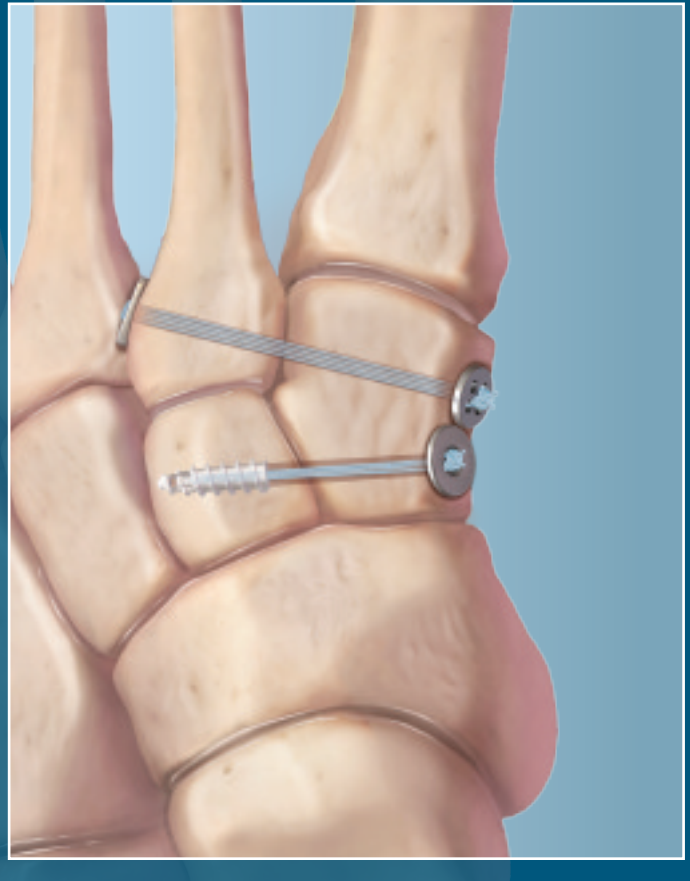
Arthrex®

Lisfranc TightRope® Fixation

Surgical Technique



Lisfranc TightRope Fixation

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This technique was developed in conjunction with John Crates, M.D., Plano TX

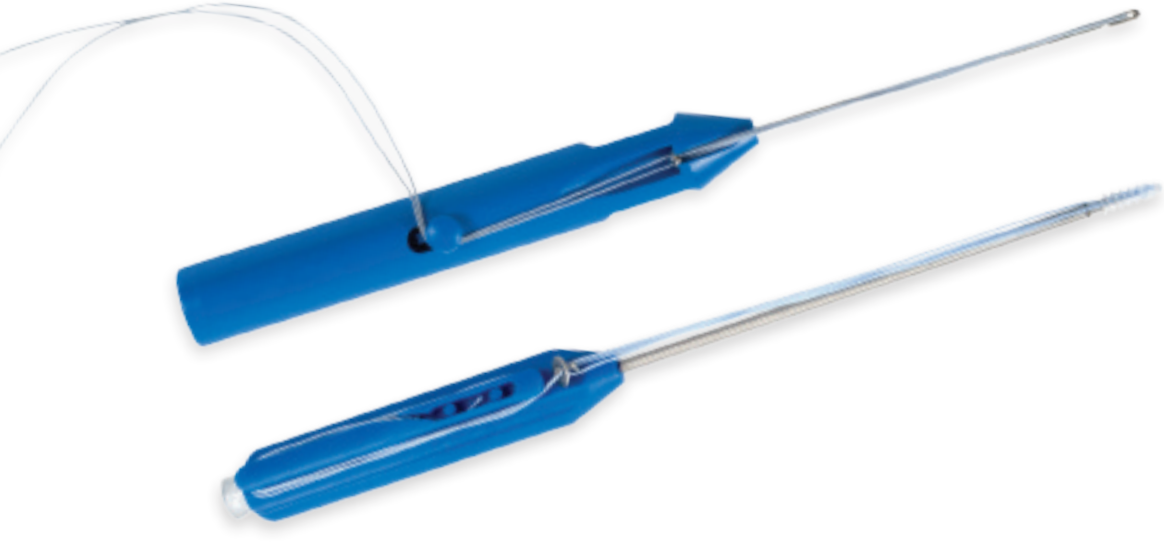
The successful treatment of subtle Lisfranc joint injuries requires maintaining stability and anatomy of the midfoot. While many subtle or "grey-zone" injuries can be successfully treated conservatively, the Mini TightRope provides a successful alternative to pin and screw fixation when treatment warrants surgical intervention.

Advantages:

- No second surgery for screw removal
- Less protruding hardware
- Similar strength to screw fixation[1]
- Less joint disruption than that caused by a screw
- Rotational stability by addressing rotation and medial-lateral compression
- Micro-motion proven to accelerate biological healing[2,3]

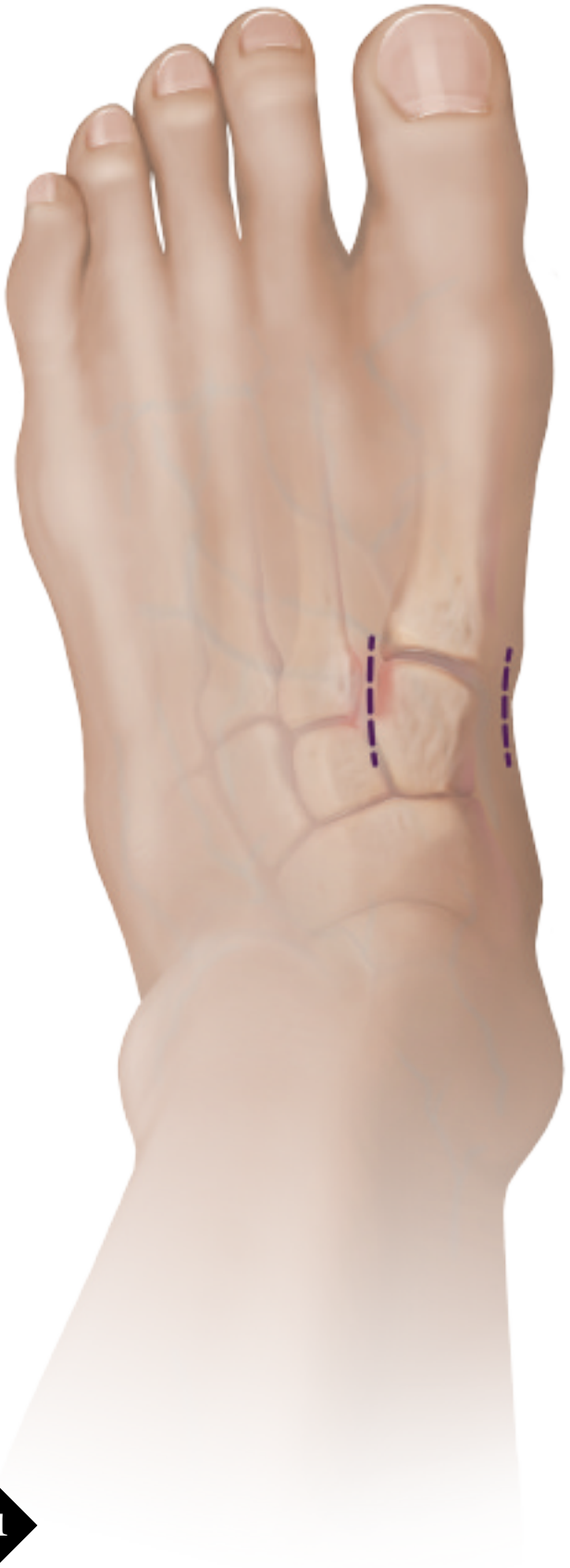
Ordering Information

AR-8913DS	Mini TightRope
AR-8912DS	Mini TightRope FT



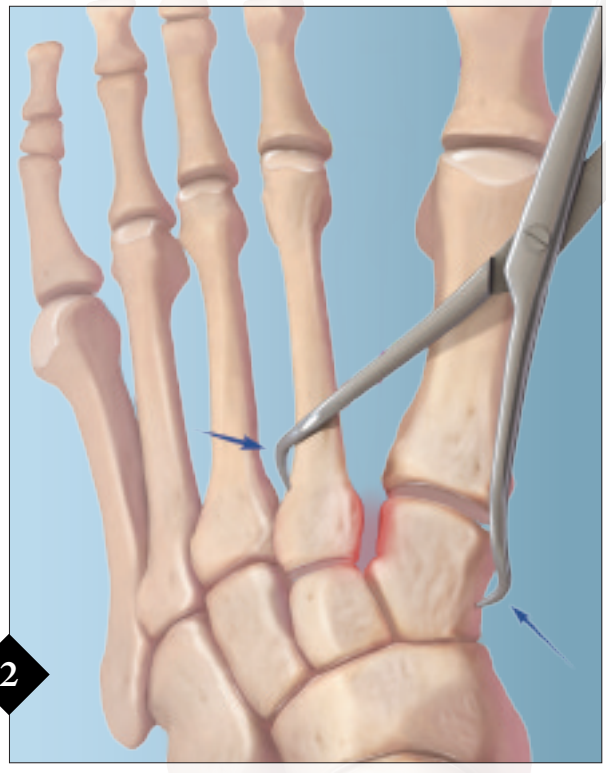
References:

1. Vinod K. Panchbhavi, M.D., FRCS, Santaram Vallurupalli, M.D., Jinping Yang, M.D., Screw Fixation Compared with Suture-Button Fixation of Isolated Lisfranc Ligament Injuries. *Journal of Bone Joint Surgery Am* 2009;91:1143-1148.
2. Hart DP, Dahners LE, Healing of the medial collateral ligament in rats. The effects of repair, motion, and secondary stabilizing ligaments. *Journal of Bone Joint Surg Am* 1987;69:1194-9.
3. Walsh S, Frank C, Shrive N, Hart D, Knee immobilization inhibits biomechanical maturation of the rabbit medial collateral ligament. *Clinical Orthopeadic Related Research* 1993;297:253-61.



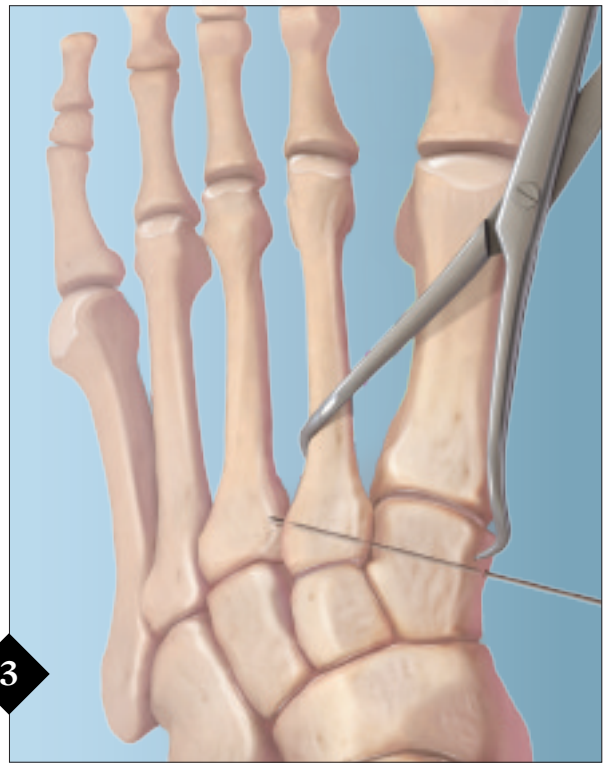
1

A two-incision technique is utilized. A dorsal approach is made overlying the intercuneiform joint and the first and second tarsal-metatarsal. The second (medial) approach is made along the medial cuneiform. Care is taken to protect the neurovascular bundle dorsally and the anterior tibialis medially.



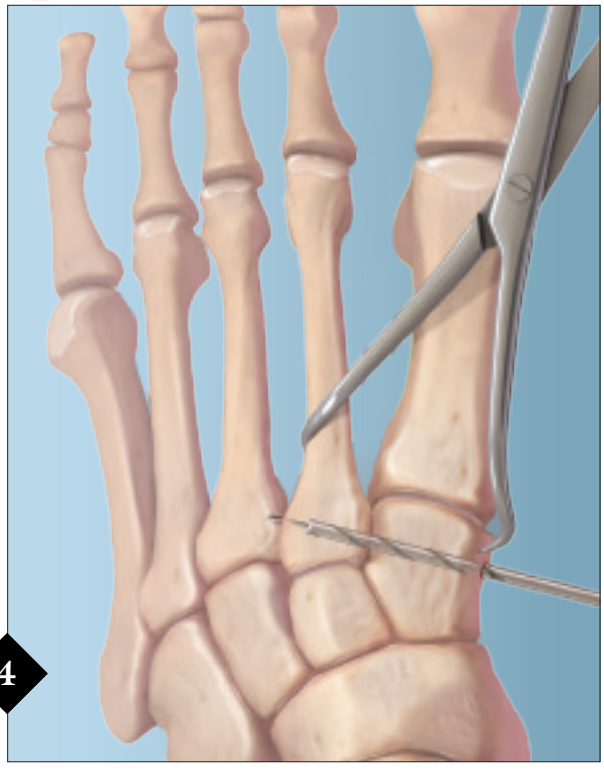
2

The Reduction Clamp is placed to reduce and compress the second metatarsal base and the medial cuneiform, while traction is applied to the medial column.



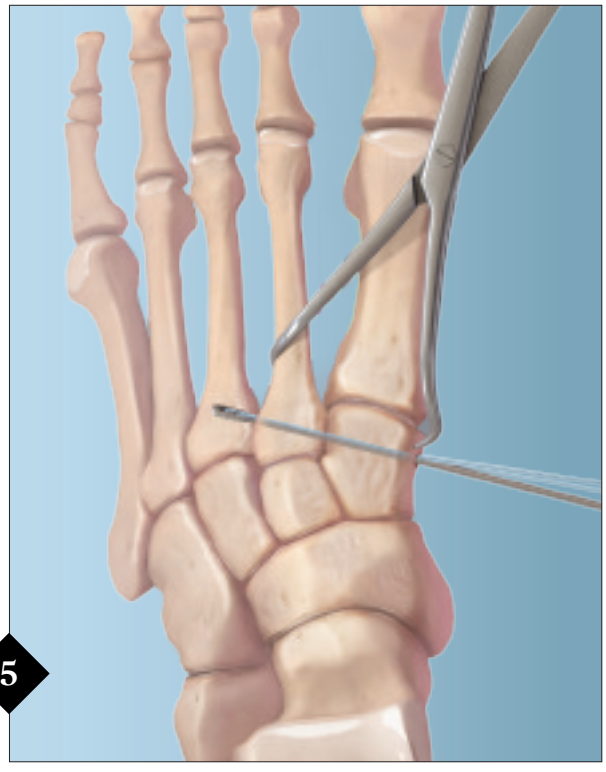
3

The medial starting point of the 1.2 mm Guidewire is on the medial cuneiform distal to the anterior tibialis insertion in the mid-coronal plane. The Guidewire is directed under fluoroscopy toward the second metatarsal base in the mid-coronal plane distal to the articulation, between the second and third metatarsals.



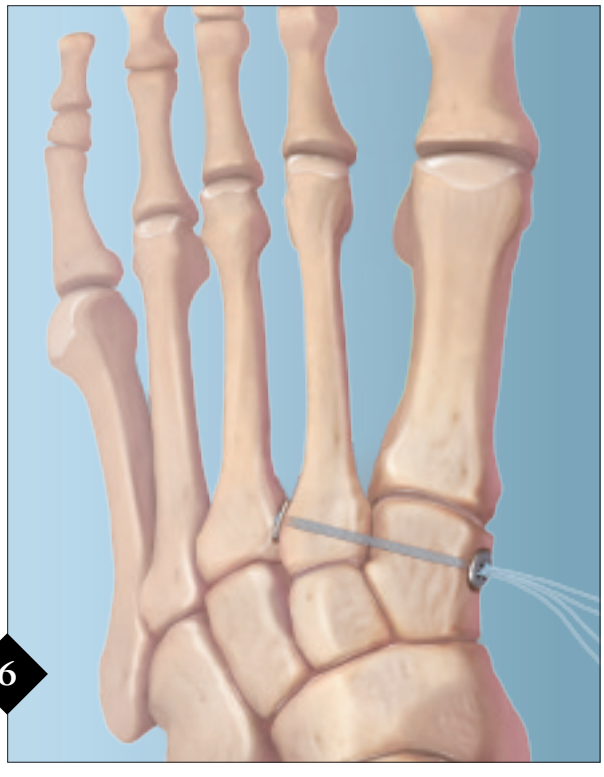
4

The 2.7 mm Cannulated Drill is advanced over the Guidewire.



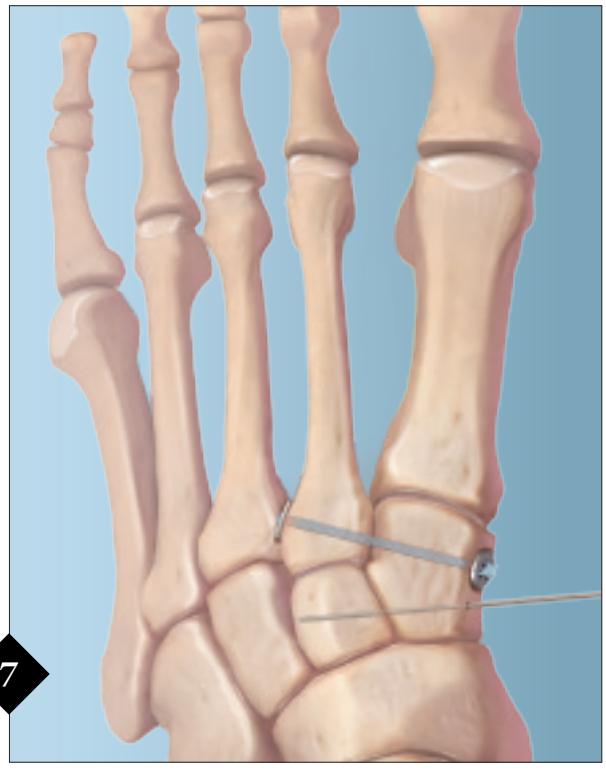
5

The Mini TightRope with handled inserter is passed medial to lateral. The button should sit flush on the lateral second metatarsal base.



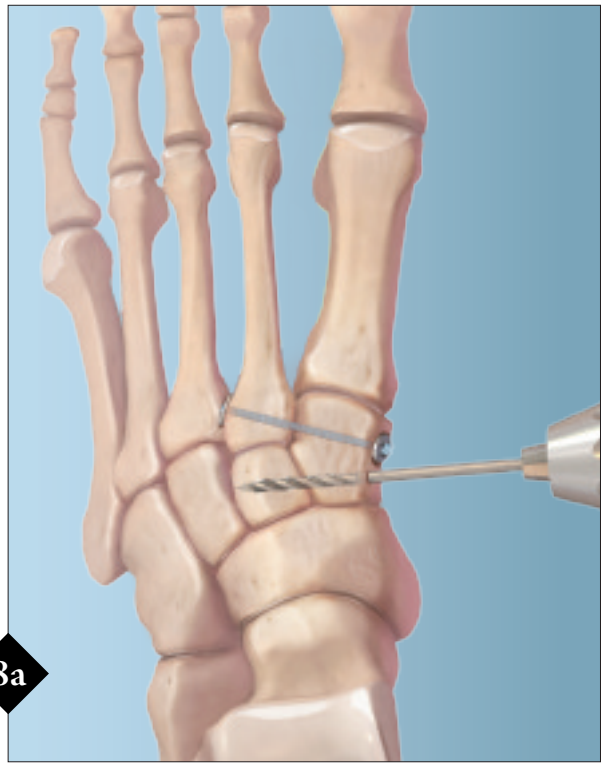
6

The Mini TightRope is tightened by throwing three or four half-hitches. The button should sit flush on the medial cortex of the medial cuneiform.

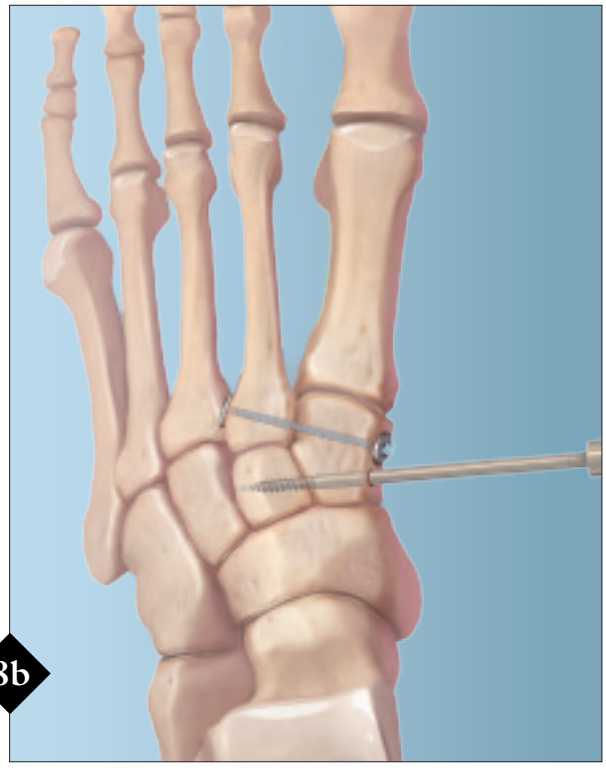


7

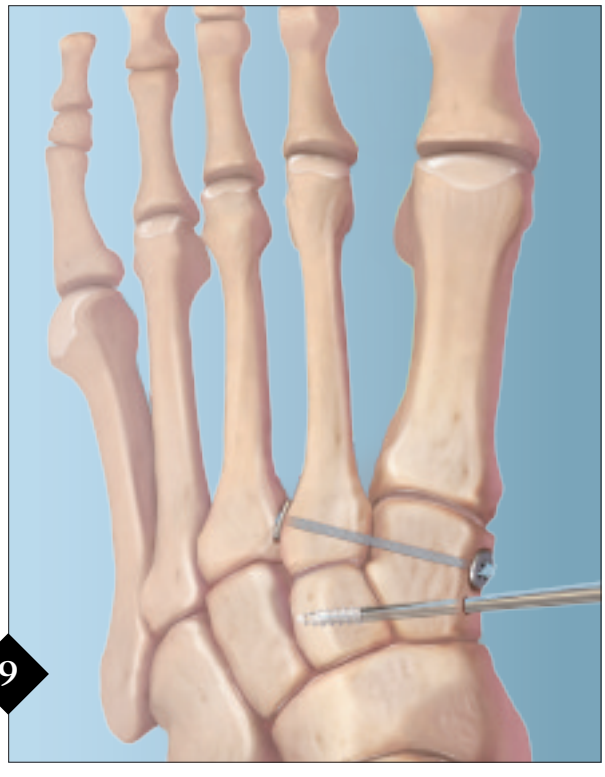
The 1.2 mm Guidewire for the Mini TightRope FT is placed proximally and dorsally to the initial Mini TightRope. Care is taken to cross the intercuneiform joint perpendicularly with the second Guidewire just proximal to the second TMT joint. Fluoroscopy should be used to aid in this placement.



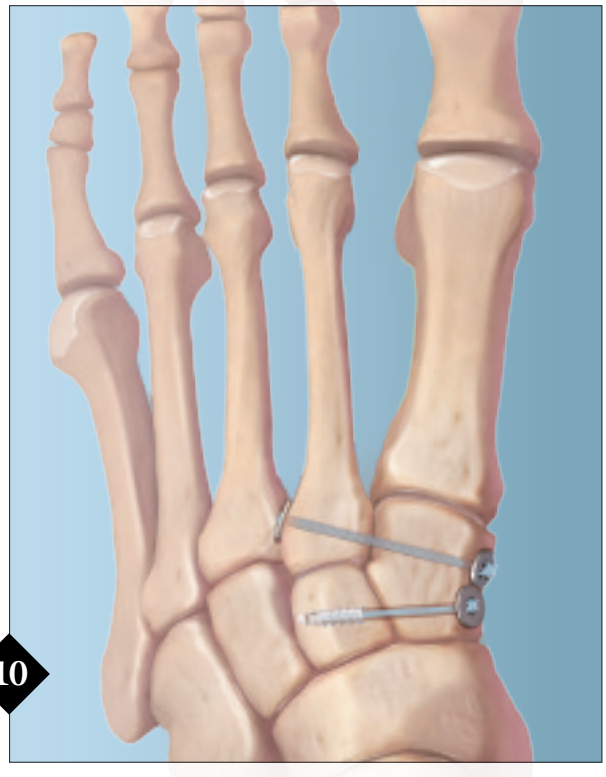
With the 1.2 mm Guidewire in place, the 2.7 mm drill for the Mini TightRope FT is reamed over the Guidewire to the lateral cortex of the middle cuneiform enlarging this path to allow passage of the Bio-Corkscrew® FT anchor. This second Mini TightRope FT drill should stop its penetration just medial to the lateral cortex of the middle cuneiform.



The Guidewire and drill are removed and the track into the middle cuneiform is tapped.



The Mini TightRope FT is inserted next to the anchoring system in the middle cuneiform.



The Mini TightRope FT is tightened with three or four half-hitches and placed flush on the medial cuneiform.

Additional Information:
The adequacy of the reduction is checked under direct visualization and fluoroscopy. Three view radiographs are also obtained to confirm the reduction.

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.