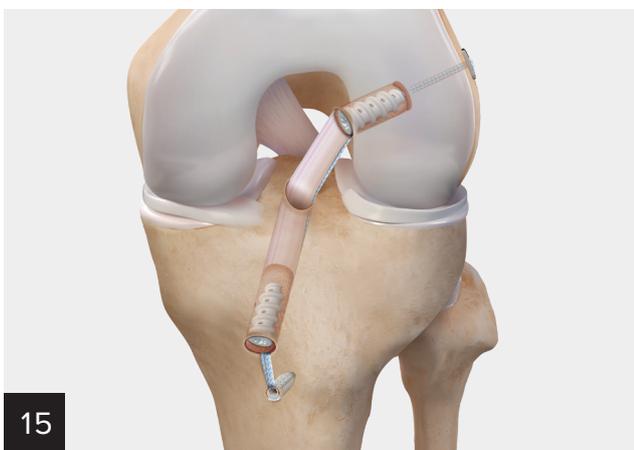
Excess FiberTape suture can be cut flush to the cortex.



After tensioning the graft in full extension, cycle the knee through the range of motion. Maintain tension, and with the leg in extension, insert a 1.1 mm nitinol guidewire into the tibial tunnel, tap the tunnel, and select the BioComposite FastThread™ interference screw of appropriate size and implant it.



If resistance is encountered when removing the screwdriver, unlock the slap hammer mechanism by twisting the knob on the back of the SlapDriver handle counterclockwise. Forcefully slide the handle away from driver tip in a slap-hammer fashion. Repeat as needed until the SlapDriver screwdriver is removed.



Test the knee's range of motion and remove the tibial graft sutures.

Ordering Information

Implants

Product Description	Item Number
ACL FiberTape® Button	AR-1588TB-IB
BioComposite FastThread™ 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
PEEK FastThread Interference Screws	
6 mm × 20 mm (used with 6 mm driver)	AR-4020P-06
7 mm - 10 mm × 20 mm Screws	AR-4020P-07 – 10
7 mm - 12 mm × 30 mm Screws	AR-4030P-07 – 12
ACL Backup Kits	
ACL Backup Fixation System, BioComposite	AR-1593-BC
ACL Backup Fixation System, PEEK	AR-1593-P

FastThread Instruments

Product Description	Item Number
Ratcheting SlapDriver	
SlapDriver, ratcheting, quick connect handle	AR-1999SD
Quick-Connect Drivers	
Quick-Connect Driver, for 20 and 30 mm screws (hexalobe)	AR-1996CD-1
Quick-Connect Driver, for 20 mm-length screws only (hexalobe)	AR-4020D-1
Quick-Connect Driver, extended-length shaft (hexalobe)	AR-1996CDL-1
Quick-Connect Driver, for 20 mm-length screws only (hexalobe)	AR-4020DF
Quick-Connect Driver, for 6 mm-diameter screws (trilobe)	AR-4019D-1
Fixed SlapDrivers	
SlapDriver, fixed, for 20 mm- and 30 mm-length screws only (hexalobe)	AR-1996SD
SlapDriver, fixed, for 20 mm screws only (hexalobe)	AR-4020SD
SlapDriver, fixed, for 6 mm-diameter screws only (trilobe)	AR-4019SD

FlipCutter® Drilling Option

Product Description	Item Number
FlipCutter III Drill, 6 mm - 12 mm	AR-1204FF
RetroConstruction™ Drill Guide Set	AR-1510S

Flexible Reamer Option

Product Description	Item Number
Curved Guide, for flexible pins	AR-1800F
TightRope® Drill Pin, flexible	AR-1298FLX
Reamer, flexible, 7 mm - 11 mm, w/ flexible guide pin	AR-1400F-70 – AR-1400F-110
Reamer, flexible, w/ flexible TightRope drill pin, 7 mm - 11 mm	AR-1401F-70 – AR-1401F-110

Low-Profile Reamer Option

Product Description	Item Number
Reamer, low profile, 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, 2 strands (1 blue, 1 white / black), 96.5 cm	AR-7201
#2 FiberLoop® Suture	AR-7234
#2 TigerLoop™ Suture	AR-7234T
FiberStick™ Suture, #2 FiberWire suture, blue, 1 end stiffened, 127 cm	AR-7209
GraftPro® Graft Preparation System	AR-2950DS

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 your Arthrex representative if you have questions about the availability of products in your area.

References

1. Matava MJ, Kosco J, Melara L, Bogunovic L. Suture tape augmentation improves the biomechanical performance of bone-patellar tendon-bone grafts used for anterior cruciate ligament reconstruction. *Arthroscopy*. 2021;37(11):3335-3343. doi:10.1016/j.arthro.2021.04.053
2. Smith PA, Bradley JP, Konicek J, Bley JA, Wijdicks CA. Independent suture tape internal brace reinforcement of bone-patellar tendon-bone allografts: biomechanical assessment in a full-ACL reconstruction laboratory model. *J Knee Surg*. 2020;33(10):1047-1054. doi:10.1055/s-0039-1692649



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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