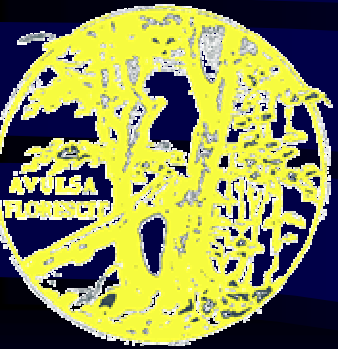


LESIONI DEL LEGAMENTO CROCIATO POSTERIORE



ALBERTO VENTURA

ISTITUTO ORTOPEDICO G. PINI



LEG. CROCIATO POSTERIORE

- GENERALITA'
- ANATOMIA
- BIOMECCANICA
- SINTOMATOLOGIA
- ESAME CLINICO
- ESAME STRUMENTALE
- TRATTAMENTO
- RIABILITAZIONE

LEG. CROCIATO POSTERIORE

- GENERALITA'
- ANATOMIA
- BIOMECCANICA
- SINTOMATOLOGIA
- ESAME CLINICO
- ESAME STRUMENTALE
- TRATTAMENTO
- RIABILITAZIONE

**ALCUNI PAZIENTI NON
PRESENTANO ALCUNA
LIMITAZIONE FUNZIONALE
MENTRE ALTRI SONO
SEVERAMENTE LIMITATI
NELLE NORMALI ATTIVITA'
QUOTIDIANE**

**NON ESISTE
CORRISPONDENZA TRA IL
GRADO DI LASSITA' E LA
SOGGETTIVITA'
(Shelbourne Am J Sport Med 1999)**

**NON ESISTE
CORRISPONDENZA TRA IL
GRADO DI LASSITA' E L'
ARTROSI**

(Shelbourne Am J Sport Med 1999)

**LA LESIONE DEL LCP NON E'
SOLO UN PROBLEMA
MECCANICO**

BIOLOGIA

PROPRIOCETTIVITA'

L' LCP PUO' ESSERE
COSIDERATO UN ORGANO DI
SENSO
(Raunest 1998)

I MECCANOCETTORI
PROPRIOCETTIVI POSSONO
AVERE UN RUOLO
FONDAMENTALE NELLE
LESIONI DEL LCP
(Safran 1999)

ESISTE UN MECCANISMO
PROPRIOCETTIVO CHE PARTE
DAI LEG. CROCIATI E CHE
INFLUENZA IL TONOTROFISMO
DELLA COSCIA
(Raunest 1996)

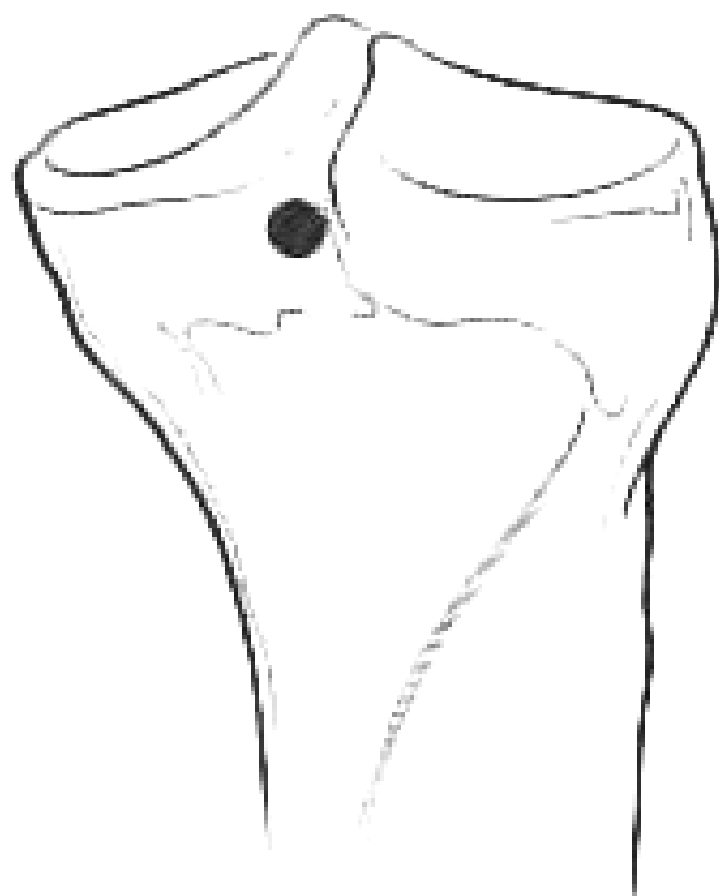
LE LESIONI DEL LCP
PRODUCONO UN DEFICIT
PROPRIOCETTIVO CHE
INFLUENZA LA STABILITA'
(Clark 1996)

LEG. CROCIATO POSTERIORE

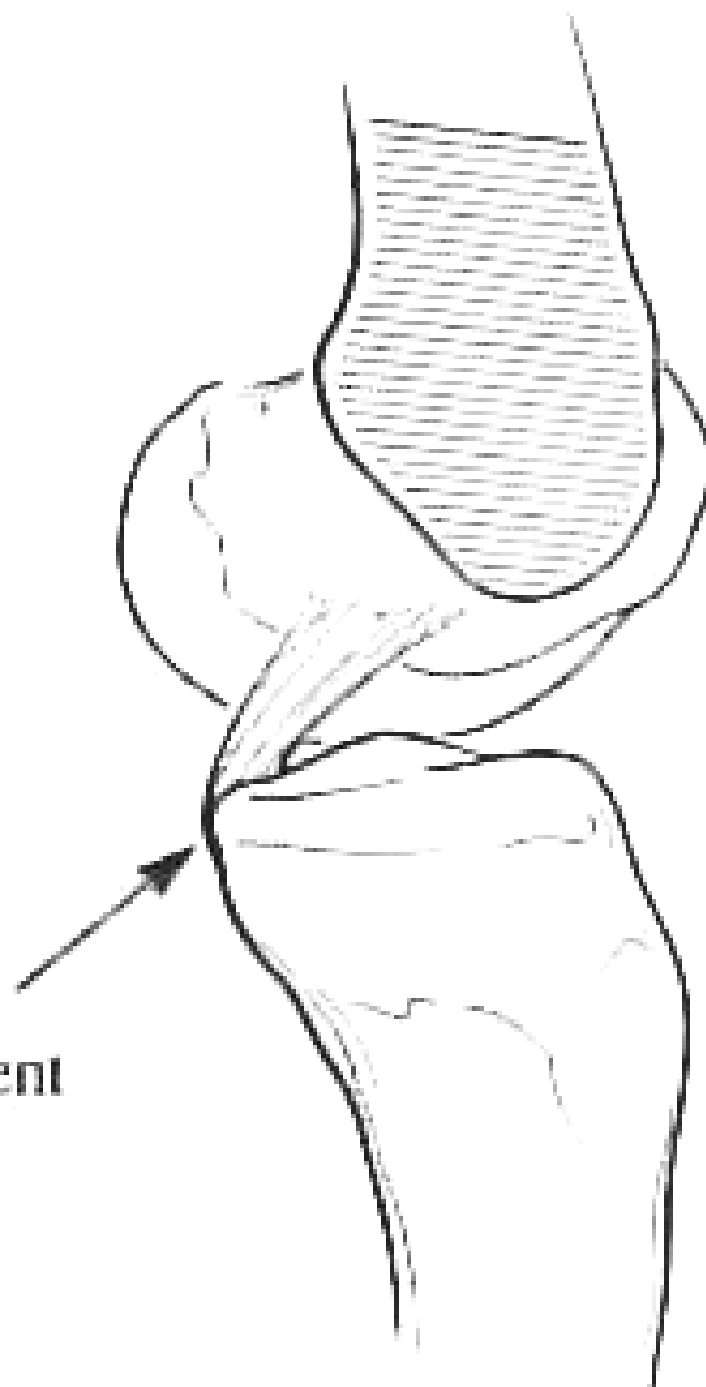
- GENERALITA'
- ANATOMIA
- BIOMECCANICA
- SINTOMATOLOGIA
- ESAME CLINICO
- ESAME STRUMENTALE
- TRATTAMENTO
- RIABILITAZIONE

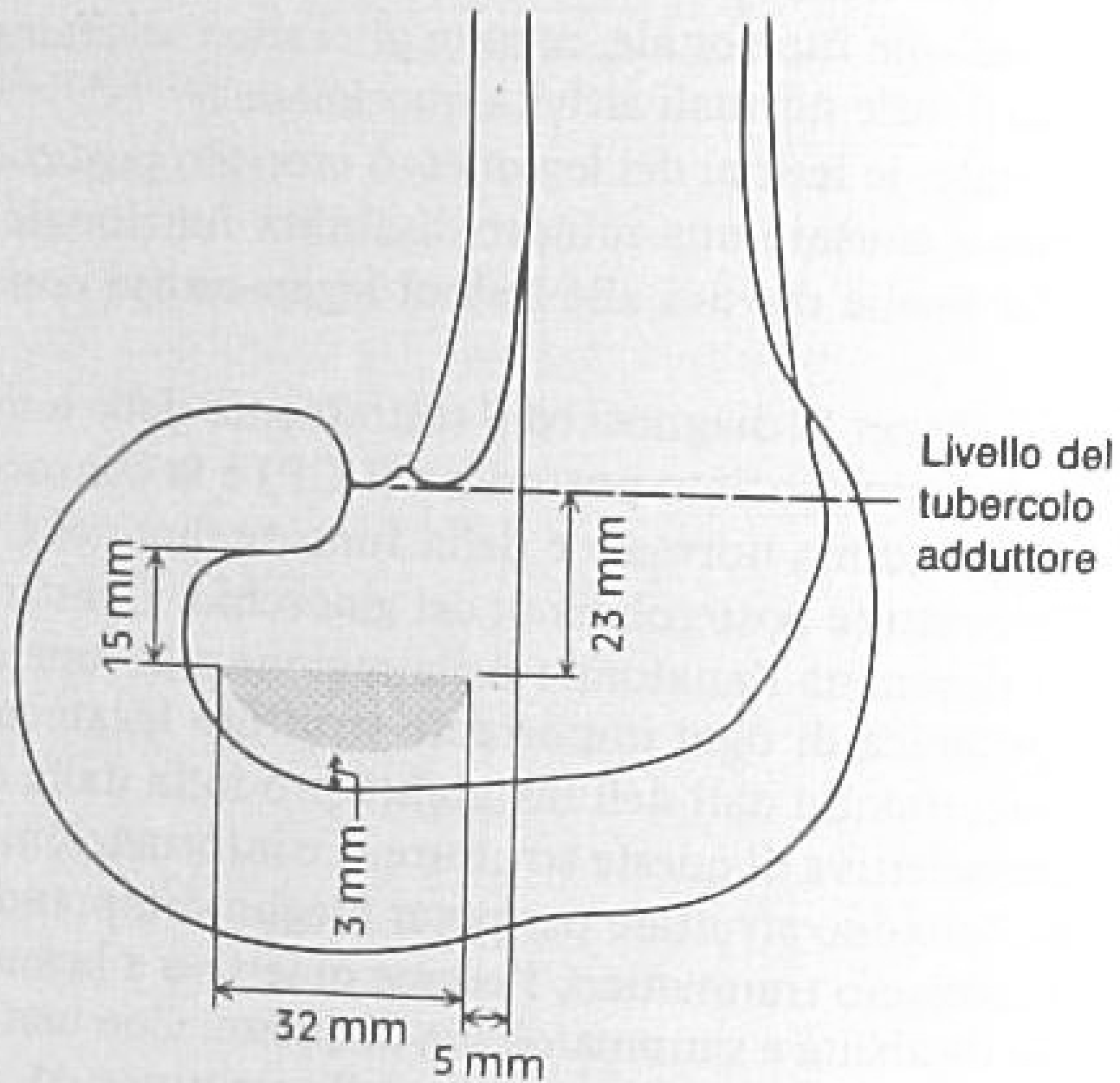
LCP

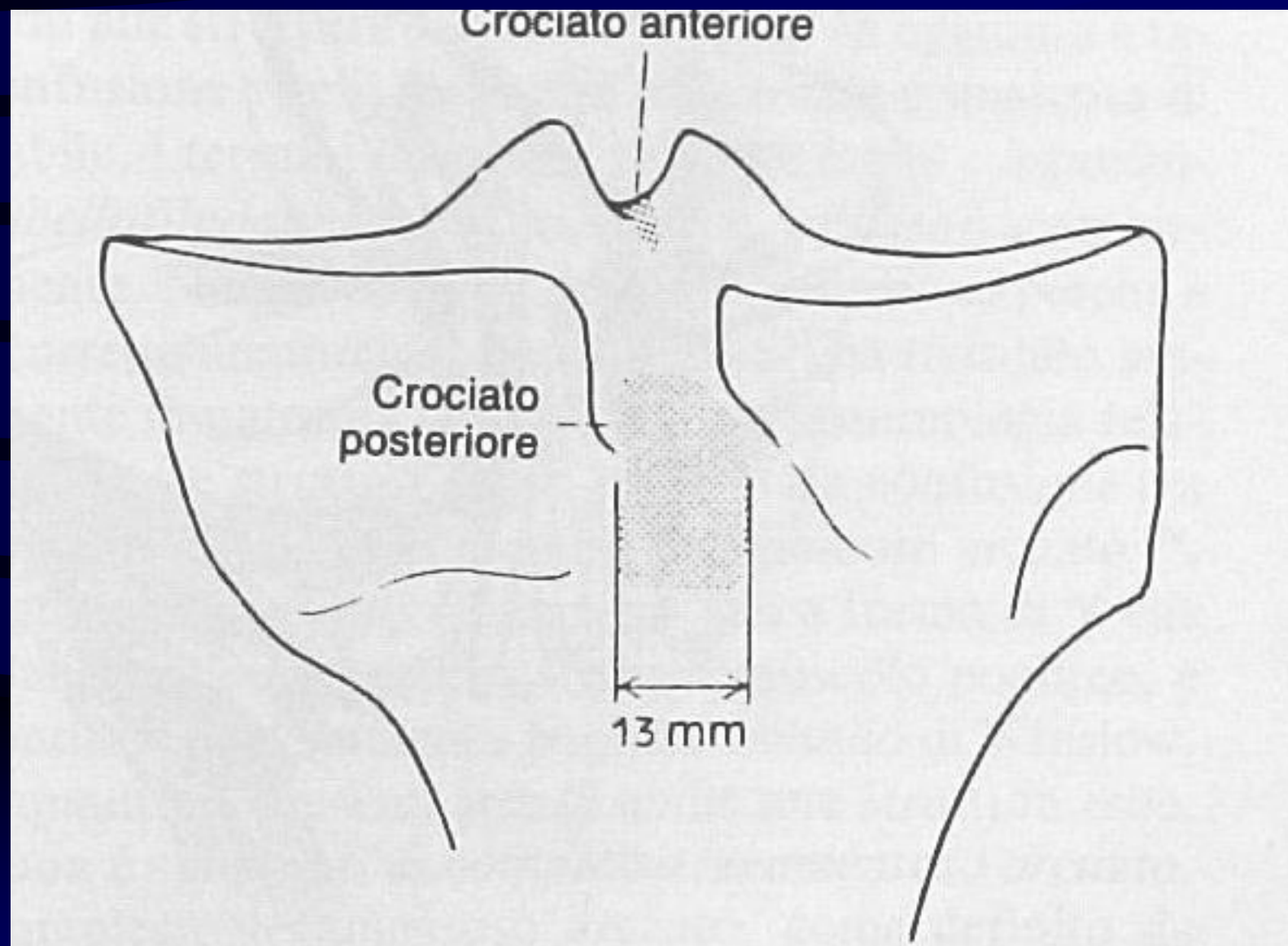
**STRUTTURE
POSTERO-LATERALI**

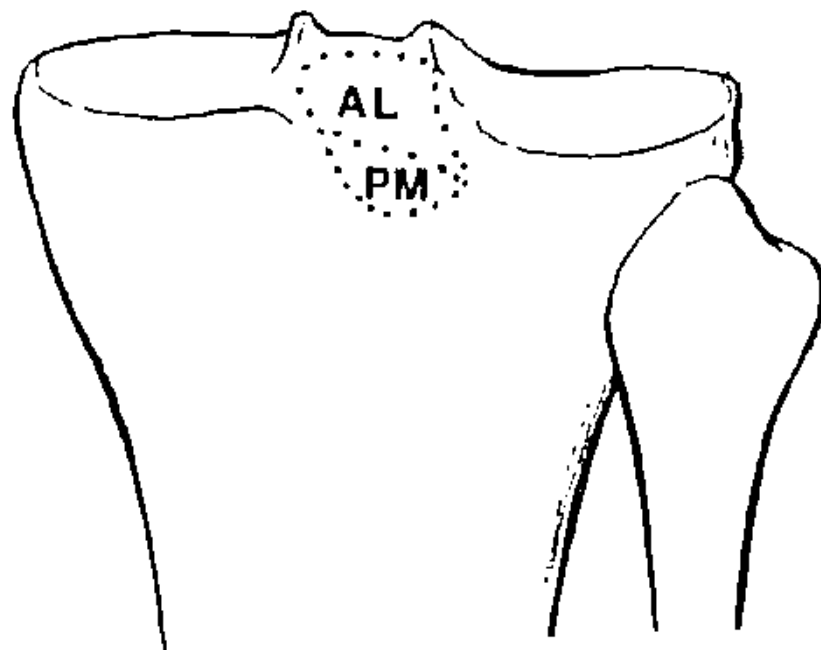
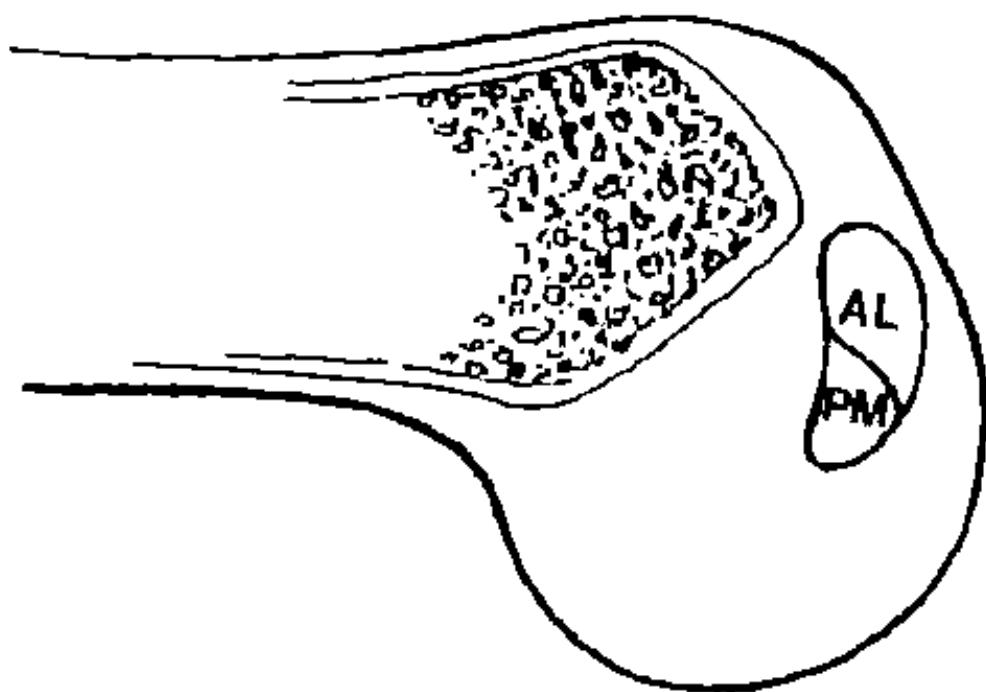


Posterior
tibial attachment
of PCL









STRUTTURE POSTERO LATERALI

COLLATERALE ESTERNO

LEGAMENTO ARCUATO

TENDINE POPLITEO

LEG. FABELLO-FIBULARE

CAPSULA

POSTERO-LATERALE

Vasto
laterale

Tratto ileotibiale

Legamento
patellofemorale
trasverso

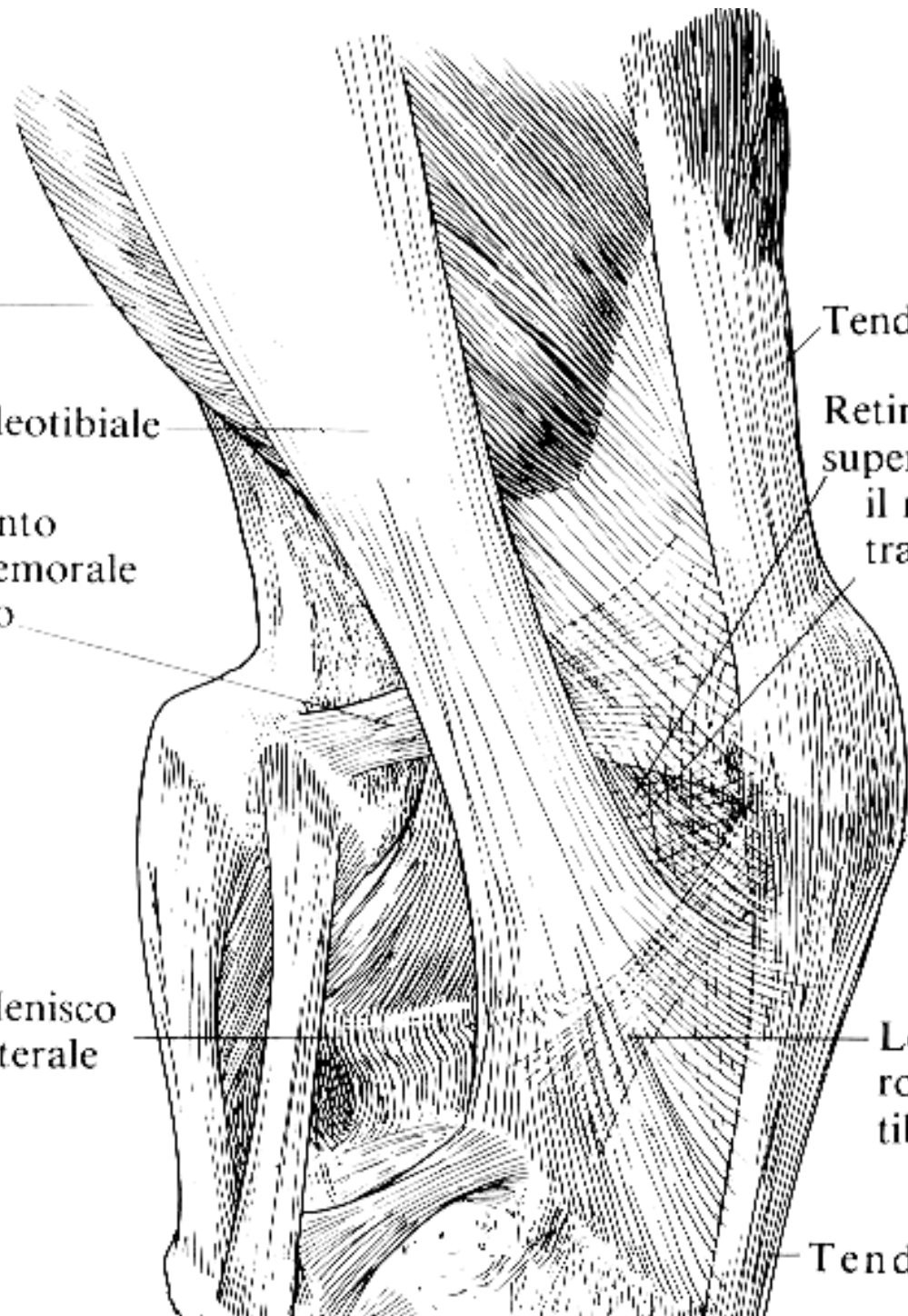
Menisco
laterale

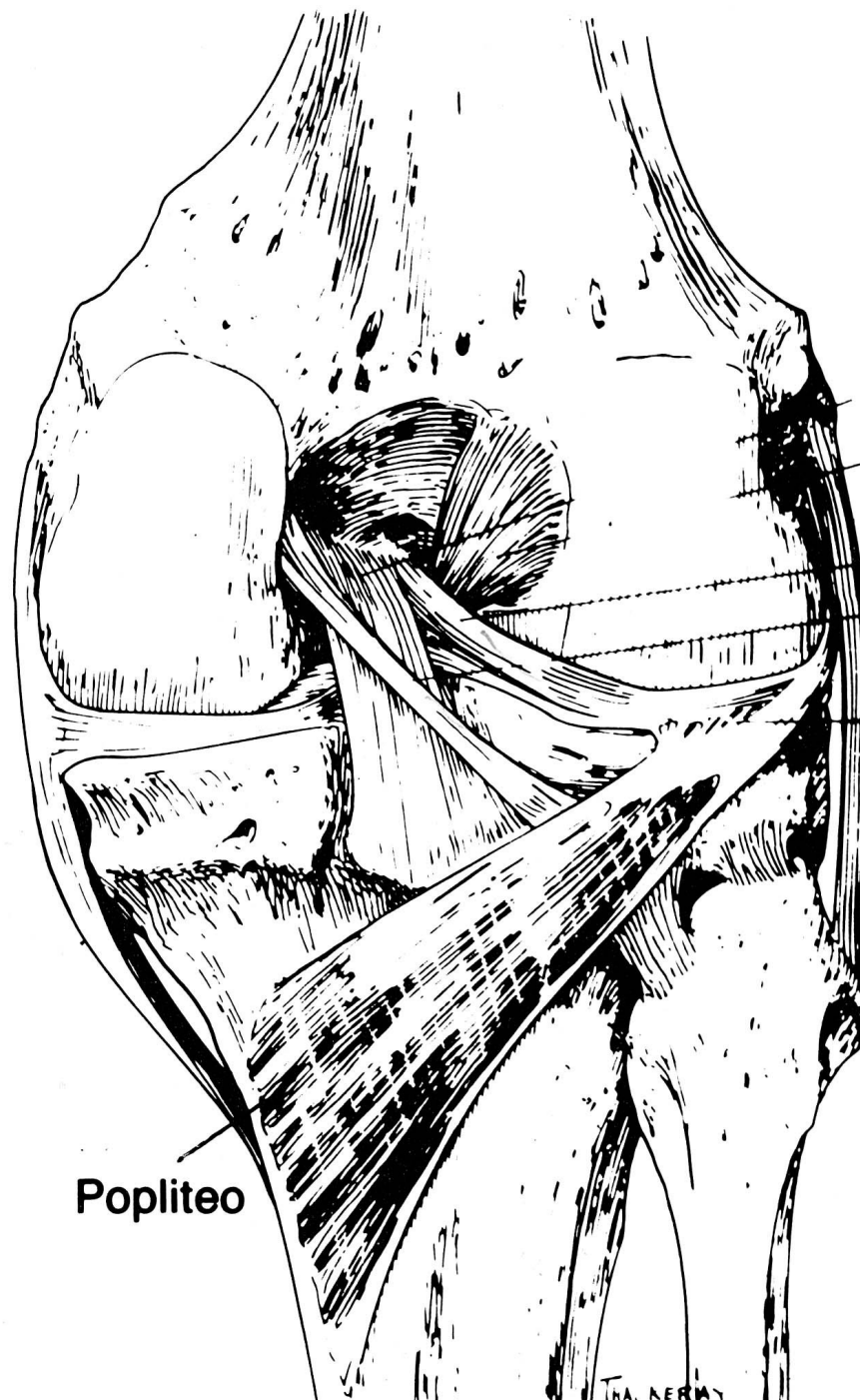
Tendine del quadricipite

Retinacolo obliquo
superficiale sovrastante
il retinacolo
trasverso profondo

Legamento menisco-
rotuleo/patello-
tibiale

Tendine rotuleo



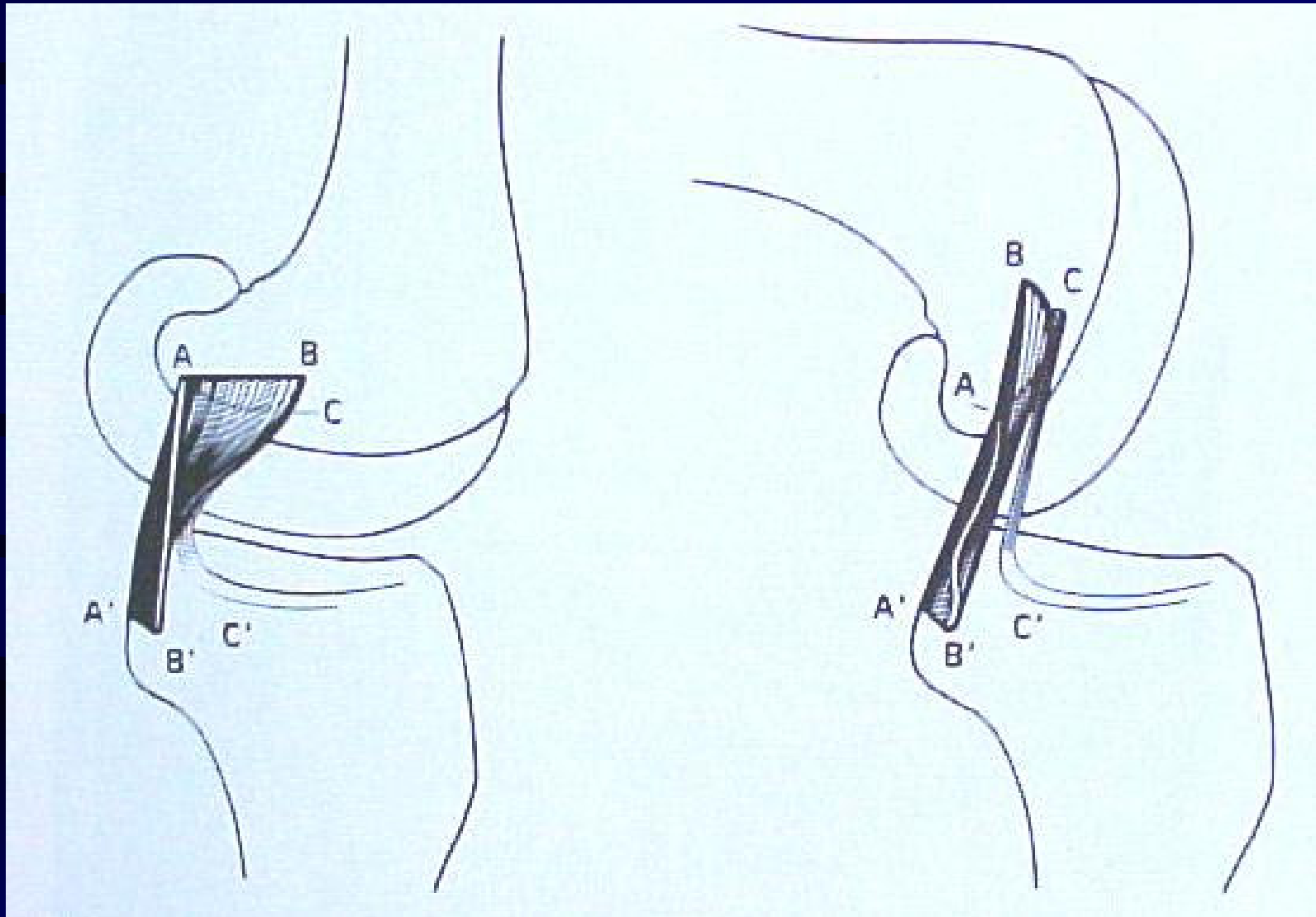


Legamento
crociato posteriore
Legamento
crociato anteriore
Legamenti di
Humphrey e
Wrisberg
Sito d'inserzione
del meniscale
laterale

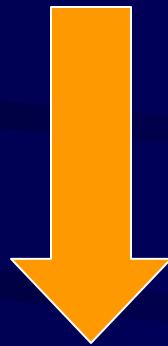
Popliteo

LEG. CROCIATO POSTERIORE

- GENERALITA'
- ANATOMIA
- **BIOMECCANICA**
- SINTOMATOLOGIA
- ESAME CLINICO
- ESAME STRUMENTALE
- TRATTAMENTO
- RIABILITAZIONE

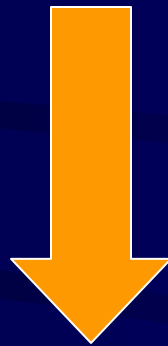


SEZ. ISOLATA LCP



TRASLAZIONE POSTERIORE DELLA
TIBIA A TUTTI I GRADI DI
FLESSIONE CON MAGGIOR
INCREMENTO TRA I 75° E I 90°

SEZ. ISOLATA COLL. ESTERNO



LA ROTAZIONE ESTERNA
AUMENTA A TUTTI GLI ANGOLI DI
FLESSIONE

SEZ. ISOLATA COMPL. LEG.
PROFONDO



LA ROTAZIONE ESTERNA
AUMENTA A 90°

SEZ. COMBINATA LLE + COMPL. LEG. PROFONDO



LA ROTAZIONE ESTERNA
AUMENTA
INCREMENTO DELLA TRASLAZIONE
POSTERIORE (MAX A 30°)

SEZ. COMBINATA LLE + COMPL.
LEG. PROFONDO + LCP

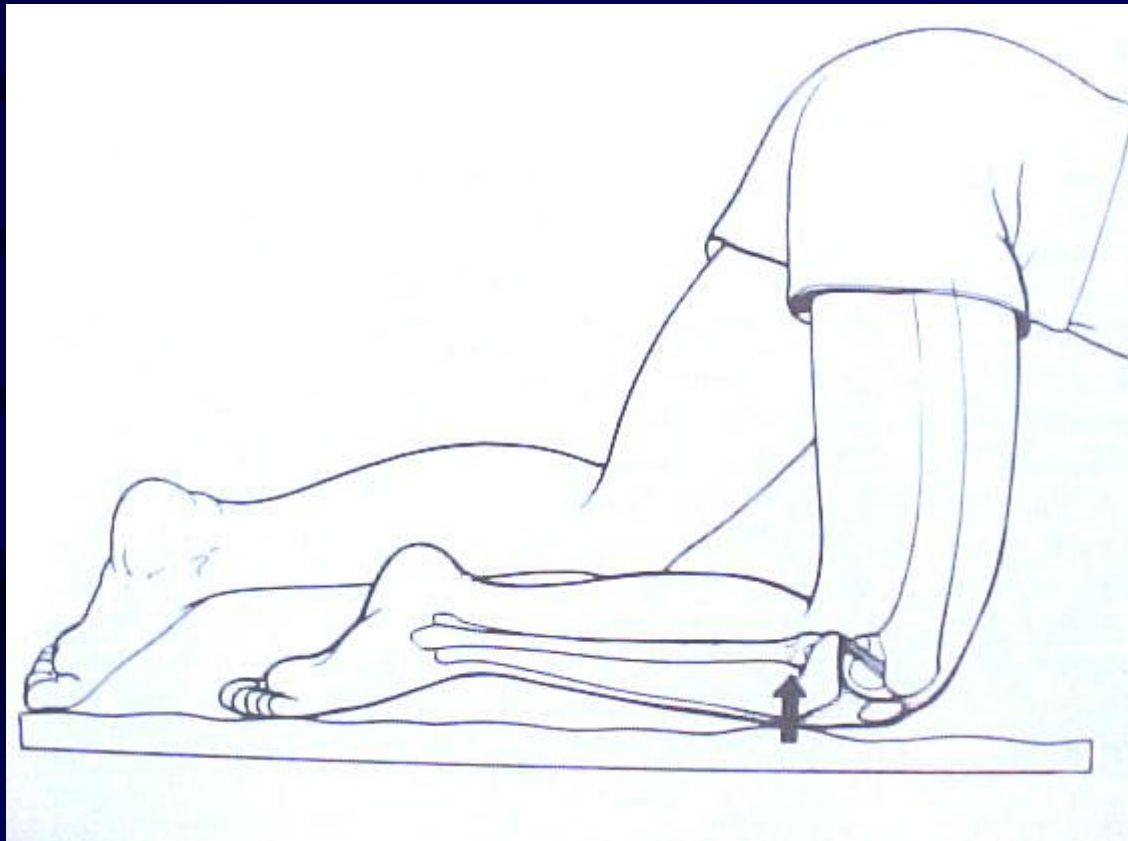


AUMENTA LA ROTAZIONE
ESTERNA E LA TRASLAZIONE
POSTERIORE IN MODO SUPERIORE
ALLA SOMMA DELLE SEZIONI
INDIVIDUALI

LEG. CROCIATO POSTERIORE

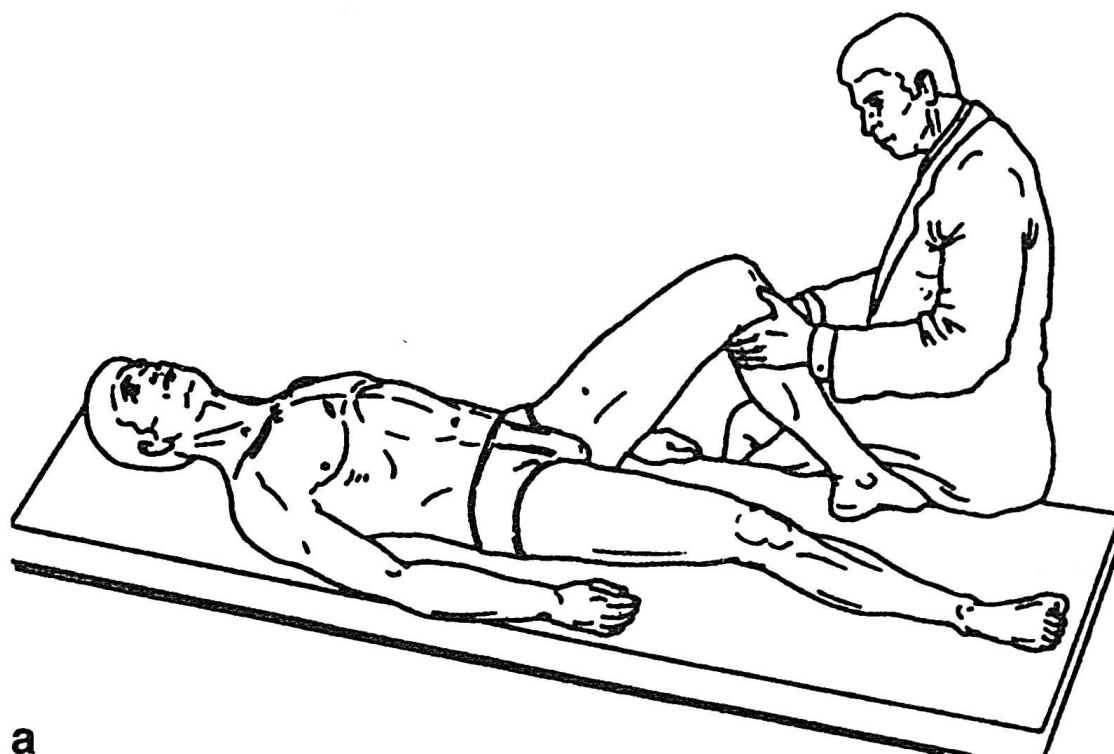
- GENERALITA'
- ANATOMIA
- BIOMECCANICA
- SINTOMATOLOGIA
- ESAME CLINICO
- ESAME STRUMENTALE
- TRATTAMENTO
- RIABILITAZIONE

MODALITA' DELLA LESIONE

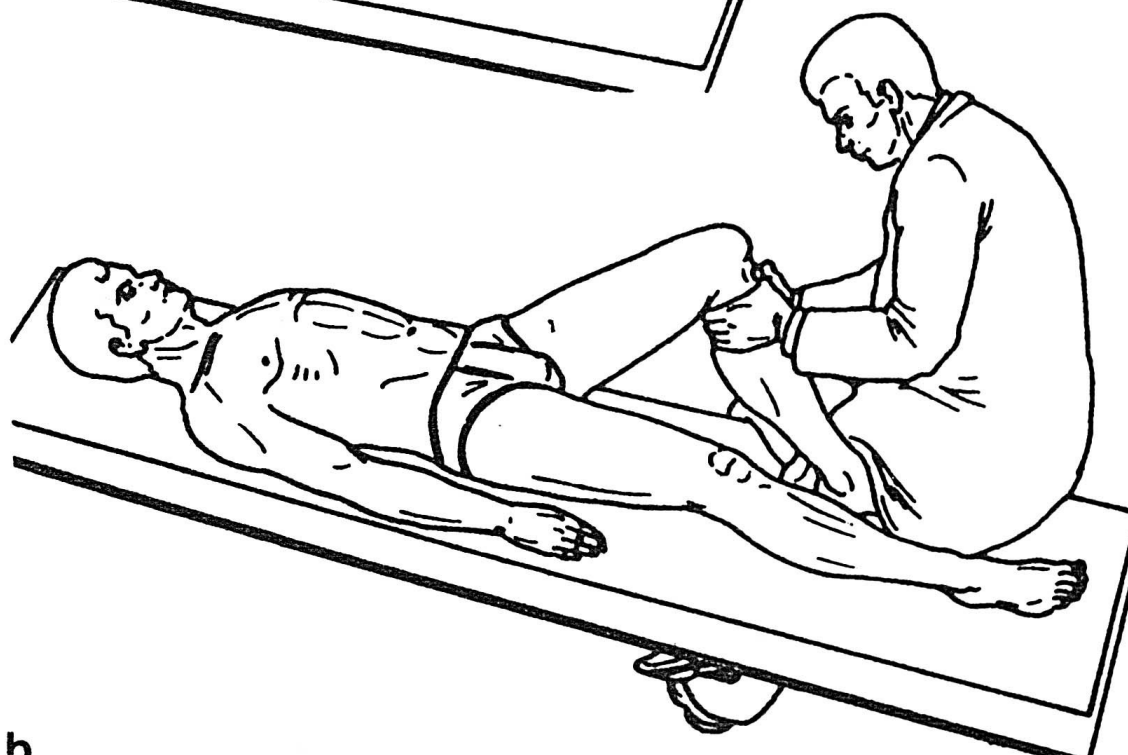


LEG. CROCIATO POSTERIORE

- GENERALITA'
- ANATOMIA
- BIOMECCANICA
- SINTOMATOLOGIA
- **ESAME CLINICO**
- ESAME STRUMENTALE
- TRATTAMENTO
- RIABILITAZIONE

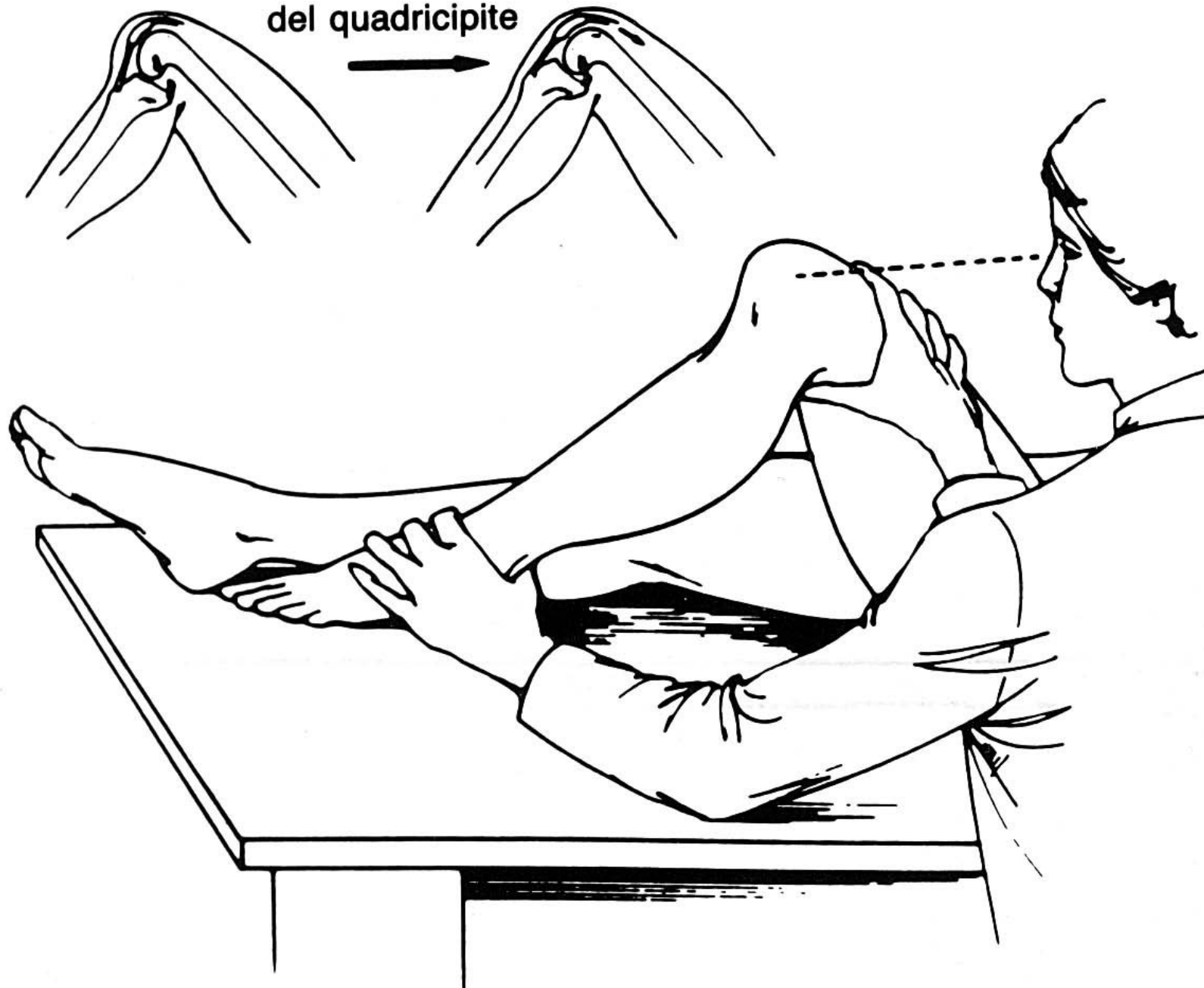


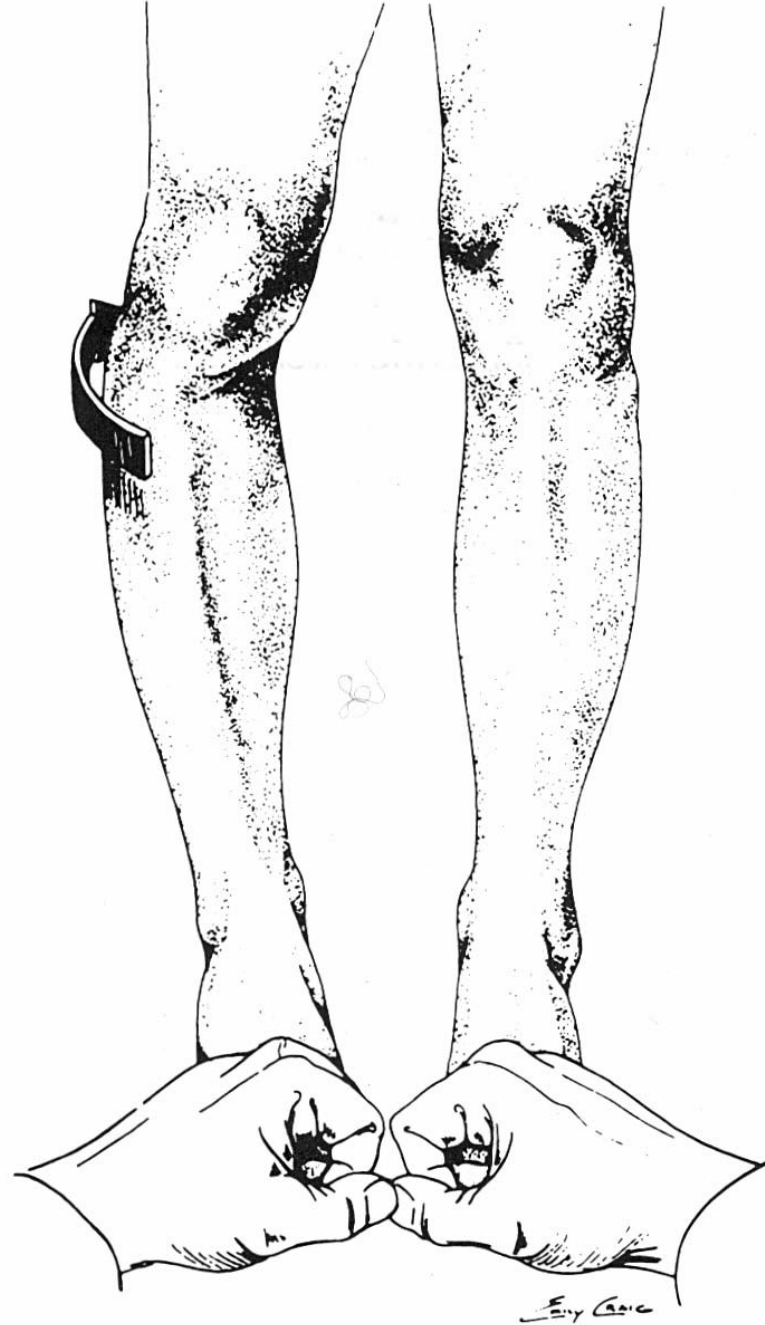
a

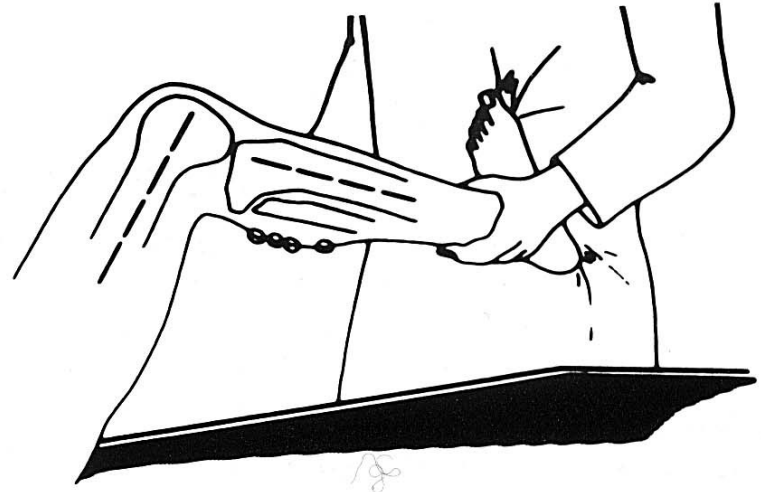
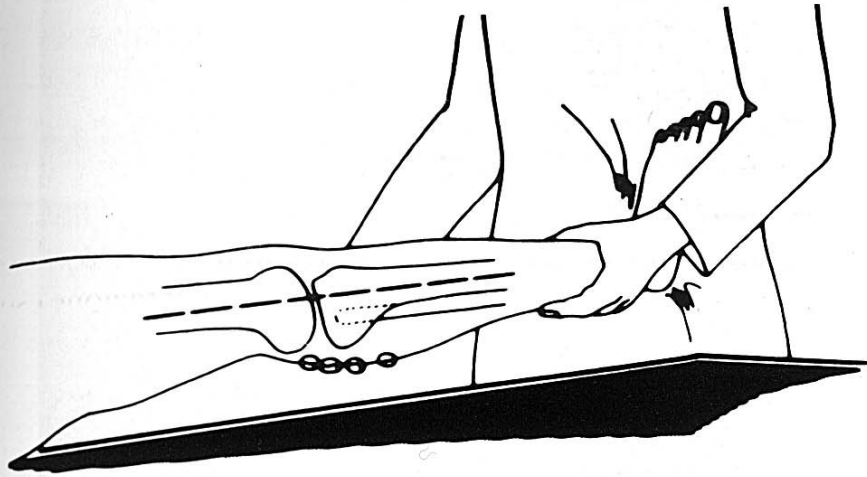


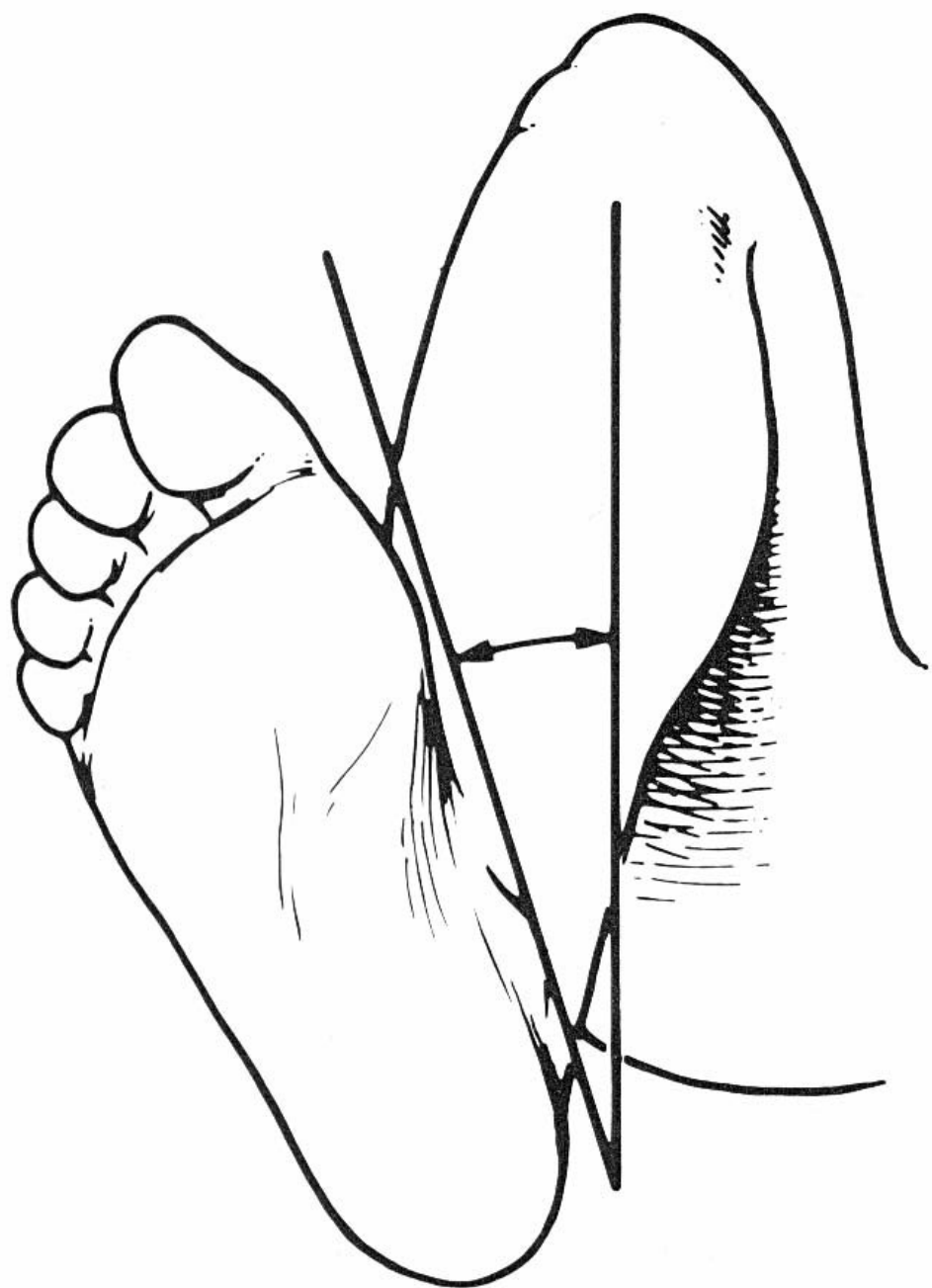
b

Contrazione
del quadricipite







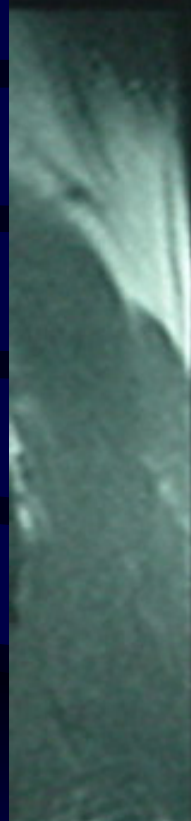


LEG. CROCIATO POSTERIORE

- GENERALITA'
- ANATOMIA
- BIOMECCANICA
- SINTOMATOLOGIA
- ESAME CLINICO
- **ESAME STRUMENTALE**
- TRATTAMENTO
- RIABILITAZIONE

23-01-2002
14:30

1 2146
u 5070
z 1.13
28,34
195x167
Raw



Ginocchio D M 26
ARTOSCAN-M

132188 76 ROSSETTI Stefano
01-12-1975

SE 5.0
360/24/2
a #8/8
e #1/1
180+180
192+160
001:58
90
90,109
0.59

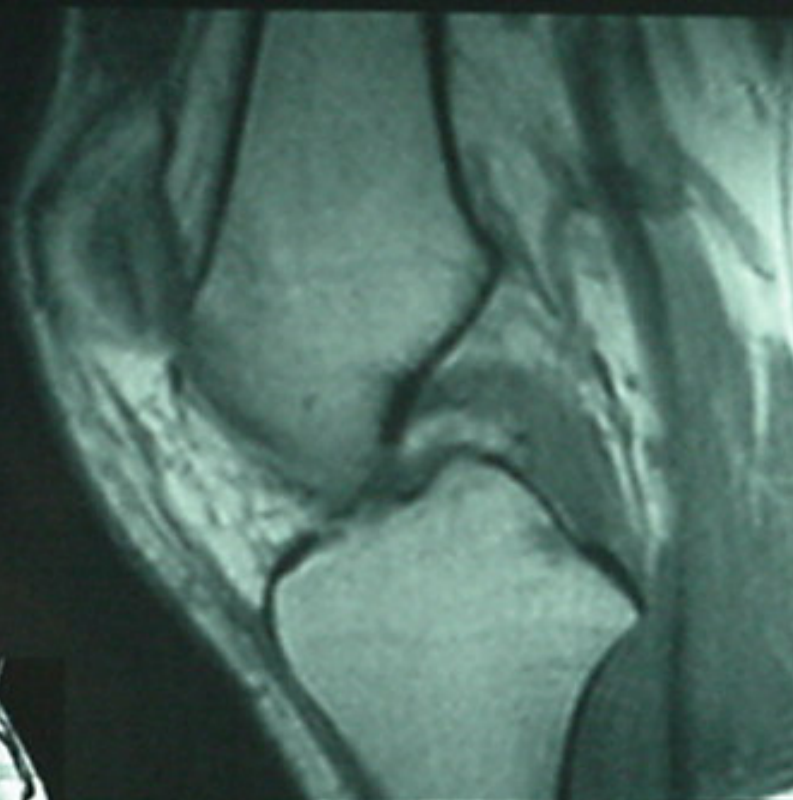
83



Casa di Cura IGER/RM 2

23-01-2002
14:30

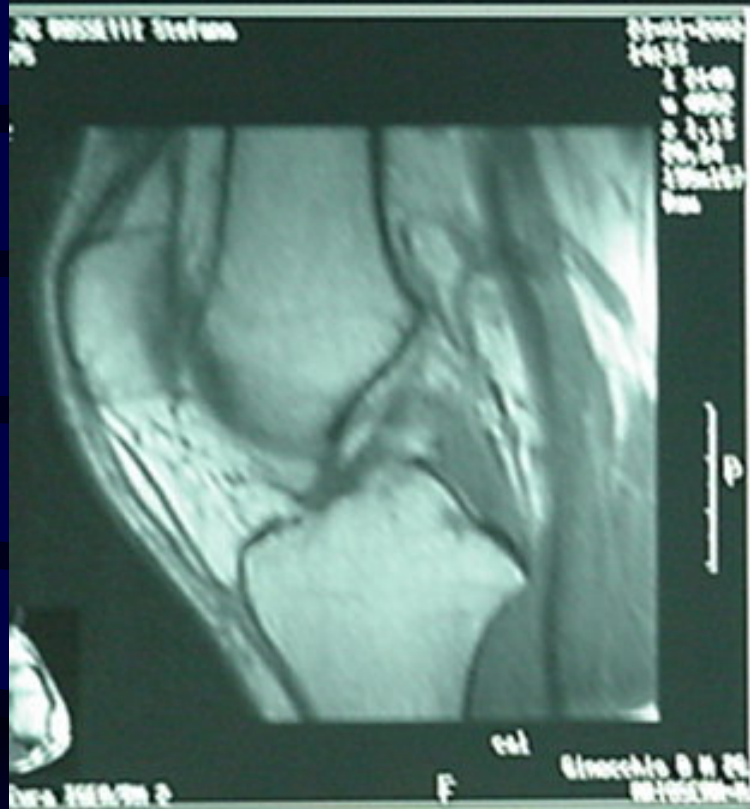
1 2149
u 4952
z 1.13
28,34
195x167
Raw



cal

F

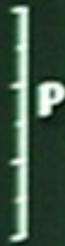
Ginocchio D M 26
ARTOSCAN-M



1 2149
e 4852
z 1.13
28,34
195x157
Raw

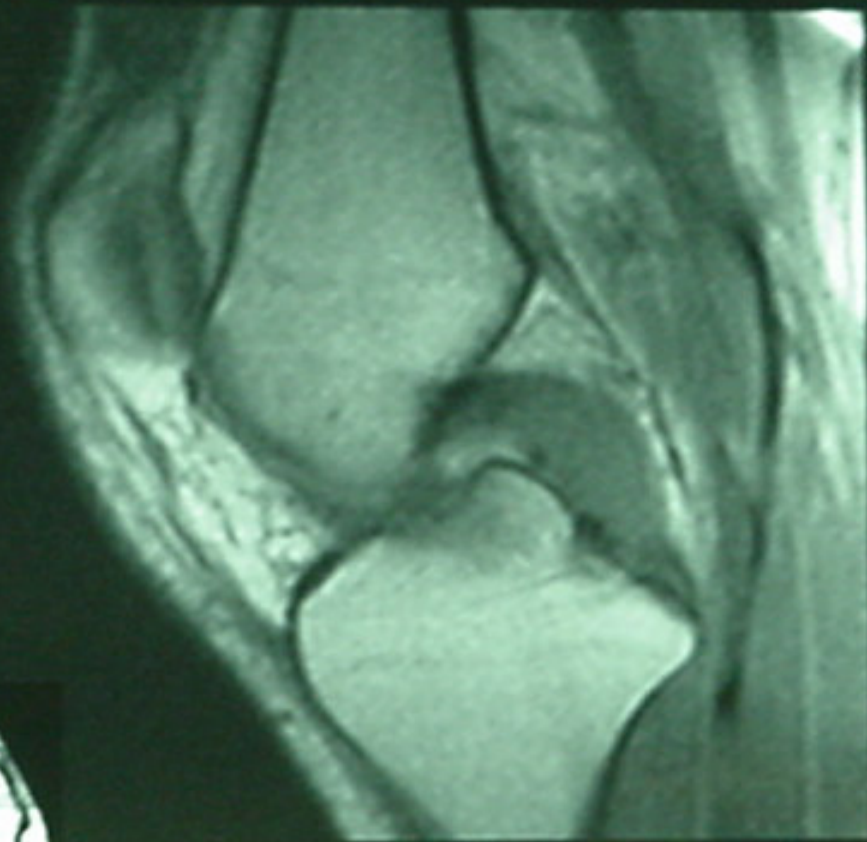
SE 5,0
350/24/2
c 02/8
e 01/1
180-180
152-160
001:58
90
90,104
0.88

83



B N 25
BSCAM-M

Casa di Cura IGEA/RM 2



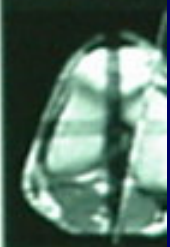
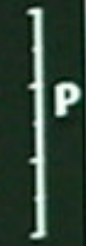
cal

F

1 2226
e 4941
z 1.13
28,34
195x157
Raw

SE 5,0
350/24/2
c 03/8
e 01/1
180-180
152-160
001:58
90
90,104
1.44

83



Ginocchio B N 26
ARTOSCAN-M

Casa di Cu



LEG. CROCIATO POSTERIORE

- GENERALITA'
- ANATOMIA
- BIOMECCANICA
- SINTOMATOLOGIA
- ESAME CLINICO
- ESAME STRUMENTALE
- **TRATTAMENTO**
- RIABILITAZIONE

TRATTAMENTO DELLE LESIONI DEL LCP

CHIRURGICO

?

CONSERVATIVO

TRATTAMENTO CONSERVATIVO (GEISSLER WHIPPLE 1993)

LESIONI CARTILAGINEE

LESIONI MENISCALI

DOLORE

LIMITAZIONE ATTIVITA' SPORTIVA

TRATTAMENTO CHIRURGICO

POSIZIONAMENTO TUNNEL (GALLOWAY
1996 - RACE E AMIS 1998 - MANNOR 2000)

TENSIONE TRAPIANTO (BURNS 1995)

FATTORI BIOLOGICI (BOSCH 1995)

RIABILITAZIONE (MARKOLF 1997)

TRATTAMENTO CHIRURGICO

POSIZIONAMENTO TUNNEL (GALLOWAY
1996 - RACE E AMIS 1998 - MANNOR 2000)

TENSIONE TRAPIANTO (BURNS 1995)

FATTORI BIOLOGICI (BOSCH 1995)

RIABILITAZIONE (MARKOLF 1997)

Two-Bundle Posterior Cruciate Ligament Reconstruction

An In Vitro Analysis of Graft Placement and Tension*

Dana A. Mannor,† MD, Jason T. Shearn,‡ MS, Edward S. Grood,‡§ PhD
Frank R. Noyes,† MD, and Martin S. Levy,|| PhD

NO SINGOLO FASCIO
NO ISOMETRICO
NO ANATOMICO

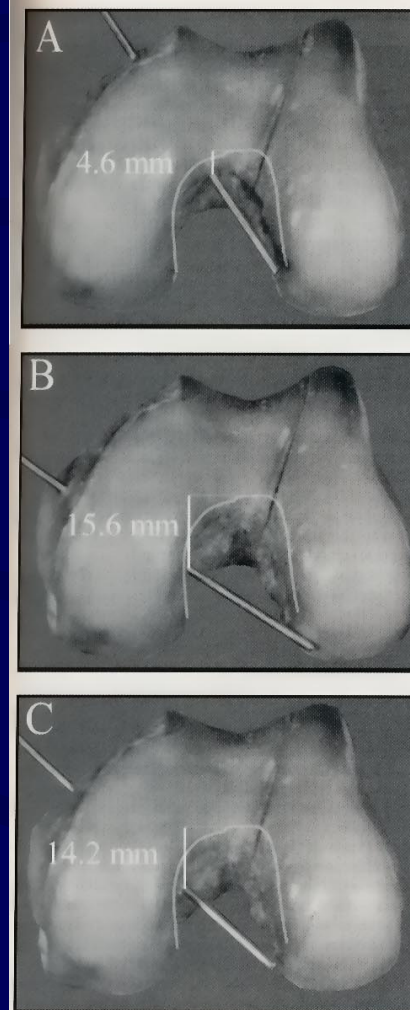


Figure 3. The transverse view of the three femoral tunnel positions (A, S₁; B, S₂; C, D). The measurements are taken posteriorly from the point where the trochlear groove meets the intercondylar notch.

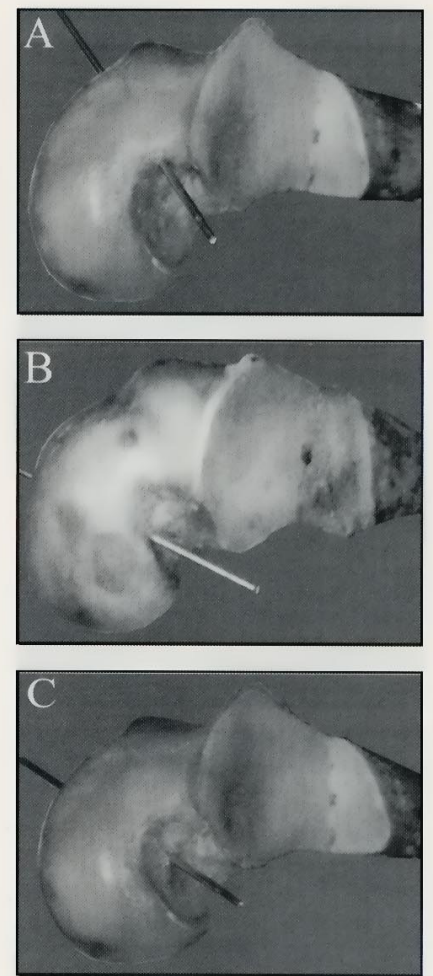


Figure 4. The oblique view of the three femoral tunnel positions (A, S₁; B, S₂; C, D)

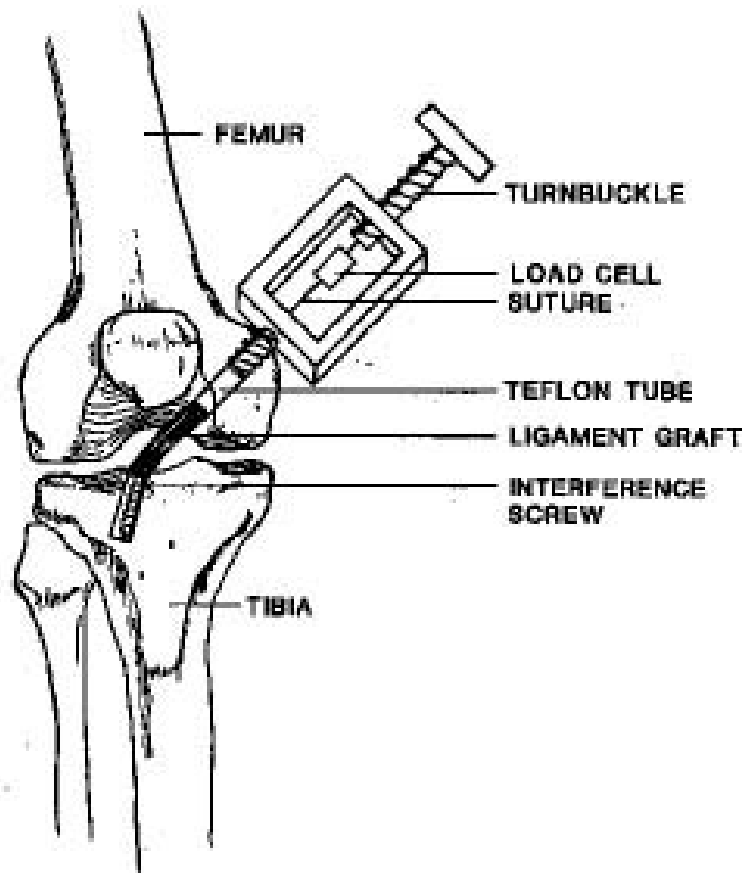
TRATTAMENTO CHIRURGICO

POSIZIONAMENTO TUNNEL (GALLOWAY
1996 - RACE E AMIS 1998 - MANNOR 2000)

TENSIONE TRAPIANTO (BURNS 1995)

FATTORI BIOLOGICI (BOSCH 1995)

RIABILITAZIONE (MARKOLF 1997)



TRAPIANTO
TENSIONATO A
90° DI
FLESSIONE CON
CASSETTO
ANTERIORE (di
156N)

TRATTAMENTO CHIRURGICO

POSIZIONAMENTO TUNNEL (GALLOWAY
1996 - RACE E AMIS 1998 - MANNOR 2000)

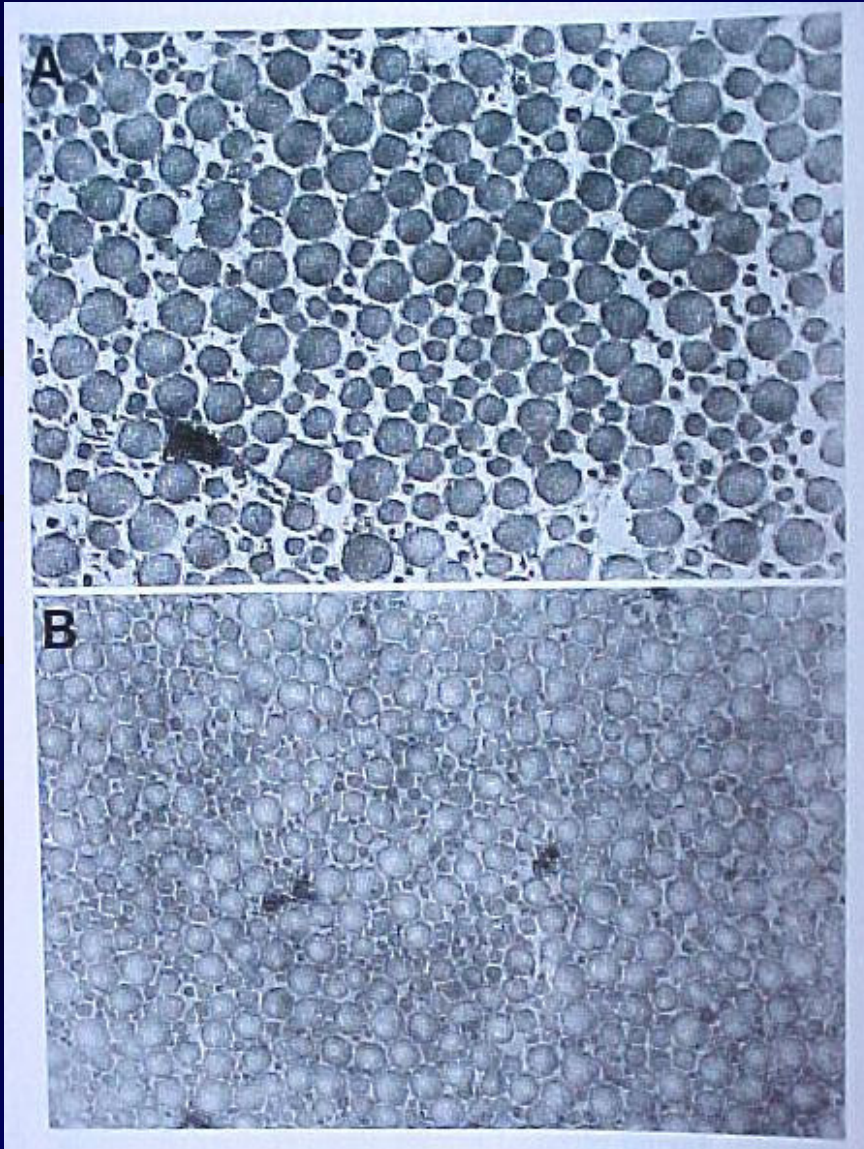
TENSIONE TRAPIANTO (BURNS 1995)

FATTORI BIOLOGICI (BOSCH 1995)

RIABILITAZIONE (MARKOLF 1997)

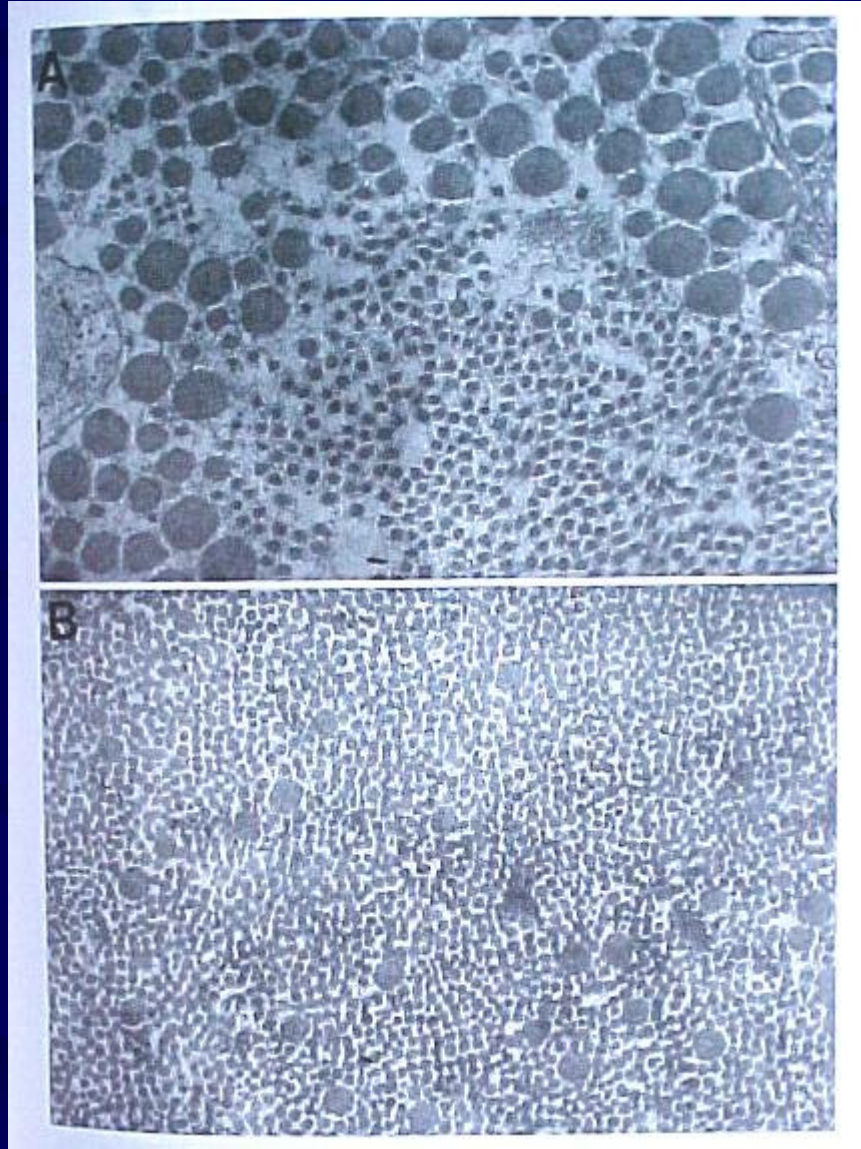
IL TENDINE ROTULEO NON E'
IN GRADO DI RIPRODURRE LE
FIBRE COLLAGENE DEL LCP.
QUESTO POTREBBE ESSERE LA
CAUSA DEGLI INSUCCESSI
DELLE RICOSTRUZIONI
(Bosch 1995)

LCP



TENDINE ROTULEO

TR 6 SETT POST-OP



TR 104 SETT POST-OP

TRATTAMENTO CHIRURGICO

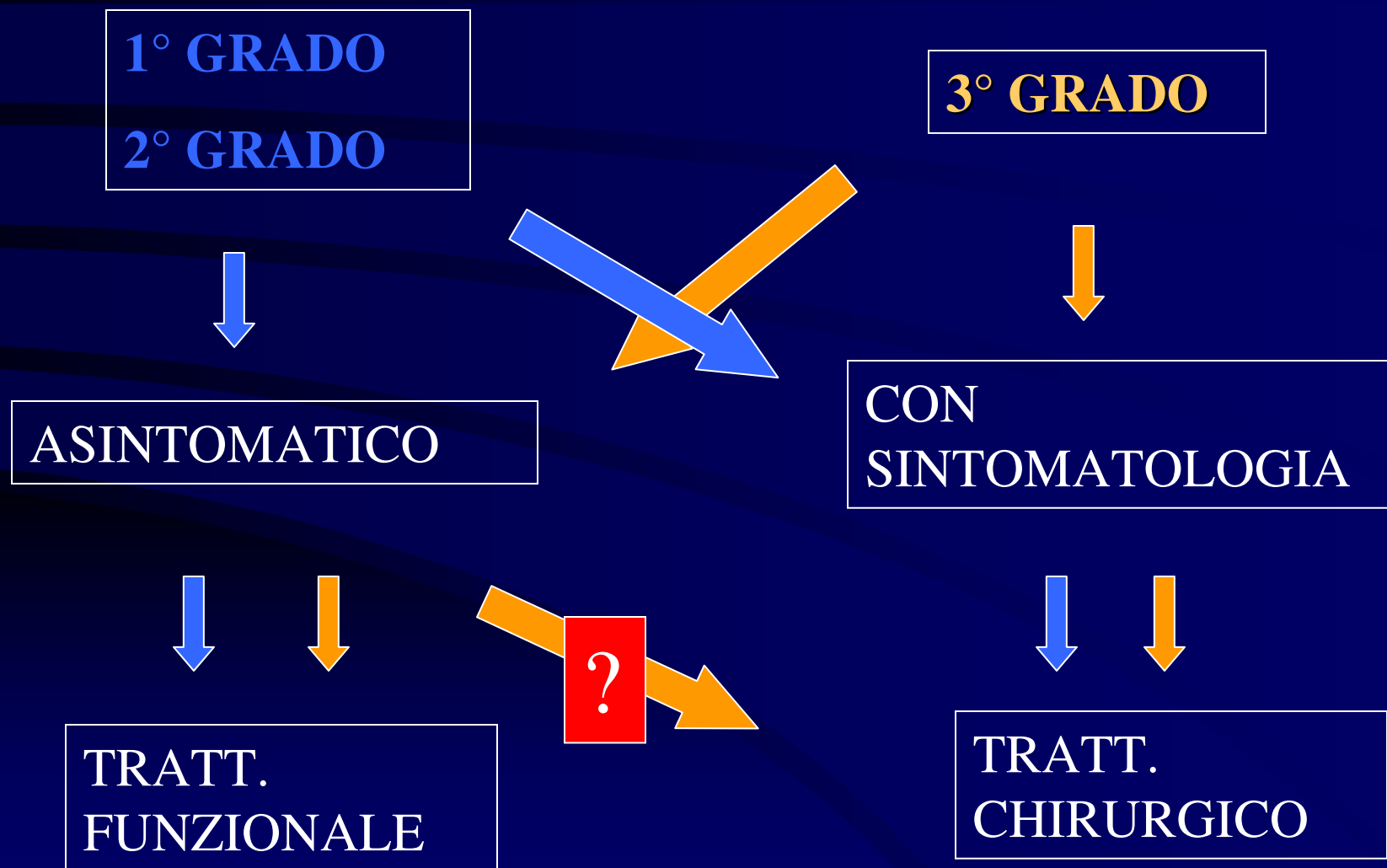
POSIZIONAMENTO TUNNEL (GALLOWAY
1996 - RACE E AMIS 1998 - MANNOR 2000)

TENSIONE TRAPIANTO (BURNS 1995)

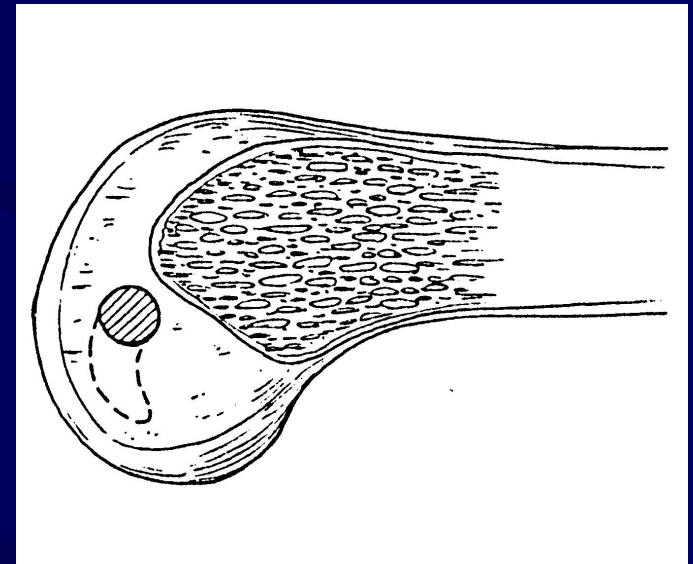
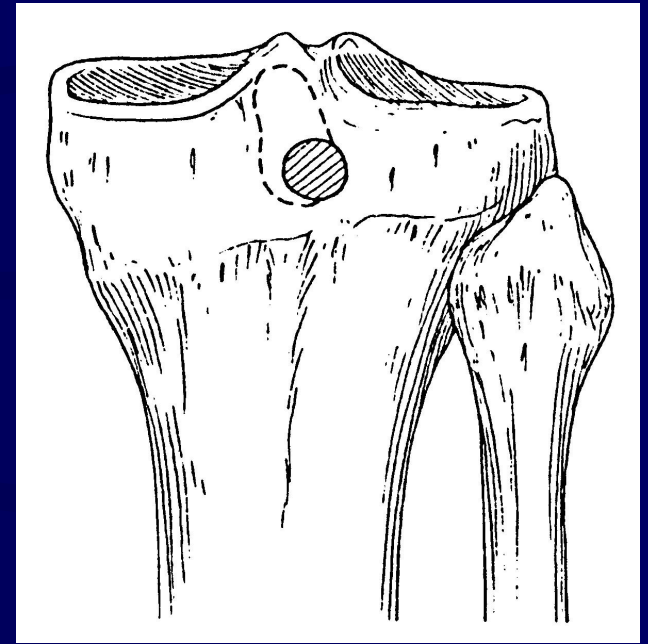
FATTORI BIOLOGICI (BOSCH 1995)

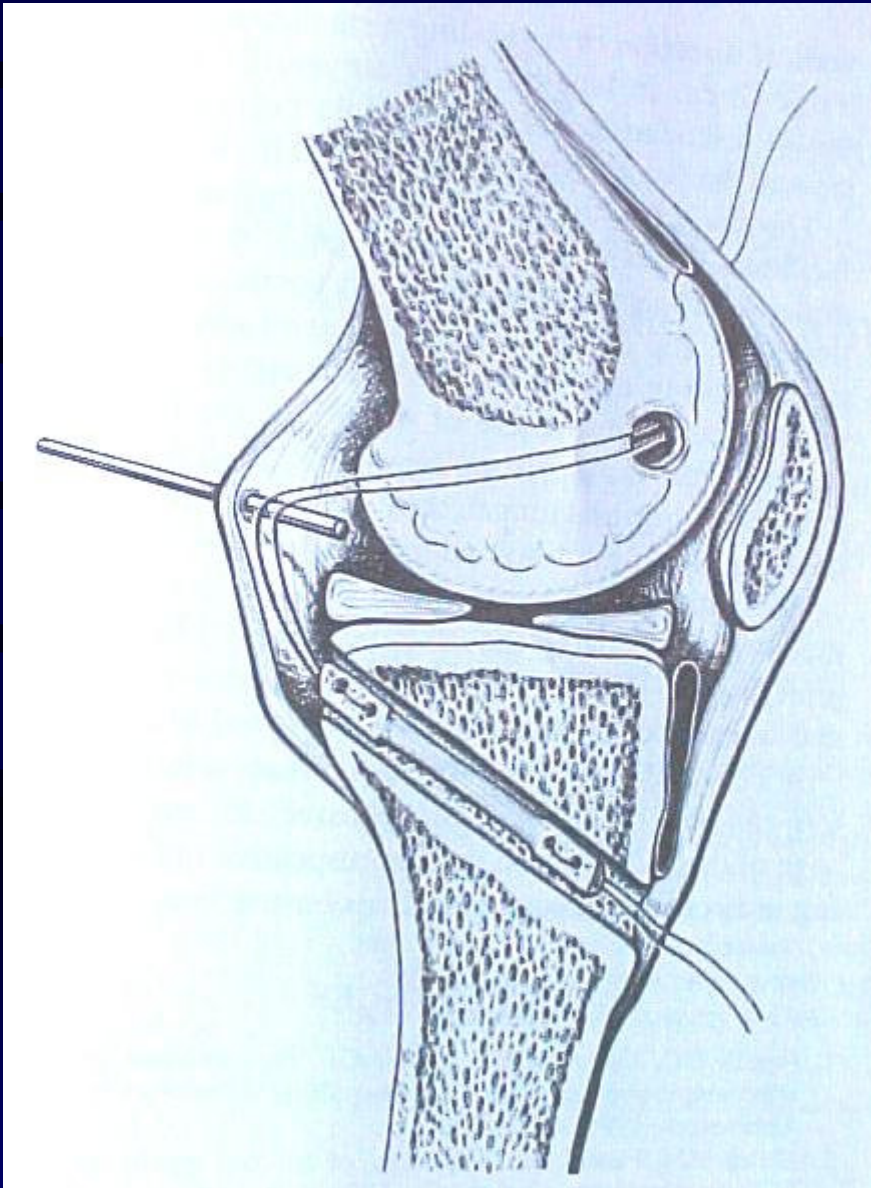
RIABILITAZIONE (MARKOLF 1997)

TRATTAMENTO LCP



**TRATTAMENTO
CHIRURGICO IN
ARTROSCOPIA
CON
SINGOLO
TUNNEL
FEMORALE E
TRAPIANTO CON
TENDINE
ROTULEO**



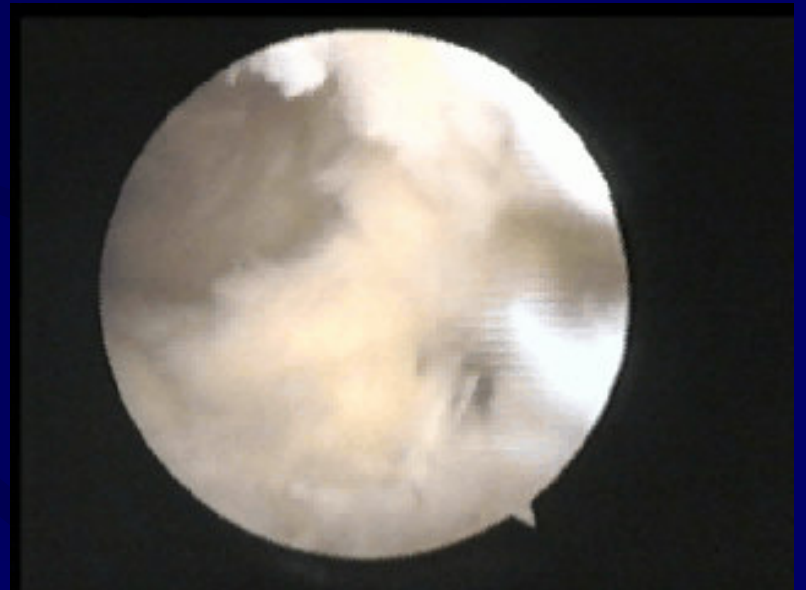
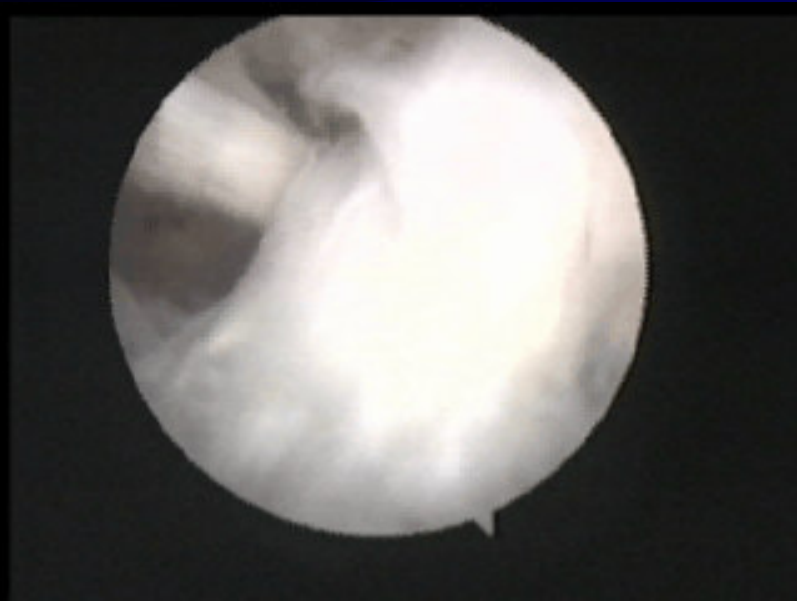


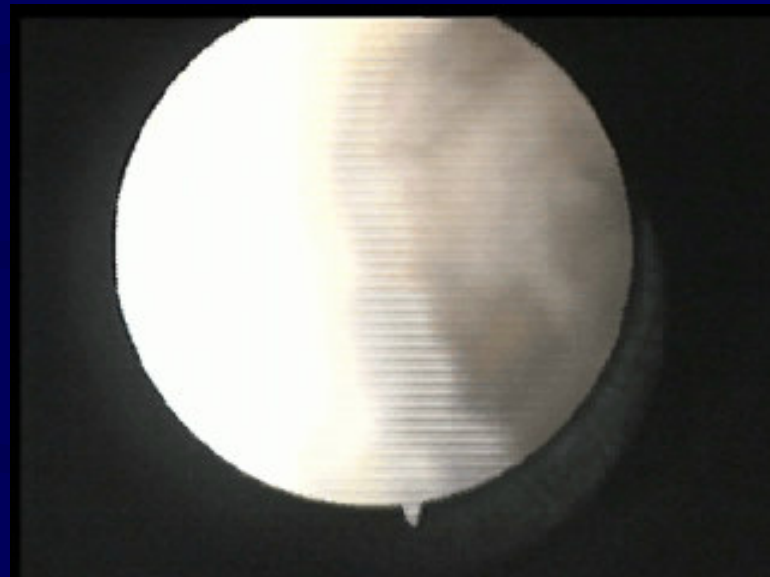
BRATTA OSSEA FEM 8 mm
e 1,5 cm DI LUNGHEZZA

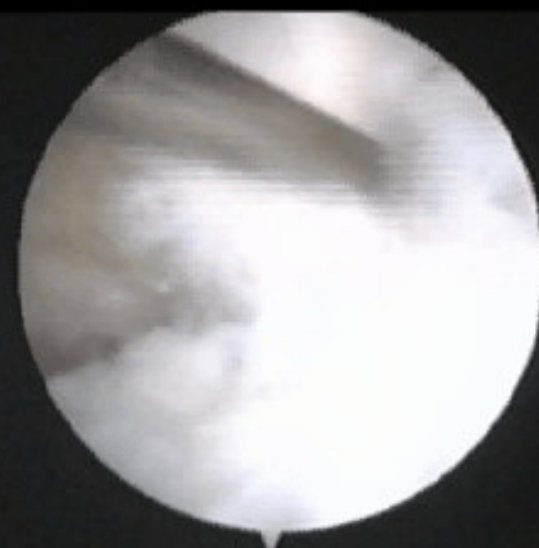
BRATTA OSSEA TIB 10 mm

E 3cm DI LUNGHEZZA

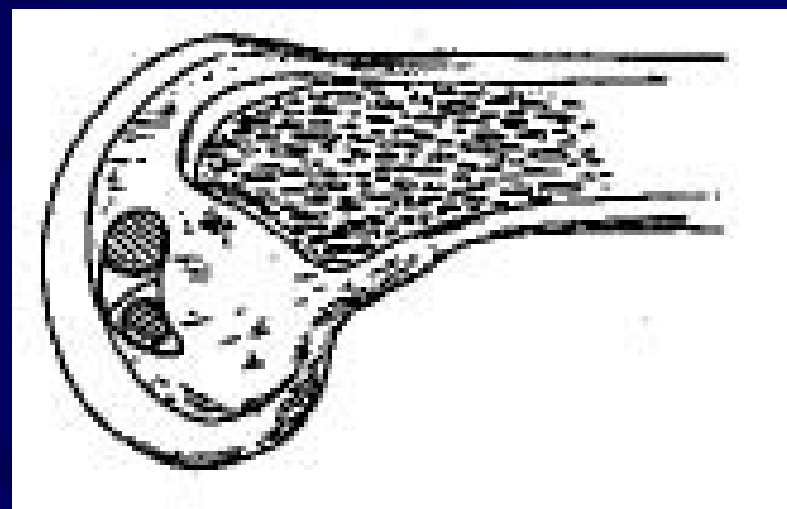
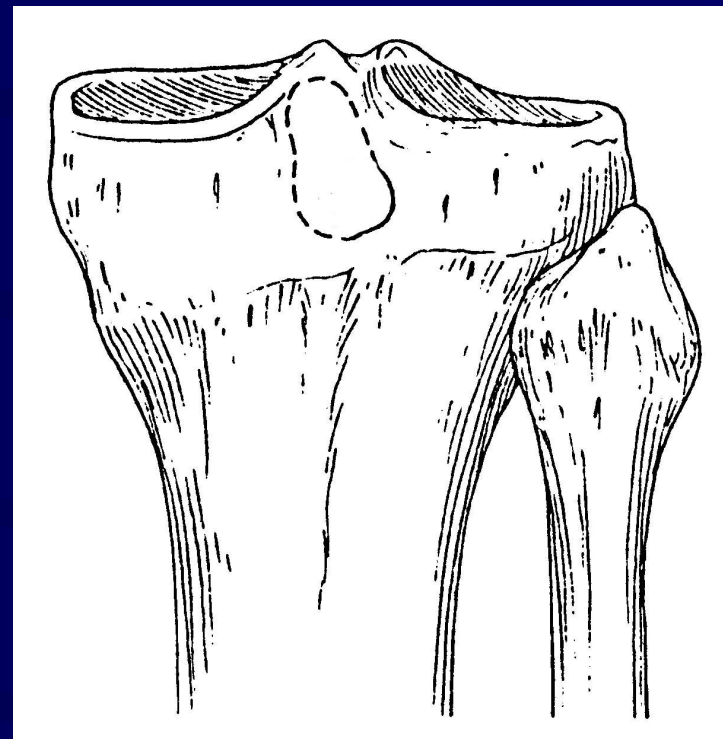
2 VITI RIASSORBIBILI

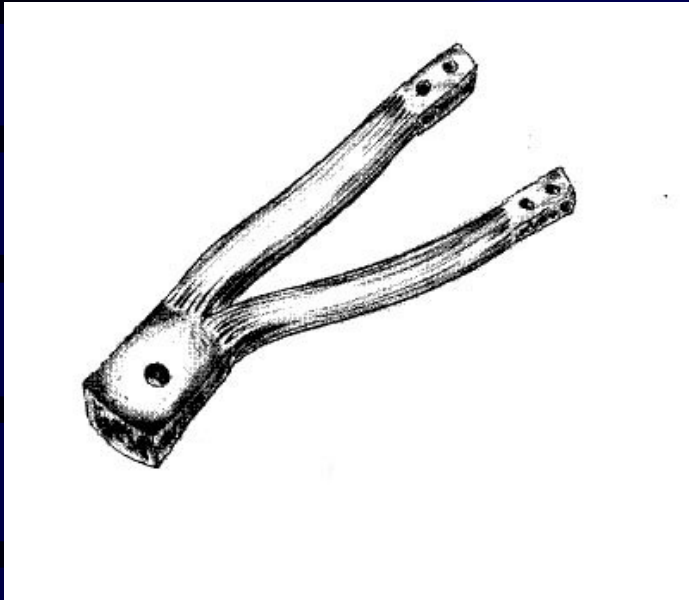




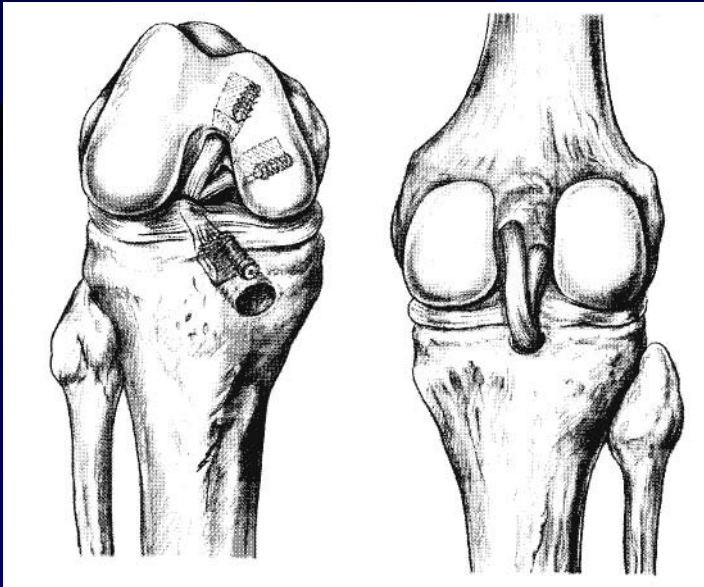


**TRATTAMENTO
CHIRURGICO IN
ARTROSCOPIA
CON
DOPPIO TUNNEL
FEMORALE E
TRAPIANTO CON
TENDINE
QUADRICIPITALE
O St + G**

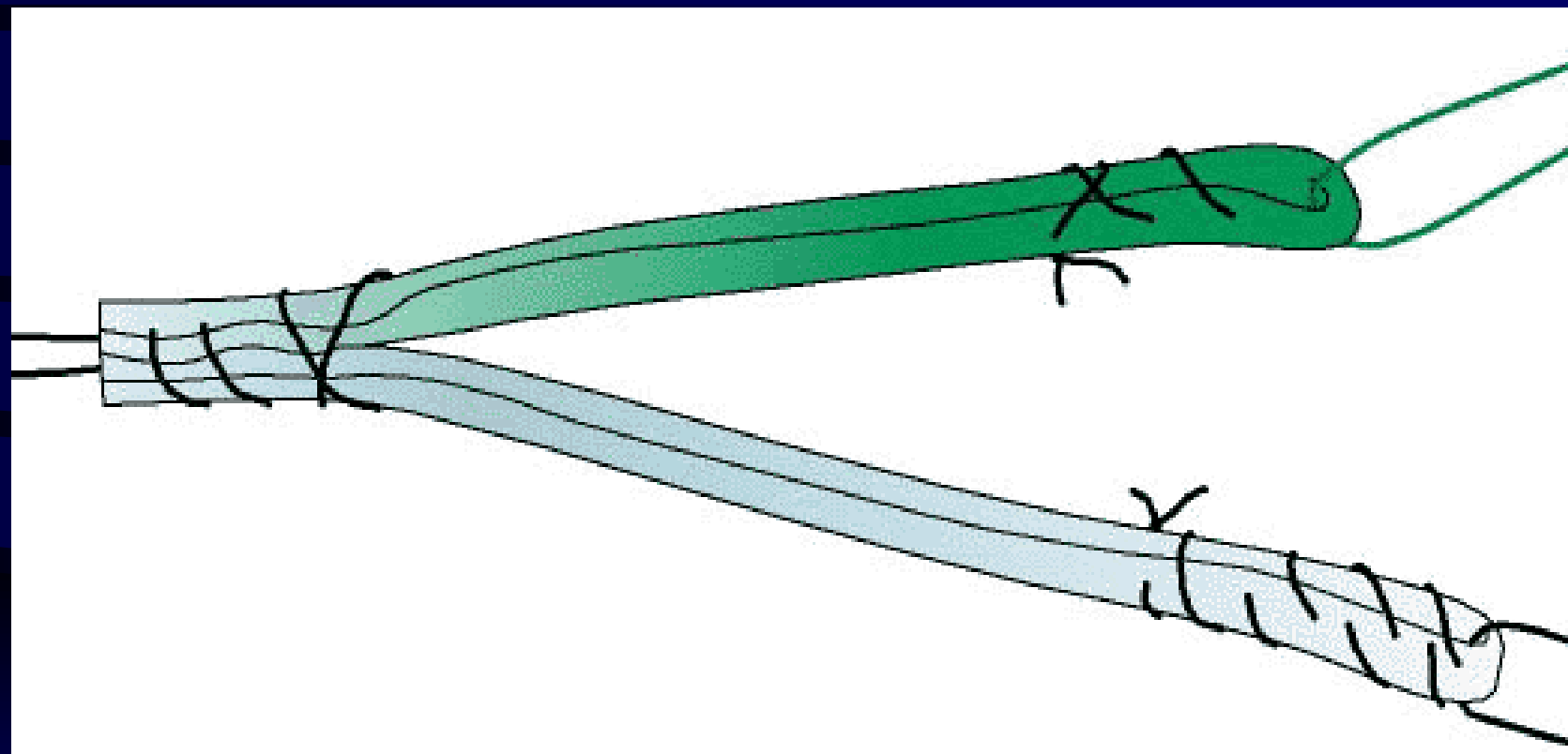


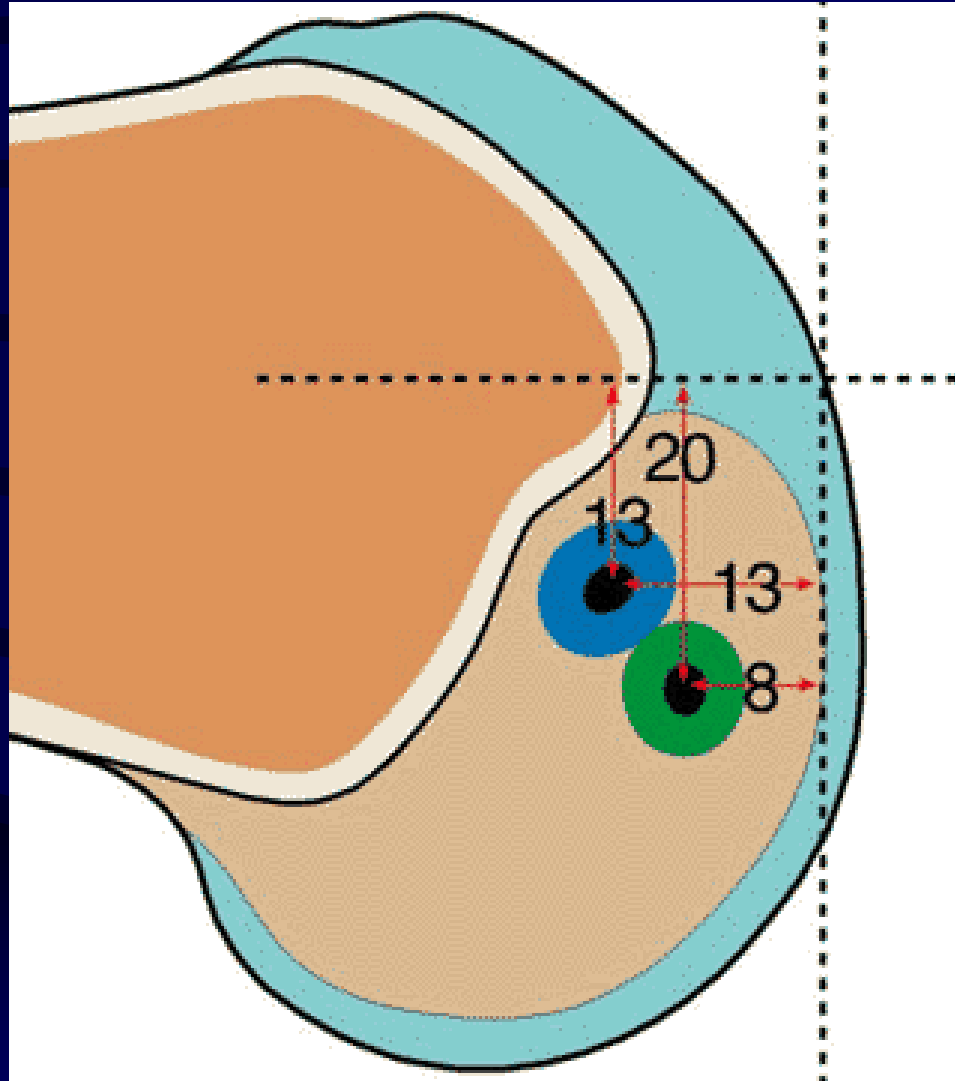


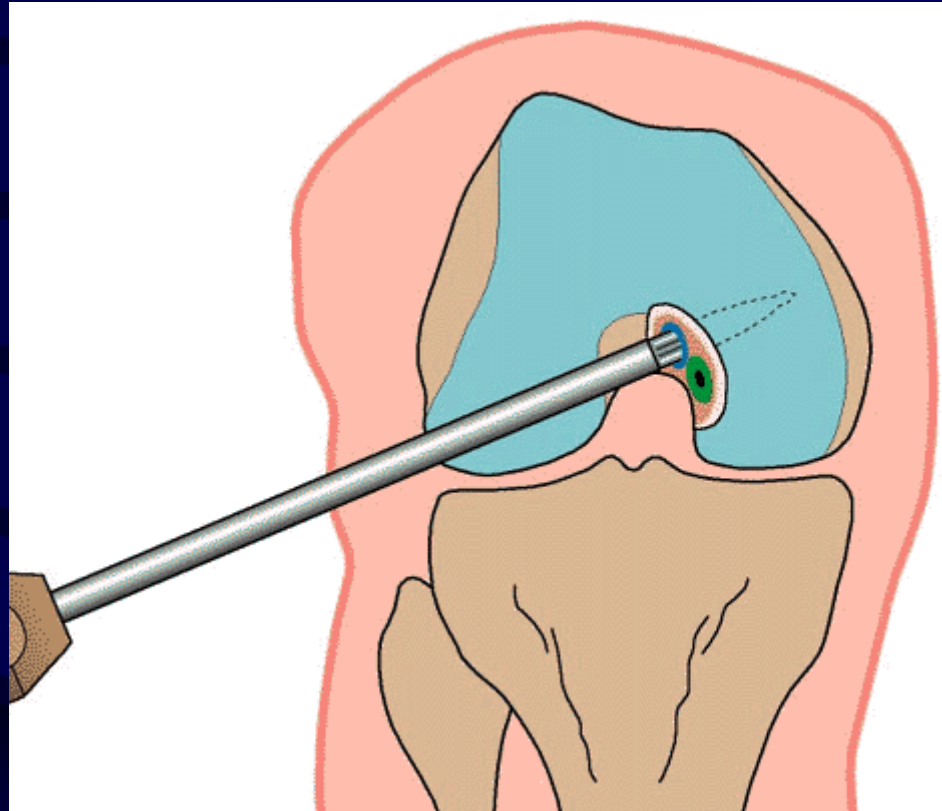
**2 FASCI DI CIRCA
5mm (PM) E 7mm
(AL)**

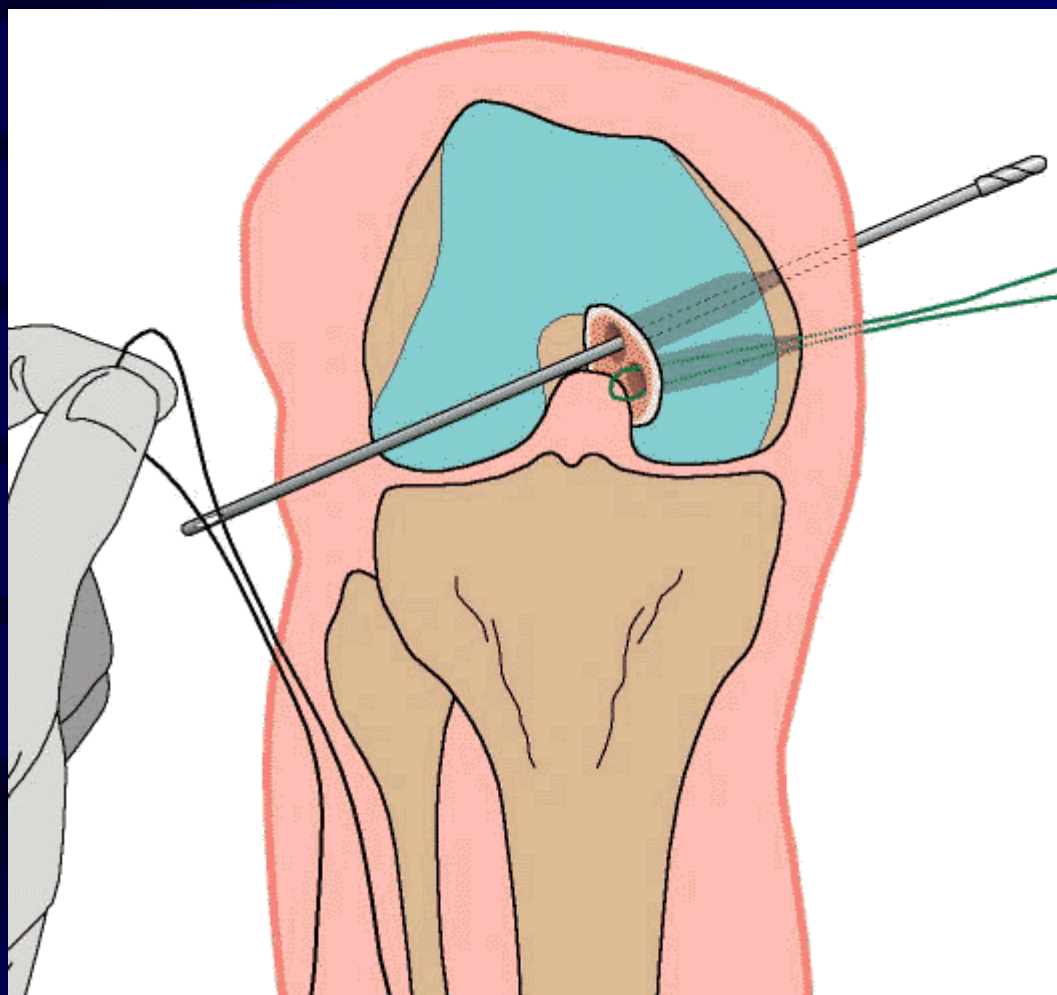


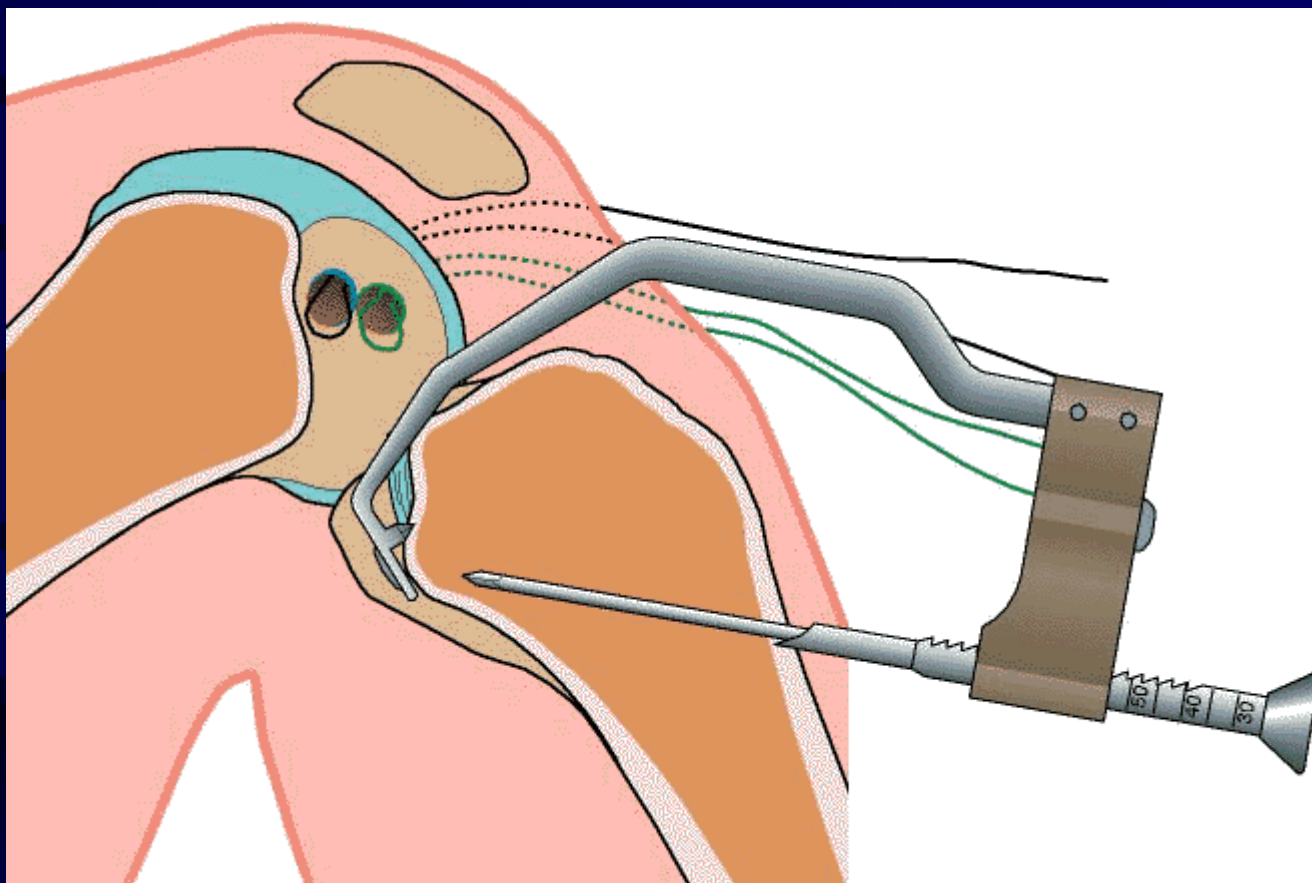
**IL TENDINE
ROTULEO E'
INADATTO A
CAUSA
DIMENSIONI DEL
PRELIEVO**

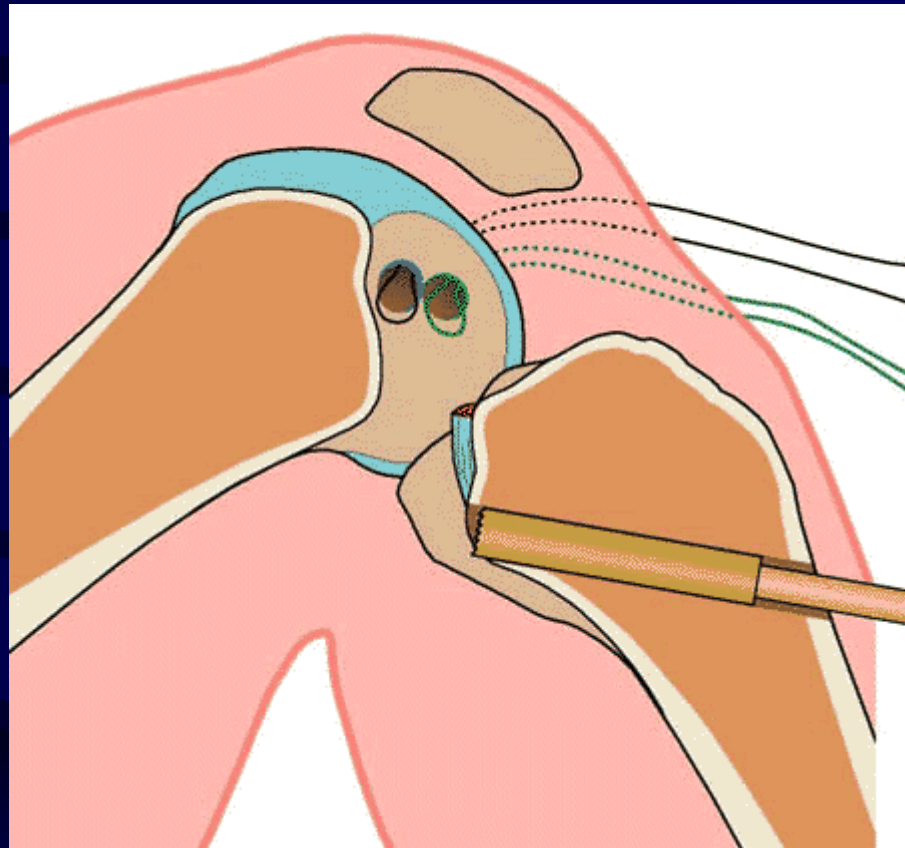


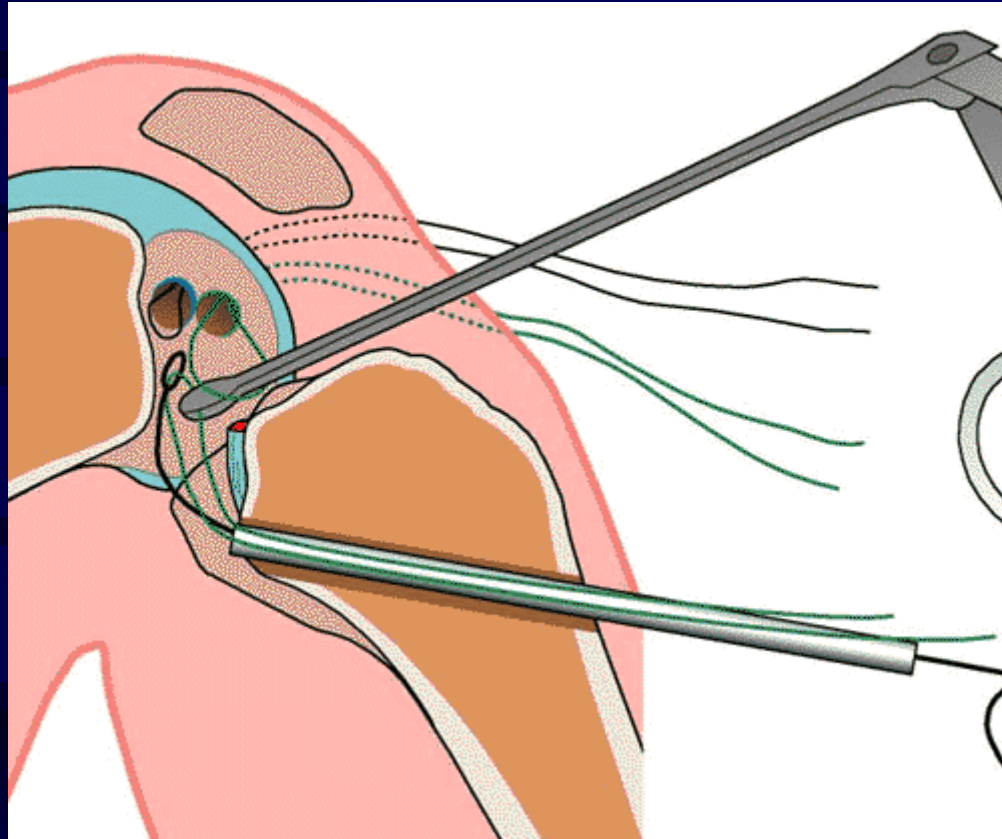


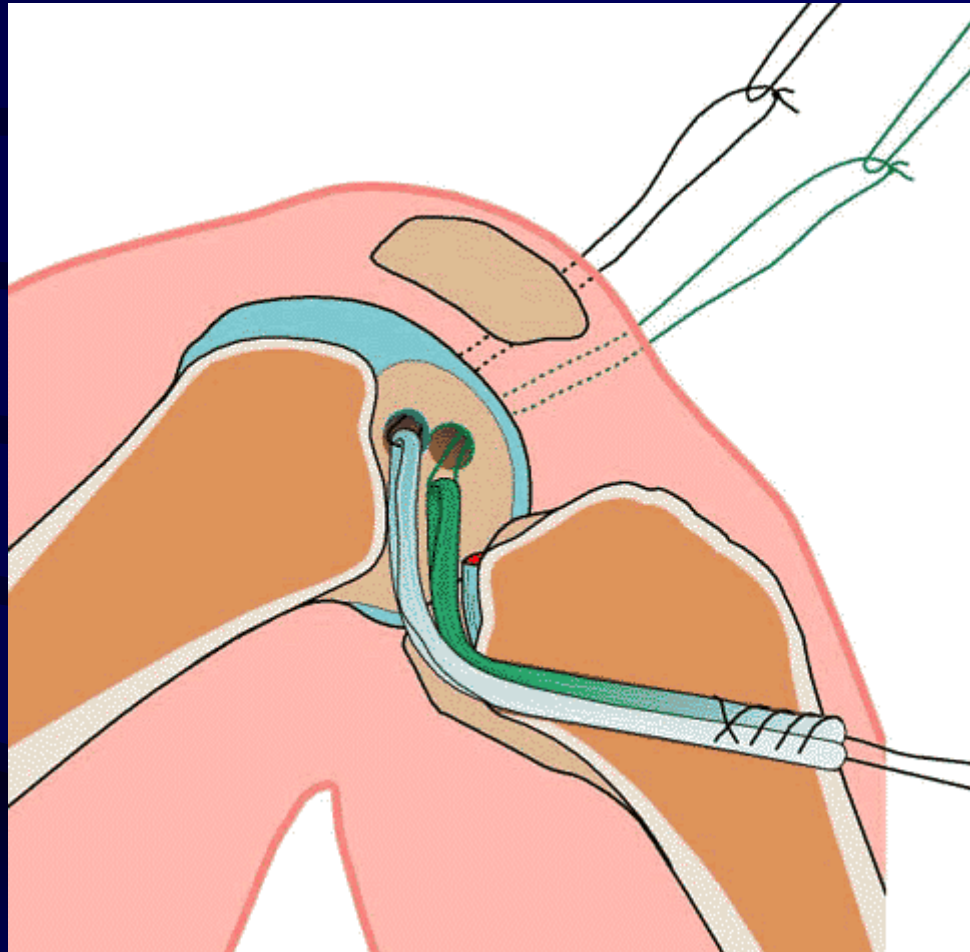


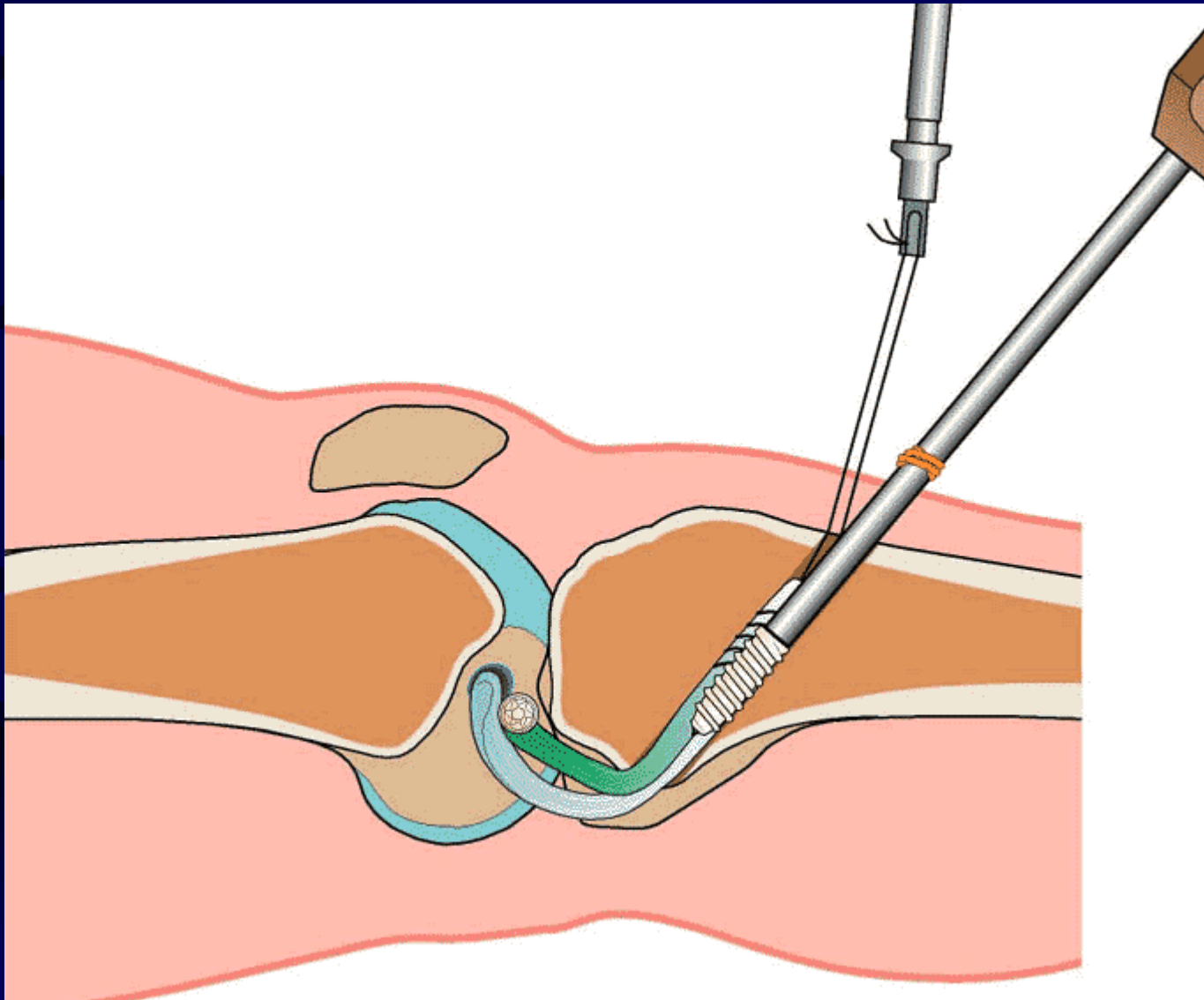


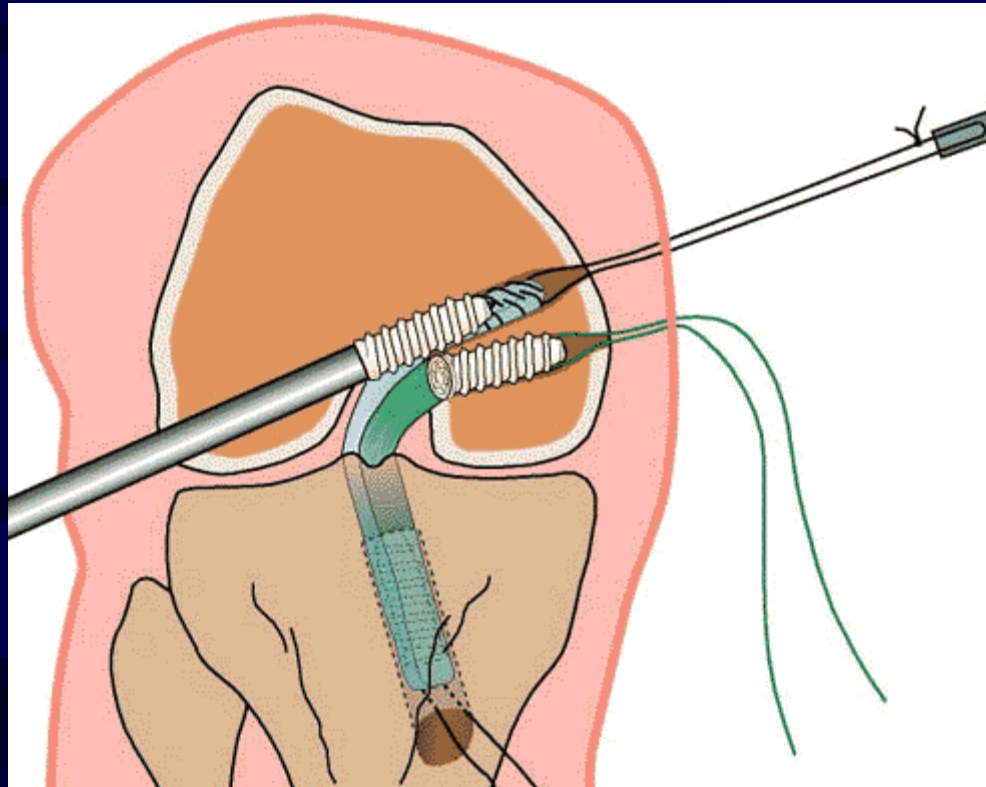


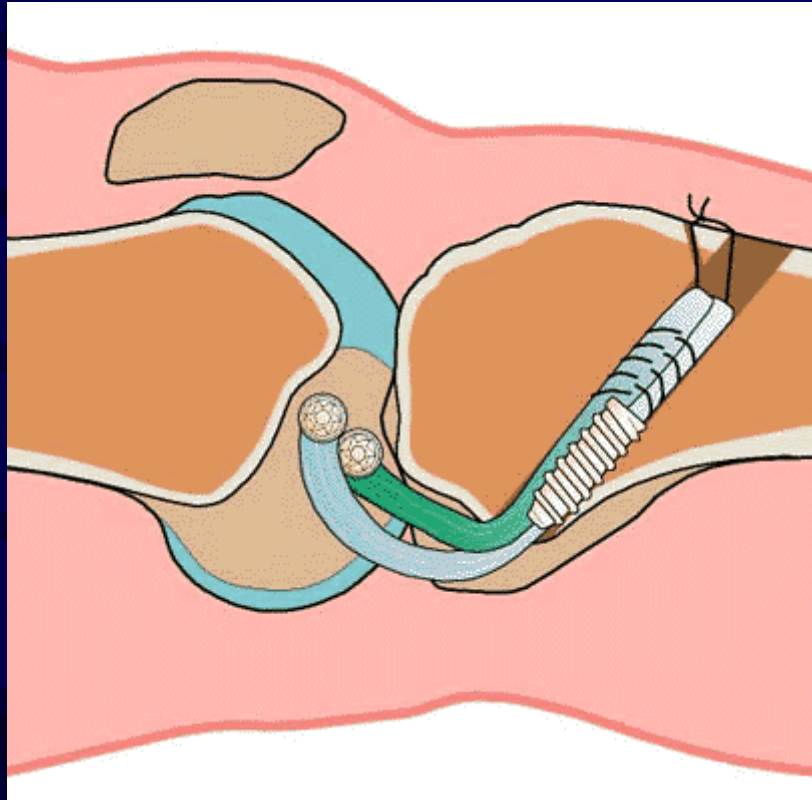


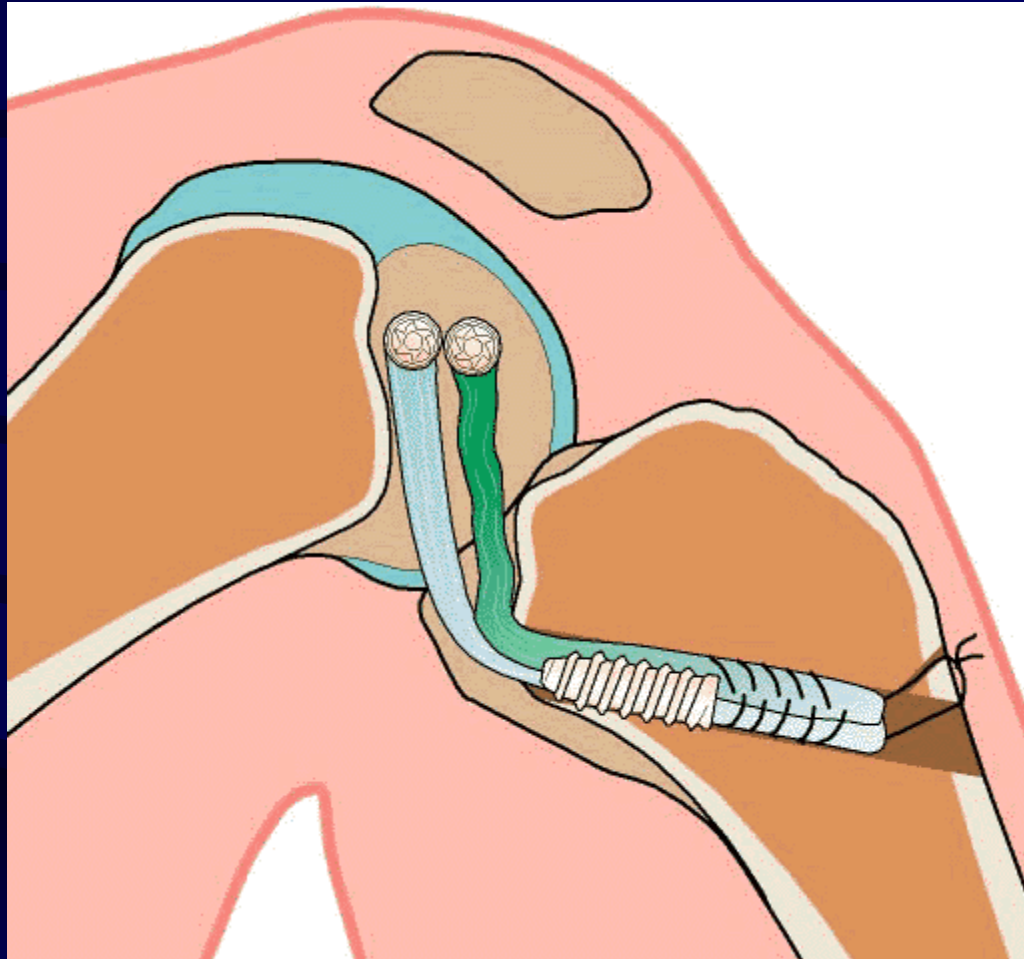




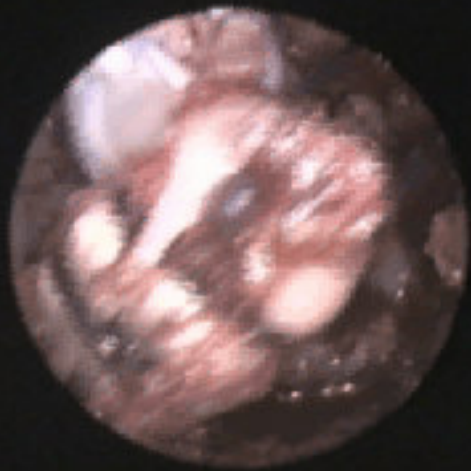








LCA + LCP ?



- tunnel PCL
- tunnel ACL
- trasporto trapianti
- fissazione PCL
- fissazione ACL

LEG. CROCIATO POSTERIORE

- GENERALITA'
- ANATOMIA
- BIOMECCANICA
- SINTOMATOLOGIA
- ESAME CLINICO
- ESAME STRUMENTALE
- TRATTAMENTO
- RIABILITAZIONE

CARICO PROGRESSIVO IN ESTENSIONE PER 6
SETTIMANE

MOBILIZZAZIONE GRADUALE PASSIVA DAL 2°
GIORNO CON CPM

RITORNO ALLO SPORT TRA 8 e 10 MESI