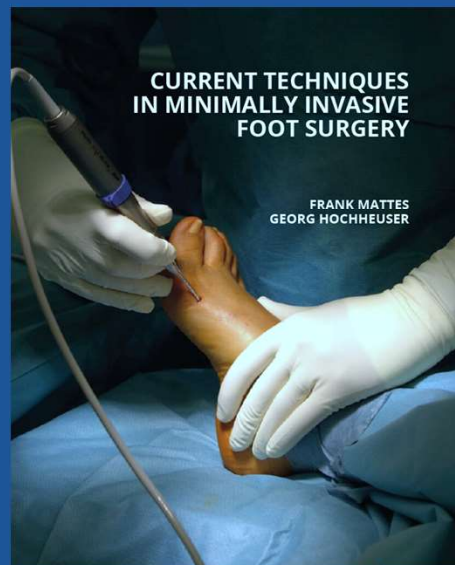


# Hands-On Cadaver Seminar

February 21-23, 2024  
Celebration, Florida

## Lisfranc Arthodesis: Are there Alternatives ?

Dr. med. Frank Mattes



interALPES  
foot and ankle academy  
Ausbildung auf höchstem Niveau

# Conflict of Interest Disclosure

Dr. Frank Mattes has a financial relationship with the following companies and/or products. These relationships may or may not apply to this lecture.



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Lisfranc Arthrodesis open or MIS possible

So why alternatives ?

# MIS Lisfranc Arthrodesis ?

In principle yes, but ....

# MIS Lisfranc Arthrodesis ?

In principle yes, but ....

Can I really remove all the cartilage with the burr ?

› [Foot Ankle Int.](#) 2023 Dec;44(12):1287-1294. doi: 10.1177/10711007231200022. Epub 2023 Nov 14.

## Open vs Minimally Invasive Resection of the First Metatarsocuneiform Joint: An Anatomical Study

Sebastian Schilde <sup>1</sup>, Dariusch Arbab <sup>2</sup>, Maria Felsberg <sup>1</sup>, Heike Kielstein <sup>3</sup>, Karl-Stefan Delank <sup>1</sup>, Natalia Gutteck <sup>1</sup>

Affiliations + expand

PMID: 37964442 DOI: [10.1177/10711007231200022](#)

2 × 13-mm Shannon burr (MIS) vs an open technique using an oscillating saw.

Ten pairs of fresh frozen cadaveric feet, randomly, open or MIS

> [Foot Ankle Int.](#) 2023 Dec;44(12):1287-1294. doi: 10.1177/10711007231200022. Epub 2023 Nov 14.

## Open vs Minimally Invasive Resection of the First Metatarsocuneiform Joint: An Anatomical Study

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PMID: 37964442 DOI: [10.1177/10711007231200022](#)

Open 100 %

MIS 85 %

**Conclusion:** In this cadaver study with the procedures performed by an experienced foot and ankle surgeon, and using 2 different surgical approaches, we found general parity between the Shannon burr MIS technique vs oscillating saw open technique techniques with more risk to the PL with our open technique and approximately 15% less cartilage resection with our MIS technique.

# 85 % is not enough

Additional arthroscopy would be an alternative

In Germany, however, this is not paid for by health insurance

also takes too long



# Alternativ: No Operation → Orthoses

Which ones?

orthoses to reduce hindfoot eversion and support the medial longitudinal arch

that **full length inserts** reduce magnitude and duration of loading under the medial midfoot

Rao S., Baumhauer J.F., Becica L., Nawoczinski D.A. Shoe inserts after plantar loading and function in patients with midfoot arthritis. *J Orthop Sports Phys Ther.* 2009;39(7):522–531

# Do our patients love orthoses ?

84 percent of patients say that their insoles help them a lot or a lot.  
72 percent have less pain and discomfort,  
69 percent are more mobile again.  
74 percent have improved their quality of life and can manage their everyday lives better again.



Lucky me



# My reality

Health insurance companies usually cover two orthopedic insoles per year



Every orthopedist who has no idea prescribes insoles

But

because so many insoles are prescribed



Health insurance pays very little for orthotic insoles



orthopedic shoemaker is not interested



Industrially prefabricated insoles are used



all insoles look the same



shutterstock.com - 2271461699

# My reality

There is only one suitable orthopedic shoemaker within a 100 km radius

Maybe 10 percent of people are satisfied with their orthopedic insoles

# What do we do with the 90 % not satisfied



**YOU ASK  
WE MAKE  
THEY WALK**

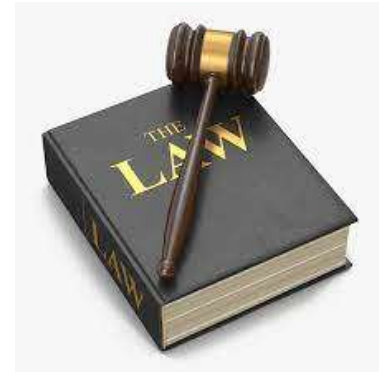
PRE-PREG ORTHESE  
EINGEBAUT



orthopedic custom made boots



Mattes first law of foot surgery:



The older the patient, the smaller the shoes become



My reality



You should waer these shoes

Clear. They're fashionable, right ?



Clear. They're fashionable, right ?

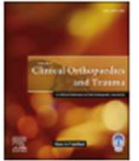
In my practice, only about 1%  
of patients want orthopedic  
boots !



So then



But



Review article

Midfoot arthritis- current concepts review

Harish Kurup\*, Nijil Vasukutty

*Pilgrim Hospital, Boston, PE21 9QS, United Kingdom*

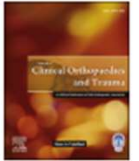


3 Month long walker  
wound healing problems, infection (3%),  
peripheral nerve injury (9%)  
nonunion (3 - 8%)  
painful neuroma formation (7%)  
screw irritation or breakage (9%)  
Arthritis in adjacent joints (4.5%)

# But

3 Month long walker  
wound healing problems, infection (3%),  
peripheral nerve injury (9%)  
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painful neuroma formation (7%)  
screw irritation or breakage (9%)  
Arthritis in adjacent joints (4.5%)

What do we do with patients  
who are getting older and older?



Review article

Midfoot arthritis- current concepts review

Harish Kurup\*, Nijil Vasukutty

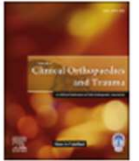
*Pilgrim Hospital, Boston, PE21 9QS, United Kingdom*



# But

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Arthritis in adjacent joints (4.5%)

That led to 2 new approaches



Review article

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*Pilgrim Hospital, Boston, PE21 9QS, United Kingdom*



# approach number 1

reduce the pressure under the metatarsal heads



this leads to less pressure in the lisfranc joints

How ?



modified DMMO



## Converse DMMO = reversed DMMO (rDMMO)

Open: Helal Osteotomy

Incision ca 2cm proximal MTP-joint



Lisfranc Arthrose als Alternative zur Versteifung



The Foot

Volume 43, June 2020, 101652



Original Article

## Early results of minimally invasive, reverse-oblique, distal metaphyseal metatarsal osteotomy (R-DMMO) for arthritis of the lesser tarsometatarsal joints – A retrospective case series

[Timothy Edward Schneider](#)<sup>a</sup>, [Caroline Ruth Varrall](#)<sup>b</sup>, [Karan Malhotra](#)<sup>a</sup>  

**safe procedure for lesser TMTJ arthrosis which can produce good results and prevent, or at least delay, the need for arthrodesis without compromising future operative options. Good to excellent outcomes have been shown with few significant complications in the short term in selected patients.**

## approach number 2

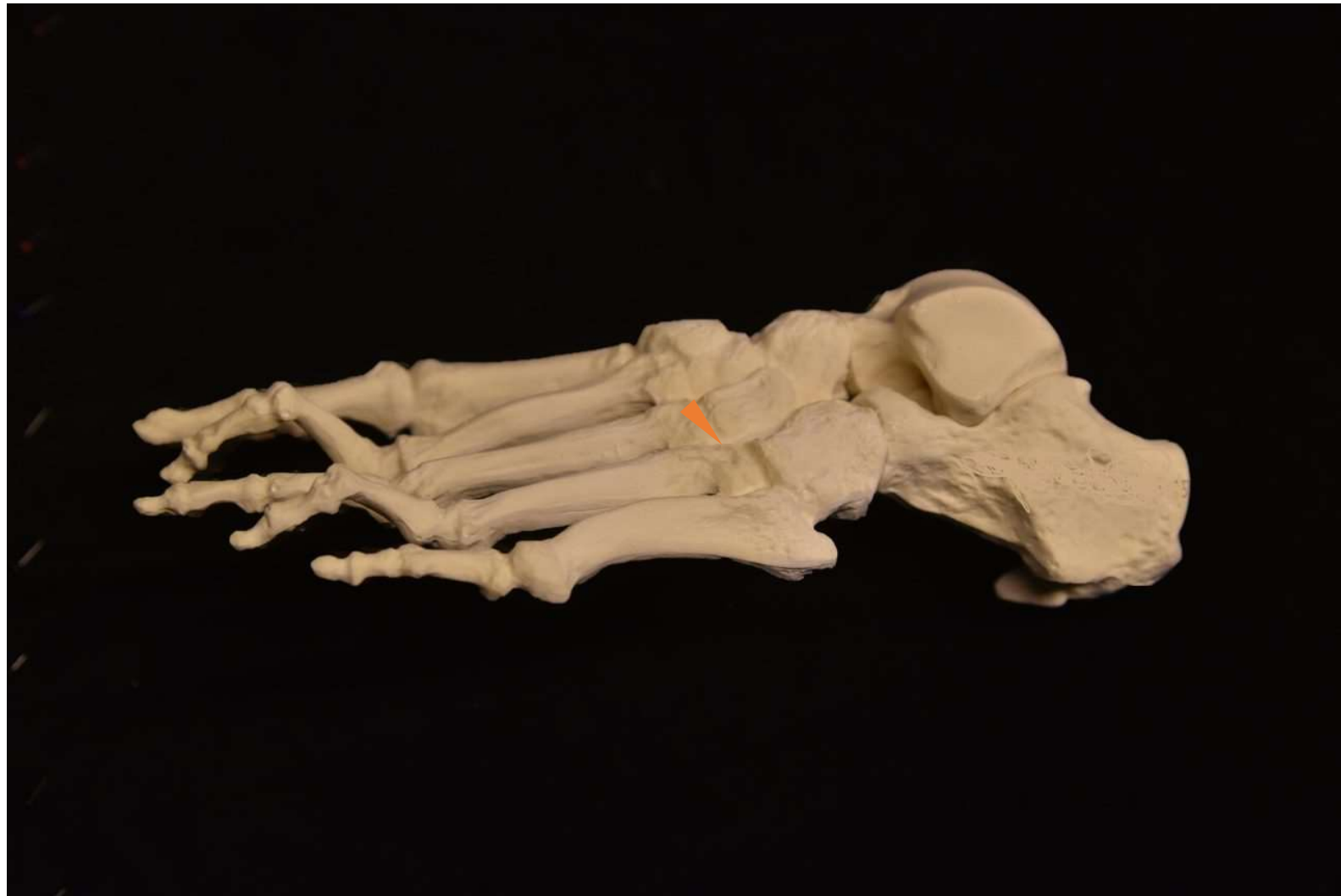
Remove the joint bearing parts of the Lisfranc joints

How ?

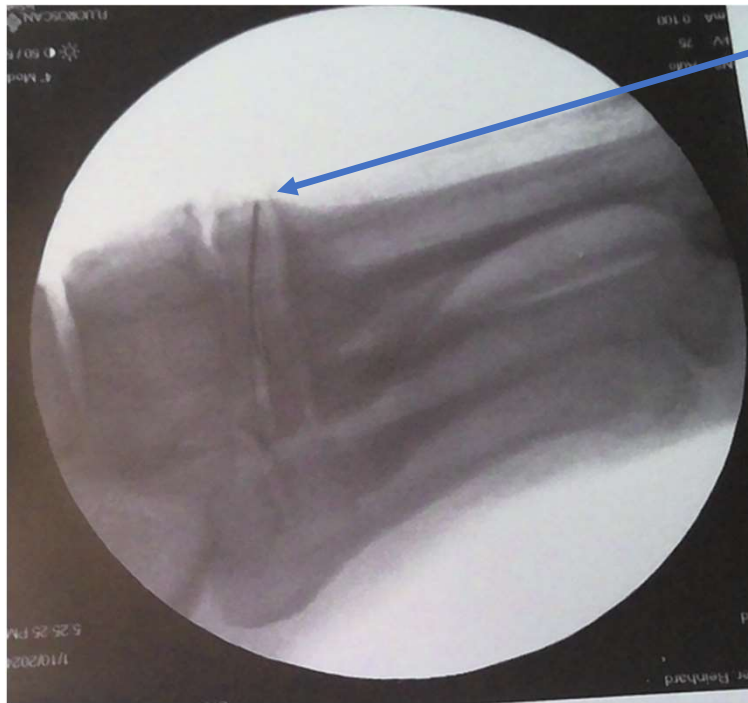


Remove the bases of the metatarsal bones

Remove the joint bearing parts of the Lisfranc joints



# Stab incision under x-ray control



Needle

Introduce the rasp into the joint



Introduce the burr under x-ray control





Remove the MT bases





Gap fills with scar tissue



# Advantages

Immediately loadable

No immobilization

A fusion is later possible

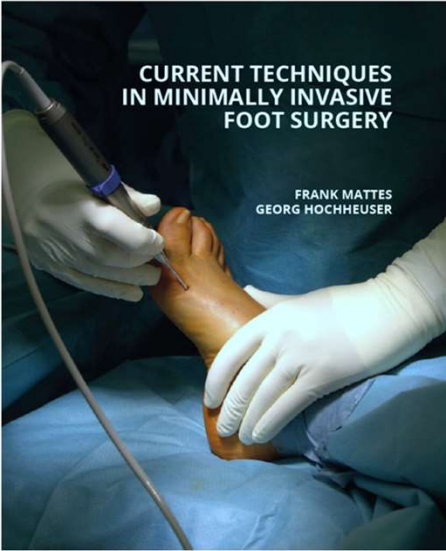
But



No Data !!

Subjective experience only !!

2 studies are currently being carried out in France and Germany



Thank You For Your Attention !

Fußchirurgie  
am See

interALPES  
foot and ankle academy  
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Academy of  
Minimally Invasive  
Foot & Ankle  
Surgery

