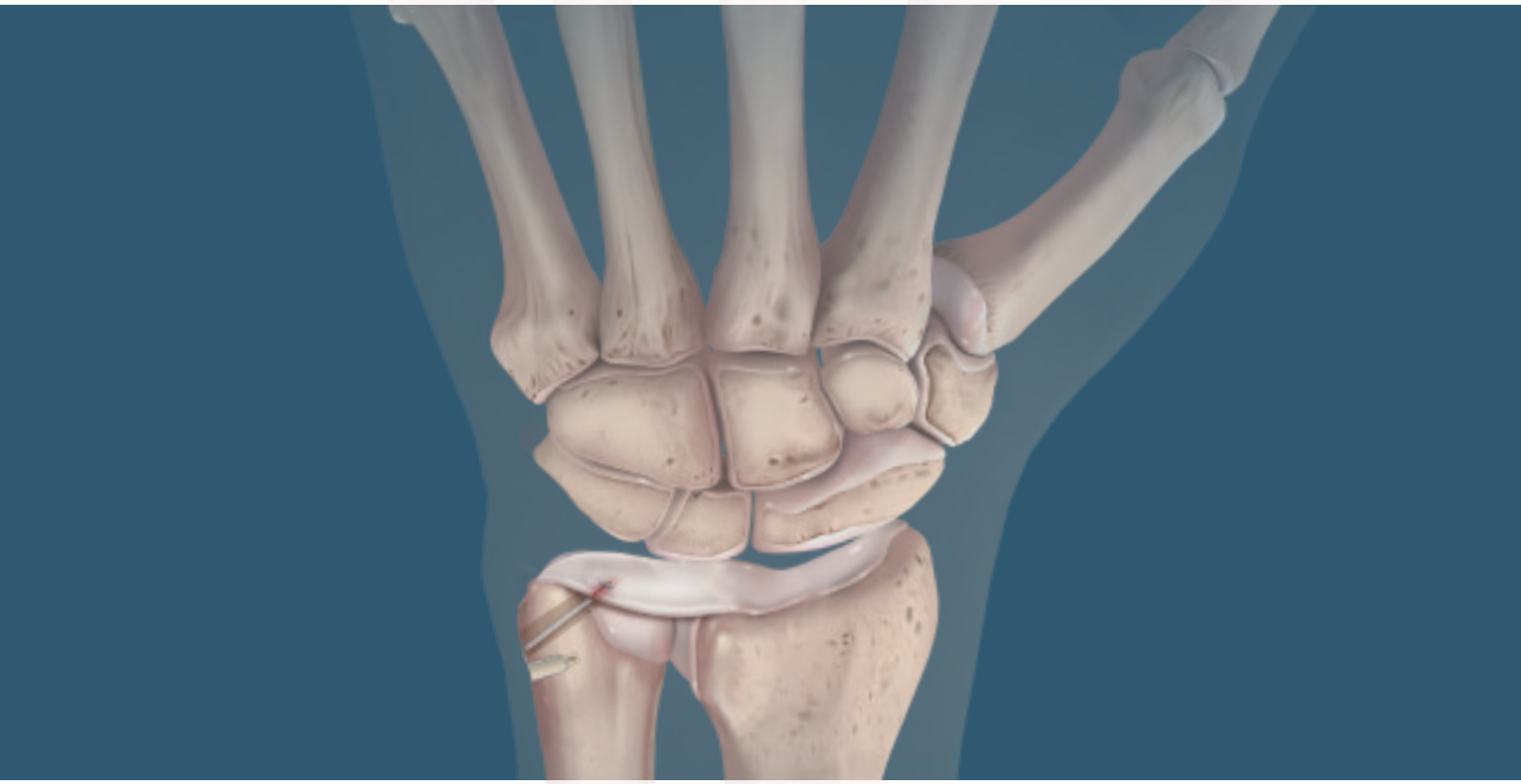
TFCC Ulnar Tunnel Repair

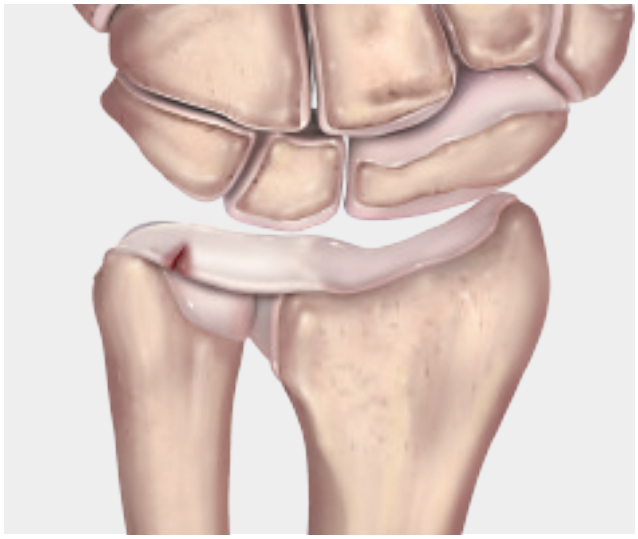
Surgical Technique

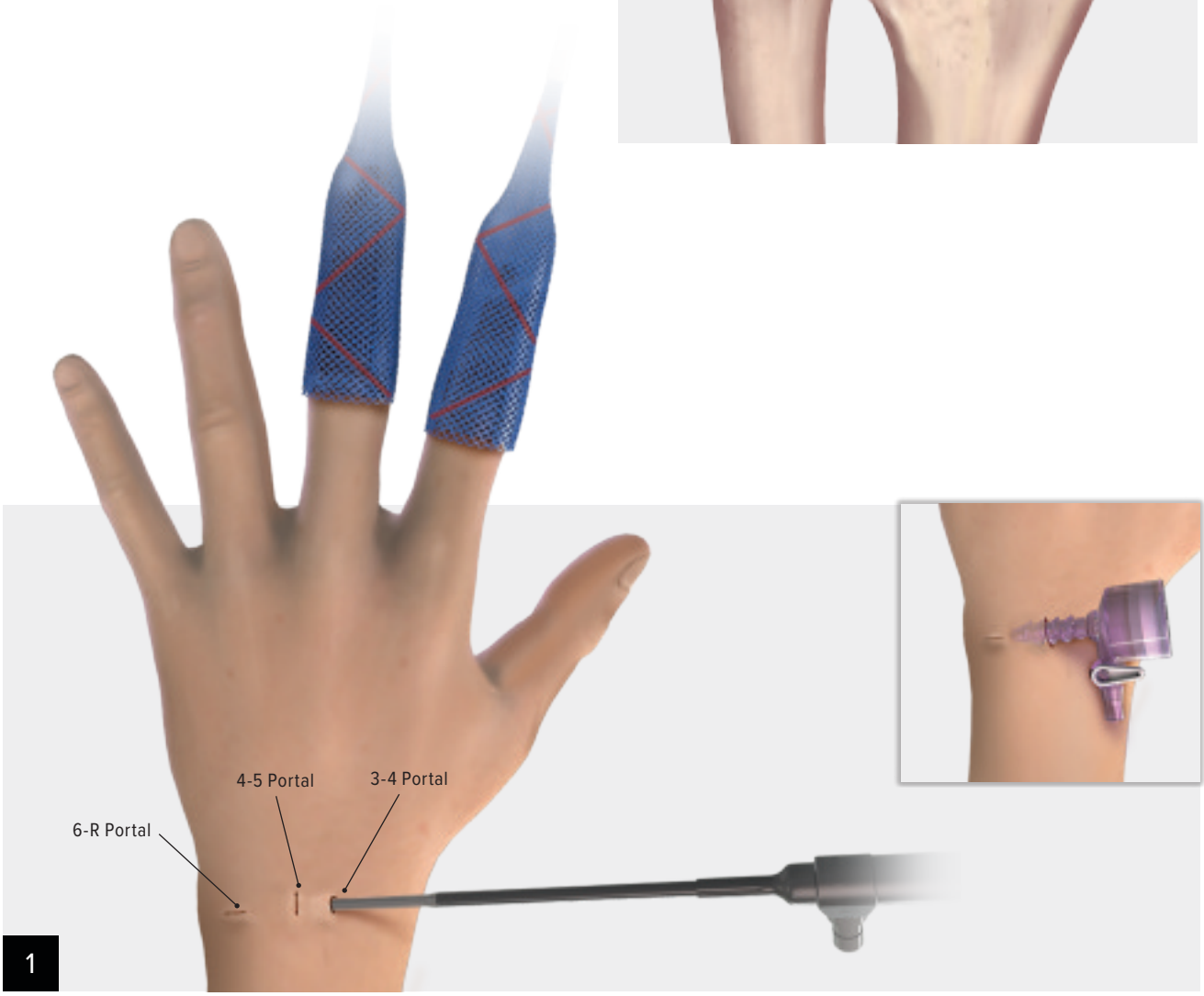


Arthrex®

TFCC Ulnar Tunnel Repair

The triangular fibrocartilage (TFCC) ulnar tunnel repair technique provides a reliable and reproducible option to treat peripheral ulnar tears of the articular disk. By repairing both the superficial and deep layers (ligamentum subcruetum) of the articular disk down to bone, this technique recreates an anatomic TFCC insertion. FiberStick™ or FiberWire® suture provides a strong and permanent suture repair of the articular disk. The 2.5 mm Mini PushLock® anchor provides the final knotless, no-profile fixation.





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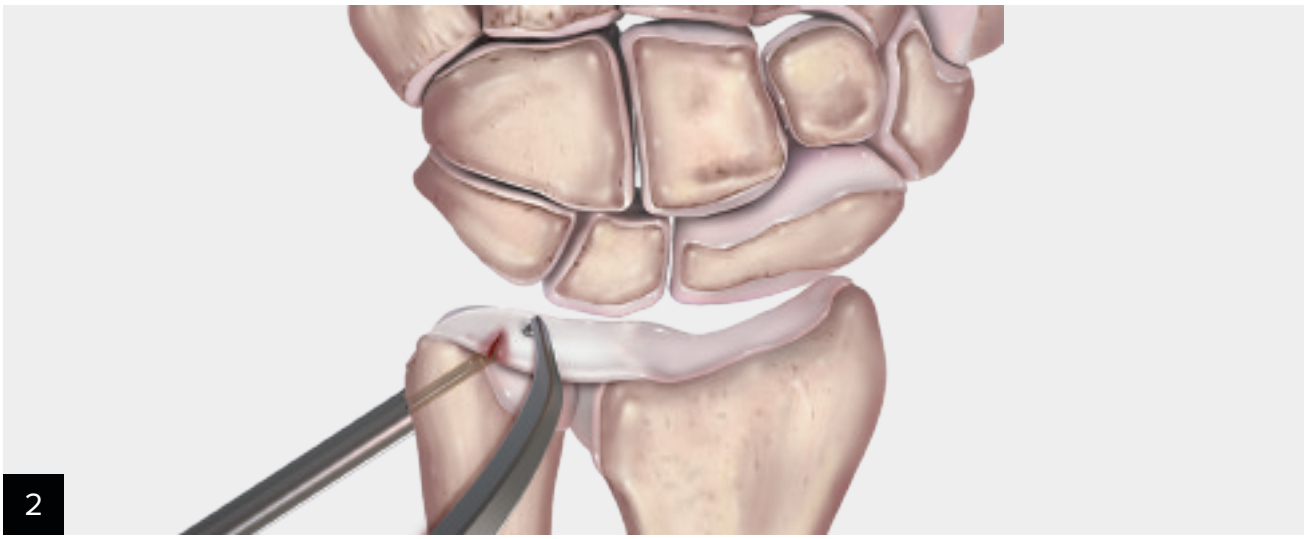
Suspend the wrist in 10 lb of traction in the wrist traction tower. Flex the wrist approximately 30° to gain easier access to the ulna head. Make sure the arm and forearm are well padded so the skin itself does not touch the traction tower.

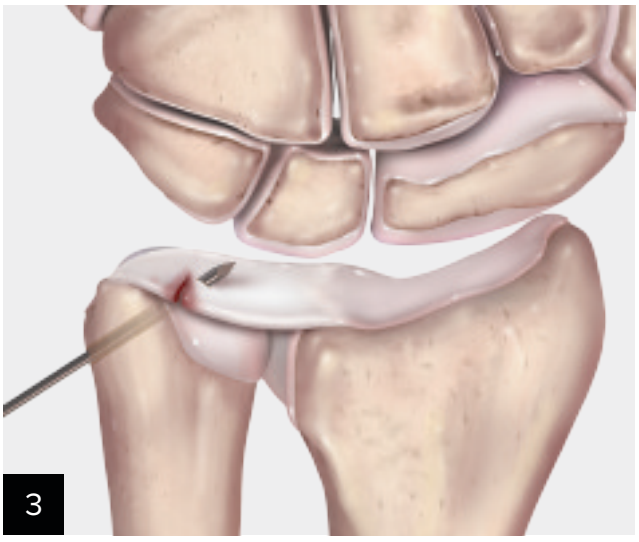
Pull the skin against the tip of a #11 blade to make the standard 3-4 viewing portal. Using a hemotstat, carry the blunt dissection down to the joint capsule, which is then opened. Introduce the arthroscope, with a blunt trocar, into the 3-4 portal. In cases where a peripheral ulnar tear of the TFCC complex is suspected, provide an inflow through either the arthroscope sheath or the 1-2 portal. Establish the 4-5 and 6-R portals and use as working portals

The Triple-Dam Twist-In™ cannula can be used to facilitate soft-tissue management through the established portals.

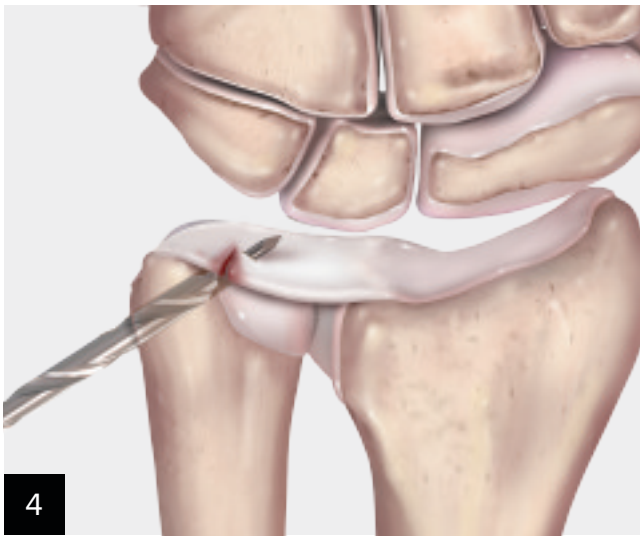


Find the correct placement of the drill guide onto the ulna by palpating the tip of the ulna styloid and going 1 cm proximal to that point. The incision should be on the mid-axial line of the ulna. Be careful not to be too volar as this endangers the dorsal cutaneous branch of the ulnar nerve. The tunnel should be at a 45° angle or less to maximize mobility of the straight Micro SutureLasso™ suture passer within the tunnel. Secure the guide by clicking the shaft into place.

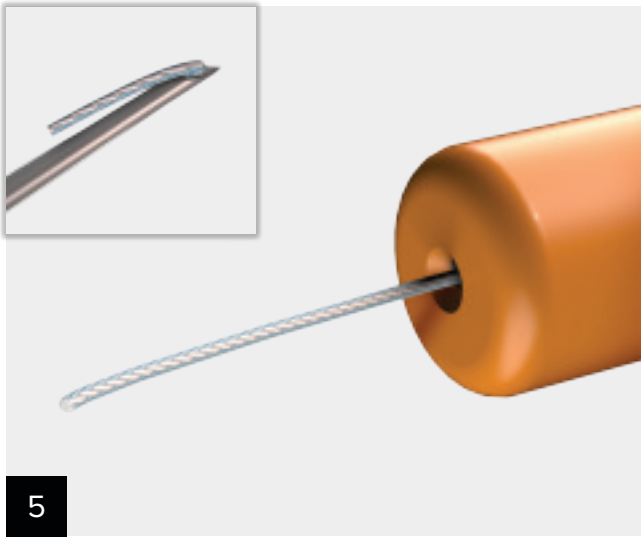
Use the C-ring aiming guide to direct the K-wire placement. Place the pointed tip of the guide in the 6-R portal with the tip pointed up. This makes it easier for the guide to slip into the joint with minimal disruption to the soft tissue. Once the guide is in place, rotate the pointed tip downwards so it is sitting on the fovea where the K-wire should exit. Using the guide as a fulcrum, keep the tip on the fovea and position the proximal part of the guide on the ulna.



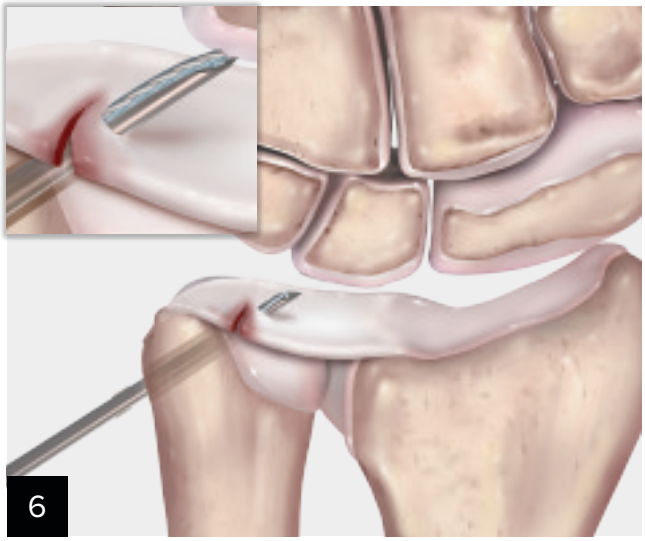
Insert the K-wire through the shaft and pierce the fovea and the TFCC. Remove the guide, leaving the K-wire in place.



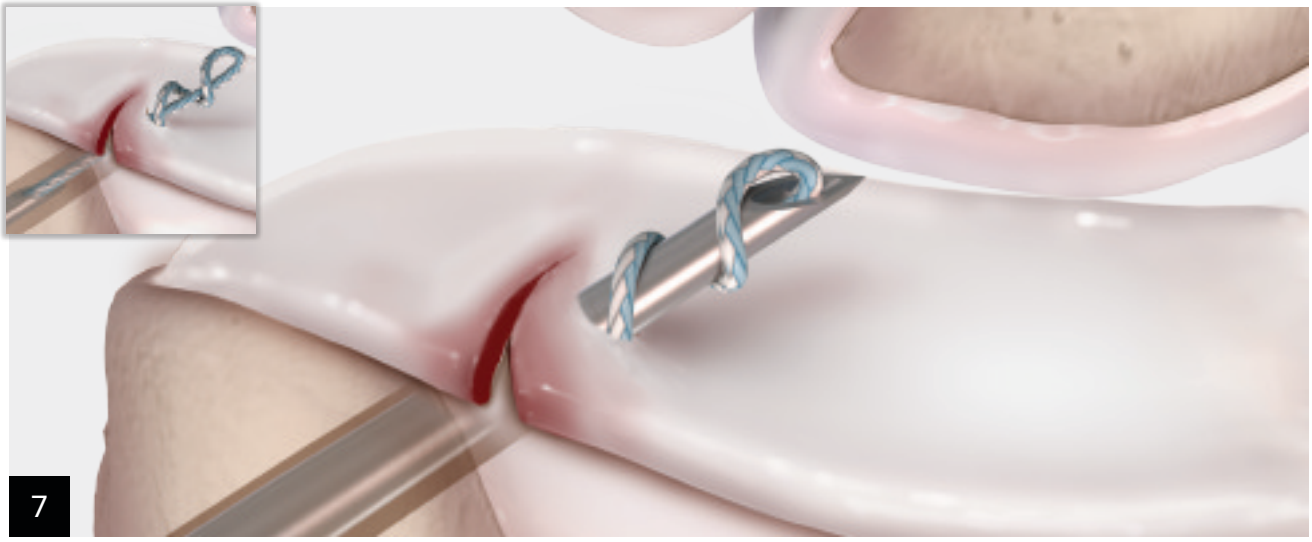
Create an incision on either side of the K-wire to allow for the introduction of the 3 mm cannulated drill. Overdrill the K-wire, making sure to pierce the fovea but leaving the TFCC intact. Stop advancing the drill after passing through the ulnar subchondral bone.



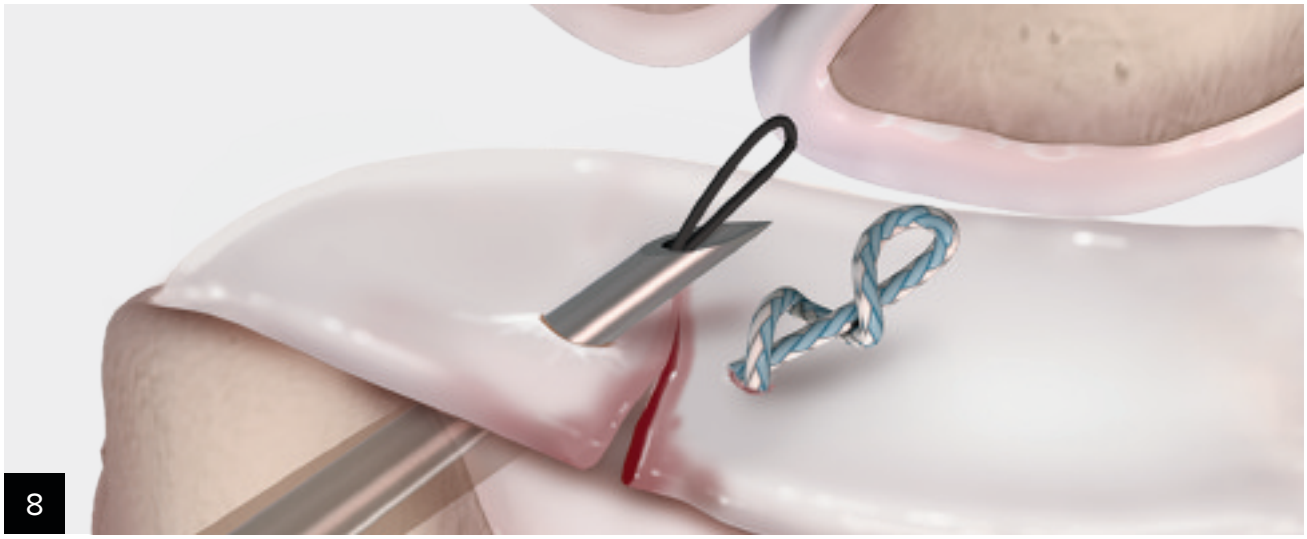
Thread the FiberStick™ suture into the straight Micro SutureLasso™ suture passer and bend the FiberStick suture over the metal tip to ensure that it does not back out of the suture passer.



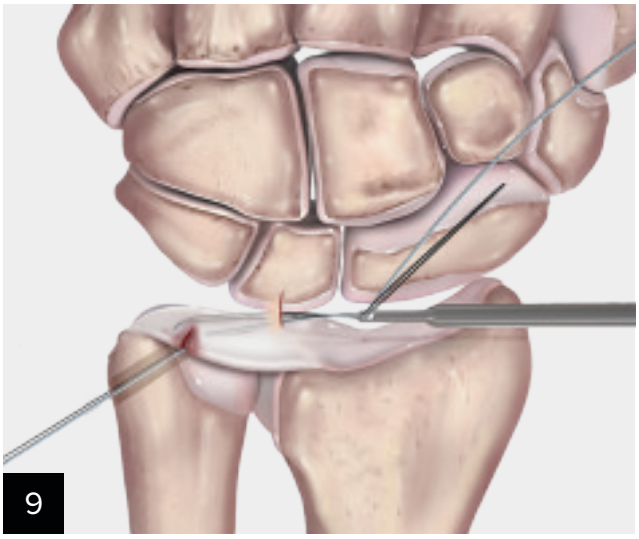
Insert the straight Micro SutureLasso suture passer through the 3 mm drill hole and advance through the TFCC just peripheral to the tear.



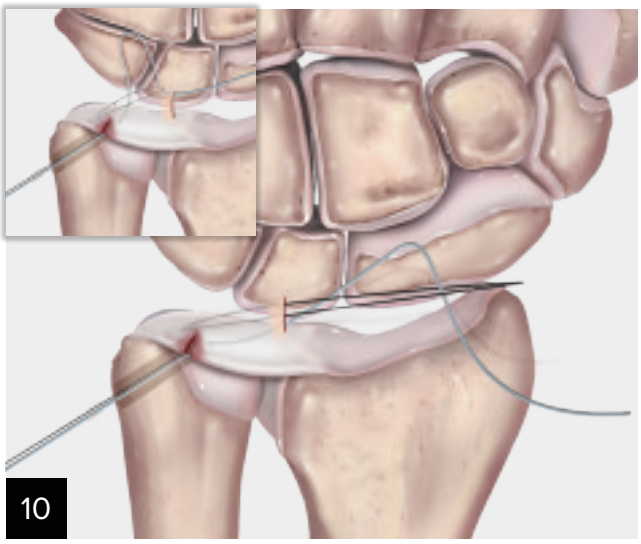
Twist the Micro SutureLasso suture passer to create a corkscrew-style thread around the suture passer. Pull back the Micro SutureLasso suture passer, leaving the FiberStick suture protruding from the TFCC.



Reinsert the straight Micro SutureLasso™ suture passer loaded with the black Nitinol wire. Push the Nitinol wire into the joint space.

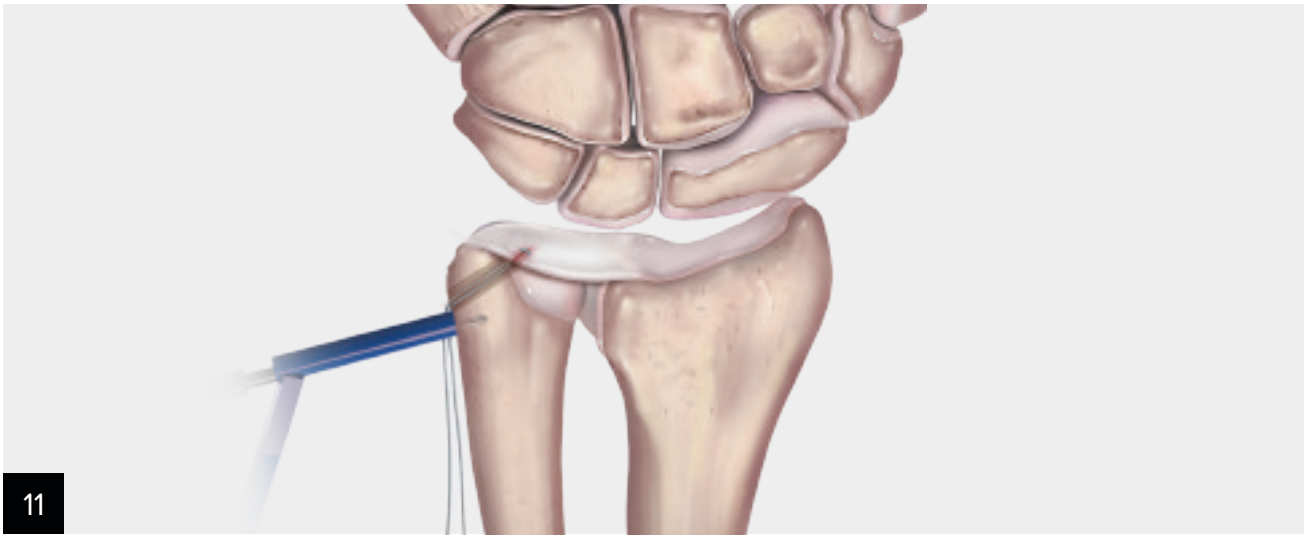


Using the mini suture hook, retrieve the Nitinol wire and the FiberWire® suture out of the 4-5 portal.



Thread the FiberStick™ suture through the Nitinol loop and pull the Nitinol loop out of the ulnar tunnel. This will create the mattress stitch.

Repeat steps 4–9 if a second mattress stitch is desired.



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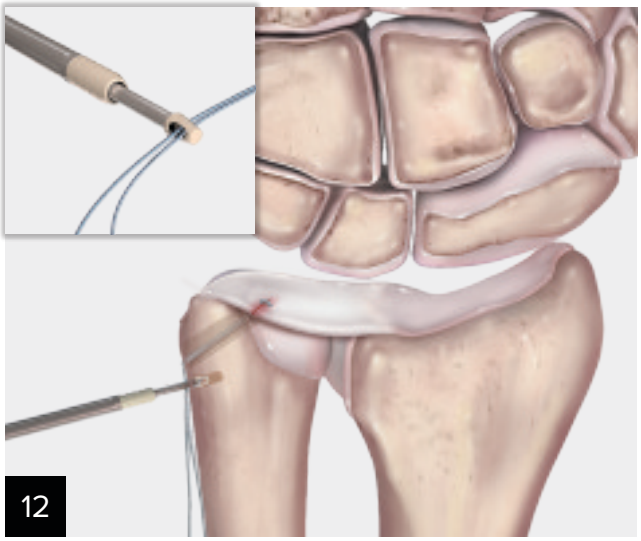
If needed, extend the incision so that the anchor can be placed approximately 1 cm proximally from the ulnar bone tunnel. Use the 1.8 or 2 mm drill to drill at a 45° angle into the ulna. Use the drill guide from the disposables kit as a depth stop.



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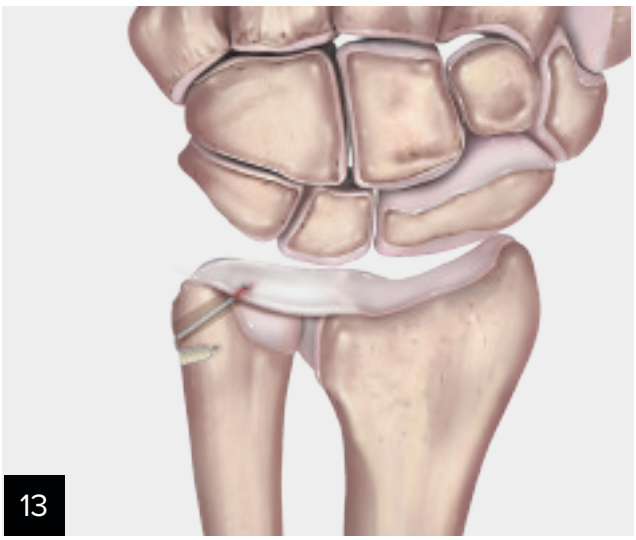
Thread the PushLock® anchor with the two tails of the FiberStick suture. Adjust the tension and insert the PushLock anchor until it is flush with the bone.



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Once the PushLock anchor is inserted and sits flush against the bone, cut the suture tails, leaving a knotless, down-to-the-bone TFCC repair. If a second FiberStick suture was inserted, repeat steps 10–13 with a second PushLock anchor. The second insertion point should be drilled at a different angle to avoid the first anchor.

Post-op Protocol

The patient is put in a sugar-tong splint with mid pronation/supination (thumb pointing up) for 1 week. A Muenster type splint is used for the following 5 to 6 weeks, making sure that it allows elbow flexion, but no pronation/supination. After 6 weeks, slow, progressive program of motion is advised. After 2 months, the patient is placed in a physical therapy program for a range-of-motion and strengthening exercises. Full weightbearing is not advised until after 4 months.

Ordering Information

Tenodesis Disposables Kit for 3 mm × 8 mm Screw

Product Description	
Guidewire 0.041 in (1 mm) Suture Passing Wire, 1.1 mm 2-0 FiberWire® Suture w/ Needle Drill Bits, AO, cannulated, 2.5 mm, 3.0 mm, 3.5 mm	AR-**1530DS**

Mini BioComposite SutureTak Anchor Disposables Kit (to use with the Mini PushLock® anchor)

Product Description	
Drill Bit, 1.8 mm (for soft bone) Drill Bit, 2.0 mm (for hard bone) Punch Drill Guide	AR-**1322DSC**

Instrumentation

Product Description	
Micro SutureLasso™ Suture Passer, straight	AR-**8703**

Implants

Product Description	
BioComposite PushLock® Anchor, 2.5 mm × 8 mm	AR-**8825B**
PEEK PushLock Anchor, 5 mm × 8 mm	AR-**8825P**
2-0 FiberStick™, 2-0 FiberWire, 50 in (blue), one end stiffened, 12 in	AR-**7222**
2-0 FIberWire, 38 in (blue)	AR-**7221**

Optional Accessories

Product Description	
Wrist Traction Tower	AR-**1611S**
Triple-Dam Twist-In™ Cannula, 3.75 mm	AR-**6580**
Mini Suture Hook	AR-**8705**
C-Ring Aiming Guide	AR-**8826G**

Plate and technique designed in conjunction with Eugene E. Curry, MD

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 or outcomes.

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