

medial Lisfranc arthrosis

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3rd Foot and Ankle Symposium
Arthritic Disorders of the Foot and Ankle
Diagnosis and Management

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Medial Lisfranc arthrosis – etiology

- > Isolated Lisfranc
 - Posttraumatic
 - Idiopathic
- > Combined
 - Idiopathic
 - Posttraumatic



isolated Lisfranc deformity vs multi-level deformity: heel position



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Ap radiograph

> > C1-M1



Ap radiograph

- > C1-M1
- > Base M2



Lateral radiograph

- > tm1
- > dC1-M5
- > Edge C1
- > Osteophytes
- > Subluxation



Medial Lisfranc arthrosis – variable anatomy

- > Planus deformity
- > Medial or lateral or no displacement of 1st metatarsal
- > With or without forefoot deformity
- > Naviculo-cuneiform arthrosis



Medial Lisfranc arthrosis – variable anatomy

- > Planus-adductus deformity
- > Varus displacement of 1st metatarsal
- > With hallux valgus



Medial Lisfranc arthrosis - variable anatomy

- > Planus deformity
- > Unstable TMTJ-1, stable MTPJ-1
- > Unstable MTPJ-2 + 3



Medial Lisfranc arthrosis – uniform treatment

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> arthrodesis

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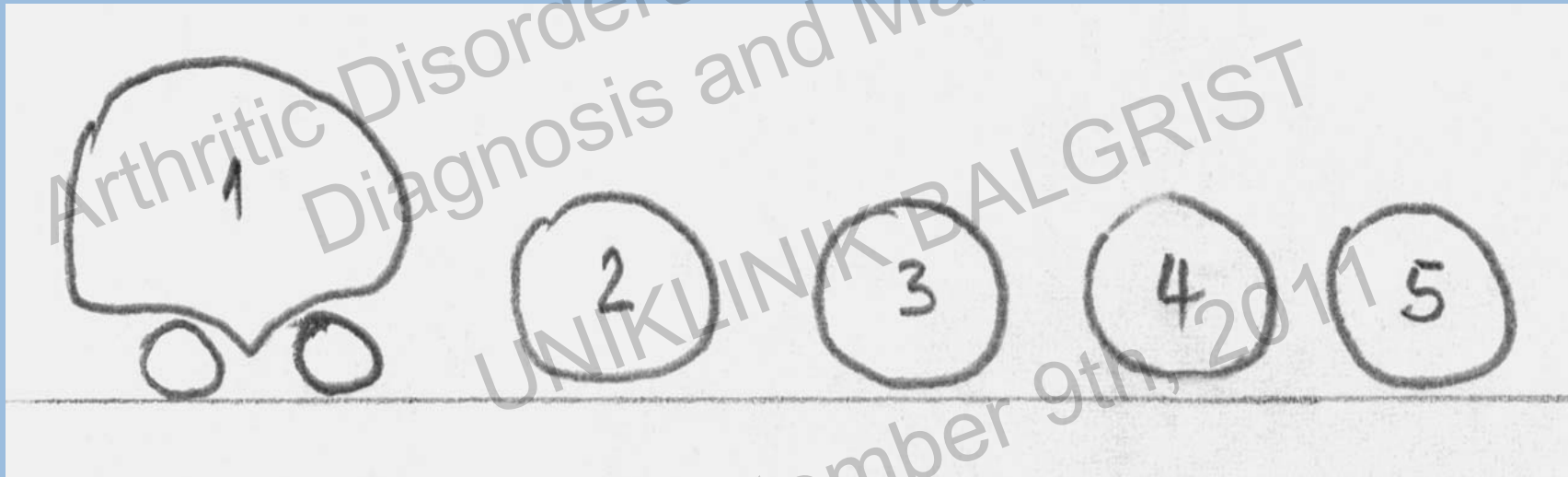
Medial Lisfranc arthrosis – uniform treatment

- > Arthrodesis
 - In situ
 - realignment

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Medial Lisfranc arthrosis - treatment

- > In situ-arthrodesis (accept deformity)
 - Advantage: sagittal balance of MT heads preserved
 - Disadvantage: persisting deformity, pressure plantar-medial over bony prominence, hyperpressure lateral Lisfranc



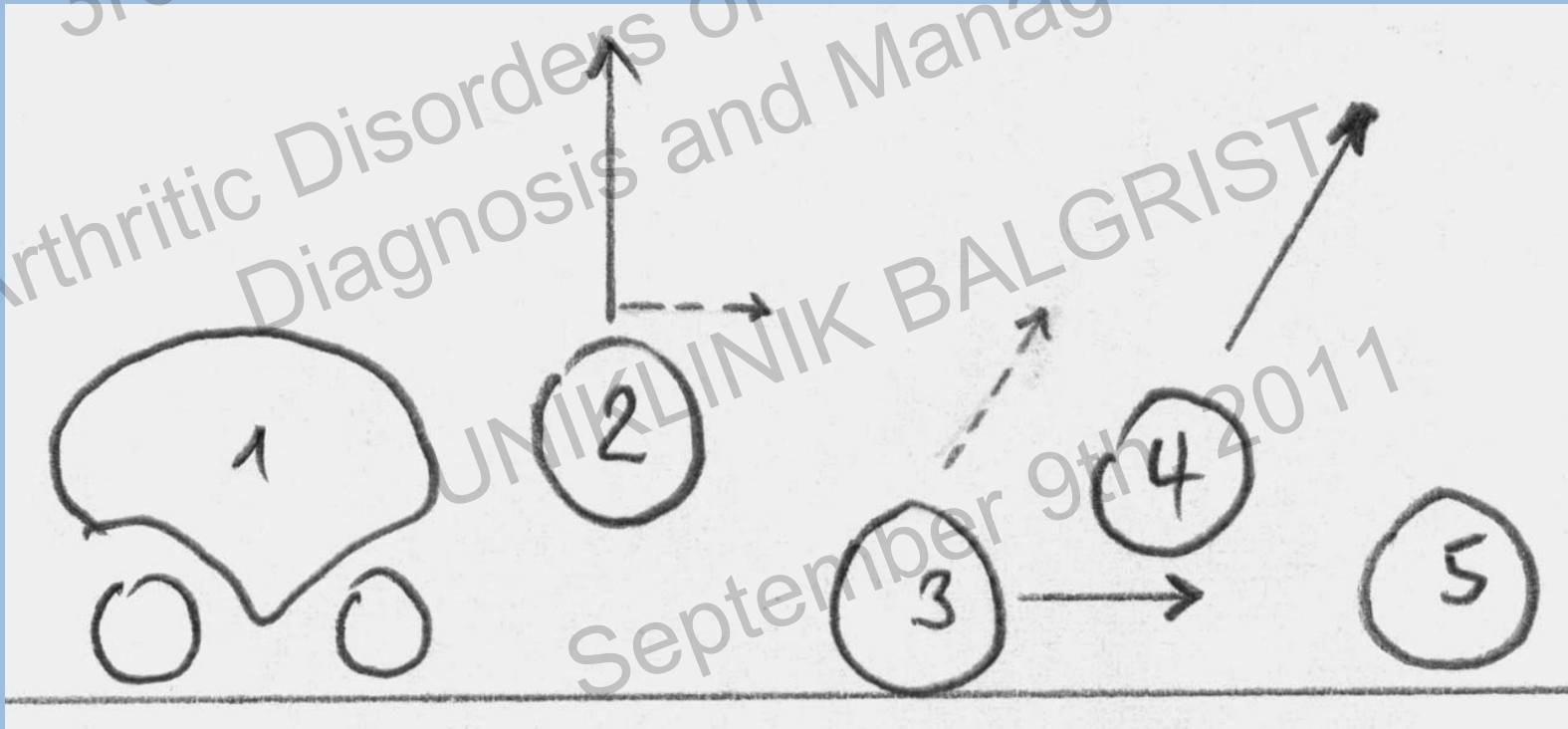
In situ-arthrodesis

Posttraumatic arthrosis with minimal deformity
In situ-arthrodesis: fixation with screws
No correction or fixation necessary: TMT4-5



Medial Lisfranc arthrosis - treatment

- > Arthrodesis with realignment
 - Advantage: restored midfoot alignment
 - Disadvantage: difficult balancing of metatarsal heads



Arthrodesis with realignment

- > Idiopathic Lisfranc arthrosis usually presents instability TMT 1-3 and planus-abductus



Arthrodesis with realignment



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Medial Lisfranc arthrosis - arthrodesis

- > Tips and tricks
 - Reduction always in plantar medial direction

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Direction of reduction

- > Most frequent direction of instability:
 - Dorso-lateral subluxation (=pronation, „arch flattening“)



Medial Lisfranc arthrosis - arthrodesis

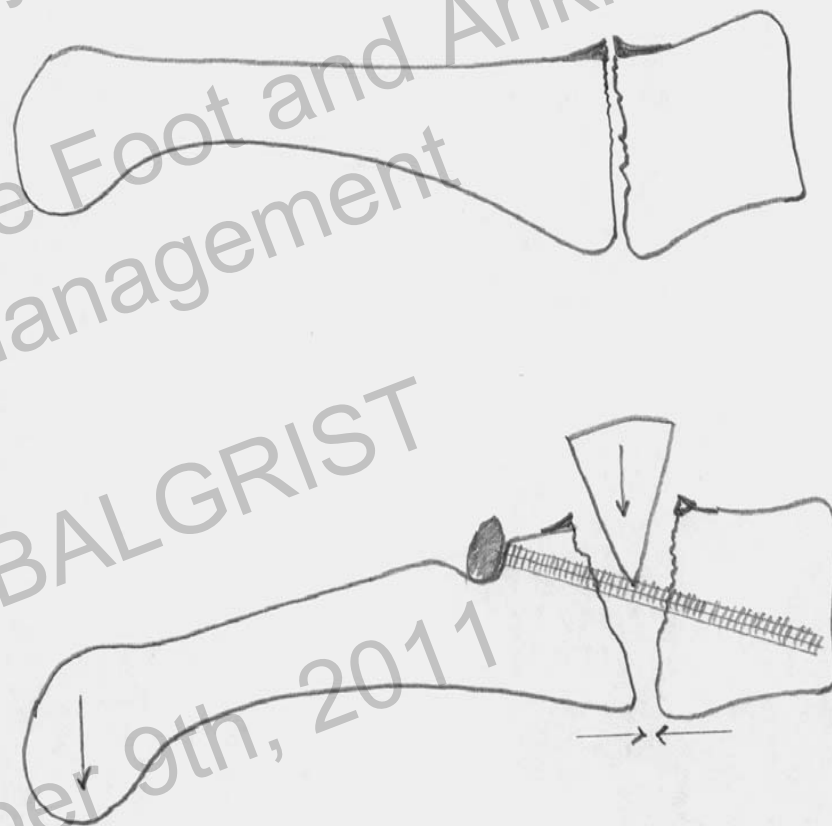
- > Tips and tricks
 - Reduction always in plantar medial direction
 - TMTJ 4 + 5 follow spontaneously
 - Except: severe rigid deformity, neuropathic fracture-dislocation

Medial Lisfranc arthrosis - arthrodesis

- > Tips and tricks
 - Reduction always in plantar medial direction
 - TMTJ 4 + 5 follow spontaneously
 - Plan for wedge grafts TMTJ-2

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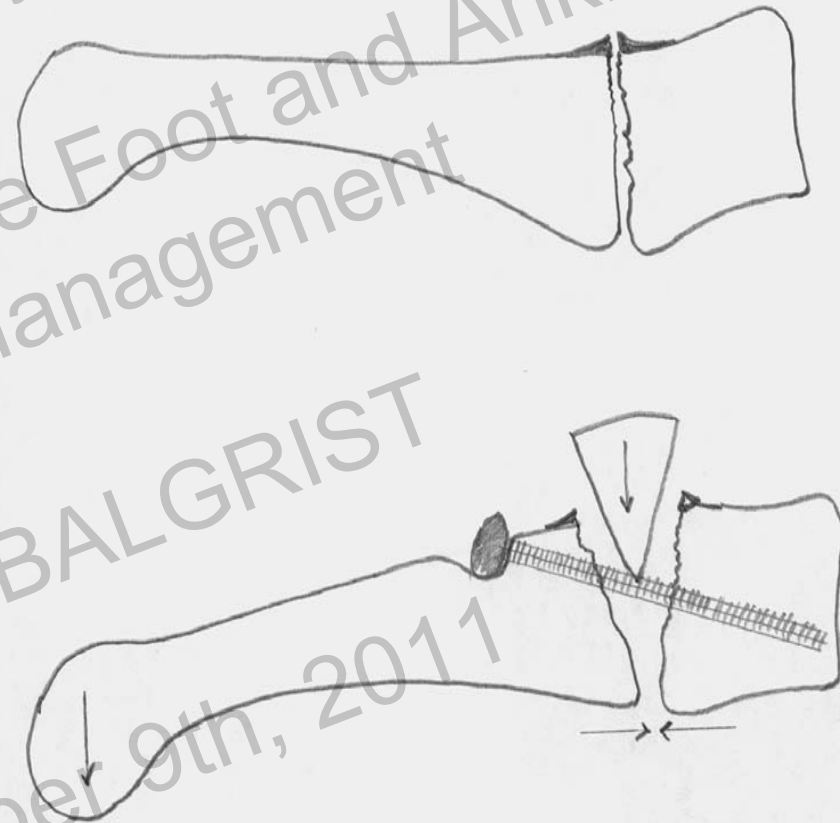


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Medial Lisfranc arthrosis - arthrodesis

- > Tips and tricks
 - Reduction always in plantar medial direction
 - TMTJ 4 + 5 follow spontaneously
 - Plan for wedge grafts TMTJ-2
 - Shortening difficult for single ray: intermetatarsal connections
 - Shortening of rays 1-3 difficult to balance



Medial Lisfranc arthrosis - arthrodesis

- > Tips and tricks
 - Reduction always in plantar medial direction
 - TMTJ 4 + 5 follow spontaneously
 - Plan for wedge grafts TMTJ-2
 - Plate fixation in large angular corrections

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Medial Lisfranc arthrosis - arthrodesis



Medial Lisfranc arthrosis - arthrodesis

> Tips and tricks

- Reduction always in plantar medial direction
- TMTJ 4 + 5 follow spontaneously
- Plan for wedge grafts TMTJ-2
- Plate fixation in large angular corrections
- Delicate soft tissues – BE GENTLE !



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Summary – medial Lisfranc arthrosis

- > Idiopathic Lisfranc arthrosis usually presents with instability TMTJ 1-3
- > 10-15% of adult acquired flatfoot
- > MT-1 varus (hallux valgus) or abductus
- > Isolated or in combination with triple joint complex deformity
- > Pes planus-abductus, heel NOT in valgus in pure Lisfranc deformity
- > Realignment arthrodesis
- > Anticipate eventual bony defects TMTJ 2 (+3) (graft)





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capital impressions



Lateral Lisfranc arthrosis

> Controversies:

- TMT 4 and 5
 - Arthrodesis
 - Resection-interposition arthroplasty (tendon)
 - Implant arthroplasty (ceramic balls)

> Author's choice:

- Hemiresection-interposition arthroplasty with peroneus tertius-tendon

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Chronic lateral Lisfranc arthritis – interpositional arthroplasty

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Chronic lateral Lisfranc arthritis – interpositional arthroplasty

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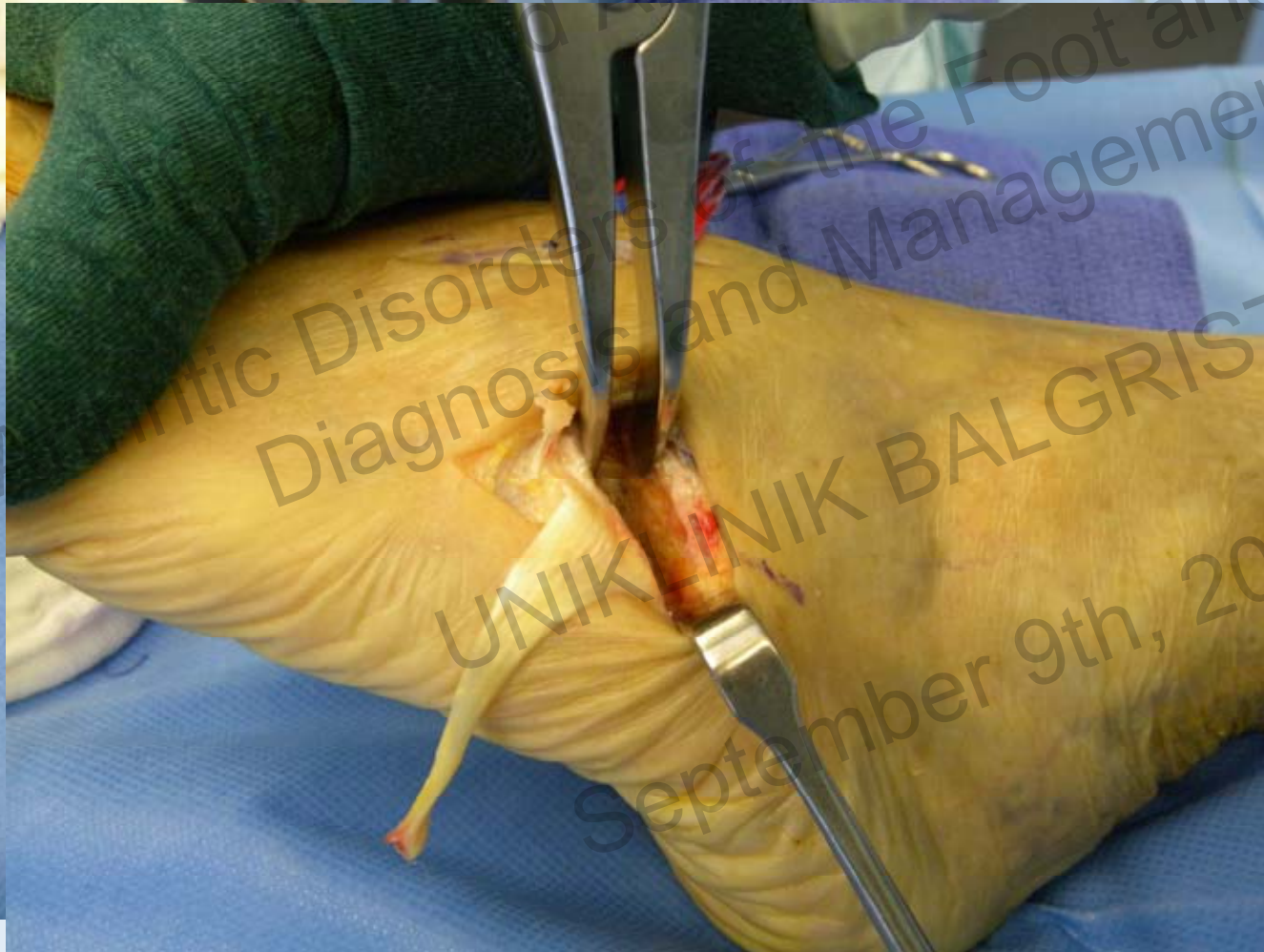


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Chronic lateral Lisfranc arthritis – interpositional arthroplasty

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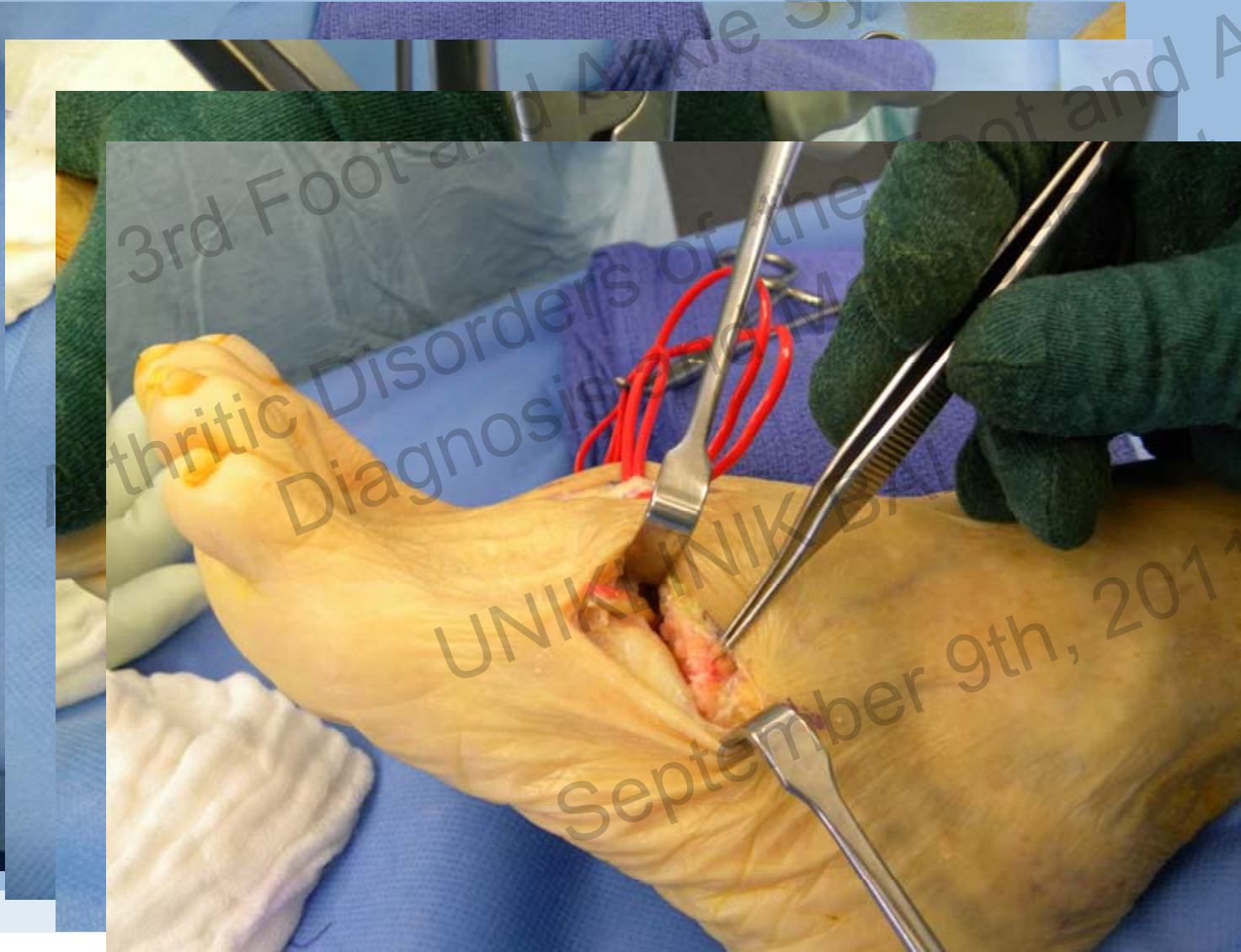
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Chronic lateral Lisfranc arthritis – interpositional arthroplasty

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Chronic lateral Lisfranc arthritis – interpositional arthroplasty

