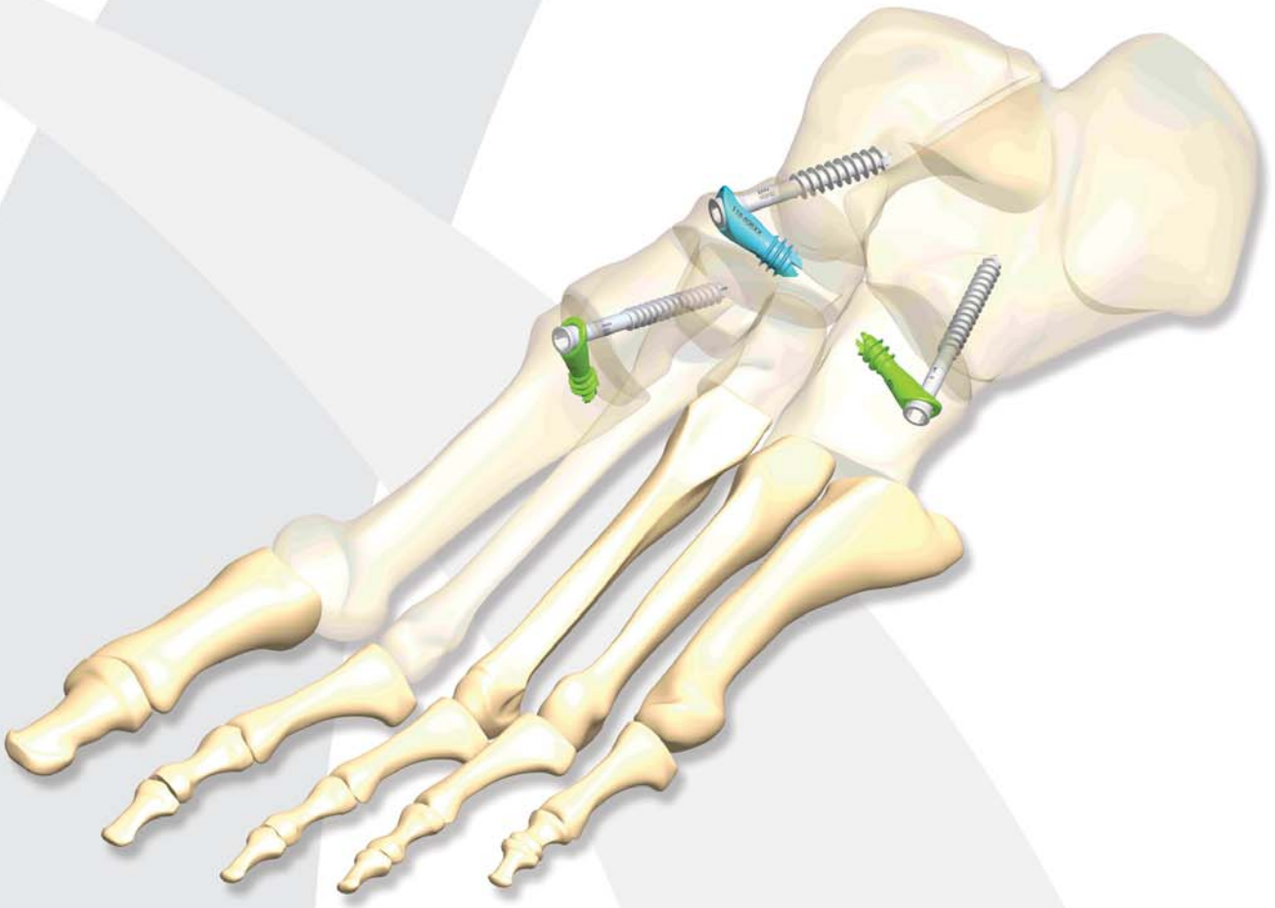
IO Fix

IntraOsseous Fixation

Representative X-Ray Reference Guide



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Representative X-Ray Reference Guide

All notes and images are from a cadaver lab with Jeff Brodie, MD - Baltimore, Maryland

This tool is intended for sales representative education. The images within this training tool represent Jeff Brodie's MD, preferred placement of guidewires and implants based on his extensive experience with IO FiX. Always check positioning with AP and Lateral fluoroscopy views. This guide illustrates the "fast" technique method - no initial Alignment Guide is utilized with this approach. Talonavicular Fusion, Calcaneocuboid Fusion, and 1st and 2nd TMT Fusion examples are included in this guide.

Notes:

Triple Arthrodesis utilizing IO FiX for the TN & CC Fusion

Typically one IO FiX works great in the TN, but leave room for a second screw or construct -just in case.

Procedure Sequence

1. Subtalar Screw 1st
2. Prepare both TN & CC joints
3. Place X-Posts in TN & CC
4. Provisionally pin joints
5. TN Lag Screw placement first, then CC Lag Screw placement

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TN X-Post™ Guidewire AP View

Navicular X-Post™ Placement

Guidewired should be:

- Centered on the medial navicular tuberosity
- Slightly plantar to dorsal
- Parallel to top and bottom of talus in AP view or the apex of the joint
- 5-10 mm from the joint

CC X-Post™ Guidewire AP View

Cuboid X-Post™ Placement

Guidewired should be:

- Parallel to the inferior & superior calcaneal cortex
- 5-10 mm from the joint

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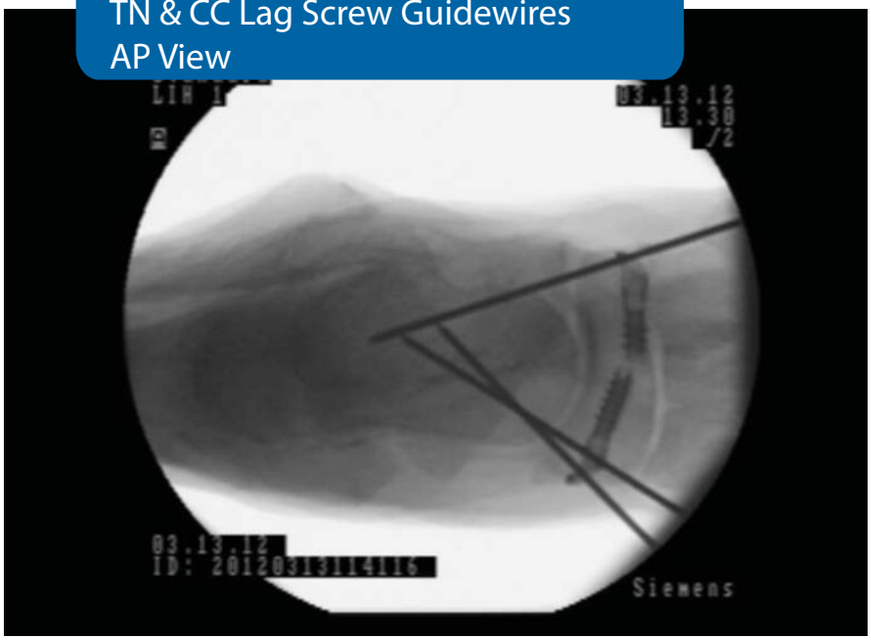
TN & CC X-Post™ Placement
AP View

TN & CC Lag Screw Guidewires
AP View



- Provisionally pin TN joint
- Guidewires thru X-Posts™
- Verify Lag Screw wire positioning on fluoroscopy

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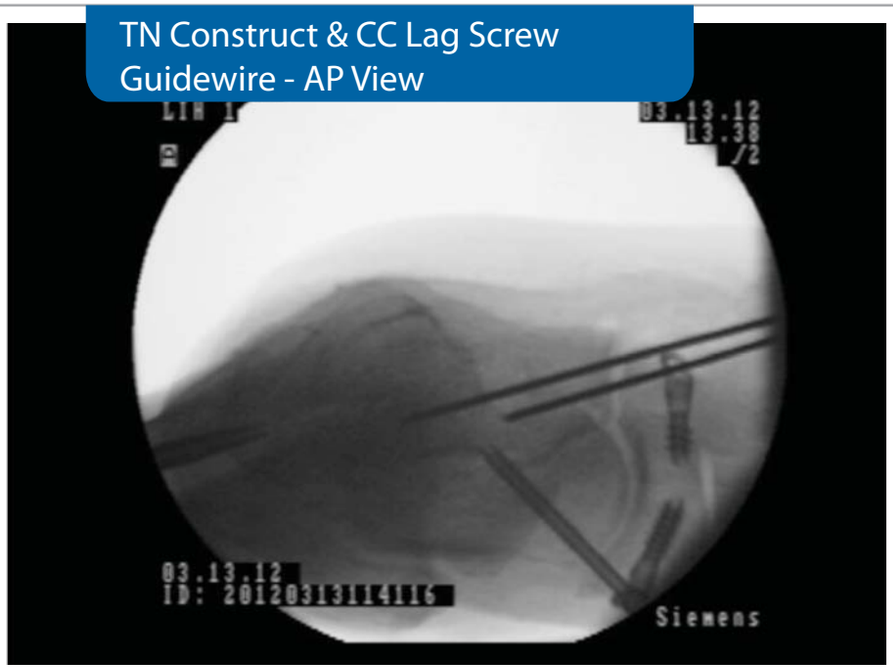
TN & CC Lag Screw Guidewires Lateral View

TN Construct & CC Lag Screw Guidewire - AP View



- TN Lag Screw inserted 1st
- Provisionally pin CC joint

NOTE: Remove provisional pins prior to the final tightening of the Lag Screw.

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TN & CC Construct Final
AP View

TN & CC Construct Final
Lateral View

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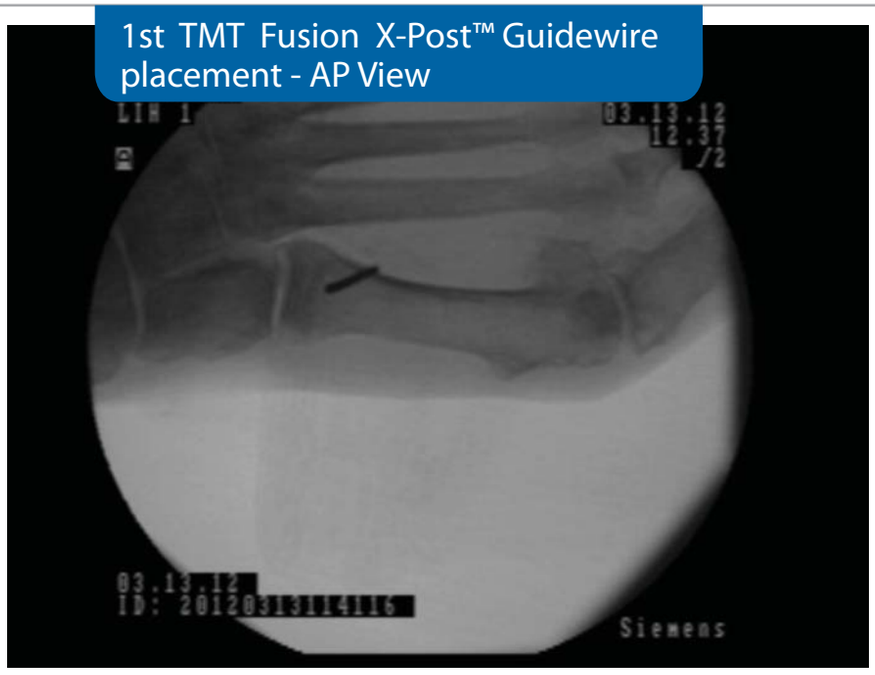
TMT/Lapidus Fusion

Notes:

IO FiX is a preferred method of fixation for TMT Fusions and Lapidus cases because:

- Nothing compresses better
- Provides much less trauma to the neurovascular bundles than plates - with plates you need to lift the neurovascular bundles.
- Provides a huge advantage with regard to potential soft tissue issues
- Delivered with smaller incisions and has no profile - all good things for my patients!

1st TMT Fusion X-Post™ Guidewire placement - AP View



1st Metatarsal X-Post™ Placement

- Center of the metatarsal base
- 7-8mm from the joint
- Parallel to the joint line (lateral image)

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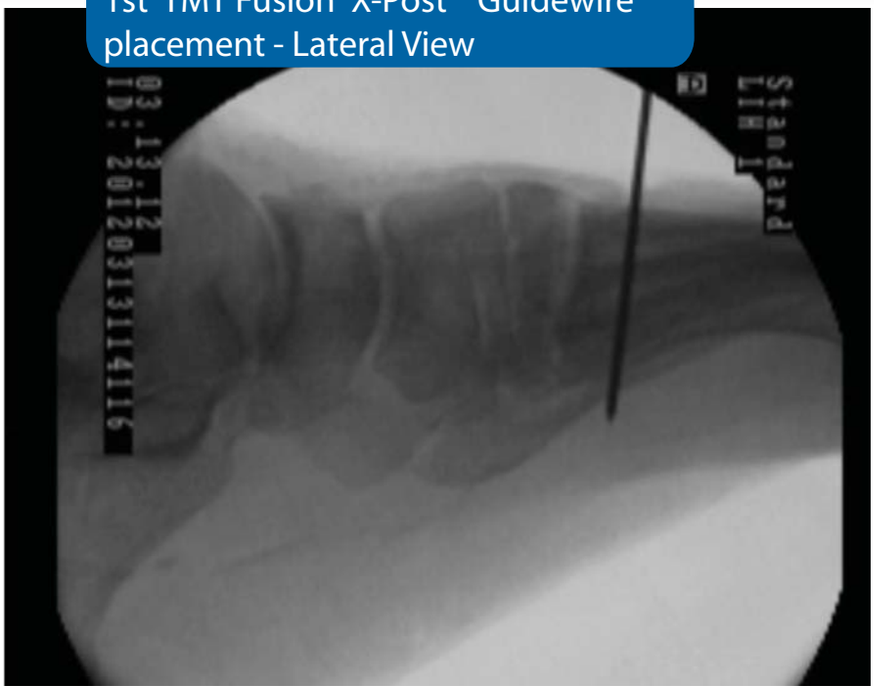
1st TMT Fusion X-Post™ Guidewire placement - Lateral View



1st Metatarsal X-Post™ Placement

- Parallel to the joint line
- Ream to full depth by hand

1st TMT Fusion X-Post™ Placement Lateral View

X-Post™ Placement (Depth)

- Implant should be flush
  - 1mm proud is acceptable

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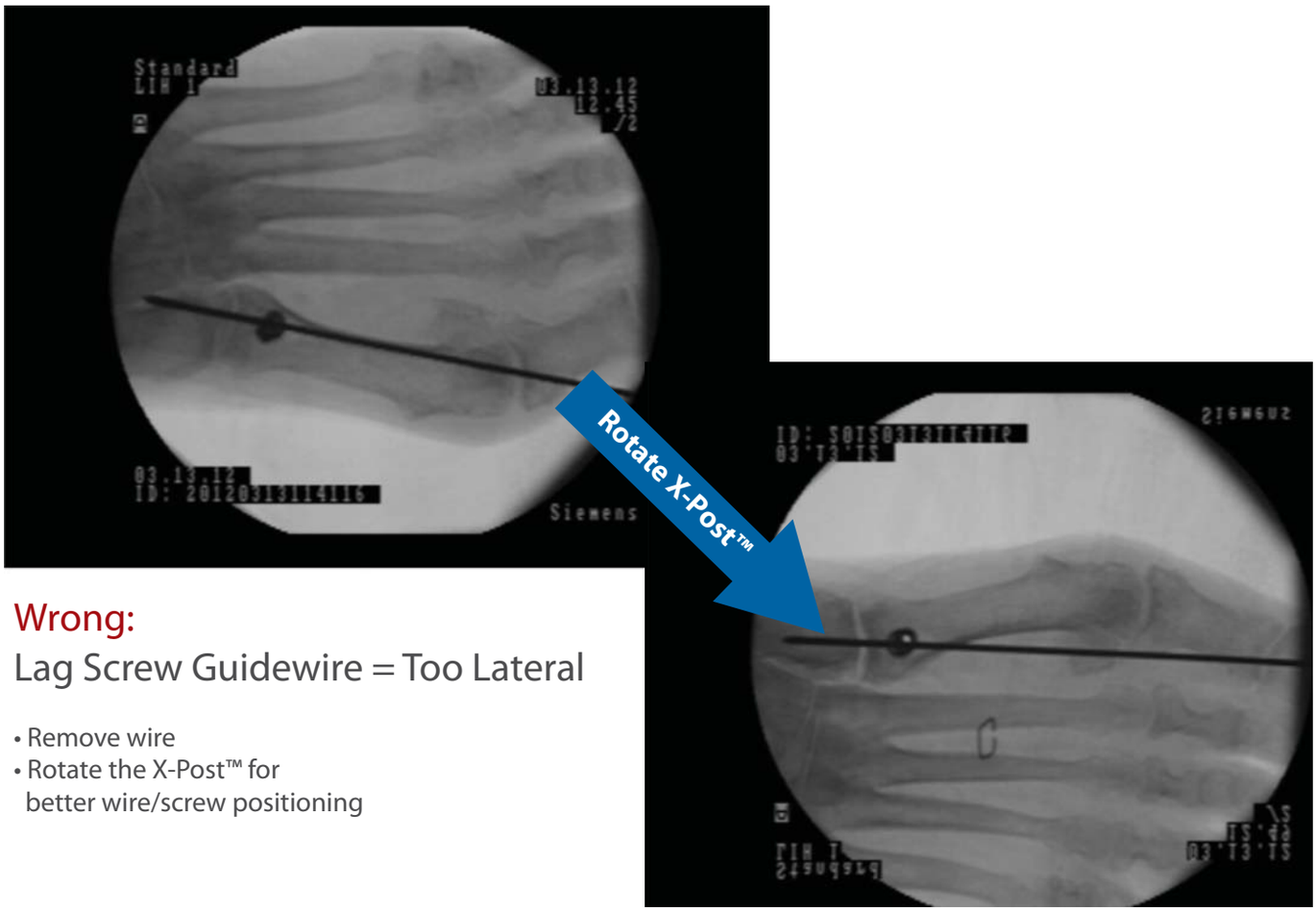
1st TMT Lag Screw Guide Wire AP View



Wrong:

Lag Screw Guidewire = Too Lateral

- Remove wire
- Rotate the X-Post™ for better wire/screw positioning

Right:

Corrected Position:

- Reposition the guidewire by removing wire and rotating X-Post™.
- Rotating the X-Post™ requires the repeating of the clearing step for the X-Post™ to allow for proper alignment of the drill guide

Dr. Brodie's tips for the clearing step:

- Ronguer to clip the edge to start
- Clear enough bone with the clearing tool so that you can see the bottom lip of the X-Post™

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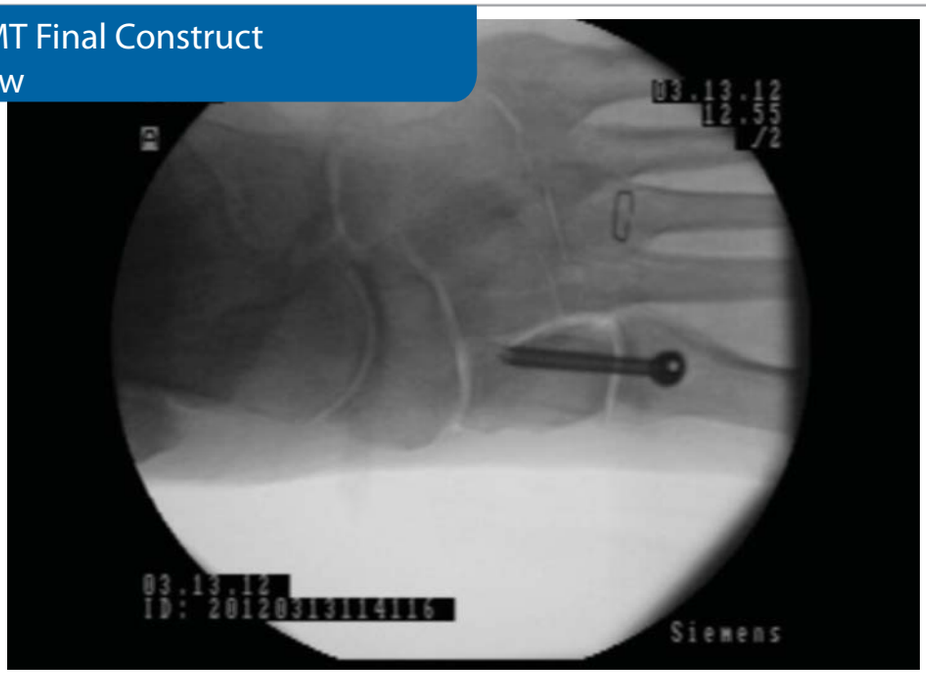
1st TMT Final Construct
Lateral View

1st TMT Final Construct
AP View



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2nd TMT X-Post™ Placement AP View

2nd Metatarsal X-Post™ Placement

Guidewire should be:

- Center of the metatarsal base
- 7-8mm from the joint
- Parallel to the joint line (lateral image)

2nd TMT X-Post™ Placement Lateral View

2nd TMT X-Post™ Placement Anterior View

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2nd TMT Lag Screw Guidewire Placement - Lateral View

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