

DISIOR

Diagnosis and treatment
through true 3D vision

“It was one of these subtle cases and I needed to get an accurate 3D model and distance map to see how to approach this patients’ treatment.”



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Case study: TMT-1 Arthritis

Arthritis of the first tarsometatarsal (TMT-1) causes pain. It is commonly caused by trauma or primary instability, and affects many people that consult with foot specialists.

This patient presented with medial midfoot pain that had been ongoing for several months. I had a bilateral **WBCT conducted to get an accurate 3D images** of the patients’ anatomy under natural loading conditions.

The medical images were run through the Foot & Ankle module of Disior’s Bonelogic 2.0 software and additional 3D analysis were performed by Eero Huutilainen, PhD*.

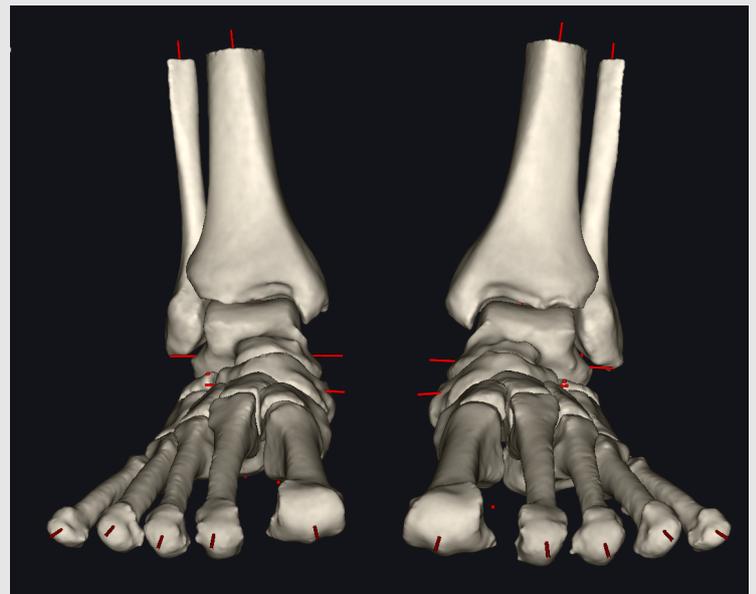


Figure 1. Patients' feet in AP view, on the left foot MT1 slipped over cuneiform.

The accurate 3D models, revealed a very **subtle but asymmetrical TMT1 arthritis** on the left foot, where the metatarsal had slipped on the cuneiform (Figure 1).



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“ This case clearly illustrates why Disior’s software is a game changer for common foot problems. ”



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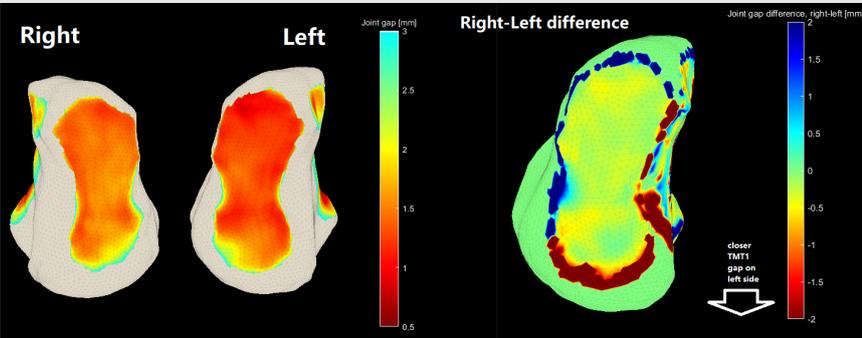


Figure 2. Right-left comparison of TMT1 joint space, a custom analysis protocol.

By comparing the joint spacing between the left and right TMT1 you can see the **subtle narrowing of the left TMT1 joint indicative of arthritis** (Figure 2).

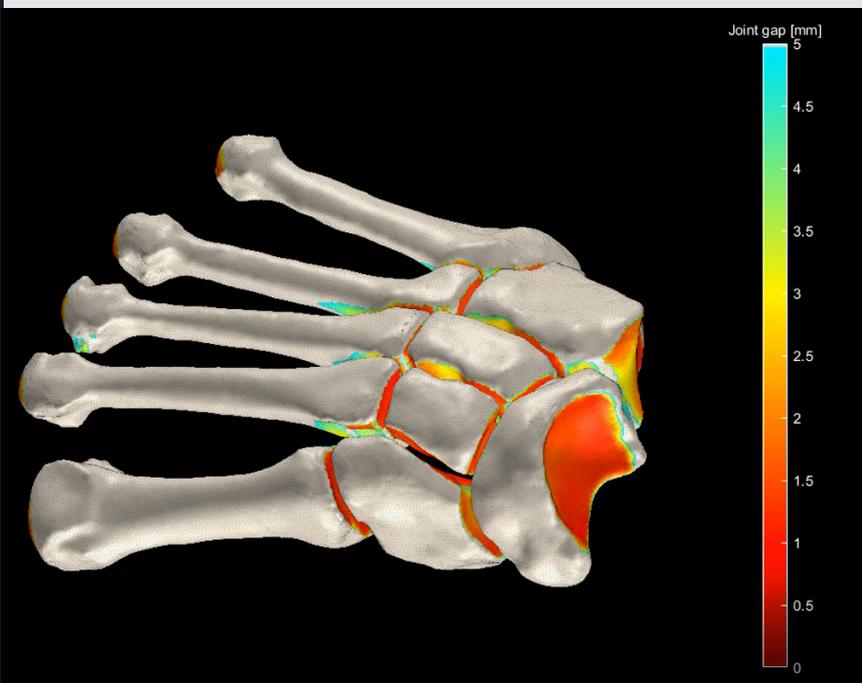


Figure 3. Distance mapping in the Lisfranc area.

Distance mapping of the Lisfranc region (Figure 3) showed subluxation and approximation in the dorsal aspect of the joint explaining the patient's pain

These insights allowed me to choose the **most appropriate treatment**, firstly a pair of supporting insoles, then a TMT1 fusion.