

ECOGRAFIA POLSO E MANO



Barbara FANTI

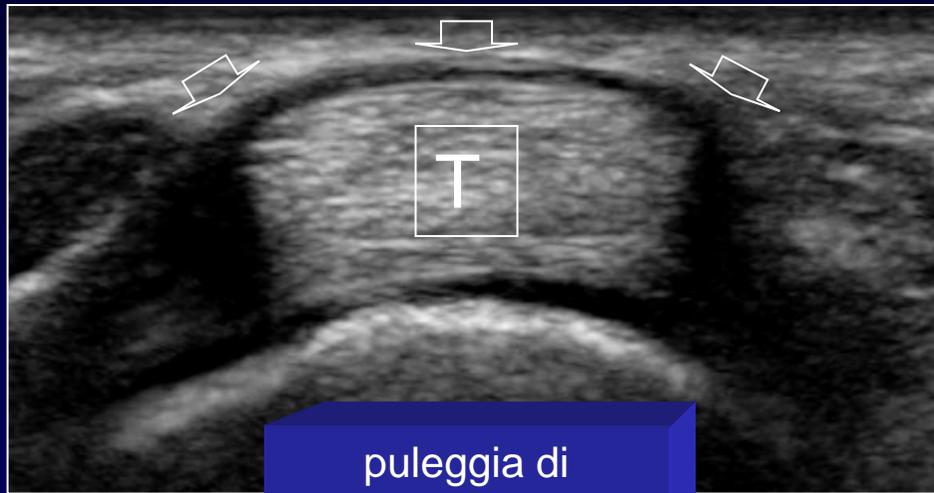
IMAGING DI 1° LIVELLO NELLO STUDIO DEI TENDINI DELLA MANO E DEL POLSO

Esame in tempo reale

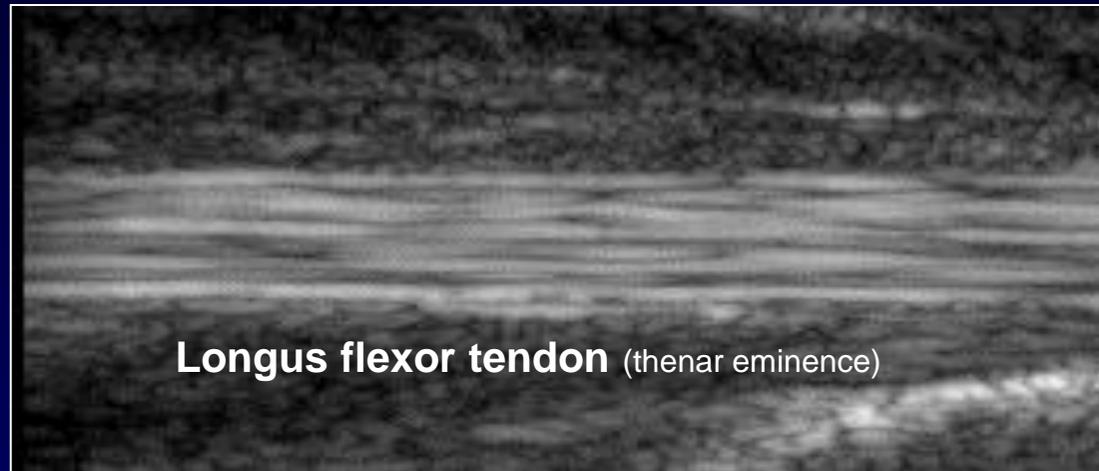
Esame dinamico

Power-Doppler



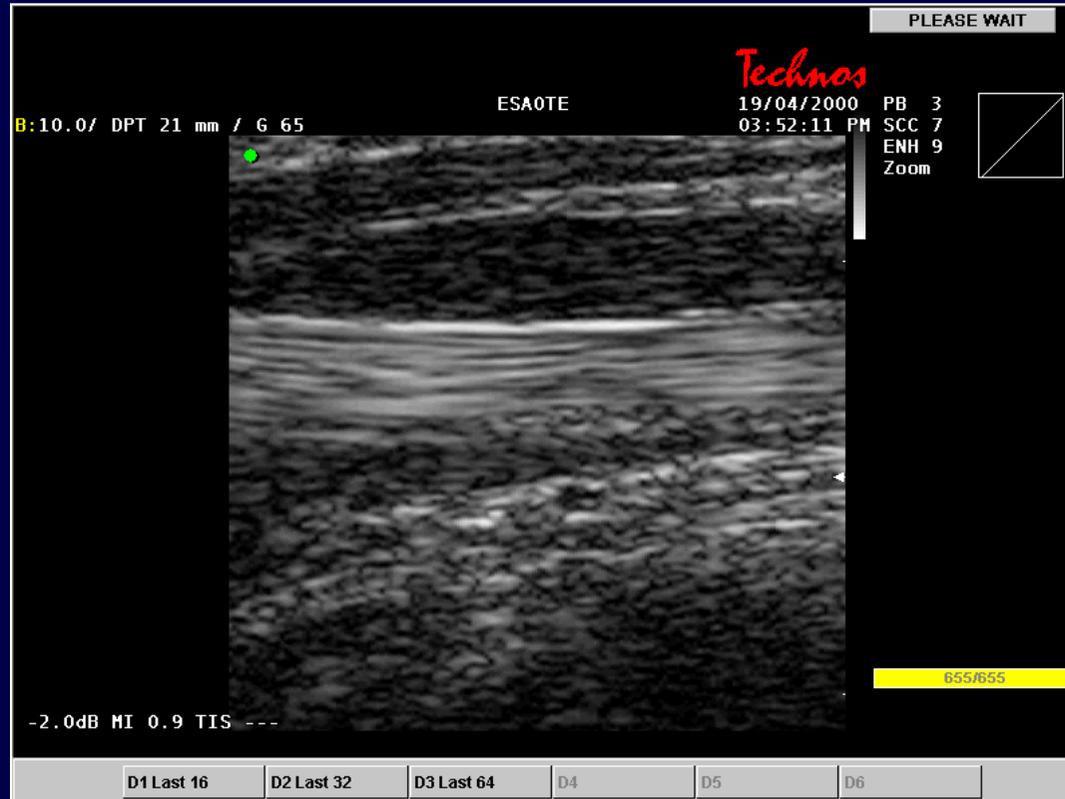


puleggia di
riflessione (A1)
scansione
trasversale dito



Longus flexor tendon (thenar eminence)

Analisi dinamica



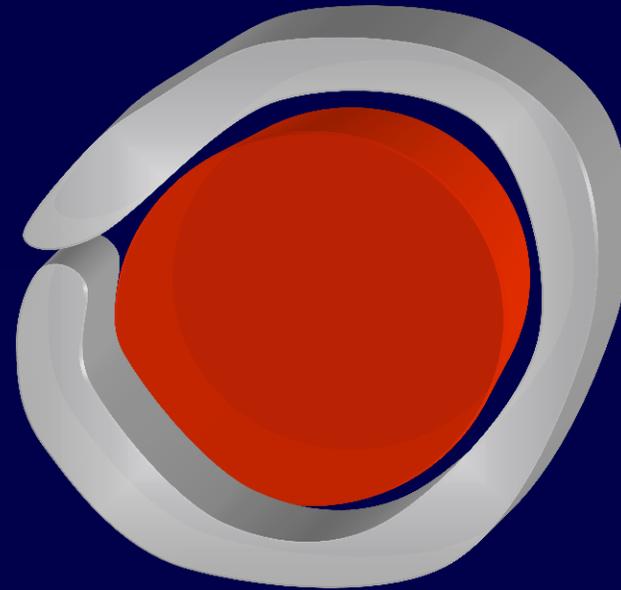
Flessore lungo del pollice (eminenza thenar)

Struttura Complessa di Diagnostica per Immagini e Ecografia Interventistica OEI - Genova



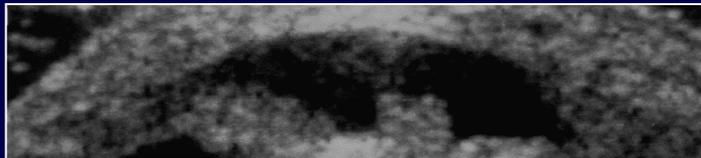
TENOSINOVITI

- Idiopatica
- Artropatie
- Gotta
- Amiloidosi
- Processi infettivi

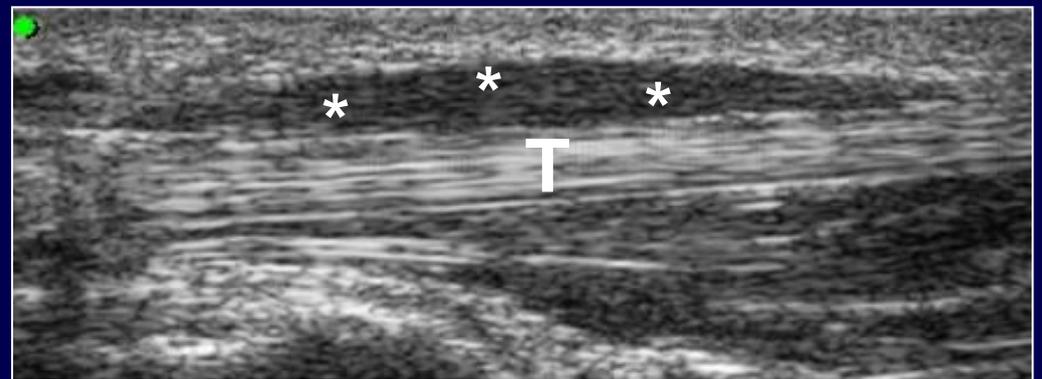
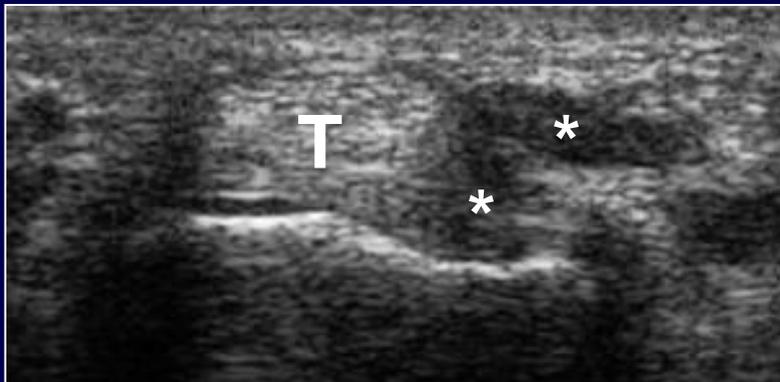


TENOSINOVITI: semeiotica US

TENOSINOVITI ESSUDATIVE: contenuto fluido



TENOSINOVITI PROLIFERATIVE: contenuto prol. sinov.



TENOSINOVITE ACUTA INFETTIVA: semeiotica US

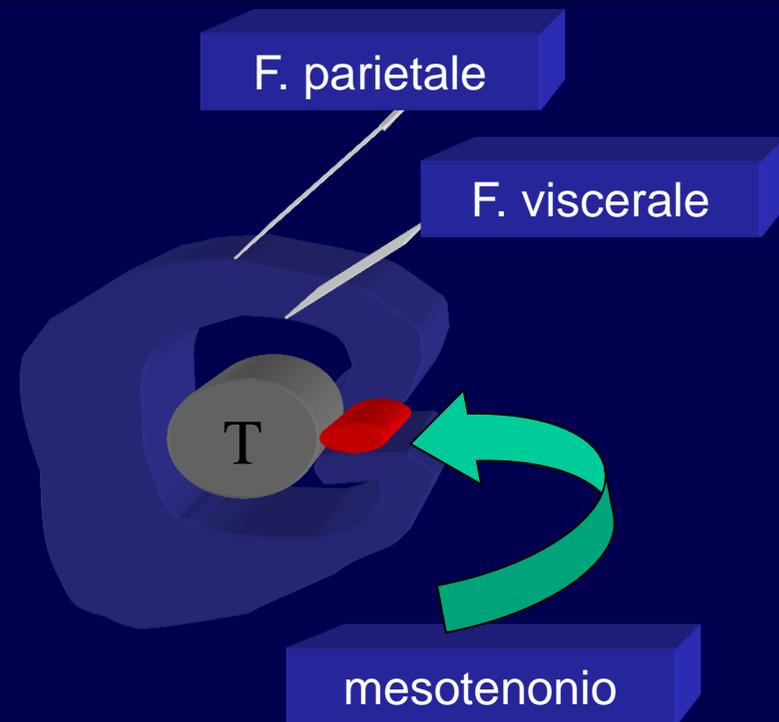
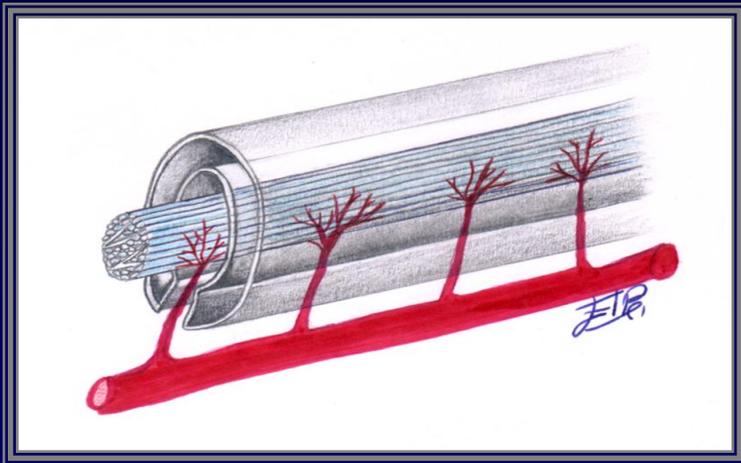
Distensione della guaina caratterizzata da contenuto fluido corpuscolato.



TENOSINOVITE MYCOBACTERIUM BOVIS

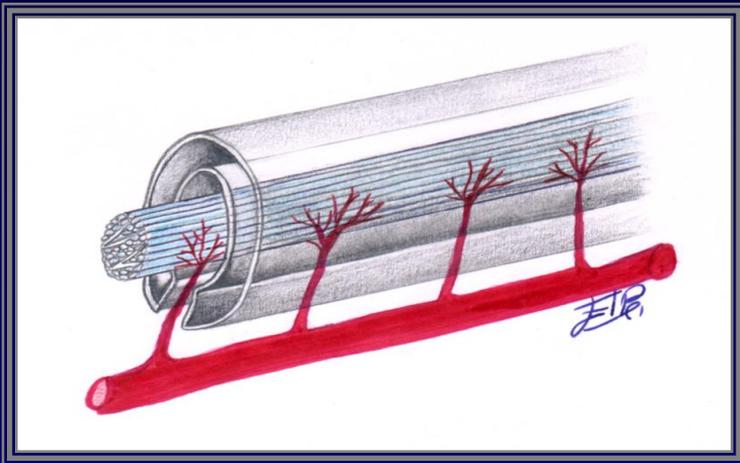
TENOSINOVITI: semeiotica CD/PD

CD e PD possono evidenziare un quadro di ipervascolarizzazione a livello della guaina sinoviale



TENOSINOVITI: semeiotica CD/PD

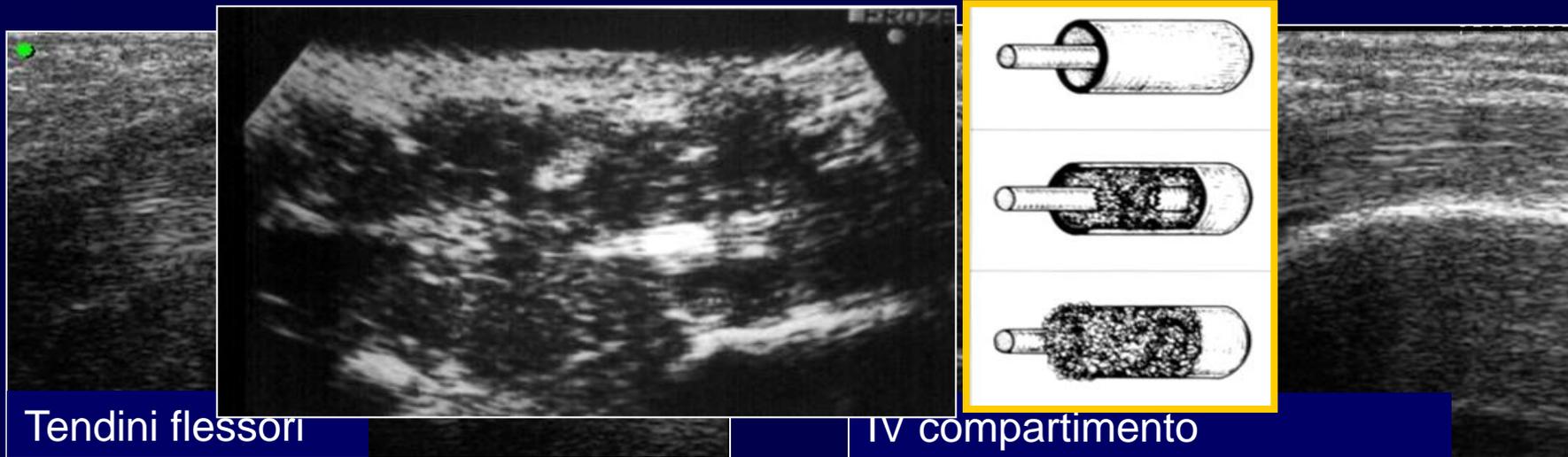
CD e PD possono evidenziare un quadro di ipervascolarizzazione a livello della guaina sinoviale



Pollicis longus flexor tendon

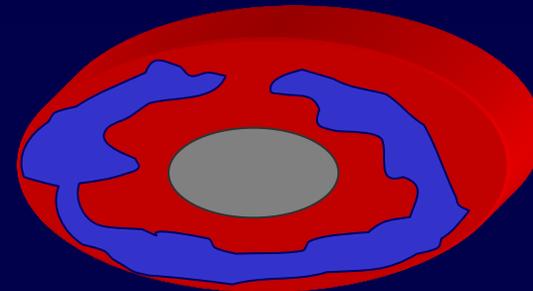
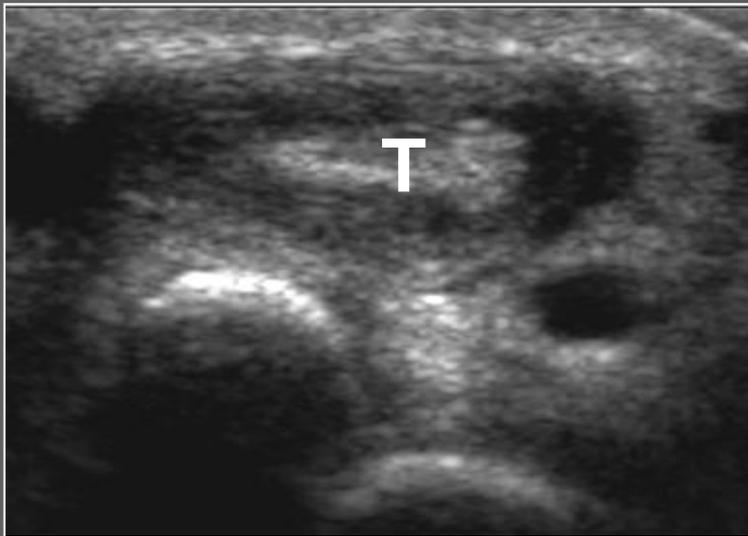
TENOSINOVITE REUMATOIDE: semeiotica US

Sono più frequentemente coinvolti I tendini flessori e il III,IV,V e VI compartimento degli estensori.



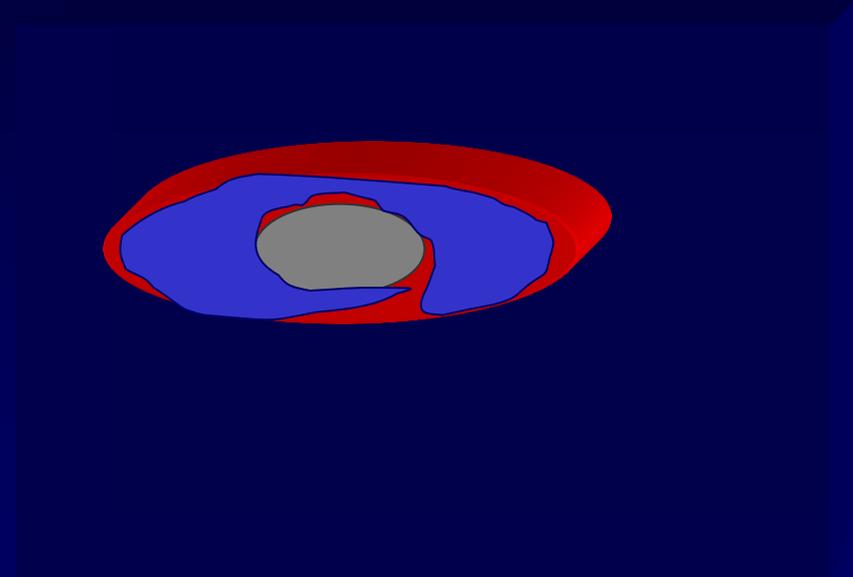
TENOSINOVITE REUMATOIDE: semeiotica US

Versamento vs proliferazione sinoviale



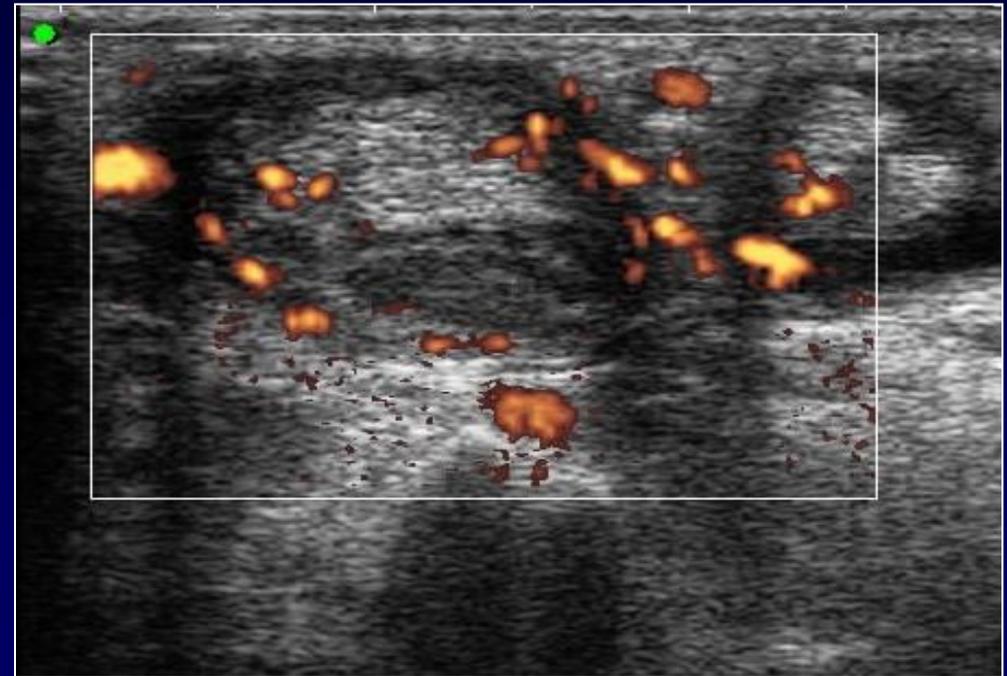
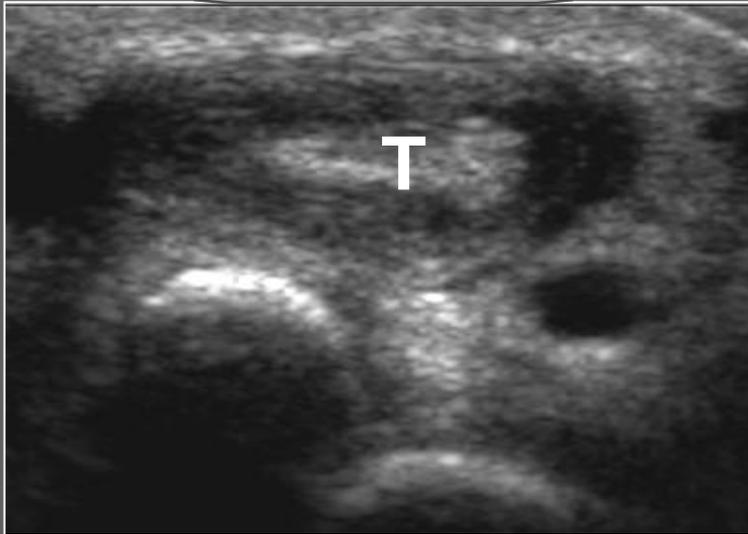
TENOSINOVITE REUMATOIDE: semeiotica US

Versamento vs proliferazione sinoviale

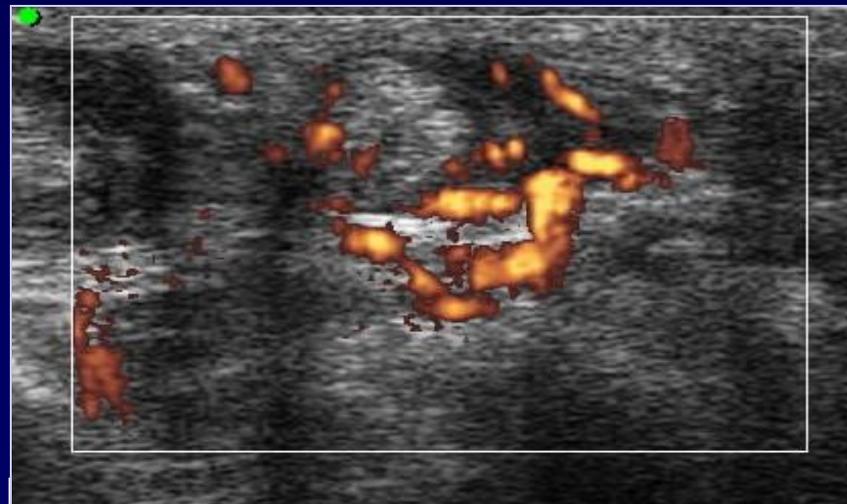
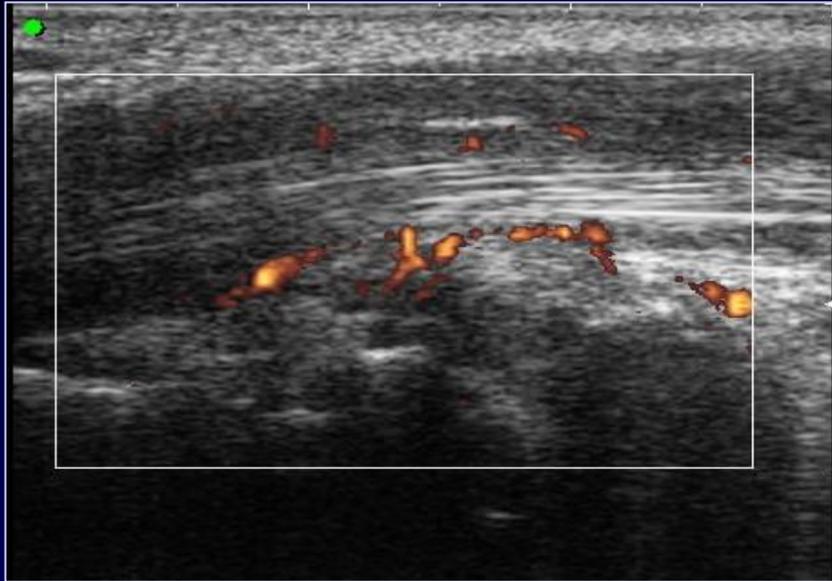


TENOSINOVITE REUMATOIDE: semeiotica US

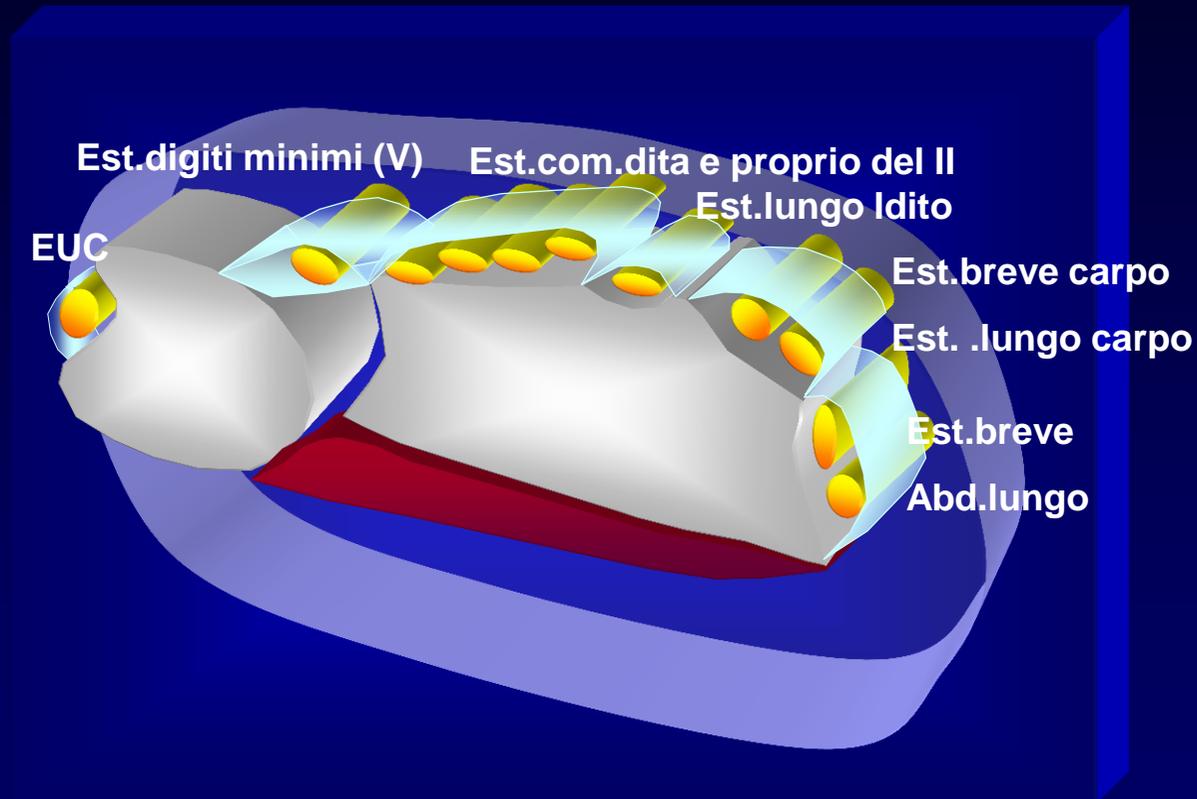
Versamento vs proliferazione sinoviale



TENOSINOVITE REUMATOIDE: semeiotica PD



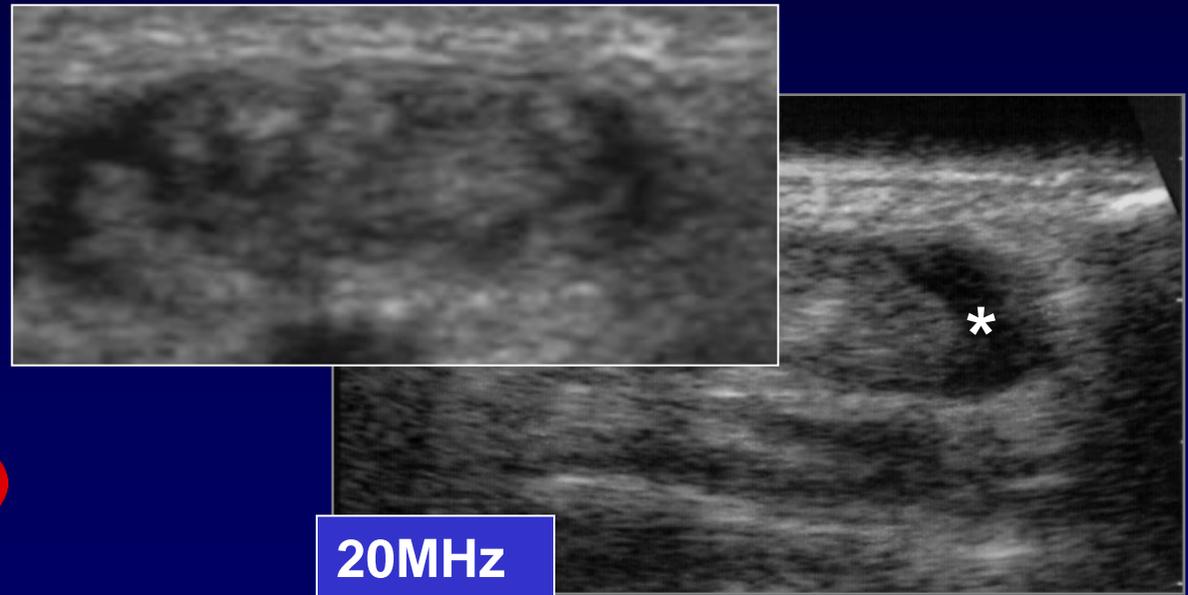
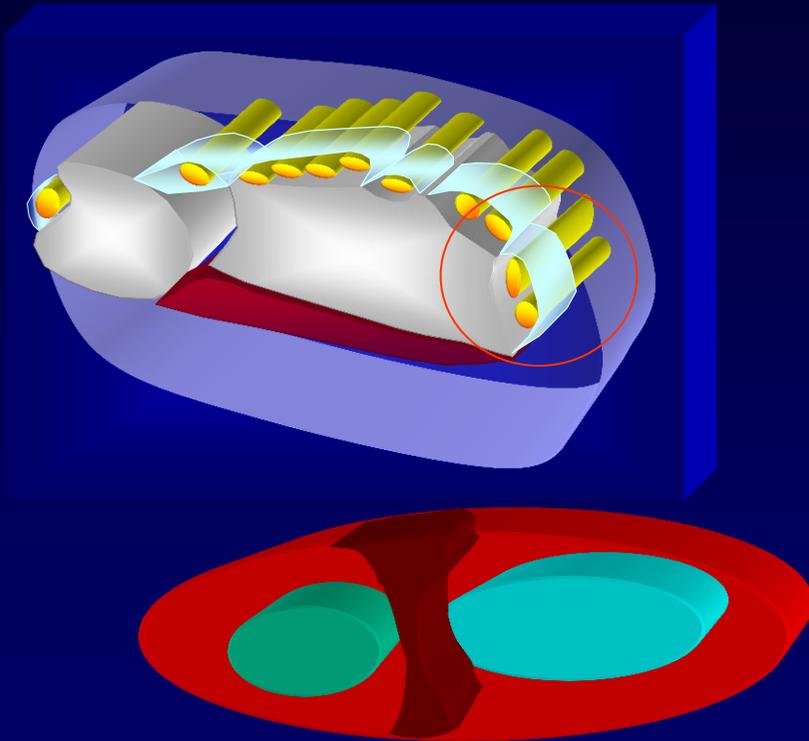
I tendini estensori



I COMPARTIMENTO ESTENSORI

(Abductor pollicis longus-extensor pollicis brevis)

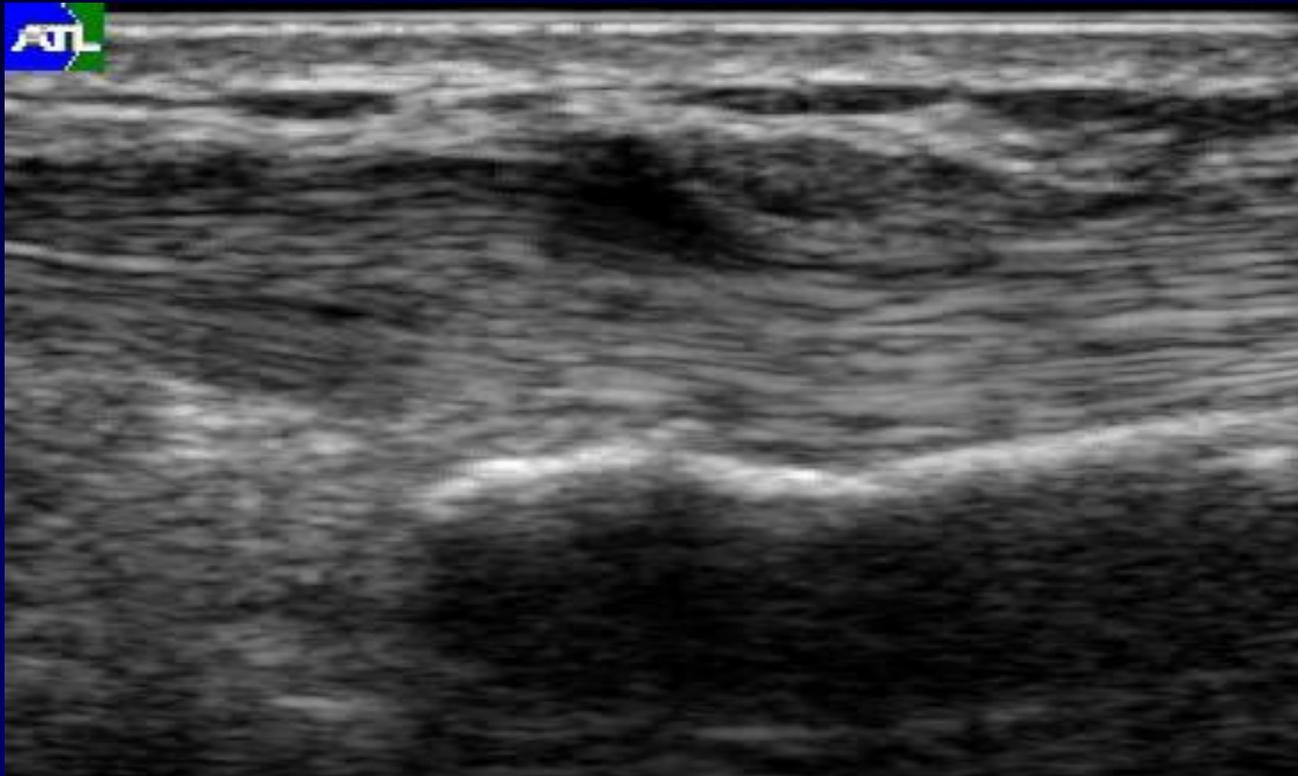
(tenosinovite di De Quervain)



I COMPARTIMENTO ESTENSORI

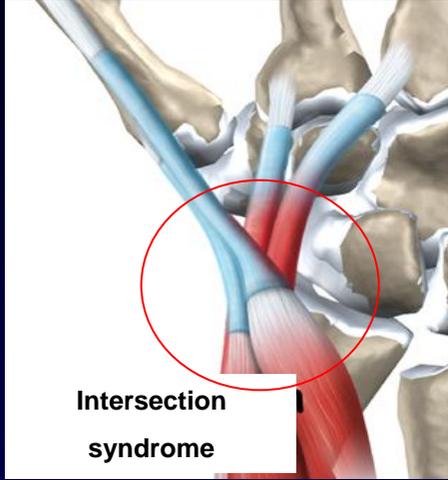
(Abductor pollicis longus-extensor pollicis brevis)

(tenosinovite di De Quervain)



SINDROME DELL'INTERSEZIONE

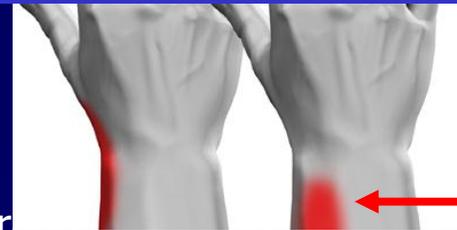
(Tenosinovite del II comp. estensori)

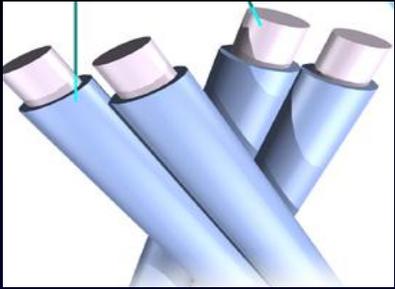


Impingement in corrispondenza dell'intersezione tra I e II compartimento degli estensori (estensori radiale lungo e breve del carpo).



De Quervain Intersection syndrome

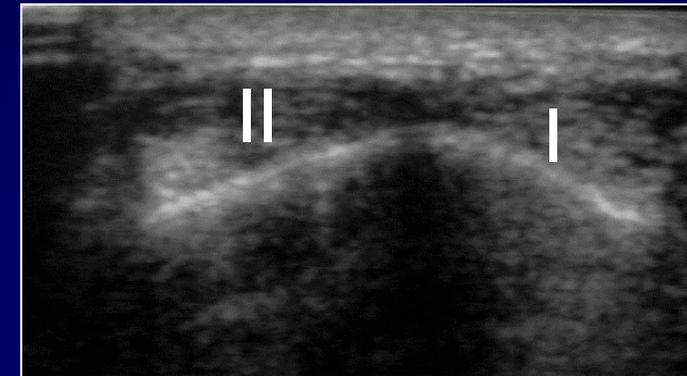
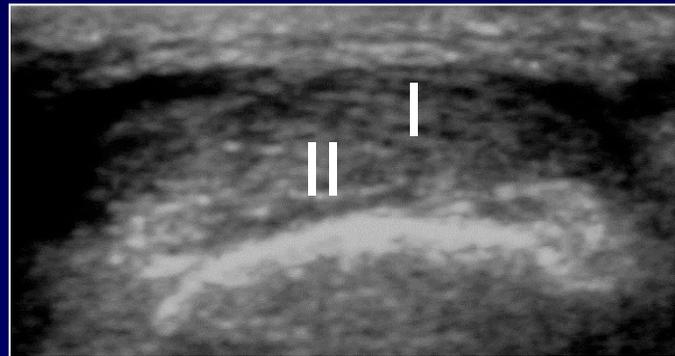
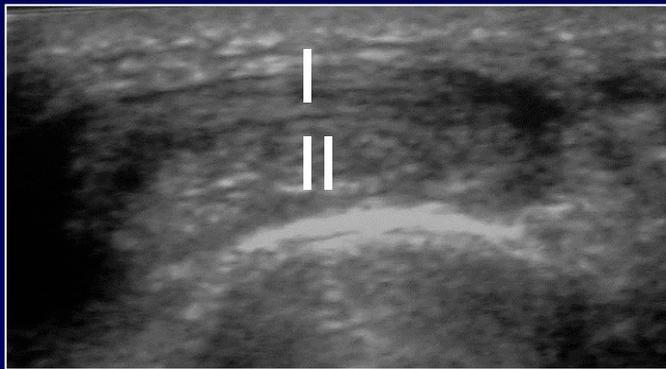




SINDROME DELL'INTERSEZIONE

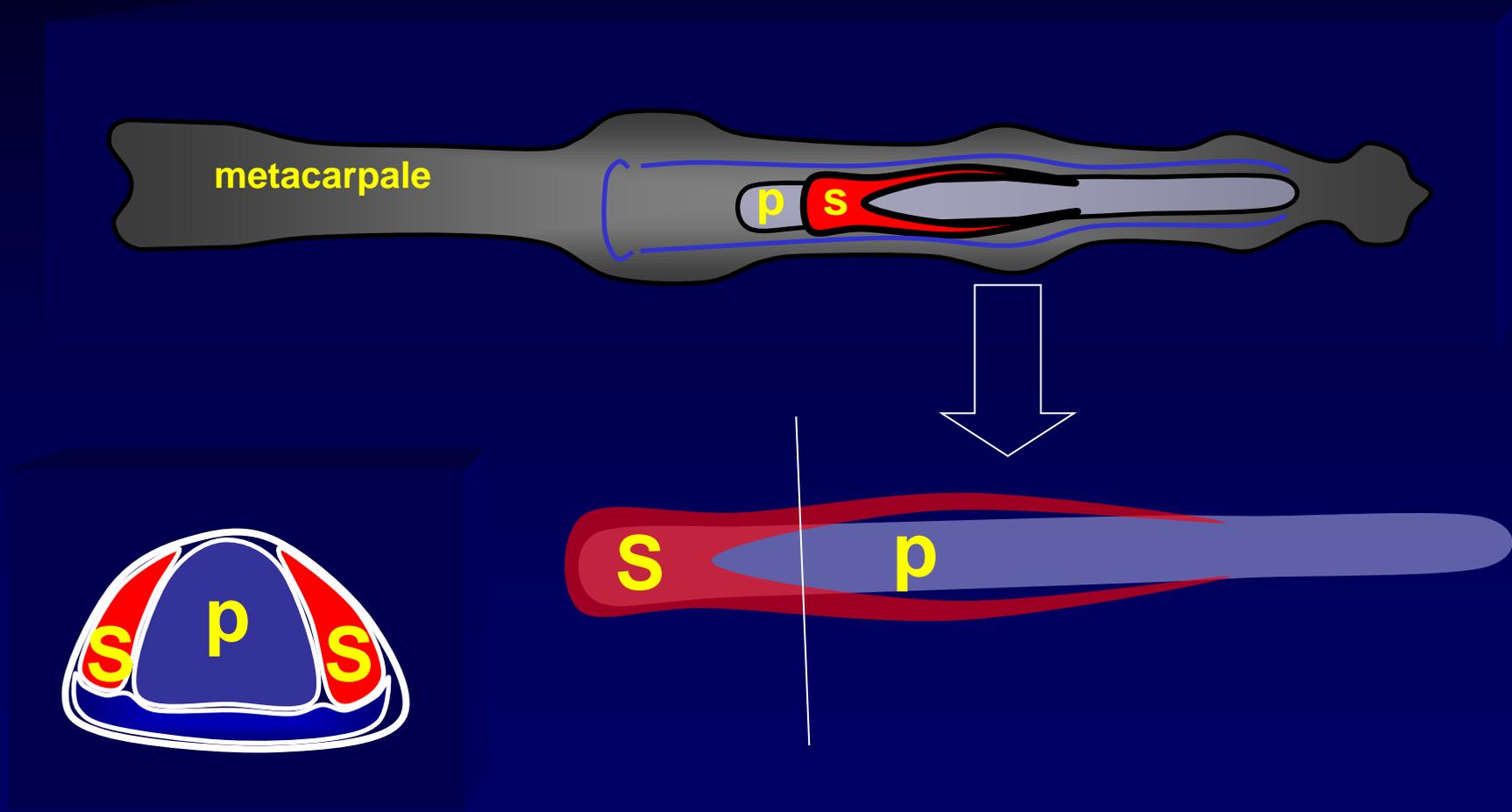
1. Variazioni dei programmi di allenamento.
2. Ripresa degli esercizi dopo un periodo di inattività
3. Esercizi intensi

I and II extensor compartment



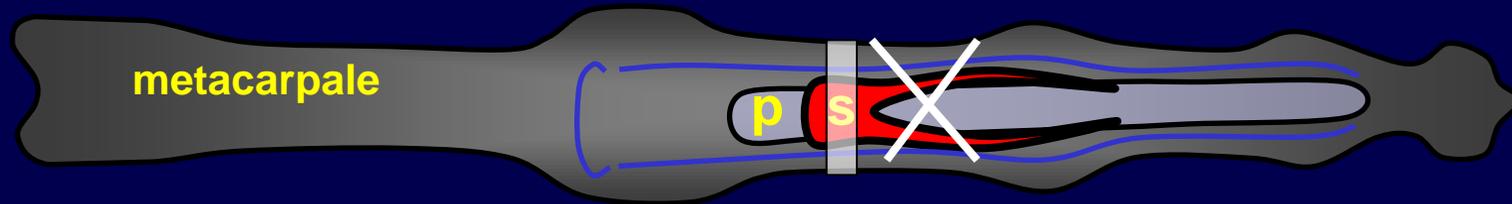
Tendini flessori dita

Legenda: p, tendine flessore profondo; s, tendine flessore superficiale.



Tendini flessori dita

Legenda: p, tendine flessore profondo; s, tendine flessore superficiale.



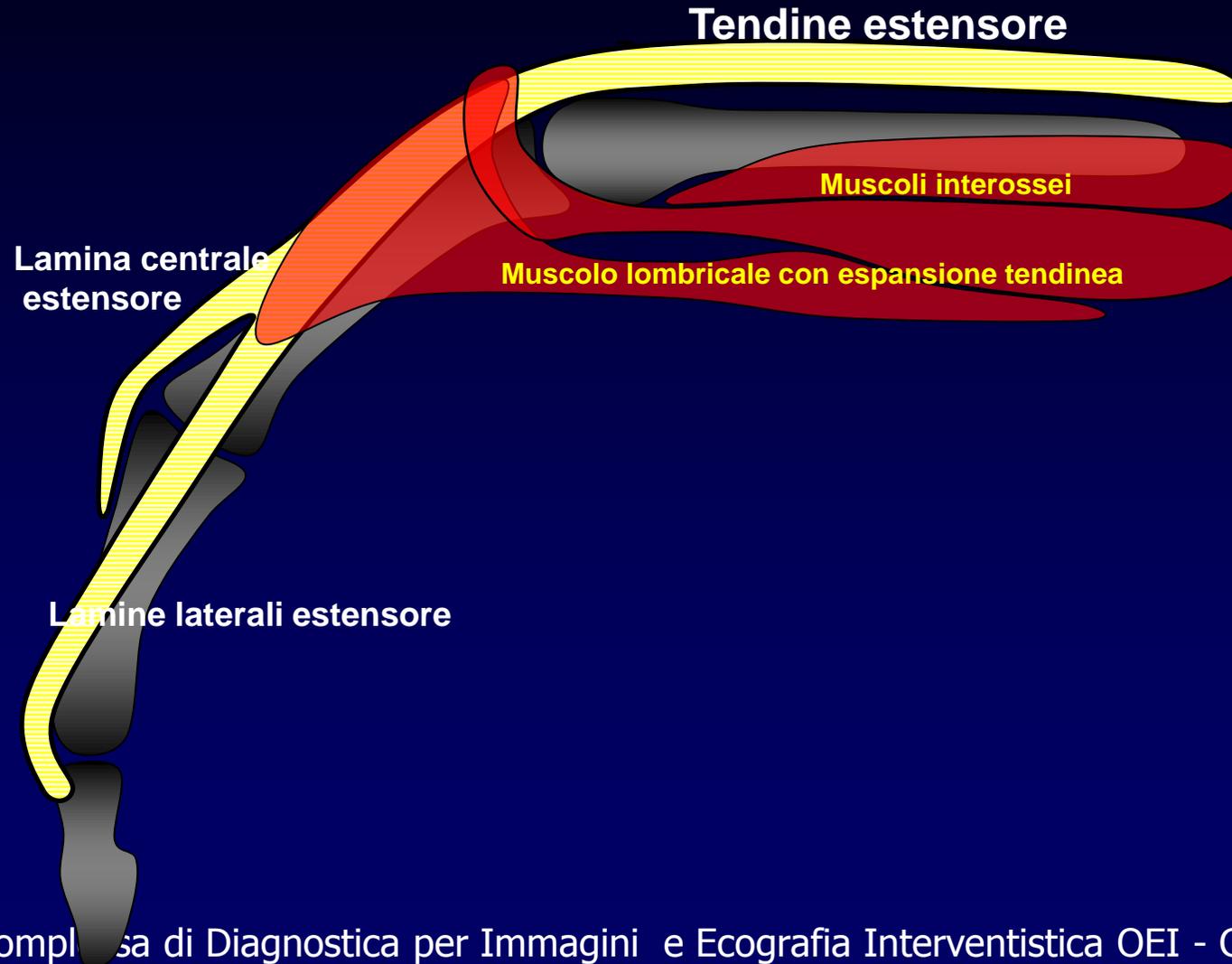
Canale osteofibroso



5 pulegge

4 bande cruciformi

Complesso tendineo estensorio



Strutture di stabilizzazione passiva



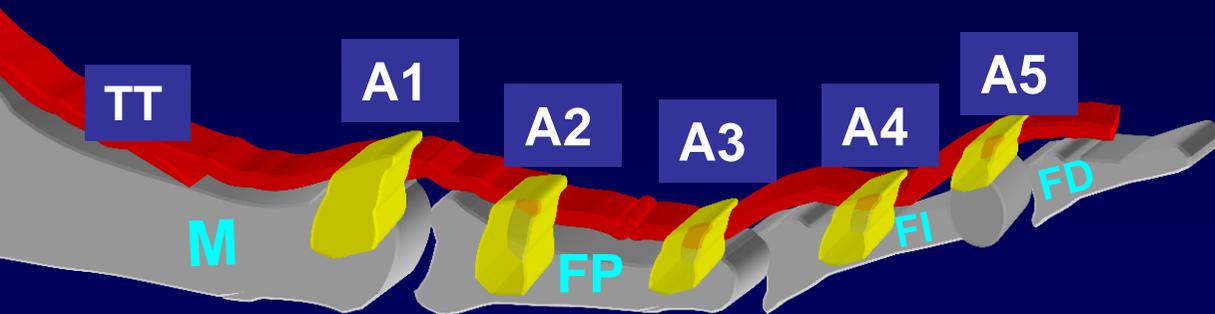
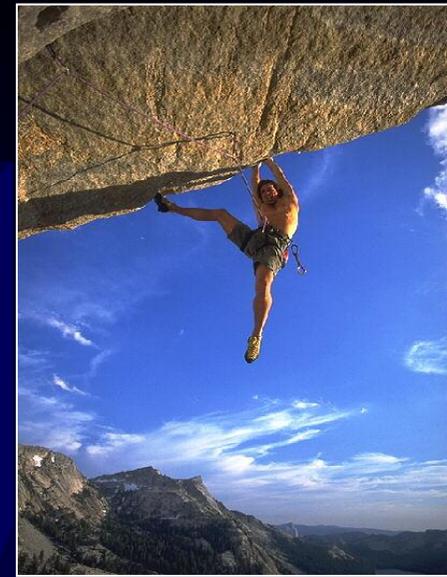
complesso legamentoso
“tridimensionale” costituito dai
legamenti collaterali e da una
componente volare (box-complex)

“CLIMBER’S FINGER”

A livello delle dita si configura un particolare complesso biomeccanico che consente un ottimale scorrimento dei tendini flessori costituito da:

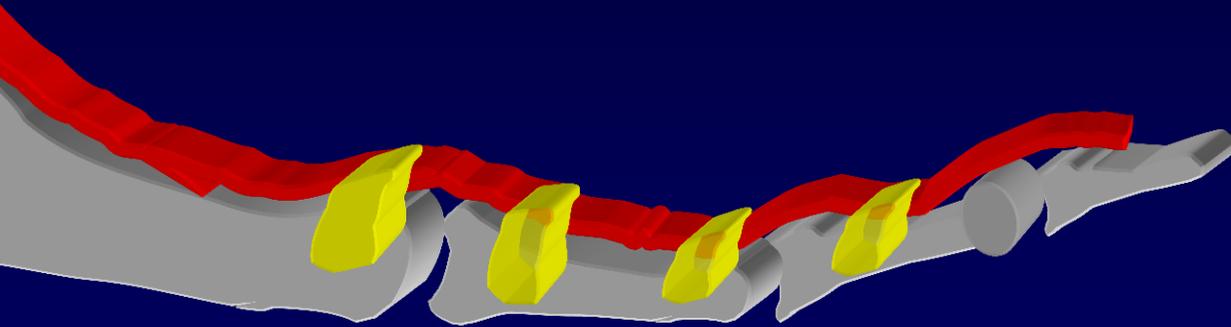
5 pulegge e 3 bande cruciformi localizzate lungo le guaine.

Una ipersollecitazione delle pulegge causa la rottura delle stesse e conseguente sintomatologia dolorosa.



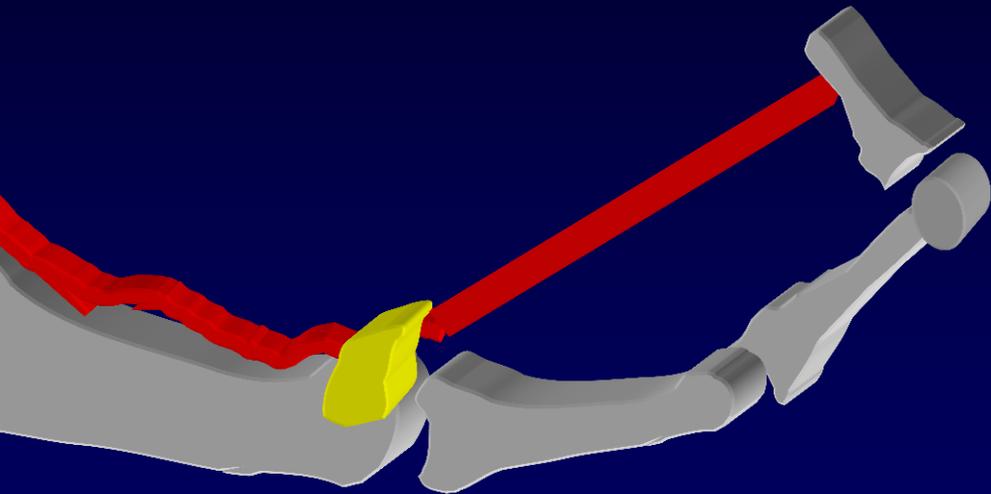
POLSO

“CLIMBER’S FINGER”



POLSO

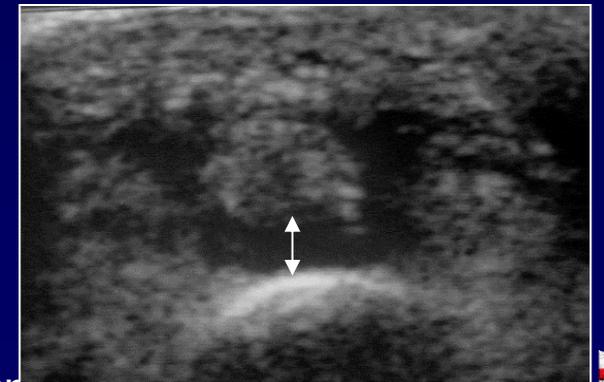
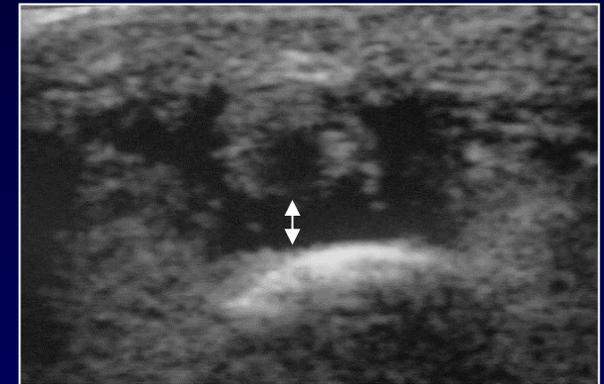
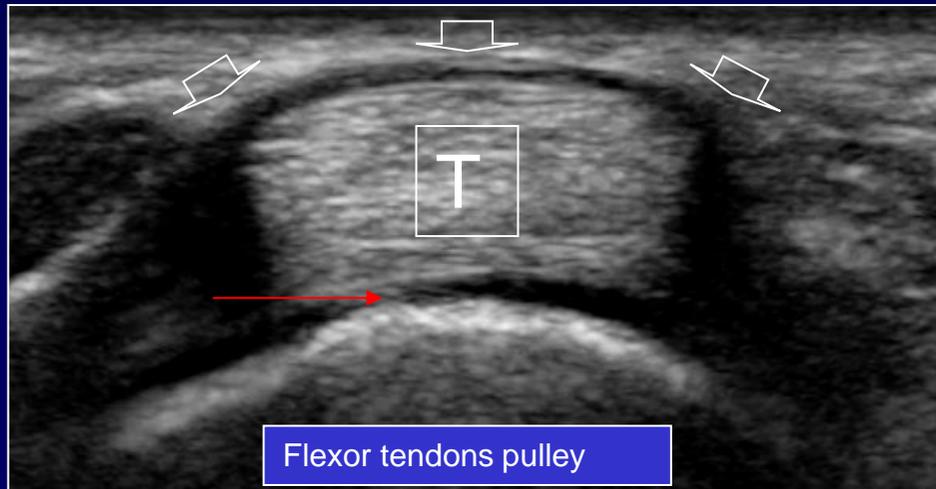
“CLIMBER’S FINGER”

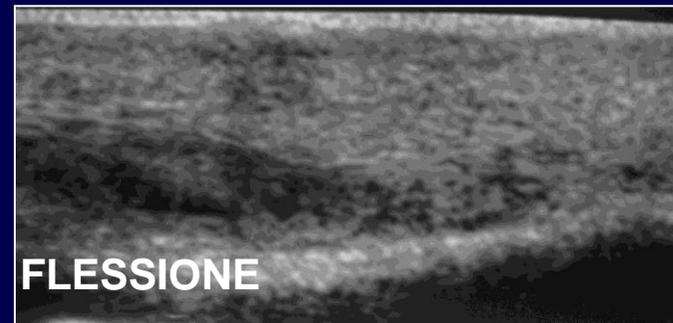
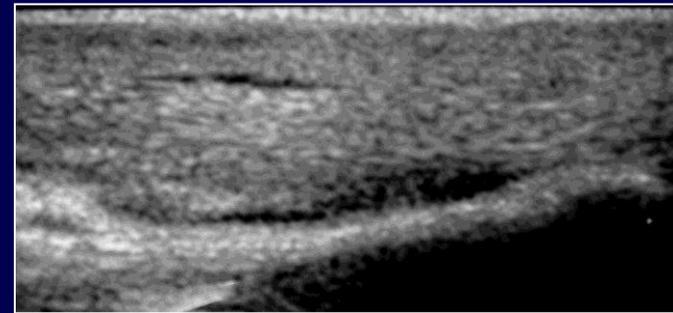


“CLIMBER’S FINGER”



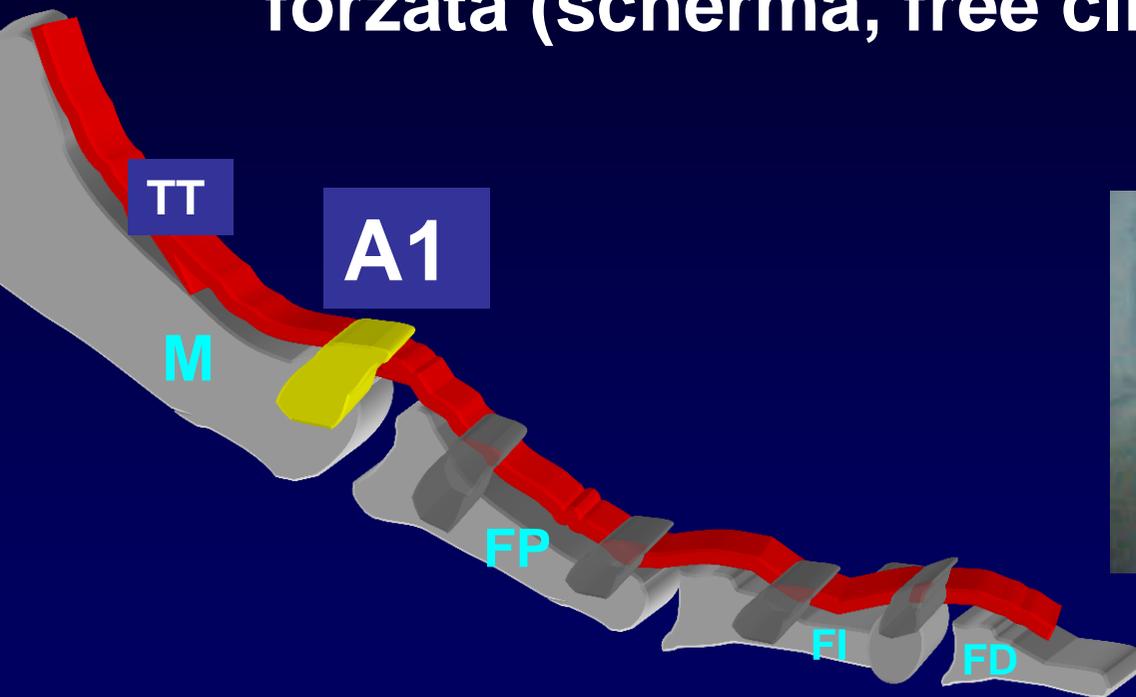
L'ecografia dinamica ad alta risoluzione può essere utilizzata nel sospetto di rottura delle pulegge.





“TRIGGER FINGER”

Il dito a scatto si riscontra negli sport che prevedono una posizione della mano in prensione forzata (scherma, free climbing, tennis, golf)

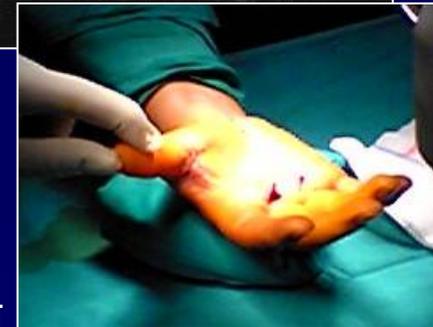
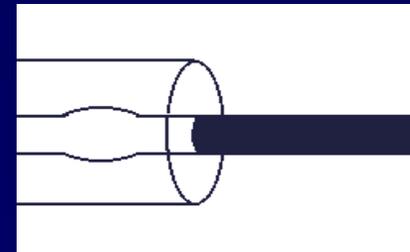
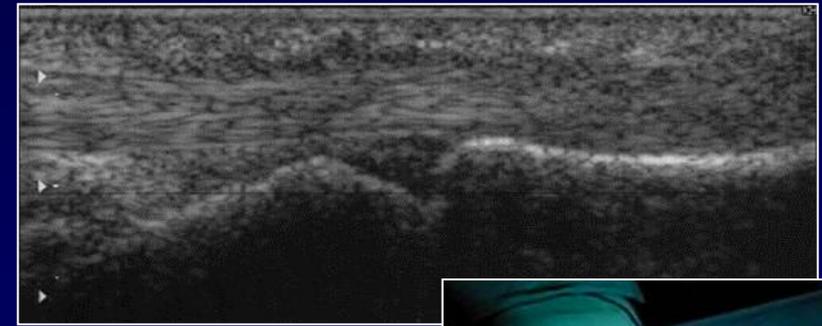
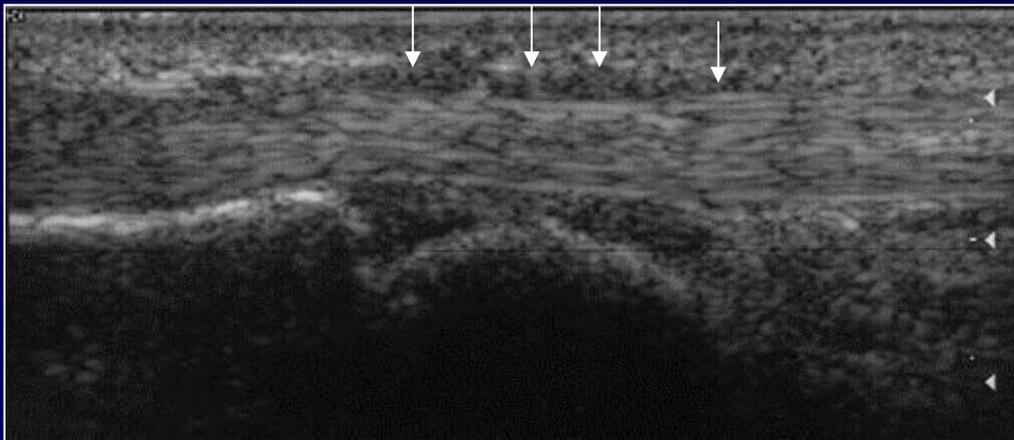


Tenosinovite cronica stenosante – A1

“TRIGGER FINGER”

Semeiotica US:

1. Ispessimento tendineo,
2. Area nodulare superficialmente ai tendini flessori prossimalmente ad A1.
3. Ispessimento della guaina tendinea con fluido (eventuali piccole cisti peritendinee).

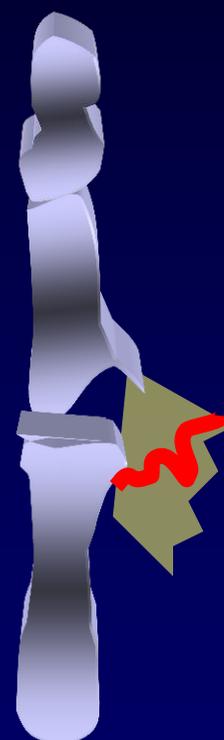
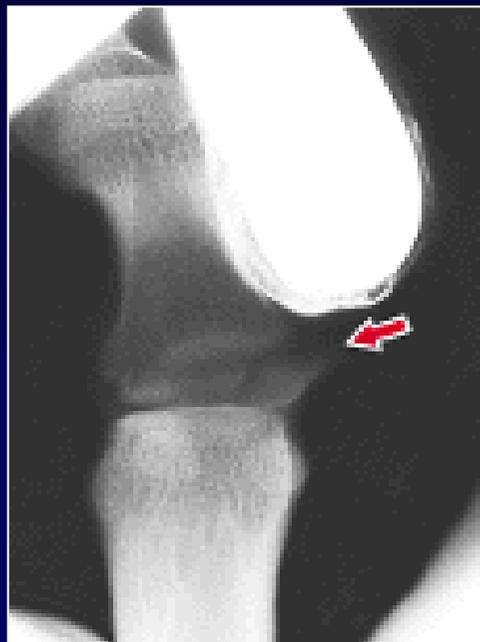
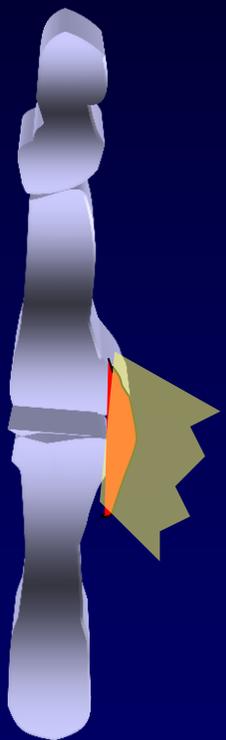




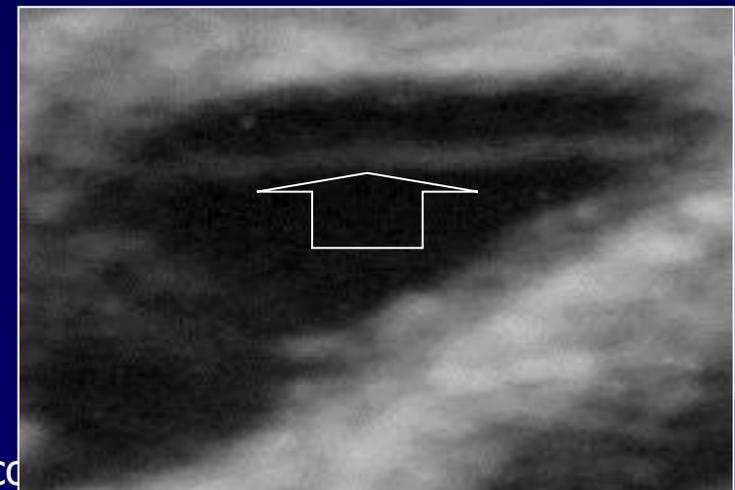
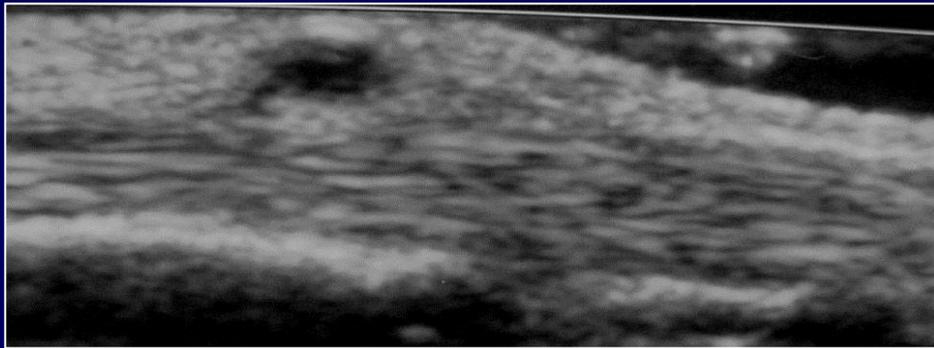
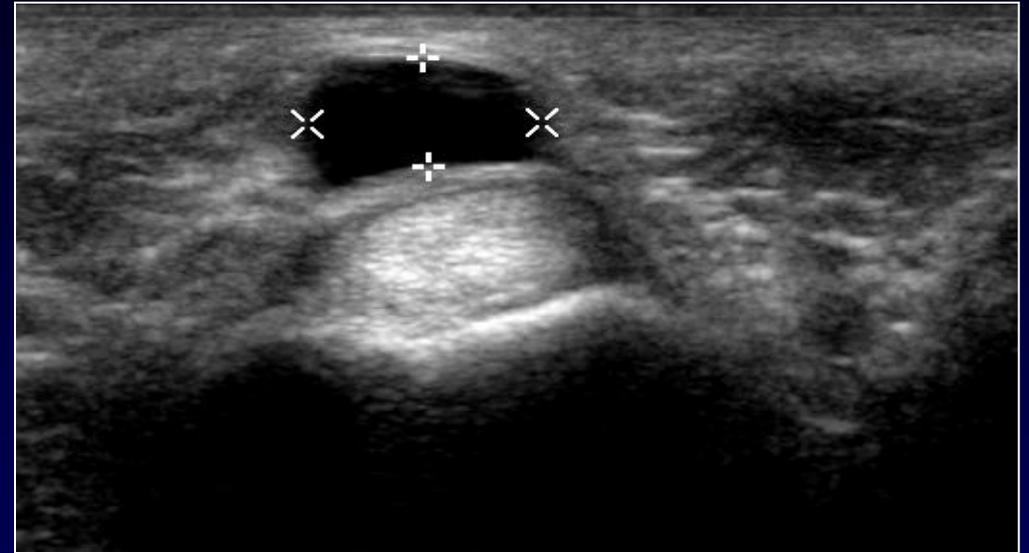
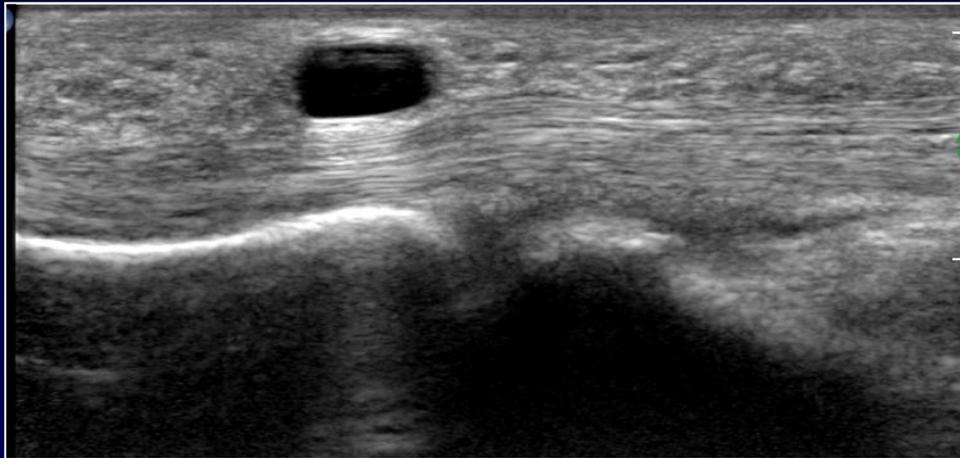
POLSO

“SKIERS THUMB”

LCU DELLA I METACARPOFALANGEA



CISTI TENDINEE

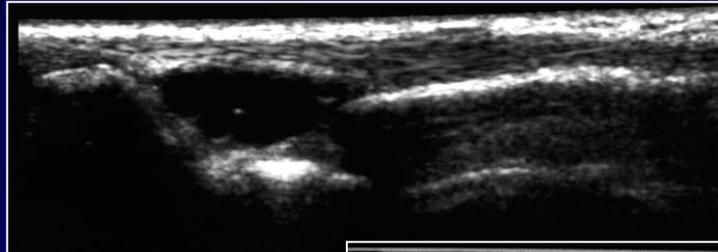
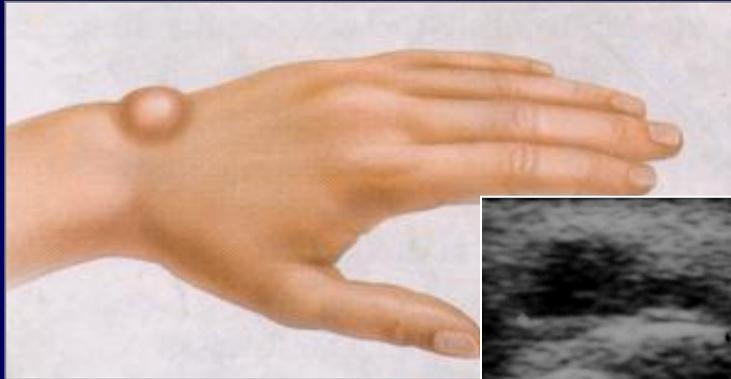


Cisti ganglionari

localizzazioni

Adiacenti ad articolazioni o tendini

Articolazione SL (60-70%)



Cisti ganglionari

localizzazioni

Adiacenti ad articolazioni o tendini

Articolazione radioscafoidea e pisopiramidale
(18-20%)

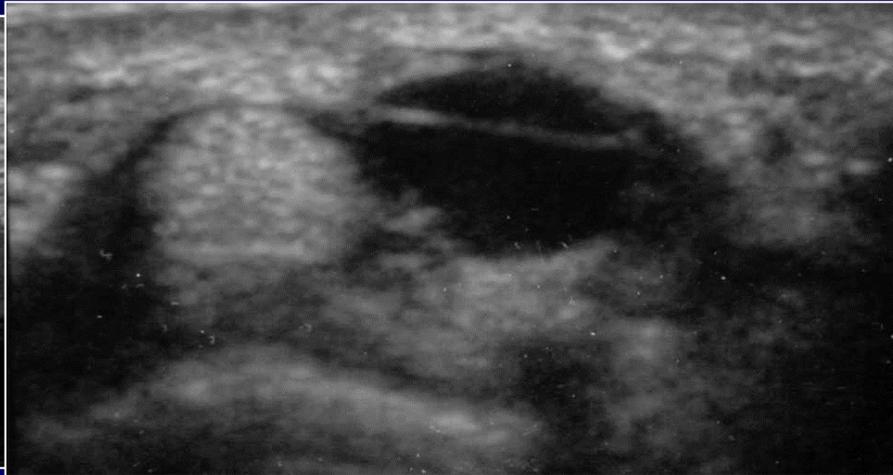
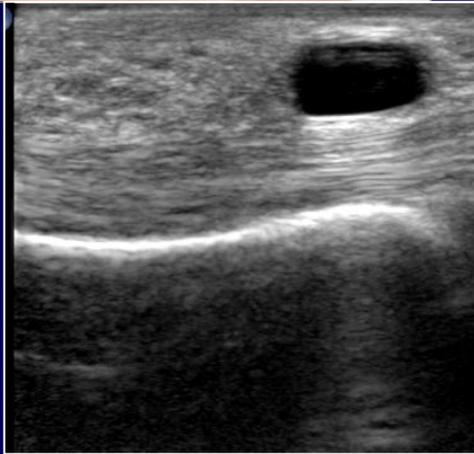
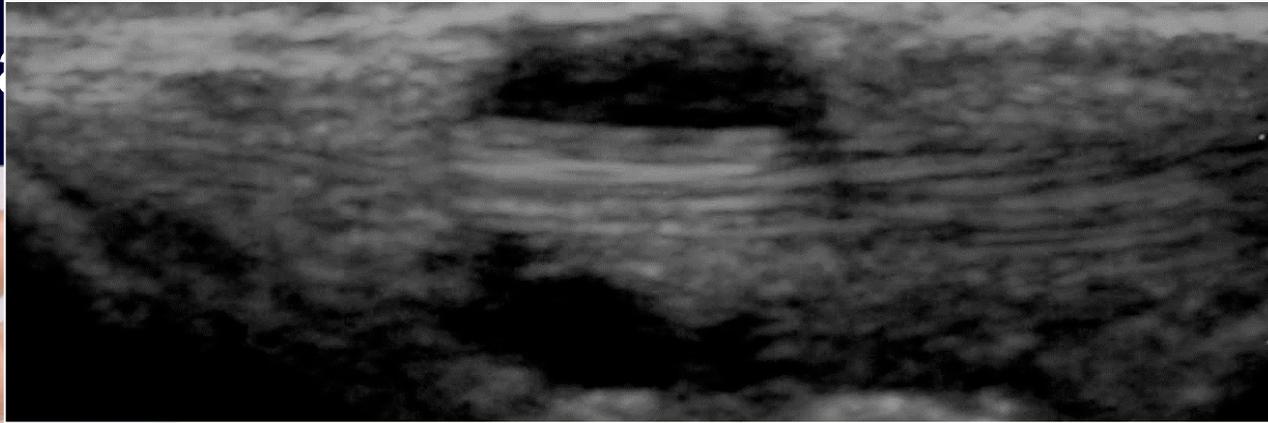


POLSO

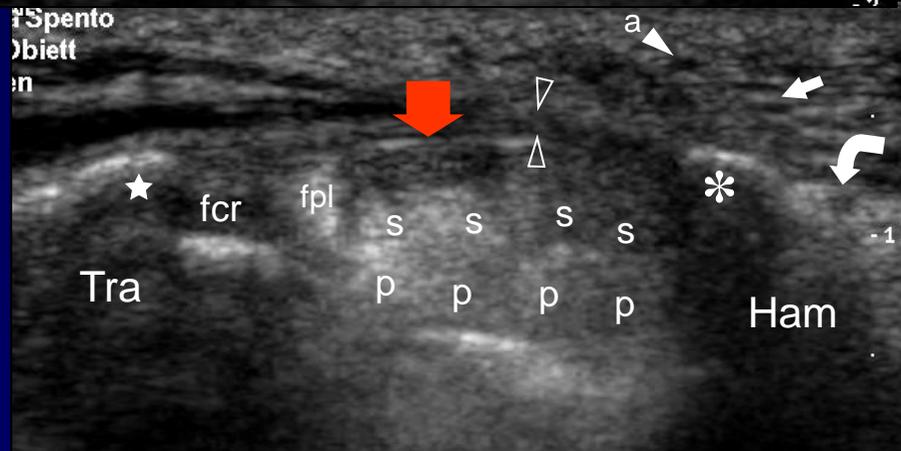
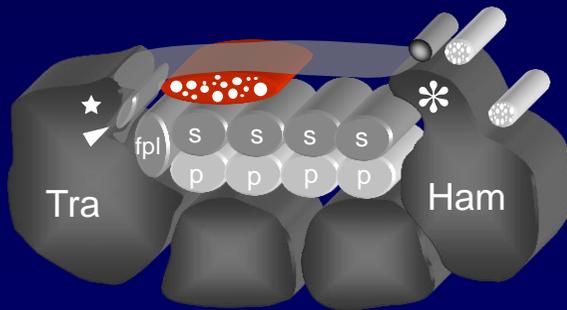
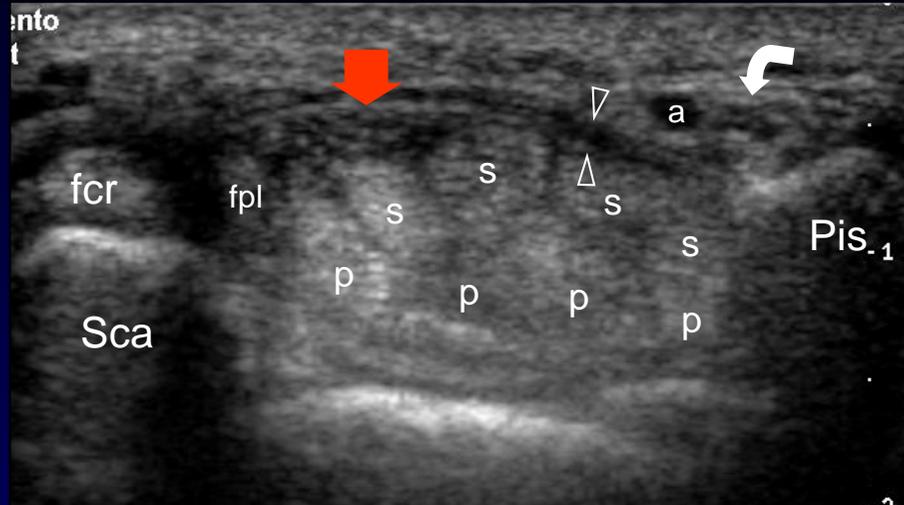
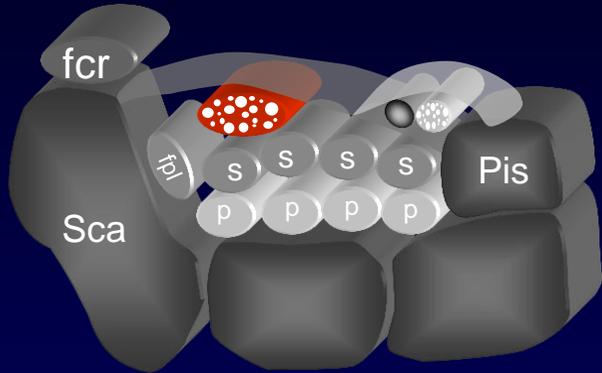
Cisti ganglionari

localizzazioni

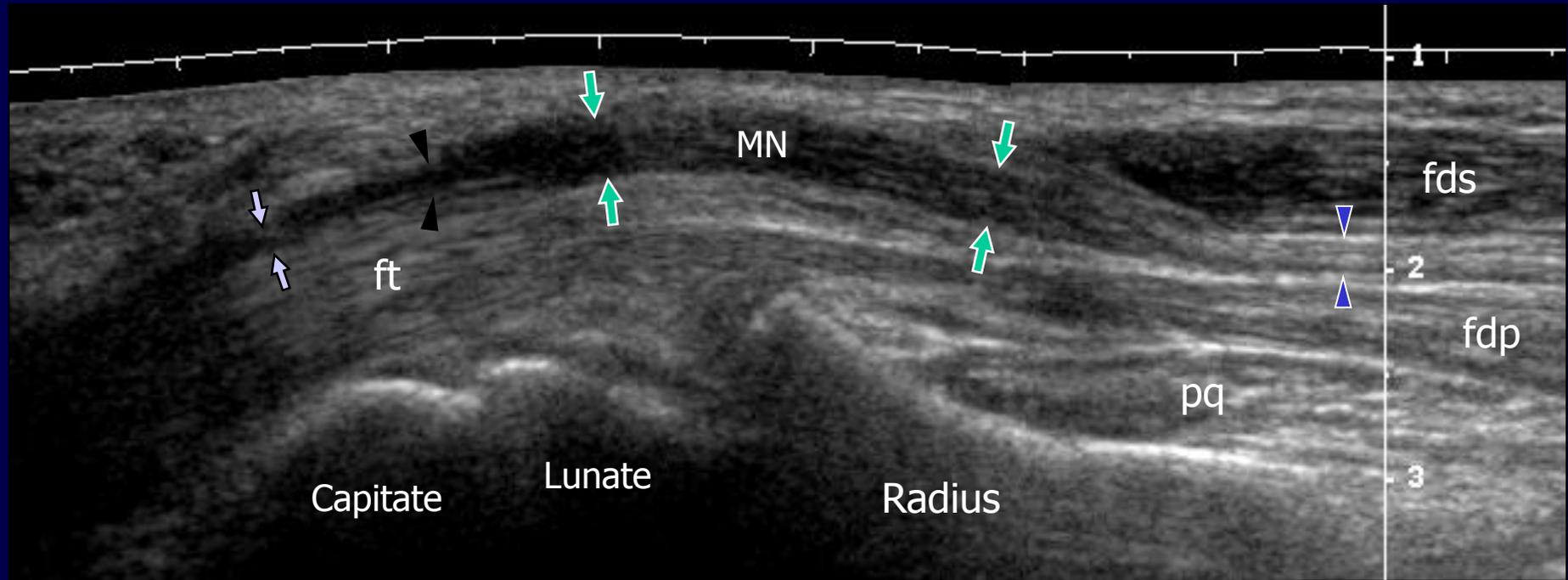
Adi



Canale carpale



Carpal Tunnel Syndrome

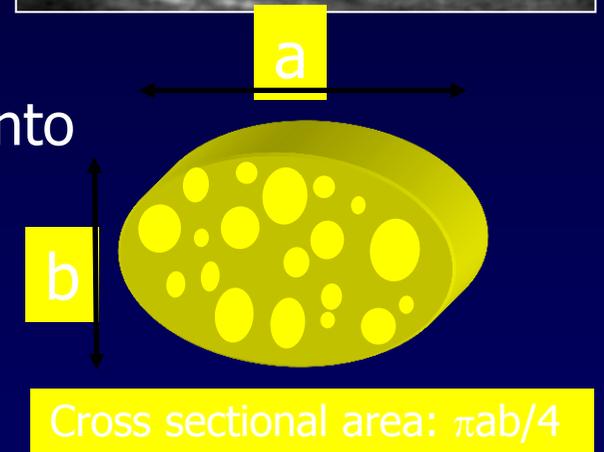
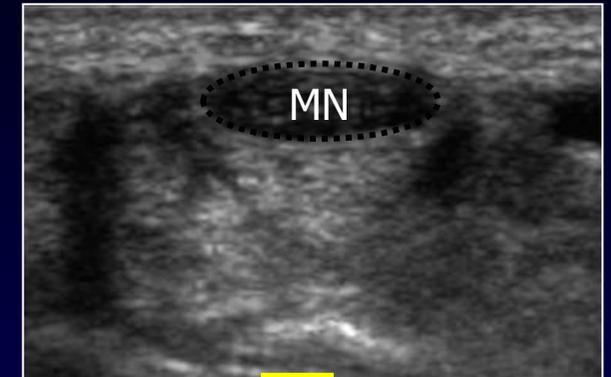


Carpal Tunnel Syndrome

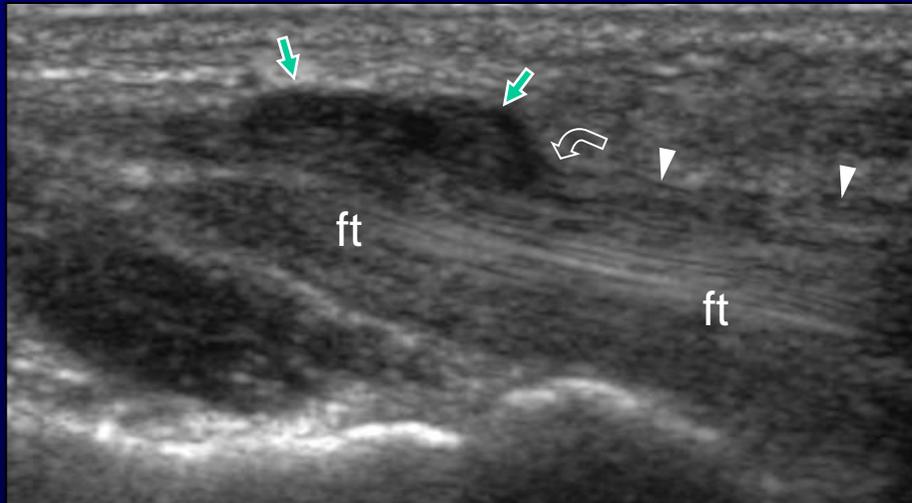
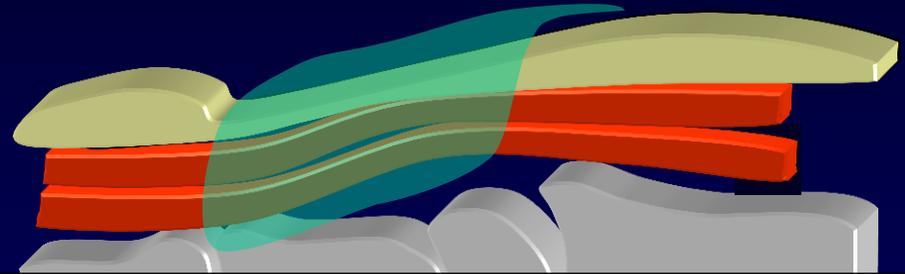
Analisi quantitativa

■ Ispessimento nervo mediano prossimalmente al retinacolo

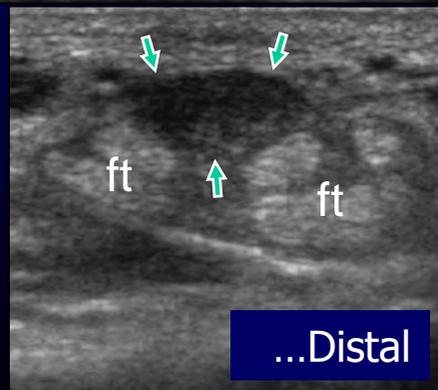
- utilizzare piani trasversali
- utilizzare il software per calcolare l'area
- Misurare il nervo nella sede di massimo ispessimento
- Valori soglia ?
 - ➔ nervo mediano [$\geq 9\text{mm}^2$; $\geq 10\text{mm}^2$; $\geq 15\text{mm}^2$]



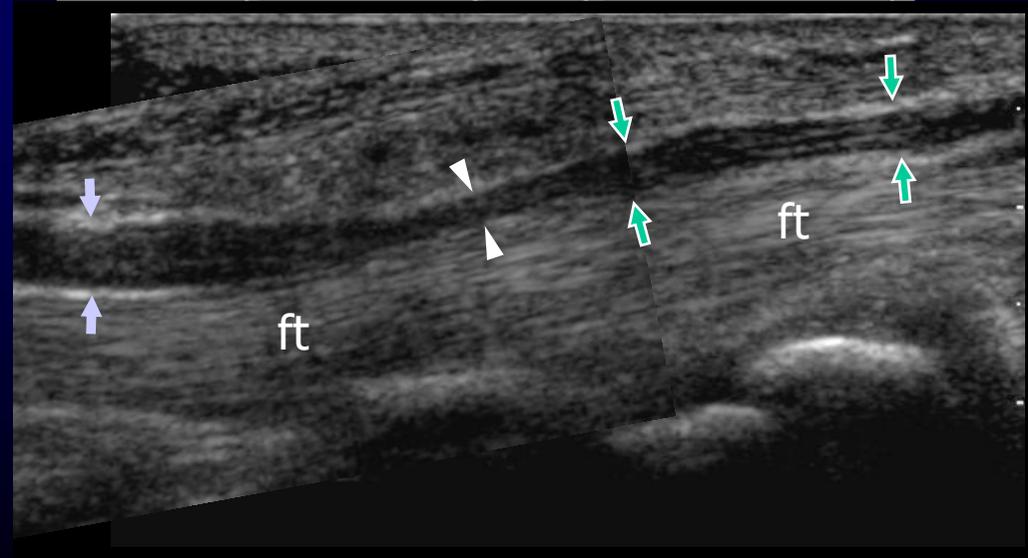
Carpal Tunnel Syndrome



Proximal...



...Distal

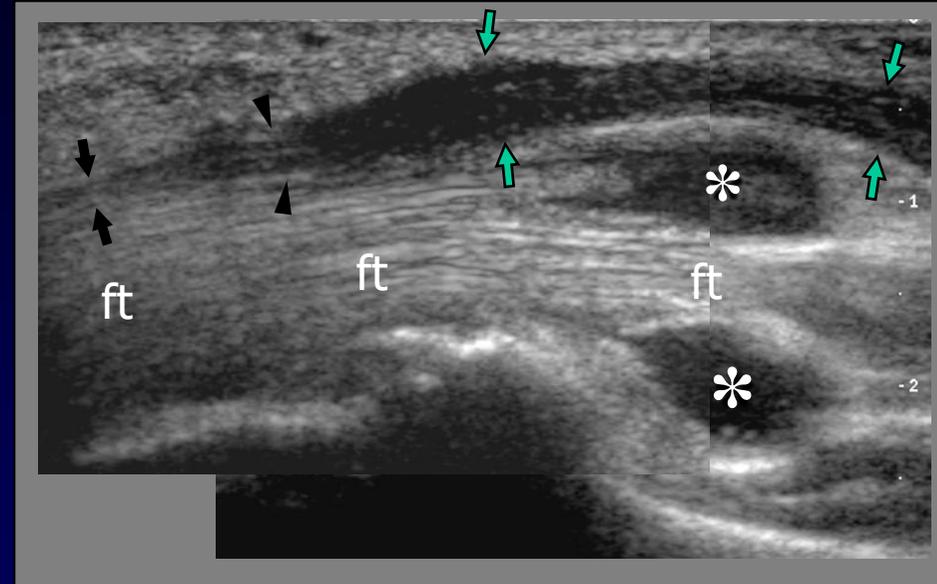
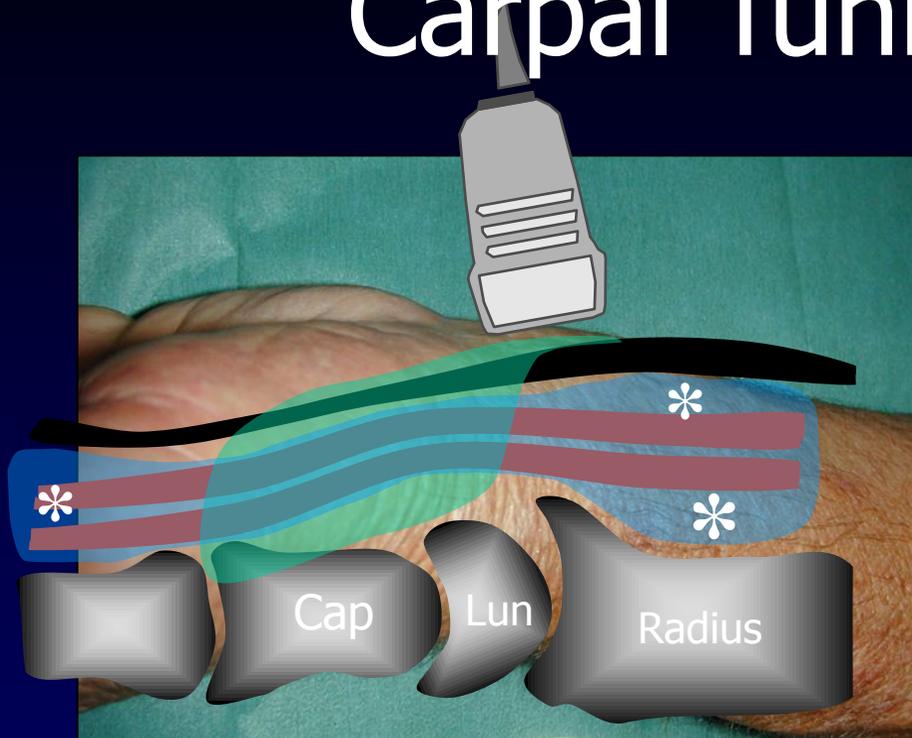


...Loggia and Interventions 2011 Genova



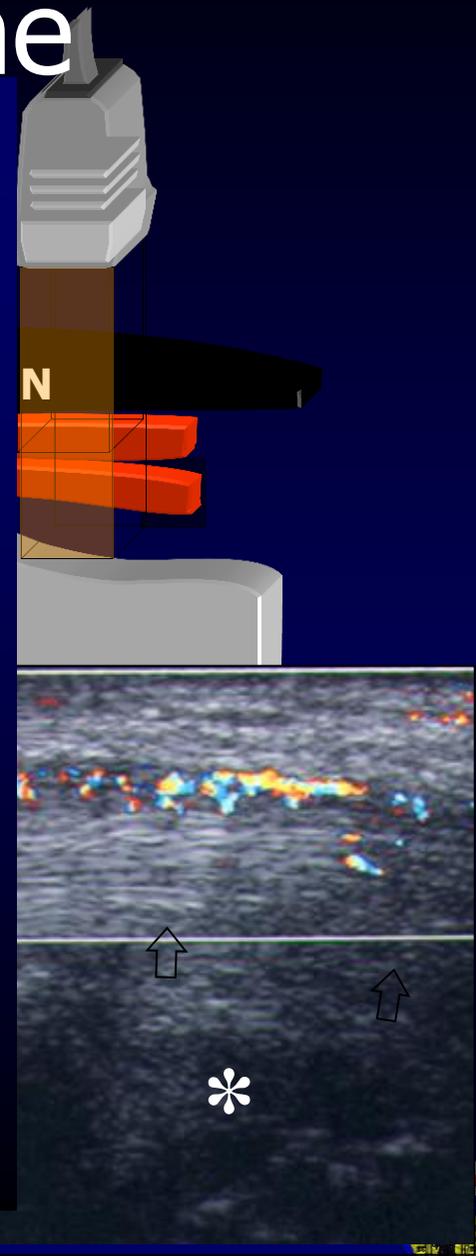
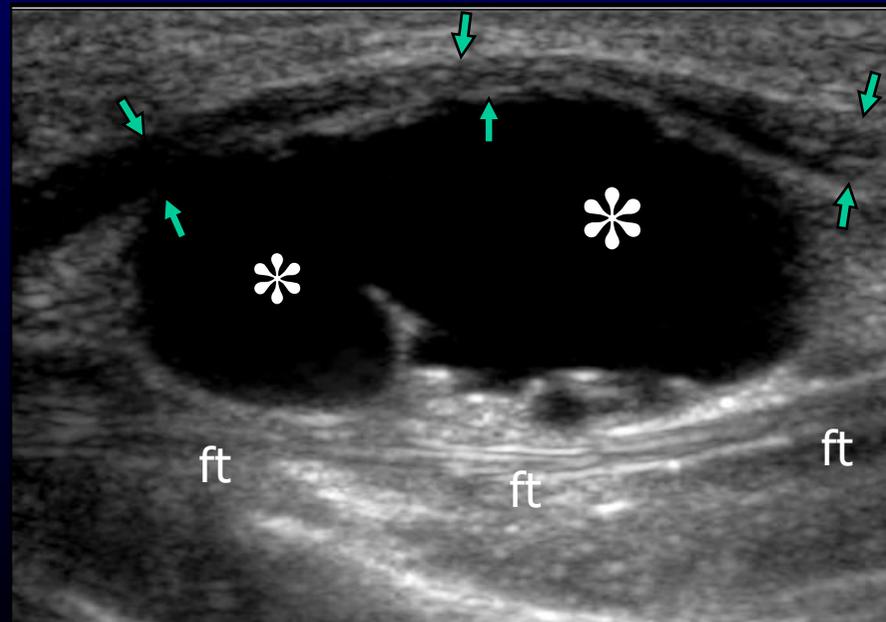
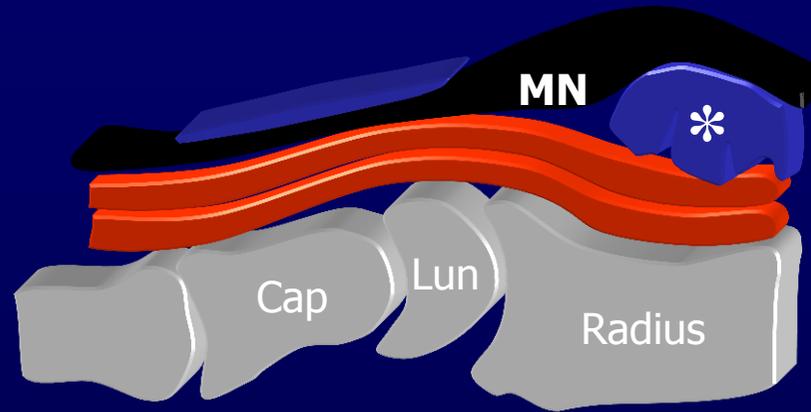
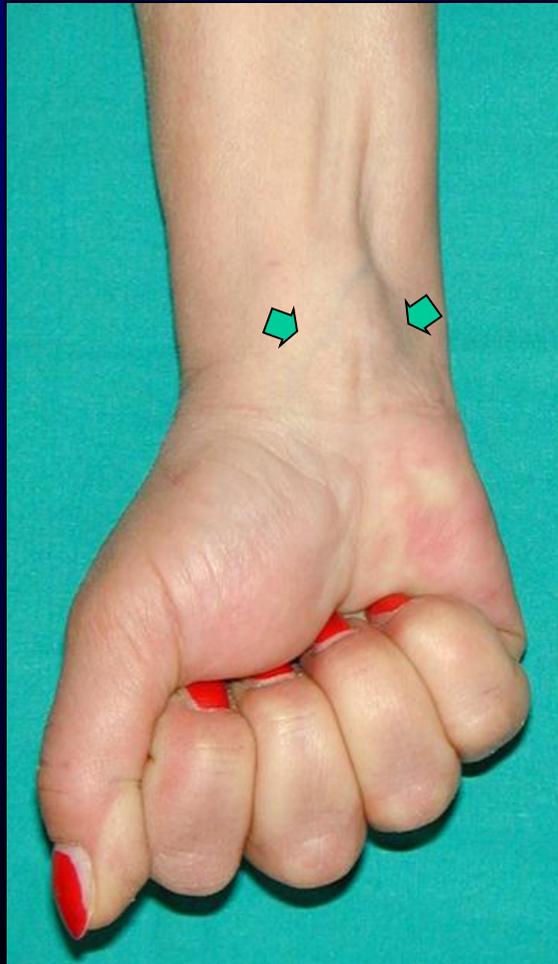
Carpal Tunnel Syndrome

Tenosinovite dei flessori



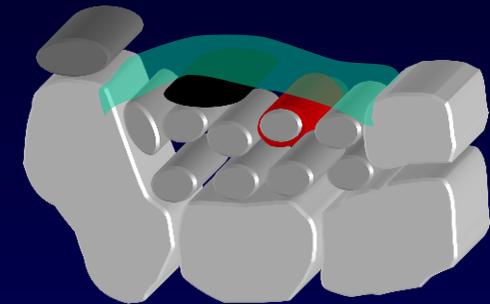
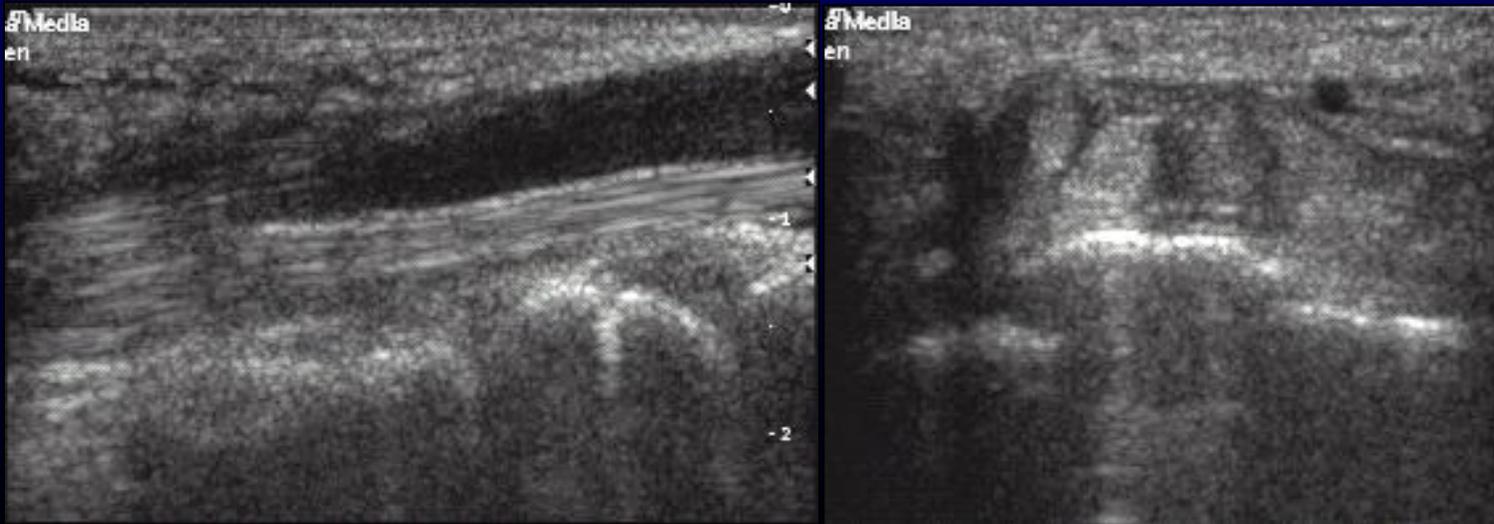
Carpal Tunnel Syndrome

gangli

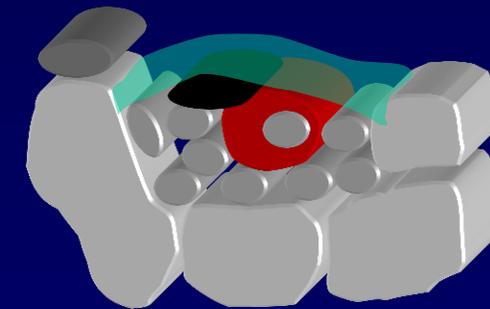


Carpal Tunnel Syndrome

Ventre muscolare anomalo del flessore superficiale delle dita

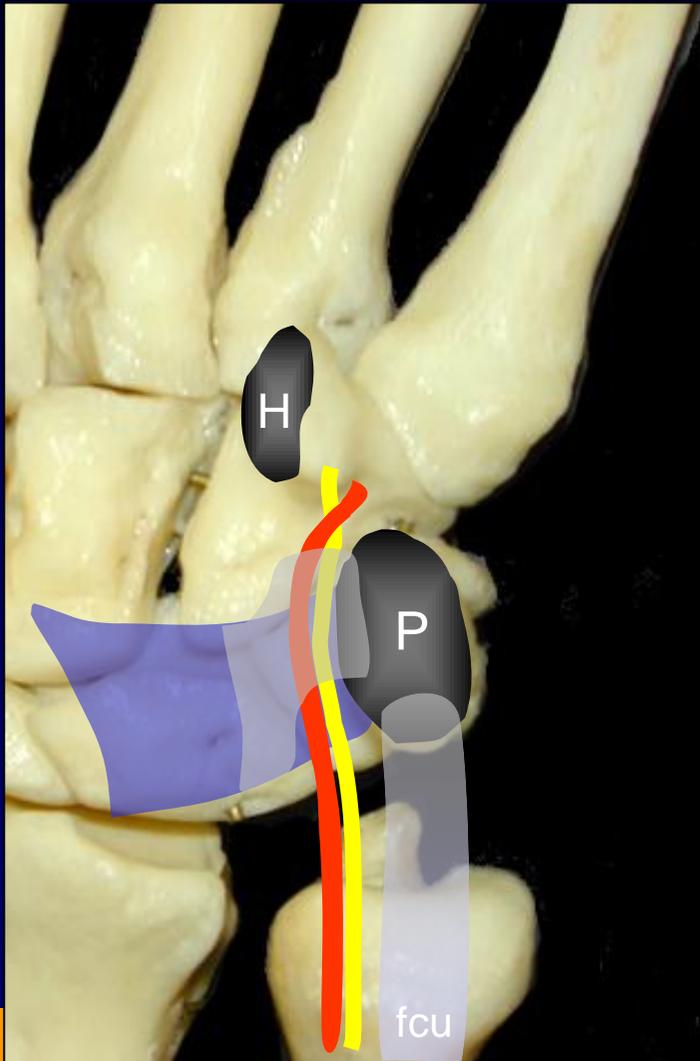


Flexion

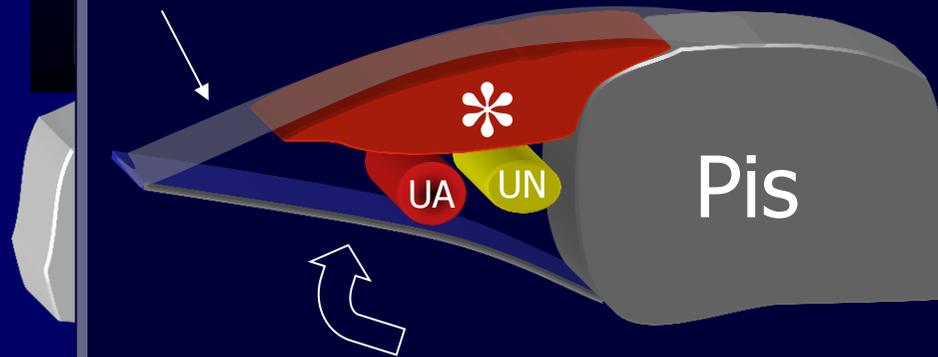
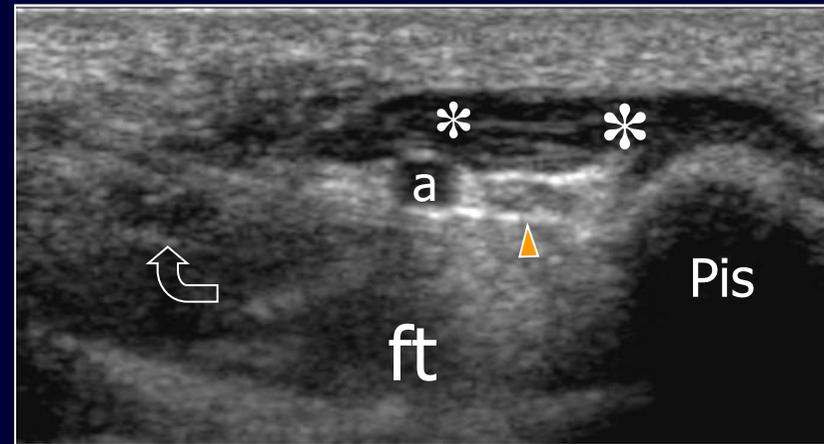


Extension

Canale di Guyon



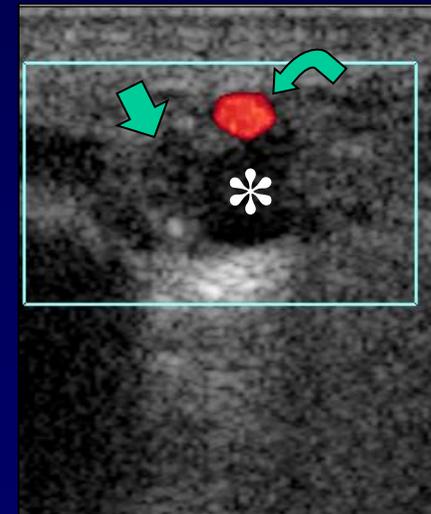
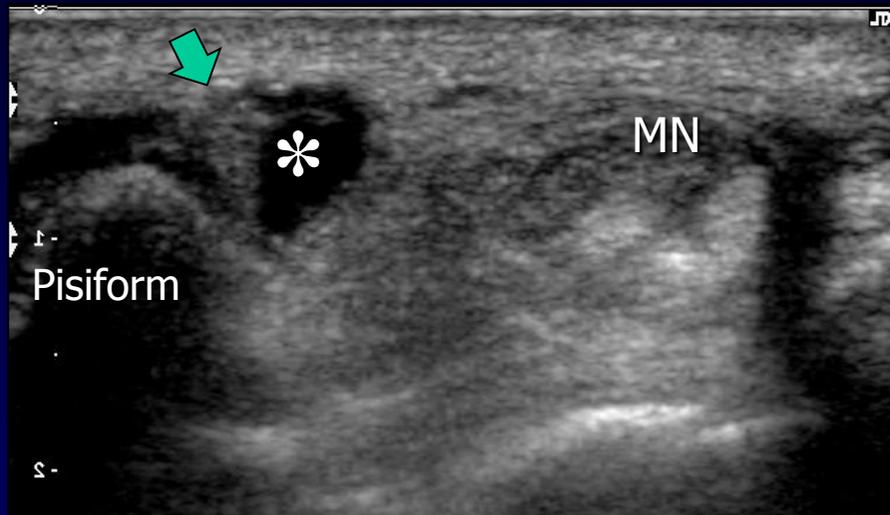
Abductor digiti minimi



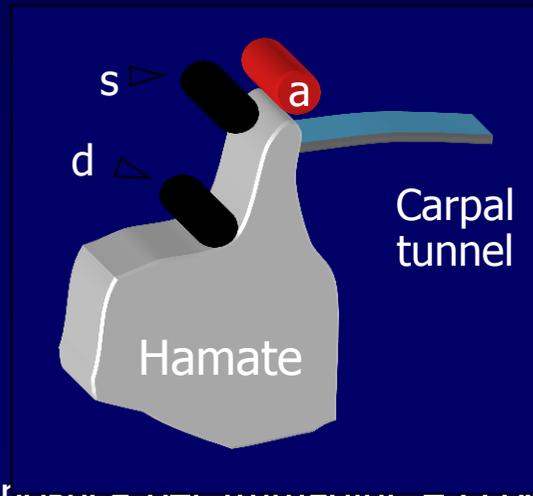
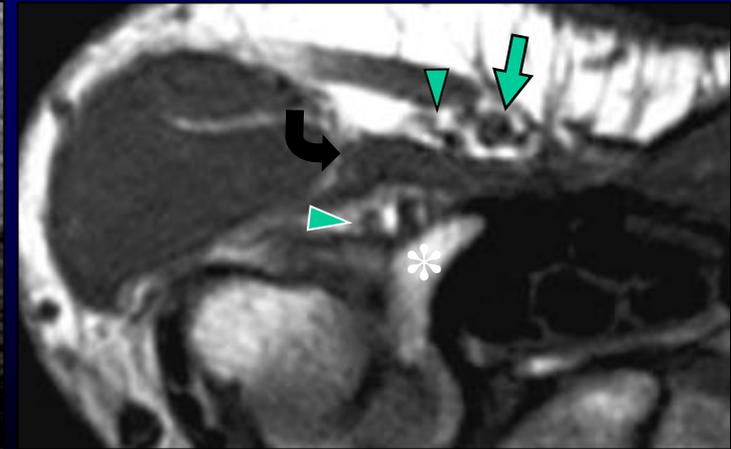
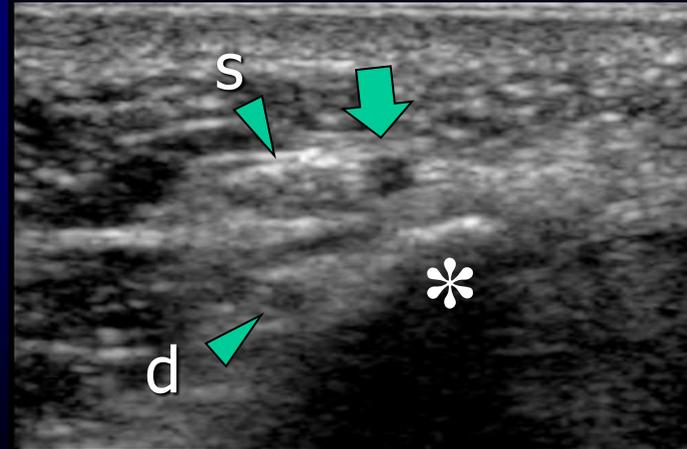
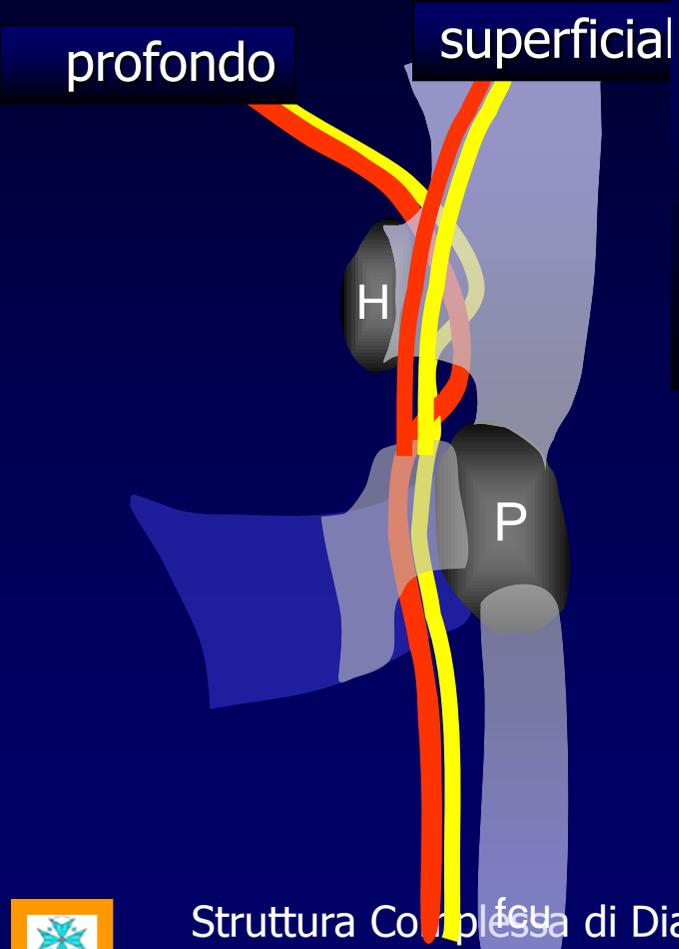
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Guyon Tunnel Syndrome



Canale di Guyon



Grazie per la vostra attenzione !

