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® provides a strong and permanent suture repair of the articular disk. The 2.5 mm Mini PushLock® provides the final knotless, no-profile fixation.

The wrist is suspended in 10 pounds of traction in the Wrist Traction Tower. The wrist is flexed approximately 30º to gain easier access to the ulna head. The arm and forearm are well padded so the skin itself does not touch the traction tower.

The standard 3-4 viewing portal is made by pulling the skin against the tip of a #11 blade. Blunt dissection is carried out with a hemostat down to the joint capsule which is then opened. The arthroscope, with a blunt trocar, is introduced into the 3-4 portal. In cases when a peripheral ulnar tear of the TFCC complex is suspected, an inflow is provided either through the arthroscope sheath or the 1-2 portal.

The 4-5 and 6-R portals are then established and used as working portals.

The TripleDam Cannula can be used to facilitate soft tissue management through the established portals.
The correct placement of the Drill Guide onto the ulna is found by palpating the tip of the ulna styloid and coming 1 cm proximal to that point. The incision should be on the mid-axial line of the ulna. Care is taken not to be too volar as this endangers the dorsal cutaneous branch of the ulnar nerve. The tunnel should be at a 45º angle or less to maximize mobility of the straight Micro SutureLasso™ within the tunnel. Secure the guide by clicking the shaft into place.

The C-Ring Aiming Guide is used to direct the K-wire placement. The pointed tip of the guide should be placed 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.

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 to leave the TFCC intact. Stop advancing the drill after passing through the ulnar subchondral bone.

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

Thread the FiberStick into the straight Micro SutureLasso and bend the FiberStick over the metal tip to ensure that it does not back out of the Micro SutureLasso.
Insert the straight Micro SutureLasso™ through the 3 mm drill hole and advance through the TFCC just peripheral to the tear.

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

Reinsert the straight Micro SutureLasso 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® out of the 4-5 portal.
Once the PushLock anchor is inserted and sits flush against the bone, the suture tails are cut, leaving a knotless, down-to-the-bone TFCC repair. If a second FiberStick 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.

10
Thread the FiberStick™ 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.

11
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 45º angle into the ulna. There is a Drill Guide in the disposables kit that should be used as a depth stop.

12
Thread the PushLock® anchor with the two tails of the FiberStick. Adjust the tension and insert the PushLock until it is flush with the bone.

13
Once the PushLock anchor is inserted and sits flush against the bone, the suture tails are cut, leaving a knotless, down-to-the-bone TFCC repair. If a second FiberStick 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.

This technique was developed in conjunction with Richard F. Howard, DO, St. Louis, Missouri.
**Post-op Protocol**

The patient is put in a sugar-tong splint with mid pronation/supination (thumb pointing up) for one week. A Muenster type splint is used for the following 5 – 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 weight-bearing is not advised until after 4 months.

**Ordering Information**

**Tenodesis Disposables Kit for 3 mm x 8 mm Screw**  
(AR-1530DS) includes:

- Guidewire .041” (1 mm)
- Suture Passing Wire
- 2-0 FiberWire w/Needle
- Cannulated Drills 2.5 mm, 3 mm and 3.5 mm

**Mini SutureTak® Disposables Kit (AR-1322DSC)** for use with the Mini PushLock® includes:

- Drill Bit, 1.8 mm (for soft bone)
- Drill Bit, 2.0 mm (for hard bone)
- Punch
- Drill Guide

**Instrumentation:**

- Micro SutureLasso, straight AR-8703

**Implants:**

- Bio-PushLock, 2.5 mm x 8 mm AR-8825B
- PEEK PushLock, 2.5 mm x 8 mm AR-8825P
- 2-0 FiberStick, 2-0 FiberWire, 50” (blue), one end stiffened, 12” AR-7222
- 2-0 FiberWire, 38” (blue) AR-7221

**Optional Accessories:**

- Wrist Traction Tower AR-1611S
- TripleDam Cannula, 3.75 mm AR-6580
- Mini Suture Hook AR-8705
- C-Ring Aiming Guide AR-8826

*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.*