



**FASCIOPATIA: PATOLOGIA MULTIFATTORIALE ?
DIAGNOSI E TRATTAMENTO**

Ronconi Paolo

Roma 27-28-Novembre 2021

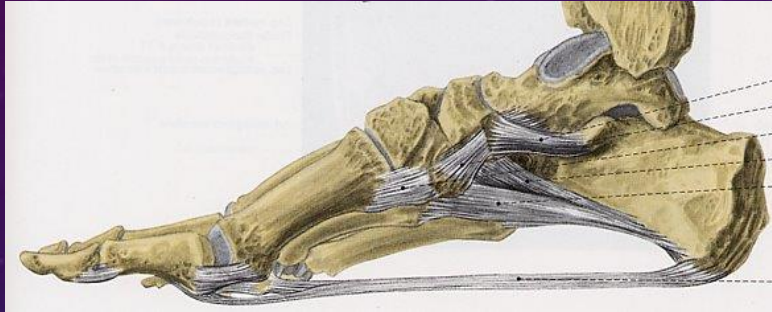


LA FASCIOPATIA

Fasciopatía Plantare (meglio conosciuta come Fascite Plantare) è una condizione dolorosa, spesso limitante, che colpisce sia la popolazione sedentaria che quella sportiva.

Negli ultimi anni, il termine "*fascite*" è stato sostituito dal termine "*fasciopatía*", a sottolineare maggiormente l'aspetto cronico-degenerativo della fascia plantare piuttosto che quello infiammatorio. Questo ha portato anche ad una gestione che si avvicina molto a quella delle tendinopatie: modificazioni delle attività e programma di esercizi con carichi progressivi.

LA FASCITE PLANTARE



INCIDENZA DELLA FASCITE PLANTARE

- **Incidenza**
 - **10.5 per 1000**
 - Scher et al JBJS 2009
- **10% popolazione**
- **83% attività adulta (25-65)**

Crawford,et al 2000

Riddle,etal FAI 2004

INCIDENZA DELLA FASCITE PLANTARE

- 54% uomini 46% donne
- 7.8% corridori

Taunton,etal Br J Sports Med,2002

- 66.1% donne

Rano,JFAS,2001

- 1.4% aumenta nell'obesità

Frey,FAI,2007

La Fascite
Plantare

1A
MALATTIE SISTEMICHE
O EXTRAREGIONALI

1A-1 REUMATICHE

SPONDILITE ANCHILOPOIETICA
ARTRITE REUMATOIDE
SINDROME DI REITER
ARTRITE PSORIASICA
CONNETTIVOPATIE
ARTRITI SIERONEGATIVE

1A-2 METABOLICHE

DIABETE
GOTTA
CALCINOSI
IPERPARATIROIDISMO
OSTEOPOROSI

1A-3 INFETTIVE

SARCOIDOSI
LYME

1A-4 NEOPLASTICHE

MAMMELLA
PROSTATA
CUTE (MELANOMA)
SISTEMA EMOPOIETICO

1B MALATTIE REGIONALI

1B-1 DA CAUSA OSSEA

PIEDE PIATTO
IPEROSTOSI
ACROMEGALIA
FRATTURE DI CALCAGNO
OSTEOMIELITI
TUMORI
(METASTASI, OSTEOMA OSTEIOIDE,
CONDROBLASTOMA)

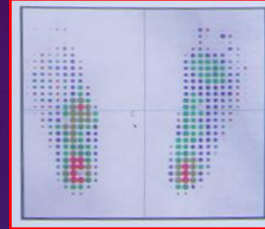
1B-2 DALLE PARTI MOLLI

TRIADE DOLOROSA DI CALCAGNO:
(FASCITE PLANTARE, STT,
DISFUNZIONE DEL TP)
TGC

CAUSE BIOMECCANICHE

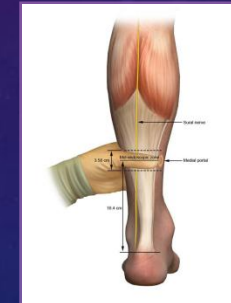
- **Abnormal Pronation**

- Talus Plantarflexes, Cancaneus Everts

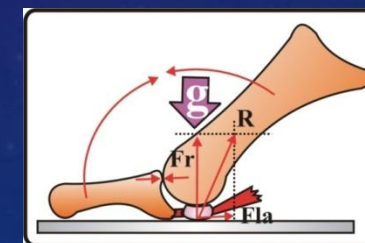


- **Ankle Equinus**

- Inability to dorsiflex 10°



- **Functional Hallux Limitus**



- **Pes Cavus**

- Aumento della tensione fasciale



*Kwong et al. Foot & Ankle
International 1988)*

DIAGNOSI DIFFERENZIALE

Muscoloscheletrica

- Plantar Fascial Rupture
- Retrocalcaneal Bursitis
- Achillies Tendonitis
- PT Tendonitis
- Subtalar Joint Arthritis
- Sever's Disease (apophysitis)
- Calcaneal Stress Fracture
- Inflammatory Arthropathies
- Osteomyelitis
- Interosseous Tumor

Neurologica

- Lumbar Spinal Stenosis
- Lumbar Disc Herniation
- Neuropathy
 - Diabetic, alcoholic, HIV assoc, etc
- **Tarsal Tunnel Syndrome**

COME SI FA LA DIAGNOSI

Storia:

Discinesia

Sensazione di tensione

Intenso bruciore

**Improvviso dolore o inizio
graduale**

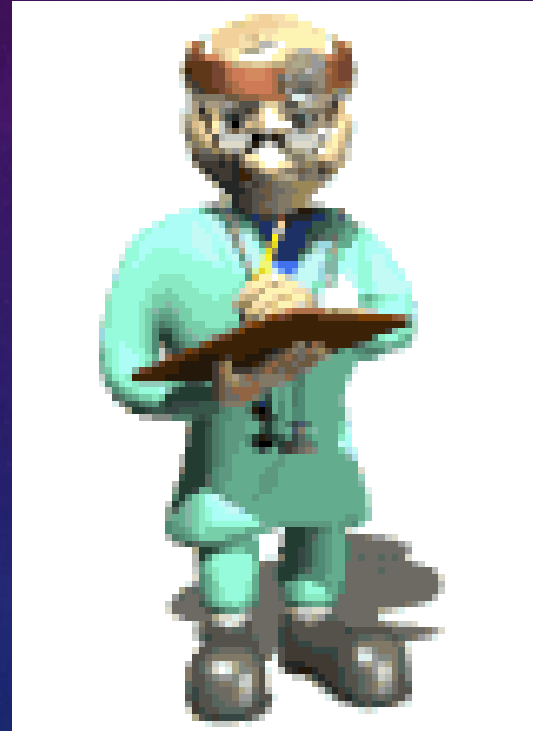
Geldwert et al. ACFAS 2000



DIAGNOSI



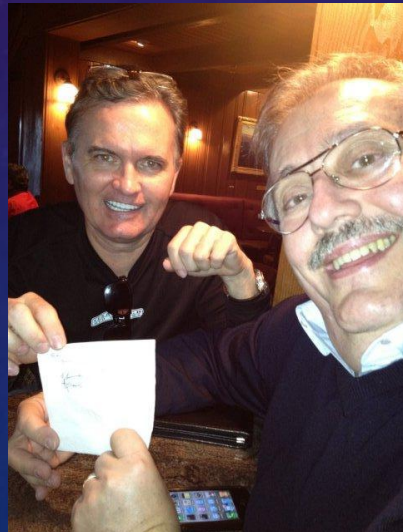
- Clinica
- Ecografica
- RDX
- RNM
- EMG
- Ecc.



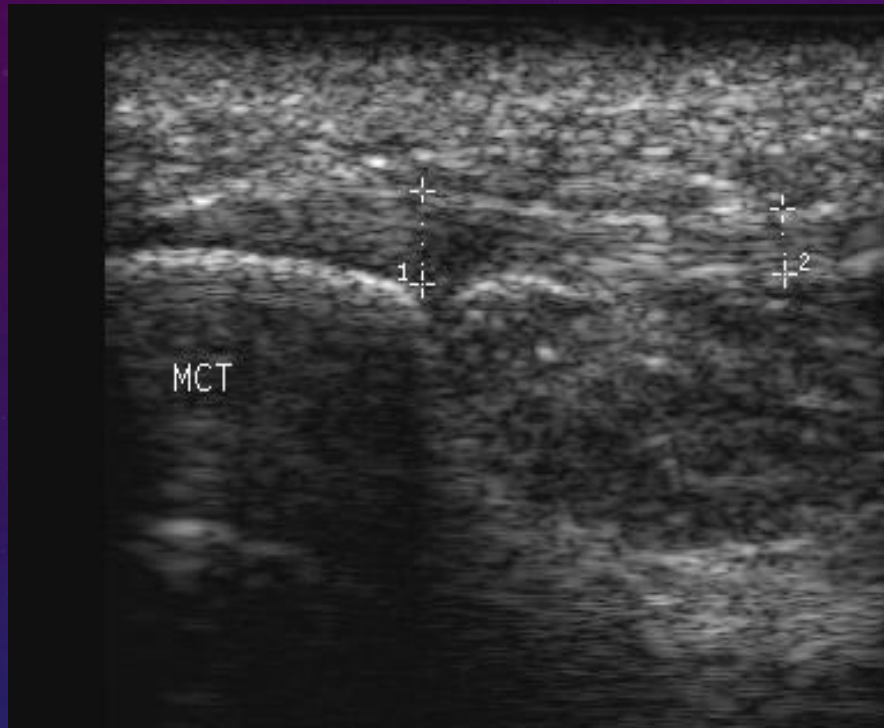
La classificazione di S.Barrett (*Phoenix*)



	I	II	III	IV
A	< 4mm Thickness None or Mild Hypoechoic Signal	>4mm <5.5mm Thickness None or Mild Hypoechoic Signal	>5.5mm <7.5mm Thickness None or Mild Hypoechoic Signal	> 7.5mm Thickness None or Mild Hypoechoic Signal
B	< 4mm Thickness Moderate Hypoechoic Signal	>4mm <5.5mm Thickness Moderate Hypoechoic Signal	>5.5mm <7.5mm Thickness Moderate Hypoechoic Signal	> 7.5mm Thickness Moderate Hypoechoic Signal
C	< 4mm Thickness Severe Hypoechoic Signal	>4mm <5.5mm Thickness Severe Hypoechoic Signal	>5.5mm <7.5mm Thickness Severe Hypoechoic Signal	> 7.5mm Thickness Severe Hypoechoic Signal
Conservative Care Regimen			Aggressive Intervention	
Non Invasive Intervention				



Differente valutazione ecografica in paziente asintomatico (SX) e sintomatico (DX)



RT. PROXIMAL PLANTAR FASCIA ORIGIN,
LONGITUDINAL, MEDIAL BAND, ASYMPT.



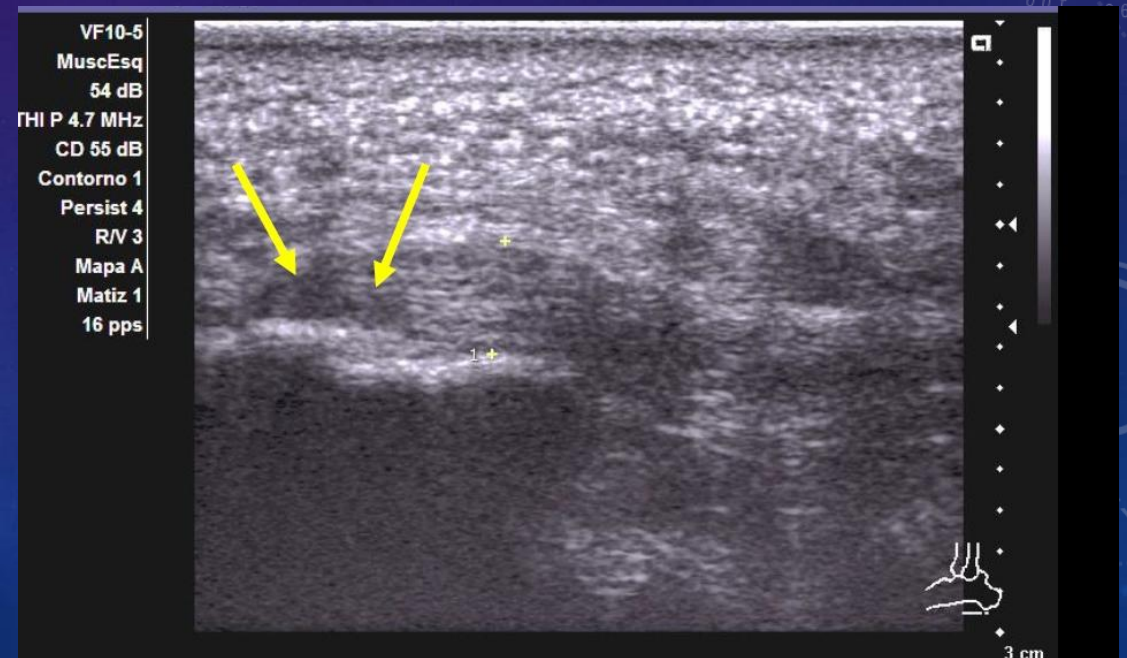
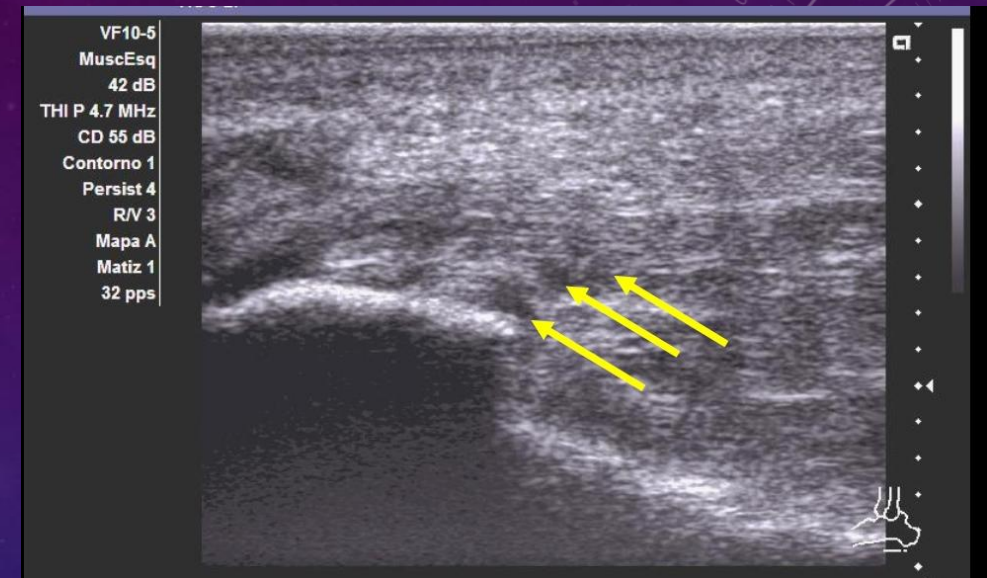
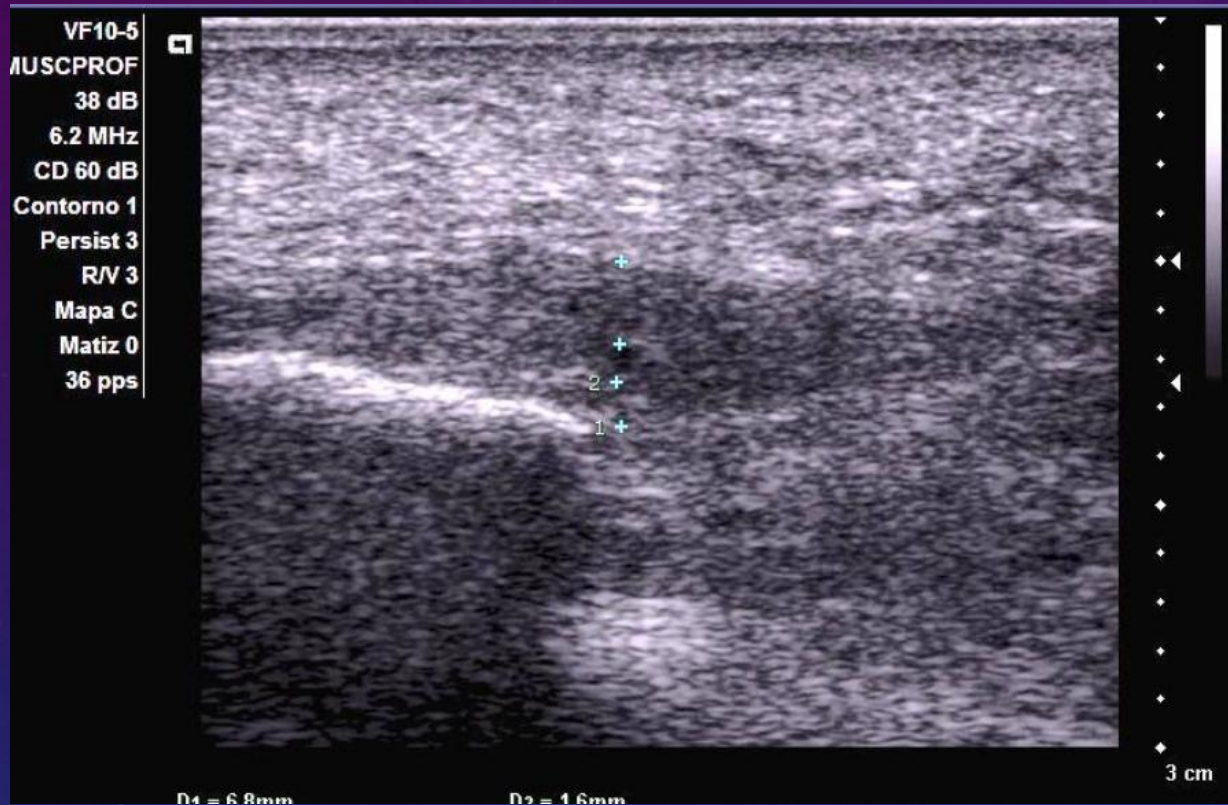
RT. PROXIMAL PLANTAR FASCIA, MEDIAL
BAND, LONGITUDINAL, SYMPTOMATIC



Grado 1: Leggero ingrossamento ipoecogeno della fascia plantare

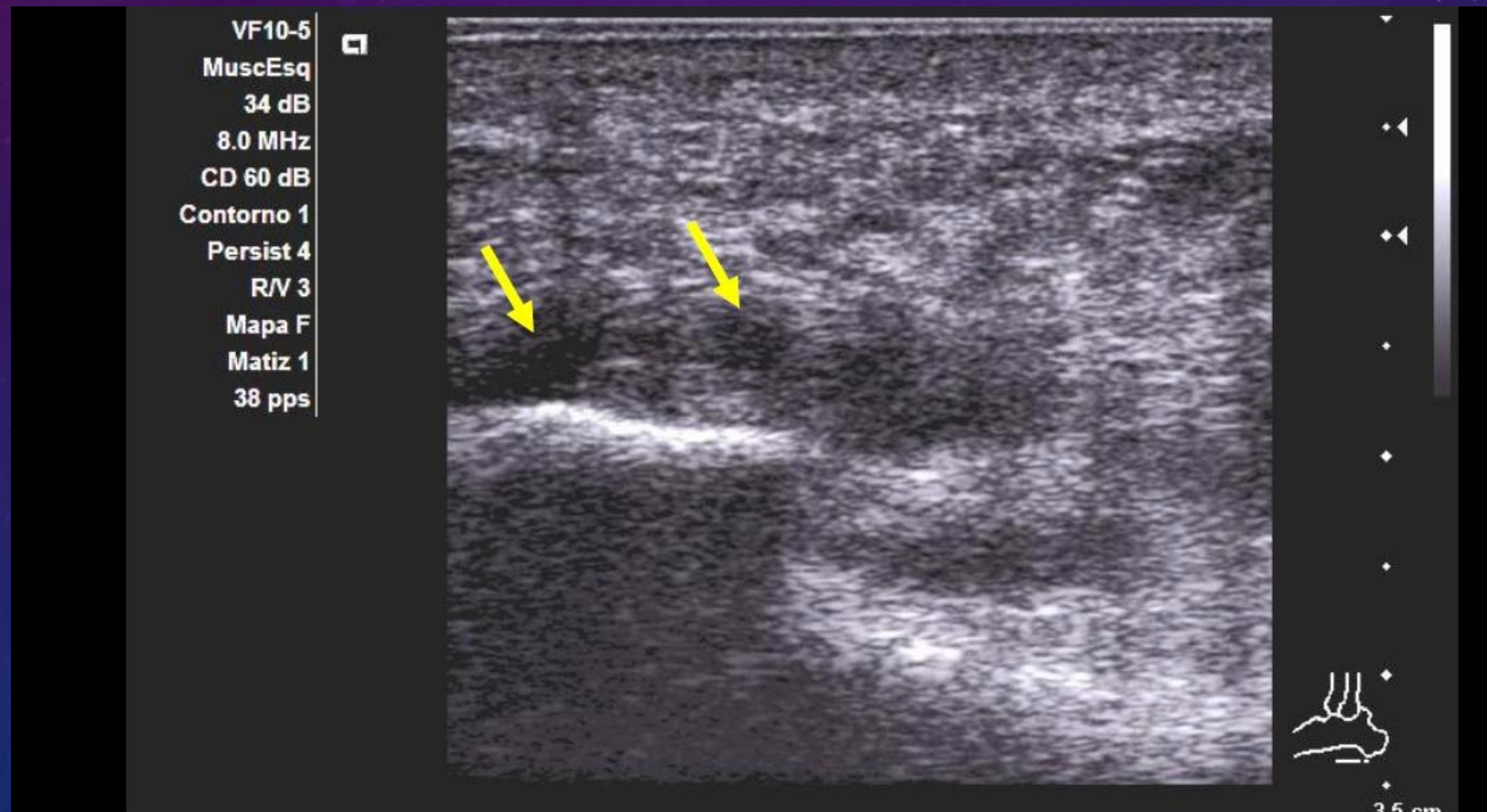
GRADO 2

Esistono più aree ipoecogene



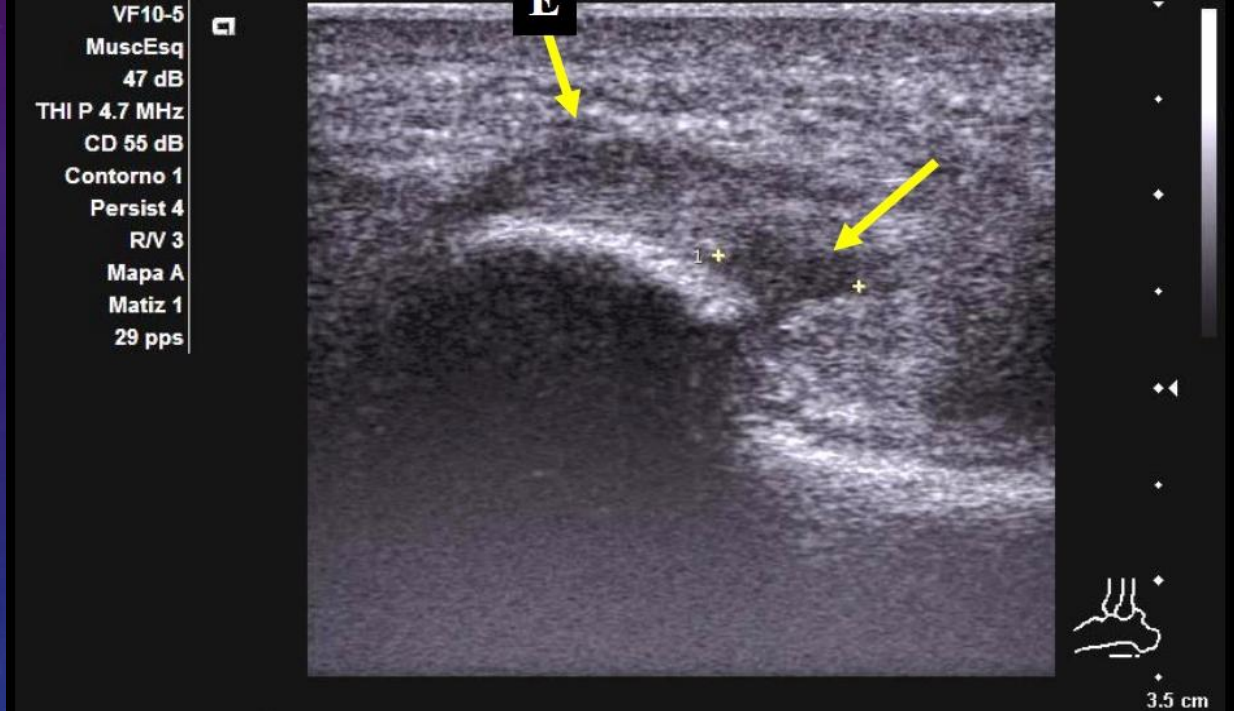
Grado 3

Esistono più aree ipoecogene senza struttura fibrillare di 4- 7 mm di diametro massimo



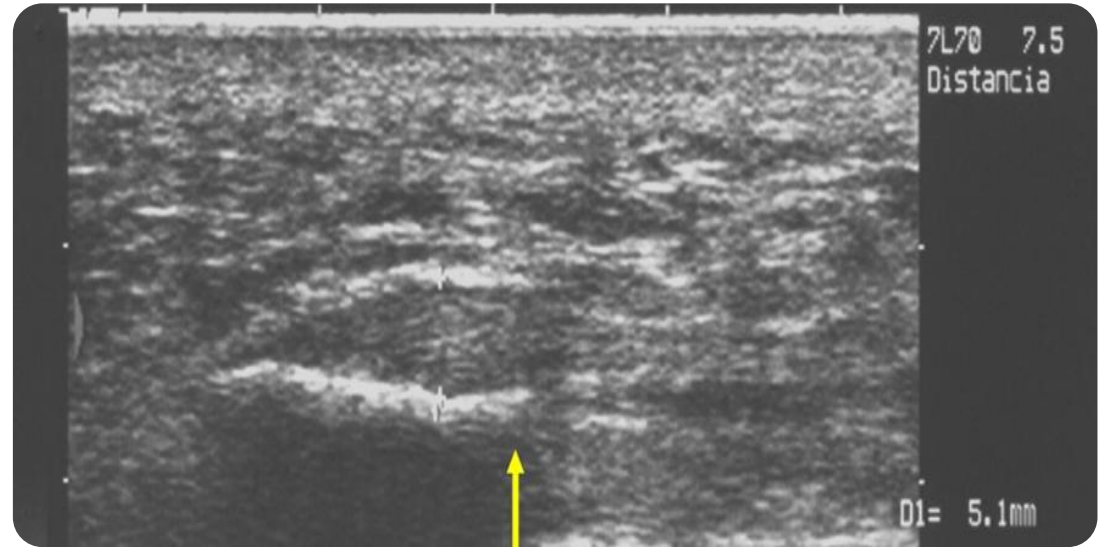
Grado 3

Esistono più aree ipoecogene senza struttura fibrillare
Più di 7mm di diametro massimo



SPERONE CALCANEARE

- 1-Indica una evoluzione di almeno 6-12 mesi
- 2- Presente nel 15.5% senza fascite plantare
- 3-Presente nel 65% con fascite plantare
- 4-Alta prevalenza di spina calcaneare in pazienti asintomatici
- 5-Si forma vicino l'abduktore dell'alluce ed il flessore breve



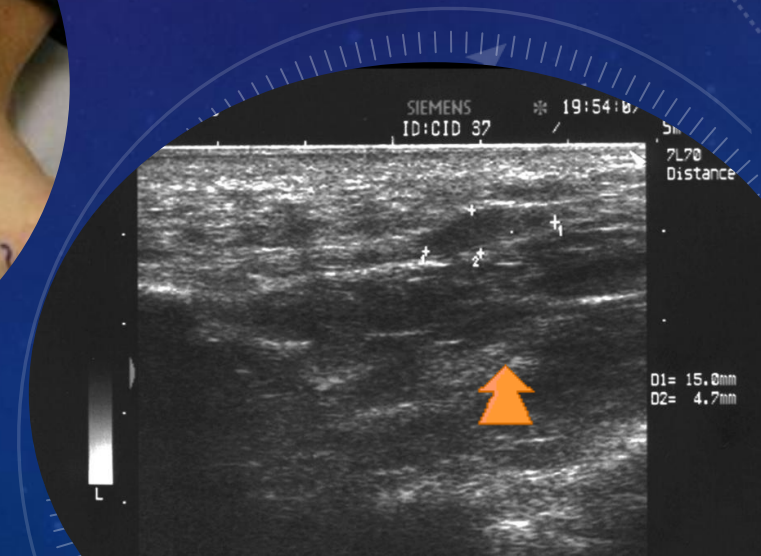
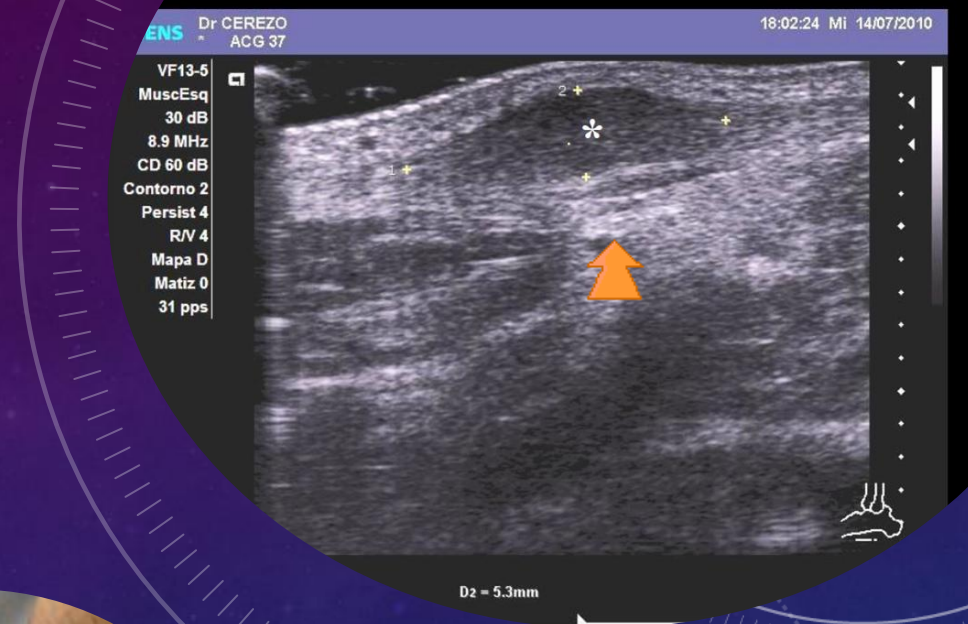


**NELLA DIAGNOSI
DIFFERENZIALE
DOBBIAMO
ANNOVERARE ANCHE:**

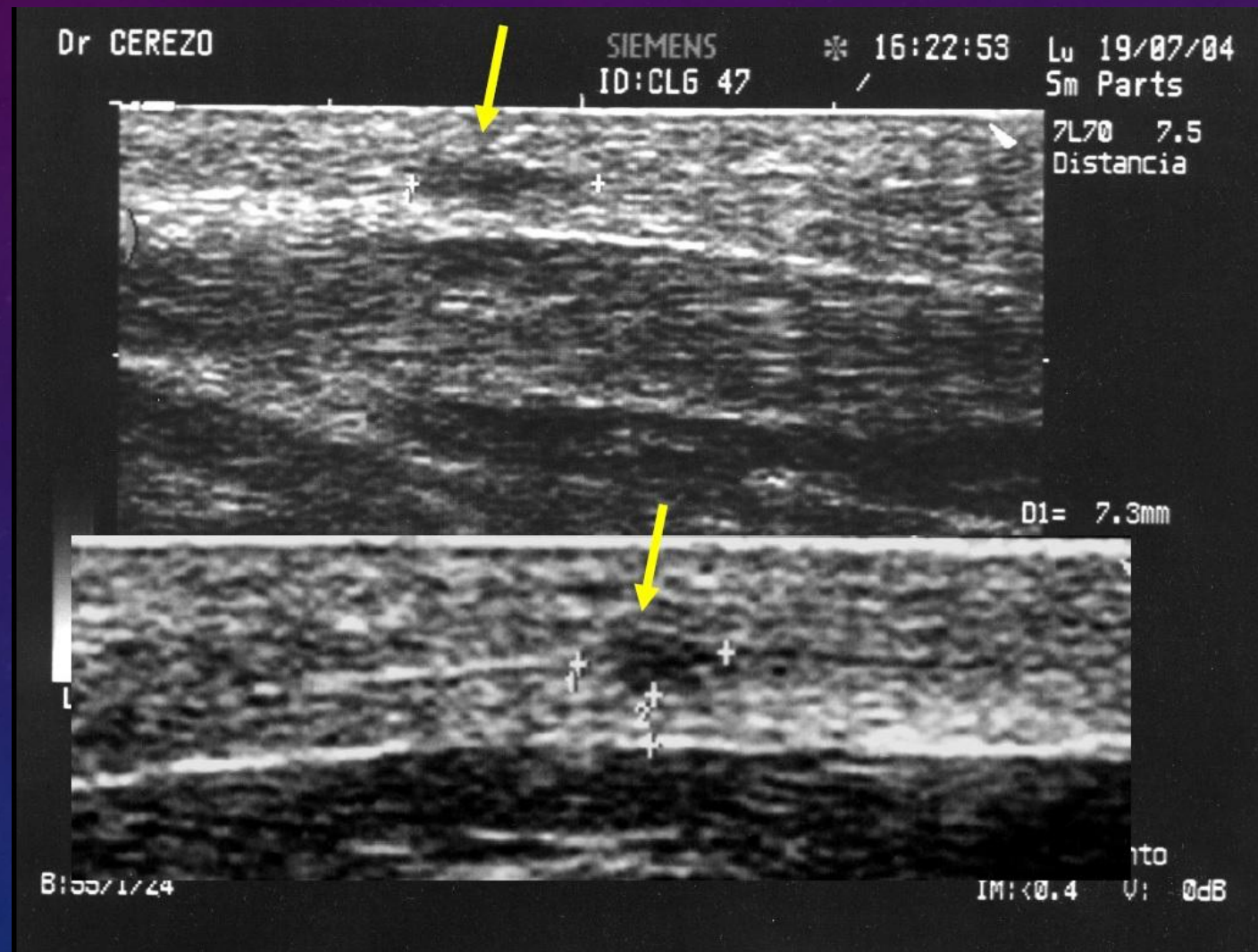




- Fibroma Plantare
- Ledderhose



Rottura della fascia plantare



Cisti ossea



Tumori

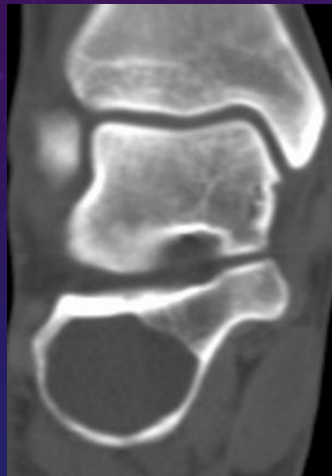
Cisti aneurismatica



Ulcera



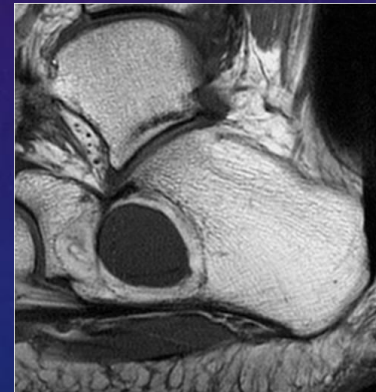
Cisti ossea



Osteoma osteoide



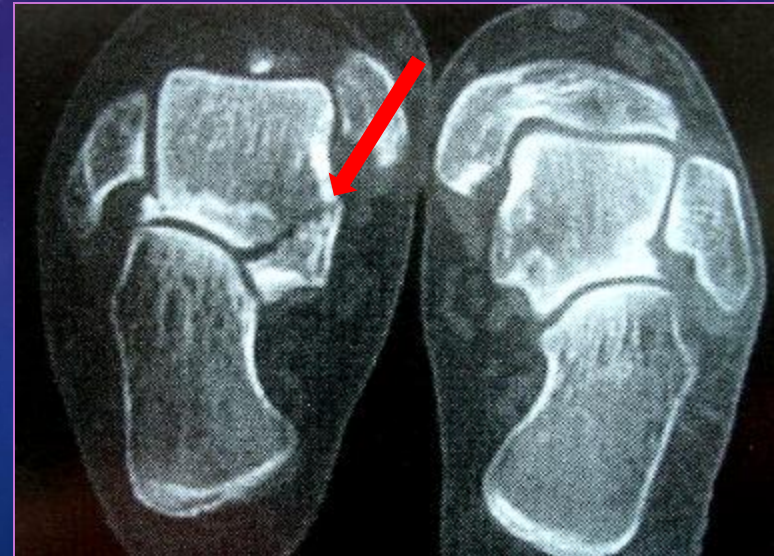
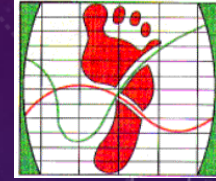
Lipoma intraosseo



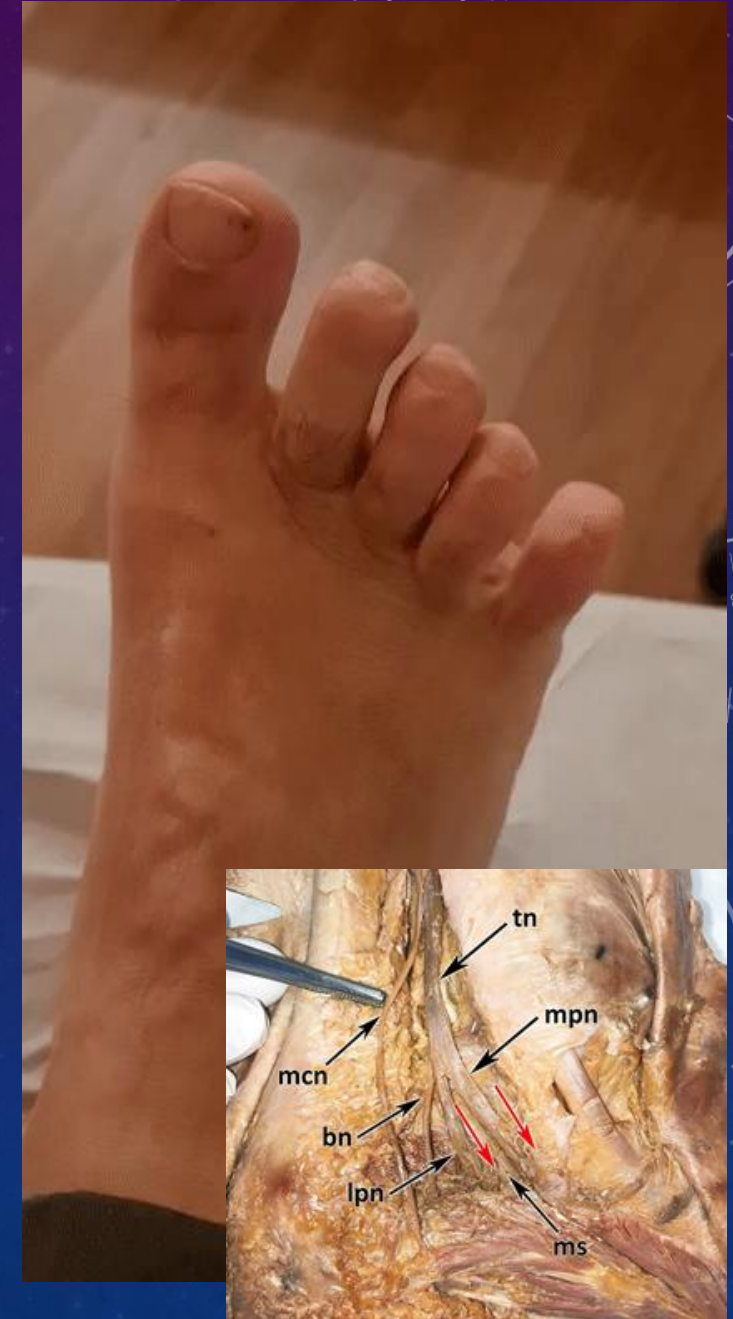
Condrosarcoma mixoide



Fratture da stress



• IL NERVO DI BAXTER



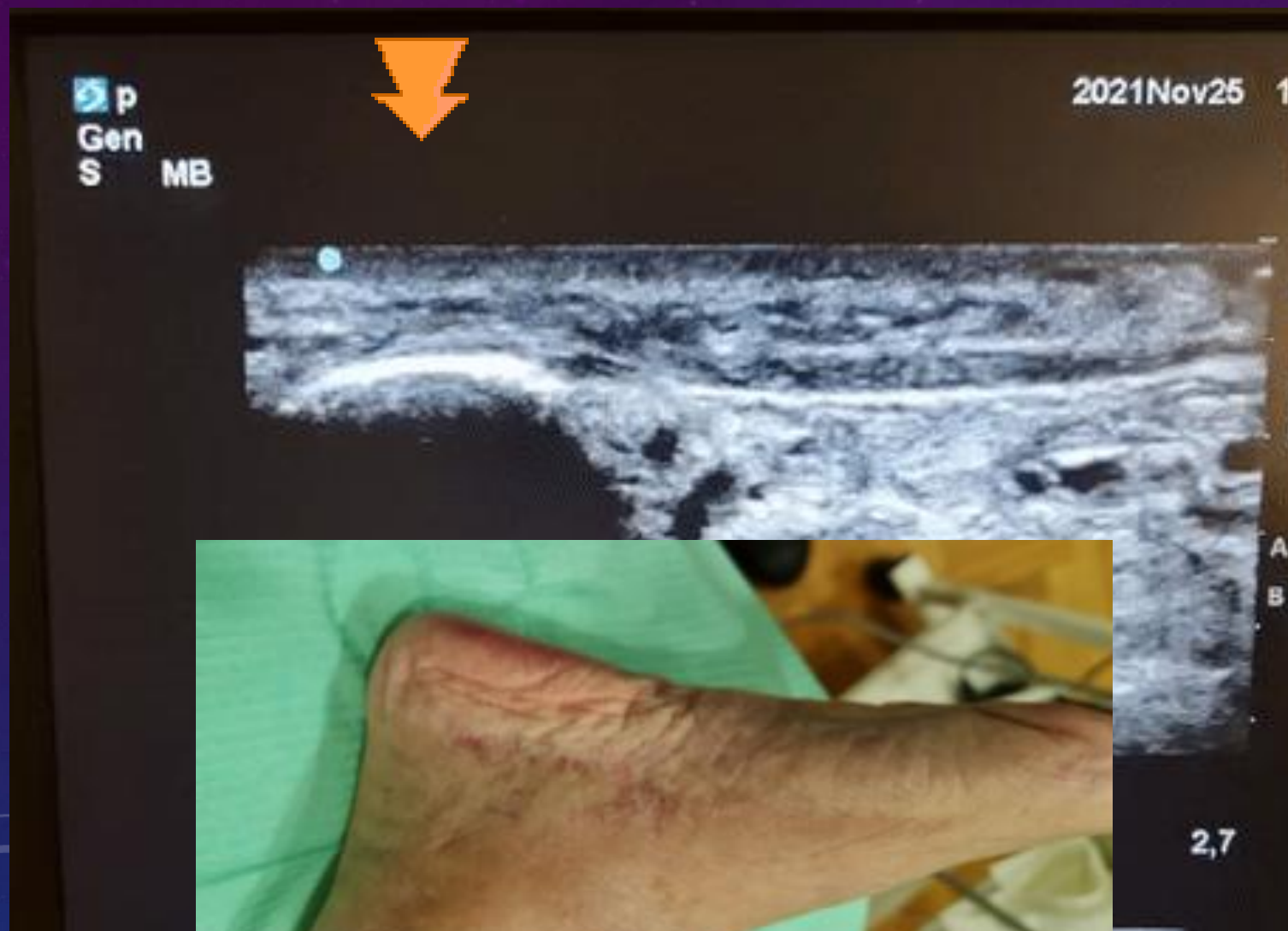
SINOSTOSI E COMPRESSIONE N. TIBIALE POSTERIORE





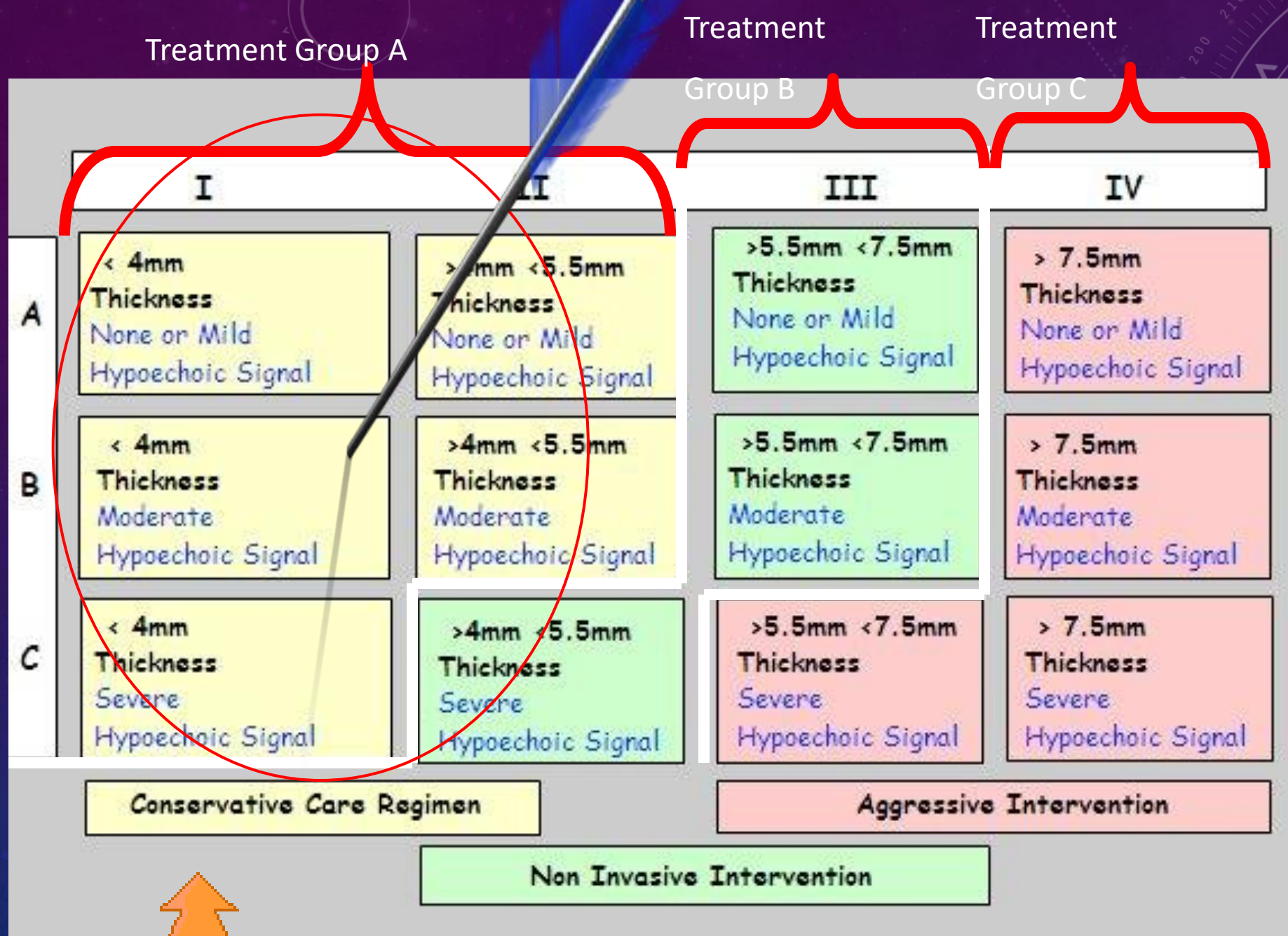
RIDUZIONE DEL PANNICOLO ADIPOSO

Riduzione pannicolo adiposo



QUALE TRATTAMENTO ?





By Stephen Barrett DPM



QUALE TRATTAMENTO ?

Initial Treatment

1. Padding & strapping
2. Stretching
3. OTC Arch Support
4. Shoe Recommendations
5. Oral Anti-inflammatories
6. Home Physical Therapy
7. Corticosteroid Injections
8. **Shockwave**

*Diagnosis & Treatment of Heel Pain
JFAS 49(2010) S1-S19*

Second Line Treatment

1. Corticosteroid Injection
2. Custom Orthotics
3. Night Splints (TNS)
4. Immobilization
5. Physical Therapy
6. Extracorporeal Shockwave Therapy

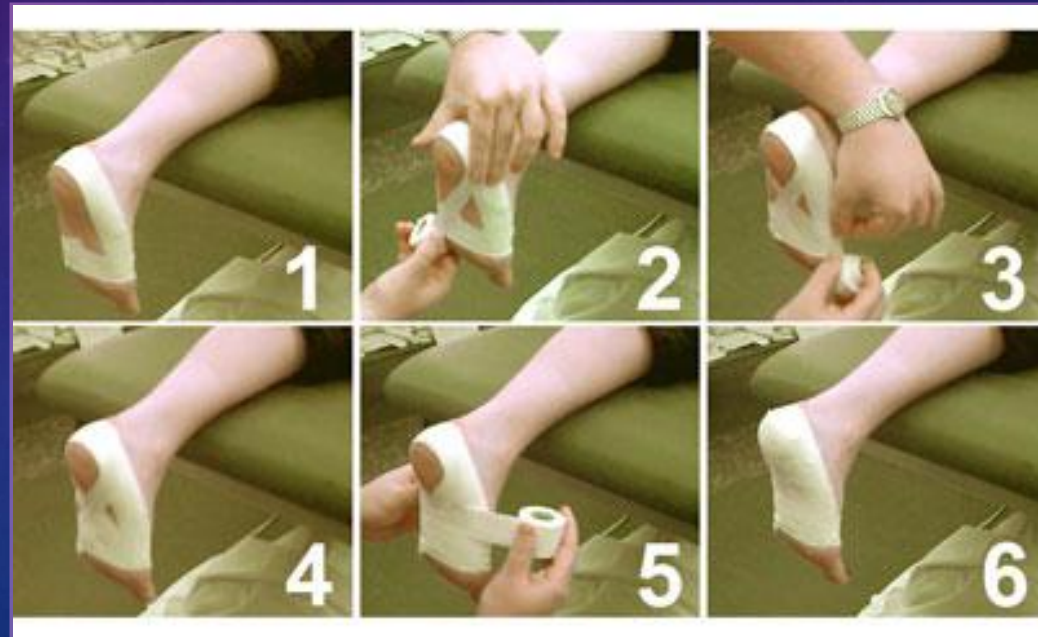
Third Line Treatment

1. Surgical Mangement
2. Radiofrequency Coblation
3. Endoscopic plantar fasciotomy (EPF)

TRATTAMENTO INIZIALE

Padding & Strapping

- Low Dye Taping Technique
 - Offers improvement in first step pain
 - (BMC Musculoskeletal Disorders 2006)



Low Dye Taping=bendaggio

TRATTAMENTO INIZIALE

Plantar Fascial & Achillies Tendon Stretch

- 101 Patients, two year follow-up
(*Digiovanni et al*)
 - 94% decrease in pain
 - 92% total satisfaction
 - 77% no limitation in recreational activity



Stretching dei polpacci
Decrease in 'first step pain

Radford et al BMC
Musculoskeletal disorders 2007

TRATTAMENTO INIZIALE

- Arch Support / Heel Cup

Roos et al. Foot & Ankle International 2006



Orthotic Style Arch Supports

Orthotic style arch supports are a little different from standard over the counter arch supports in that they closely resemble custom made orthotics both in their form and in their function. Orthotic style arch supports are usually made from harder plastics such as polypropylene plastic so they provide a great arch support that lasts for a much longer period of time than standard over the counter arch supports made from softer plastics and foam.



Reasonably Priced Orthotic Style Arch Supports
All Arch Heights & All Shoe Types



A Great Fit For Every Foot!
Orthotic Style Arch Supports
3 Heights & 3 Widths
Great Selection
Value Priced!



Flexify Brand of OTC Orthotic Style Arch Supports For Medium, High & Extra High Arches



All New Arch Support Accessories
Velcro Dots - Double Sided Tape - Tongue Pads
For attaching or enhancing any arch support
- [Click Here](#) -



Trattamento iniziale

STUDIES ON TENSION NIGHT SPLINTS (T. N. S.)

- Batt et al, 1996
 - 32 pts, randomized to 2 months
 - NSAID/heel cup/stretching: 35% “cured”
 - Above + TNS /heel cup: 100% “cured”
- Probe et al, 1999
 - 116 pts randomized to 3 months
 - NSAID/stretching/shoe changes: 68% improved
 - Above + TNS: 68%



NSAID: Nonsteroidal anti-inflammatory drugs

Effect of Magnetic vs Sham-Magnetic Insoles on Plantar Heel Pain

JAMA. 2003 Sep 17;290(11):1474-8.

Mark H. Winemiller, MD; Robert G. Billow, DO; Edward R. Laskowski, MD; W. Scott Harmsen, MS

Objective : To determine whether magnetic insoles provide greater subjective improvement for treatment of plantar heel pain compared with identical nonmagnetized insoles

Design, Setting, and Participants Randomized, double-blind, placebo-controlled trial conducted from February 12, 2001, to November 9, 2001, of a volunteer sample of 101 adults with diagnoses of plantar heel pain for at least 30 days from a multispecialty group practice clinic in Rochester, Minn. Daily pain diaries were kept for 8 weeks.



Conclusion: Static bipolar magnets embedded in cushioned shoe insoles do not provide additional benefit for subjective plantar heel pain reduction when compared with nonmagnetic insoles.

Sham: Finte

TRATTAMENTO INIZIALE

- Oral Anti-inflammatories
 - NSAIDS
 - Steroids



Trattamento iniziale

Corticosteroid Injection



Figure 3: Courtesy of William O. Roberts, MD



Figure 3. To inject the plantar fascia origin, insert the needle on the medial side of the foot about 0.5 to 2.0 cm distal to the estimated location of the origin at an angle up to 45° to the coronal plane of the foot. Using a mixture of 10 mg of triamcinolone hexacetonide (0.05 mL of 20 mg/mL solution), 1 mL of 1% lidocaine, and 1 mL of 0.5% marcaine, inject the minimum volume required to relieve pain, using a 'hunt and peck' injection technique to blanket the painful area. Local massage after the injection may help distribute the medication throughout the area.



CONTROL INFLAMMATION (CONT): STEROID INJECTION

Trattamento iniziale

- Quicker pain relief at 1 month but no long-term advantage
 - Crawford et al, Rheum 1999.
- Predisposes to PF rupture, which causes chronic pain
 - Acevedo JJ et al, 1998: 765 pts tx'd for PF
 - Those tx'd w/ injection: 44 ruptures **(10%)**
 - Others: 7 ruptures (1%)



Trattamento iniziale

- Home Physical Therapy

“RICE”

- Rest
- Ice
- Compress
- Elevate

Non ci sono studi a riguardo



il panorama della terapia fisica

elettroterapia

termoterapia

laserterapia

vibrazioni meccaniche

campi magnetici ed elettromagnetici

crioterapia

Viss ecc.





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Second Line Treatment

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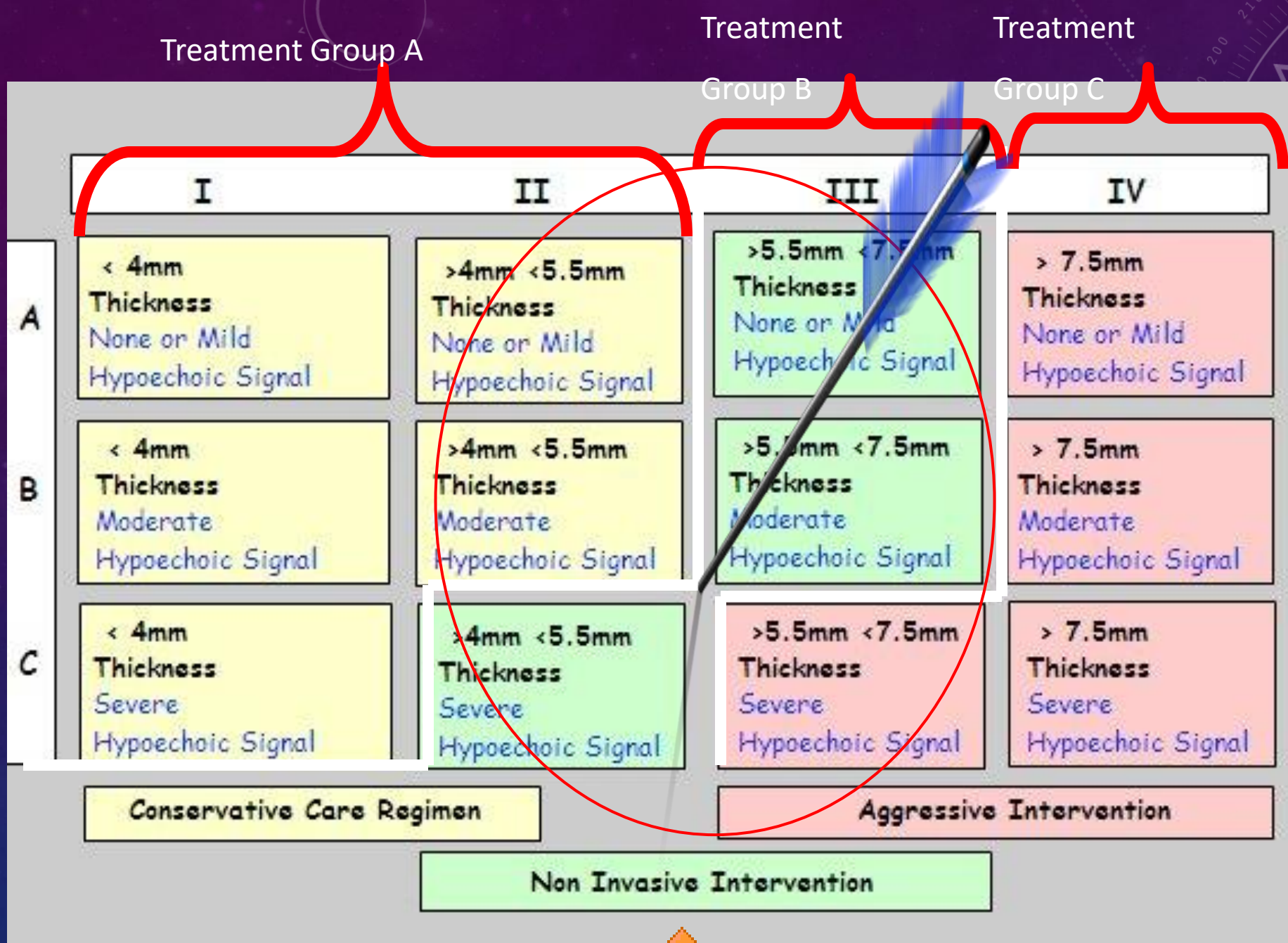


Third Line Treatment

1. Surgical Mangement
2. Radiofrequency Coblation
3. Endoscopic plantar fasciotomy (EPF)

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OTC=Over the Counter= da banco



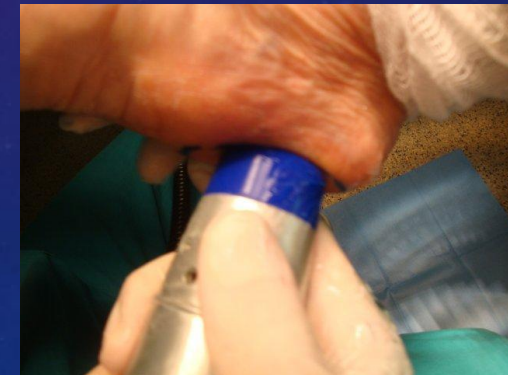
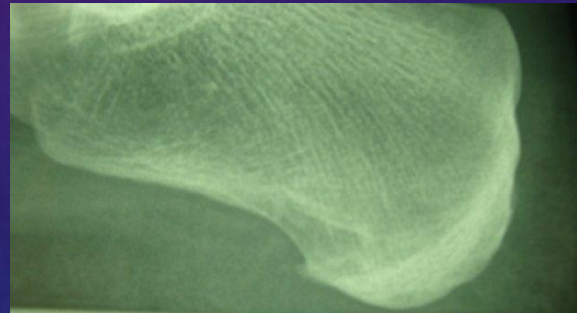
Infiltrazione di gel piastrinico ed onde d'urto Secondo Barrett 75% di successo



**Infiltrazione di gel piastrinico ed onde
d'urto 4000 colpi in anestesia locale**



USGPPF APC+ ESWT



USGPPF APC+ ESWT=Onde d'urto + Gel piastrinico

ESWT Swiss Dolorclast

Advantages:

1. Can be done in office without anesthesia
2. No post procedure immobilization
3. No BIOMECHANICAL consequence
4. Virtually no side effects

Disadvantages:

1. Insurance/usually self pay
2. Not immediate req. 6-8 weeks to see result
3. Cost of technology

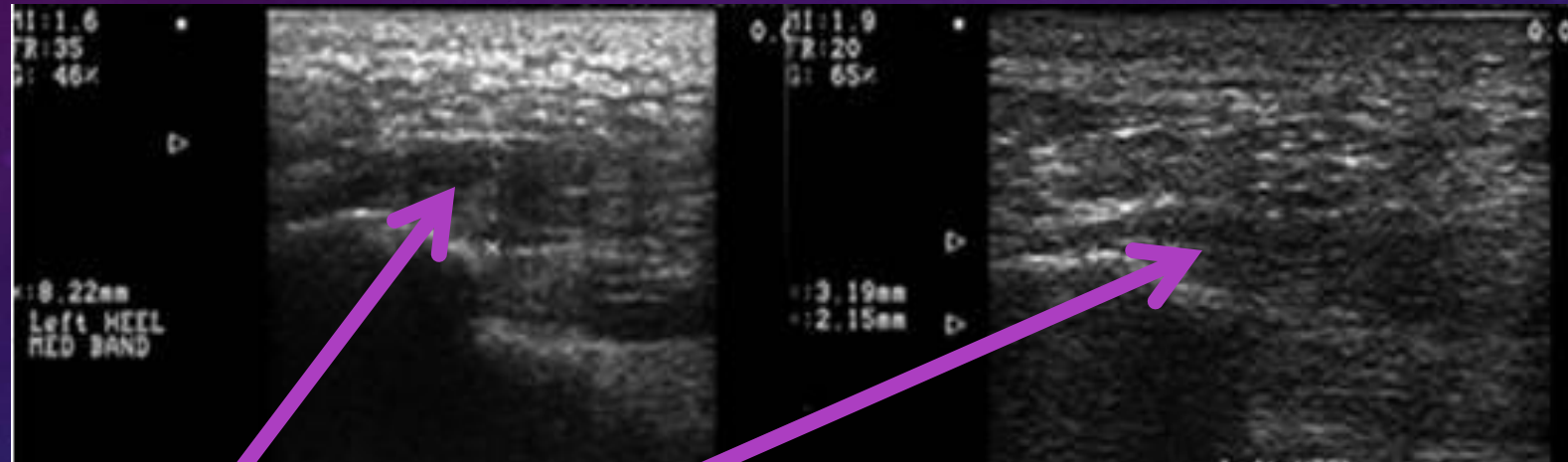


>80% success rate if used in
Grade IIB through IIIA

11/4/2012

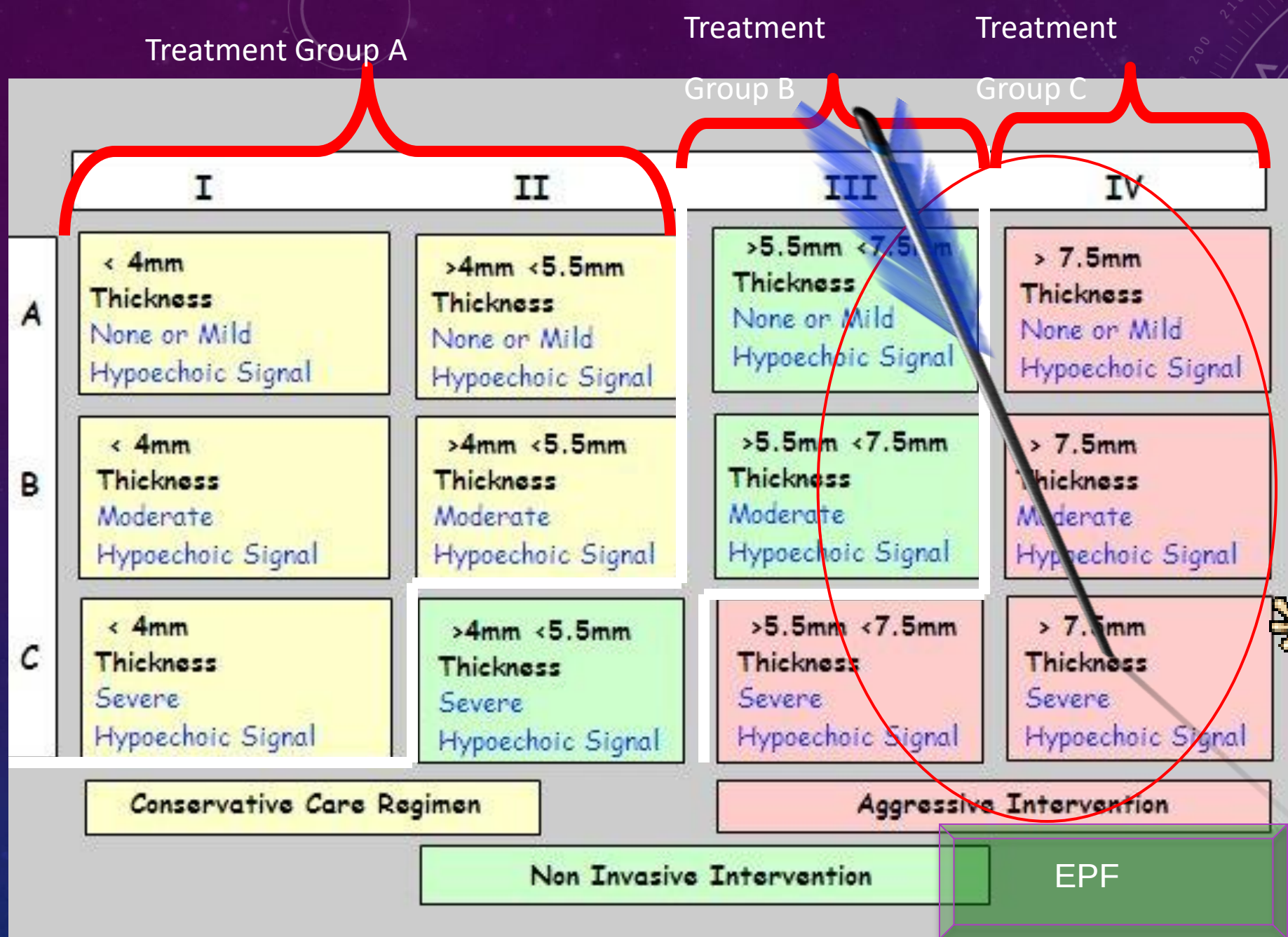
4/5/2013

Successo 75%



8.22mm
Ipoecogenico

3.19mm
Segnale normale ecogenico





QUALE TRATTAMENTO ?

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Second Line Treatment

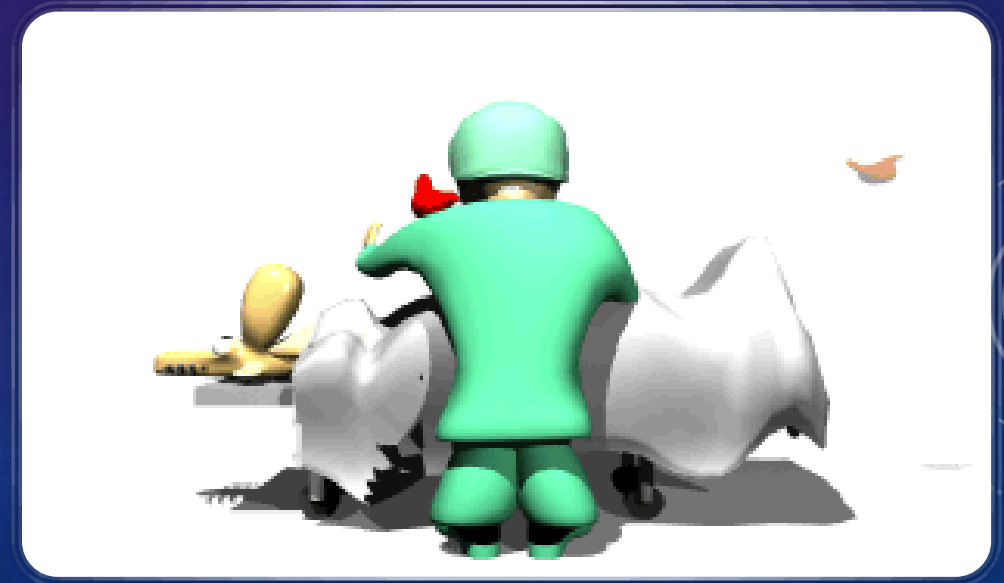
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Third Line Treatment

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3. **Endoscopic plantar fasciotomy (EPF)**



- **Nei casi resistenti alla terapia onde d'urto e gel piastrico si puo' eseguire una fasciotomia endoscopica**

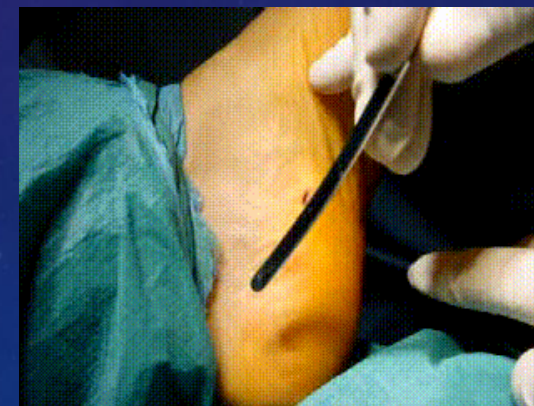
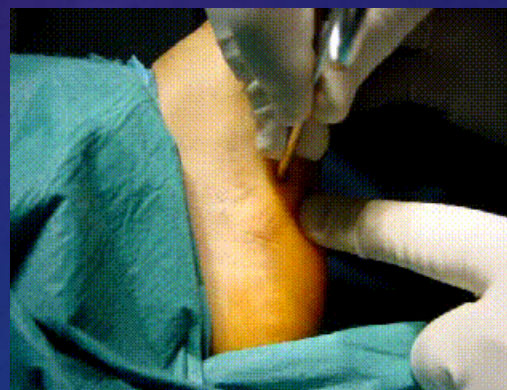


TECNICA CHIRURGICA

- ✉ Incisione verticale di circa 5 mm nel punto sopra descritto



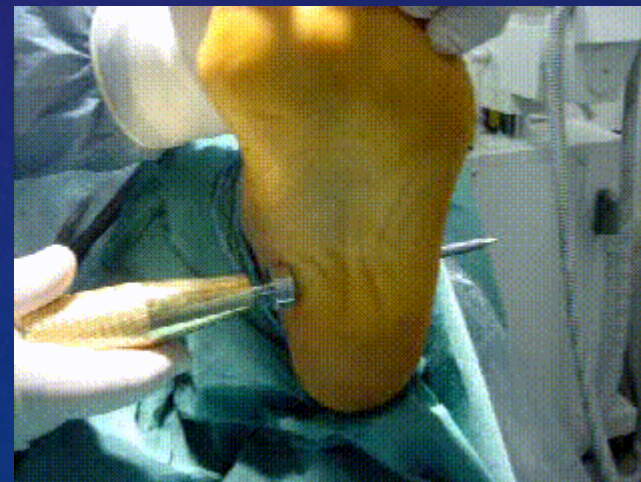
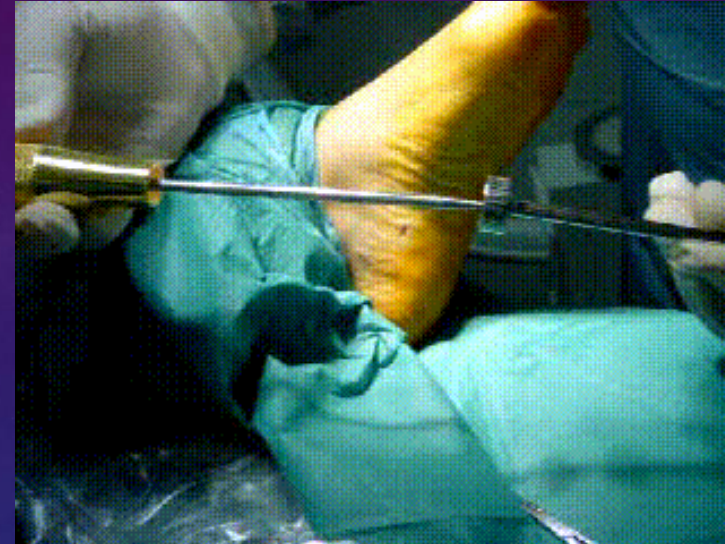
- ✉ Introduzione dell'elevatore e scollamento della fascia dal tessuto sottocutaneo, fino al margine laterale del calcagno.



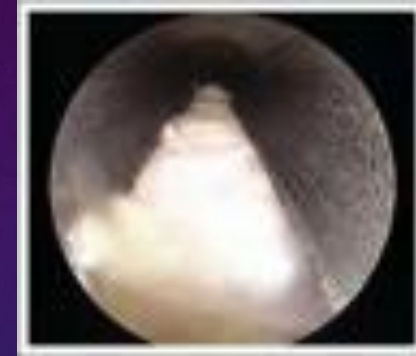
✉ Rimozione dell'elevatore ed introduzione del trocar, con la rispettiva cannula, fino al margine laterale

✉ Palpando la punta del trocar stesso si esegue una controincisione laterale di circa 5 mm, di solito più bassa rispetto alla prima incisione mediale

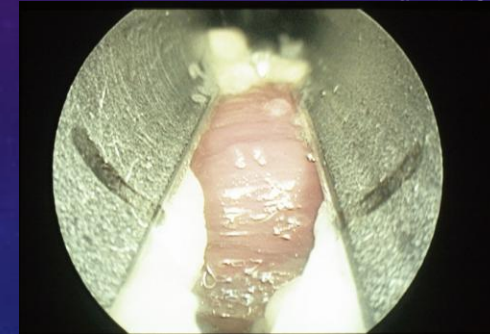
✉ Rimozione del trocar e inserimento dell'endoscopio medialmente e del palpatore lateralmente



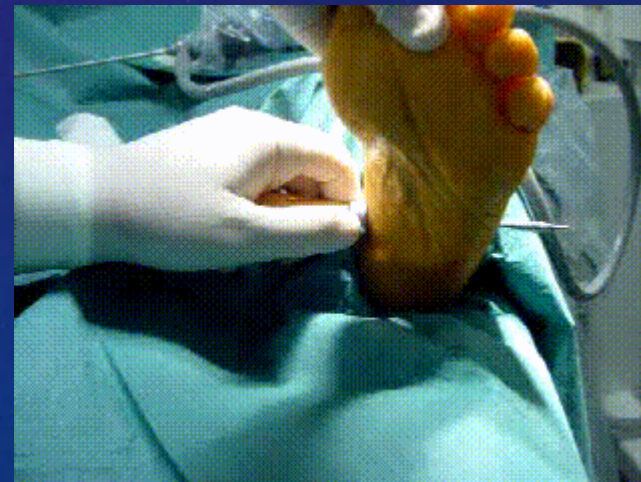
⊠ Visualizzazione della fascia plantare



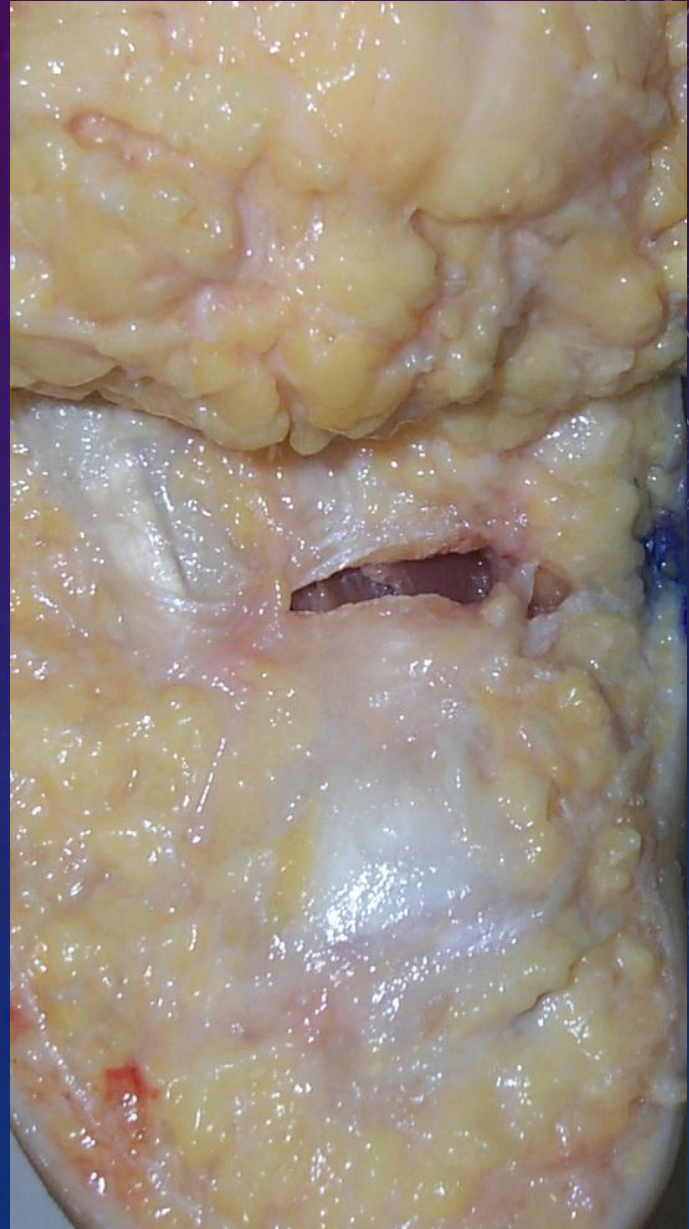
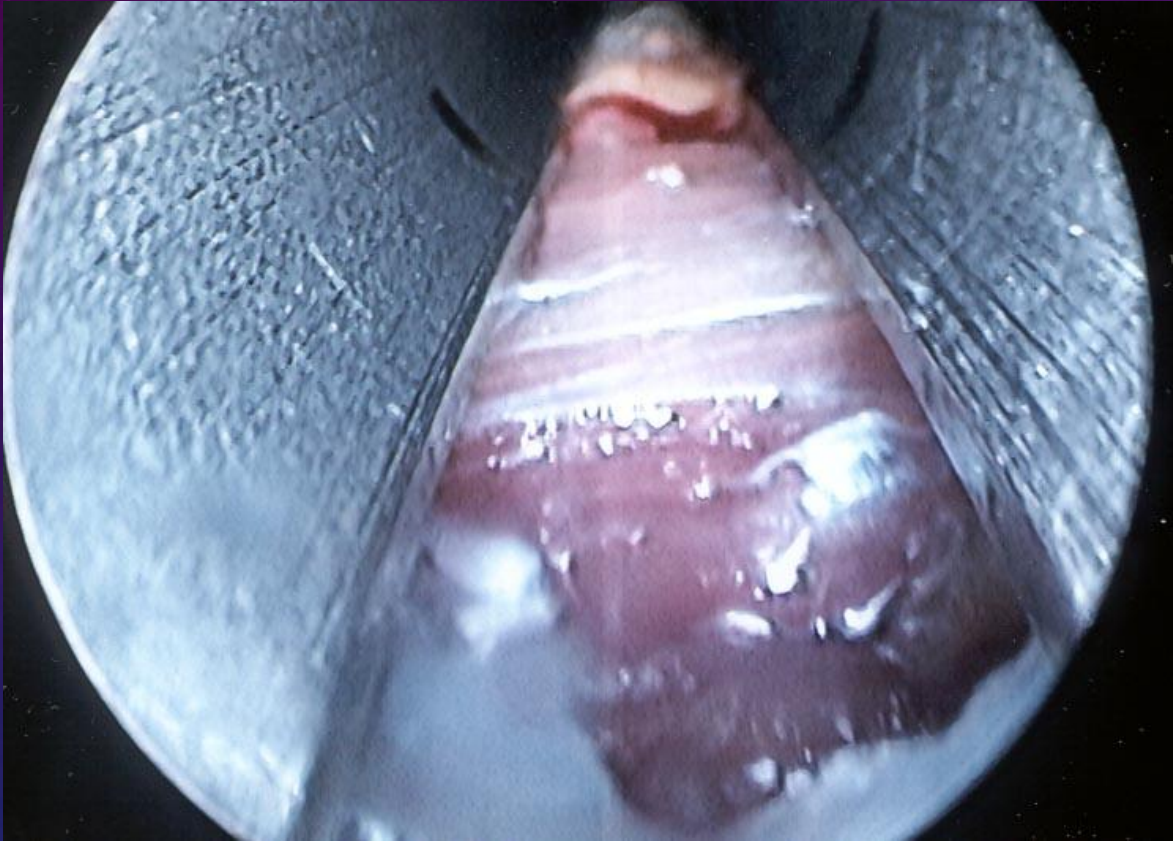
⊠ Release della porzione centro-mediale della fascia plantare



⊠ Estrazione della strumentazione







Postop.

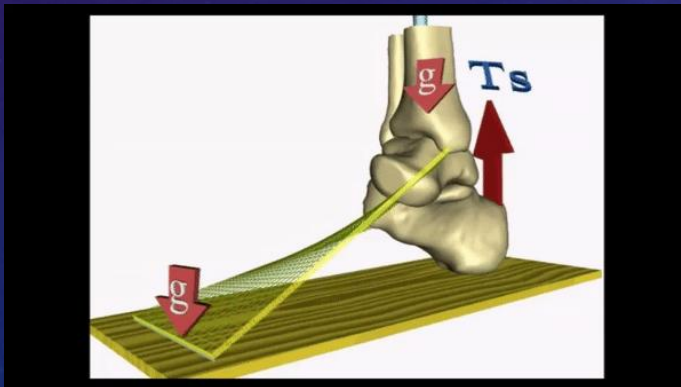
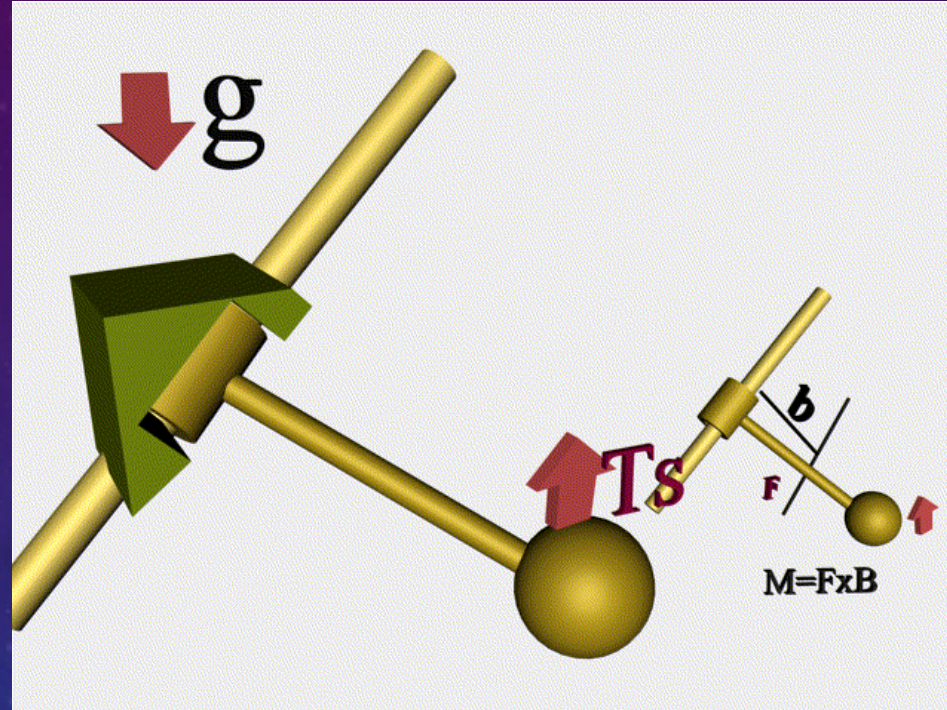
✉ **bendaggio compressivo**

✉ **carico immediato con una particolare calzatura postoperatoria che mantiene in tensione la fascia plantare impedendo la formazione di aderenze post-chirurgiche**

✉ **dopo 7 giorni : scarpa da jogging**

✉ **dopo 3 -4 settimane : Calzatura normale**

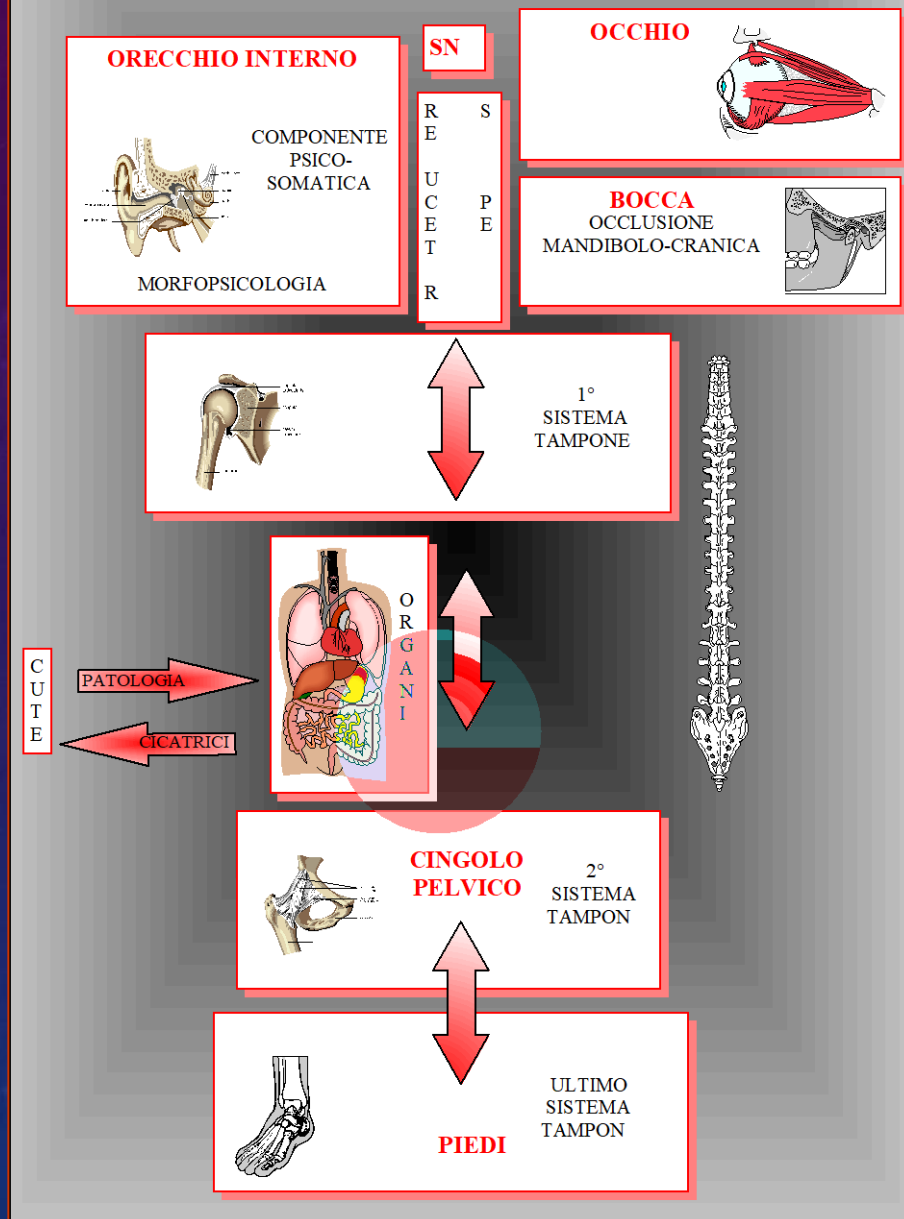
Patologie biomeccaniche



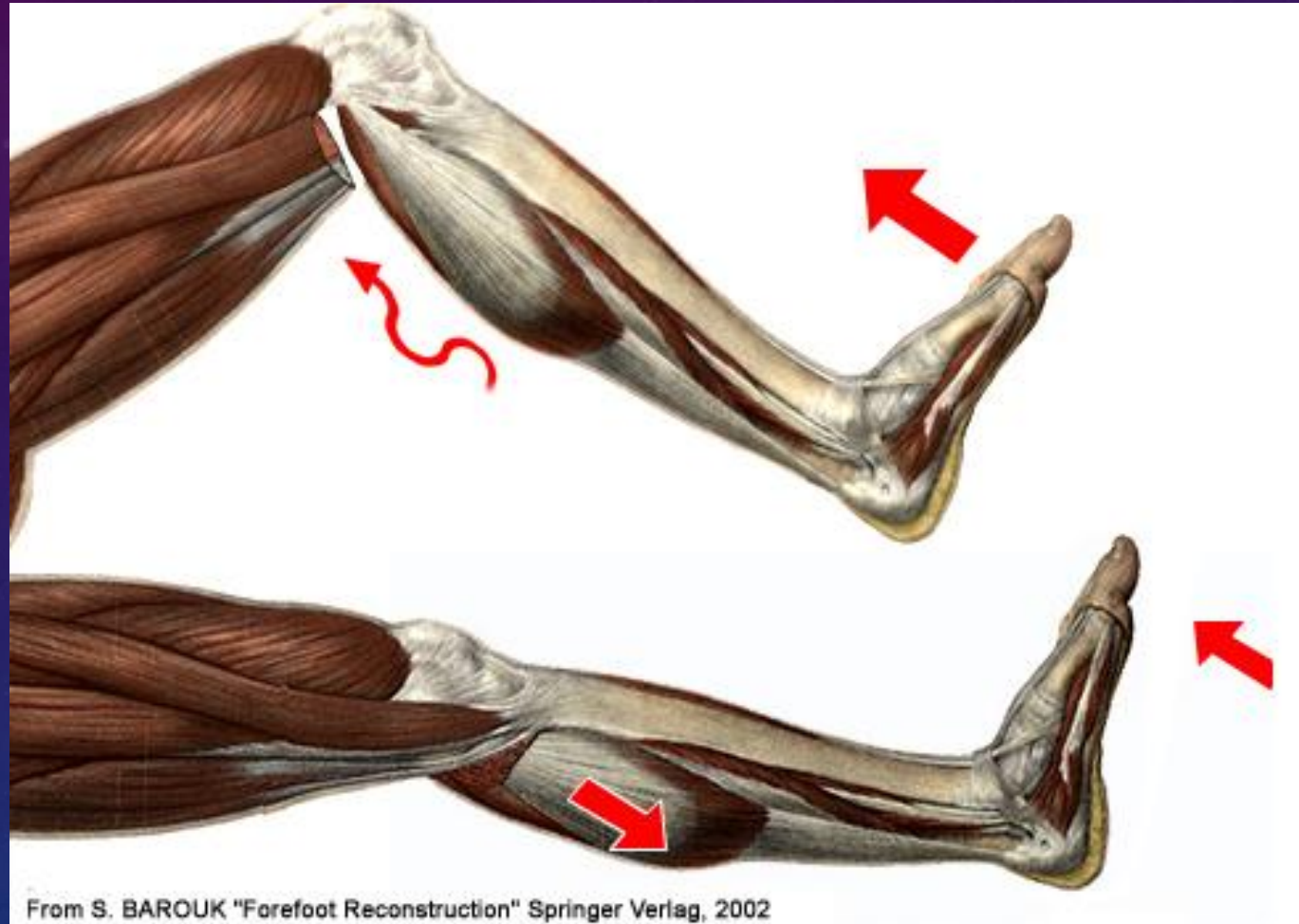
A questo punto ci siamo detti tutto?

SISTEMA TONICO POSTURALE

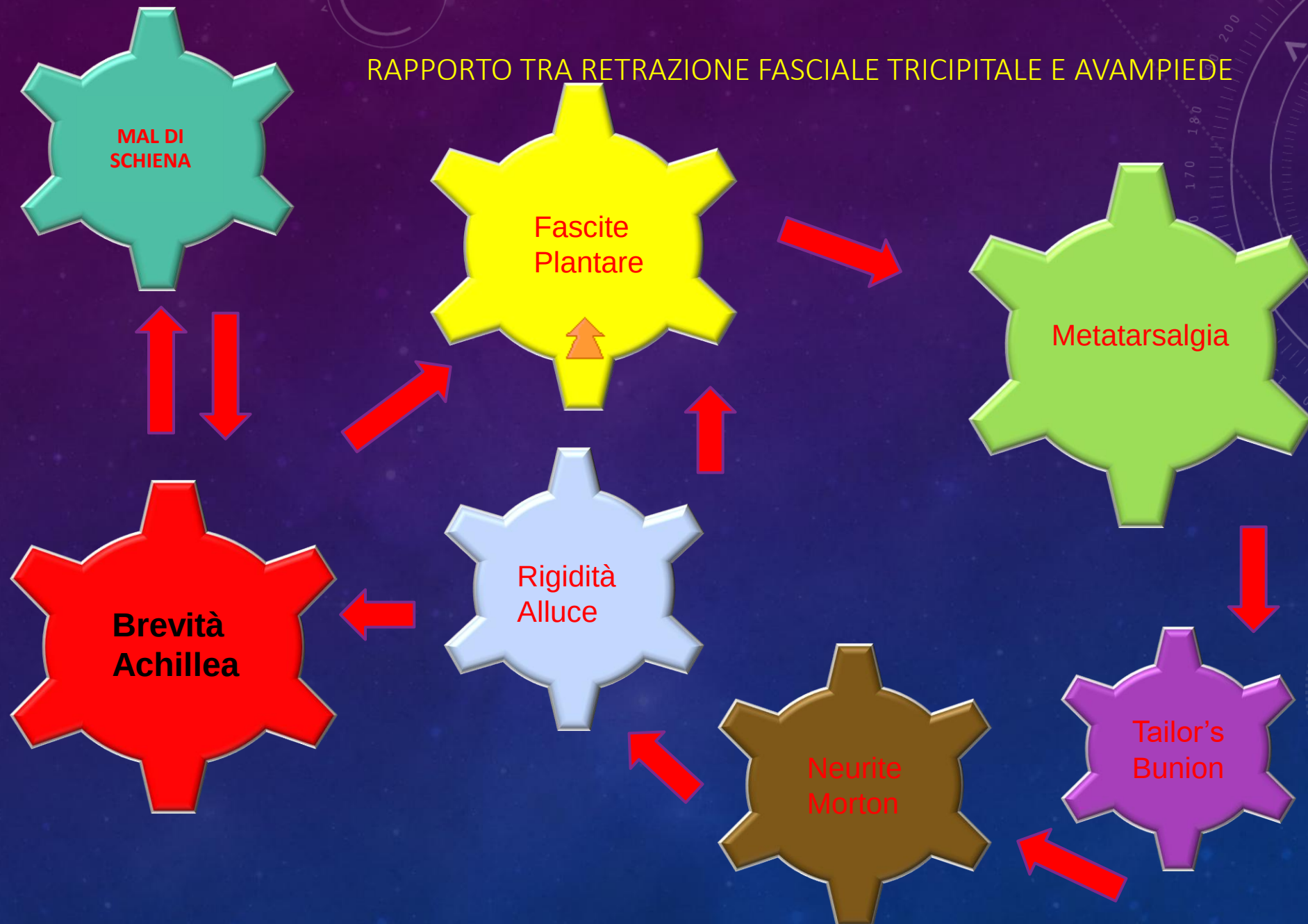
SISTEMA CIBERNETICO APERTO



La Gastronemius recession secondo Barrett

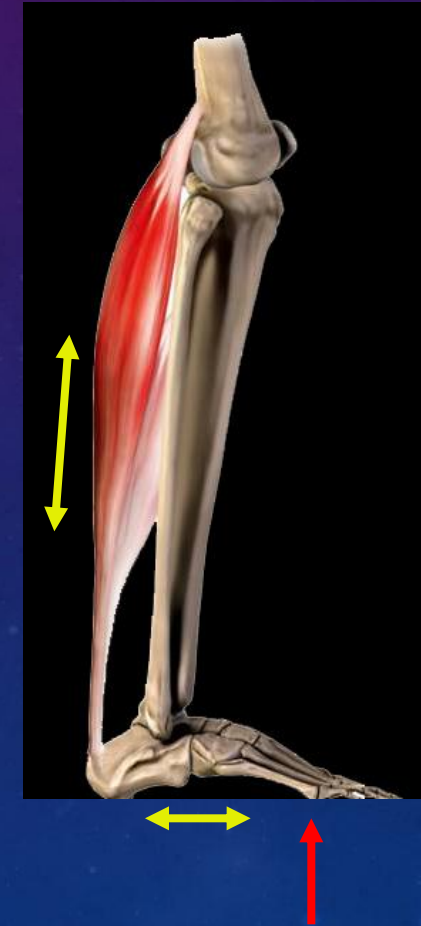
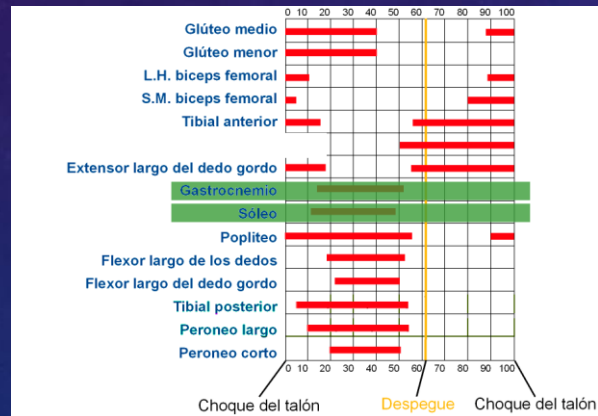
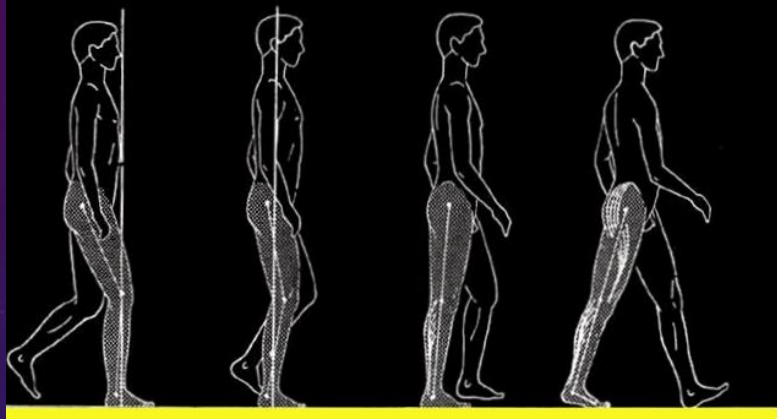


RAPPORTO TRA RETRAZIONE FASCIALE TRICIPITALE E AVAMPIEDE

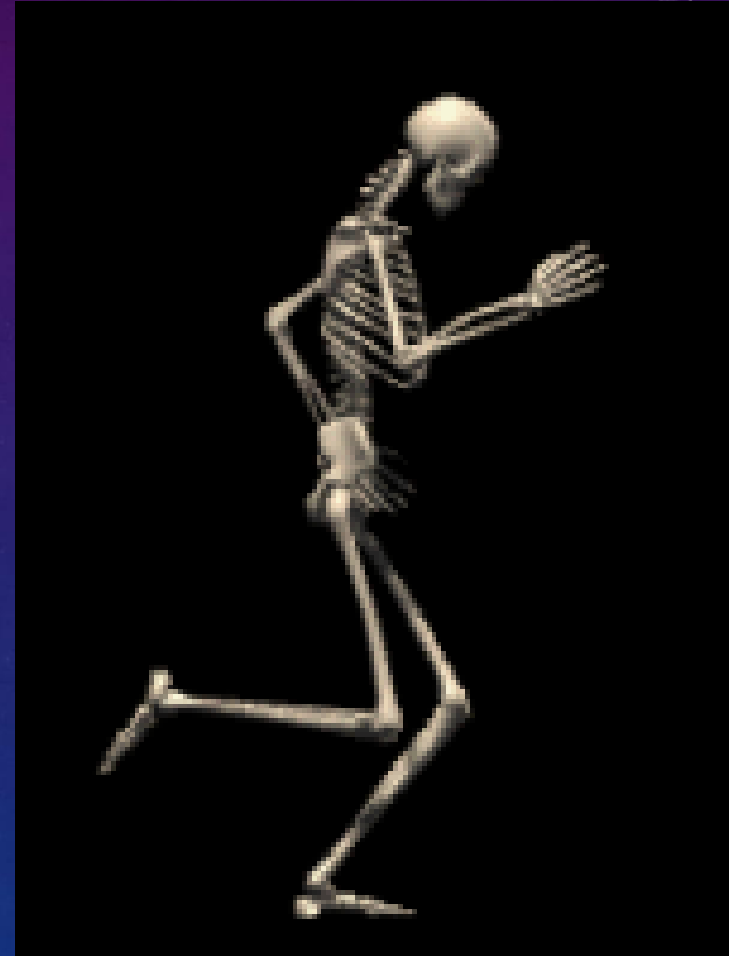
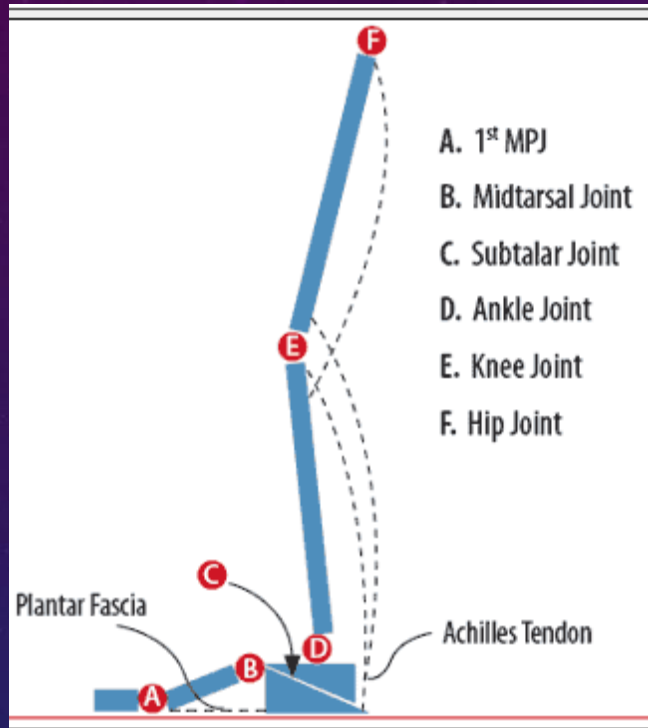


BIOMECCANICA INFLUENZA DEI GASTROCNEMI CORTI

2nd ROCKER DELLA MARCIA : SOVRACCARICO DEL SISTEMA



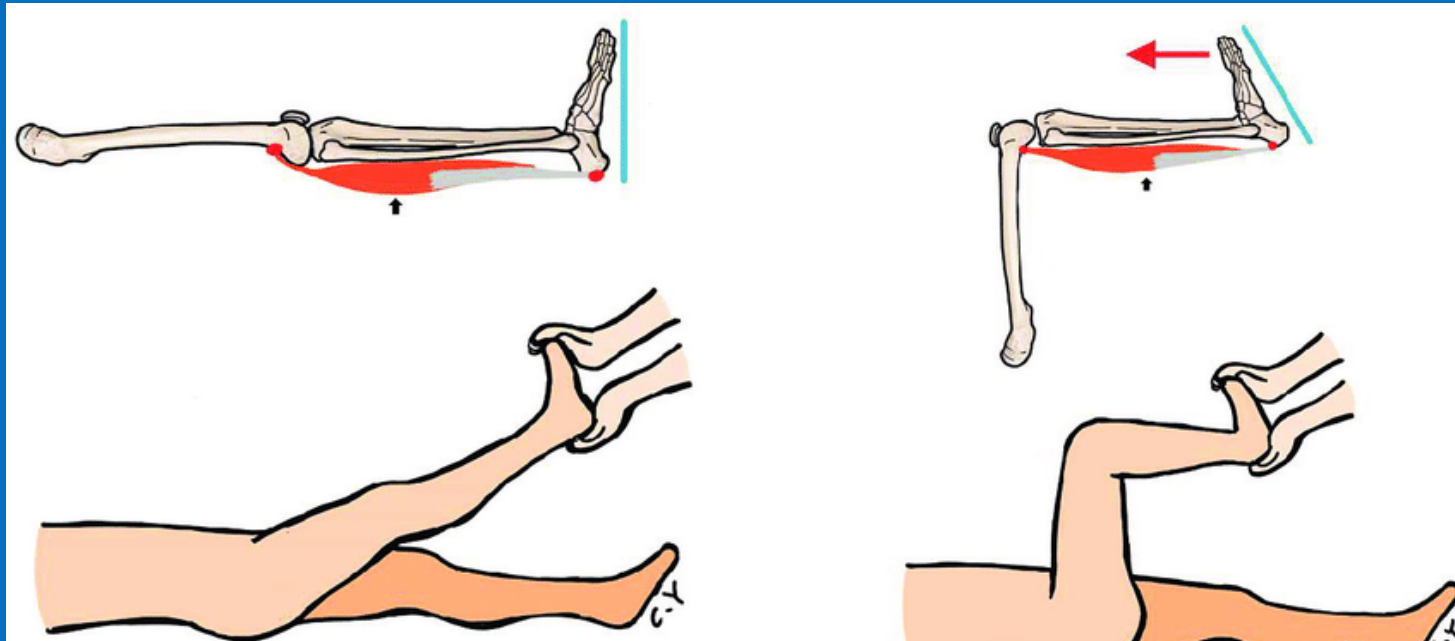
IL SISTEMA ACHILLEO CORTO



Come si Diagnostica una fascia tricipitale corta?



Come si Diagnostica una fascia tricipitale corta?



Esame clinico



NILS SILFVERSKIÖLD
(1888–1957)



Silverskjöld (1923)

Silfverskiöld test

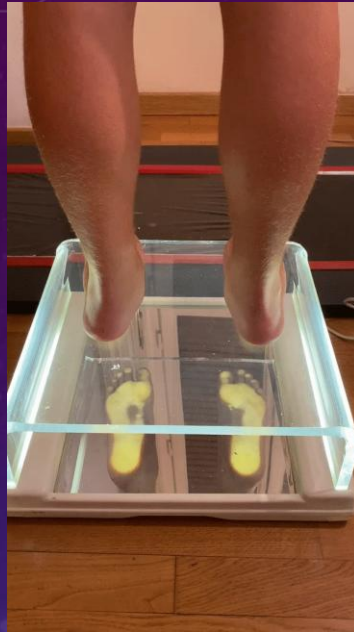




ESAME CLINICO Test dell'alluce

RETRAZIONE DELLA FASCIA PLANTARE





LA FASCIA CORTA IN ETA' ADOLESCENZIALE



SILFVERSKIOLD TEST

SQUAT TEST



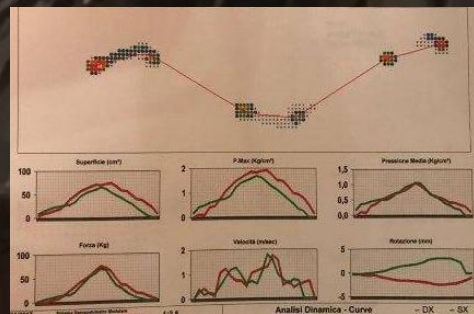
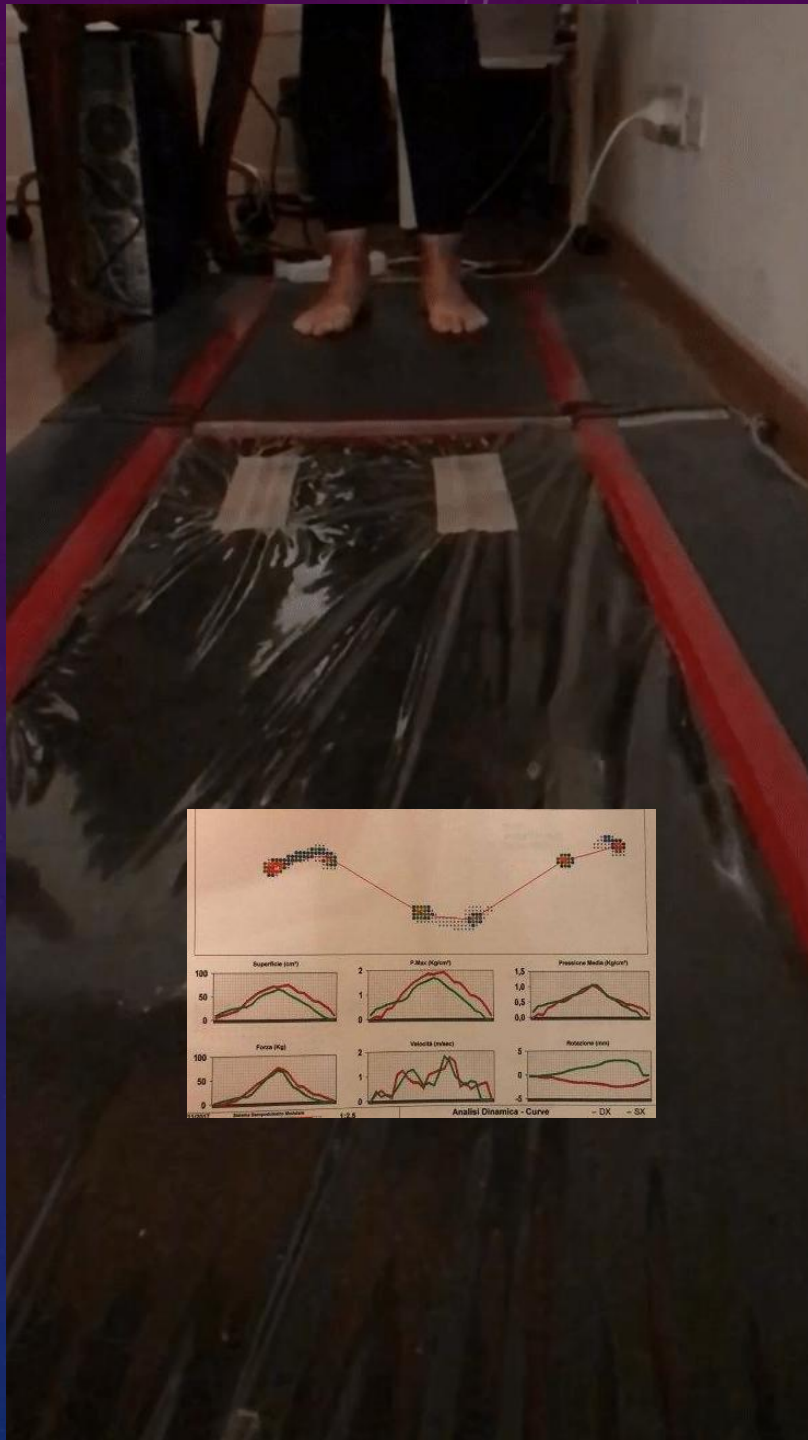
**ischio-peroneo-tibiali
corti**



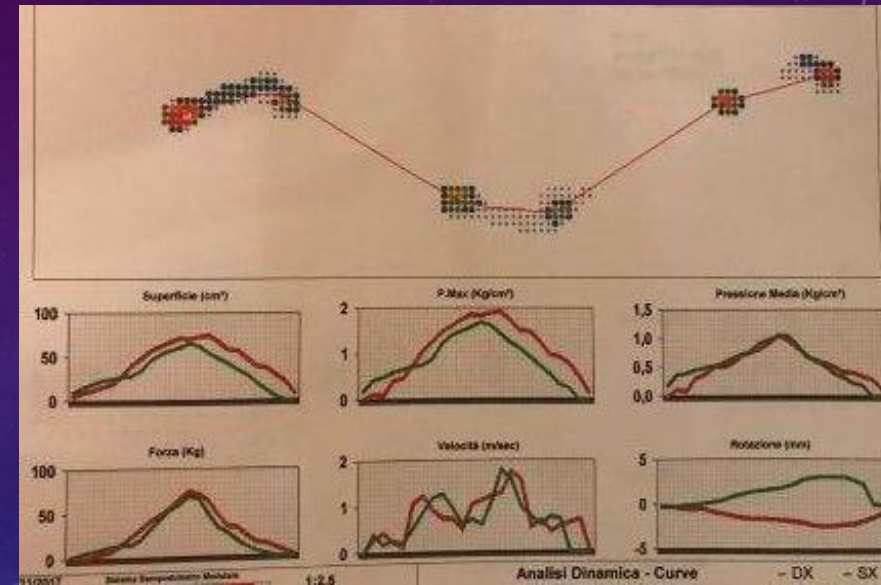
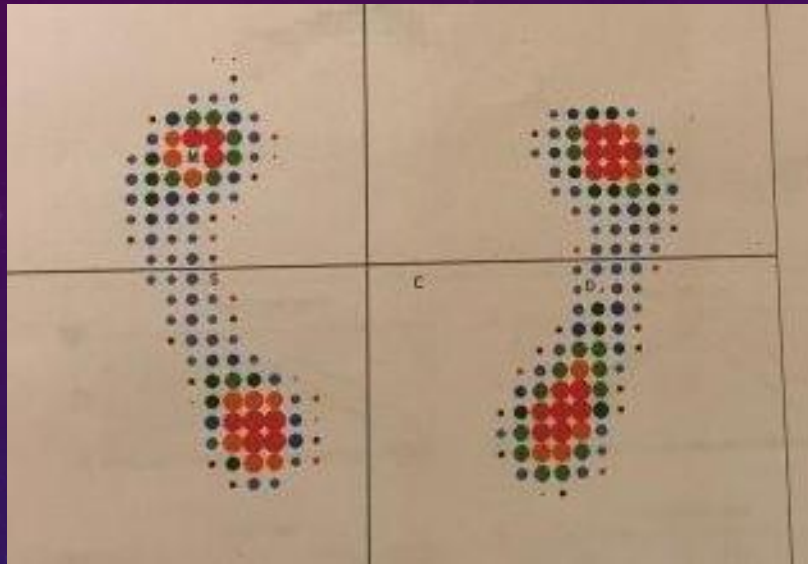
CASO CLINICO



CASO CLINICO



CASO CLINICO



CASO CLINICO



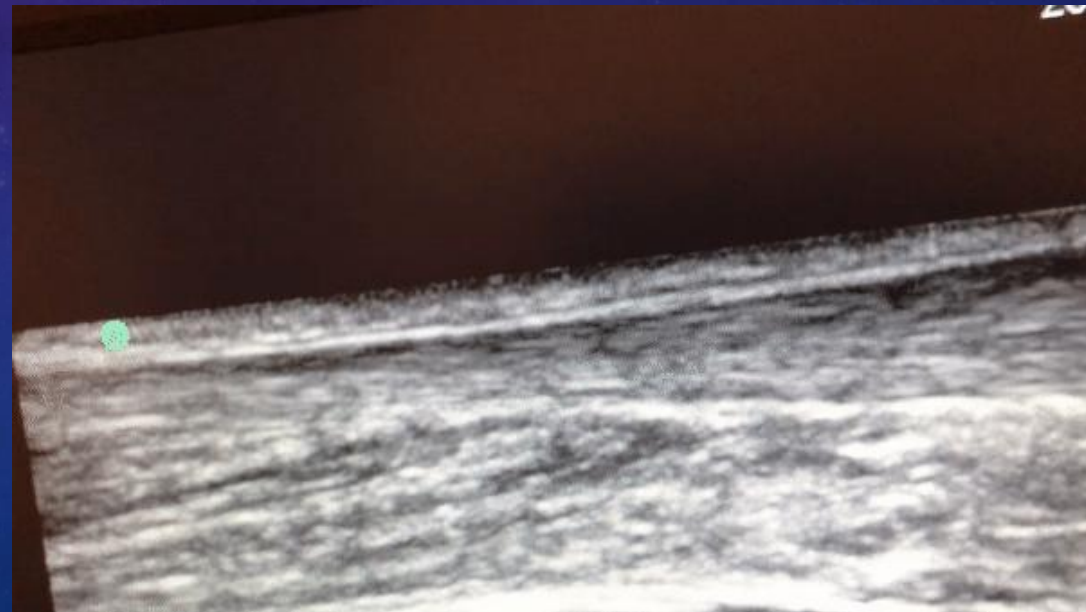
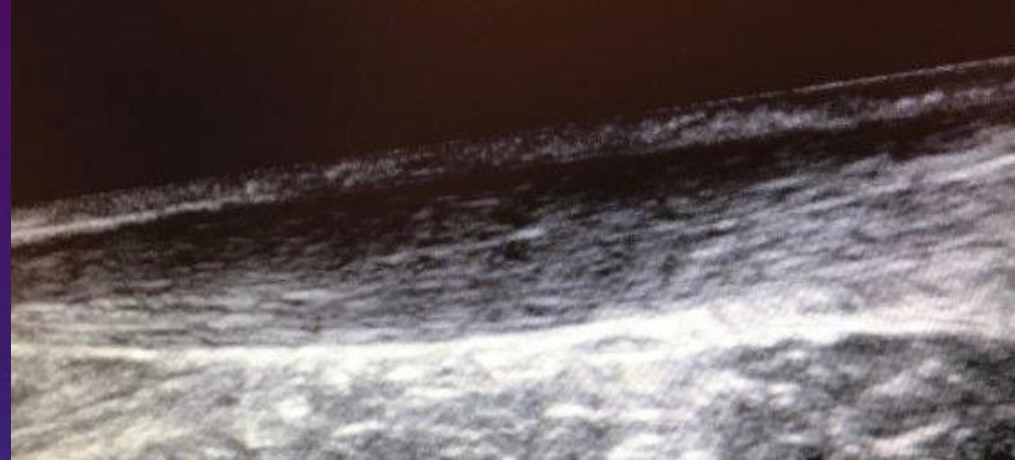
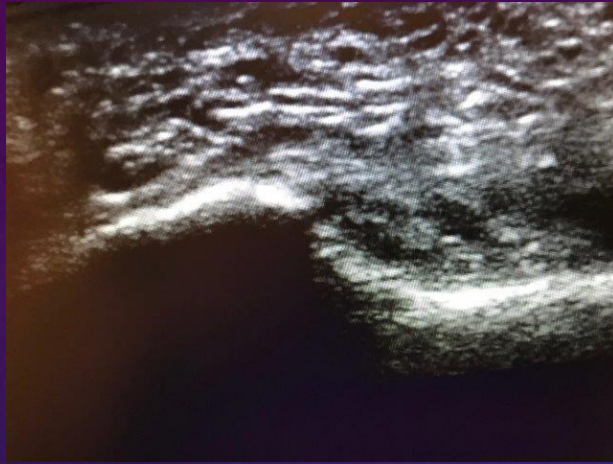
CASO CLINICO



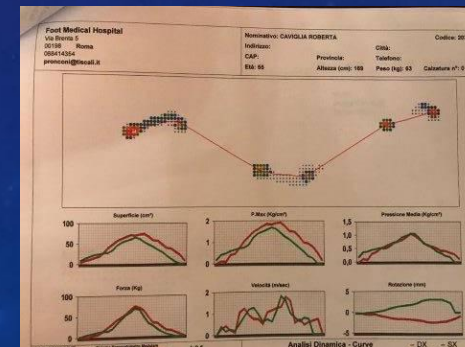
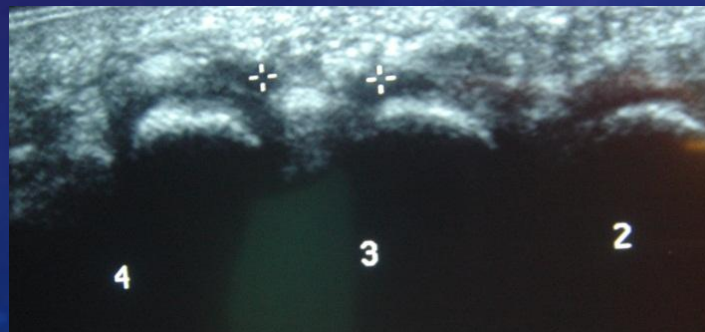
RADIOGRAFICAMENTE



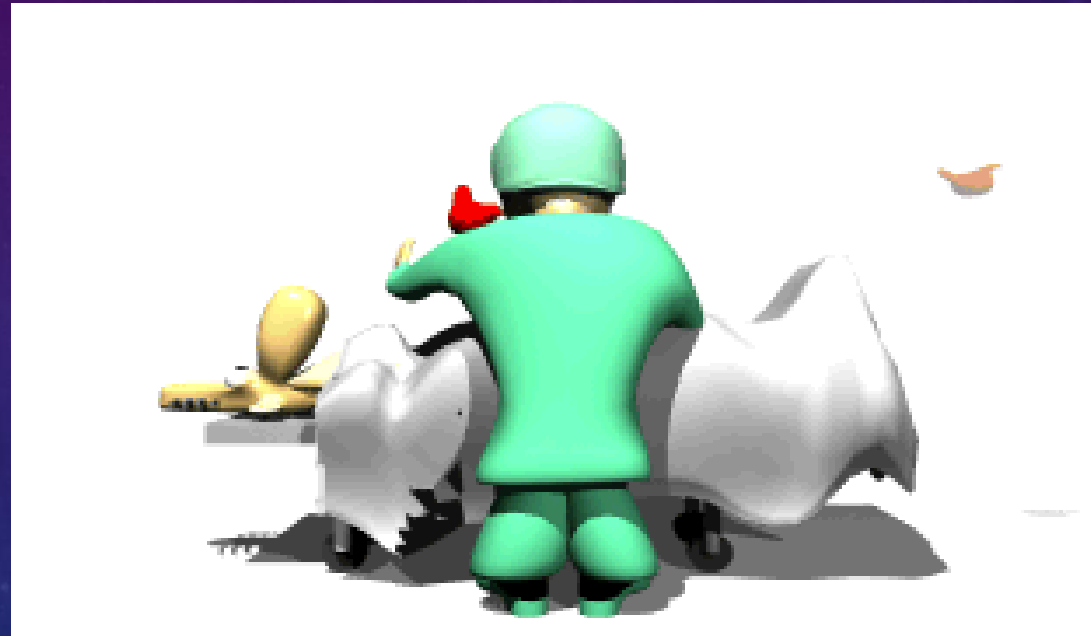
QUADRO ECOGRAFICO



ECOGRAFIA DINAMICA NEUROMA



IL TRATTAMENTO CHIRURGICO



Influenza dei gastrocnemi: tipi di chirurgia La nostra esperienza



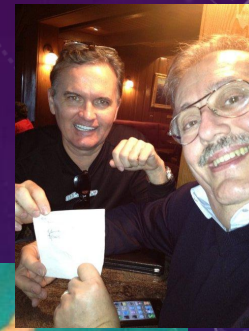
Silverskjöld (1923)



Barouk



Barrett





PROCEDIMENTO CHIRURGICO



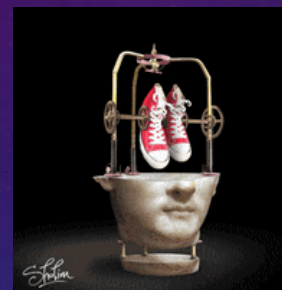


POSTOPERATORIO



➡ 1-Carico immediato con walker per 15 gg

➡ 2-Calzature sportive e stretching



➡ 2-Fkt



➡ 3-Ripresa attività lavorative e attività sportive dopo 60 giorni



QUALI SONO GLI EFFETTI DI QUESTO INTERVENTO?

- 1. Rilasciamento della fascia tricipitale**
- 2. Aumento articularità tibiotarsica**
- 3. Rilasciamento della fascia plantare**
- 4. Aumento articularità MF Alluce**
- 5. Distensione delle dita**
- 6. Diminuzione dei carichi avampodalici**

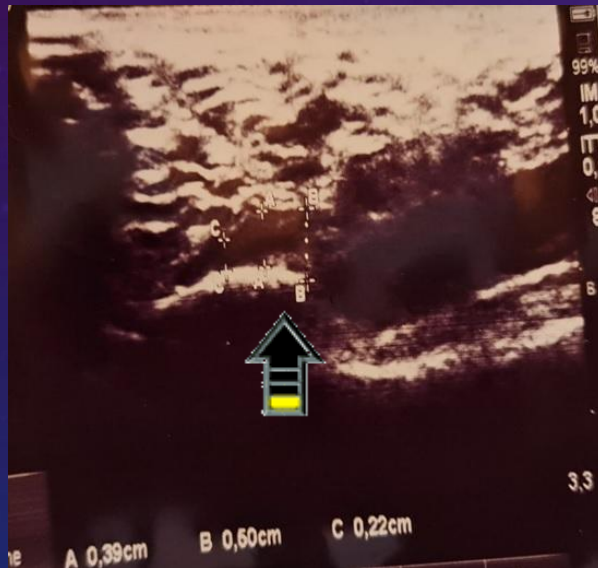


**Valutazione postoperatoria
Aumento articolare T.T.**



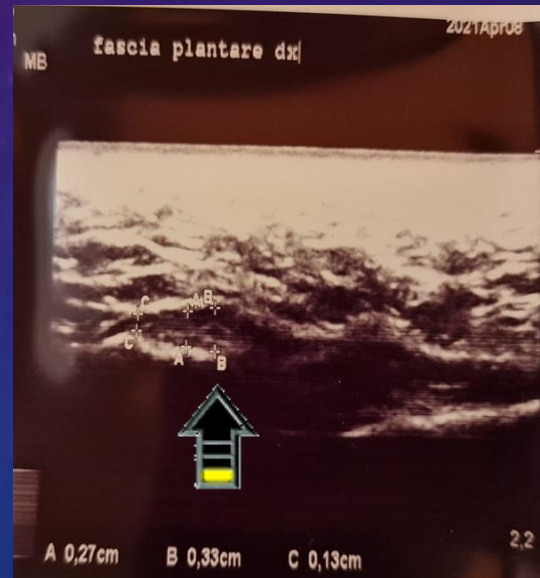
RILASCIAMENTO DELLA FASCIA PLANTARE

In caso di fasciti o fasciopatie si può riscontrare una diminuzione importante dello spessore della fascia plantare .



08 -03-2021

A: 39 B: 50 C: 22



08-04-2021

A:27 B:33 C: 13

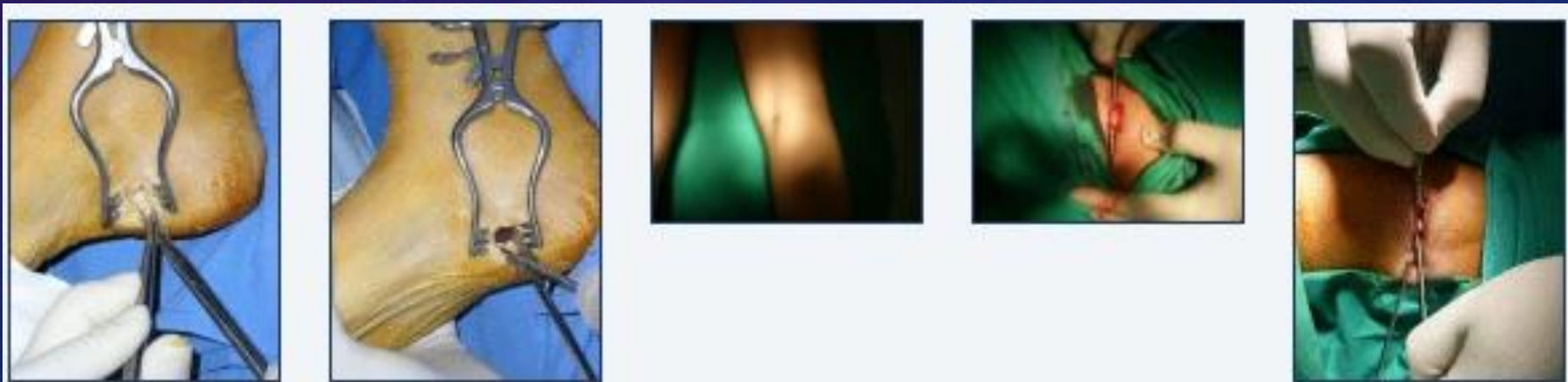


Chronic plantar fasciitis: Plantar fasciotomy versus gastrocnemius recession

**Manuel Monteagudo, Ernesto Maceira,
Virginia Garcia-Virto & Rafael Canosa**

International Orthopaedics (SICOT)

Springer-Verlag Berlin Heidelberg 2013



STUDIO RETROSPETTIVO

60 pazienti con fascite plantare crónica

30 fasciotomie plantari vs 30 PMGR

GRUPPI EQUILIBRATI

Trattamenti previi, tempo di evoluzione fino alla chirurgia (>9 mesi, media 13 mesi)

RISULTATI

FASCIOTOMÍA

PMGR

SODDISFAZIONE PAZIENTE

Eccellente	10%	80%
Buona	30%	10%
Soddisfacente	20%	5%
Cattiva	40%	5%

RITORNO AL LAVORO

3 mesi (1-6)	1 mese (0-3)
--------------	--------------

RITORNO ALLO SPORT

3 mesi (1-6)	1.5 mesi (0-4)
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proximal medial gastrocnemius release (PMGR)

EFFETTI DELL'ALLUNGAMENTO DEL GASTRONEMIO

Aumento articolare dell'alluce

Preop



Postop



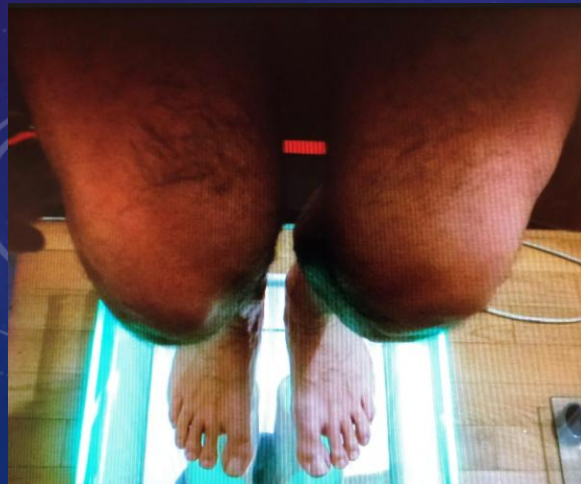
ALTRO CASO



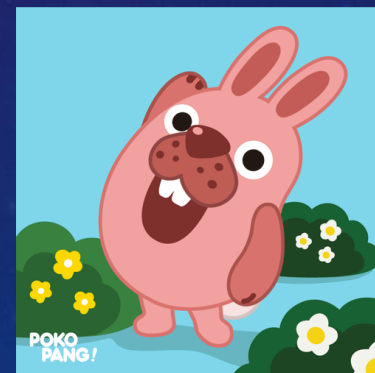
AUMENTO ARTICOLARITA' ALLUCE

5- Distensione delle dita

Chirurgia: operato di gastrocnemio corto a dx.
Post-op a tre mesi



Si puo' utilizzare su un alluce valgo in presenza di fascia tricipitale corta

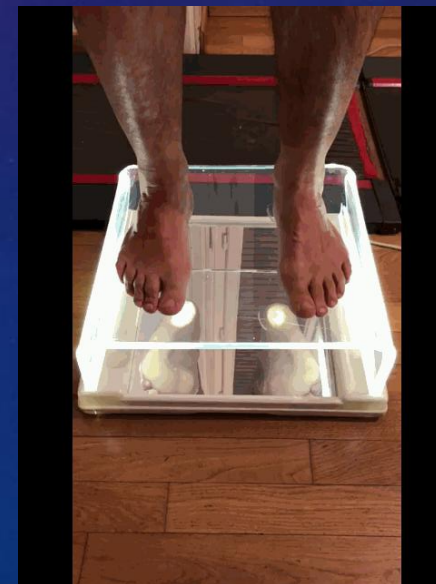
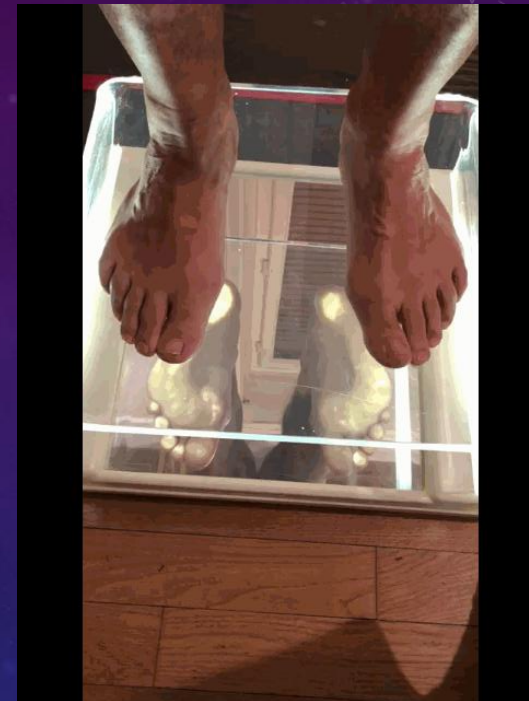
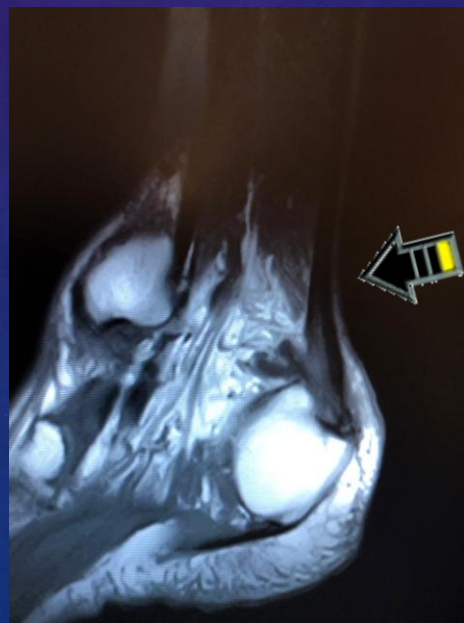




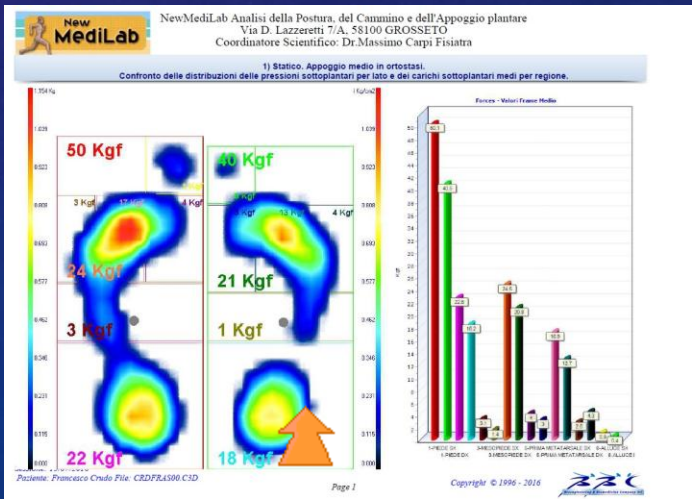
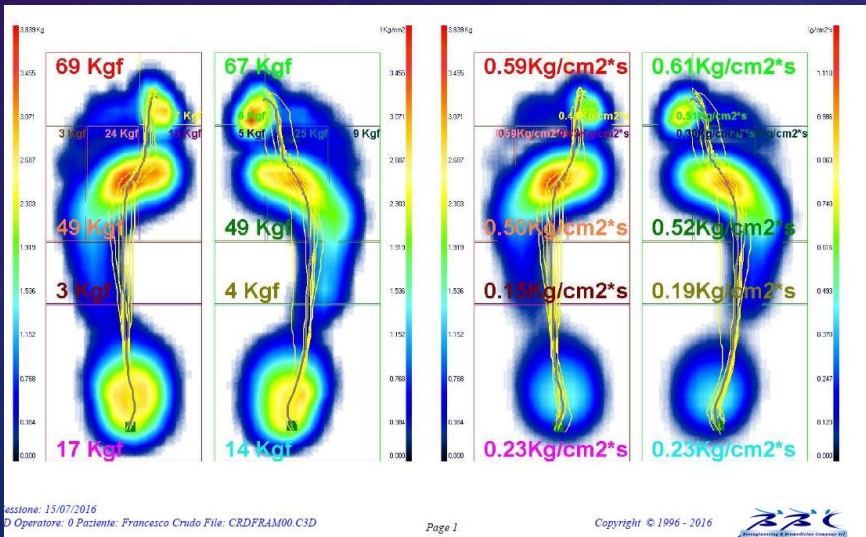
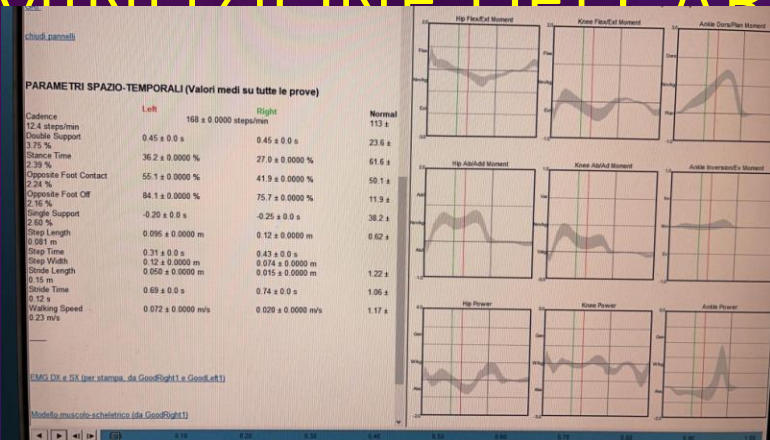
POST. Solo A SX



POST. BILATERALMENTE



6- DIMINUIZIONE DEL CARICO

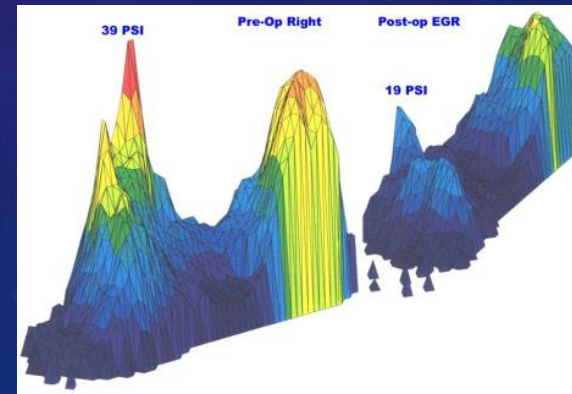




Barrett S., Endoscopic gastrocnemius recession (EGR) Technique - Saxena ed AA, Endoscopic gastrocnemius recession (EGR) Technique, Preliminary report on 18 spousi. J Foot Ankle Surg. 43(5):p.302-6 . 2004

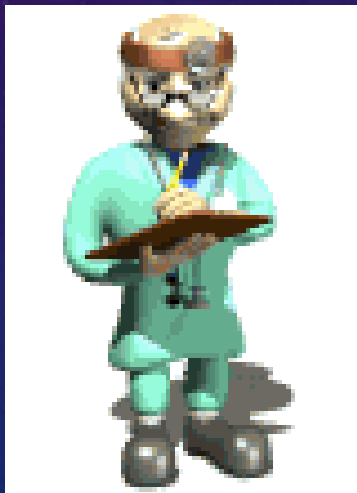


Confermata da Barrett

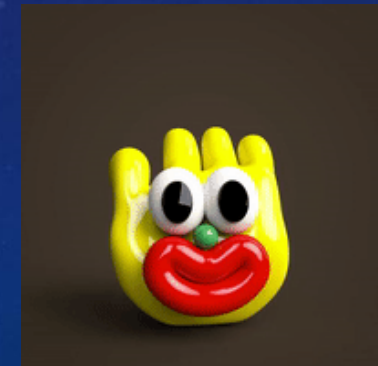




**Alla luce di queste
considerazioni, quando è
presente una fascia
tricipitale corta, in quali altri
interventi associarla?**



ALTRE ASSOCIAZIONI CHIRURGICHE



ALTRE ASSOCIAZIONI CHIRURGICHE

Neurite di Civinini Morton
Tecnica Radiofrequenza



DEAMBIULAZIONE POSTOPERATORIA ON WALKER



Op: 8-11-2017
Contr: 21-11.2017
13 gg post-op

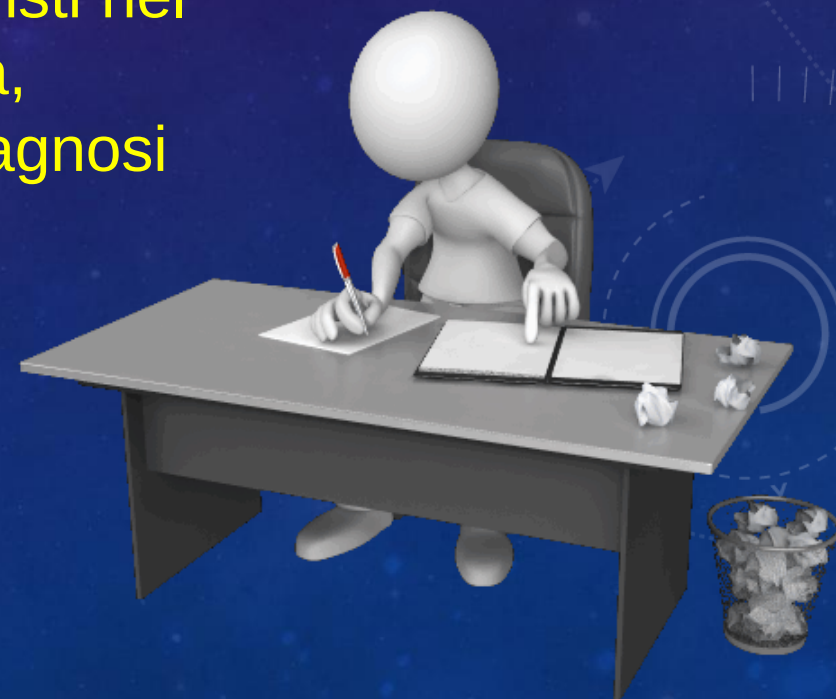
conclusion

Sono certo che oggi parlare di fascite o fasciopatia rende necessaria una valutazione più olistica .

Oserei parlare di fasciopatia come « SINTOMO» .

Solo attraverso una migliore comunicazione tra specialisti nel settore: medico- chinesiologo – posturologo –osteopata, tecnico ortopedico , podologo ecc. permetterà una diagnosi ed un trattamento il più efficace e più idoneo.

Paolo Ronconi
pronconi52@gmail.com
www.lachirurgiadelpiede.it

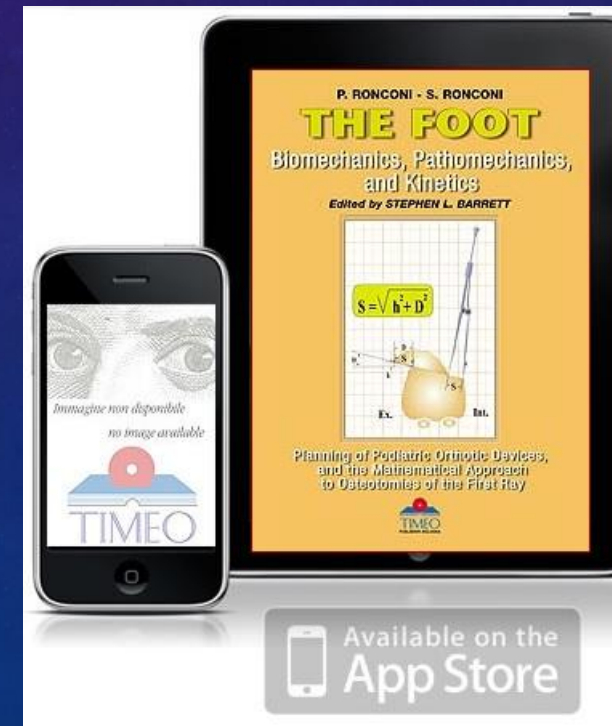


- Per coloro che lo desiderassero è a disposizione questa relazione.



APPROFONDIMENTI SU YOUTUBE: RONCONI PAOLO: BIOMECCANICA

http://youtu.be/7imJ_1_wxz4
<http://youtu.be/JsIRfHnQ9y0>
<http://youtu.be/FNDyujNeKjw>
<http://youtu.be/EnOOYxuSvW0>
<http://youtu.be/MGCROtxlzmA>
<http://youtu.be/V22-0zIXwsY>
<http://youtu.be/SPgbugSsemc>
<http://youtu.be/Y52DV5oKh6E>
<http://youtu.be/HF90fmjmvaM>
<http://youtu.be/lquOfx-Nylc>
<http://youtu.be/vZDTUkXL-hU>



Available on the
App Store

Email: pronconi52@gmail.com



GRAZIE

