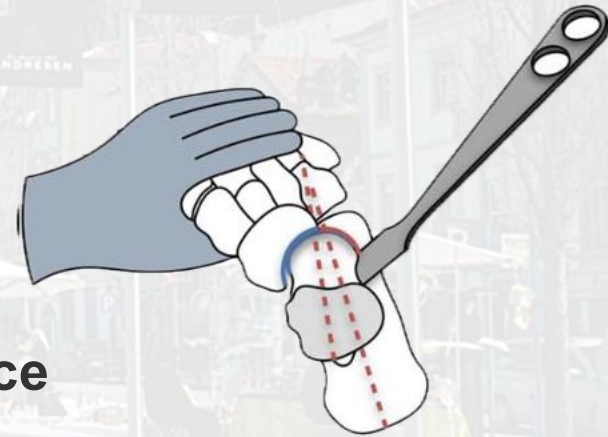


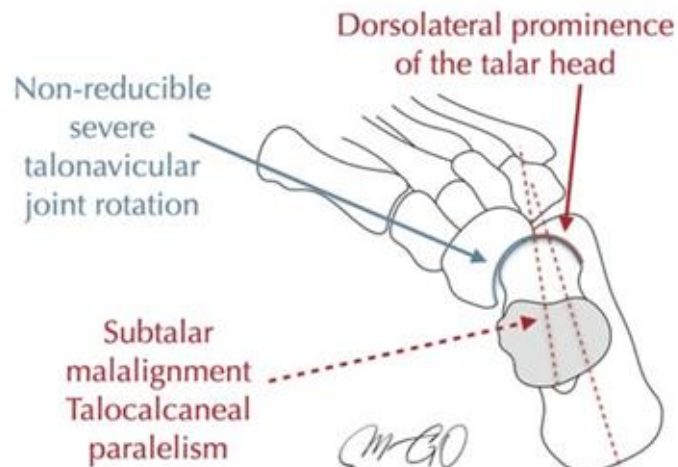
TALOCALCANEONAVICULAR REALIGNMENT FOR SEVERE EQUINOVARUS IN CHILDREN

Surgical Technique and Case-Based Experience



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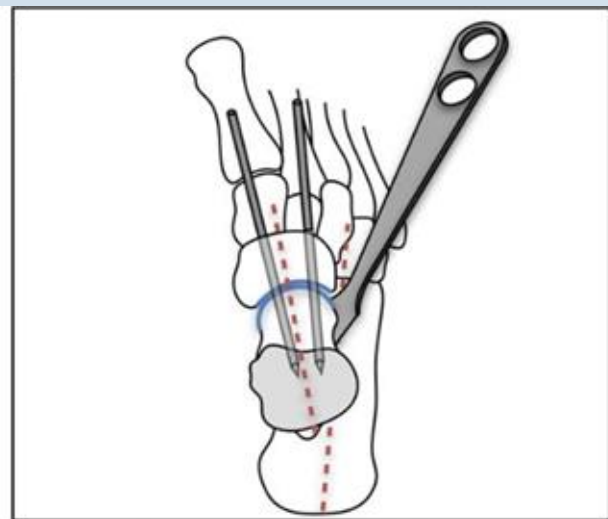
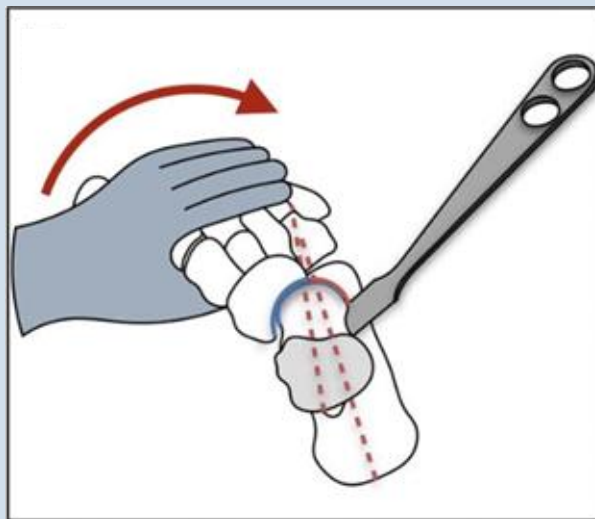
Equinovarus foot



- ✓ Neurologic equinovarus (NECV) foot → rigid deformities → 3D deformity
- ✓ Difficult surgical correction
- ✓ Calcaneo pedal unit

TCN Realignment

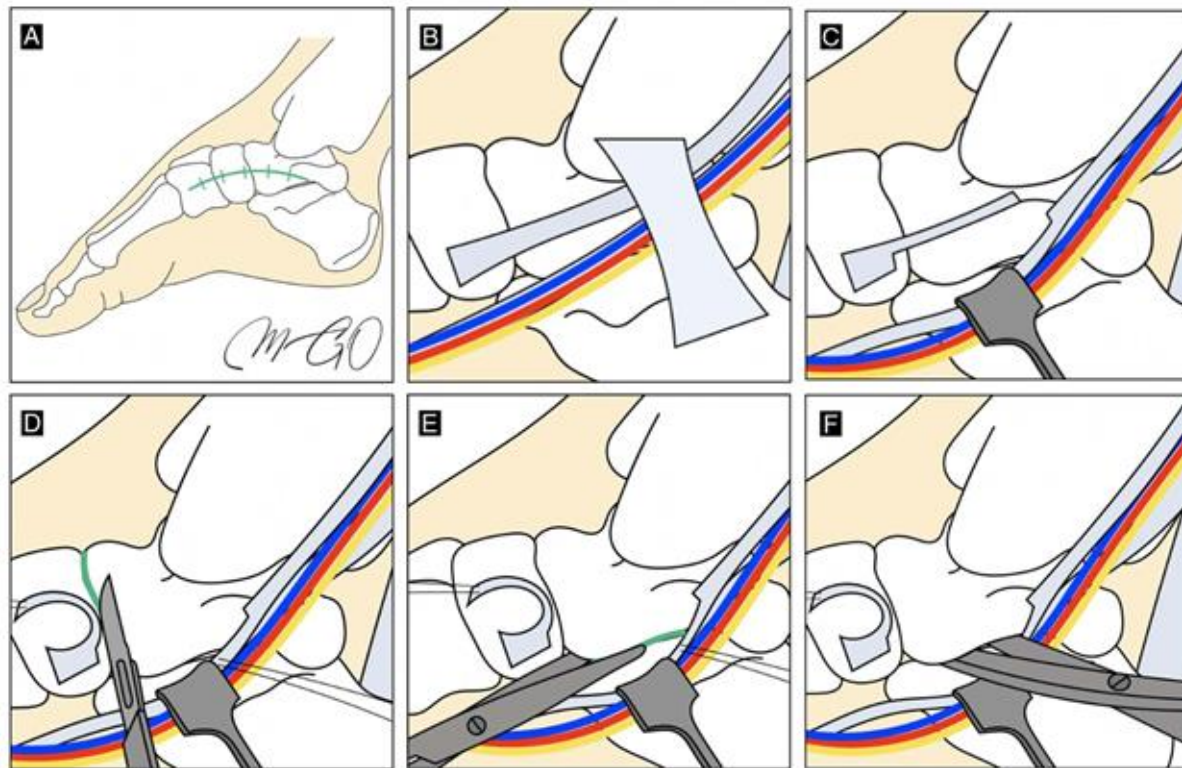
- ✓ Realigning is crucial for reestablishing foot biomechanics
- ✓ STJ alignment + TNJ coverage



Objectives

1. Describe the TCNR technique
2. Present cases evaluating its clinical , radiological and functional outcomes

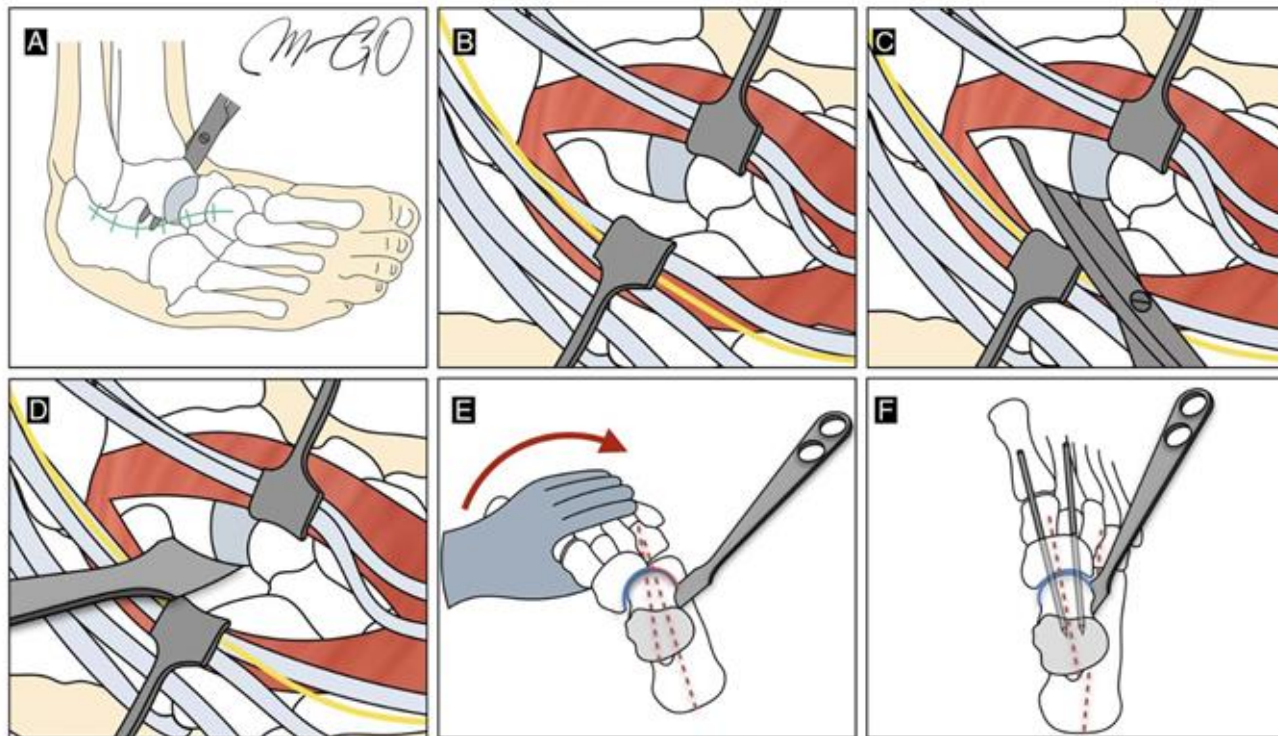
Surgical Technique



Talocalcaneonavicular Realignment: The Foundation for Comprehensive Reconstruction of Severe, Resistant Neurologic Cavovarus, and Equinovarus Foot Deformities in Children and Adolescents

Maria Galán-Olleros, MD, Gonzalo Chorbadjian-Alonso, MD,†‡
Ana Ramirez-Barragán, MD, PhD,* Maria Jesús Figueroa, MD,*§|| Manuel Praga-Collarte, MD,*
Carmen Martínez-González, MD,* Carlos H. Prato de Lima, MD,¶ and
Ignacio Martínez-Caballero, MD, PhD**

Surgical Technique



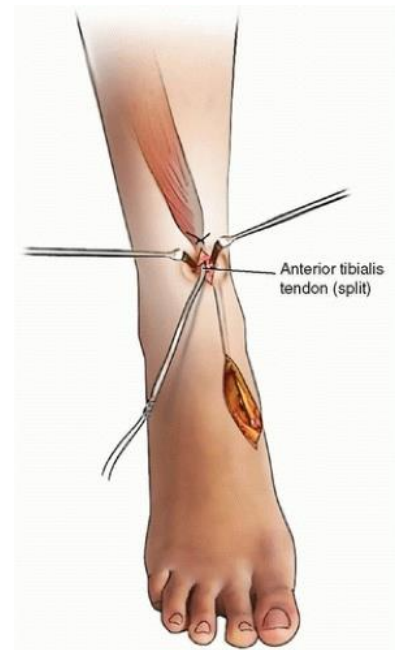
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Surgical Technique

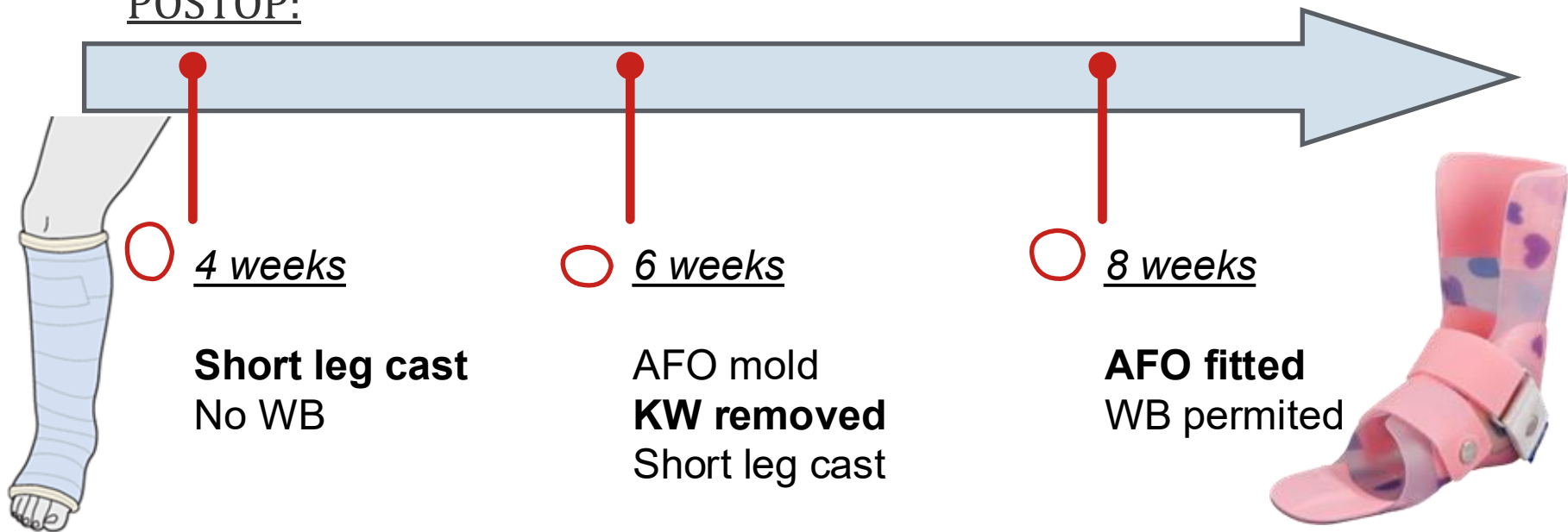
ADDITIONAL PROCEDURES:

- ✓ Tendon transfer
- ✓ Aquilles lengthening
- ✓ Osteotomies
- ✓ ...



Surgical Technique

POSTOP:



Patient 1

- 10 year-old patient – GMFCS II
- Spastic paraparesis – variant of uncertain significance
- Unstable gait with increased base of support
- **AFOS – limited tolerance**
- Previous APAI



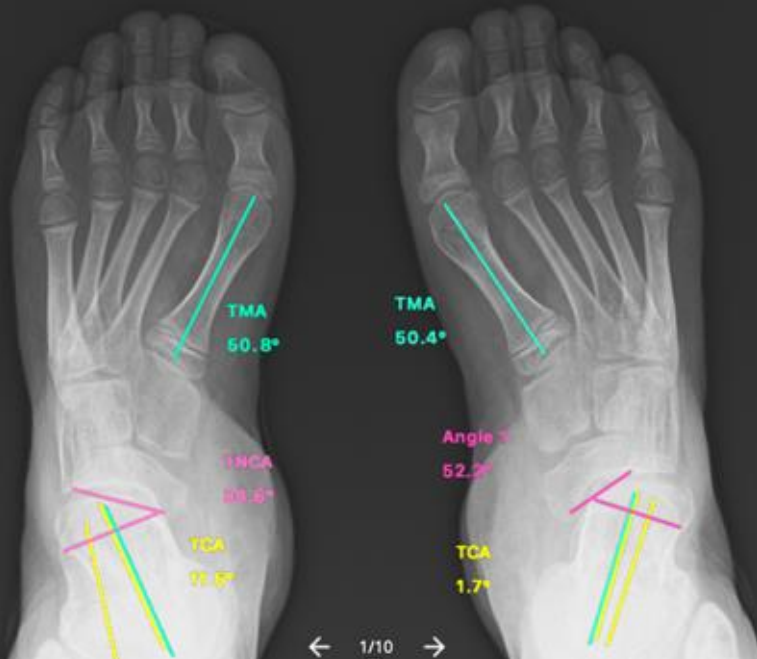
Patient 1

- **Bilateral equino-cavo-varus feet**
- Semi-rigid deformities
- Lateral border hyperkeratosis
- Progressive stiffness
- No improvement after prior treatment
+ AFO intolerance



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TCN realignment

- 1st cuneiform plantar-based osteotomy
- 1st metatarsal dorsal hemiepiphysiodesis
- Posterior tibial Z-lengthening
- Anterior tibial transfer to 3rd cuneiform
- Achilles tenotomy

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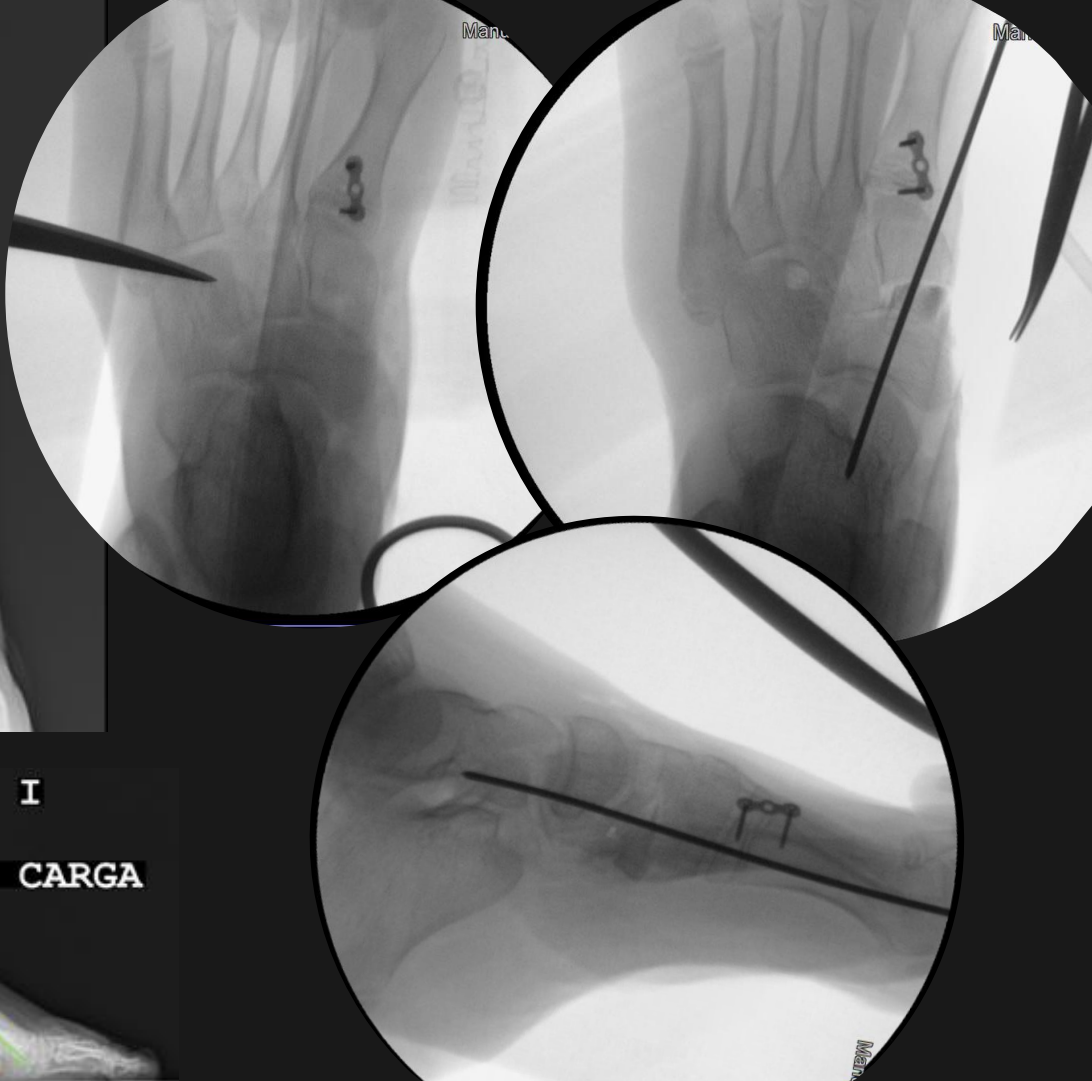
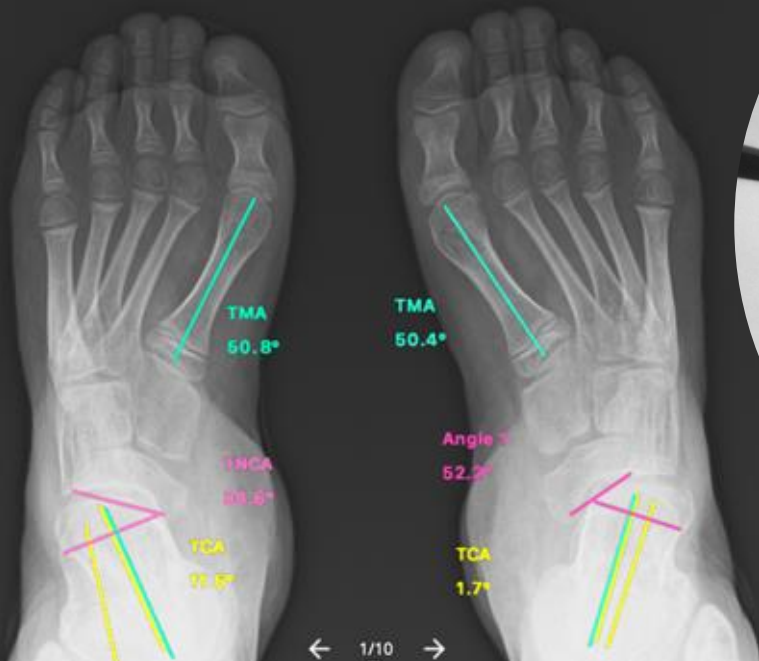
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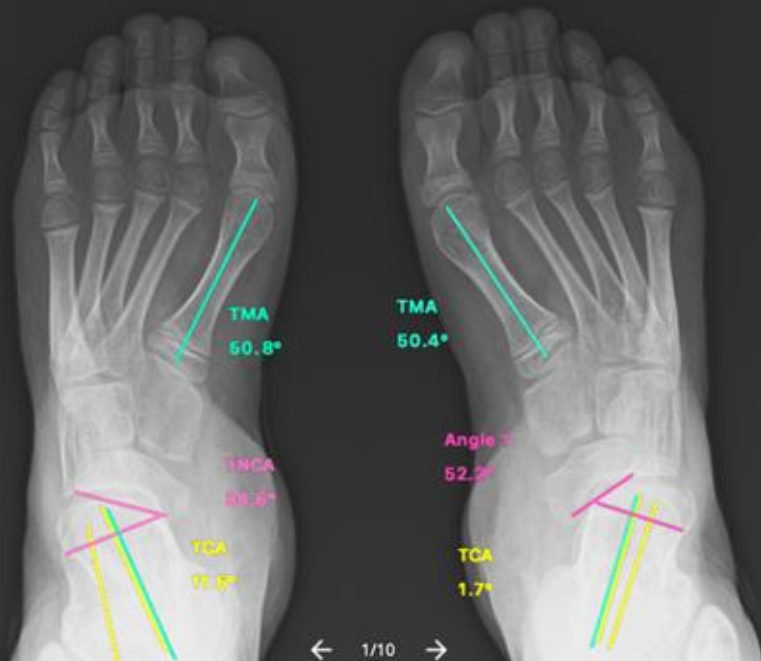
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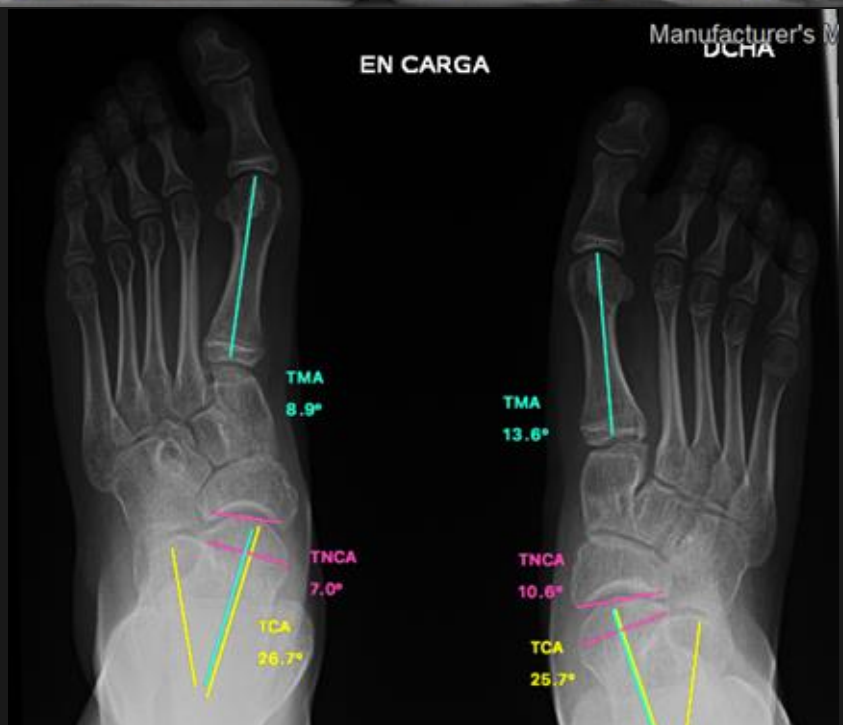


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Manufacturer's
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Patient 1



- Plantigrade, well alineated feet
- Residual valgus hindfoot and mild abduction
- **Free pain, brace-tolerant**
- Active physiotherapy program

Results

Painless, plantigrade and braceable foot

Reproducible technique

No severe complications

High level of satisfaction

Take home messages

Effective 3D correction

Restores ST axis + TN coverage

Part of global reconstruction

Best for severe rigid deformity