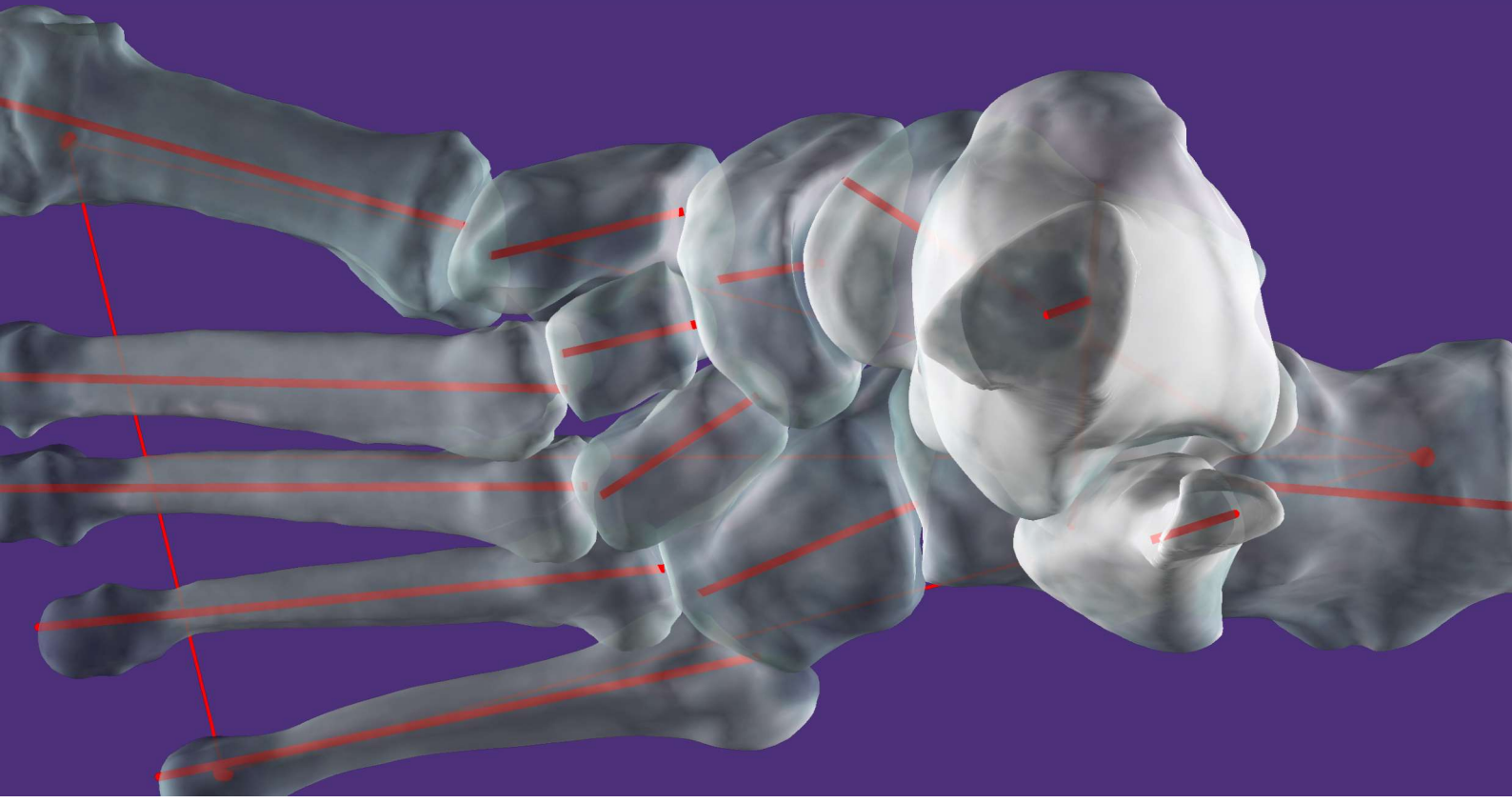




Product Information



TRANSFORMING TREATMENTS

Disior's 3D analytics software is a fast and cost-efficient way to analyze medical images in three-dimensions. There are three anatomy-specific modules currently available. Each module enables clinicians to have objective data for diagnosis, create patient-specific surgery plans and assess treatment efficacy.

KEY BENEFITS:

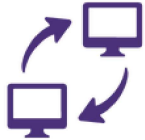
- Accurate diagnosis with automated, easy-to-use tools without manual labor.
- Accelerated patient throughput with reliable analysis (ICC > 0.96) under 5 minutes.
- Improved treatment outcomes through patient specific surgery plans.
- Enhanced clinical efficacy with evidence-based treatments and interventions.

“Until today, medical images have been analyzed using 2D slices, as if you were looking at the image with one eye only. Disior analyzes the original 3D data in a way that compares to having a full vision.”

Professor Jari Salo MD,
Specialist in Orthopedics and Trauma



SIMPLIFY YOUR CLINICAL WORKFLOW



Enjoy easy and safe transfers of DICOM and 3D data.



Analyze your CT or CBCT scans in 3-4 minutes saving hours of work.



Discover objective measures that can help you evaluate the degree of pathology and identify impingement points.



Virtually plan treatments in 3D with live bone alignment measure that support treatment decisions.



Visualize the findings to help your patient understand the planned procedure.



Modules for different anatomical applications.

Find out more on our website:



Bonelogic[®] Foot & Ankle

Disior's 3D analytics software Bonelogic[®] is a fast and cost-efficient way to get objective data for accurate diagnosis, create patient-specific surgical plans and assess treatment outcomes.

Automatic analysis of radiographic parameters, that support you in quantifying dislocations, deformities and suspected impingement

Excellent applicability for various diagnoses of the hindfoot and forefoot e.g., progressive collapse flat foot deformity and post-traumatic osteoarthritis



One software – several solutions. No need to acquire several software or expensive equipment

3D treatment planning in minutes, saving you time in the operation room

Objective

Reliable

Effective

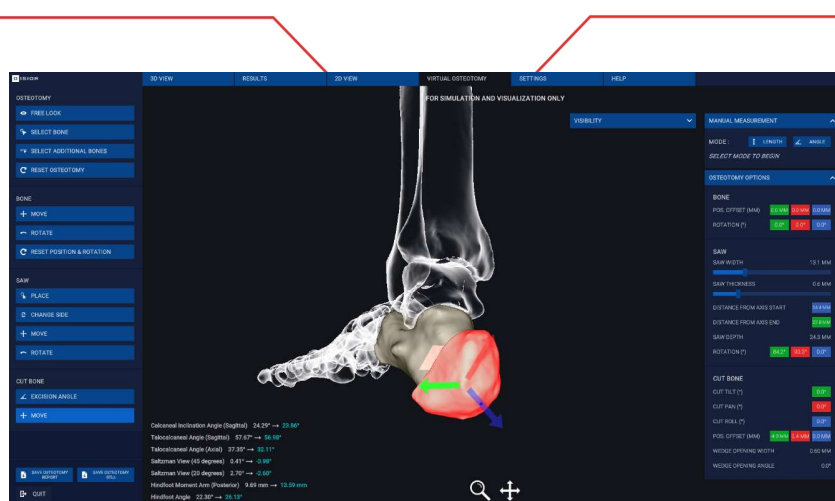
Disior Bonelogic[®] is regulated and CE marked as a Class II b medical imaging software tool in the EU and has received 510(k) clearance as class II medical imaging software for treatment planning in the field of orthopedics in the USA.

Bonelogic® Planning

Disior's Bonelogic® Planning module is a quick and easy-to-use way to gain insights on the planned procedure through visualization and manipulation of 3D models in your own clinic. This module gives you complete control over your clinical workflow.

Available in combination with the Foot & Ankle or Hand & Wrist modules to aid every stage of your clinical workflow

Easily export the models and parameters for the creation of surgical implant and guides



Planning of treatments that boost your confidence in the operation room

Live bone alignment analytics* that help you assess your surgical plan

Objective

Reliable

Effective

*Note that the live bone alignment measurement values do not reflect any influence that the soft tissue may have.

CASE STUDIES

Supramalleolar osteotomy to improve quality of life

BACKGROUND: A Patient with osteoarthritis in need of a supramalleolar osteotomy to improve mobility and quality of life.

OPERATIVE PLAN: Assessment of the patients' pre-operative pathology was performed by analyzing their CBCT data in Bonelogic®.

The medial distal tibial angle (MDTA) and the tibial lateral surface angle (TLSA) were 85.5° and 93.7°, respectively. A corrective supramalleolar osteotomy was planned using the planning module of Bonelogic®.

The manipulation predicted that using a 14 mm saw with 0.4 mm thickness to create a wedge opening (of 8.72° and 5 mm wide), 20 mm from the tibial plafond to a depth of 31 mm, would result in an increase in the MDTA of 9.0° and a reduction of TLSA of 2.8°.

A surgical guide was manufactured and used in accordance with these parameters (**Table 1**) and as illustrated as in **Figures 1 - 4**:

Key bone alignment analytics:	Preoperative	Virtual post-op
Medial Distal Tibial Angle (coronal)	85.5°	94.5°
Tibial Lateral Surface Angle (sagittal)	93.7°	90.9°
Surgical planning parameters:		
Saw width		14.0 mm
Saw thickness		0.4 mm
Cut distance from tibial plafond (at tibial center line)		20 mm
Saw depth		31.0 mm
Wedge opening angle		8.7°
Wedge opening width		5.0 mm

Table 1: Pre- vs. virtual post-op measurements of the MDTA and TLSA

Figure 1 Pre-operative condition (left) and simulated post-operative outcome (right).

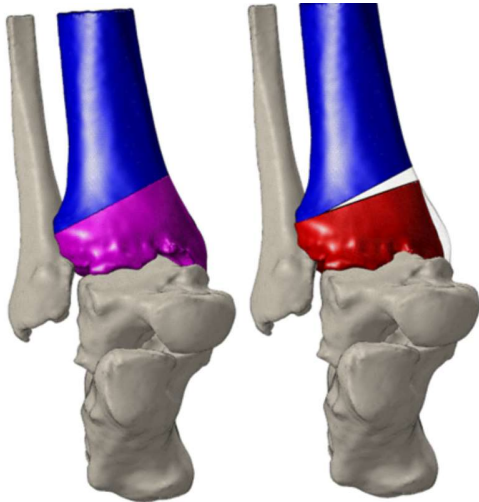


Figure 2 Computer Aided Design (CAD) of the surgical guide.

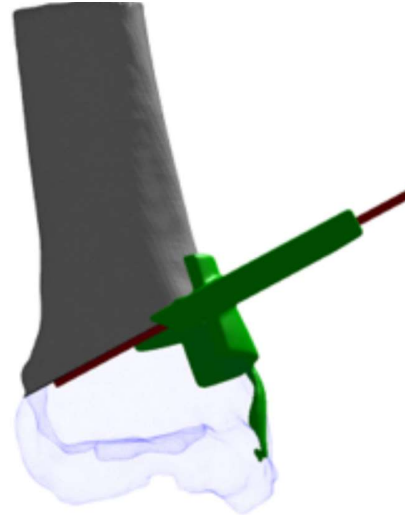


Figure 3 3D-printed, patient-specific guide.



Figure 4 Surgical guide in use in the O.R.

CAD design and printing of surgical guides are for illustrative purposes only of the potential applications and not part of the Bonelogic® software



“With Disior, I was able to plan the surgery in more detail compared with conventional methods. Virtual planning allowed this patient to receive individualized treatment. I firmly believe this technology will give confidence to surgeons of all levels.”

Marko Mykkänen, M.D.
Orthopedic Surgeon
Pihlajalinna Hospital, Helsinki, Finland

A subtle case of TMT-1 arthritis

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

This patient presented with medial midfoot pain that had been ongoing for several months. A bilateral weight-bearing computer tomography (WBCT) was conducted to get an accurate 3-dimensional (3D) image of the patient's anatomy under natural loading conditions.

EXAMINATION: The medical images were run through the Foot & Ankle module of Disior's Bonelogic® 2 software and additional 3D analysis were performed by Eero Huotilainen, PhD, Senior Expert - Algorithms at Disior.

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

By comparing the joint spacing between the left and right TMT-1 you can see the subtle narrowing of the left TMT-1 joint indicative of arthritis (**Figure 2**).

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

These insights led to choosing the most appropriate treatment: firstly, a pair of supporting insoles, then a TMT-1 fusion.

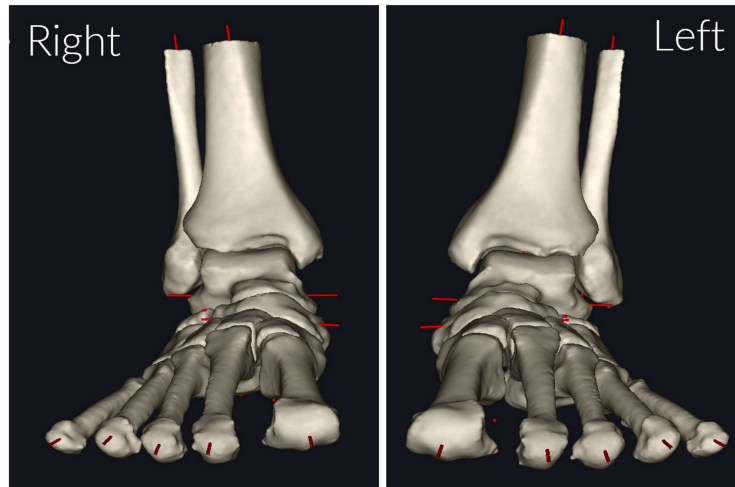


Figure 1
Patient's feet in AP view, on the left foot MT-1 slipped over cuneiform.

Figure 2
Right-left comparison of TMT-1 joint space, a custom analysis protocol.

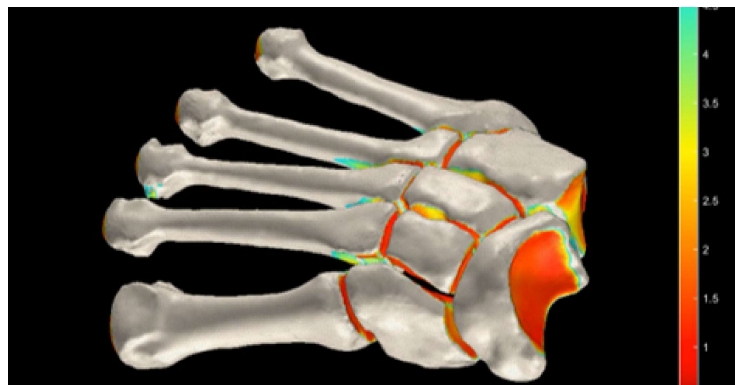
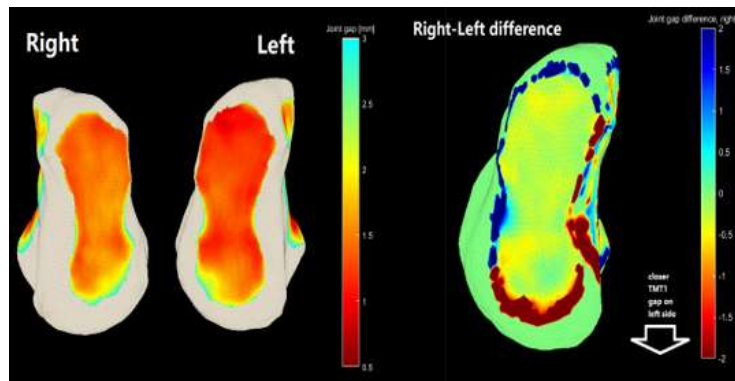


Figure 3
Distance mapping in the Lisfranc area.



"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 patient's treatment. This case clearly illustrates why Disior's software Bonelogic® 2 is a game changer for common foot problems."

François Lintz, M.D.

Consultant Orthopaedic Surgeon
Centre de Chirurgie de la Cheville et du Pied,
Toulouse, France

TRANSFORMING TREATMENTS

We know that medical imaging data holds the key to understanding the cause of your patients' symptoms. Manually analyzing medical images is time-consuming and prone to human error. That is why we work with clinicians to develop easy-to-use software that offer:

- Automated, objective and reliable measures to minimize the discrepancy in radiology reporting and that help you to diagnose, plan treatments and assess outcomes.
- Digitally reconstructed radiographs generated from DICOM data to reduce radiation exposure of your patients.
- Patient specific 3D models and planning to support your clinical workflow and precise surgery execution.
- Optional custom measurements and kinematic analysis offered as in-house service.

“Our technology creates better treatment plans and treatments. This helps clinicians to improve the standard of care for all patients.”

Anna-Maria Henell
Disior, Helsinki, Finland





www.disior.com

Claim your free trial here:

