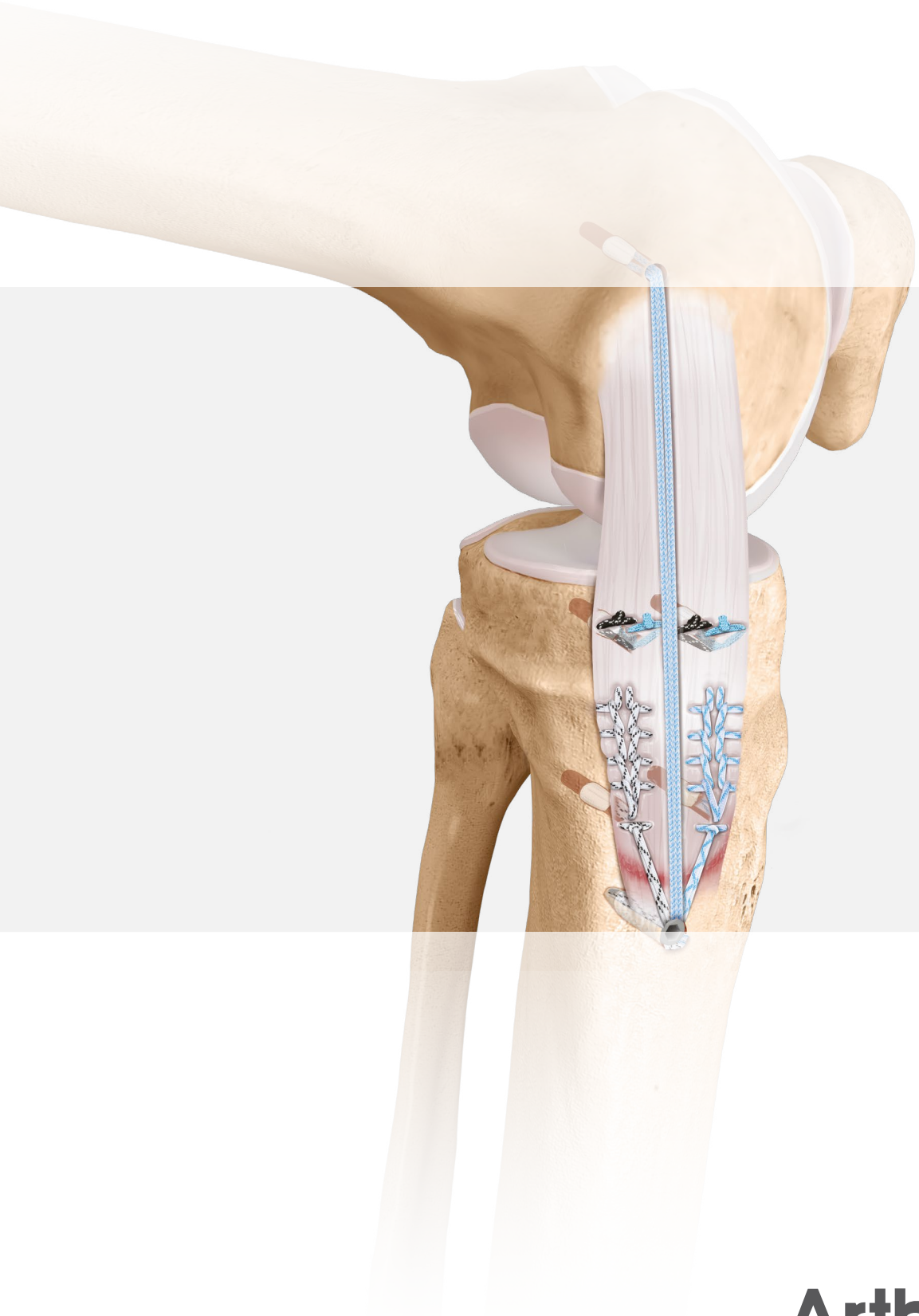
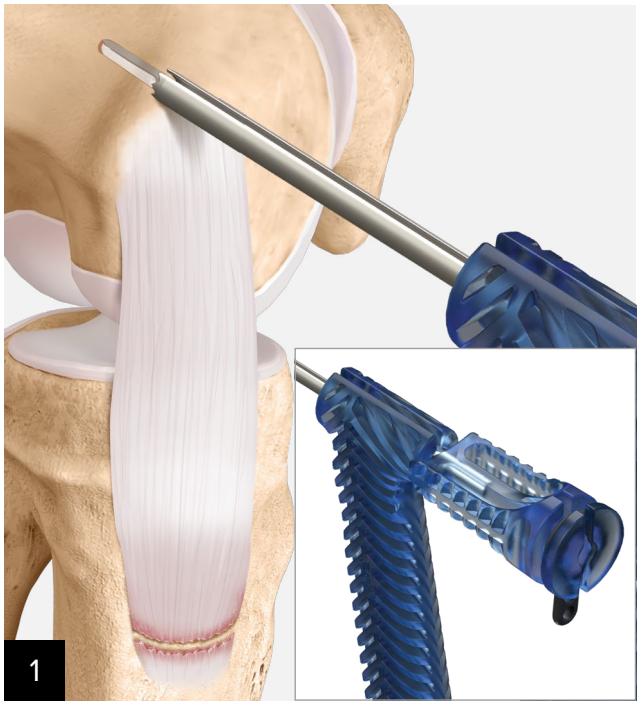
Distal MCL Repair Using Knee FiberTak® Anchors and the *Internal*Brace™ Technique

Surgical Technique



Arthrex®

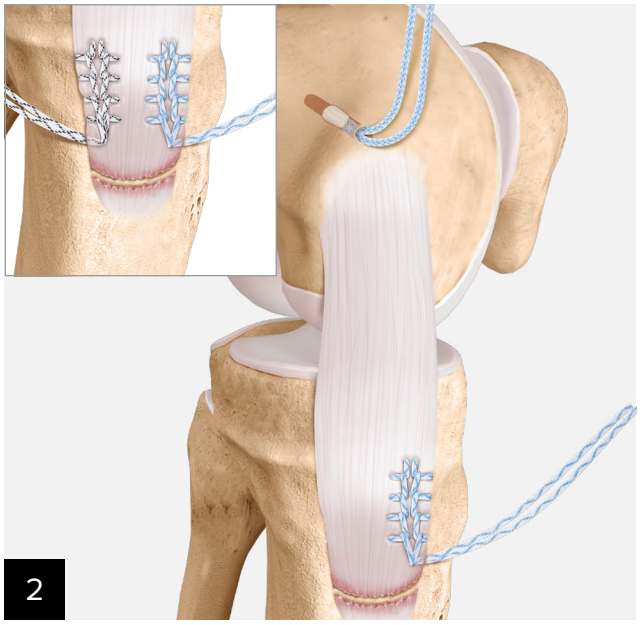
Surgical Technique



With the knee in a neutral position, locate landmarks on the medial condyle. Generally, the fixation point on the femur should be approximately 3.2 mm proximal and approximately 4.8 mm posterior to the medial epicondyle. After identifying the point of femoral fixation, place the pistol grip guide against the cortex and prepare a pilot hole using either an awl, a calibrated drill, or, in appropriate bone density, by self-punching the Knee FiberTak® anchor for the *Internal*Brace™ technique. Snap the FiberTape® loop out of the way. The 1.3 mm sliding SutureTape can be used for a repair or removed.

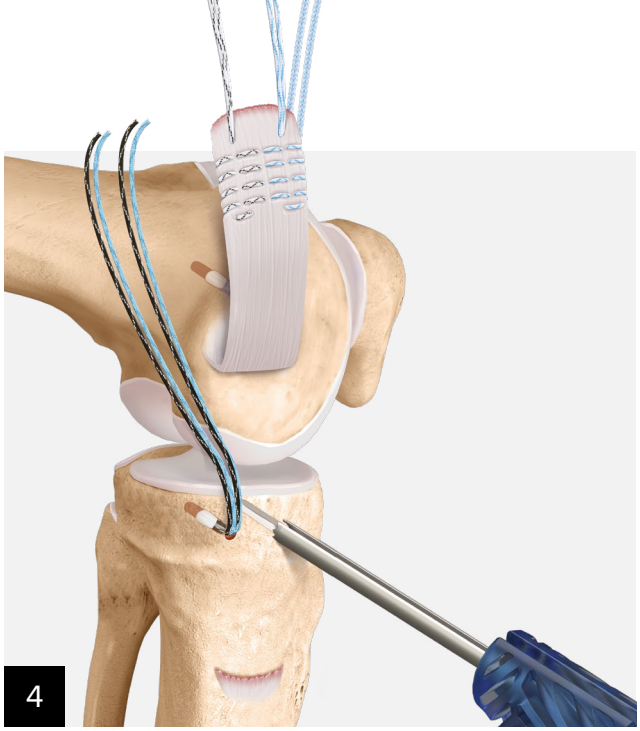
- Advance the 2.6 mm drill until the collar of the drill comes into contact with the back of the pistol grip guide.
- Punch a pilot hole using the reusable awl.
- Alternatively, in appropriate bone density, the anchor can be self-punched until the handle of the anchor inserter comes into contact with the back of the pistol grip guide.

Note: Do not impact the inserter body into the back of the guide. This could inadvertently advance the guide into the bone, compromising the cortex and potentially impacting fixation strength. Avoid excessive impaction as this could lead to inserter or anchor damage and/or breakage.

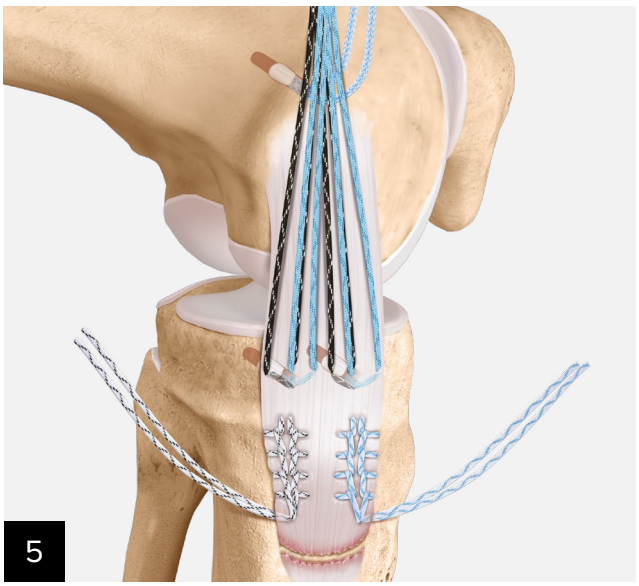


Place locking Krackow suture configurations in the anterior and posterior aspect of the MCL using 1.3 mm SutureTape so all SutureTape strands exit the deep surface of the MCL approximately 1 cm from the end of the tissue, leaving a flap of footprint tissue distally.

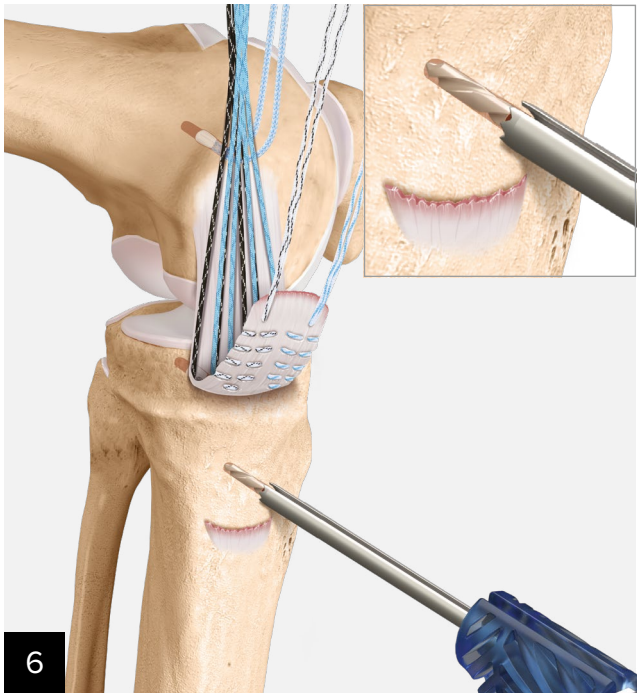
Aiming away from the joint, place one or two Double Knotted Knee FiberTak anchors approximately 1 cm distal to the joint line. As this bone is typically hard, drilling a pilot hole is recommended.



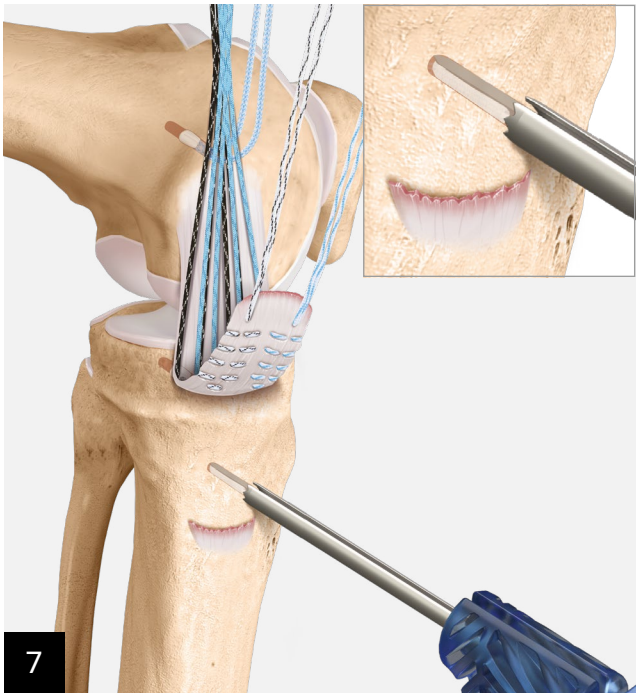
Place additional Double Knotted Knee FiberTak® anchors as appropriate.



Pass the 1.3 mm SutureTape limbs from the Double Knotted Knee FiberTak anchors in a mattress fashion to repair the deep MCL. To aid in visualization, wait to tie knots to complete joint line fixation until after completion of distal, superficial MCL fixation.

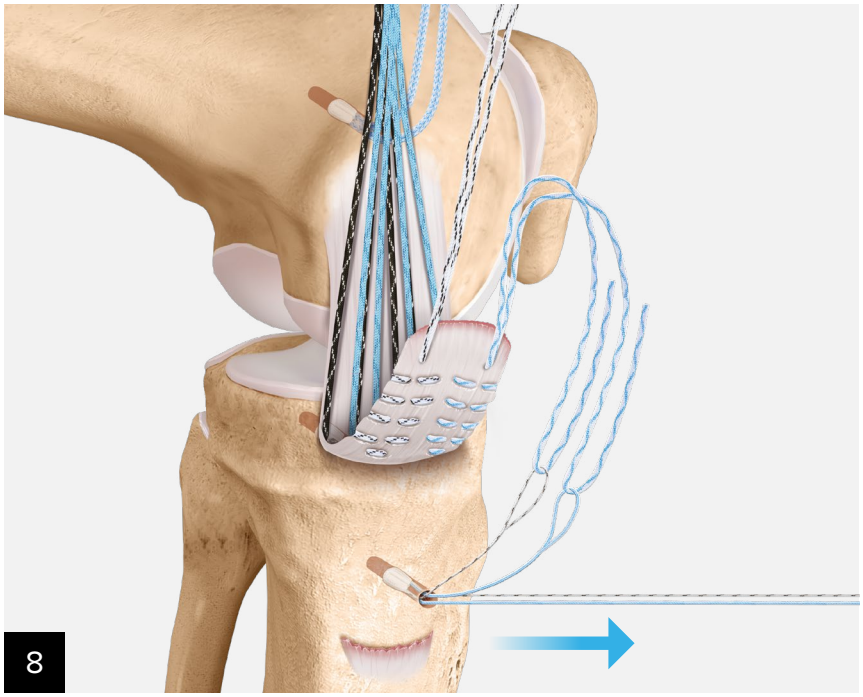


Using the point where the anterior locking Krackow SutureTape limbs exit the deep surface of the MCL as a reference point to the bone, advance the drill through the pistol grip guide until the collar comes into contact with the back of the guide. Drilling in very hard bone may require cycling the drill to aid in anchor insertion while maintaining consistent alignment of the drill guide.

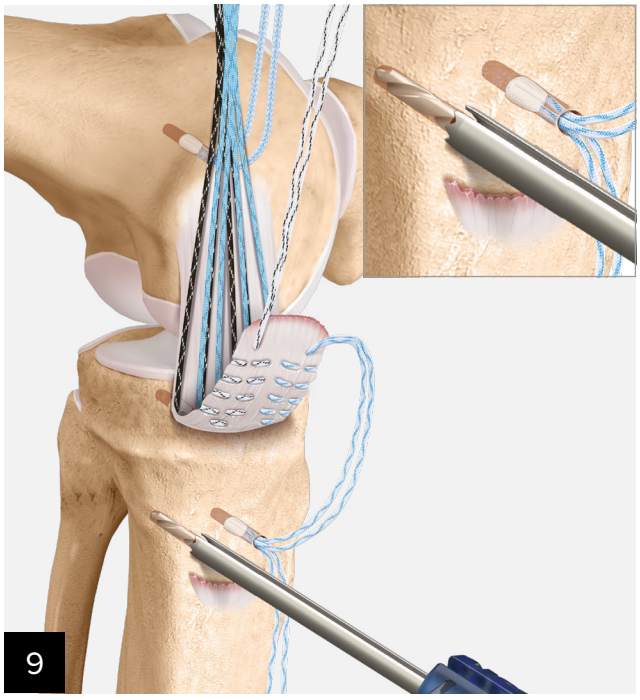


Insert a Knee FiberTak button implant through the pistol grip guide and into bone by gentle impaction until the inserter handle is flush with the back of the guide.

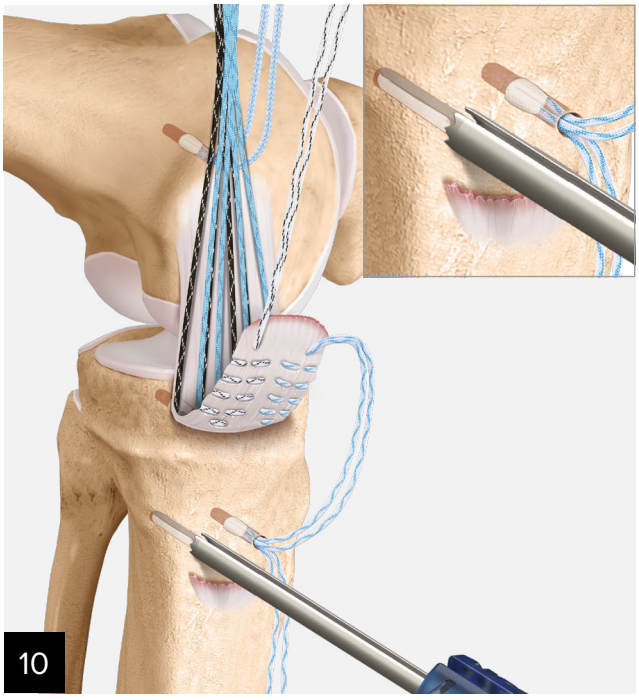
Note: Do not impact the inserter body into the back of the guide. This could inadvertently advance the guide into the bone, compromising the cortex and potentially impacting fixation strength. Avoid excessive impaction as this could lead to inserter or anchor damage and/or breakage.



Load the SutureTape limbs into the shuttle links of the Knee FiberTak® button. Shuttle the SutureTape limbs through the anchor one at a time by giving gentle tugs on the single limb of the shuttle link. Once both limbs are shuttled through the anchor, leave slack in the SutureTape limbs to aid in visualization for placement of the second Knee FiberTak button.

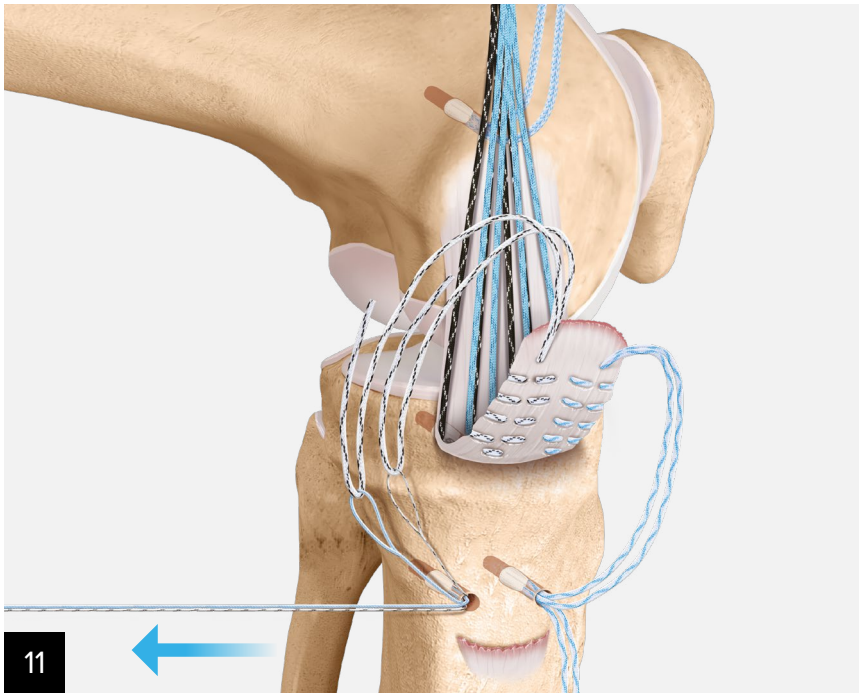


Similar to step 8, use the point where the posterior locking Krackow SutureTape limbs exit the deep surface of the MCL as a reference point to the bone, and advance the drill through the pistol grip guide until the collar comes into contact with the back of the guide.

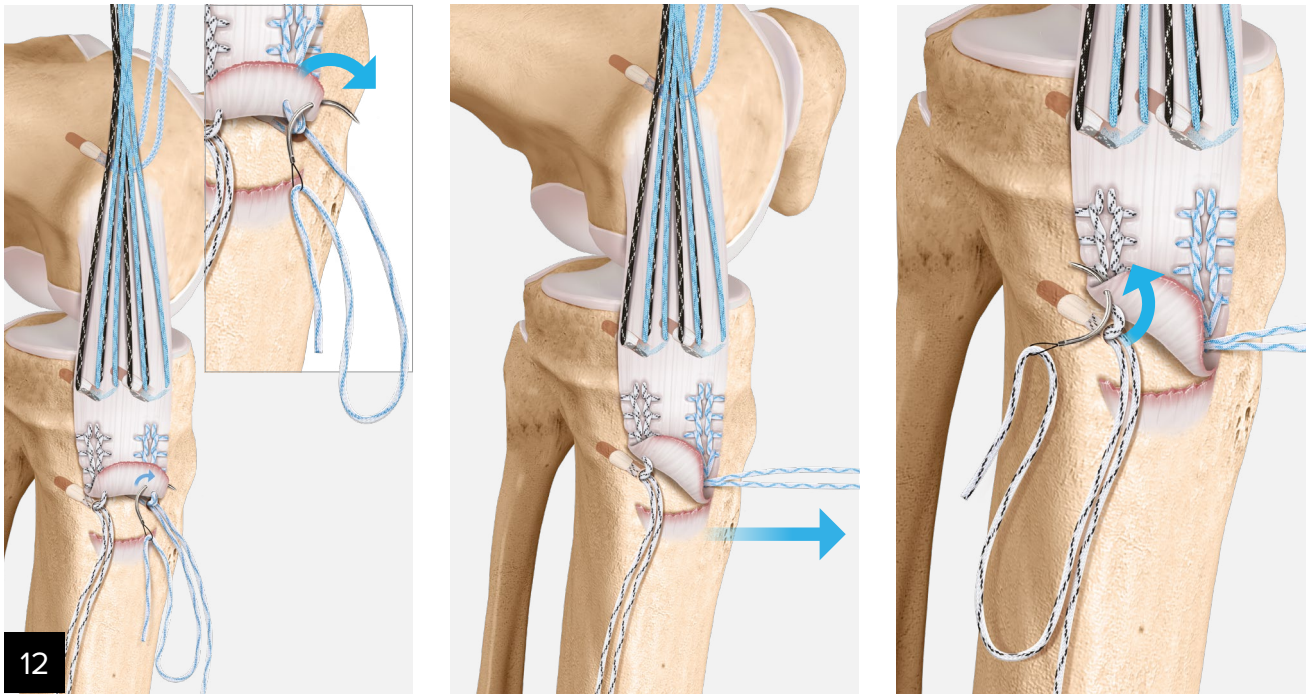


Similar to step 9, Insert a Knee FiberTak button implant through the pistol grip guide and into bone by gentle impaction until the inserter handle is flush with the back of the guide.

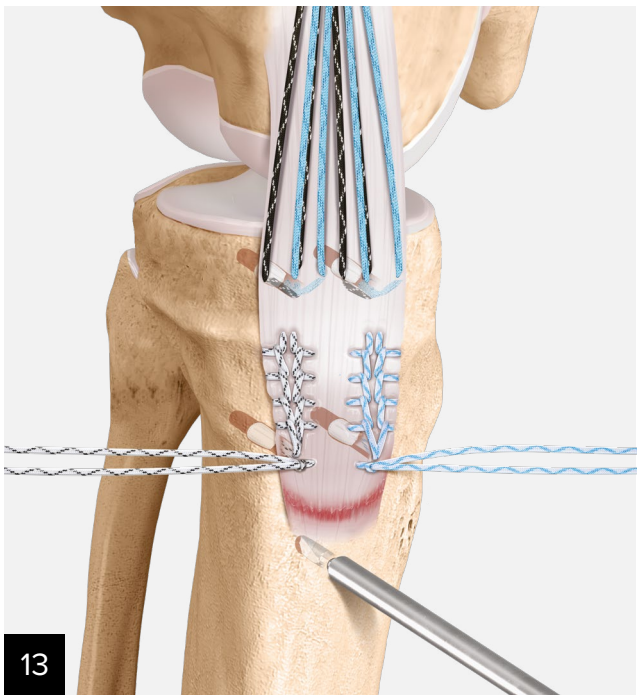
Note: Do not impact the inserter body into the back of the guide. This could inadvertently advance the guide into the bone, compromising the cortex and potentially impacting fixation strength. Avoid excessive impaction as this could lead to inserter or anchor damage and/or breakage.



Similar to step 10, load the SutureTape limbs from the posterior locking Krackow construct into the shuttle links of the posterior knee FiberTak® button. Shuttle the SutureTape limbs through the anchor one at a time by giving gentle tugs on the single limb of the shuttle link.

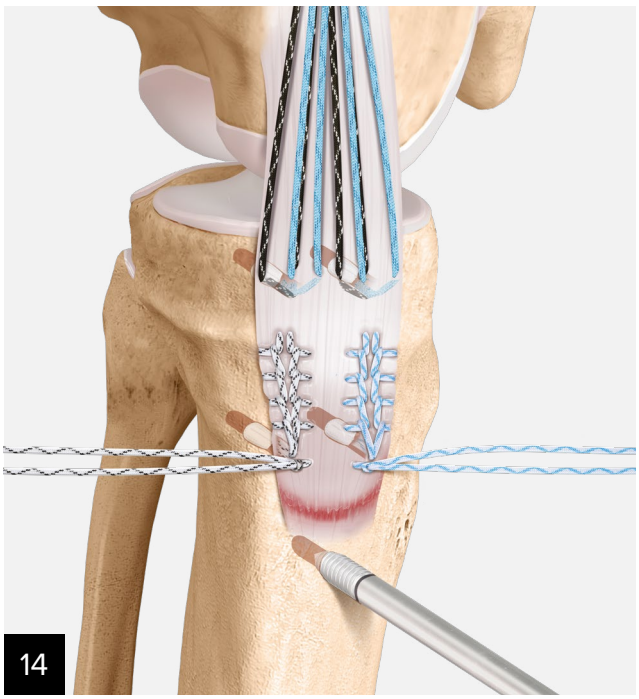


Leaving a distal flap approximately 1 cm in length, use a free needle to independently pass the SutureTape limbs through the distal MCL tissue from deep to superficial in mattress fashion. Tension all four SutureTape limbs to reduce the tissue down to bone in a tension-slide fashion and tie knots.

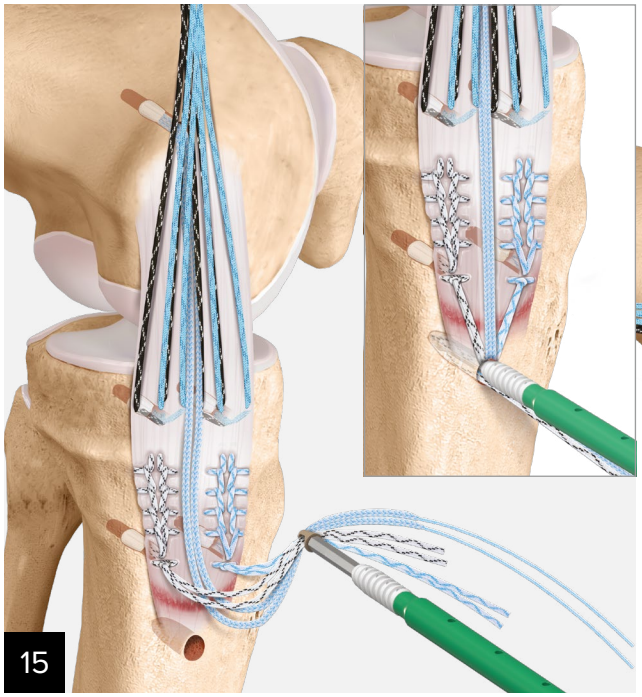


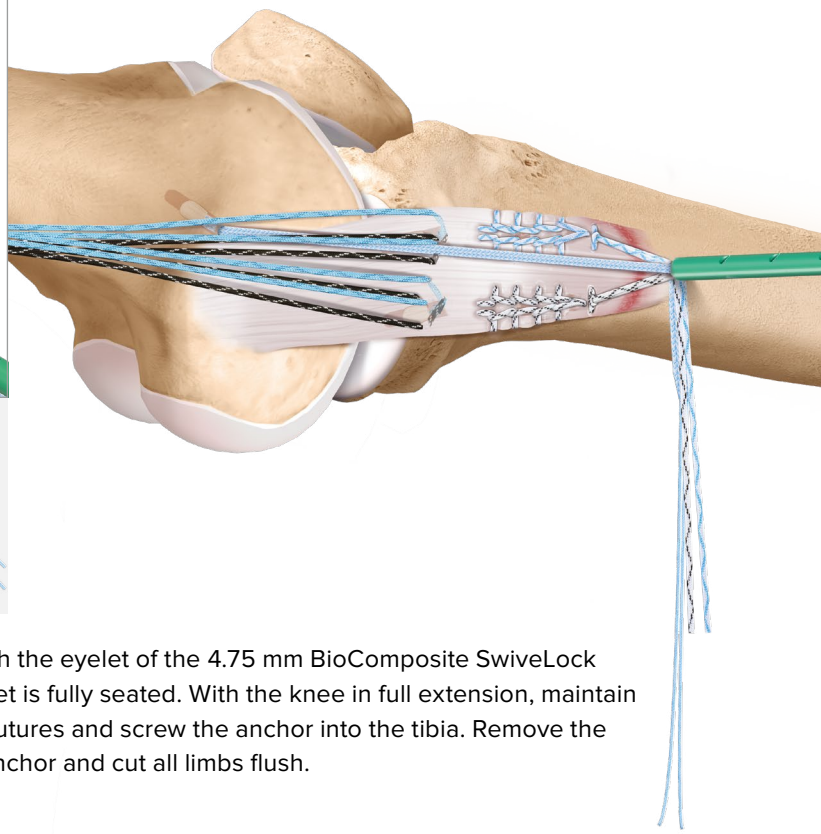
Advance the spade-tip drill into the tibia to the depth of the drill collar, which represents a depth of 20 mm.

Note: Prior to drilling the pilot hole, a 2.4 mm drill pin can be placed and referenced using the FiberTape® sutures to determine isometry.



Depending on bone density, tap with either the 4.75 mm or 5.2 mm SwiveLock® tap. The 5.2 mm tap is recommended for harder bone.





Pass the SutureTape and FiberTape suture limbs through the eyelet of the 4.75 mm BioComposite SwiveLock anchor. Push the anchor into the drill hole until the eyelet is fully seated. With the knee in full extension, maintain tension on the limbs of the SutureTape and FiberTape sutures and screw the anchor into the tibia. Remove the driver, and then remove the retention suture from the anchor and cut all limbs flush.

To complete the repair, tie the SutureTape limbs from the Double Knotted Knee FiberTak® anchors previously passed for fixation of the deep MCL.

Ordering Information

Product Description	Item Number
Knee FiberTak® anchor for the *Interna*lBrace™ technique	AR-**3750SP**
Double Knotted Knee FiberTak anchor w/ needles	AR-**3730SP**
Knee FiberTak button	AR-**3780SP**
Knee FiberTak disposable drill guide kit	AR-**3710**
2.7 mm Knee FiberTak disposable hard-bone drill	AR-**3712-27**
2.8 mm Knee FiberTak disposable hard-bone drill	AR-**3712-28**
2.9 mm Knee FiberTak disposable hard-bone drill	AR-**3712-29**
3 mm Knee FiberTak disposable hard-bone drill	AR-**3712-30**
2.6 mm Knee FiberTak reusable punch	AR-**3714**
Implant System, secondary fixation with BioComposite SwiveLock® anchor 4.75 mm × 19.1 mm	AR-**1593-BC**
Implant System, secondary fixation with PEEK SwiveLock anchor 4.75 mm × 19.1 mm	AR-**1593-P**
1.3 mm SutureTape, white/blue, w/ two 26.5 mm curved, tapered needles	AR-**7505**
1.3 mm SutureTape, black/white, w/ two 26.5 mm curved, tapered needles	AR-**7505TT-02**

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The *Interna*lBrace surgical technique is intended only to augment the primary repair/reconstruction by expanding the area of tissue approximation during the healing period and is not intended as a replacement for the native ligament. The *Interna*lBrace technique is for use during soft tissue-to-bone fixation procedures and is not cleared for bone-to-bone fixation.

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US patent information

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