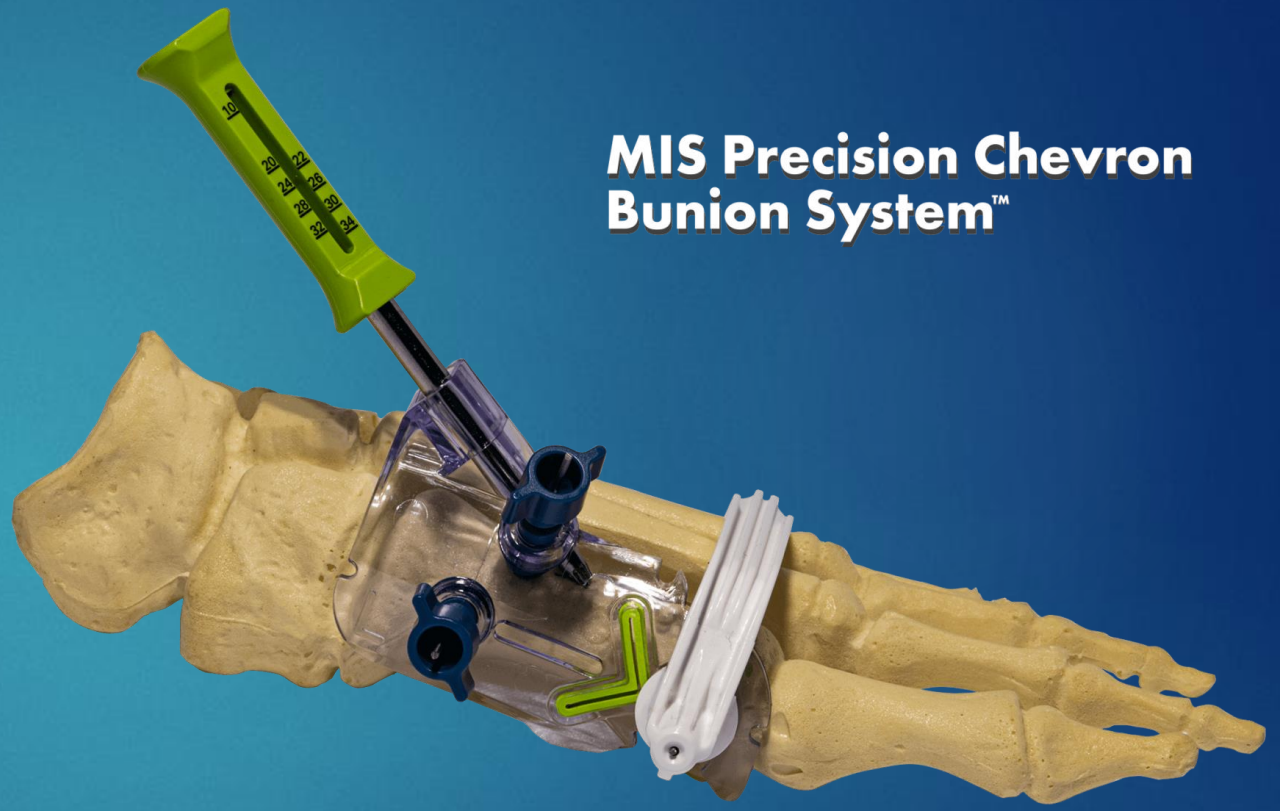
MIS CHEVRON BUNION SYSTEM

MIS Precision Chevron Bunion System

- Based off a traditional method
- Chevron Osteotomy Guide
- Sagittal Saw
- Screw guide for placement of a 3.5mm cannulated screw
- 1cm incision
- Indications
  - Mild to moderate bunion
- Correction in transverse and sagittal plane
- Cost effective

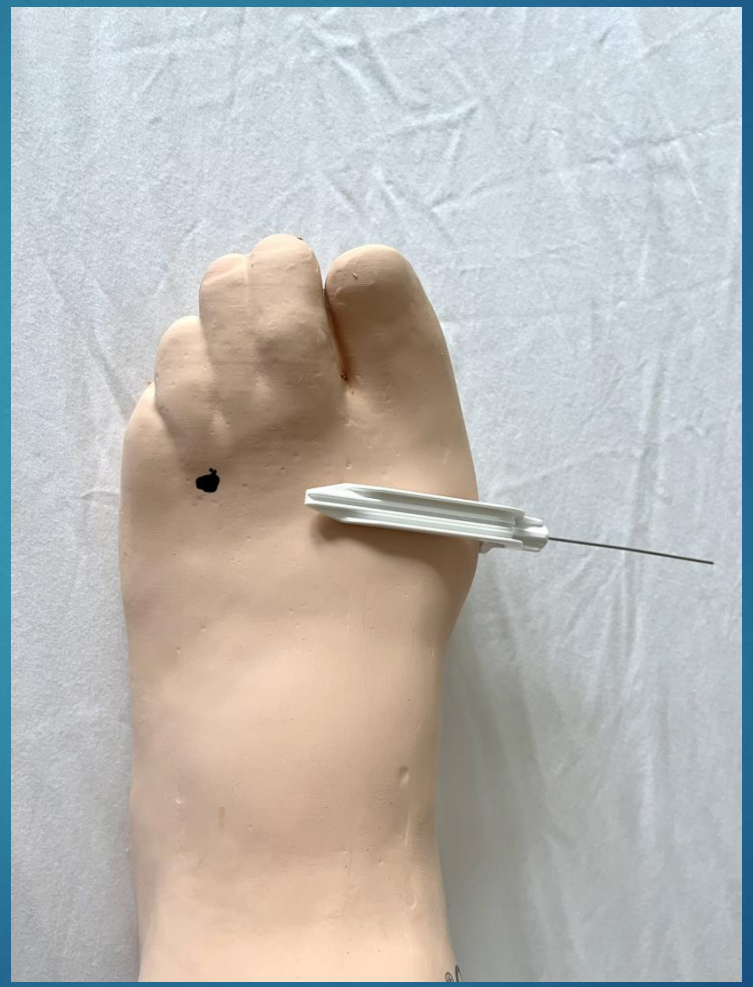


Prepare the Site

MIS Lateral Release: Mark 4th MPJ

(Optional) Perform lateral release, at surgeon's discretion.

Place a small mark on the skin on the dorsal aspect of the Fourth Metatarsophalangeal Joint (MPJ).

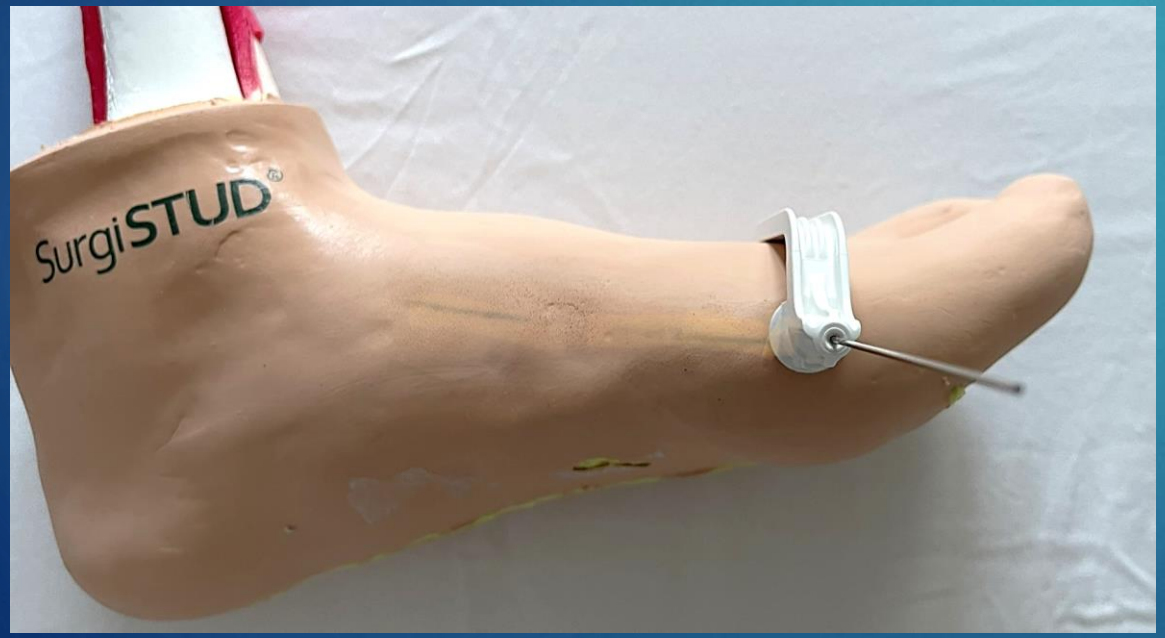


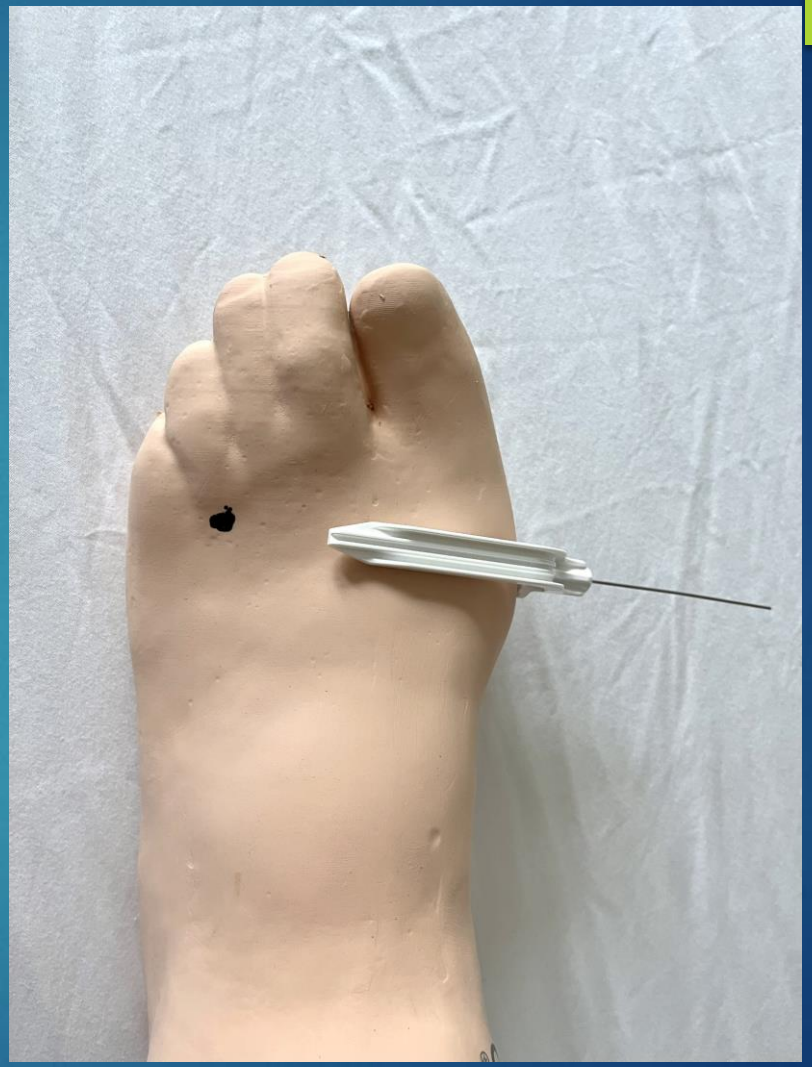
RELjA INNOVATIONS

Align the Targeting Guide

Place the white Targeting Guide on the foot. Aim this directly across the top of the foot.

Aim directly across the foot towards the 4th MPJ.





RELjA INNOVATIONS

Align the Targeting Guide

Insert a K wire from the kit into the targeting guide but not into the skin.

Utilize live fluoroscopy to position the k wire. Shoot directly down the k wire so it looks like a BB. The wire position should be 1mm superior to midline of head AND Neck of the 1st metatarsal. (as shown)

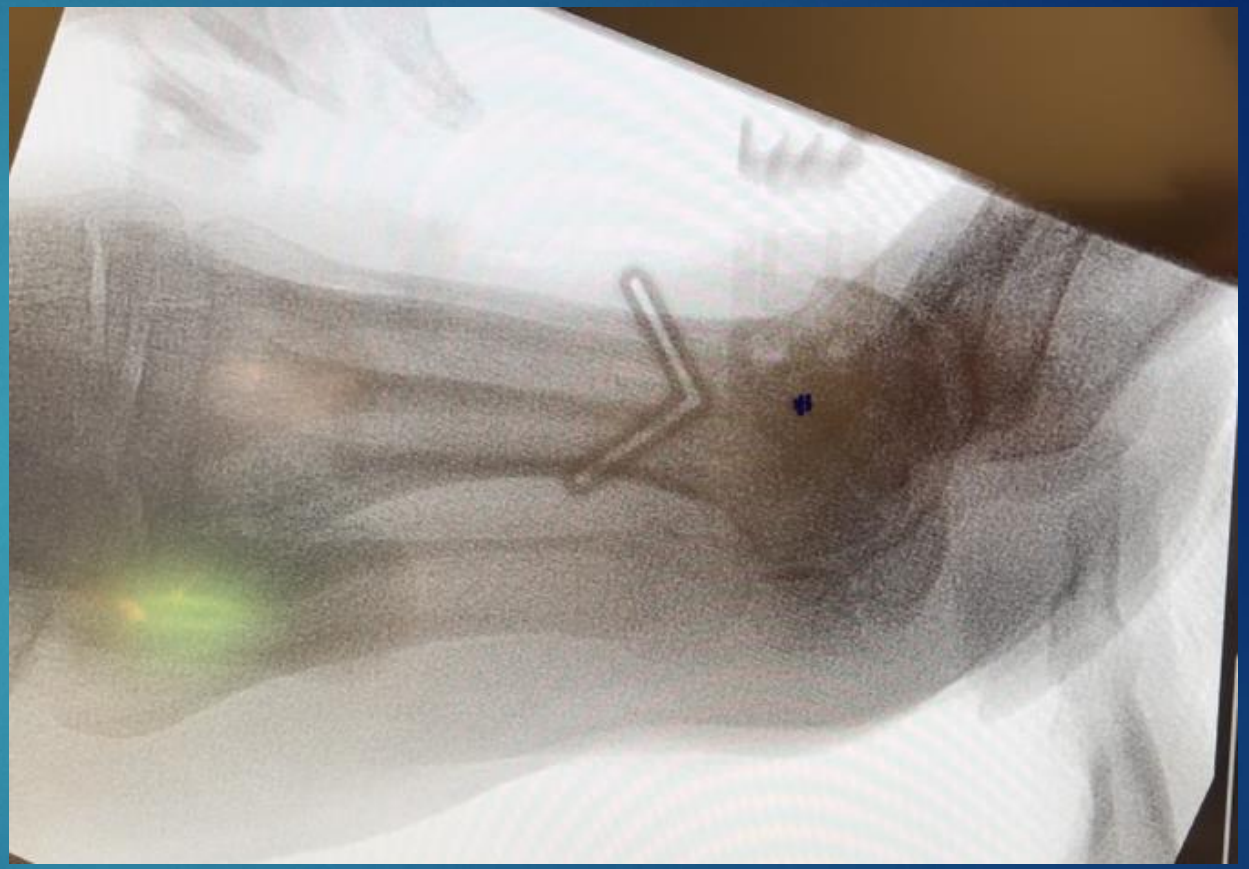
Advance the K wire into the 1st metatarsal and through the far cortex.

RELjA INNOVATIONS

Align the Precision Osteotomy Guide

Place the Osteotomy guide on K wire #1 in the center adjustment hole.

Confirm with fluoroscopy that the chevron insert is midline of the 1st metatarsal and in the neck of the 1st metatarsal (as shown on the right) Shoot directly down K wire #1.

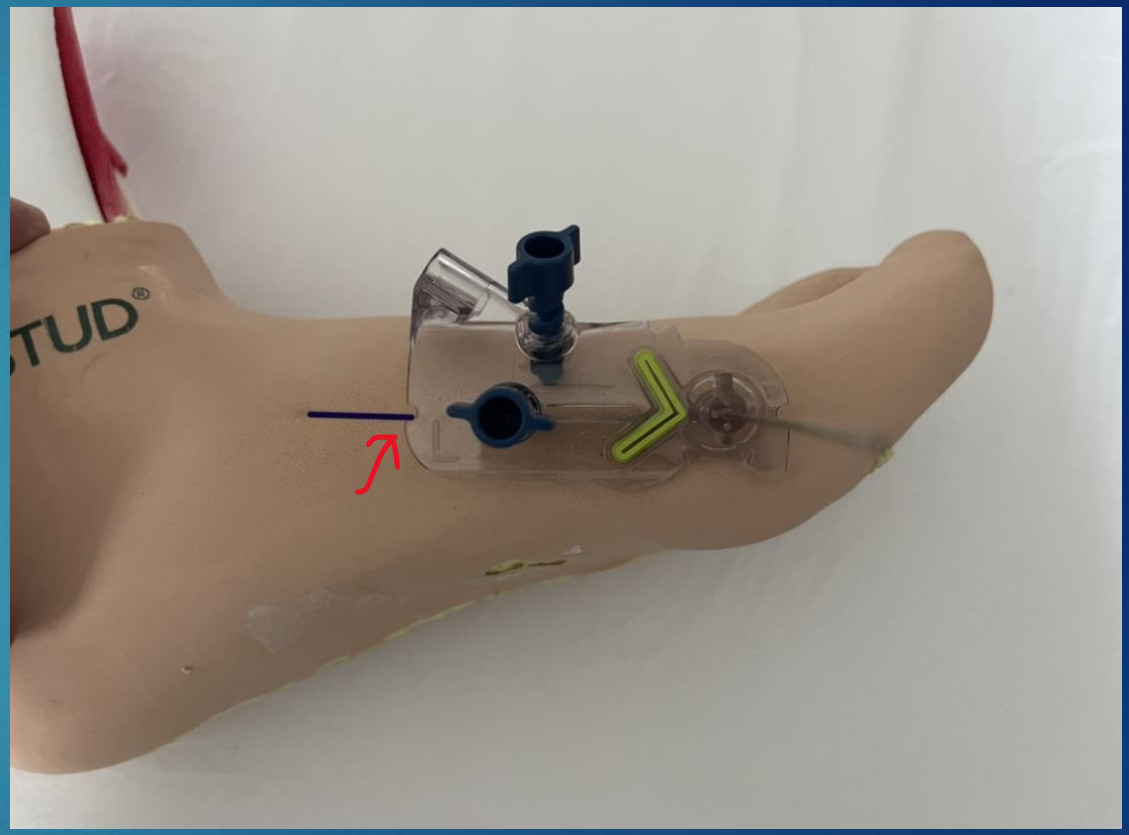


RELjA INNOVATIONS

Align the Precision Osteotomy Guide

Align the proximal portion of the osteotomy guide with live fluoroscopy. The medial blue alignment screw should be 3 mm below midline of the 1st metatarsal (as shown below). Shoot directly down K wire #1.

Place a skin marking line at the proximal notch of the Osteotomy guide (as shown on the right)



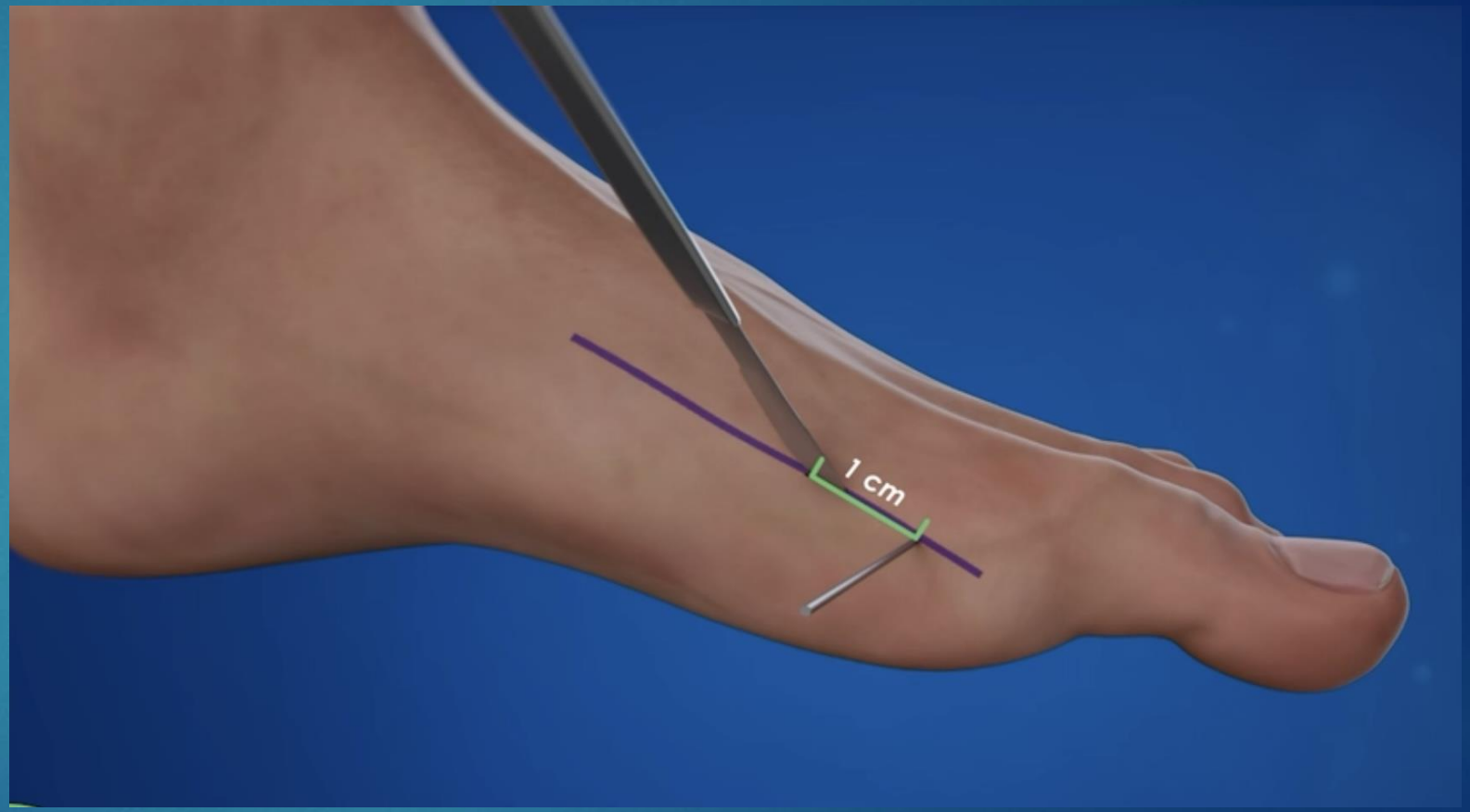
RELjA INNOVATIONS

Make the Skin Incision

Remove the Chevron Osteotomy Guide

Make a 1cm incision from K wire #1 proximally along the skin marking line.

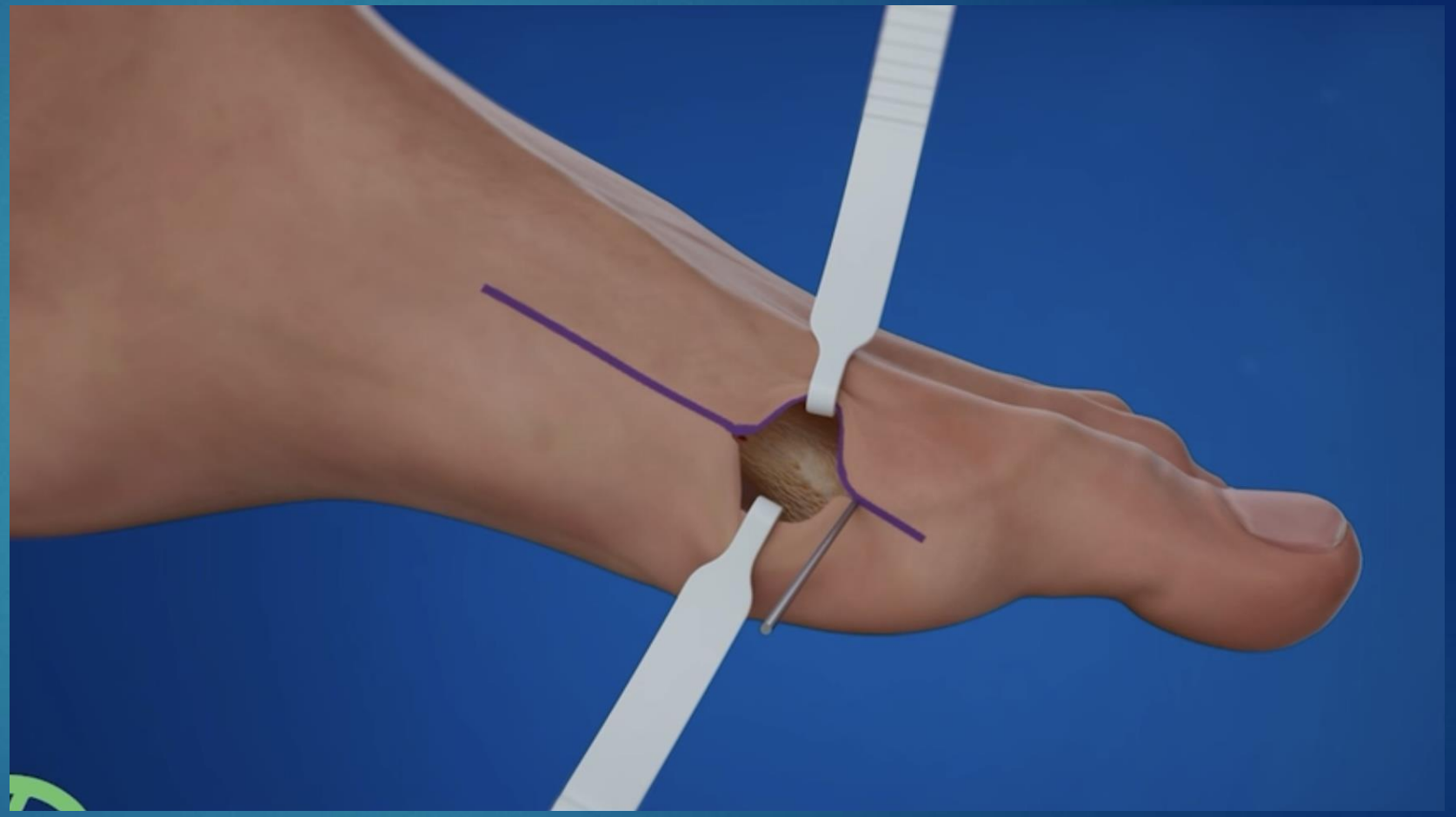
Perform dissection



RELjA INNOVATIONS

Make the Skin Incision

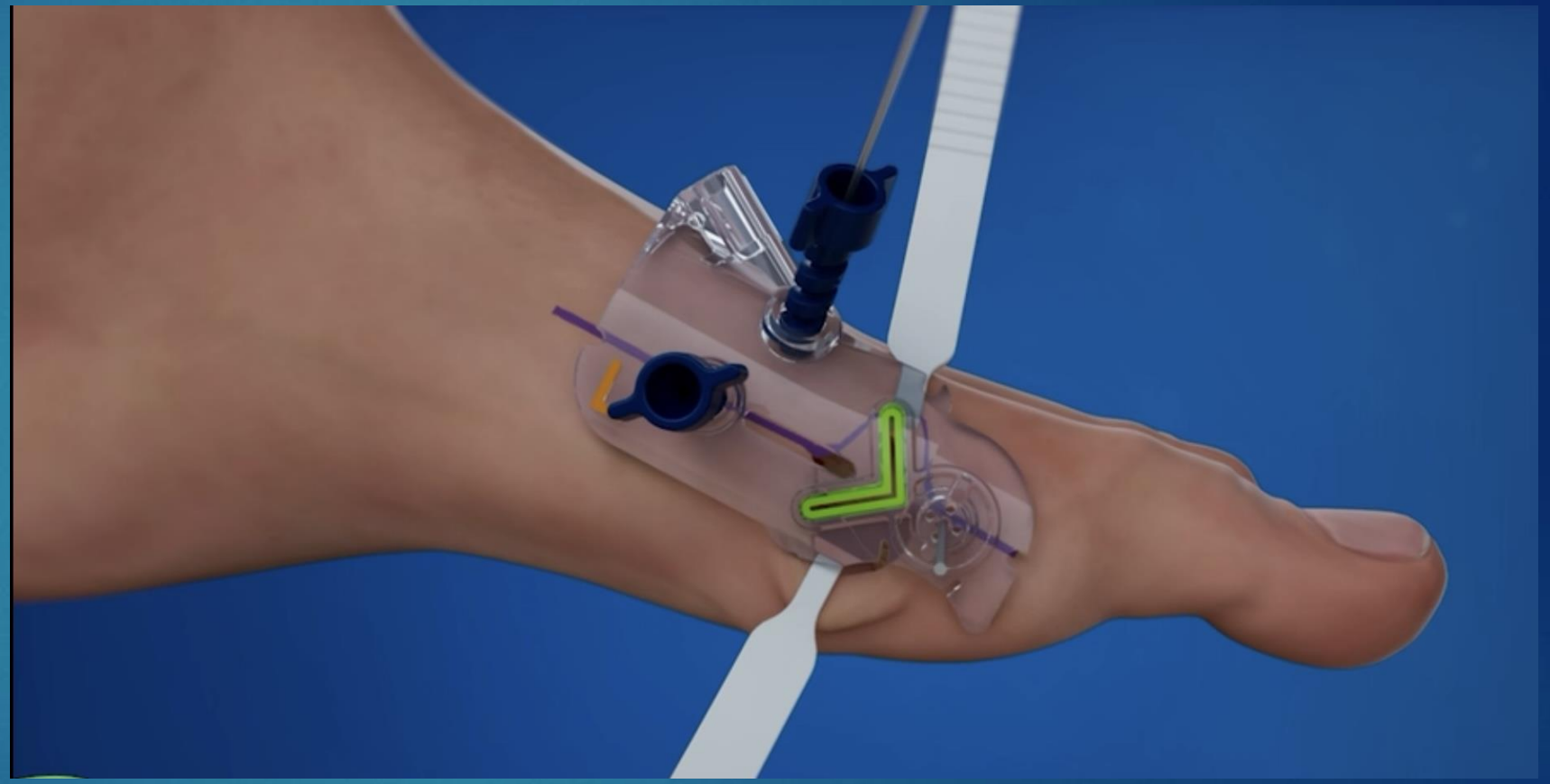
Insert the Dorsal Retractor (longer) and the plantar retractor.



RELjA INNOVATIONS

Align the Precision Osteotomy Guide

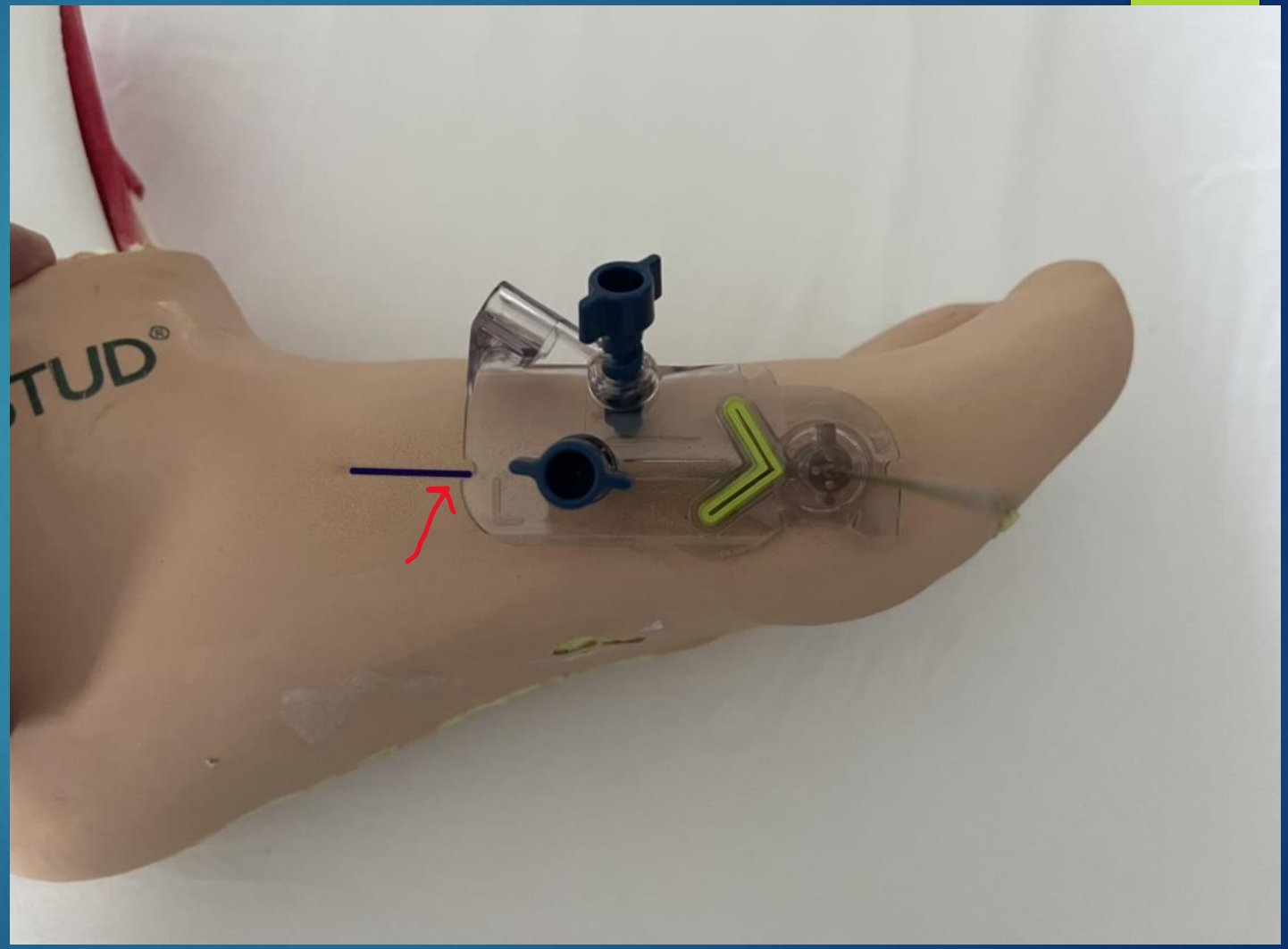
Place Osteotomy guide back into position on K wire #1 in the same adjustment hole as previously chosen.



RELjA INNOVATIONS

Align the Precision Osteotomy Guide

Proximal portion of the guide (notch) should be lined up with the previous skin marking line.



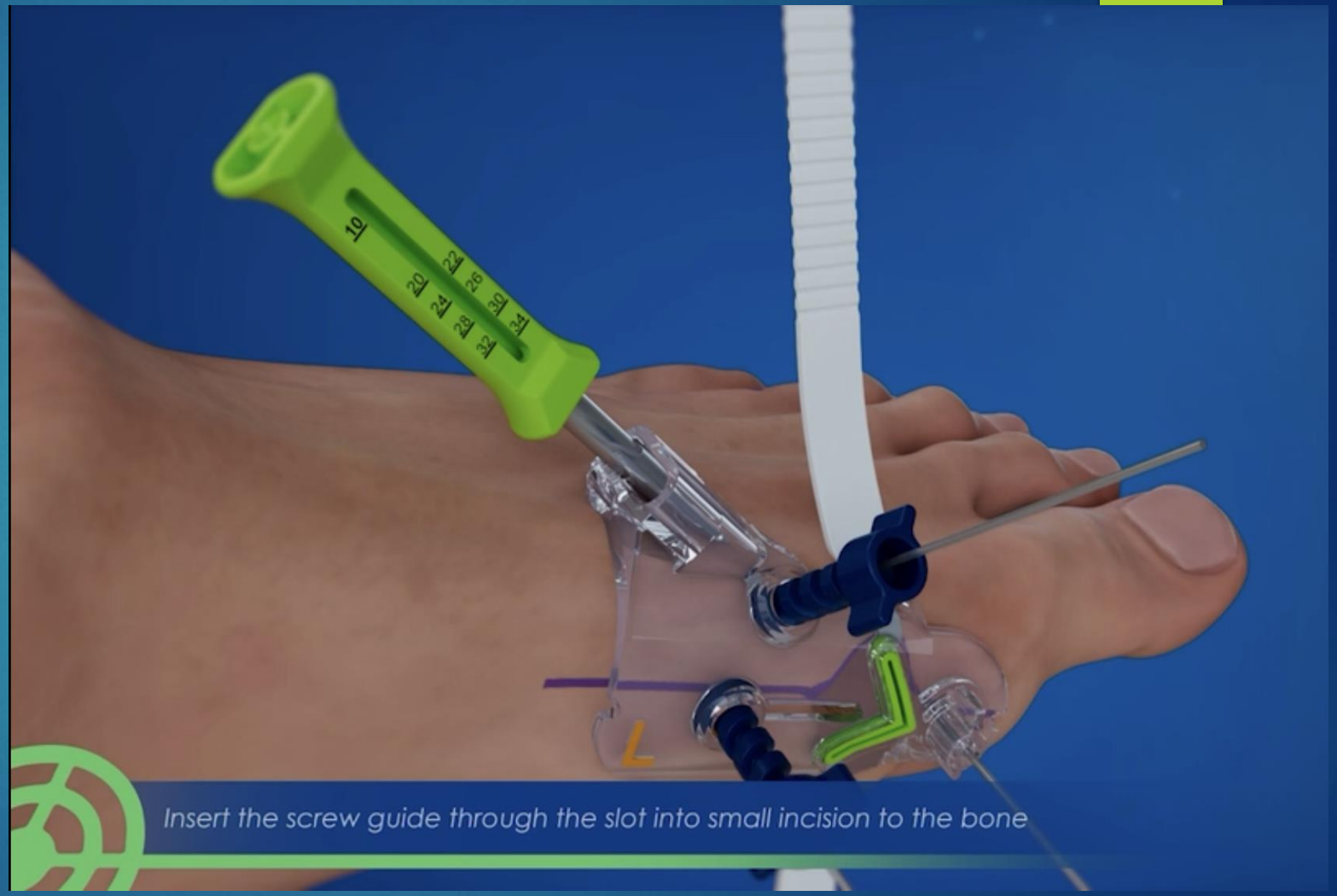
RELjA INNOVATIONS

Insert Screw Guide and Measure for Length

Insert K Wires #2 and #3 into the blue alignment screws.

Insert the Screw Guide into the osteotomy guide slot

Make a small incision at the contact point and insert the screw guide to the bone. (protect the EHL)

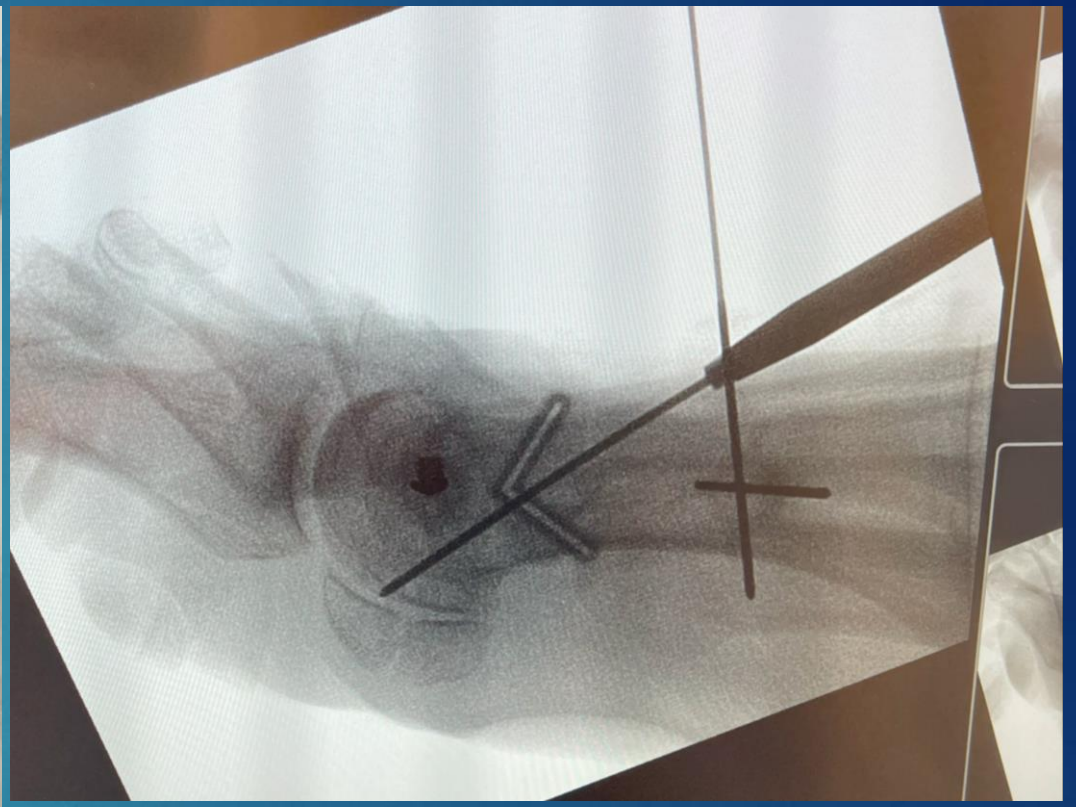


RELjA INNOVATIONS

Insert Screw Guide and Measure for Length

Insert the 1.1mm Guide Wire through the Screw Guide and into bone. Stop short of the 1st MPJ.

Aim the guide wire in the middle of the lateral ½ of the 1st metatarsal head (as shown).



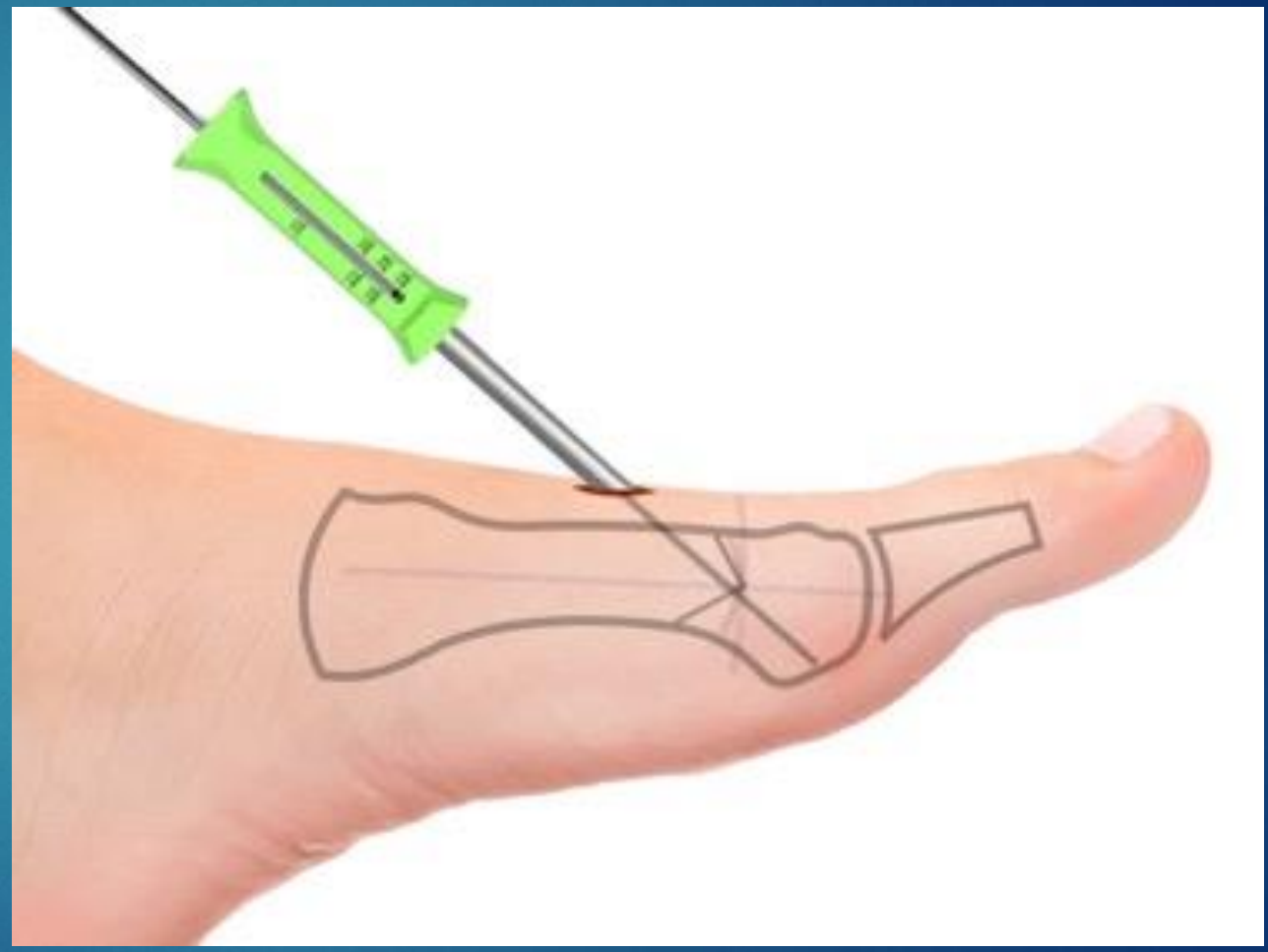
RELjA INNOVATIONS

Insert Screw Guide and Measure for Length

Measure the screw length utilizing the laser line on the guide wire.

Select the proper screw length as follows:

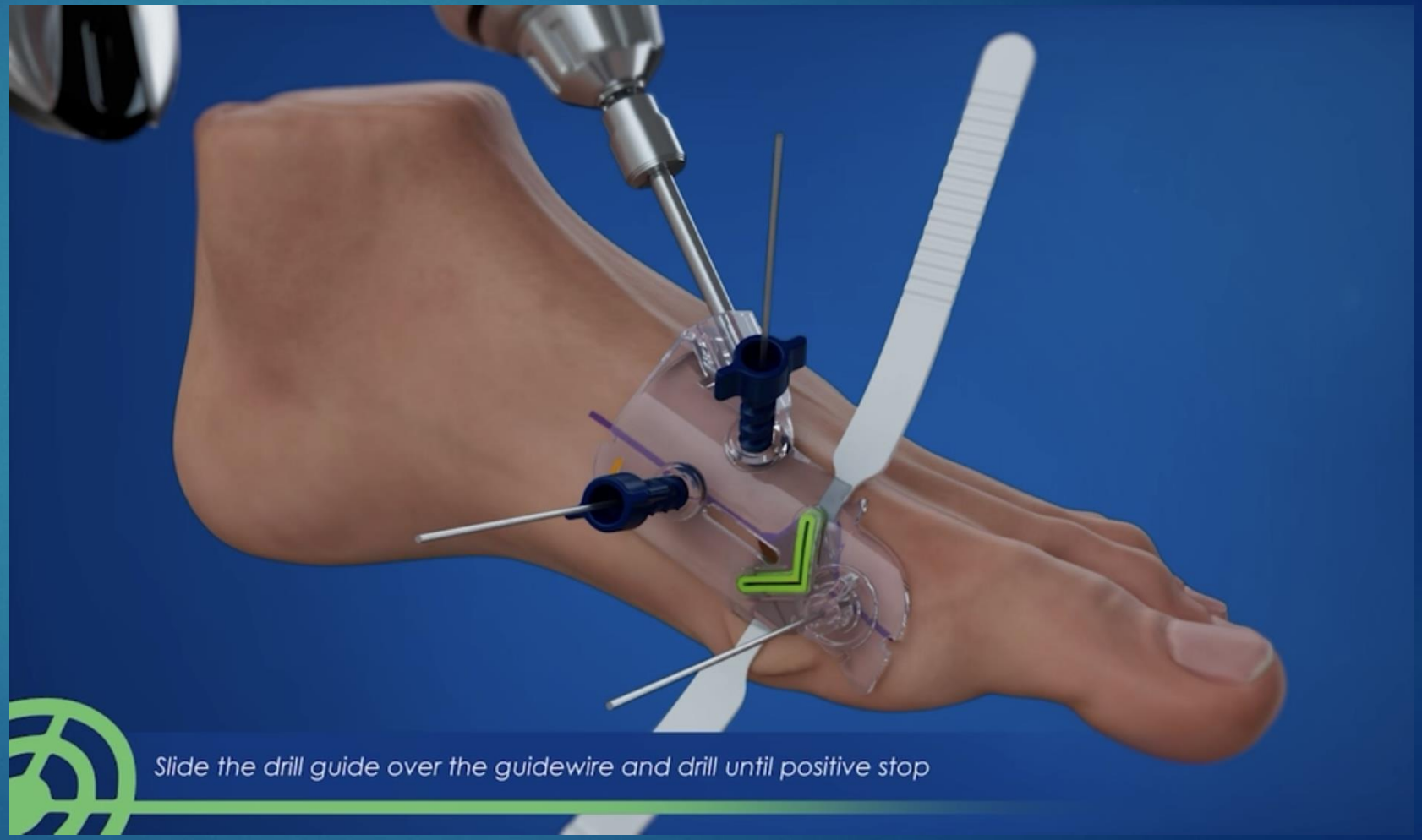
- If the measurement is 32mm or greater, then use the dark blue 27mm cannulated screw.
- If the measurement is less than 32mm, then use green 24mm cannulated screw.



RELjA INNOVATIONS

Drill and Countersink

Insert the cannulated Drill/Countersink over the guide wire. Retract the EHL and drill and countersink until there is a hard stop.

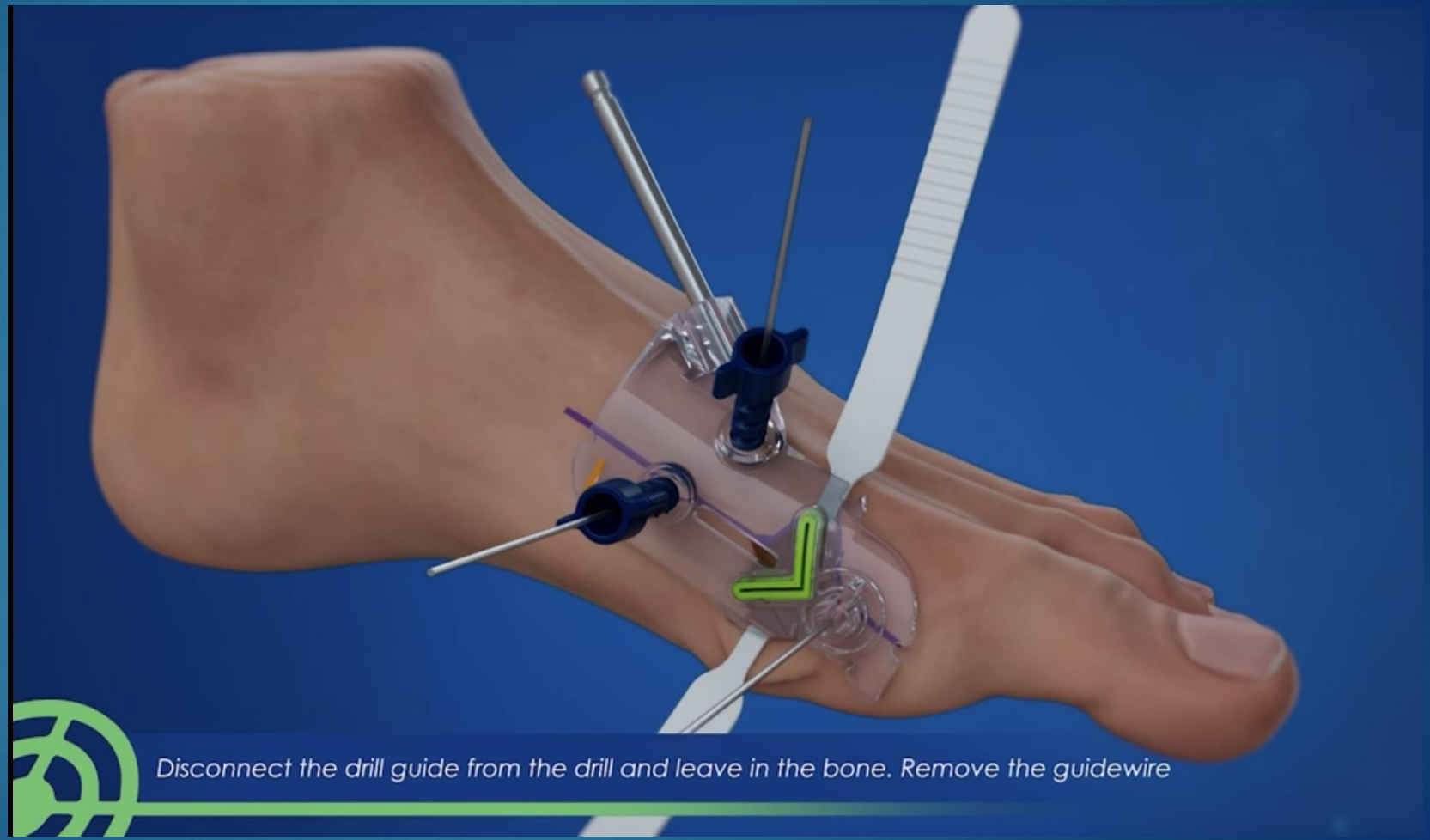


RELjA INNOVATIONS

Drill and Countersink

Disconnect the drill from the AO quick connect and leave drill in place.

Remove the guide wire (leaving the drill in place).

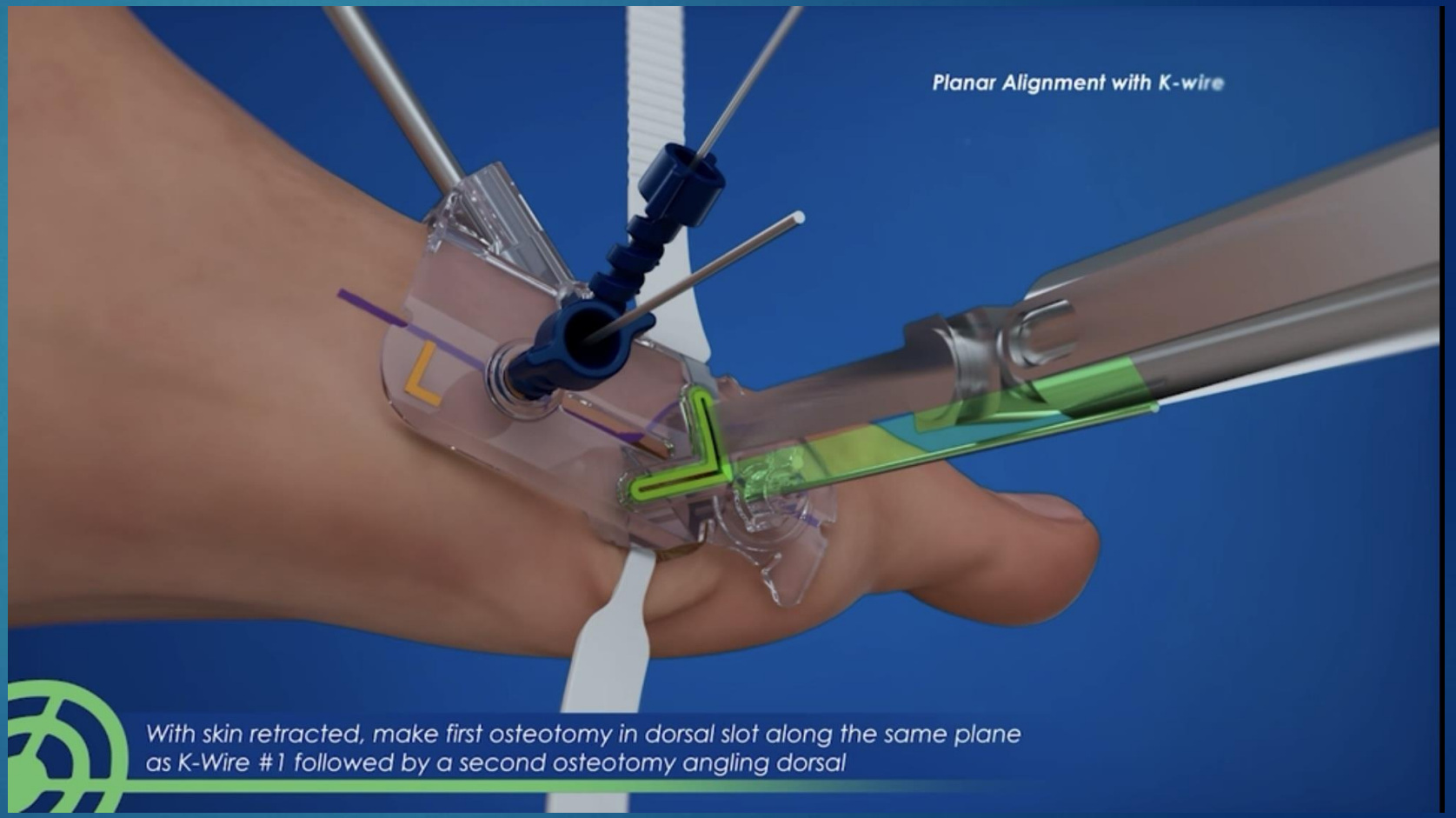


RELjA INNOVATIONS

Create the Osteotomy

Retract skin and perform osteotomy.

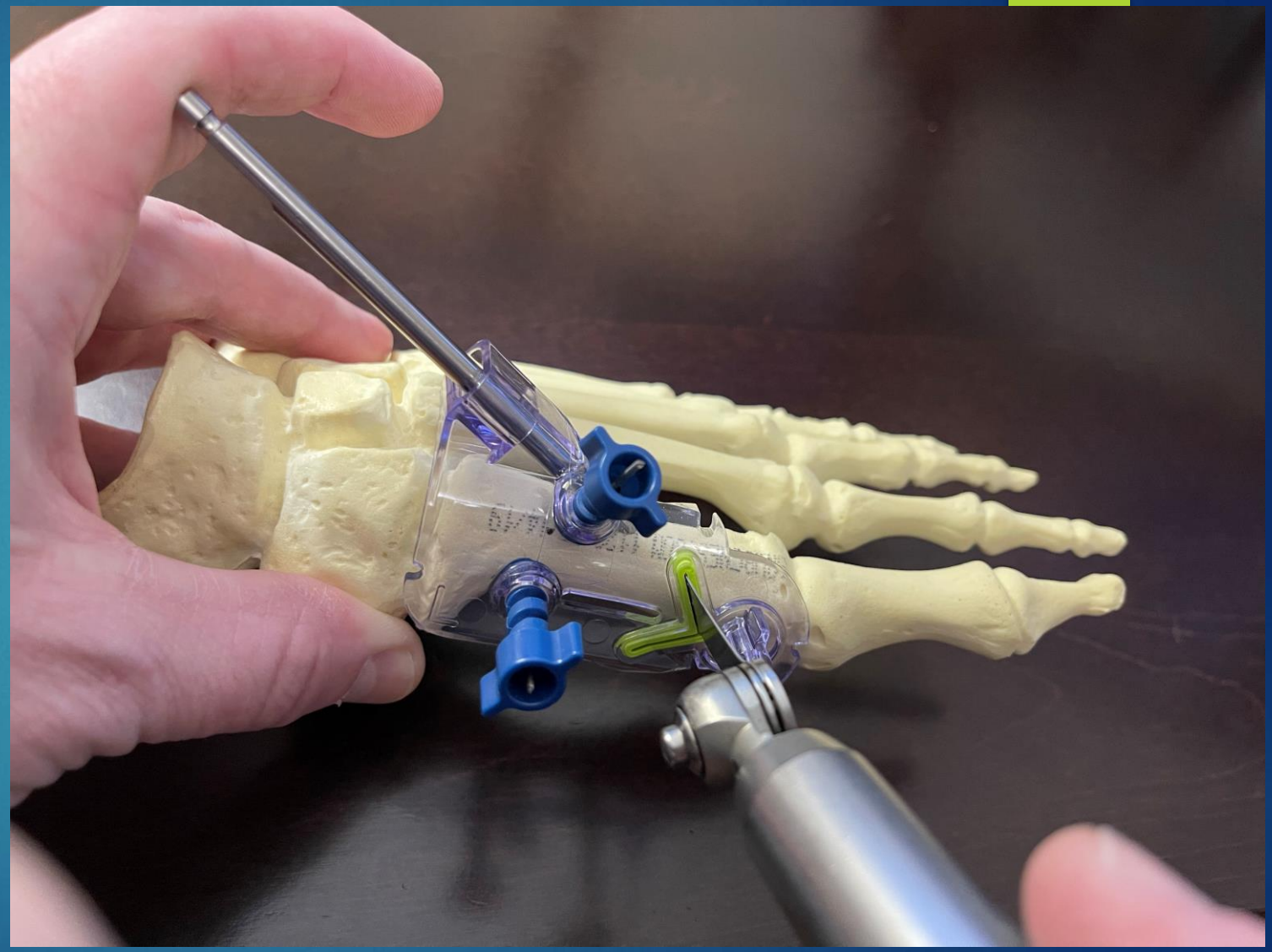
Use Stryker or Hall compatible saw blade (9 x 31 x .38)



RELjA INNOVATIONS

Create the Osteotomy

When performing the osteotomy, hold the top of the drill to keep it from backing out.

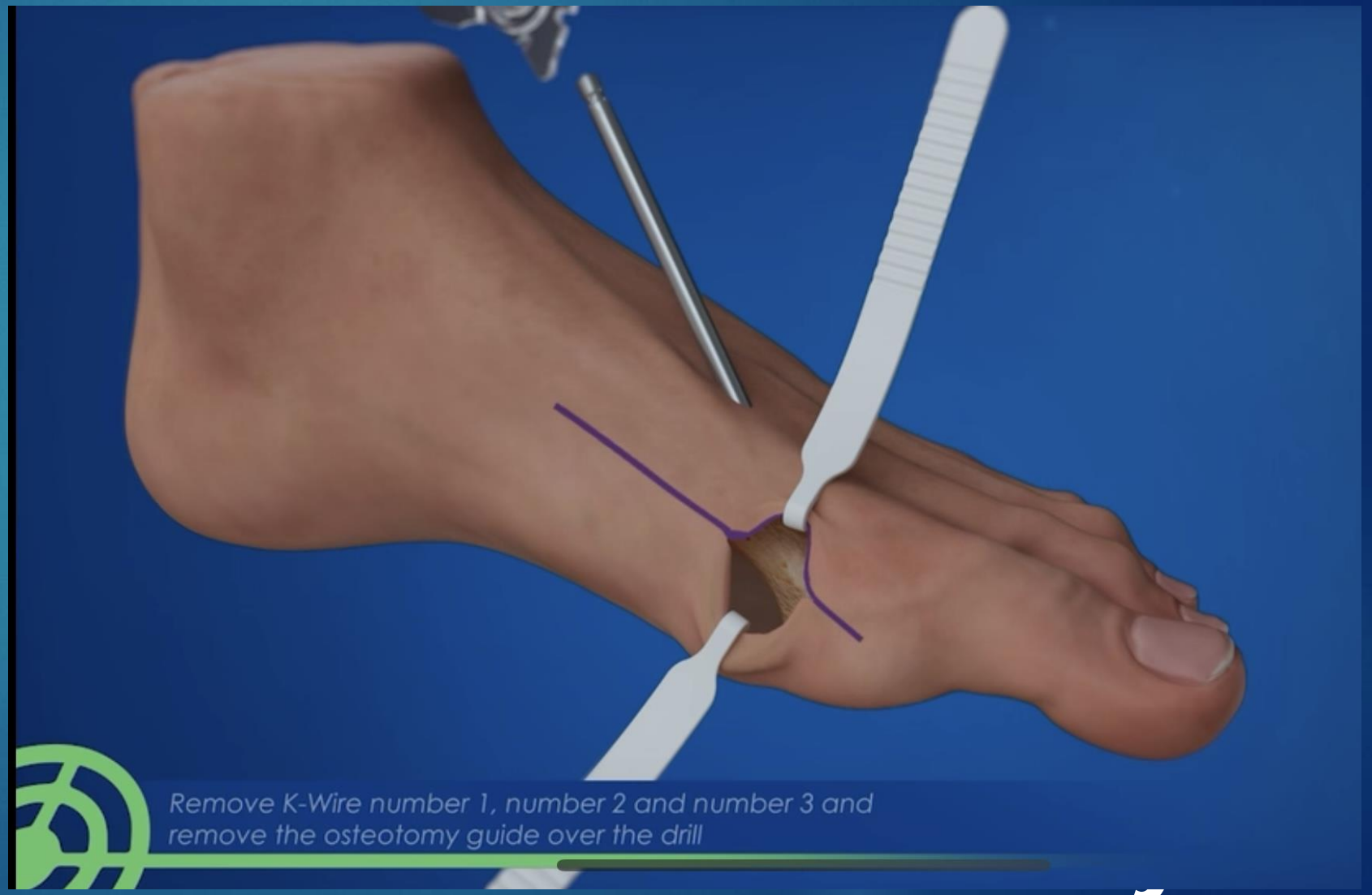


RELjA INNOVATIONS

Shift Metatarsal Head and Prepare for Implant

Remove K wire #1, #2, and #3.

Remove the osteotomy guide by sliding it over the drill, keeping the drill in place



Shift Metatarsal Head and Prepare for Implant

Correct the deformity

Utilize a freer in the metatarsal shaft to assist with translation.

RELjA INNOVATIONS

Shift Metatarsal Head and Prepare for Implant

With the drill in place, insert the Guide Wire into the drill and advance into the 1st MPJ.

Insert temporary fixation (as show) from medial to lateral. Confirm position on Flouroscopy AP and Lateral

RELjA INNOVATIONS

Shift Metatarsal Head and Prepare for Implant

Confirm position and no gapping of the osteotomy

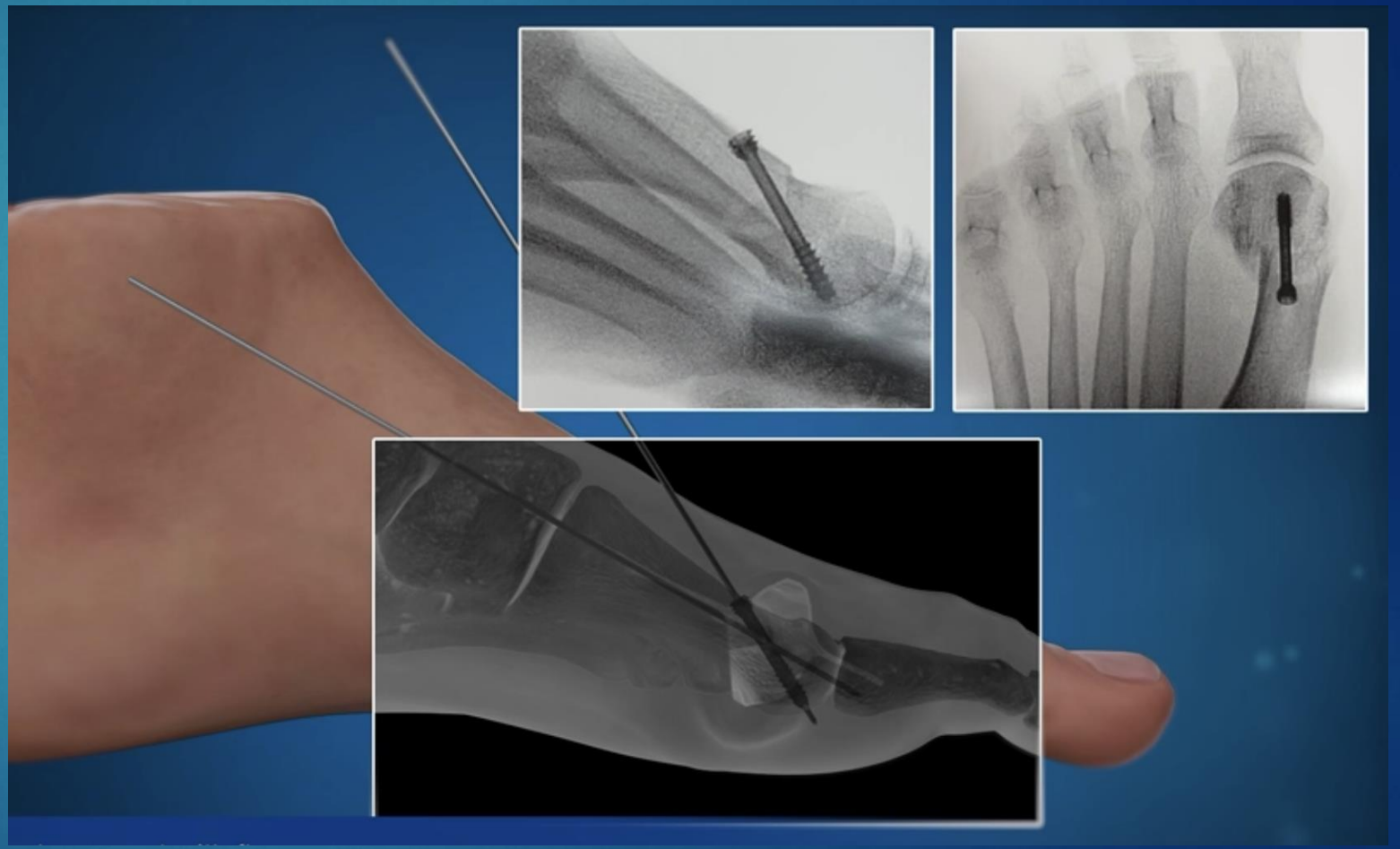
Remove Drill while keeping the guide wire in place.

RELjA INNOVATIONS

Insert Implant and Close

Insert the screw

Confirm the screw position with fluoroscopy, AP and Lateral.



RELjA INNOVATIONS

Insert Implant and Close

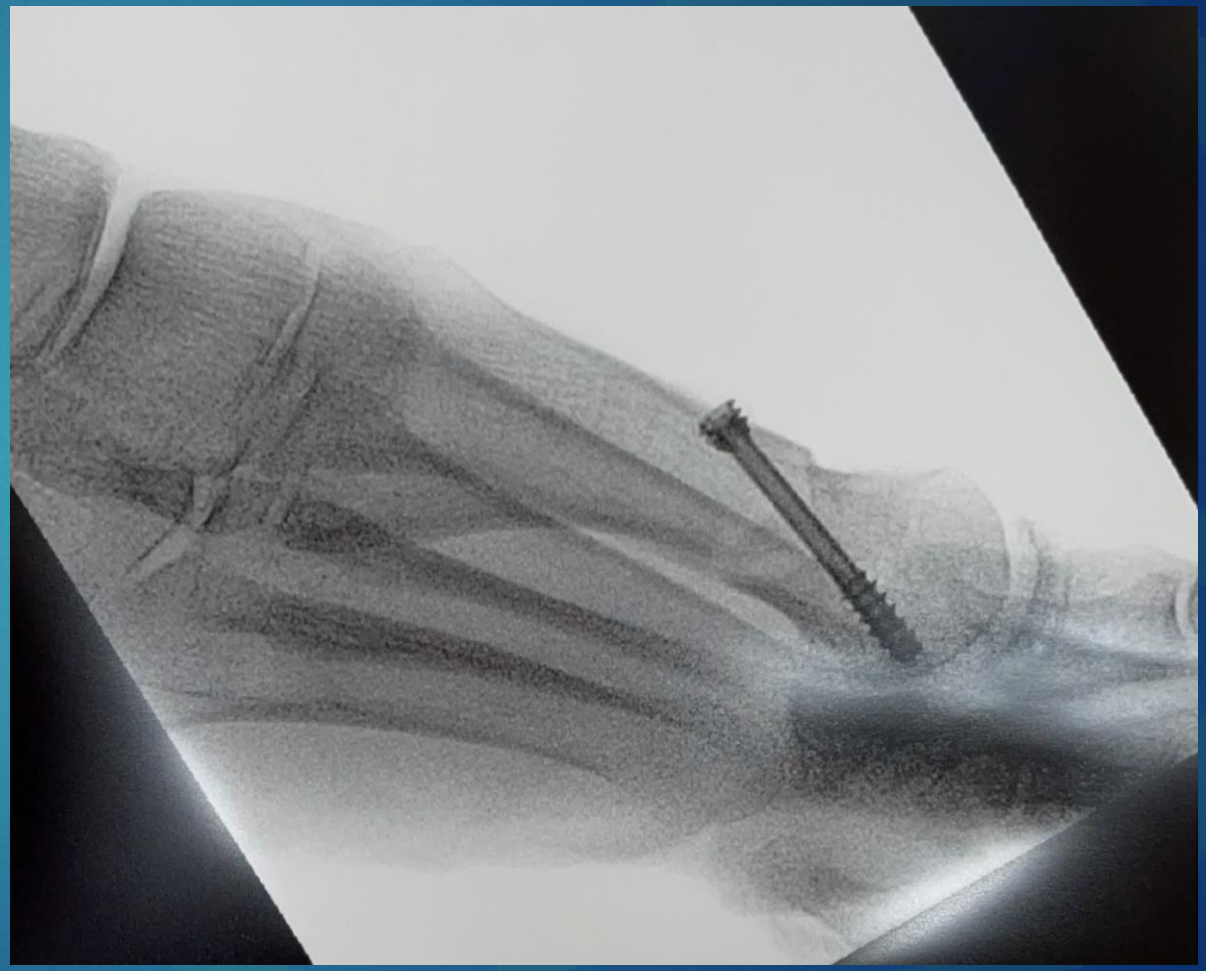
Resect and smooth the medial bone shelf with power bone rasp / saw.

Remove the Guide Wire and temporary fixation.

Flush and close incisions.

RELjA INNOVATIONS

Post op



Pre op

Post op

Pre op

Post op

Two Screw Option Shown

MIS Precision Chevron Bunion System™ Components

Left precision osteotomy guide (embossed “L”)

Right precision osteotomy guide (embossed “R”)

Cannulated screwdriver, Torx T10 tip

Blue, 3.5 mm dia., 27 mm length screw

Drill bit

Screw guide with depth gauge

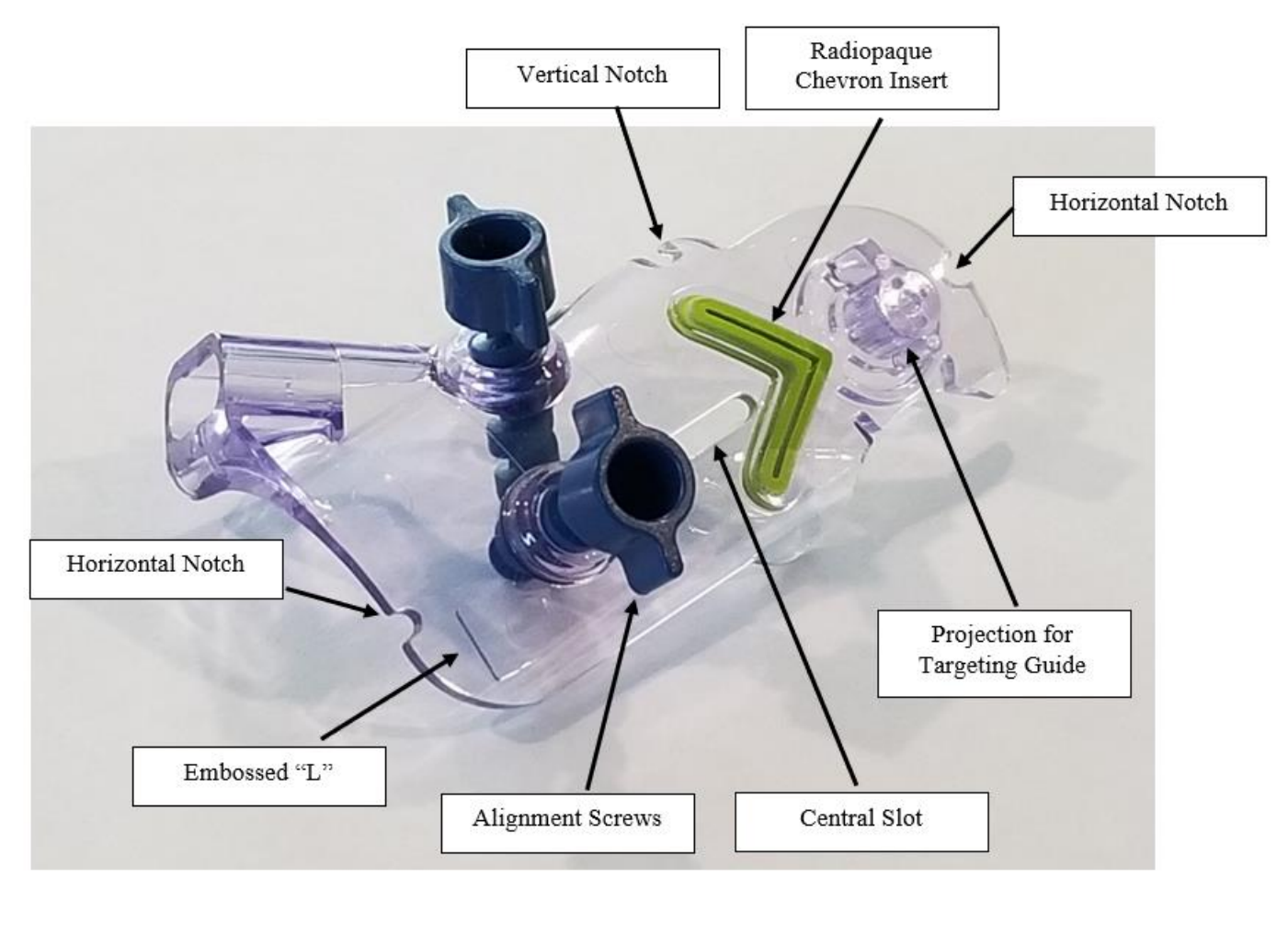
1.1 mm guidewire with laser etch, 140 mm long

Targeting guide

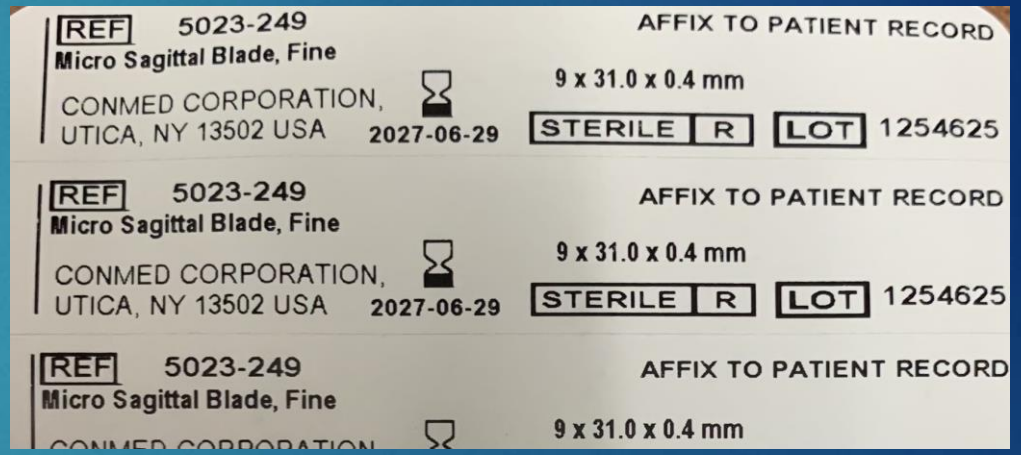
Three 1.1 mm K-wires, 100 mm long

Green, 3.5 mm dia., 24 mm length screw

MIS Precision Chevron Bunion System™
The Precision Osteotomy Guide



Compatible Sawblades are Stryker 2296-003-125 or Conmed 5023-249



RELjA INNOVATIONS