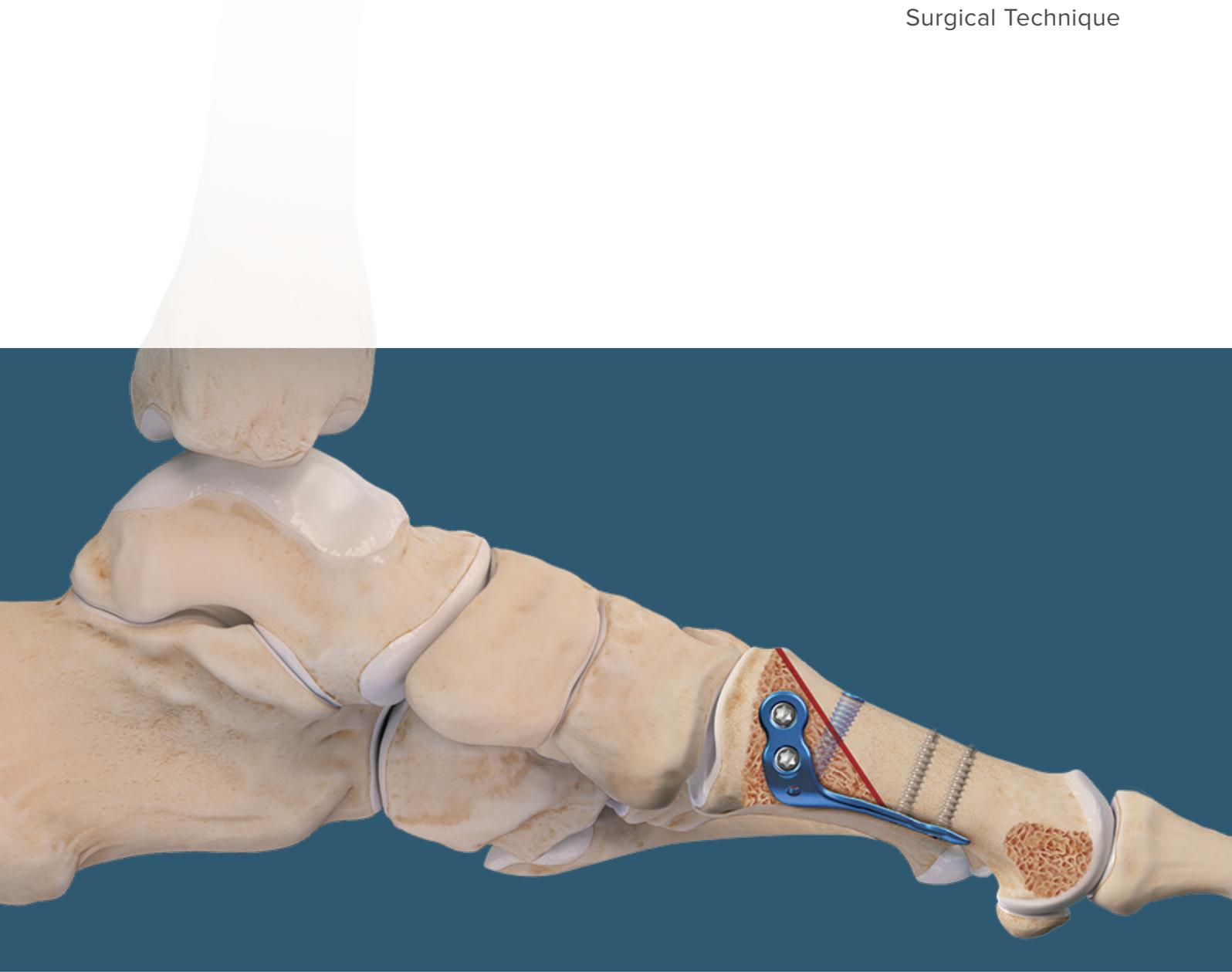


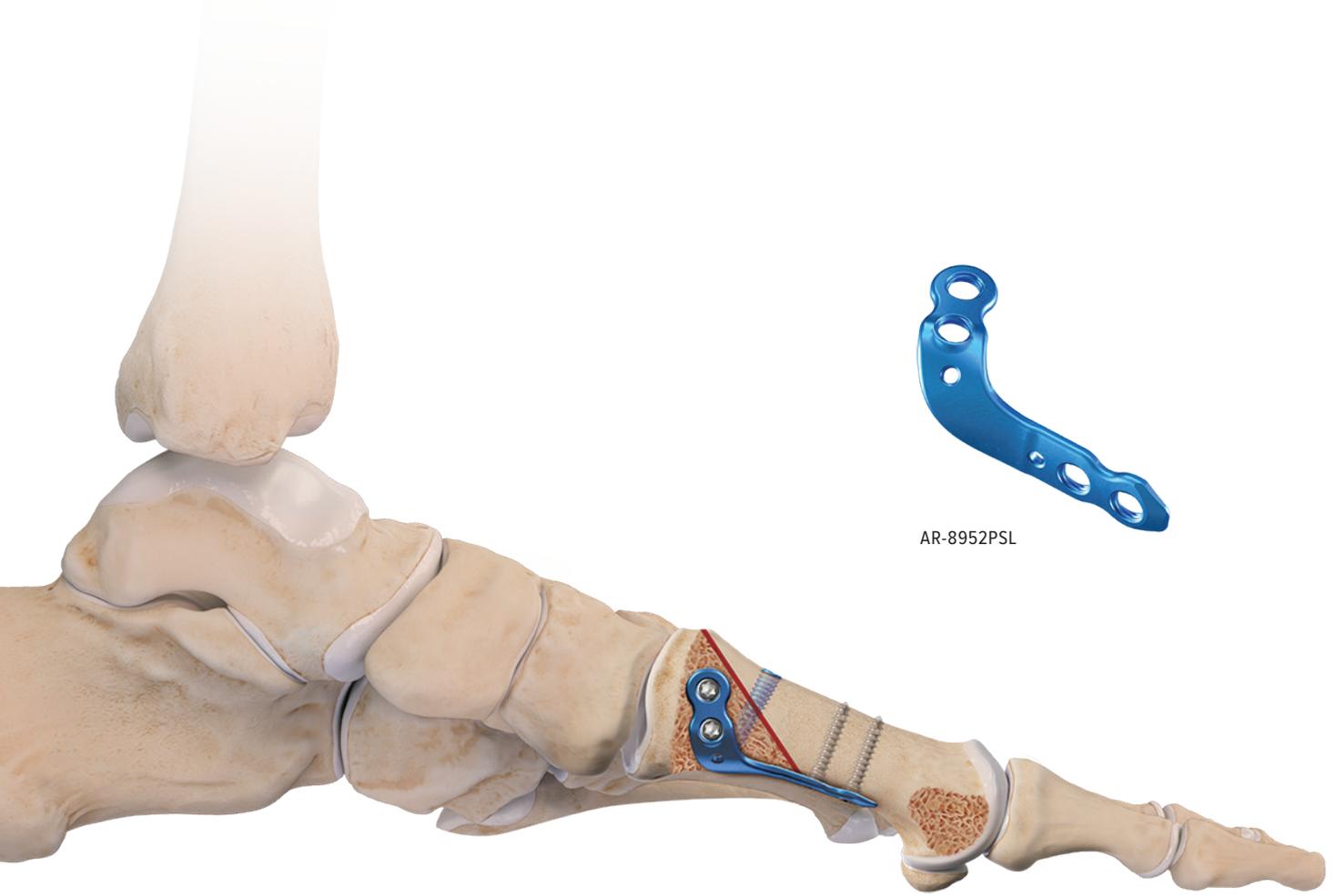
Proximal 1st Metatarsal Osteotomy Plate

Surgical Technique



Proximal 1st Metatarsal Osteotomy Technique

Proximal metatarsal osteotomies work well to achieve reliable deformity correction in patients with a large 1st–2nd intermetatarsal angle. They may help minimize rotation, shortening, and elevation of the metatarsal. A number of osteotomy techniques have been described, including Ludloff, Mau, proximal crescentic, proximal chevron, scarf, opening wedge, and closing wedge, among others. The plate works with osteotomies where the proximal 1.5 cm of the 1st metatarsal is preserved to allow for placement of locking screws. The plate can be used alone or as an adjunct to screw fixation. It is particularly useful in patients with osteoporotic bone.



AR-8952PSL

Proximal 1st Metatarsal Osteotomy Technique



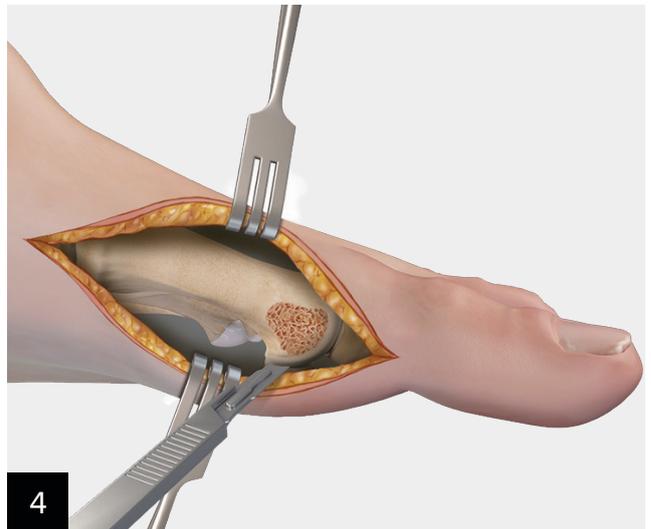
With the patient positioned supine and a tourniquet in use according to surgeon preference, begin with a medial longitudinal incision starting at the 1st metatarsal-cuneiform joint and extending to the 1st metatarsal-phalangeal joint.



Make a longitudinal capsular incision to expose and resect the medial eminence.



The adductor hallucis tendon can be released from the lateral sesamoid and the lateral capsule may be released according to surgeon preference.

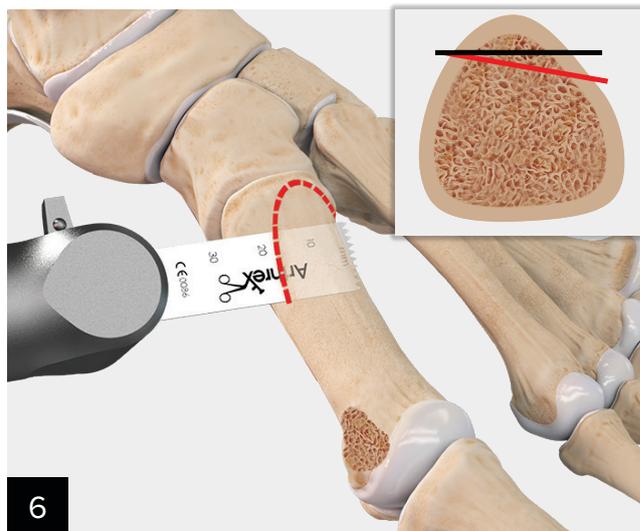


Alternatively, a distal soft-tissue release can be performed directly through the medial incision or through a formal dorsal 1st web space incision, releasing soft-tissue structures based on surgeon preference.

Proximal 1st Metatarsal Osteotomy Technique



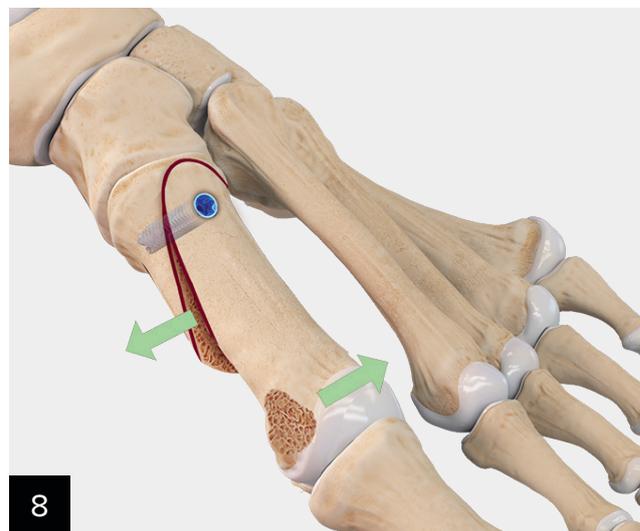
The type of proximal osteotomy performed depends on such factors as the magnitude of the of IM 1-2 angle, 1st TMT joint stability, distal metatarsal head articular angle (DMAA), and surgeon preference, among others. The Ludloff osteotomy will be used here for illustration.



Start the osteotomy as far proximal dorsal and close to the 1st TMT joint as possible to allow maximum correction of the IM 1-2 angle. The osteotomy should be directed toward the plantar aspect of the metatarsal (approximately 30° osteotomy–plantar metatarsal surface angle) exiting proximal to the sesamoids, and angled approximately 10° plantarly.

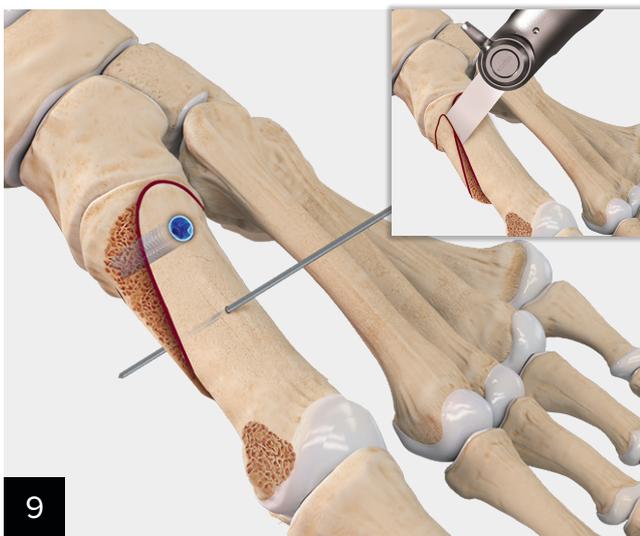


Complete the osteotomy approximately two-thirds of the way, stopping short of the plantar cortex. A screw can be inserted dorsal to plantar and advanced, stopping just short of the cortex, 5 mm to 7 mm proximal to the start of the osteotomy. Alternatively, a temporary 1.6 mm K-wire can be used.

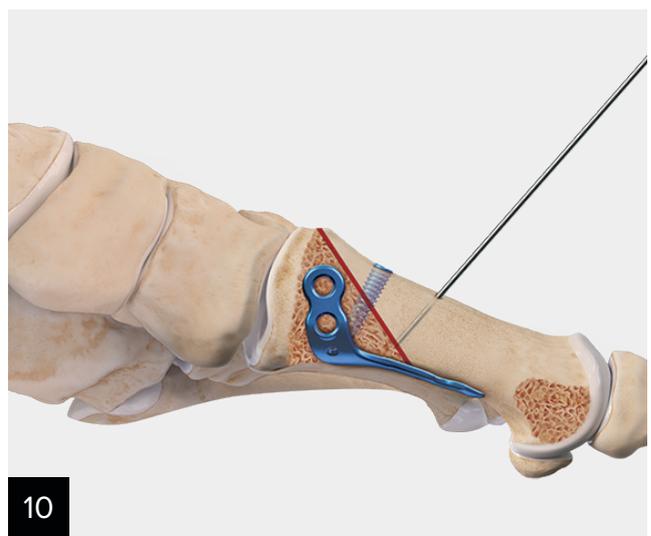


Complete the osteotomy through the plantar cortex. Using sharp reduction forceps or a dental pick, pull the proximal part of the 1st metatarsal medially, while simultaneously pushing the metatarsal head laterally, until the distal part of the metatarsal is parallel to the 2nd metatarsal.

Proximal 1st Metatarsal Osteotomy Technique



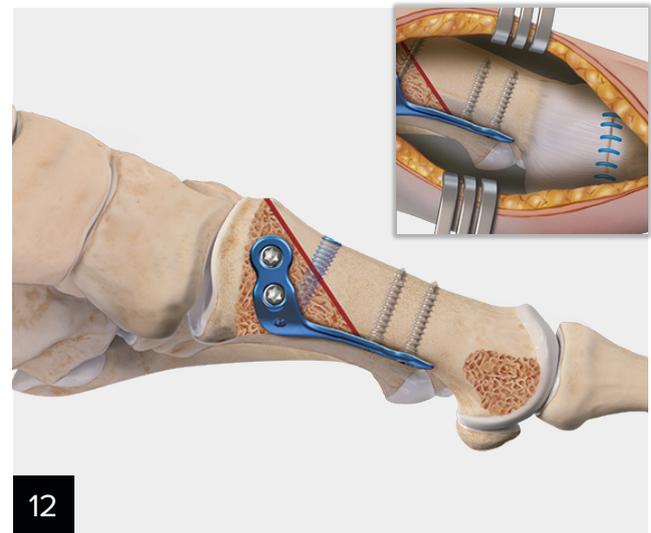
9 Use a second 1.25 mm K-wire to stabilize the osteotomy distal to the 1.6 mm K-wire or screw. Advance the screw to achieve compression across the proximal osteotomy site. **Optional: Use another 1.25 mm K-wire to temporarily pin the 1st metatarsal head to the 2nd metatarsal. Resect the excess proximal 1st metatarsal overhang.**



10 Choose the appropriate-size plate and apply to the metatarsal shaft.

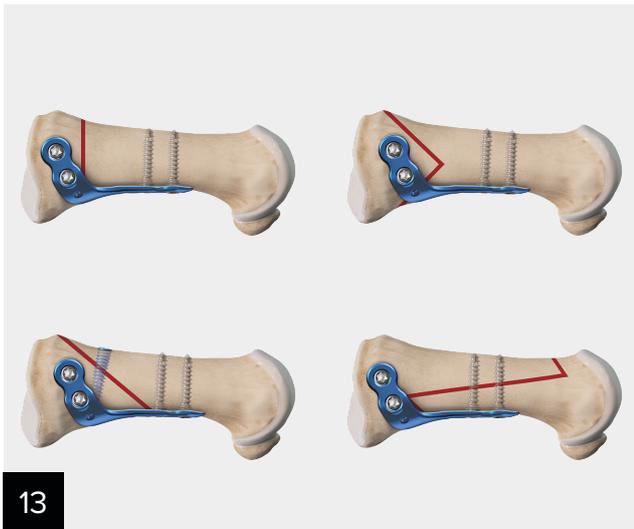


11 Proximal fixation is achieved first with locking screws (these can be placed as variable-angle screws). Use fluoroscopy to verify that the screws are not penetrating the 1st tarsometatarsal joint.



12 Place the distal locking screws, securing the distal metatarsal fragment and finalizing the correction. Complete the medial capsular closure, lining up the sesamoids in the corrected position under the metatarsal head.

Proximal 1st Metatarsal Osteotomy Technique



These steps are performed in a similar fashion when the plate is used for other types of proximal osteotomies.



1st Tarsometatarsal Arthrodesis



Naviculocuneiform Arthrodesis

Postoperative Protocol

- The patient is placed into a postoperative shoe or a low-fracture boot. Immediate heel weightbearing may be allowed.
- Dressings are changed and sutures are removed at 10-14 days; 1st MTP joint range-of-motion exercises are started.
- Once full bone healing has been confirmed, patients may bear weight on the toe as tolerated around 4-5 weeks postoperatively.
- Return to low-impact activities may start at 2 months postoperatively.

Ordering Information

Proximal 1st Osteotomy

Product Description	Item Number
Plantar 1st Metatarsal Osteotomy Plate, petite, left (d)	AR-8952PPL
Plantar 1st Metatarsal Osteotomy Plate, petite, right	AR-8952PPR
Plantar 1st Metatarsal Osteotomy Plate, standard, left	AR-8952PSL
Plantar 1st Metatarsal Osteotomy Plate, standard, right	AR-8952PSR
Disposables	
BB-Tak, qty 2	AR-13226
BB-Tak, threaded, qty 2	AR-13226T



AR-8952PPL



AR-8952PPR



AR-8952PSL



AR-8952PSR



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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