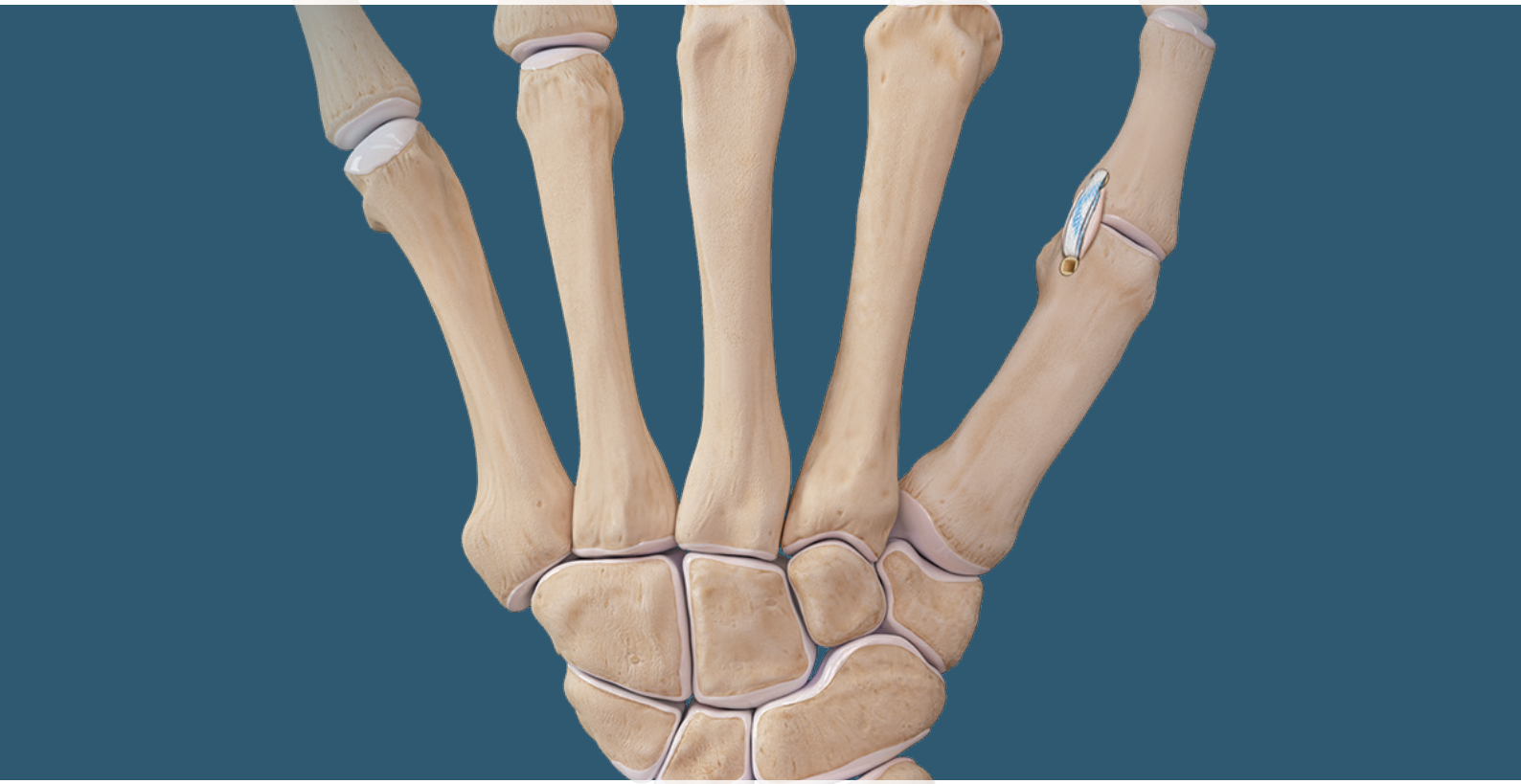
Thumb UCL Repair with *Internal*Brace™ Ligament Augmentation Procedure

Surgical Technique



Arthrex®

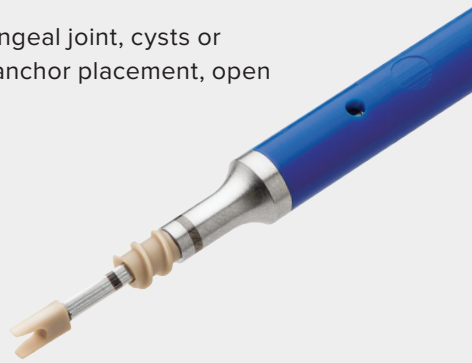
Thumb UCL Repair With *Internal*Brace™ Ligament Augmentation Procedure

Introduction

Ulnar collateral ligament (UCL) tears of the thumb are common injuries. When the tear results in pain and instability, surgical repair is one option. Augmenting the primary repair with an *Internal*Brace ligament augmentation procedure may allow for early motion and limited postoperative immobilization.[1] This technique is reproducible and intuitive in design.

Contraindications

Contraindications to this technique are painful arthritis of the thumb metacarpophalangeal joint, cysts or hardware within the metacarpal or proximal phalanx that would prevent satisfactory anchor placement, open physes, and infection.



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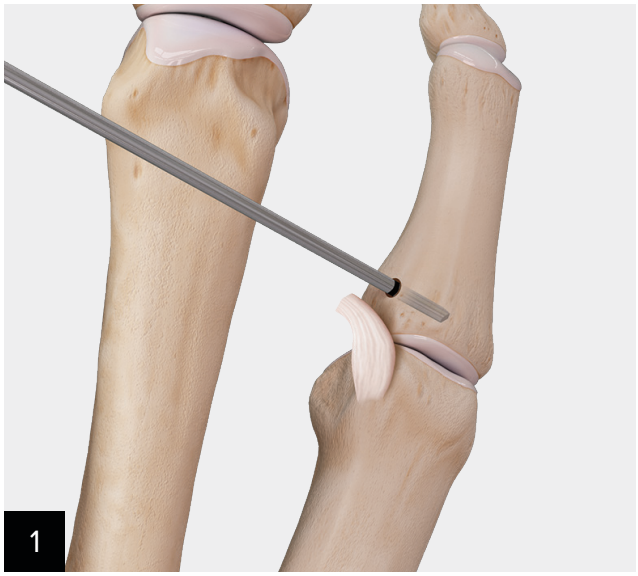
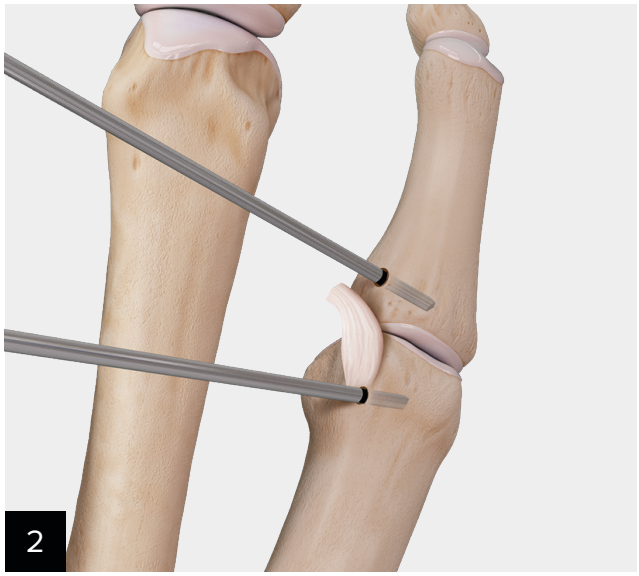
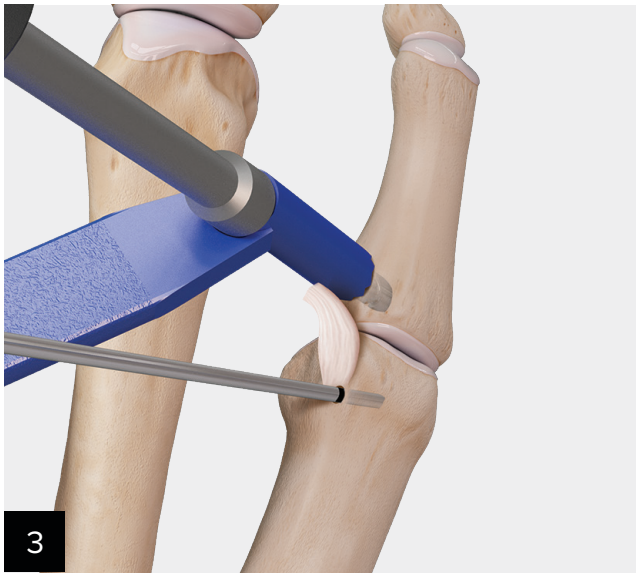


Drill a 1.35 mm guidewire up to the laser line at the insertion of the proper ulnar collateral ligament (ie, the volar base of the proximal phalanx).

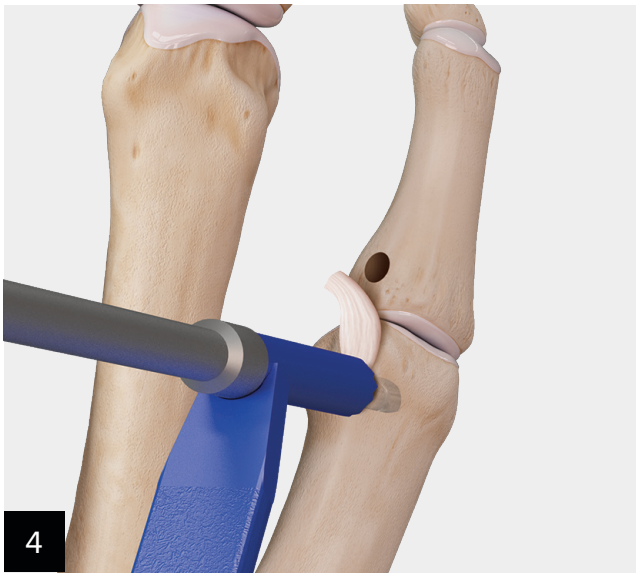


Drill a second 1.35 mm guidewire at the origin of the ulnar collateral ligament (ie, the dorsal-ulnar metacarpal head).

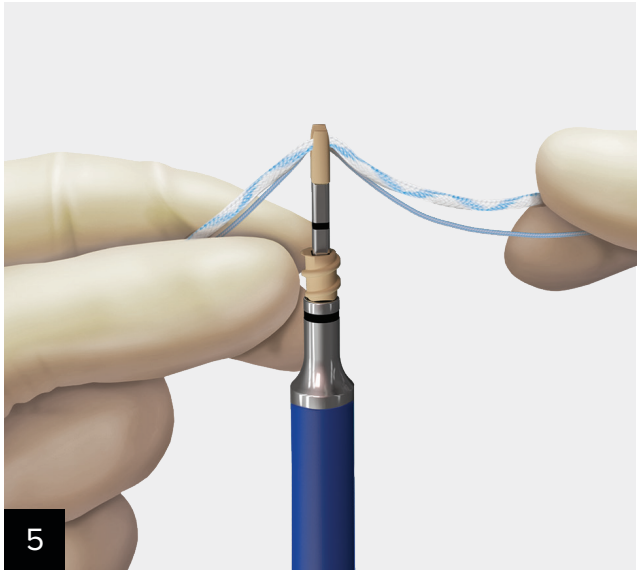
The *Internal*Brace surgical technique is intended only to augment the primary repair/reconstruction by expanding the area of tissue approximation during the healing period and is not intended as a replacement for the native ligament. The *Internal*Brace technique is for use during soft tissue-to-bone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



Using the blue depth stop, overdrill the guidewire in the proximal phalanx with the silver drill bit. The drill will stop at a depth of 1 cm.

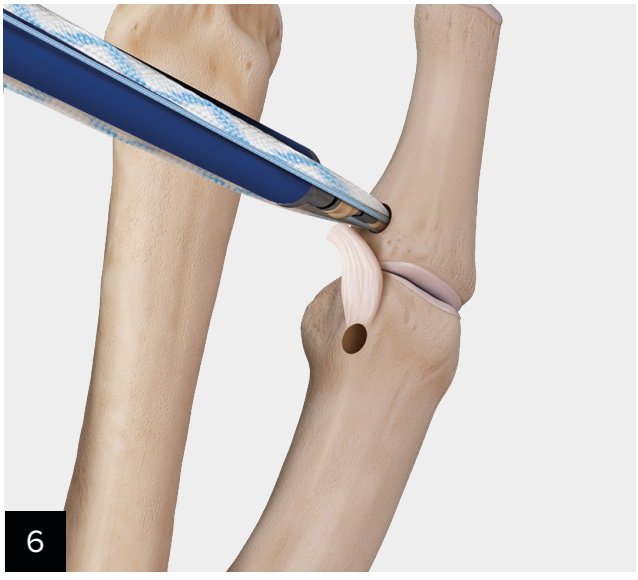


Overdrill the guidewire in the metacarpal head using the same drill and depth stop.



Load a 3-0 or 4-0 FiberWire® suture and a SutureTape onto the forked eyelet of the 3.5 mm DX SwiveLock® SL anchor. LabralTape™ suture can be substituted for SutureTape if preferred.

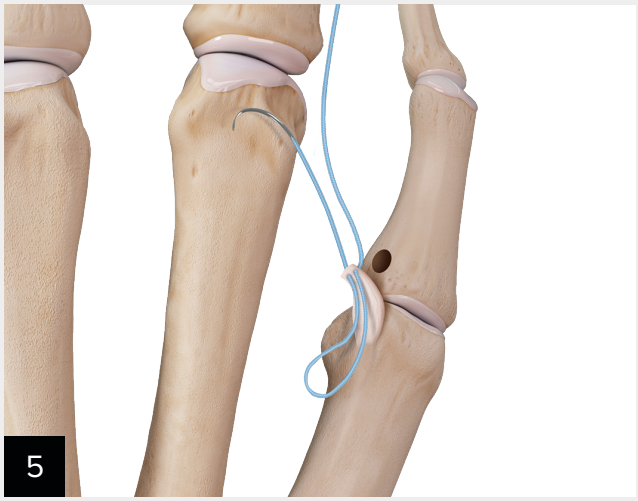
Note: According to surgeon preference, a Mini PushLock® anchor can be substituted for a DX SwiveLock SL anchor for placement in the proximal phalanx. See alternative technique.



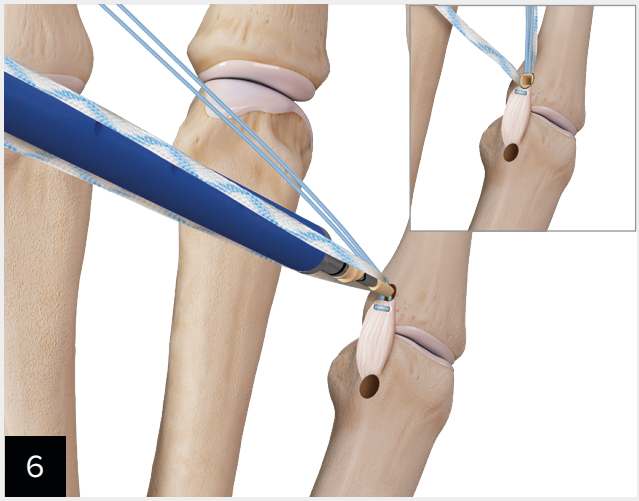
Insert the loaded DX SwiveLock® SL anchor into the drill hole at the proximal phalanx.

Alternative Options

Option A: For a knotless repair with *Interna*lBrace ligament augmentation procedure, perform steps 1-4 as described in the general technique before transitioning to the alternate steps listed on the following page. After alternate step 6, finish the procedure with general steps 8 and 9 as described previously.



Tag stitch the remaining ligament with 3-0 of 4-0 FiberWire® suture of choice.

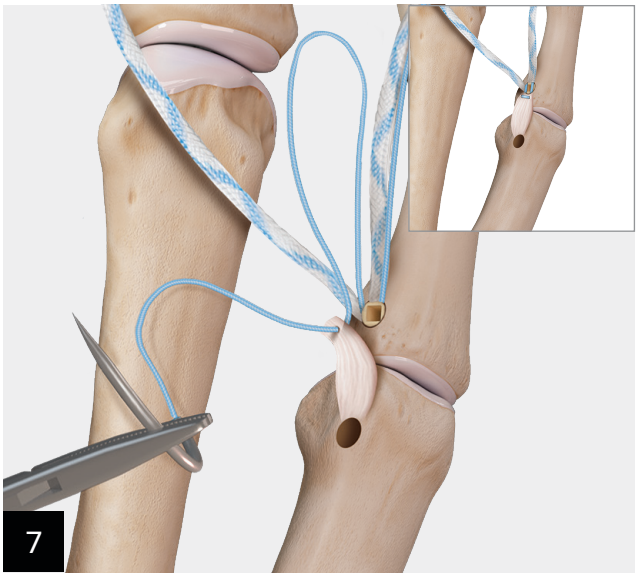


Load SutureTape onto the forked eyelet of the 3.5 mm DX SwiveLock® SL anchor. Load the FiberWire suture used to tag stitch the UCL onto the forked eyelet of the SwiveLock anchor and insert it into the drill hole at the proximal phalanx. **After this alternate step, follow steps 8 and 9 in the general technique to complete the *Interna*lBrace™ ligament augmentation repair.**

Option B: For patients with smaller anatomy, a Mini PushLock® anchor can be substituted for the 3.5 mm DX SwiveLock SL anchor for fixation in the proximal phalanx.

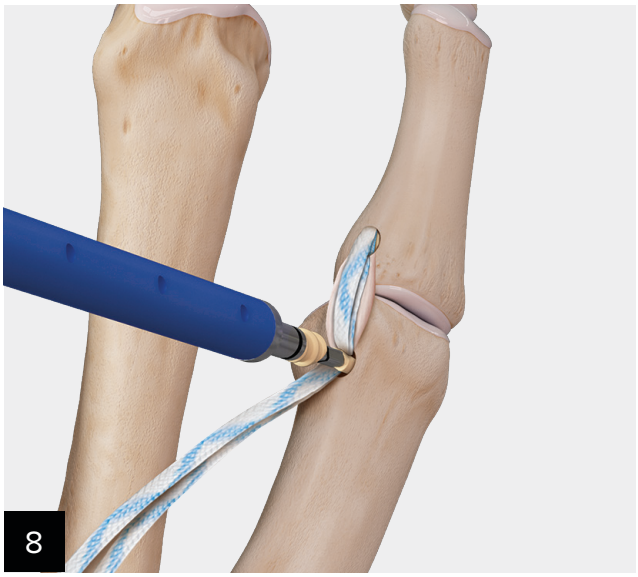
A 1.8 or 2.0 mm drill is used with the accompanying drill guide to create a hole in the proximal phalanx. The SutureTape and FiberWire suture are passed through the eyelet of the PushLock anchor. The PushLock anchor is inserted into the proximal phalanx. Steps 7-9 in the general technique are performed as stated above to finish the technique.

Final repair showing Mini PushLock anchor fixation in the proximal phalanx and SwiveLock fixation in the metacarpal.



Tag stitch the remaining UCL ligament with the FiberWire® suture and tie down to perform the direct repair.

Note: A free needle can be used to bring the second limb of FiberWire suture through the ligament, allowing the surgeon to position the knot stack on top of the ligament.



Take both limbs of the SutureTape and pull them proximally over the repaired ligament. Capture the SutureTape with a second SwiveLock® anchor and insert it into the drill hole at the metacarpal head. To avoid overtensioning the SutureTape, place the second SwiveLock anchor with the joint held flexed at 30°. Cut the remaining SutureTape and FiberWire sutures flush to finish the knotless *Internal*Brace™ ligament augmentation repair.

Final fixation.

Post-op Protocol

Postoperatively, the thumb is placed into a thumb spica splint for comfort. Mobilization of the thumb can begin at the first postoperative visit (7-10 days after surgery) or earlier, depending on surgeon preference.1,2 A hand-based custom orthosis may be used as needed. Return to full activities is anticipated at 4-6 weeks postsurgery.

References

1. De Giacomo AF, Shin SS. Repair of the thumb ulnar collateral ligament with suture tape augmentation. *Tech Hand Up Extrem Surg*. 2017;21(4):164-166. doi:10.1097/BTH.0000000000000173.
2. Shin SS, van Eck CF, Uquillas C. Suture tape augmentation of the thumb ulnar collateral ligament repair: a biomechanical study [published online March 15, 2018]. *J Hand Surg*. doi:10.1016/j.jhsa.2018.02.002.

Ordering Information

Hand and Wrist *Interna*lBrace™ Ligament Repair System

Product Description	Item Number
DX SwiveLock® SL Anchor, w/ forked eyelet, 3.5 mm × 8.5 mm, qty. 2 Drill Bit, cannulated, 3.0 mm (for all-suture constructs) Drill Bit, cannulated, 3.5 mm (for all constructs with graft incorporation) Guidewires w/ Laser Marking, 1.35 mm, qty. 3 Tendon Sizer, 2.0 mm and 2.5 mm 2-0 FiberLoop® Suture w/ Tapered Needle, qty. 2 SutureTape Suture	AR-**8978-CP**

DX SwiveLock SL Anchor
AR-**8978P**

Hand and Wrist *Interna*lBrace
Ligament Augmentation Repair
Convenience Kit – AR-**8978-CP**

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