



SOLUTIONS FOR HALLUX VALGUS

The RELJA Clamp

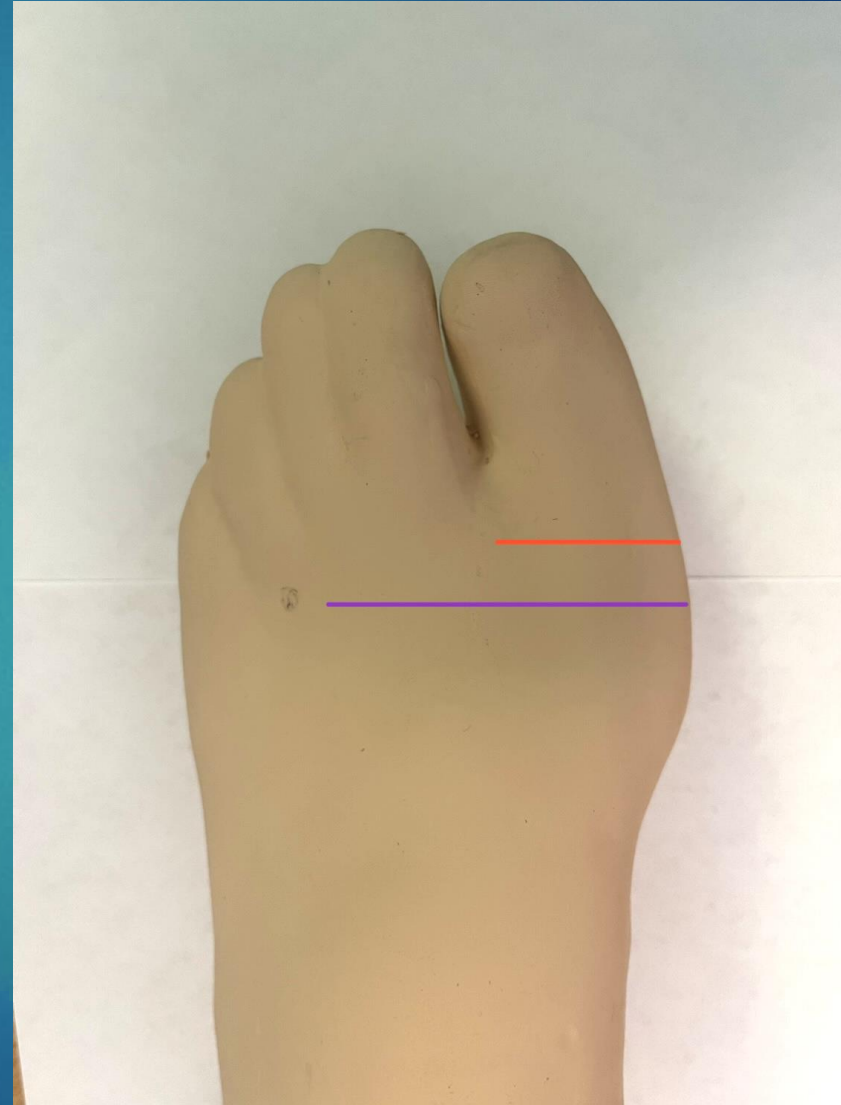
- ▶ Features for Lapidus Procedure:
 - ▶ Reduction of 1st IM Angle
 - ▶ Reduction of frontal plane deformity of the 1st Ray (supinate 1st ray)
 - ▶ Plantarflexion or dorsiflexion of the 1st metatarsal in relationship to the 2nd metatarsal
 - ▶ Compression of the 1st TMT fusion site by providing 4D correction of the 1st ray deformity.
 - ▶ compression across the 1st TMT fusion site by the clamp rotating on the Steinmann pin in the 2nd metatarsal

The RELJA Clamp



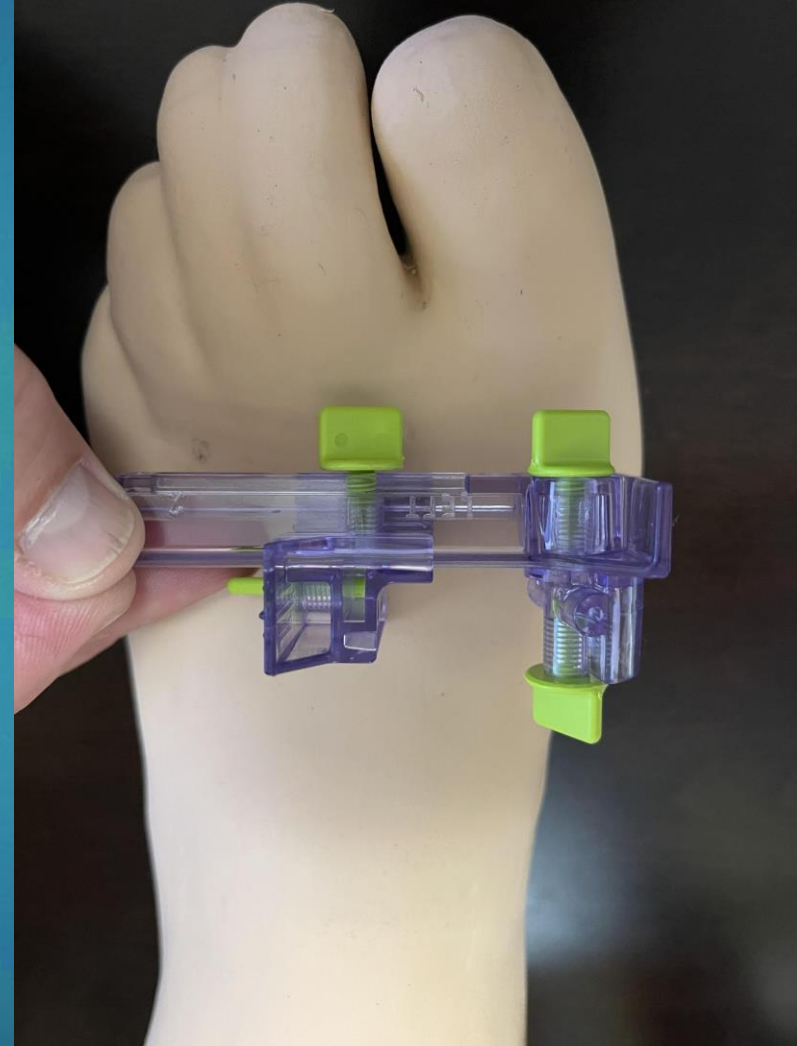
The RELJA Clamp Technique

- ▶ Perform standard joint prep of the 1st TMT prior to applying the Lapiclamp.
- ▶ Mark the 1st MTP with a horizontal line (as shown in red).
- ▶ Next, make a parallel line 5mm proximal to this across the 1st and 2nd metatarsals (as shown in purple)



The RELJA Clamp

- ▶ Lay the clamp flat on top of the foot in line the contour of the foot.
- ▶ Next position the 2nd metatarsal Steinmann pin slot over the center of the 2nd metatarsal. The Steinmann pin should enter at the previously marked purple line.



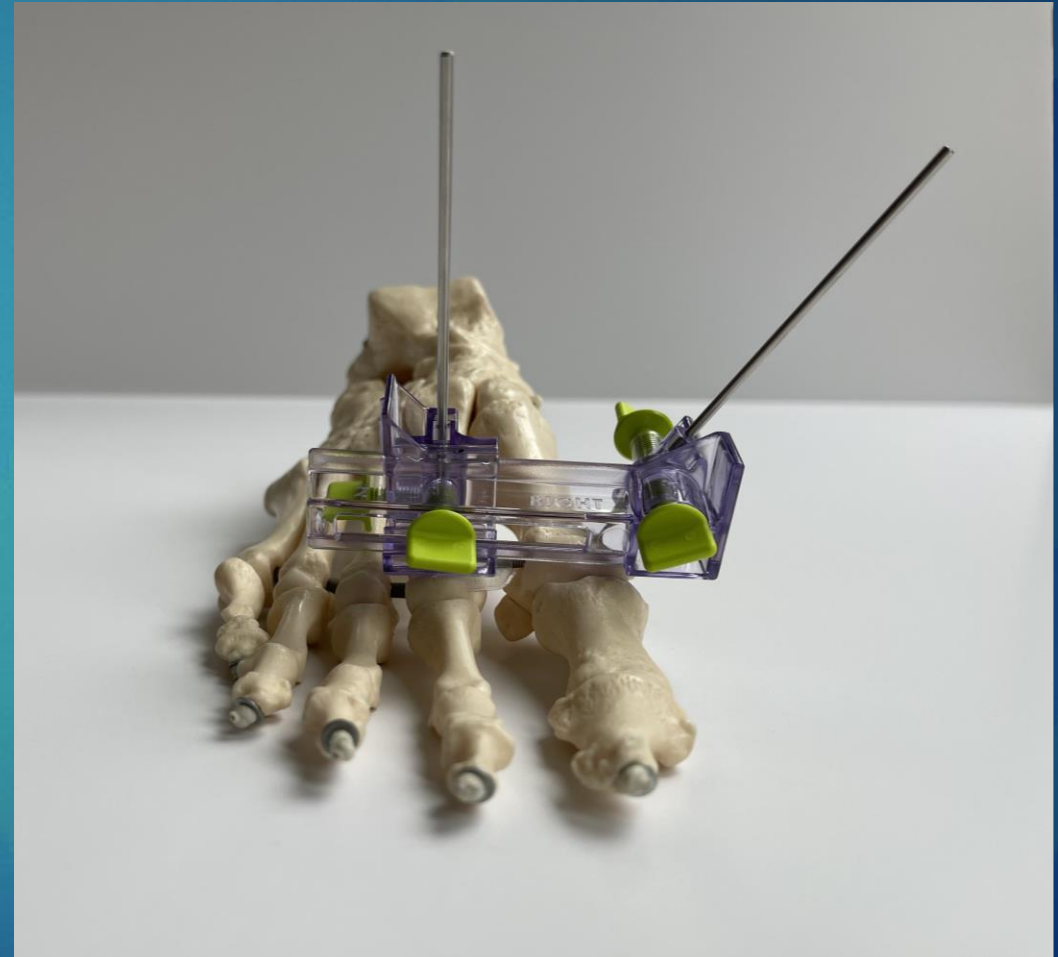
The RELJA Clamp

- ▶ Insert Steinmann Pin into the 2nd metatarsal at the skin marking line.
 - ▶ A 0.062 inch K wire could be substituted on a small foot.
- ▶ The Steinmann pin should be inserted against distal portion of the slot of the 2nd metatarsal piece of the clamp as shown (this will allow the ability to plantarflex the 1st ray later as needed)



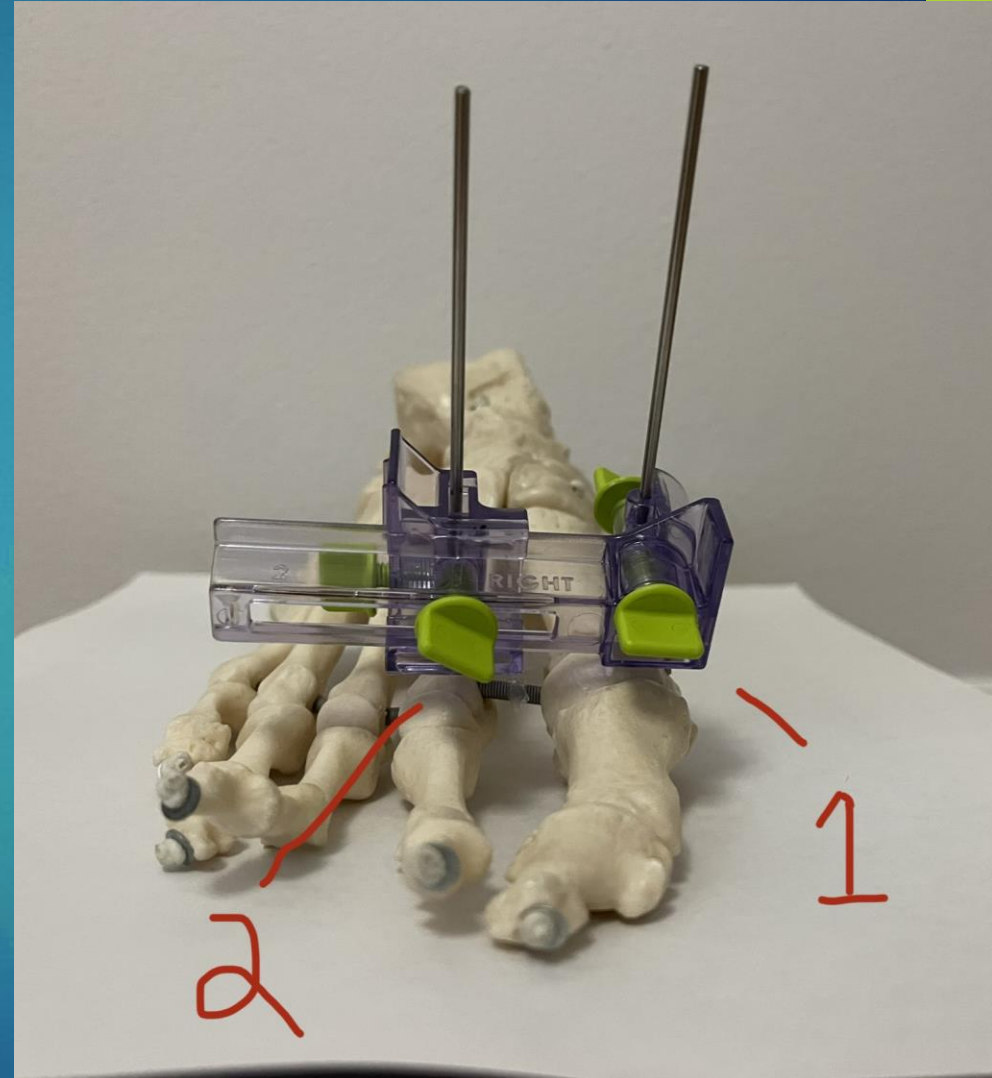
The RELJA Clamp

- ▶ Insert a Steinmann Pin in the 1st metatarsal at the skin marking line
 - ▶ Enter the dorsal medial aspect
 - ▶ This should be angled 25-30 degrees from vertical as shown



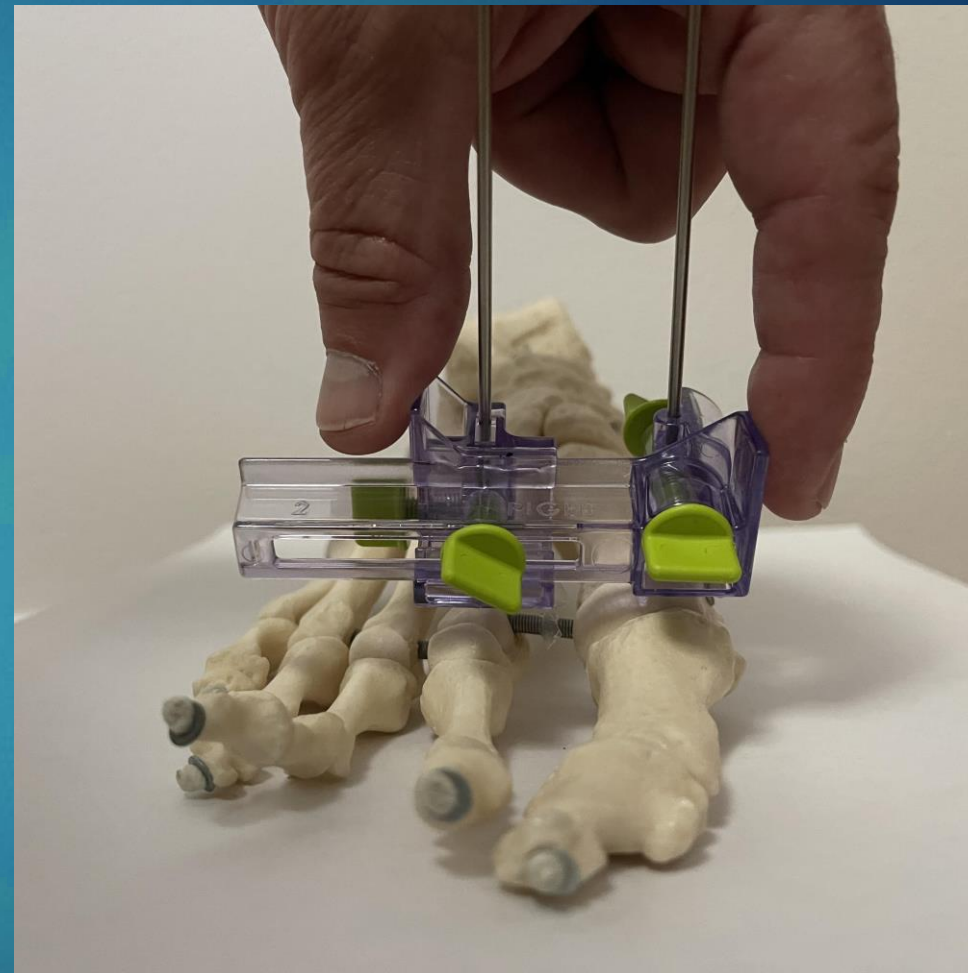
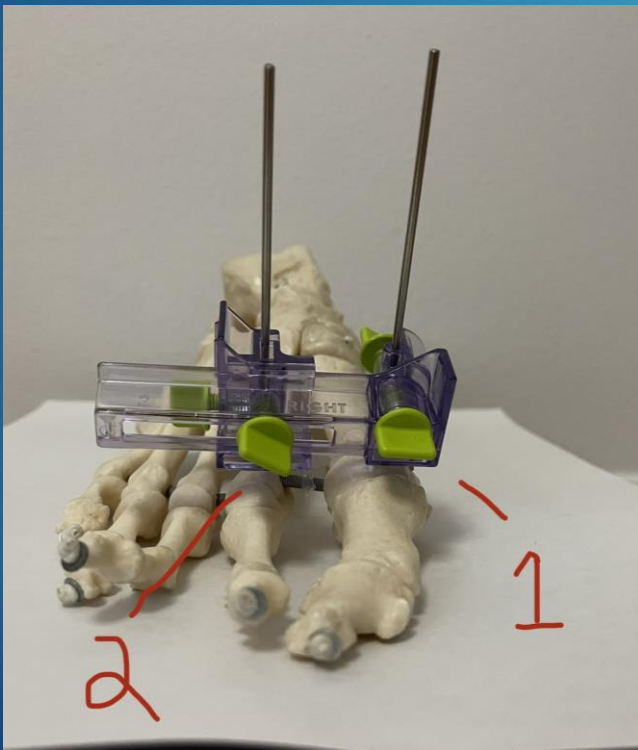
The RELJA Clamp

- ▶ Reduce the frontal plane deformity by rotating the 1st Steinmann pin until proper position achieved.
- ▶ After correcting the deformity, tighten thumb screw #1



The RELJA Clamp

- ▶ Reduce the 1st Intermetatarsal angle by squeezing on the tabs as shown on the right.
- ▶ Tighten thumb screw #2



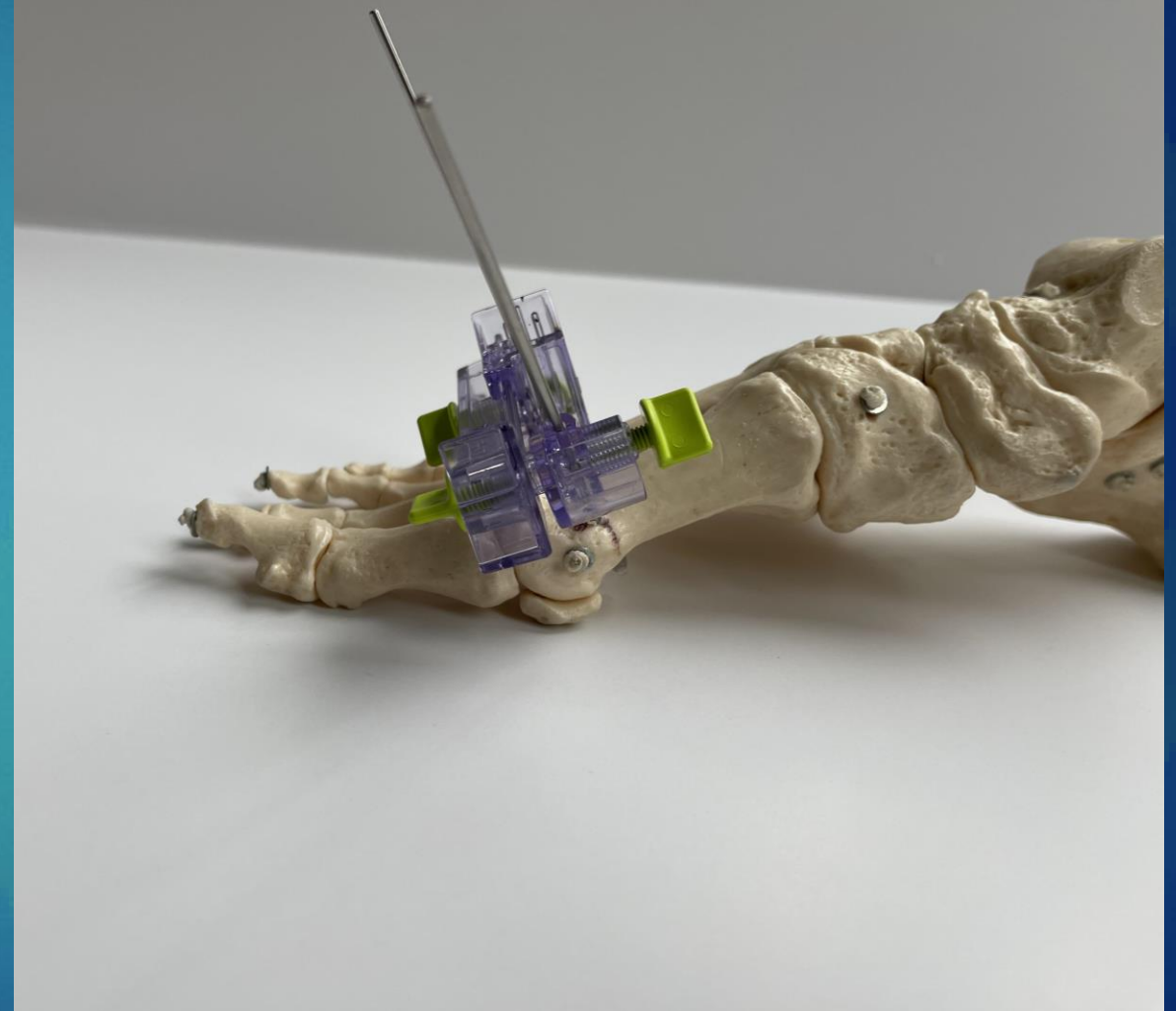
The RELJA Clamp

- Confirm position with fluoroscopy



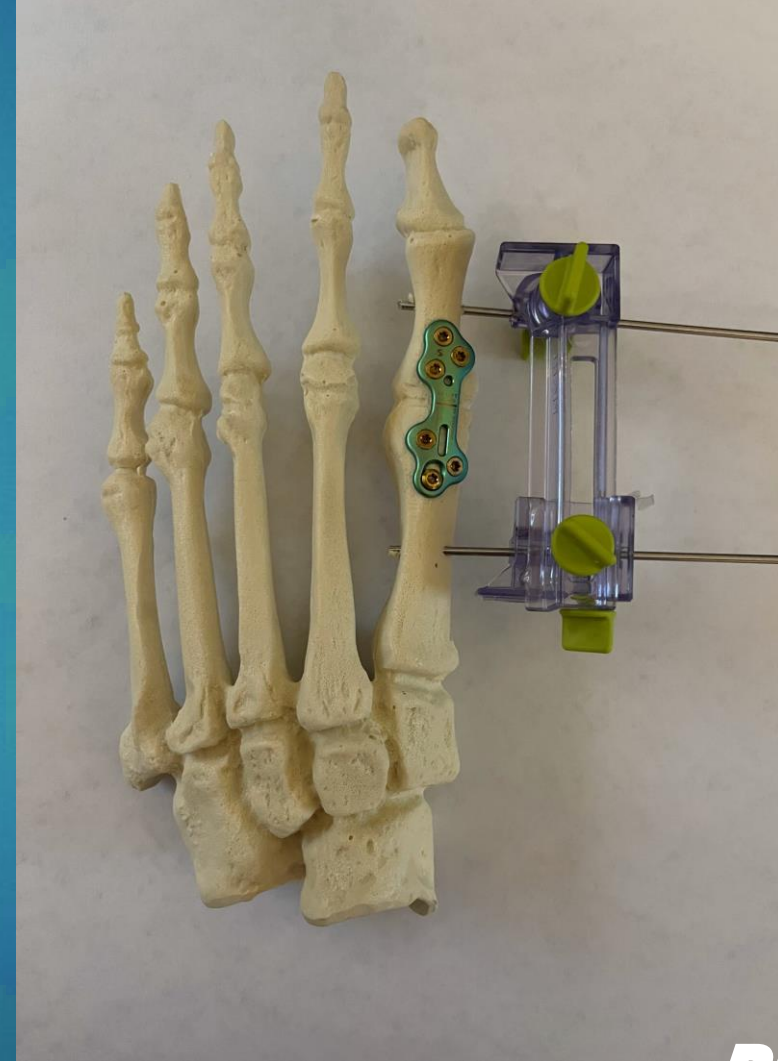
The RELJA Clamp

- ▶ Plantarflex the 1st metatarsal as needed to achieve proper position. The slot in the 2nd metatarsal adjuster on the clamp allows plantar flexion.
- ▶ Translate the 1st metatarsal as needed in the sagittal plane and tighten thumb screw 3 and 4 . This will hold the clamp tightly on the Steinmann pins
- ▶ Remove the clamp AFTER all hardware is placed at the 1st TMT



The RELJA Clamp for 1st MPJ Fusion

- ▶ After joint preparation and temporary fixation, apply The RELJA Clamp with one Steinmann pin on each side of the fusion site as shown.
- ▶ Squeeze the tabs together on the clamp to provide axial compression across the fusion site.
- ▶ Tighten the proximal thumb screw to hold the compression.



The RELJA Clamp for Midfoot fusions

- ▶ After joint preparation and temporary fixation, apply The RELJA Clamp with one Steinmann pin on each side of the fusion site as shown.
- ▶ Squeeze the tabs together on the clamp to provide axial compression across the fusion site.
- ▶ Tighten the proximal thumb screw to hold the compression.

