NONINSERTIONAL ACHILLES TENDINOPATHY

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INTRODUCTION
ACHILLES TENDINOPATHY

- Aetiology of pain in Achilles tendinopathy (AT) remains issue of debate
- Neo-vascularization is often present in AT
- Pain might be mediated through neo-innervation at the ventral aspect of tendon accompanying the vascular bundles
- Conservative measures show good results
  - including eccentric calf strengthening exercises and ESWT
- 25% of patients need surgery

Andersson G et al. Knee Surg Sports Traumatol Arthrosc; 15: 1272, 2007

Zanetti M et al. Radiology; 227: 556, 2003

Rompe JD et al. Am J Sports Med; 37: 463, 2009

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NEO-VASCULARIZATION IN ACHILLES TENDINOPATHY

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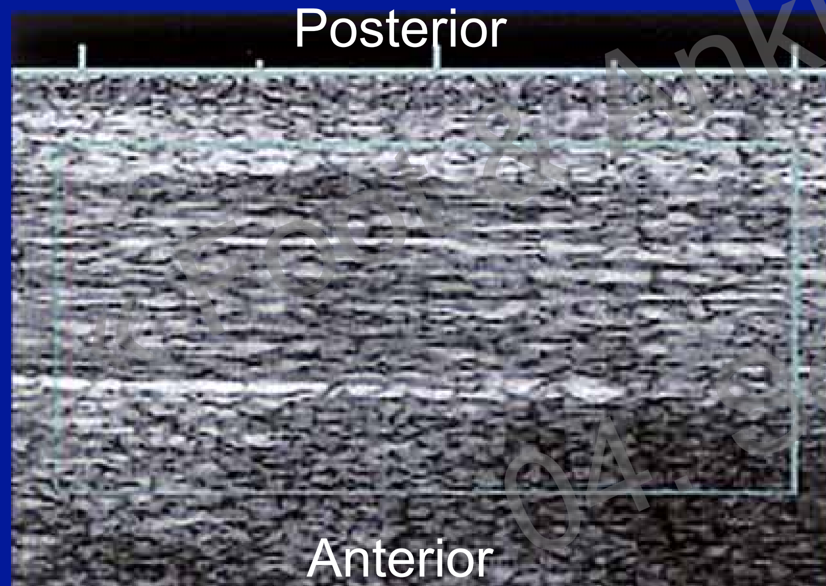

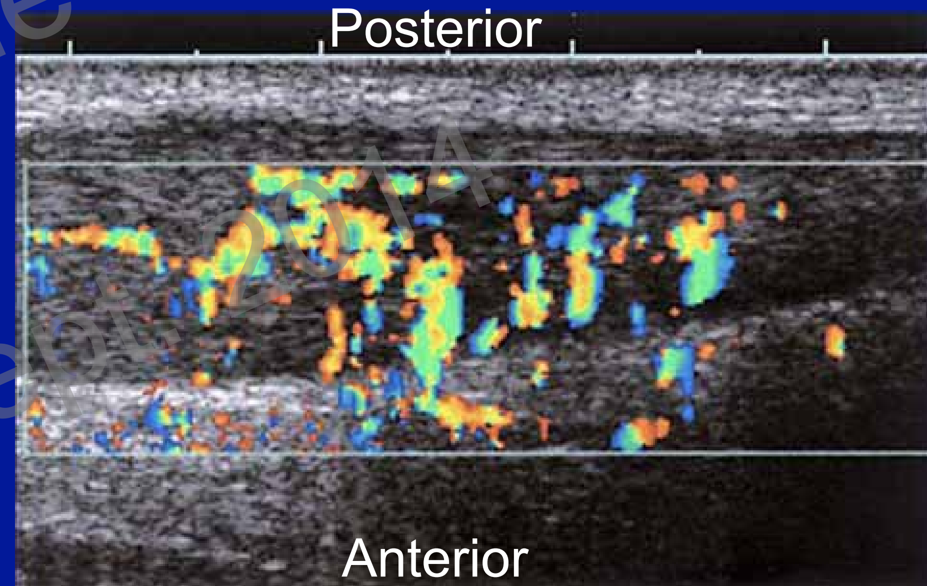

Normal **Tendinopathy**

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Alfredson H et al. Knee Surg Sports Traumatol Arthrosc; 11: 334, 2003

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OPTIONS TO REDUCE PAIN IN ACHILLES TENDINOPATHY

- Eccentric exercises lead to obliteration of neovessels during ankle dorsiflexion (confirmed by Doppler US)
- Sclerosing agents useful to treat AT
- Injection of local anaesthetics into Kager triangle results in pain-relief
- Debridement yields success in ≈ 85%

pain relief most attributable to local denervation and vascular deprivation

Alfredson H et al. Knee Surg Sports Traumatol Arthrosc; 15: 1505, 2007

Lind B et al. Knee Surg Sports Traumatol Arthrosc; 14: 1327, 2006

Humphrey J et al. J Sci Med Sport; 13: 295, 2010

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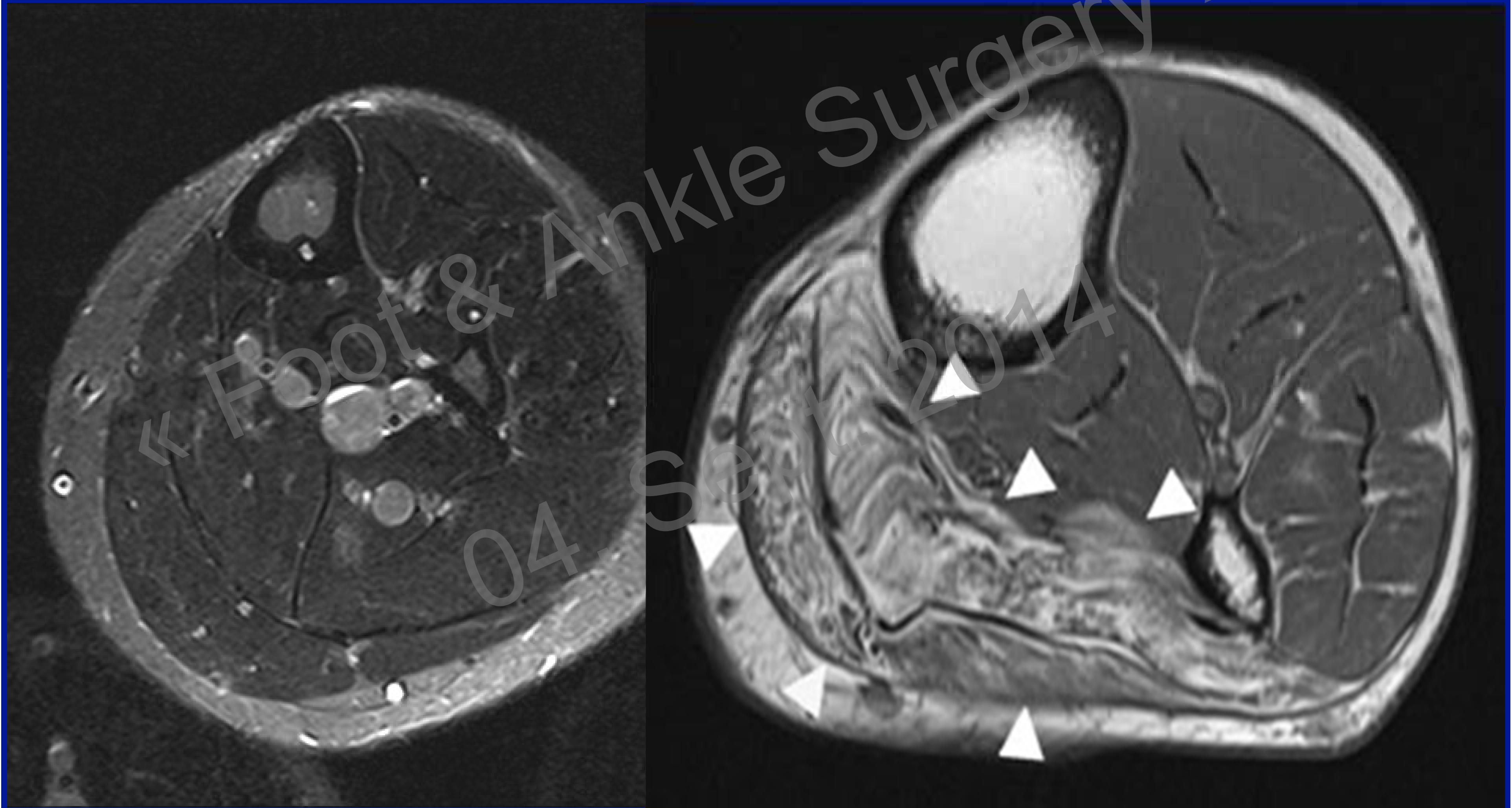
WHY IS MUSCLE ASSESSMENT IMPORTANT?



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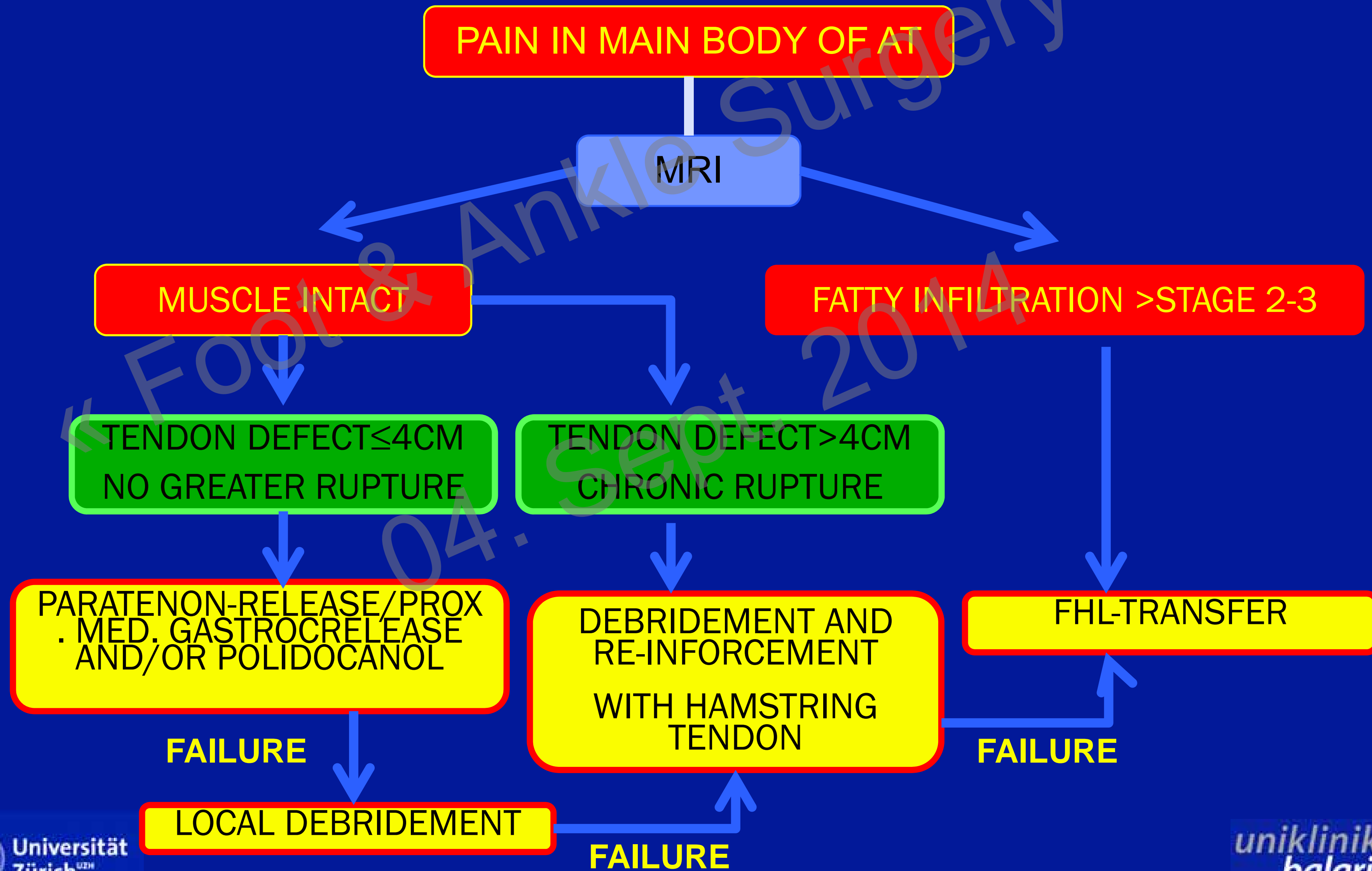
Hoffmann A et al. Eur Radiol; 21: 1996, 2011

DECISION-MAKING PART I



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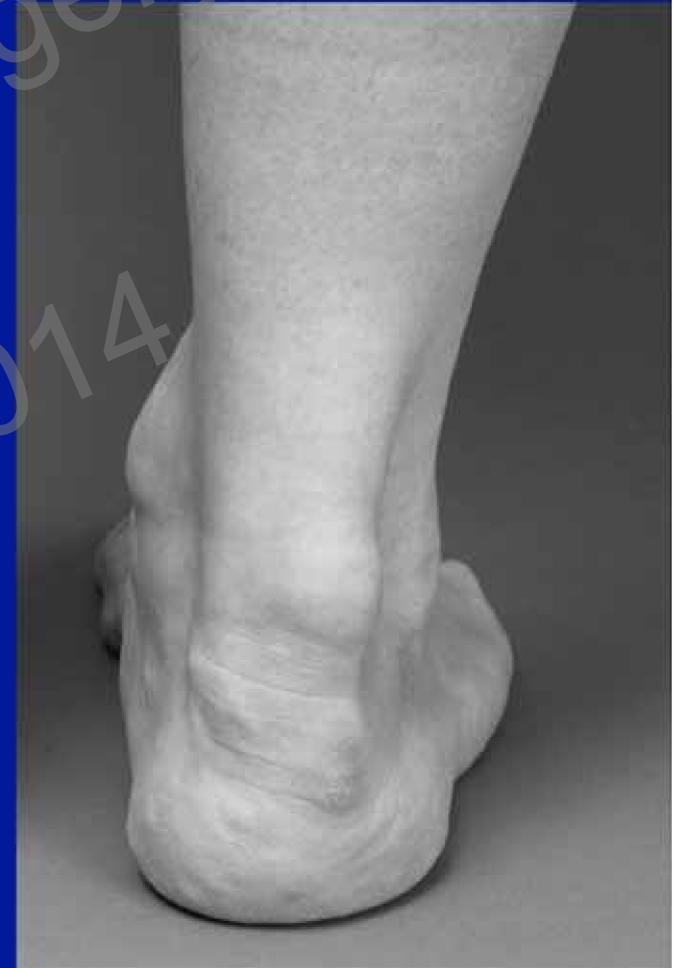
PARATENON-RELEASE INDICATIONS

- almost every patient suffering from AT
- painful AT resistant to adequate conservative therapy (min. 6 mts)
- local tendinopathic spot ≈ 4 cm



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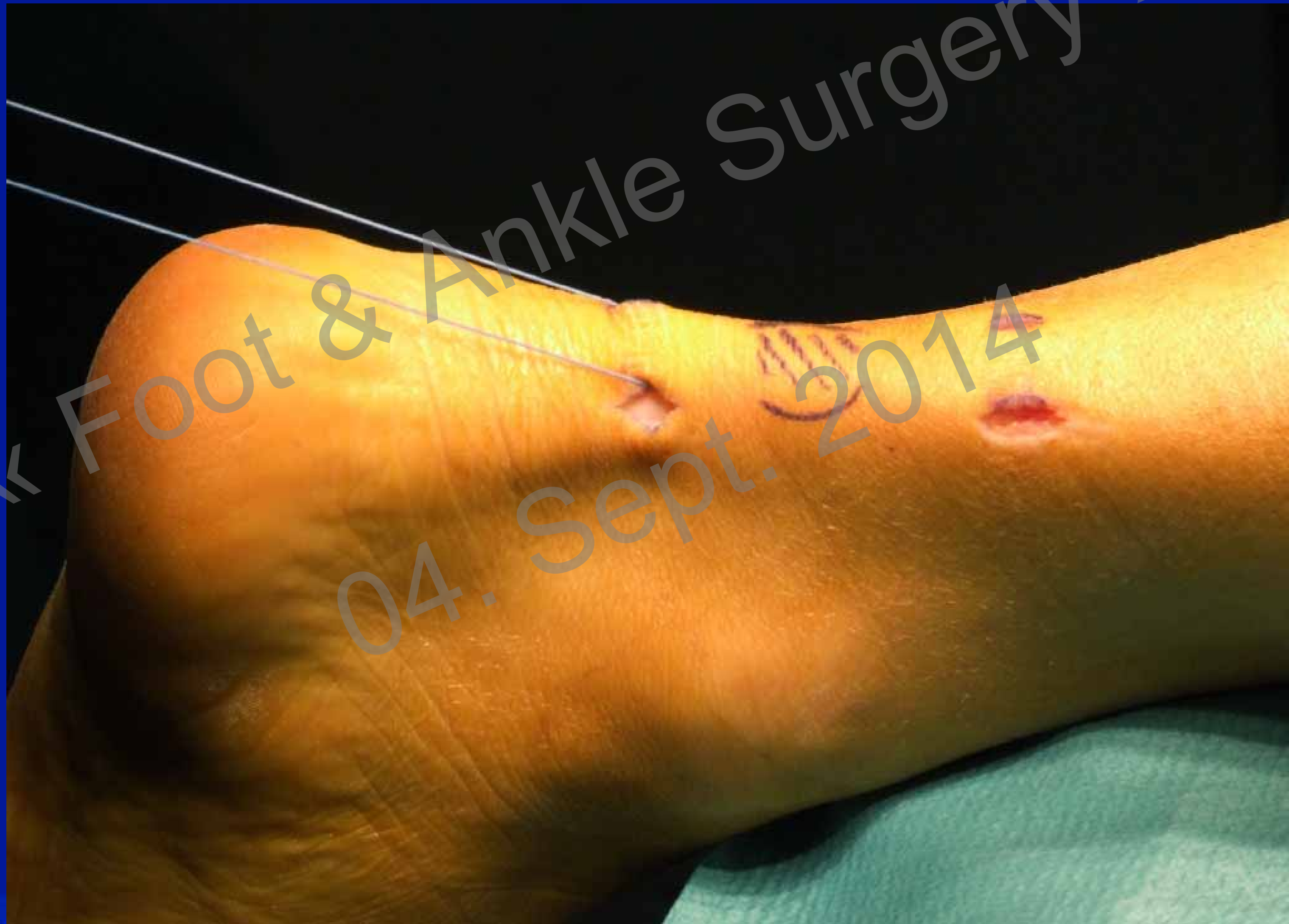
SURGICAL TECHNIQUE



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POSTOPERATIVE TREATMENT

- weightbearing as tolerated
  - if necessary, short-term cast or boot for
  - 2 weeks until stitches are removed

- 2 weeks postop: physical therapy
  - focus on proprioception, inversion and
  - eversion and plantarflexion

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PRELIMINARY RESULTS (2009-10) CASE SERIES

N	16 (17 feet)	
Follow-up	11 months	(range 10-12)
Male : Female	14:2	
Athletes	4	
Age	45 years	(range 26-65)
Improvement	82%	(range 50-100)
Improvement str.	93%	
Infection	1	(superficial)
Further surgery	3	(2 open debridement; 1 FHL)
Ret. to prev. Level	13 (14 feet)	

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OPEN DEBRIDEMENT INDICATIONS

- Failed nonoperative treatment after 3-6months
- Nodular, localized lesions 2.t-4cm of length
- Less than 50% of tendon involved/degnerated

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OPEN DEBRIDEMENT TECHNIQUE

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If less than 50% removed→ Tubularization

OPEN DEBRIDEMENT RESULTS

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N= 45; f-up: 3 years

- 92% satisfying results (Para-/Intratendinopathy)
  - 67% intratendinopathy
- Return to full activity after 5-6 months

- Age influences response to nonoperative measures

Schepsis AA and Leach RE. Am J Sports Med; 15: 308, 1987

Johnston E et al. Foot Ankle Int; 18: 570, 1997

GRACILIS AUGMENTATION IN THE TREATMENT OF NONINSERTIONAL TENDINOPATHY

- Failed nonoperative treatment after 3-6months
- Lesion > 4cm
- Intact triceps surae musculature

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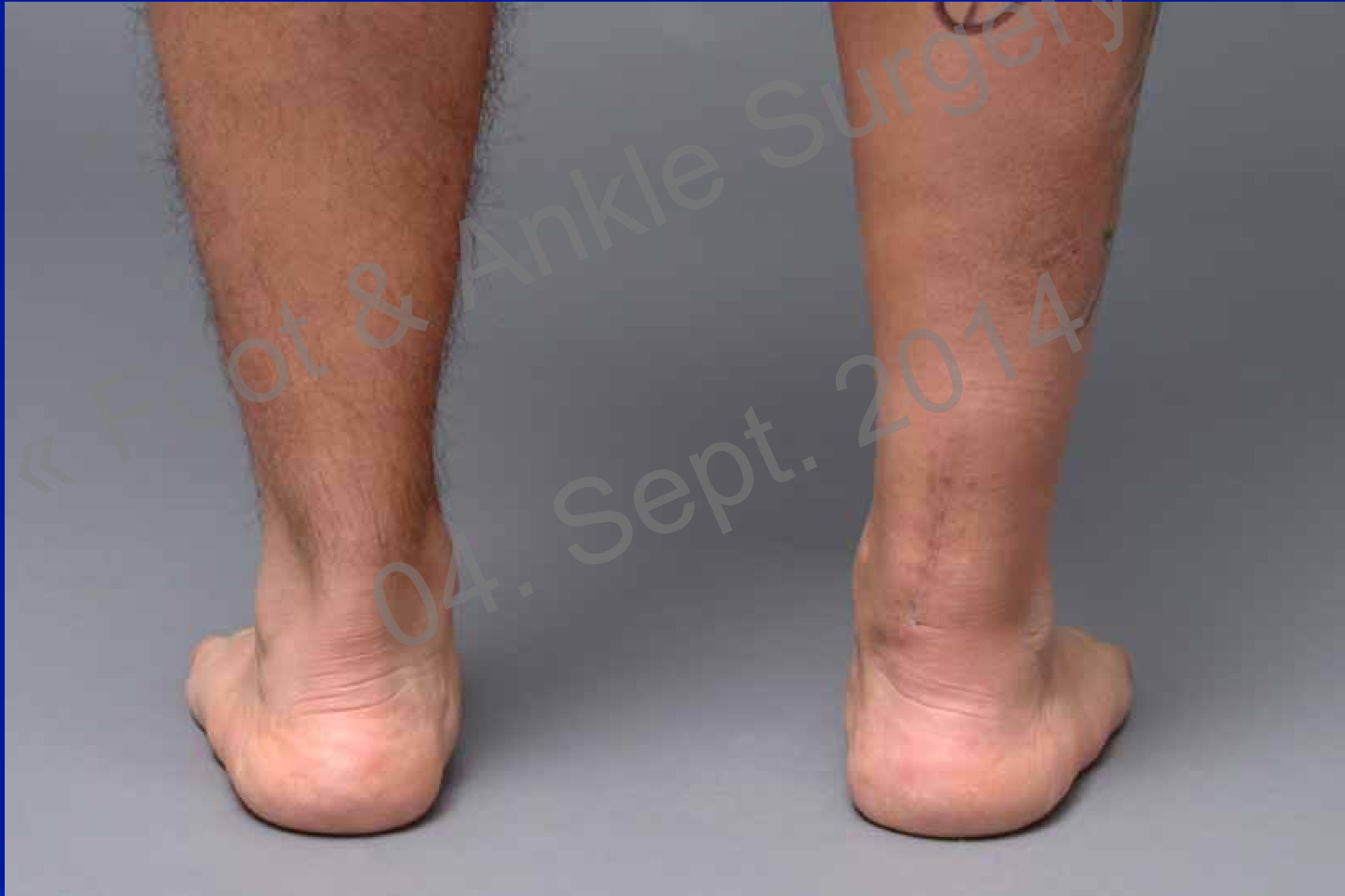
GRACILIS AUGMENTATION IN THE TREATMENT OF NONINSERTIONAL TENDINOPATHY



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