

ORDINE DEI MEDICI CHIRURGI E DEGLI
ODONTOIATRI DELLA PROVINCIA DI PARMA

I Martedì dell'Ordine

29 maggio 2012
L'ANCA DELL'ADULTO

*Sede dell'Ordine dei Medici
Chirurghi e degli Odontoiatri
Via Po, 134 – Parma*

IL CONFLITTO FEMORO ACETABOLARE SIGNIFICATO DI UN'IPOTESI PATOGENETICA

ATTUALE

GENNARO FIORENTINO

Ospedale Santa Maria
Borgo Val di Taro
U.O. Ortopedia e Traumatologia
Direttore: Prof. Aldo Guardoli

Femoroacetabular impingement: a cause of osteoarthritis of the hip

Ganz R., Parvizi J., Beck M., Leunig M., Siebenrock KA.

Clinical Orthopaedics and Related Research 2003 Dec; (417):112,20

Clinical Orthopaedics and Related Research 2003 Dec; (417):112,20

Ganz R., Parvizi J., Beck M., Leunig M., Siebenrock KA.

...10 anni fa

Reinhold Ganz

Karlsruhe – Germany

20 Aug 1939



Femoroacetabular impingement: a cause of osteoarthritis of the hip

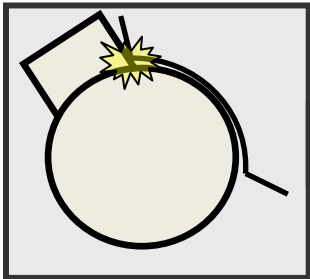
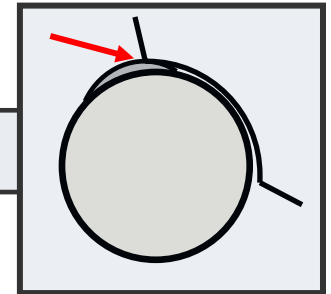
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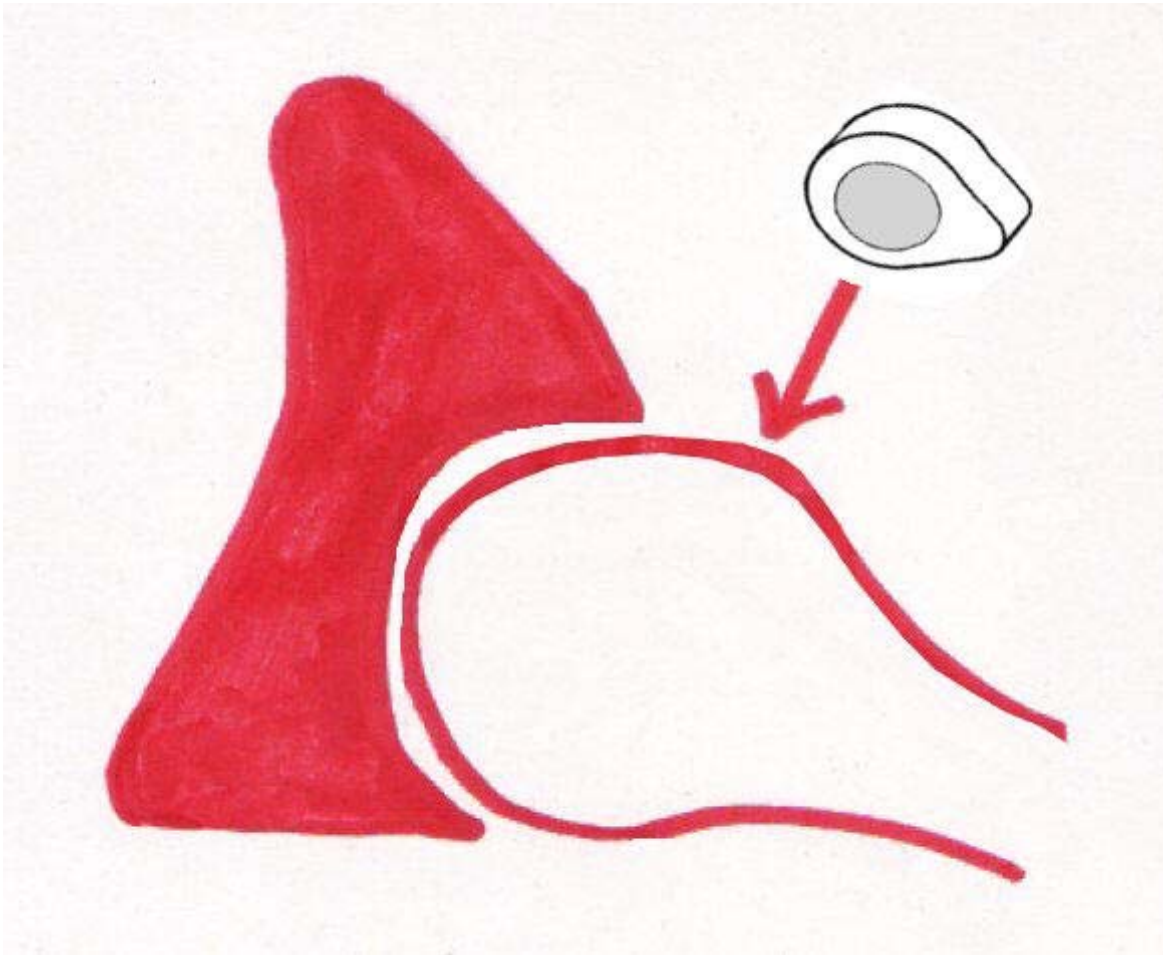
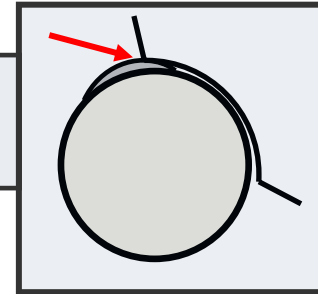
Cam Impingement: testa non sferica contro acetabolo



Pincer Impingement: collo femorale contro acetabolo retroverso

Impingement Femoro-Acetabolare

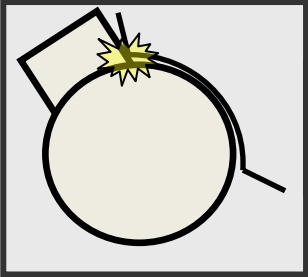
Cam (CAMMA) Impingement: testa non sferica contro acetabolo



CAM Impingement



Impingement Femoro-Acetabolare



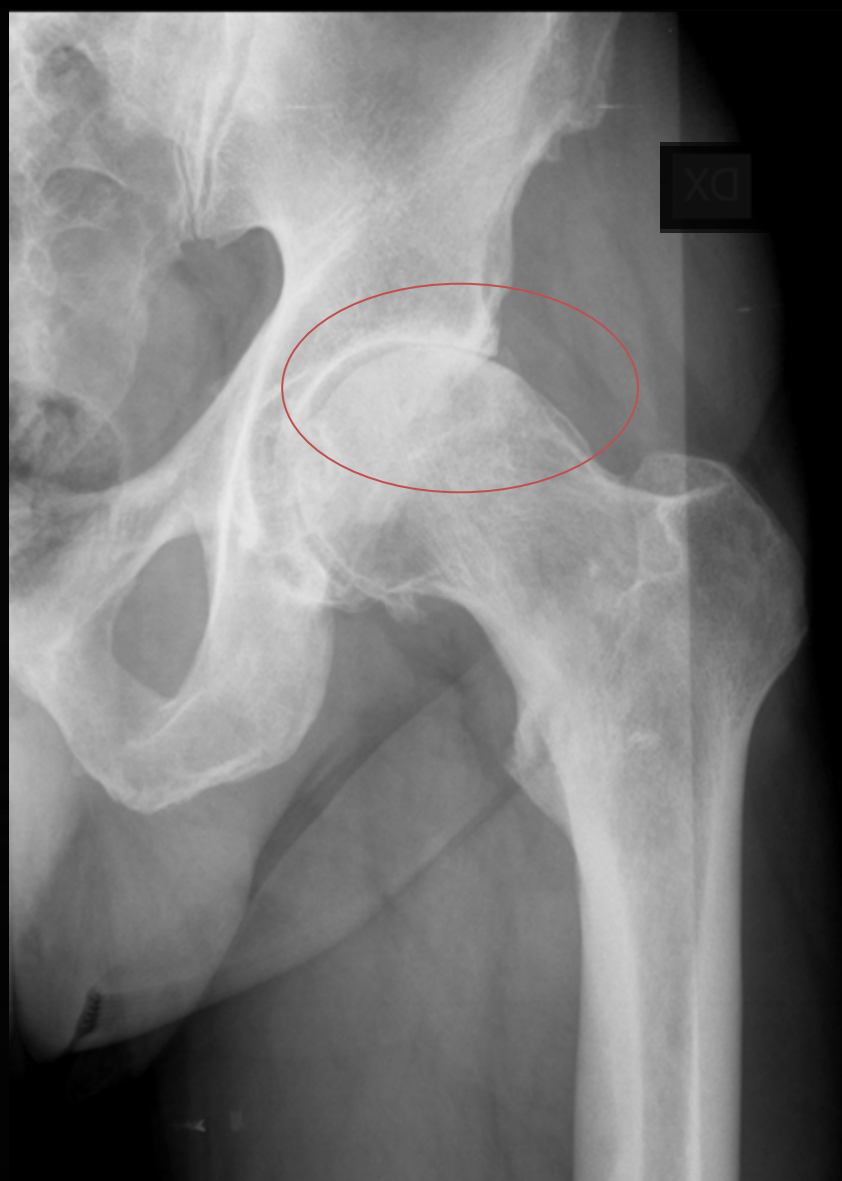
Pincer (*TENAGLIA*) Impingement: collo femorale contro acetabolo retroverso

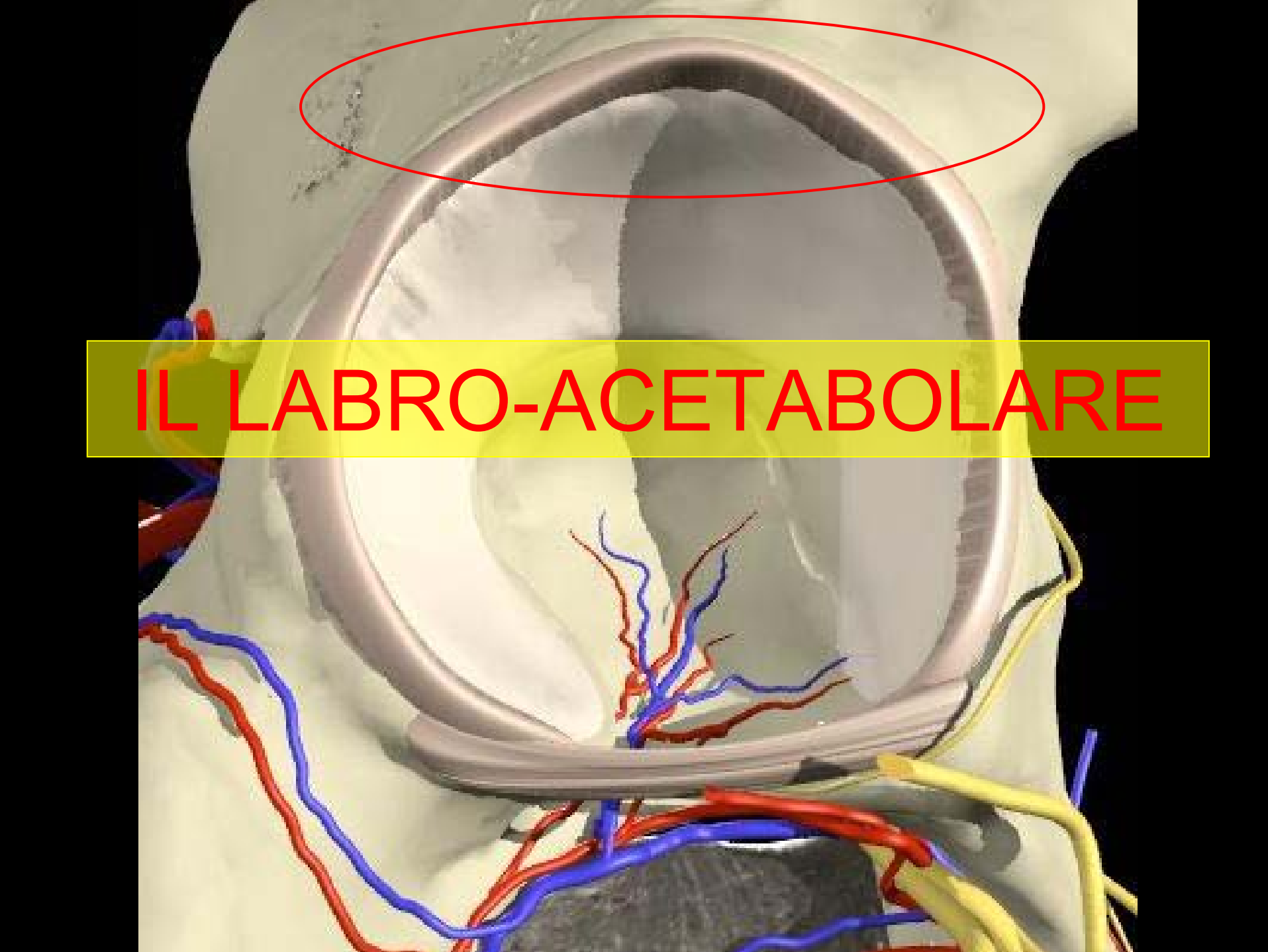


PINCER Impingement









This anatomical diagram illustrates the hip joint, specifically the acetabulum (hip socket). A red oval highlights the labrum acetabolare, a fibrocartilaginous structure that deepens the socket. The femoral head is visible within the socket. The surrounding area shows the iliofemoral and ischiofemoral ligaments, as well as the blood supply (red and blue vessels) and nerves (yellow lines) to the joint.

IL LABRO-ACETABOLARE

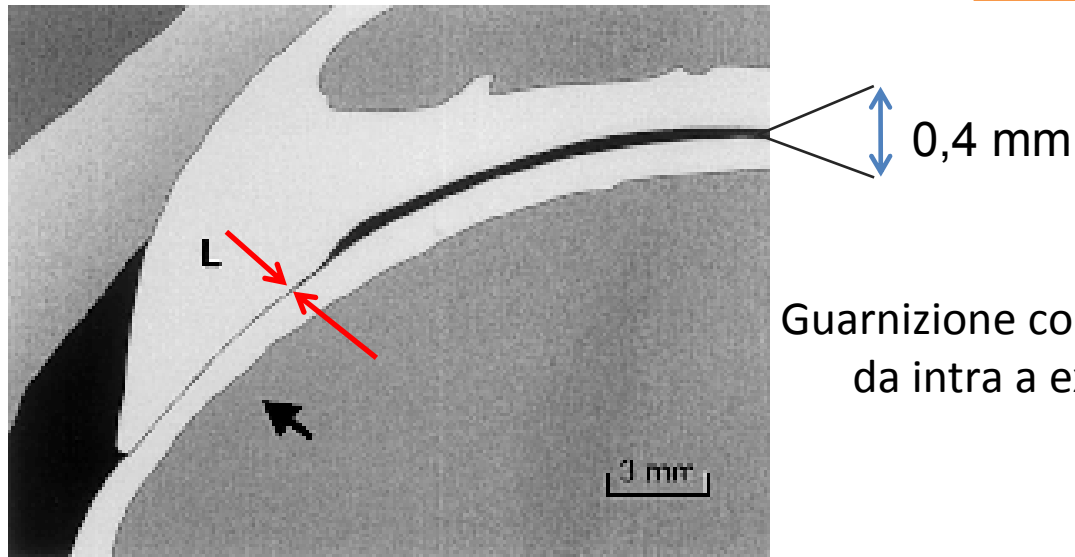
Pincer





Labbro acetabolare

GUARNIZIONE



Guarnizione contro lo spostamento di fluido da intra a extra articolare

- Weber et al. 1837
- Takechi et al. 1982
- Terayama et al. 1980

Contiene la pressione di uno strato di fluido nell'articolazione per lungo tempo limitando la compressione sulle cartilagini articolari (cartilage consolidation)

- Ferguson et al. 1999-2000
- McCutchen 1975

GUARNIZIONE

S, Min. Principal
(Avg. Cnt: 75%)

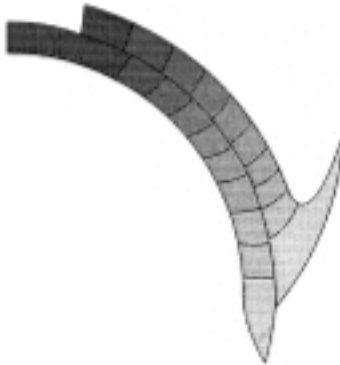
+1.14e-01
+6.86e-02
+2.27e-02
-2.52e-02
-8.91e-02
-1.15e-01
-5.81e-01
-2.57e-01
-2.53e-01
-2.99e-01
-3.45e-01



Il fluido sotto pressione sopporta > del 95%
del carico applicato

POR
(Avg. Cnt: 75%)

+8.81e-01
+7.75e-01
+6.89e-01
+6.03e-01
+5.17e-01
+4.31e-01
+3.45e-01
+2.59e-01
+1.72e-01
+8.61e-02
-5.93e-02

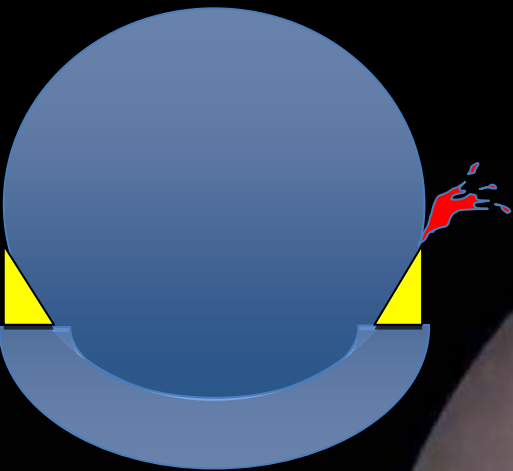


Senza labbro vi è diretto contatto tra le
cartilagini con distribuzione non uniforme
del carico

The acetabular labrum seal: a poroelastic finite element model

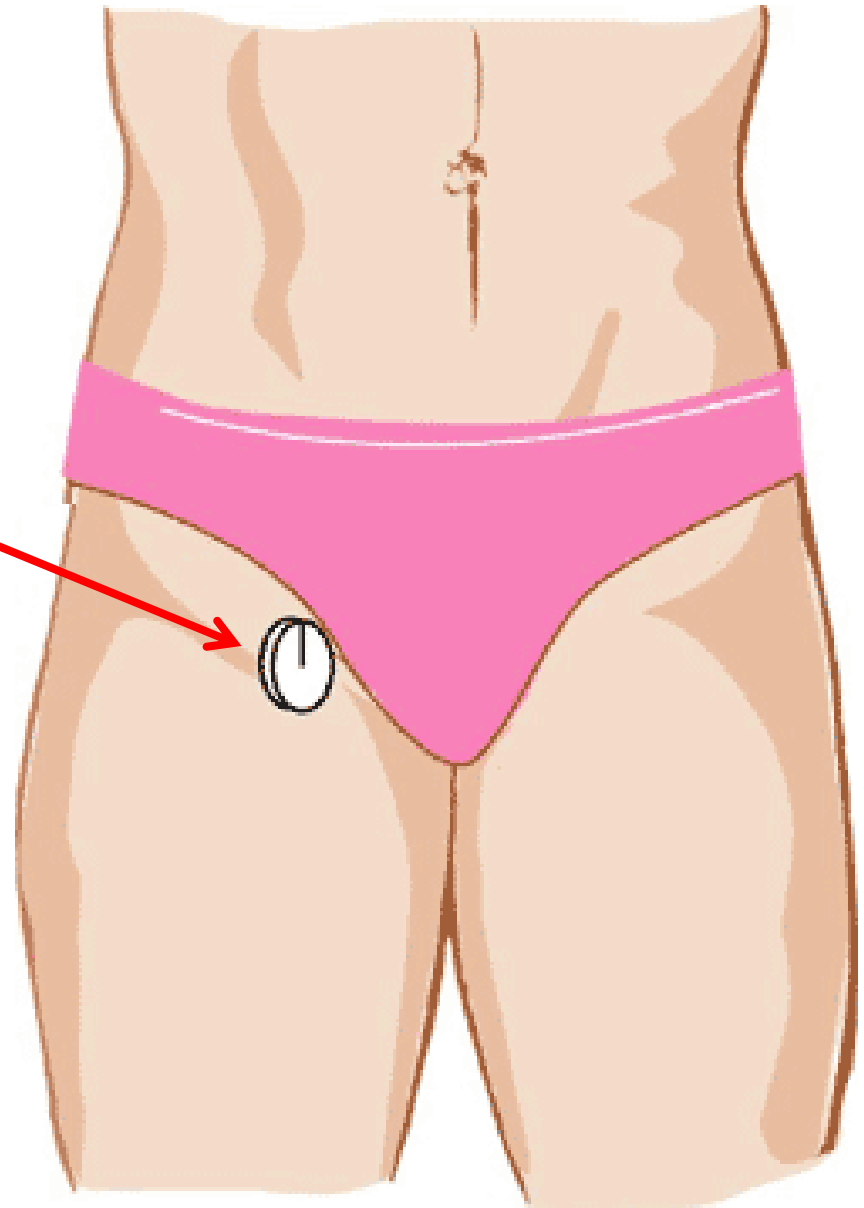
S.J. Ferguson ^{a,b,*}, J.T. Bryant ^b, R. Ganz ^c, K. Ito ^{a,c}

Clinical Biomechanics 15 (2000) 463–468



CLINICA: sintomi

**dolore
inguinale**

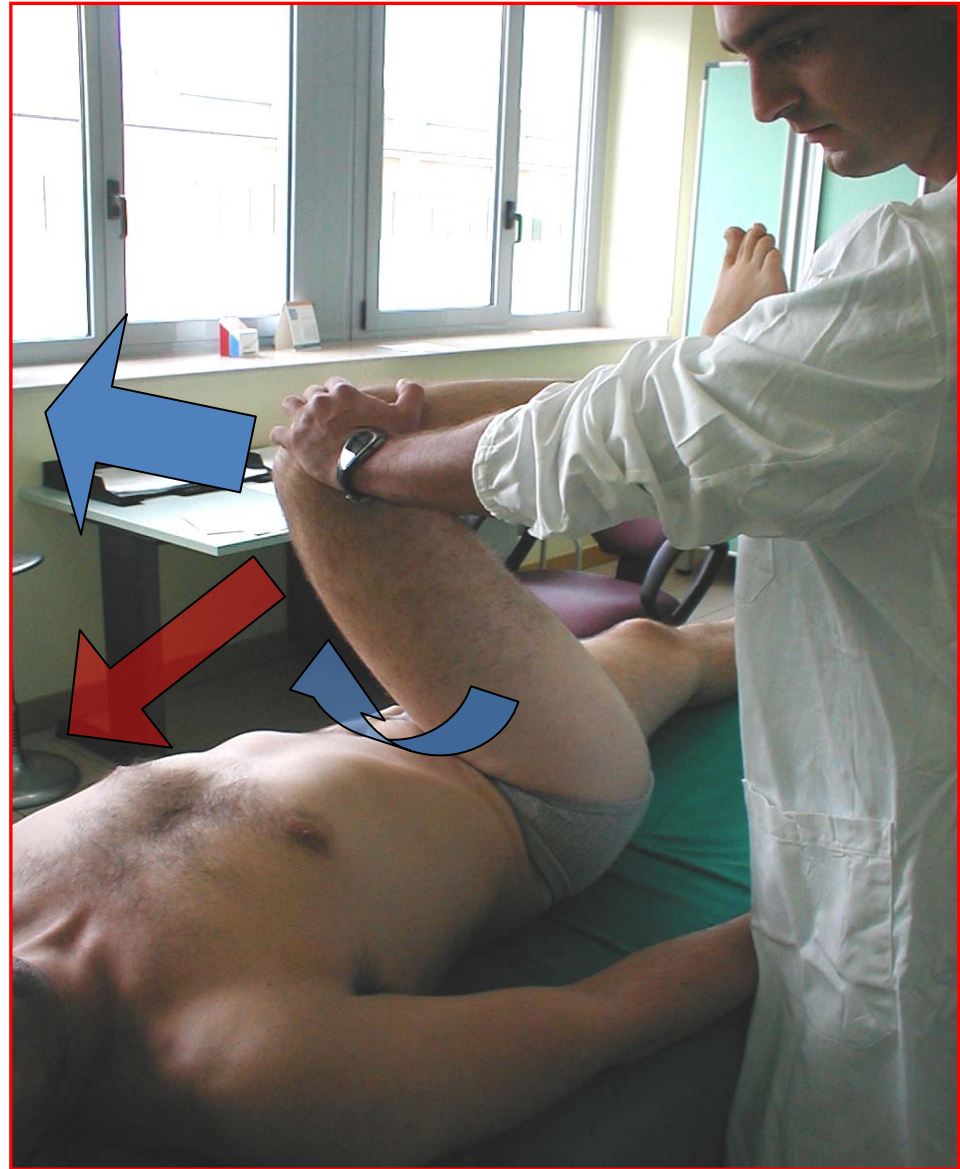
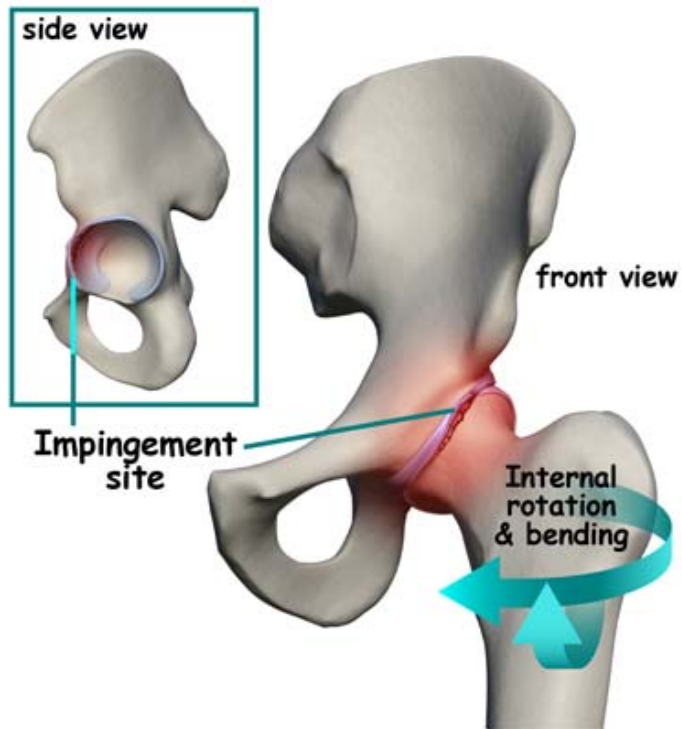


CLINICA: segni

C-Sign

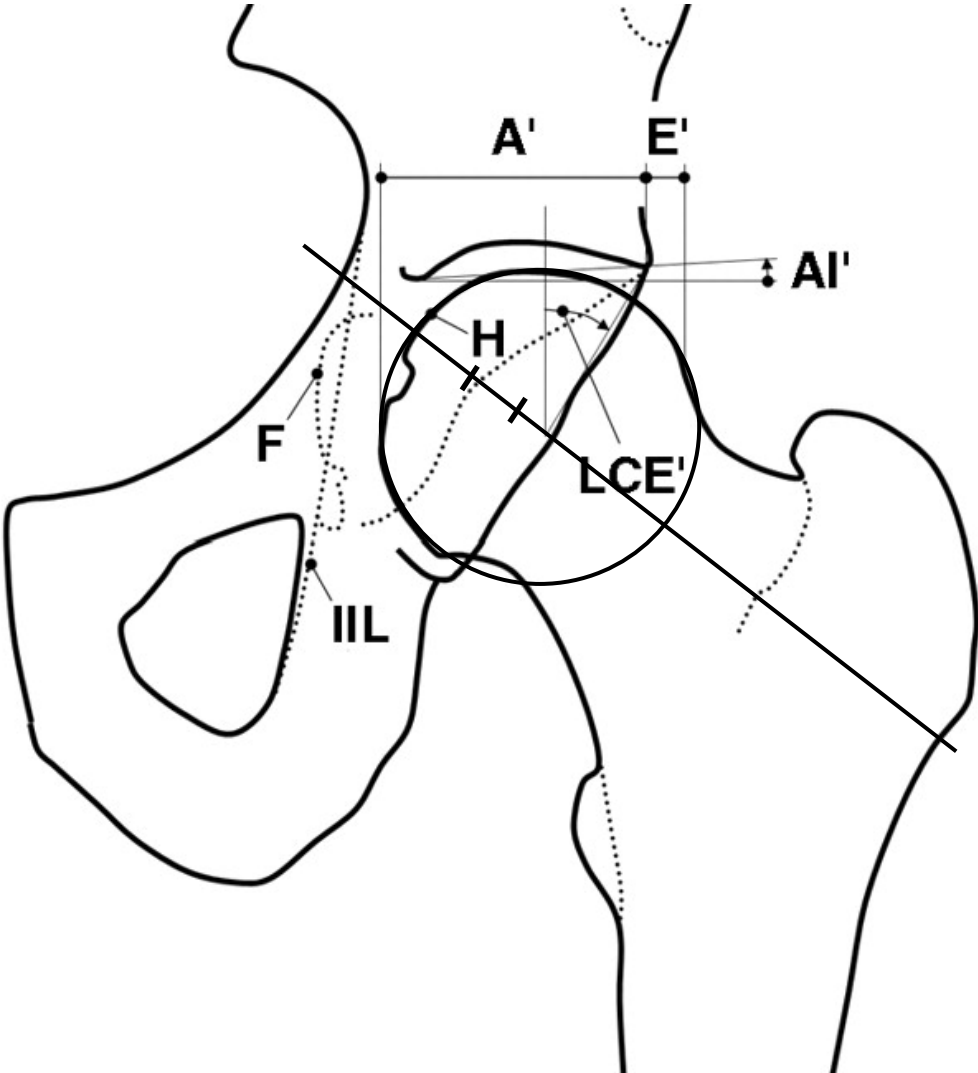


CLINICA: segni



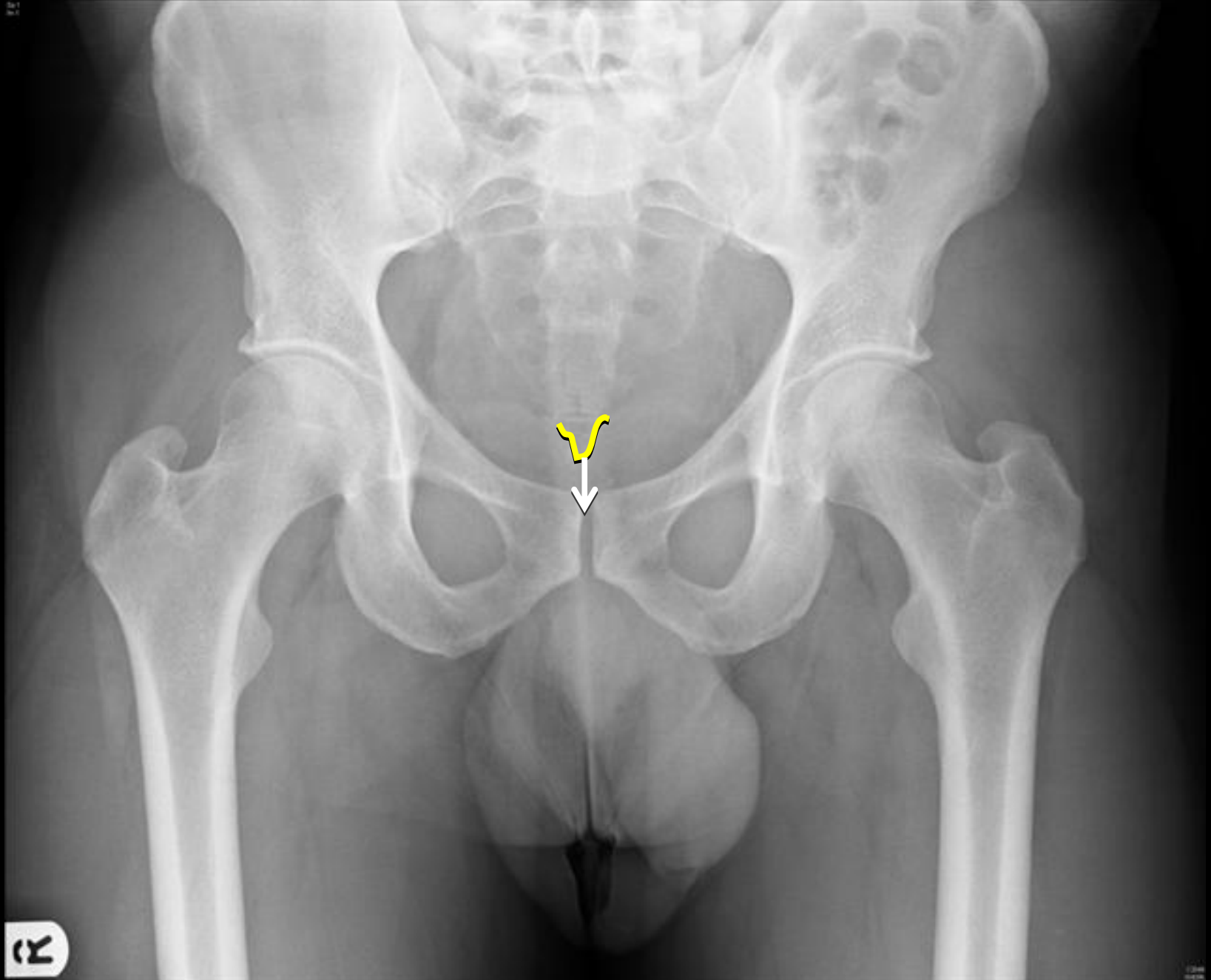
Segno dell' Impingement anteriore.

Valutare la radiografia dell'anca

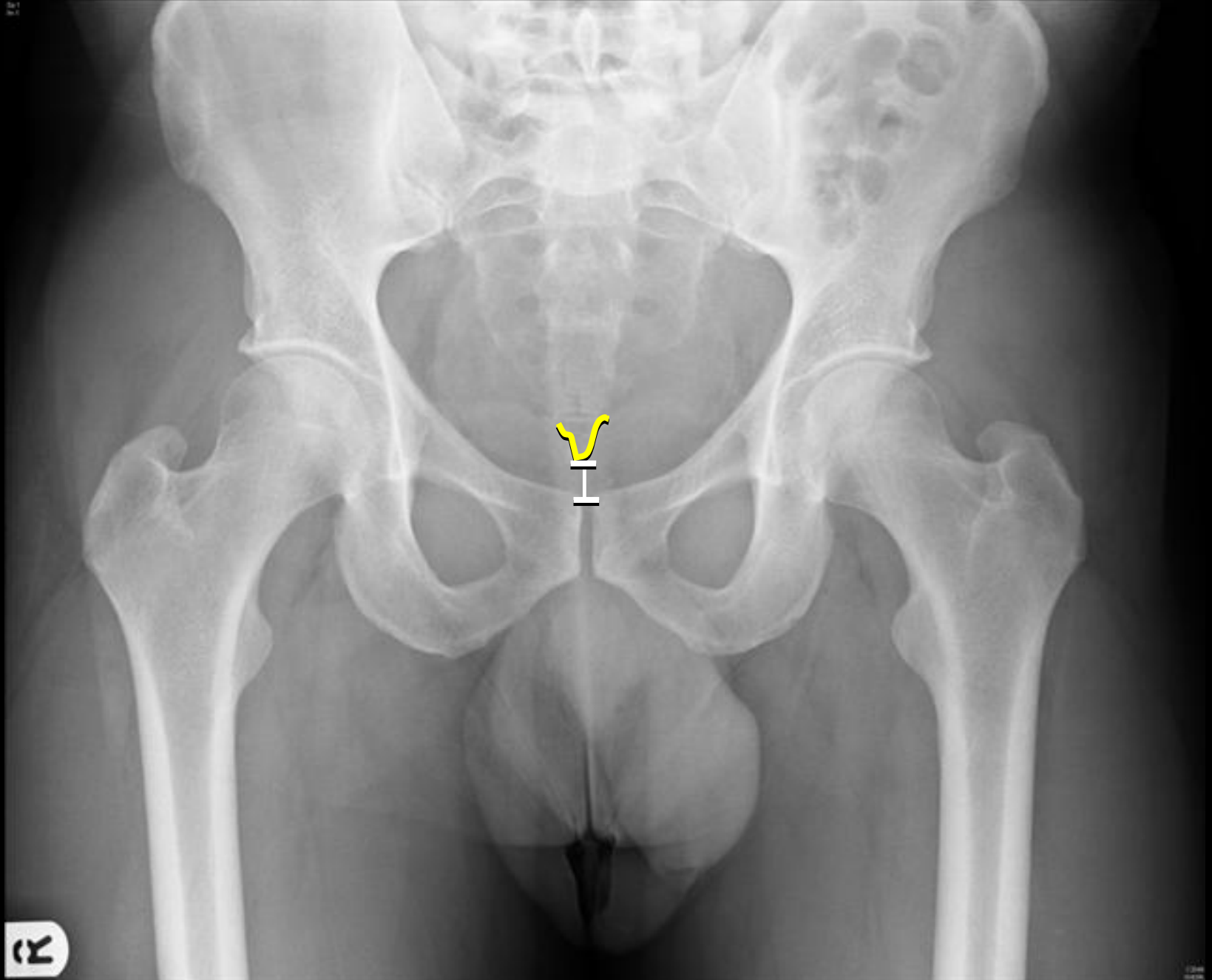




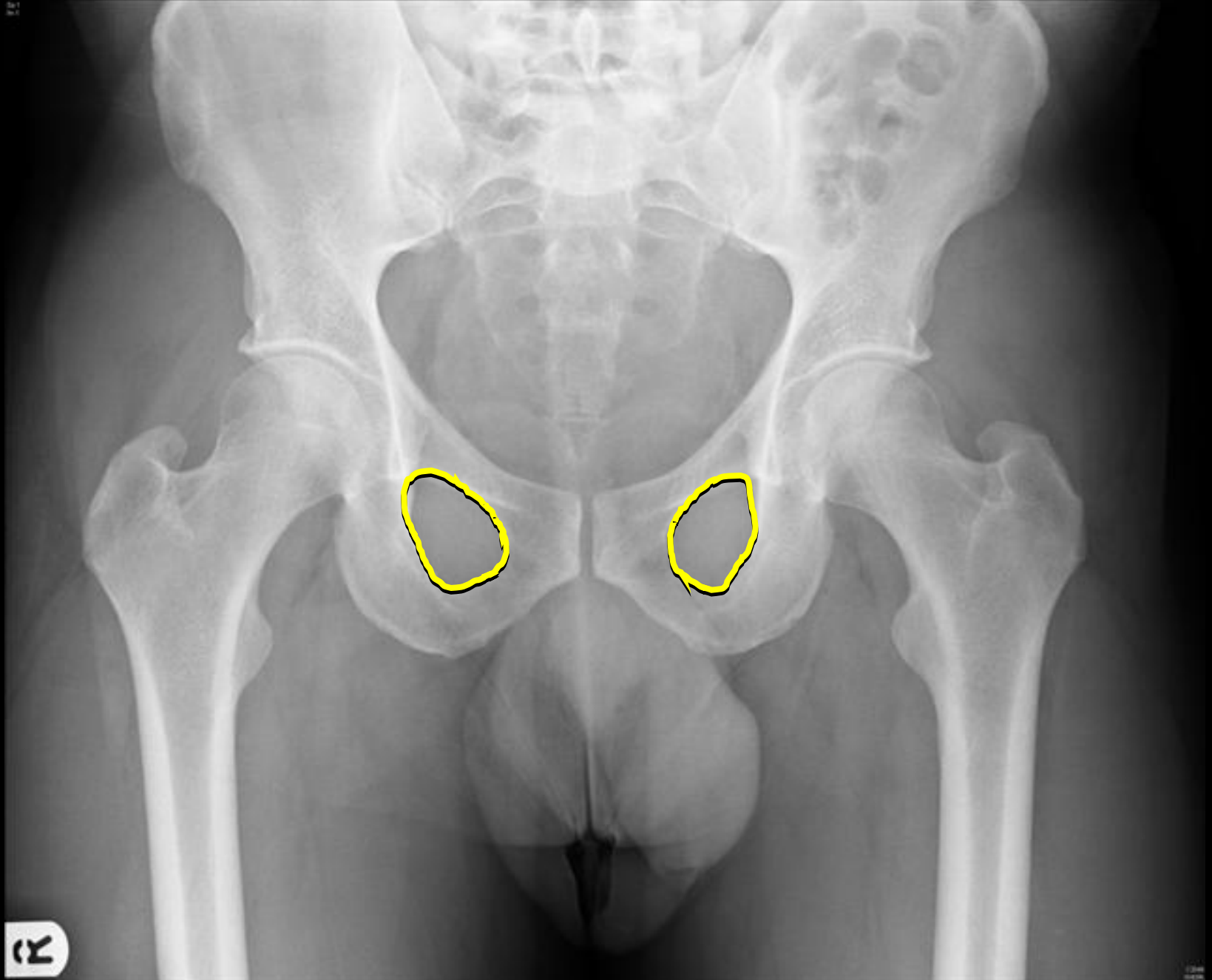
AP Vera: anche intraruotate di 15°



Coccige che punta verso la sinfisi



Distanza tra coccige e sinfisi: 1 cm nell'uomo e 2,5 cm nella donna



Forami otturatori speculari



Margine anteriore

Margine posteriore



Margine anteriore

Margine posteriore

Cross Over Sign

Retroversione Acetabolare

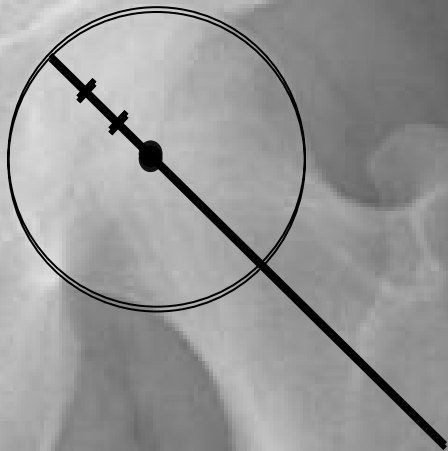


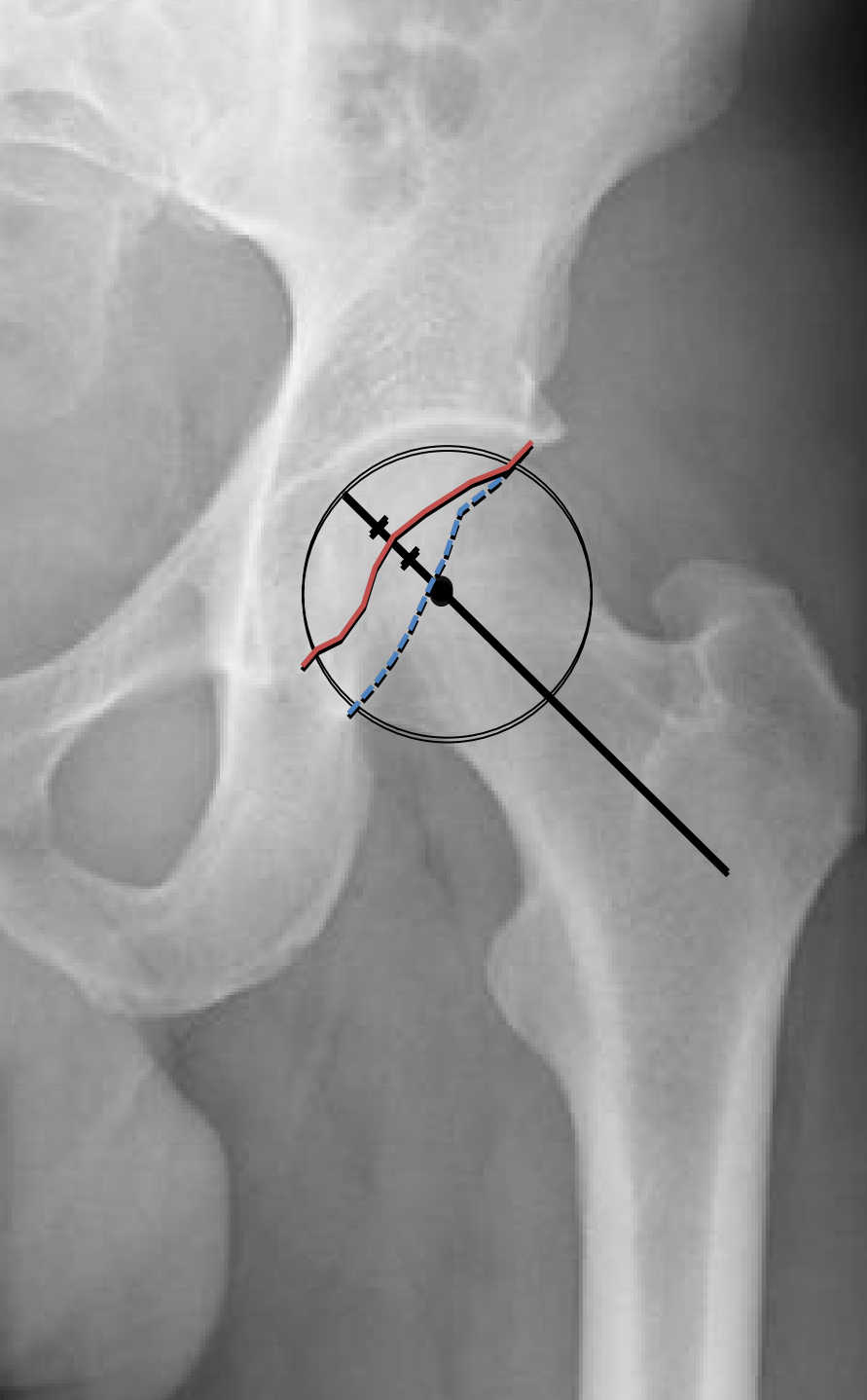
Asse anatomico del collo del femore



Centro della testa del femore

Raggio mediale della testa del femore
diviso in $3 \frac{1}{3}$





Margine anteriore

Margine posteriore

Acetabular wall index

Muro anteriore:

- Cade nei 2/3 del raggio
- 40% del raggio

Muro posteriore:

- Coincide con il centro della testa
- 90% del raggio

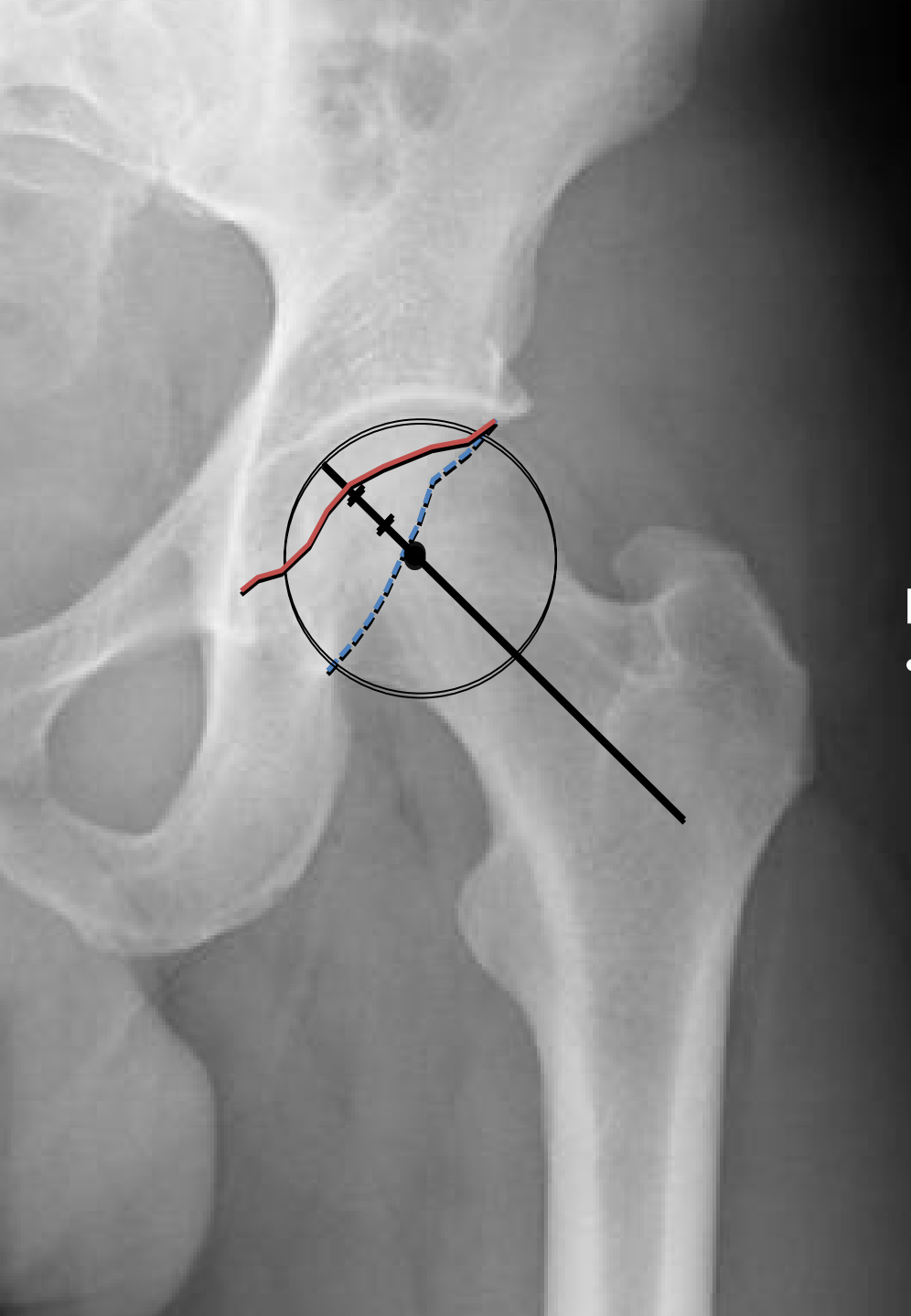
Margine anteriore

Margine posteriore

Displasico

Muro anteriore:

- Cade nel 1/3 più mediale del raggio





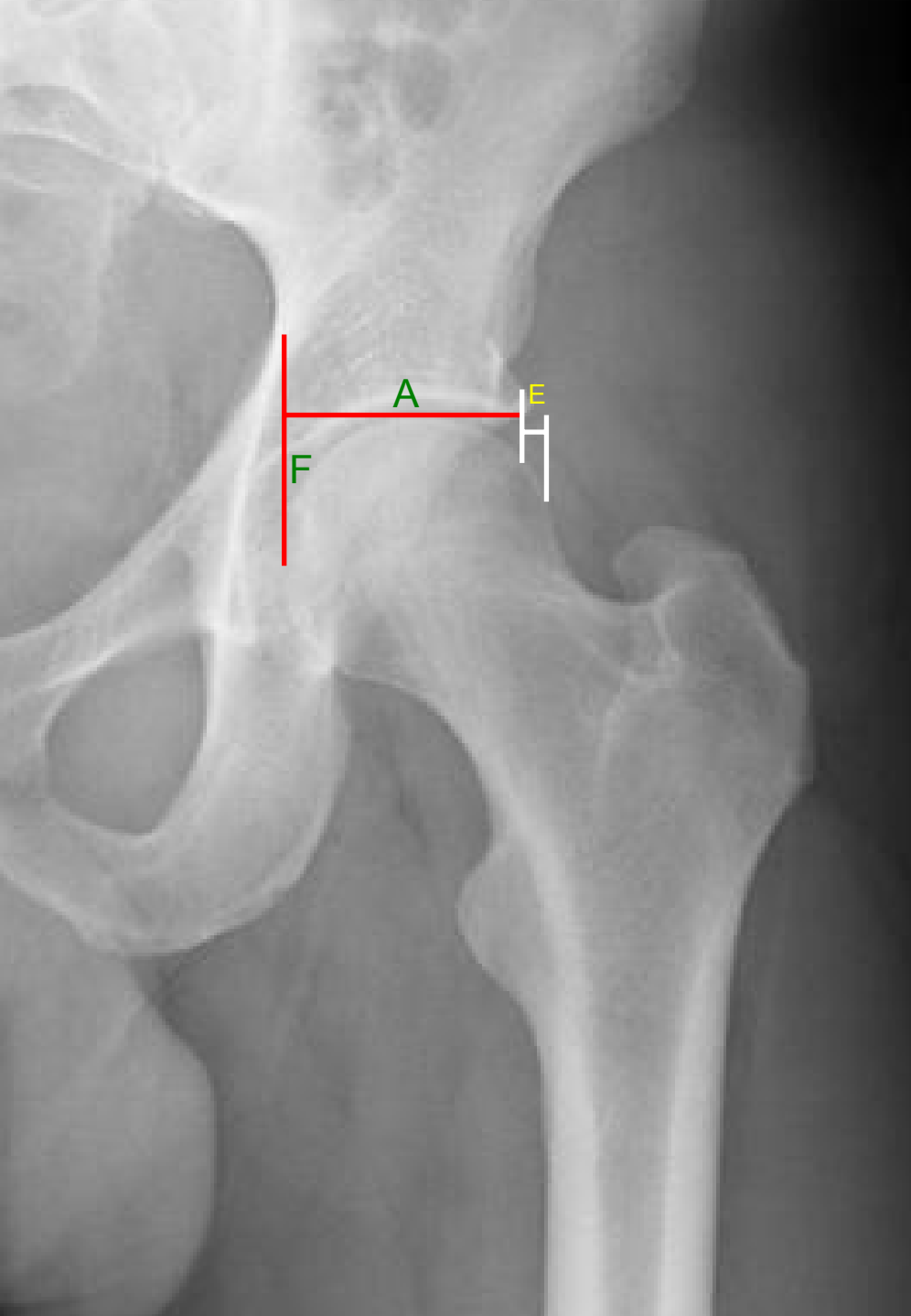
Margine anteriore

Margine posteriore

Posterior wall sign

Muro posteriore:

- Cade medialmente al centro della testa del femore
- Scarsa copertura posteriore



Extrusion index:

$$E/(A+E)$$

Normale: >0.25

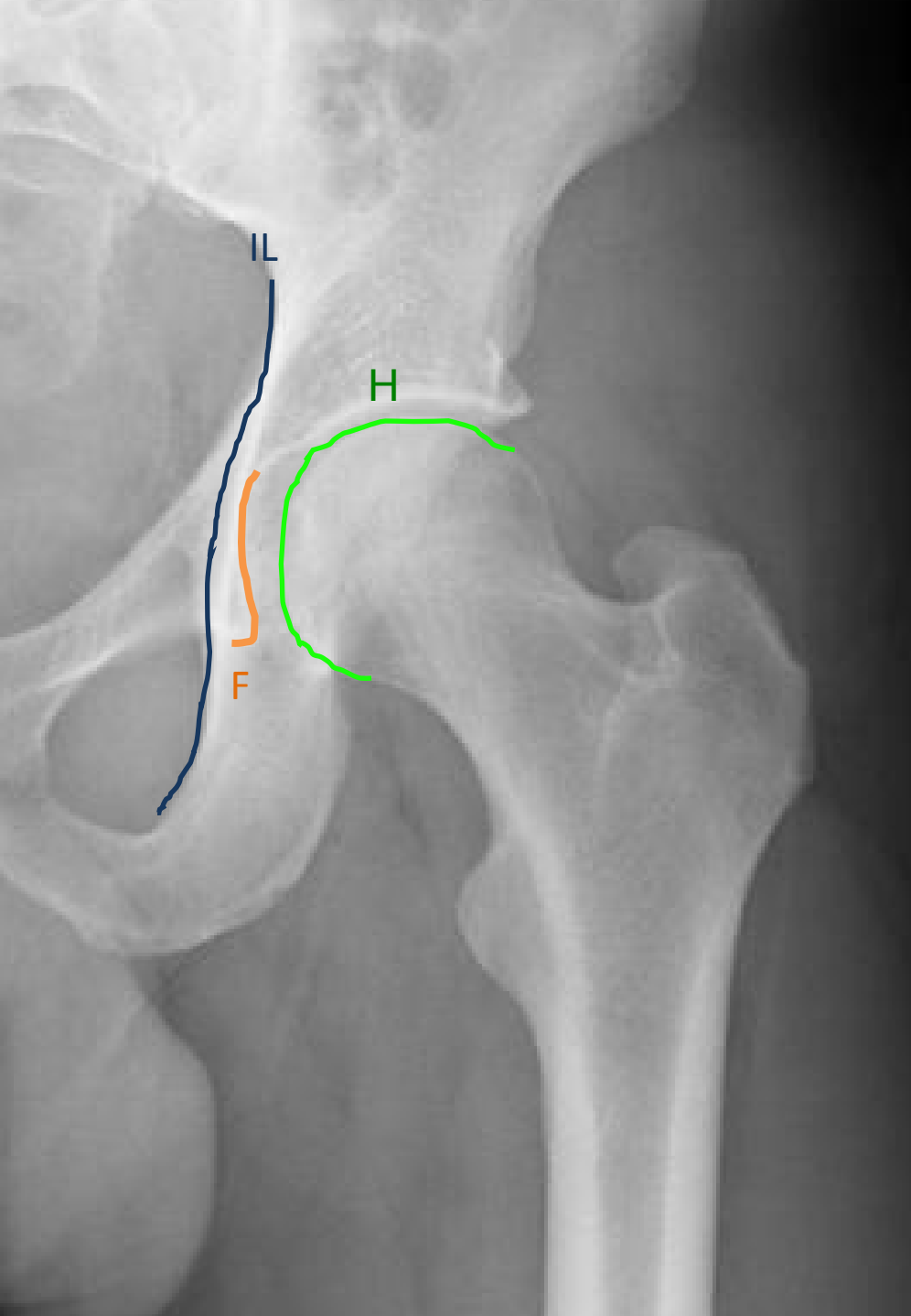
ipercoertura: $<0,18$

Ipocopertura: >0.35



Angolo di Wiberg
Center-Edge (CE) angle:

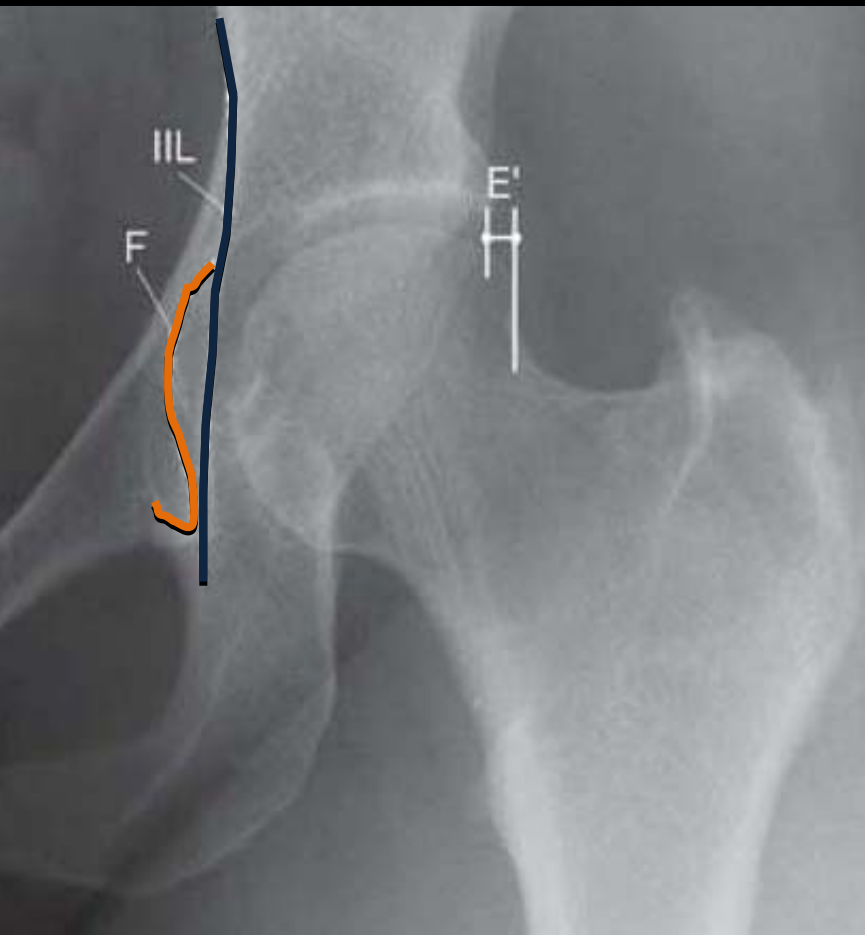
Normale: 20-40°



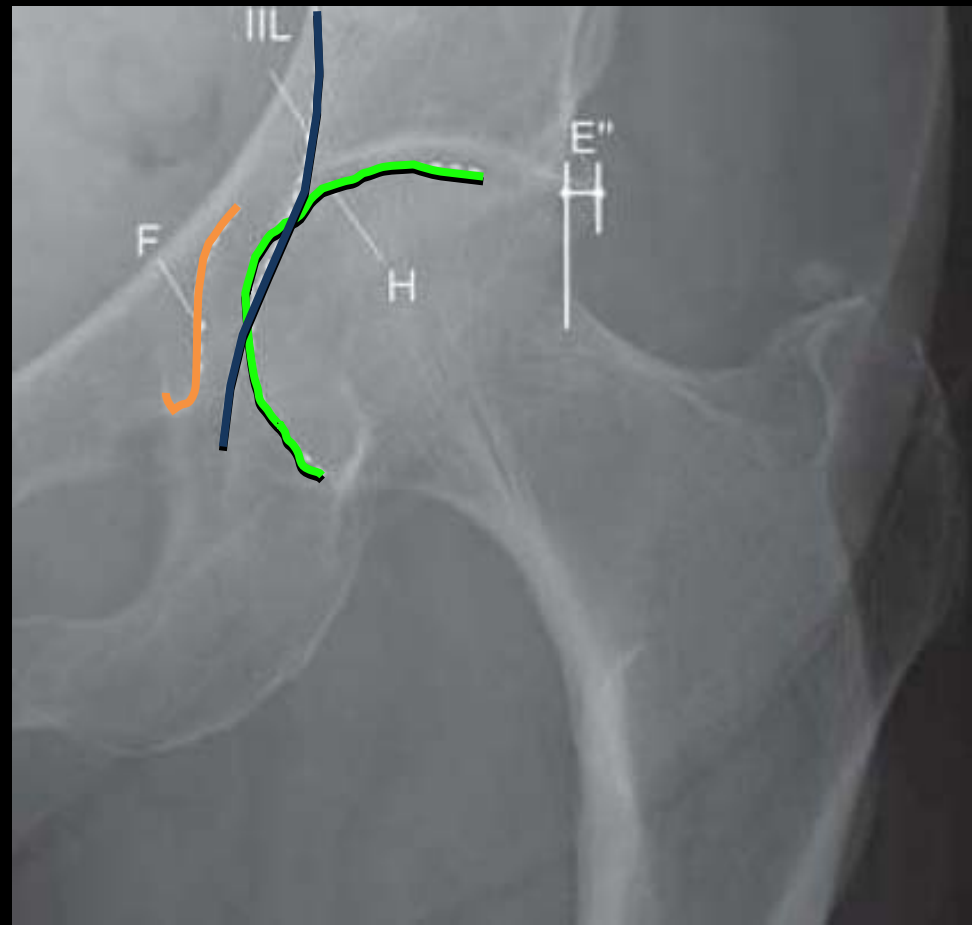
IL. Linea ileo-ischiatica
(KOHLEK'S LINE)

F: Linea acetabolare

H: Contorno della testa

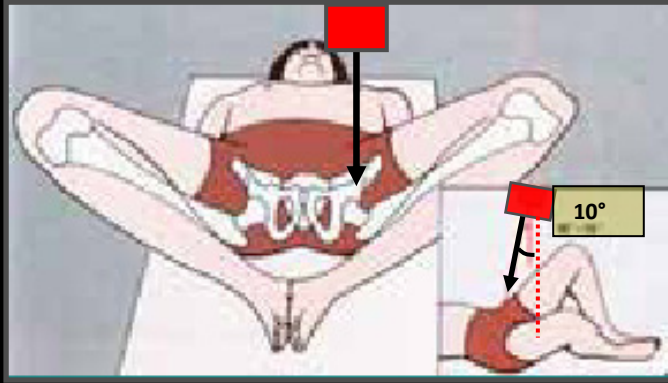


Coxa Profunda



Coxa Protrusa

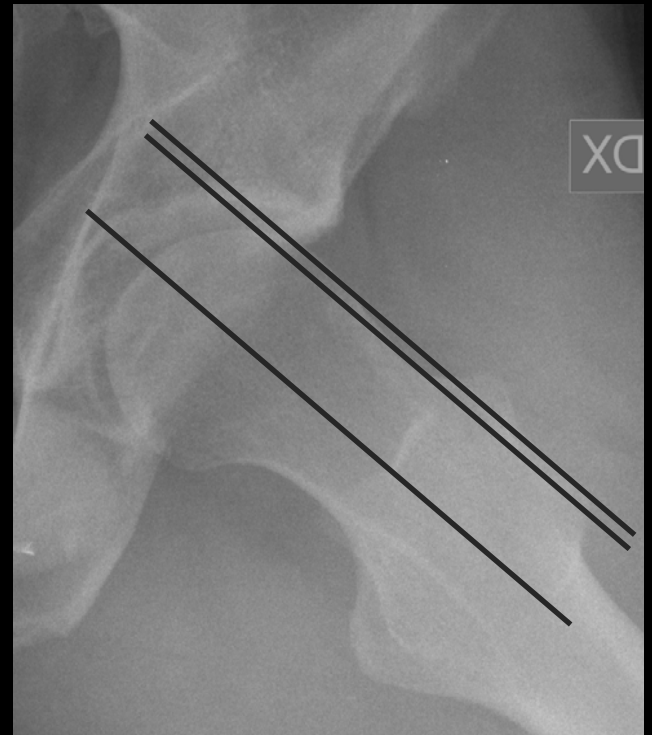
Frog Leg Position (Launstein)



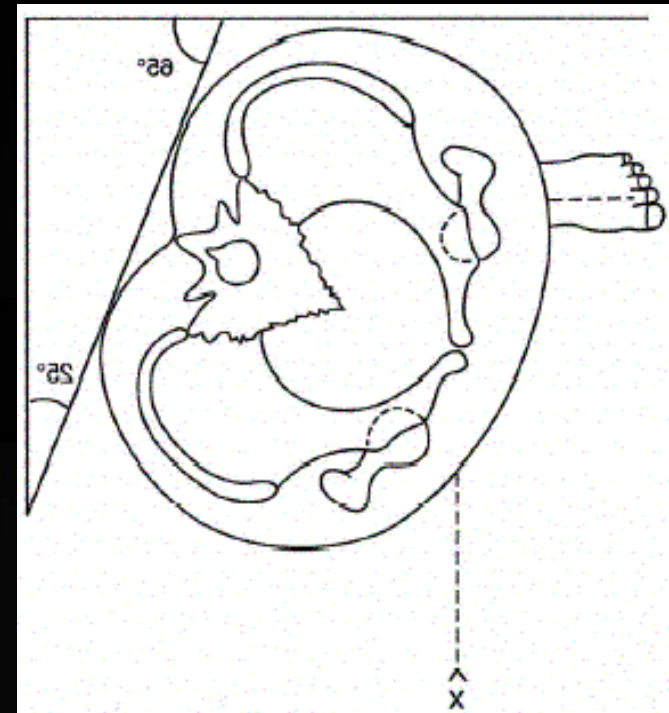
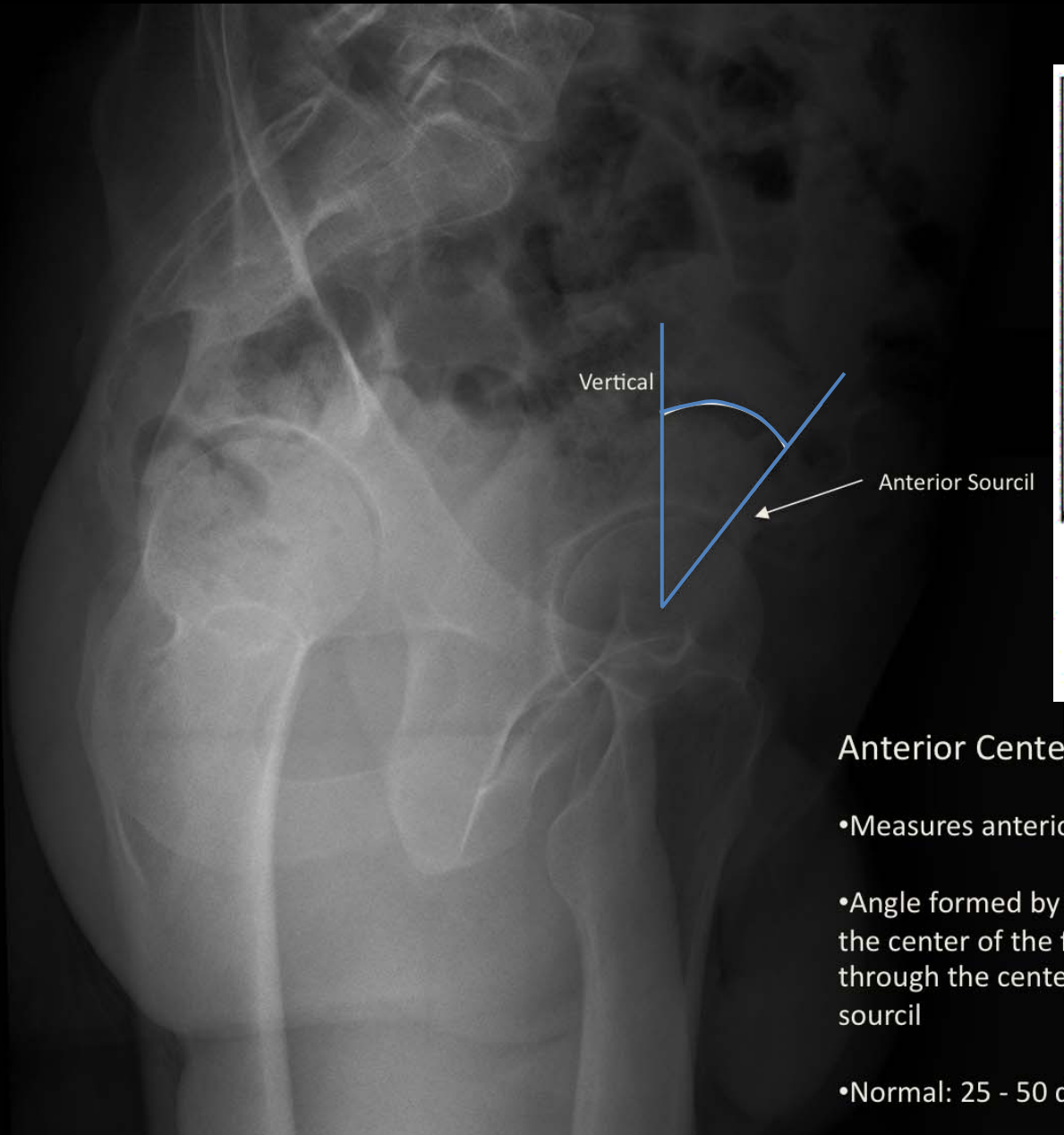


Offset Testa-Collo

a: patologico < 7mm



Falso profilo di Lequesne



Anterior Center-Edge Angle (of Lequesne)

- Measures anterior dysplasia on the false profile view
- Angle formed by the intersection of a vertical line through the center of the femoral head and a line extending through the center of the femoral head to the anterior sourcil
- Normal: 25 - 50 degrees; <20 is diagnostic of DDH



RMN



ARTRO-RM



LIDO-TEST

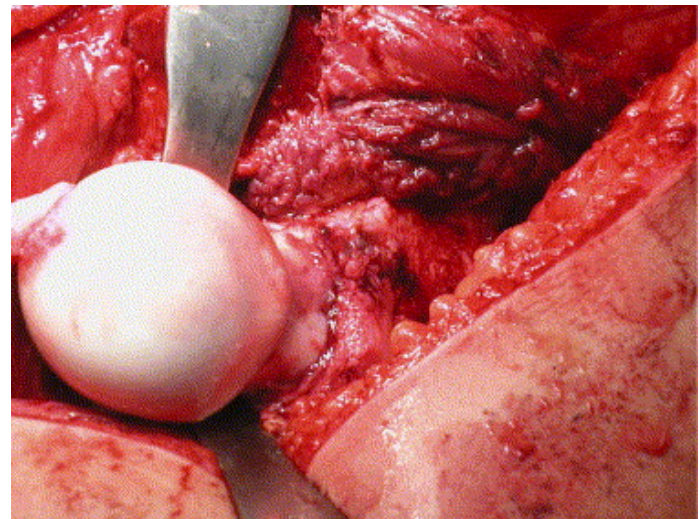
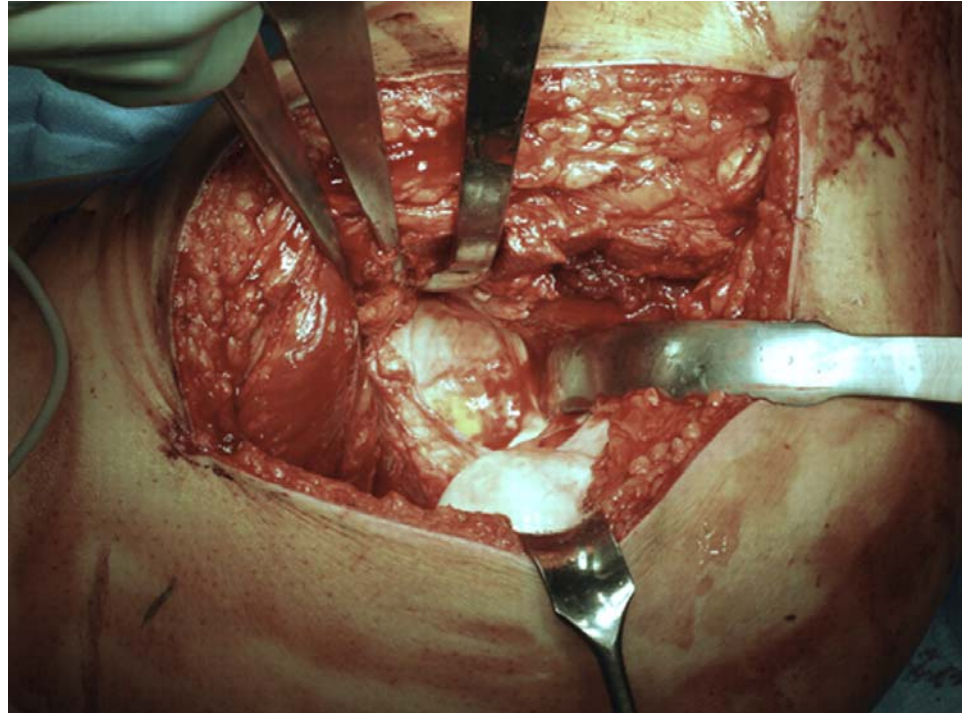
"ex adiuvantibus"

Conflitto Femoro Acetabolare trattamento



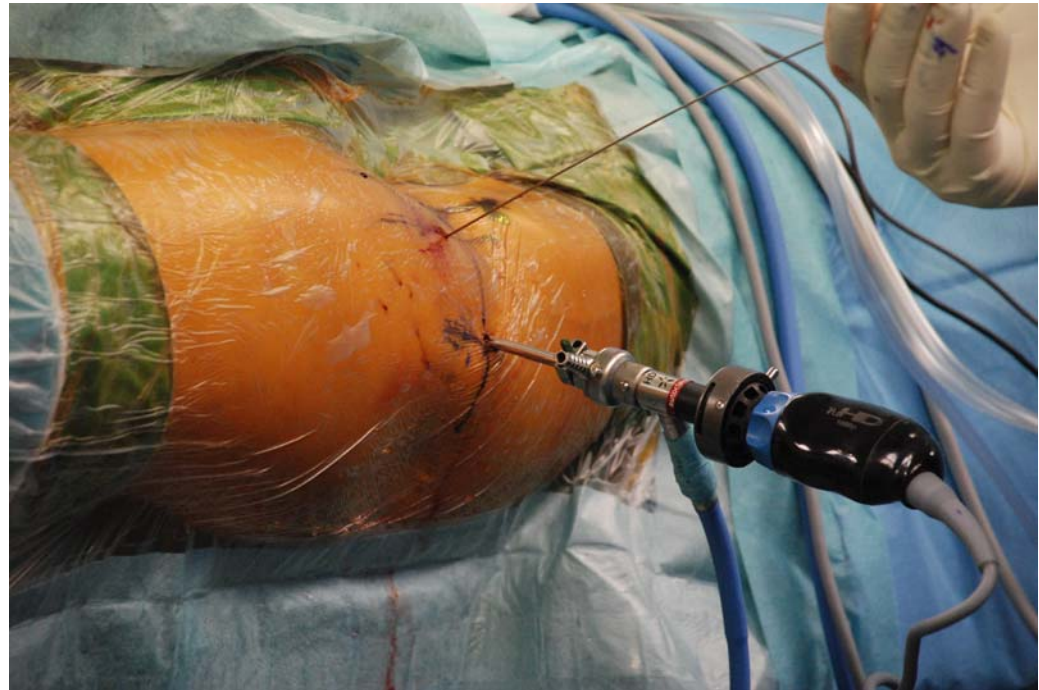
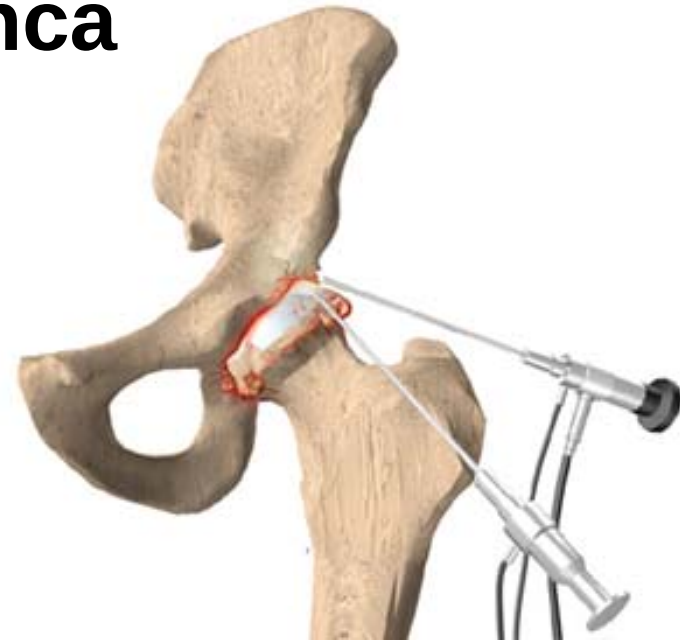
Lussazione Chirurgica dell'anca

Reinhold Ganz



Artroscopia dell'anca

Marc J. Philippon
Vail-Colorado USA



Arthroscopy for the treatment of femoroacetabular impingement in the athlete

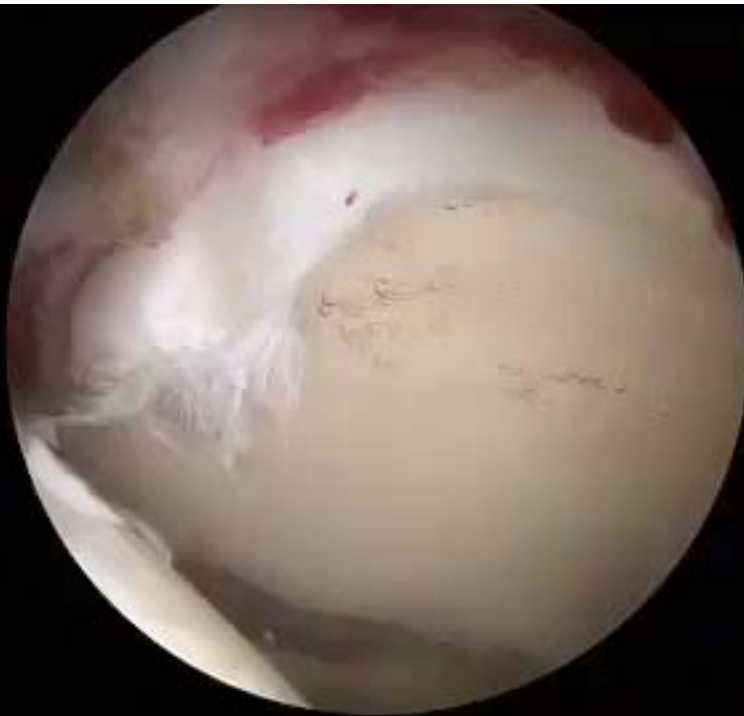
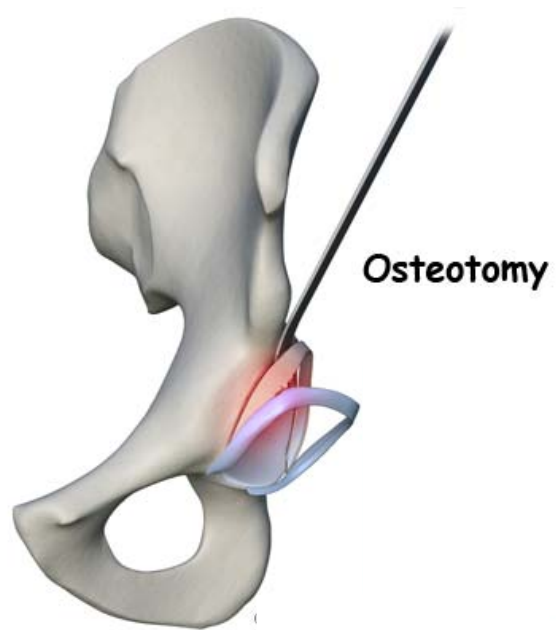
Philippon MJ., Schenker ML.

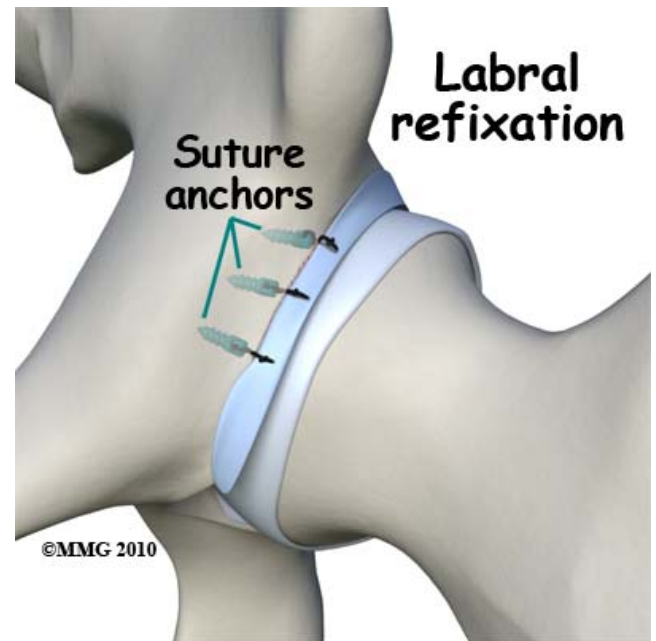
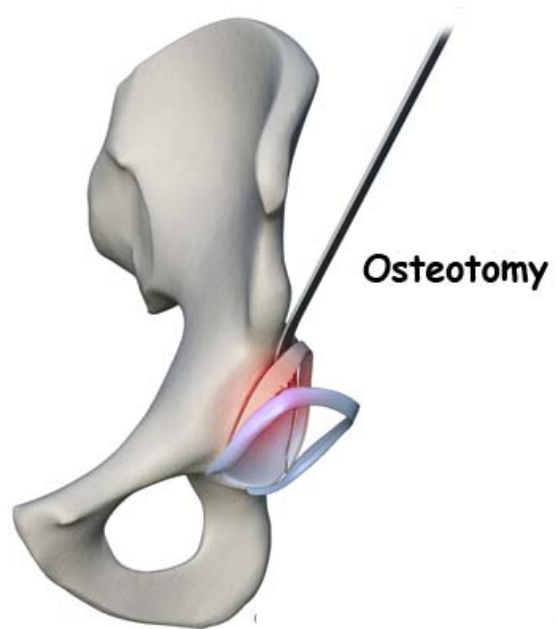
Clinical Sports Medicine 2006 Apr;25(2):299-308

Marc J. Philippon
Vail-Colorado USA

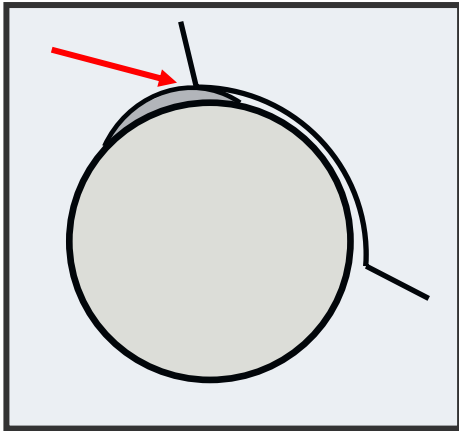


Pincer Impingement trattamento

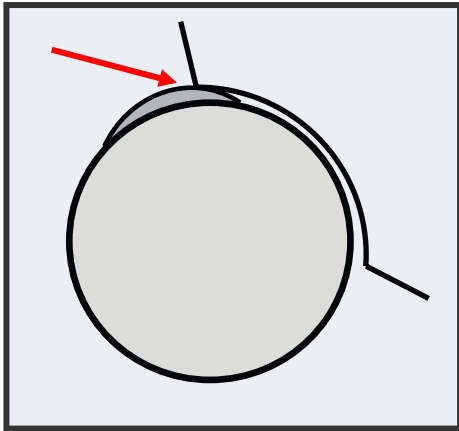




Cam Impingement trattamento



Cam Impingement trattamento



M: 38

Ex calciatore

Anca SIN
10 anni fa
primi sintomi



Anca DX

1 anno fa primi sintomi

HHSM: 73.7



TABLE 1. Modified Harris Hip Score**Pain**

44	None/ignores
40	Slight, occasional, no compromise in activity
30	Mild, no effect on ordinary activity, pain after usual activity, uses aspirin
20	Moderate, tolerable, makes concessions, occasional codeine
10	Marked, serious limitations
0	Totally disabled

Function: Gait**Limp**

11	None
8	Slight
5	Moderate
0	Severe
0	Unable to walk

Support

11	None
7	Cane, long walks
5	Cane, full time
4	Crutch
2	2 canes
0	2 crutches
0	Unable to walk

Distance Walked

11	Unlimited
8	6 blocks
5	2-3 blocks
2	Indoors only
0	Bed and chair

Functional Activities**Stairs**

4	Normally
2	Normally with banister
1	Any method
0	Not able

Son/Shoes

4	With ease
2	With difficulty
0	Unable

Sitting

5	Any chair, 1 hour
3	High chair, 1/2 hour
0	Unable to sit, 1/2 hour, any chair

Public Transportation

1	Able to enter public transportation
0	Unable to use public transportation

Total Points

×1.1**Total Score**

NOTE. The Harris hip score includes 91 points for pain and function and 9 points for range of motion and deformity. Arthroscopy is principally indicated for pain and function. Consequently, the section for range of motion and deformity has been deleted. The multiplier (1.1) is used to give a total possible score of 100.

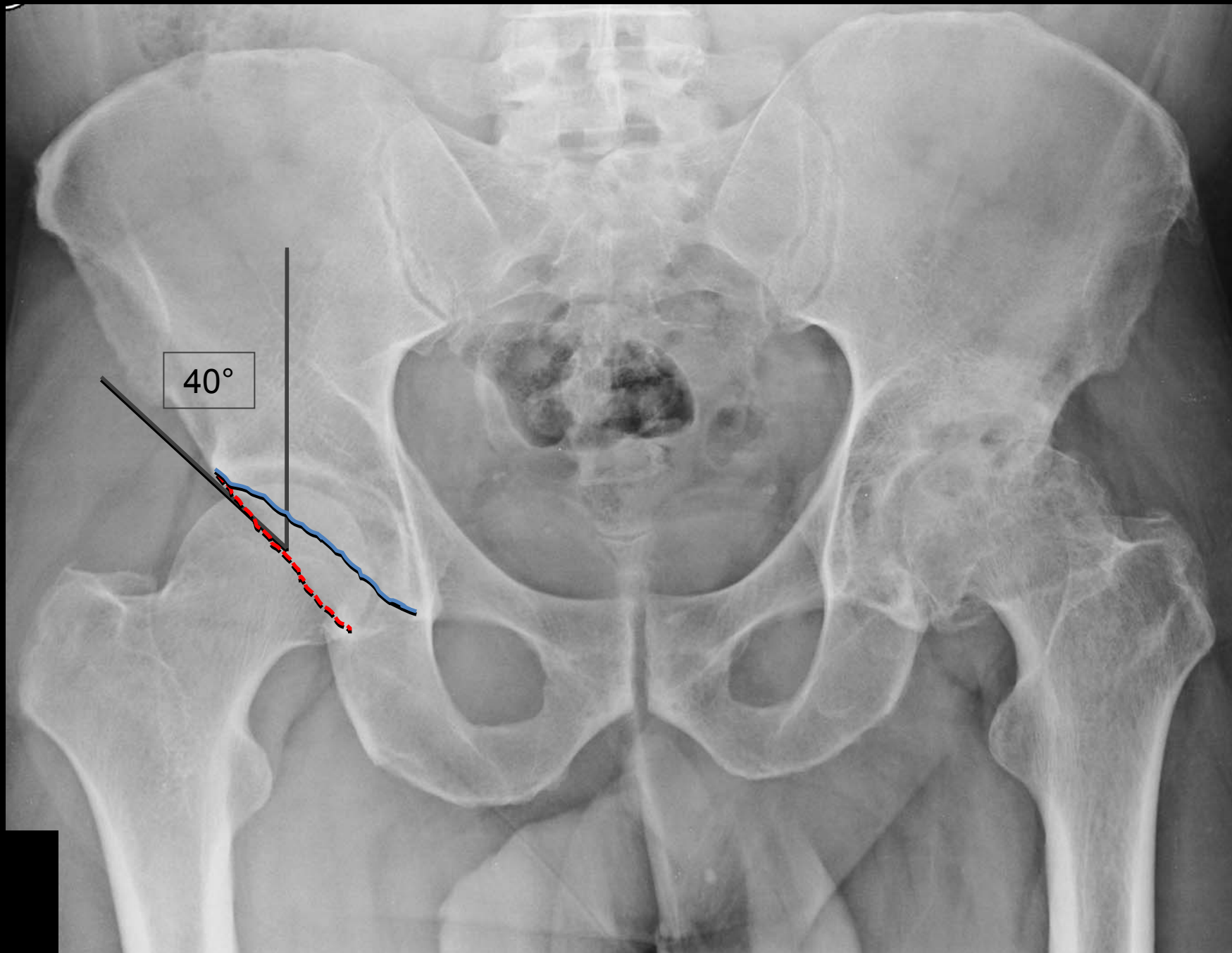
Traumatic Rupture of the Ligamentum Teres as a Source of Hip Pain

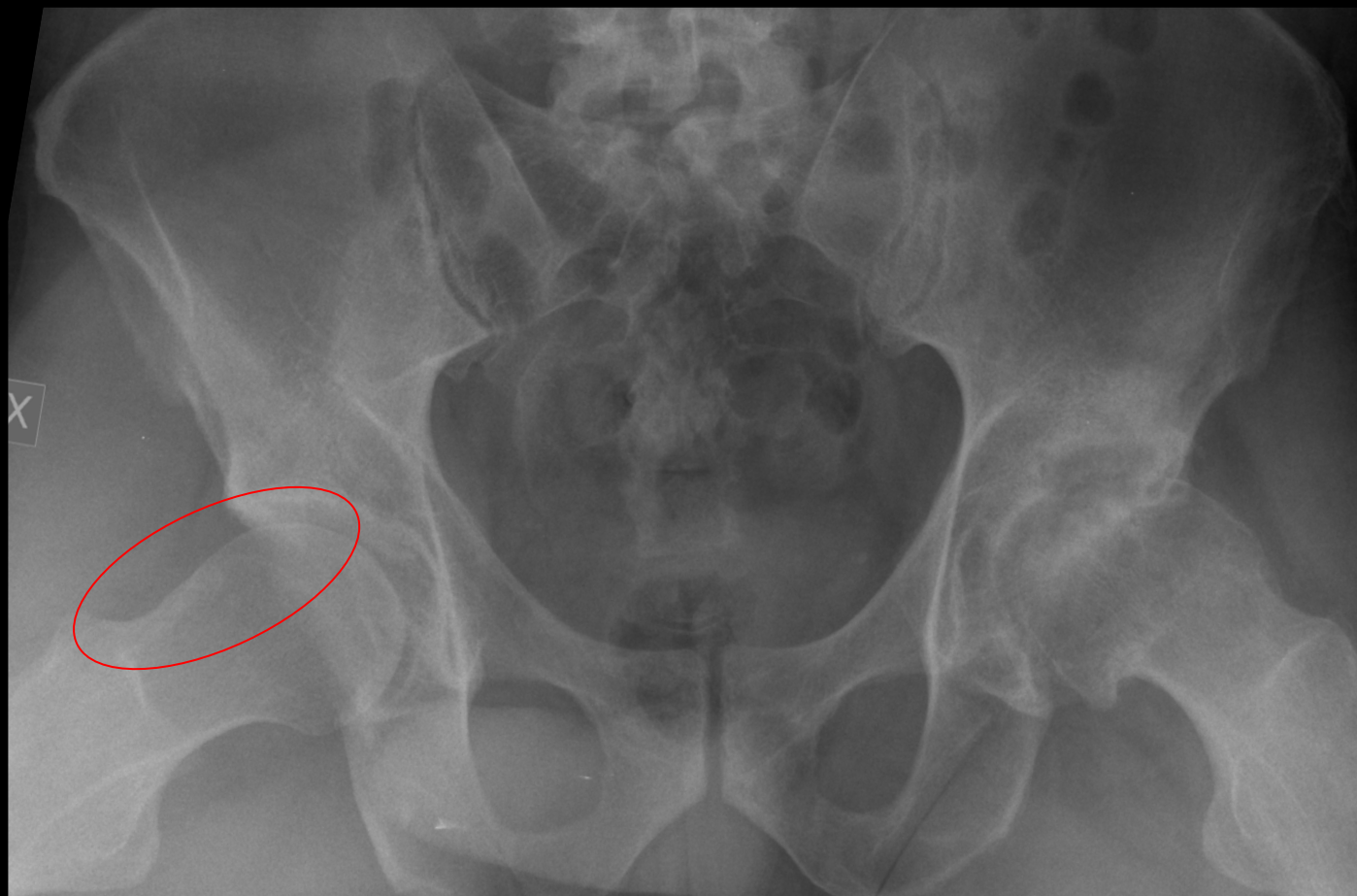
J. W. Thomas Byrd, M.D., and Kay S. Jones, M.S.N., R.N.

Pistol-Grip Deformity

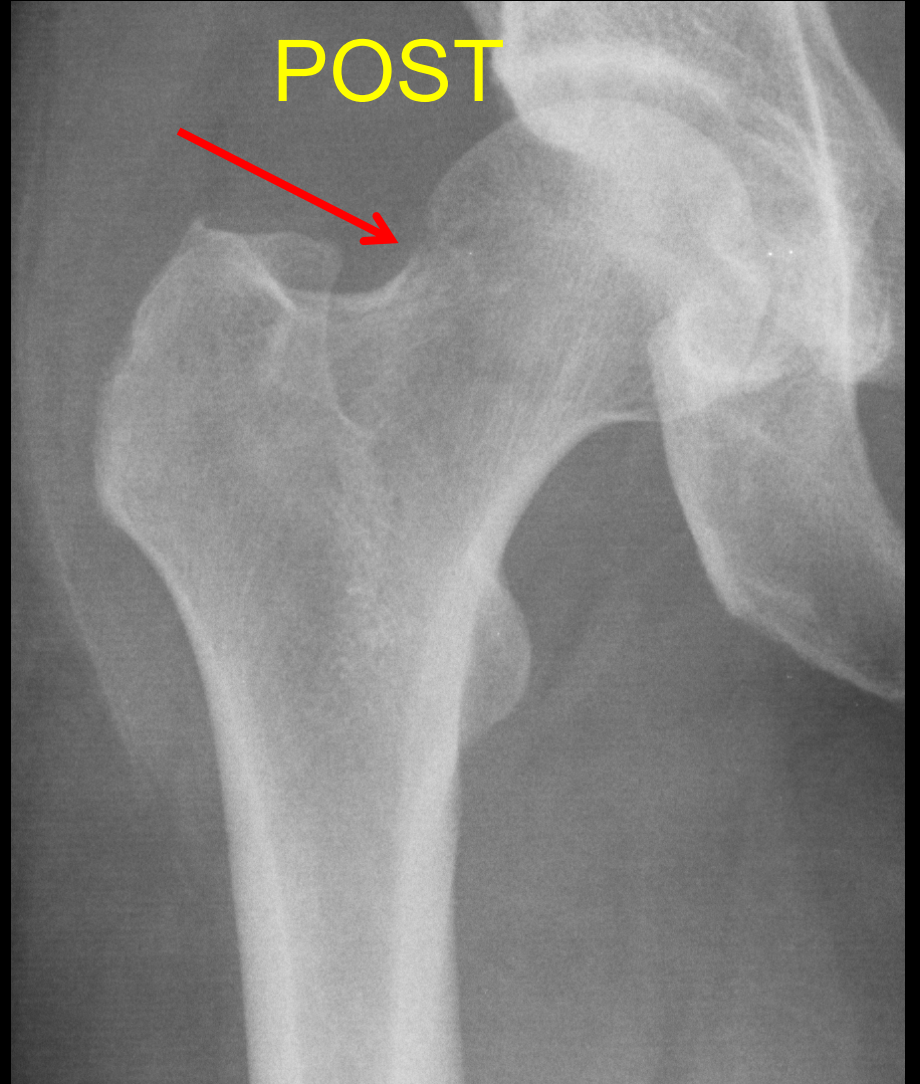
Stulberg et al. 1975

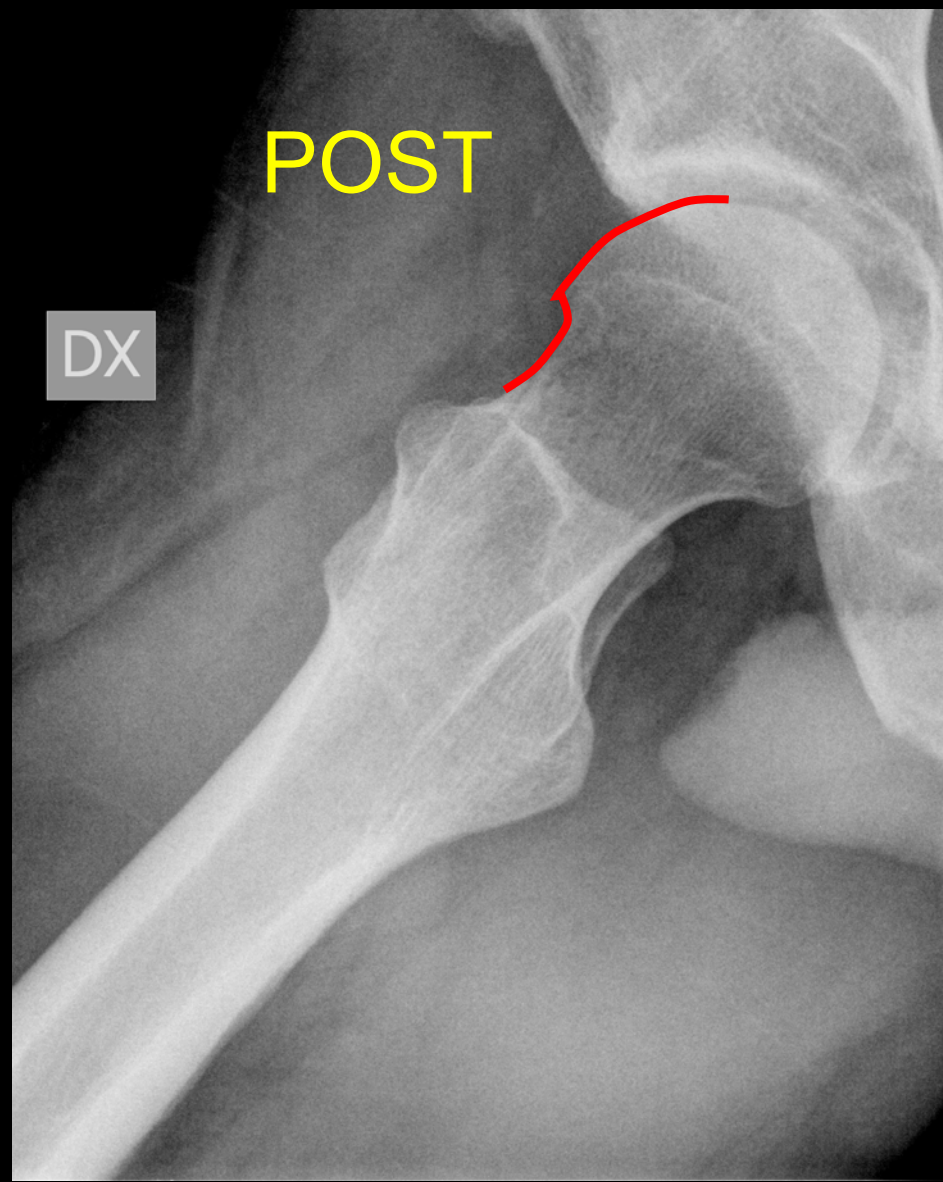
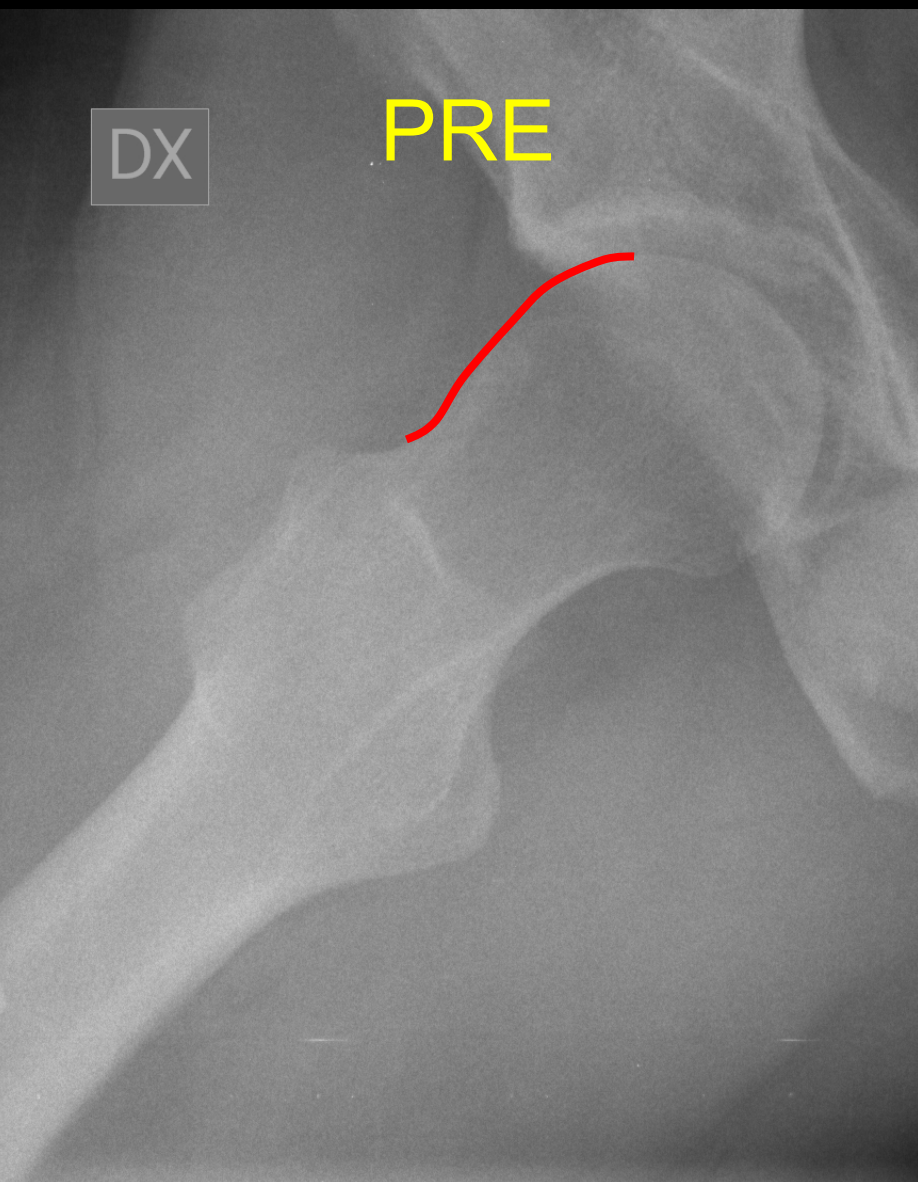






I intervento
Anca dx
OSTEOCONDROPLASTICA
ARTROSCOPICA



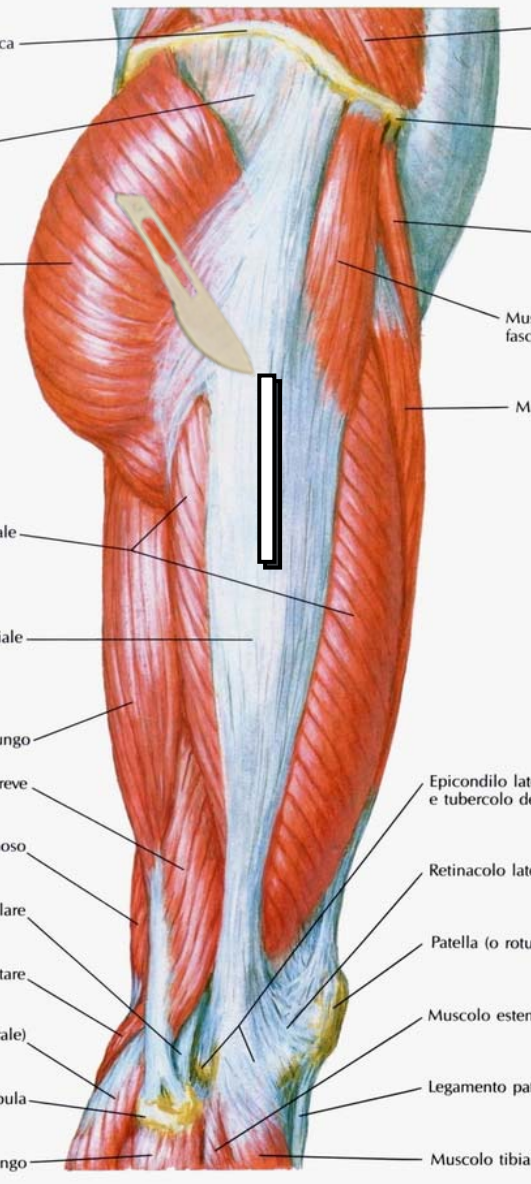


Il Intervento anca sin: Protesi Anca con accesso anteriore Mini-Invasivo

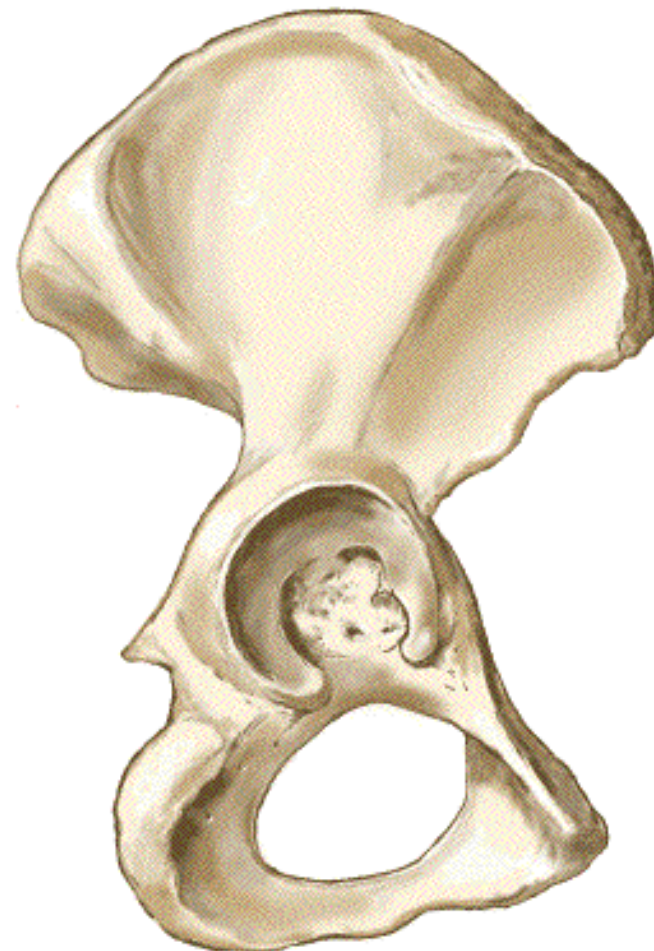


10 giorni dopo



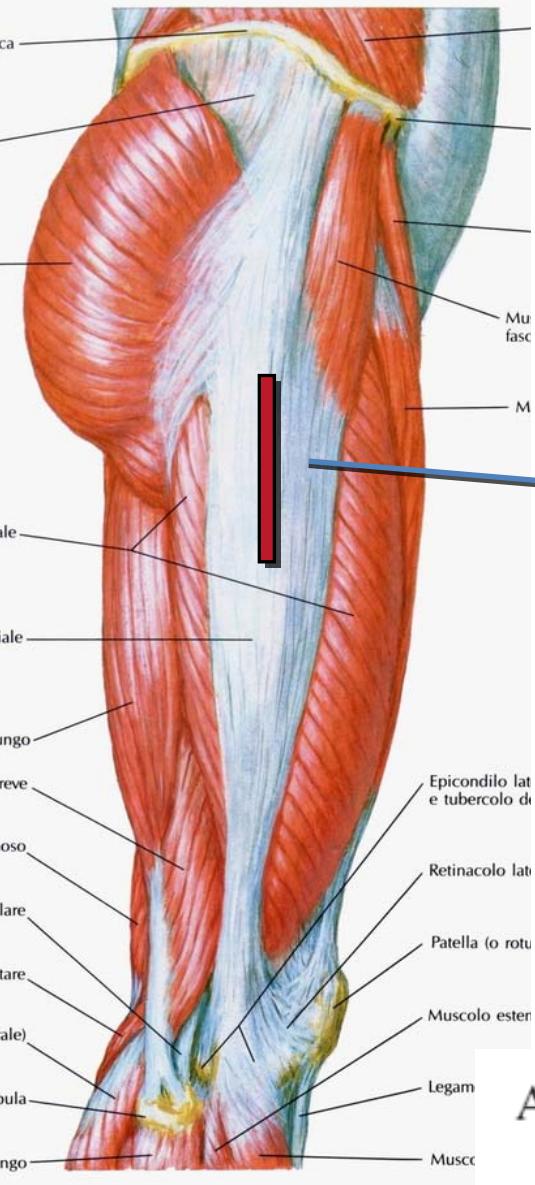


ILIOTIBIAL BAND AUTOGRAFT

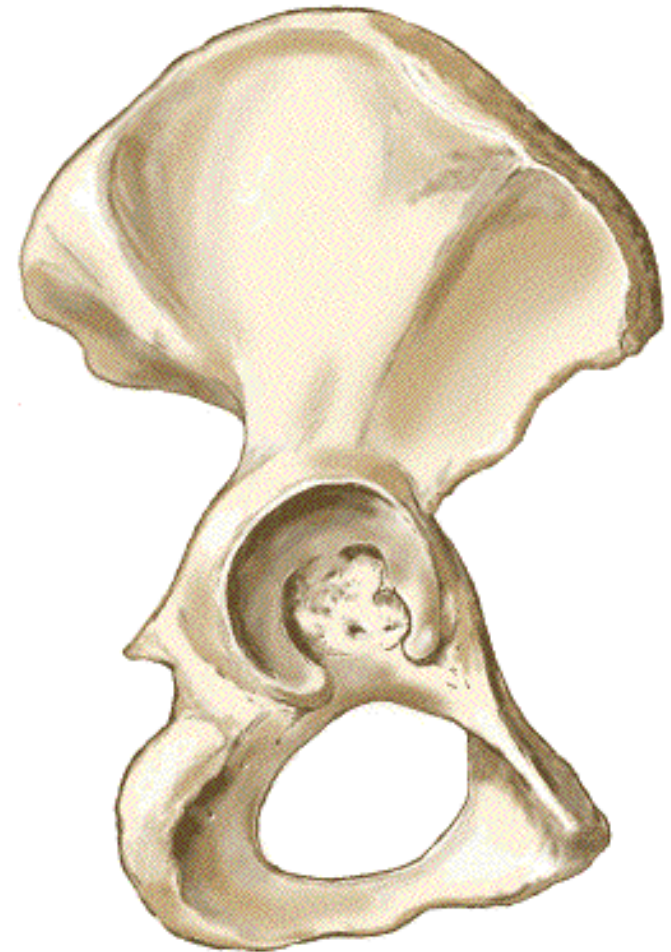
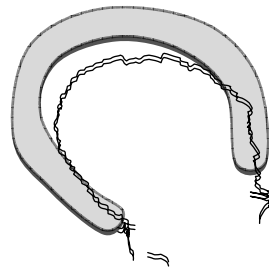


Arthroscopic Labral Reconstruction in the Hip Using Iliotibial Band Autograft: Technique and Early Outcomes

Marc J. Philippon, M.D., Karen K. Briggs, M.P.H., Connor J. Hay, B.A.,
David A. Koppersmith, B.S., Christopher B. Dewing, M.D., and Michael J. Huang, M.D.



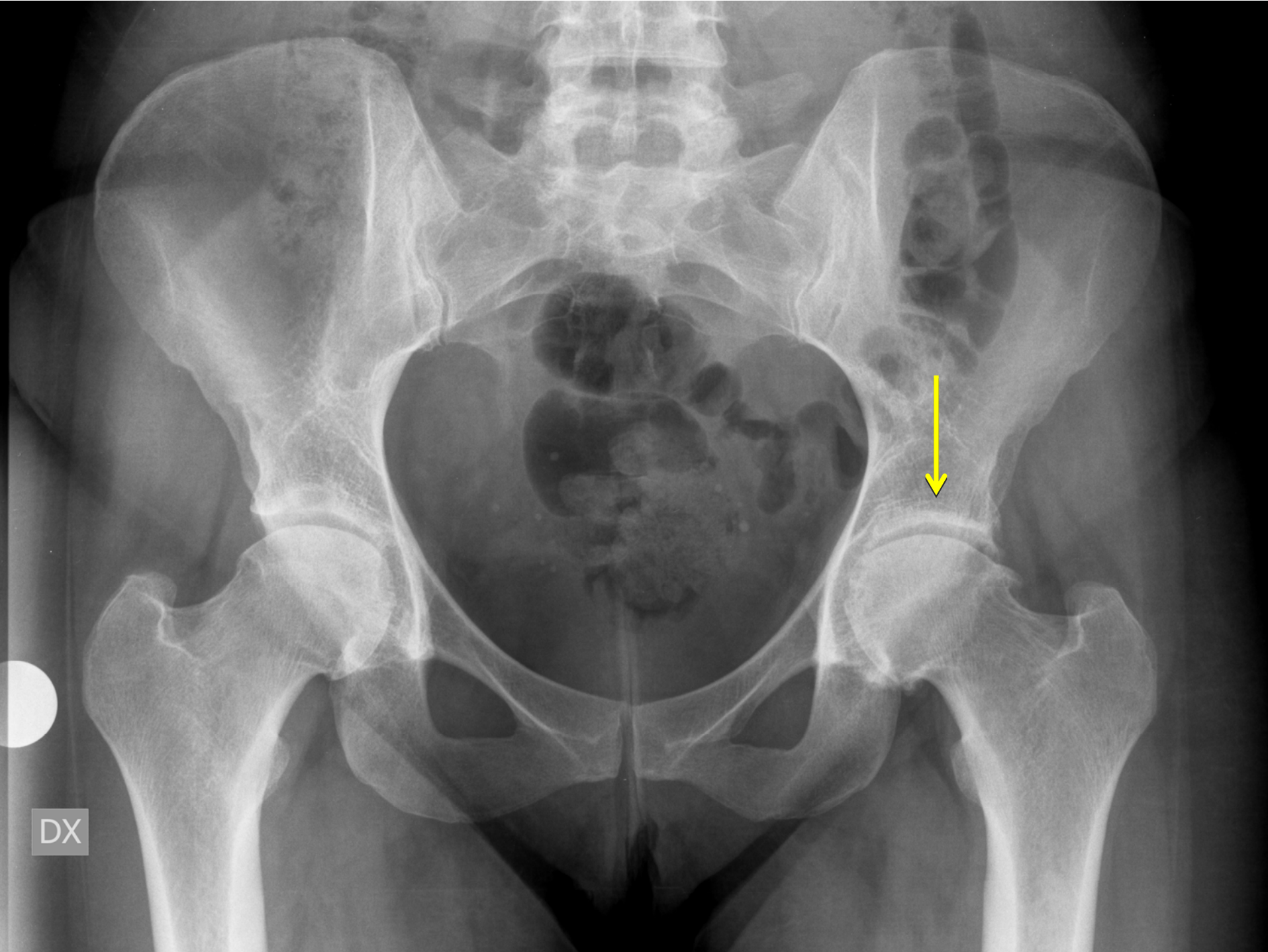
ILIOTIBIAL BAND AUTOGRAFT



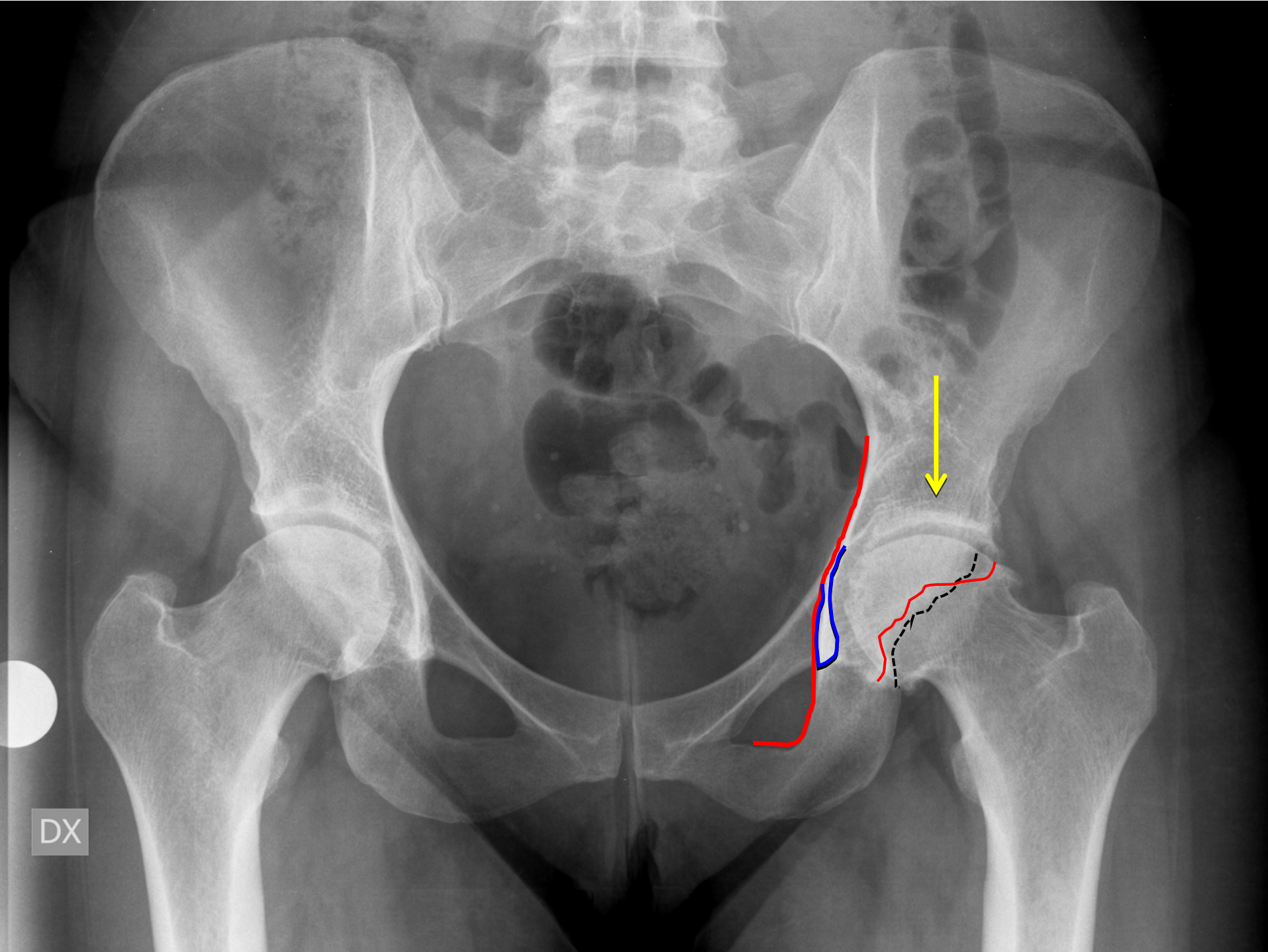
Arthroscopic Labral Reconstruction in the Hip Using Iliotibial Band Autograft: Technique and Early Outcomes

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- F: 22 ANNI
- EX-SPORT ATLETICA LEGGERA
- COXALGIA SINISTRA DA 3 ANNI
- LIMITAZIONI FUNZIONALI SEVERE
- ZOPPIA
- **MHHS: 52,8**



DX



DX

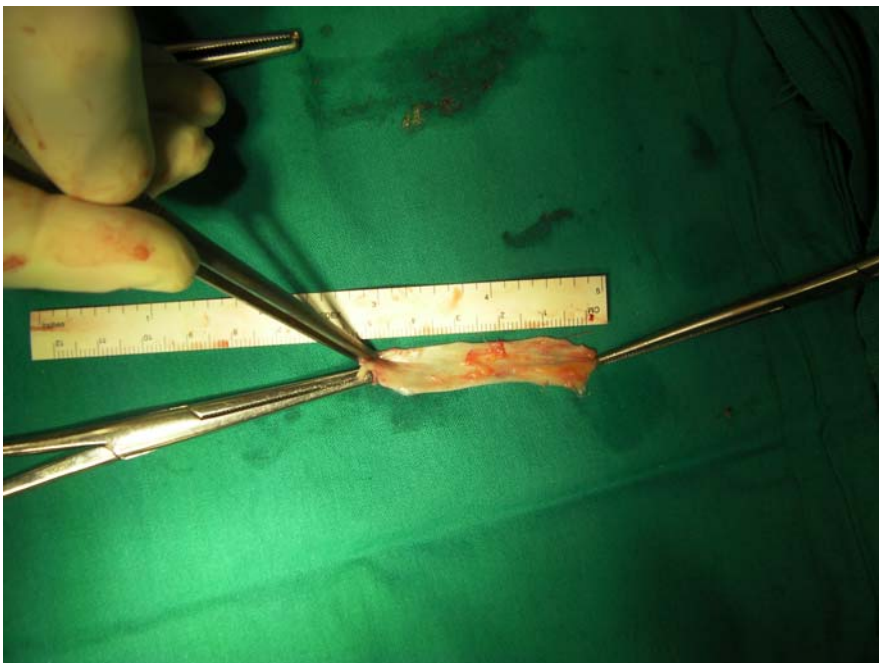
DX



SIN



ILIOTIBIAL BAND AUTOGRAFT



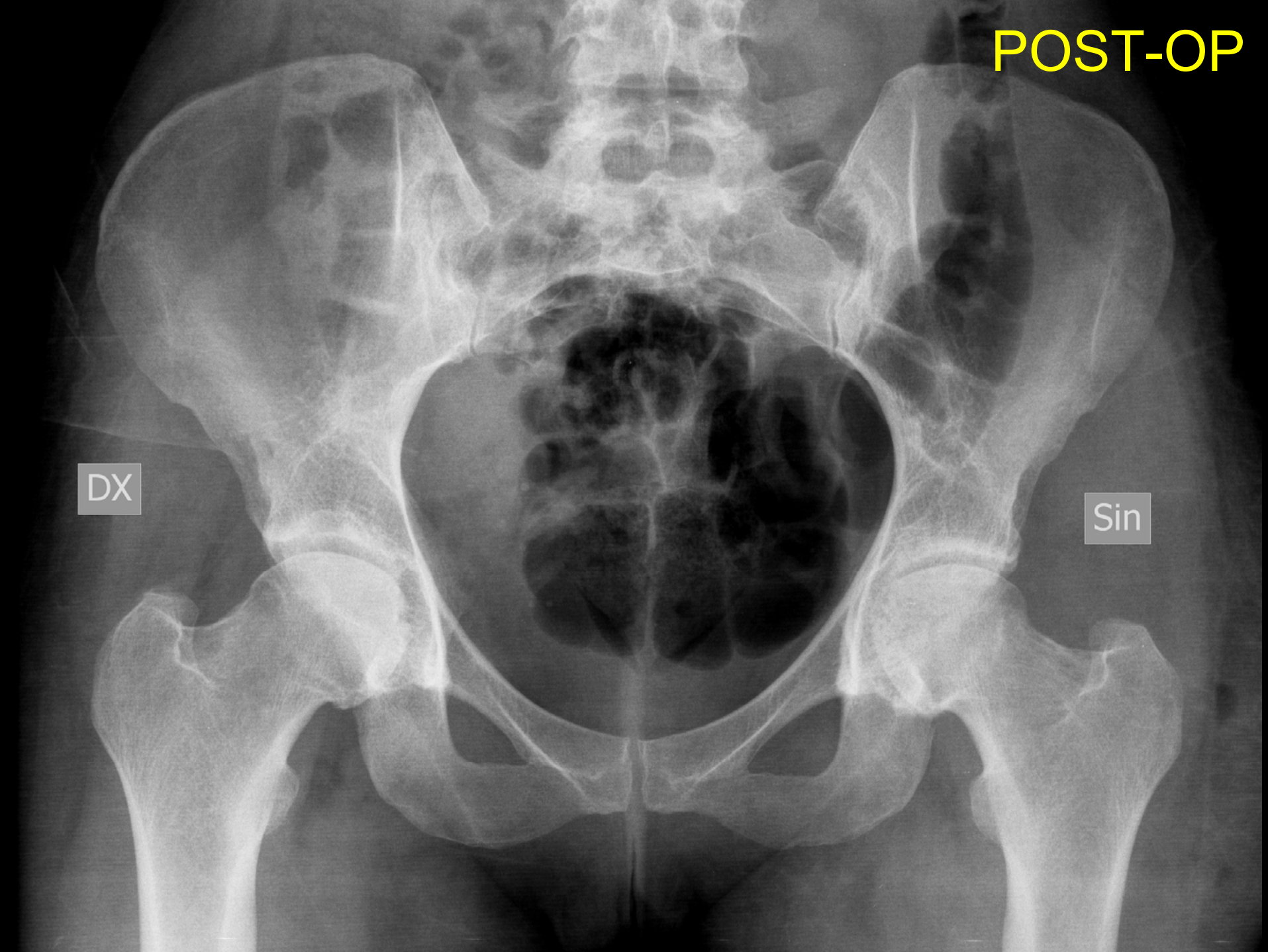
ILIOTIBIAL BAND AUTOGRAFT EMILABRO

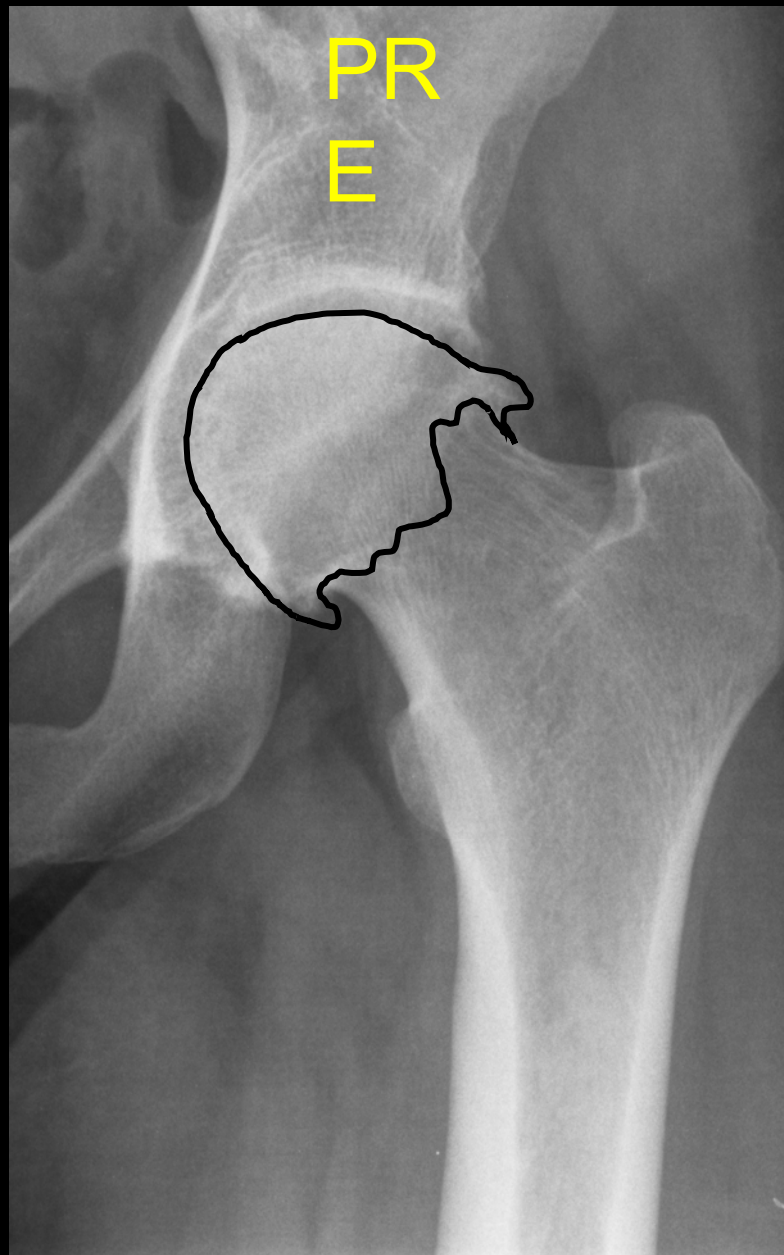


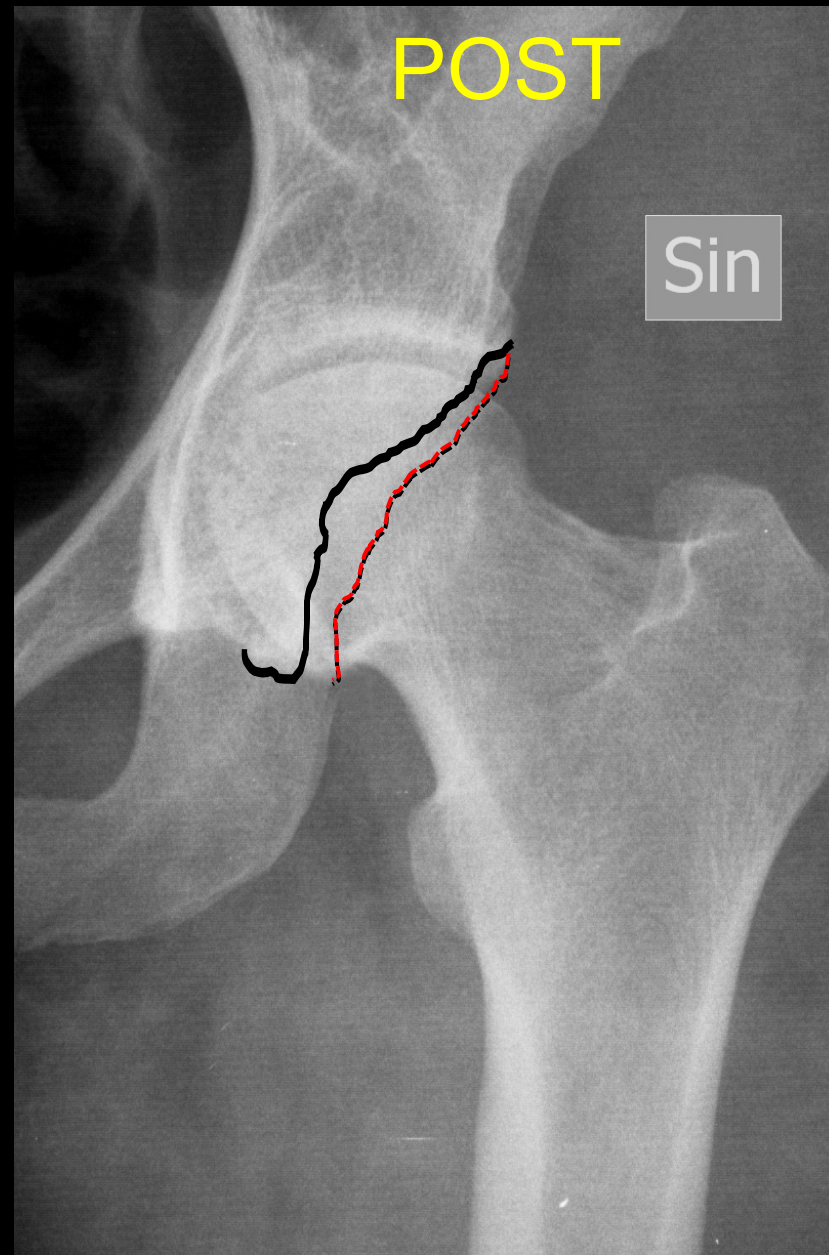
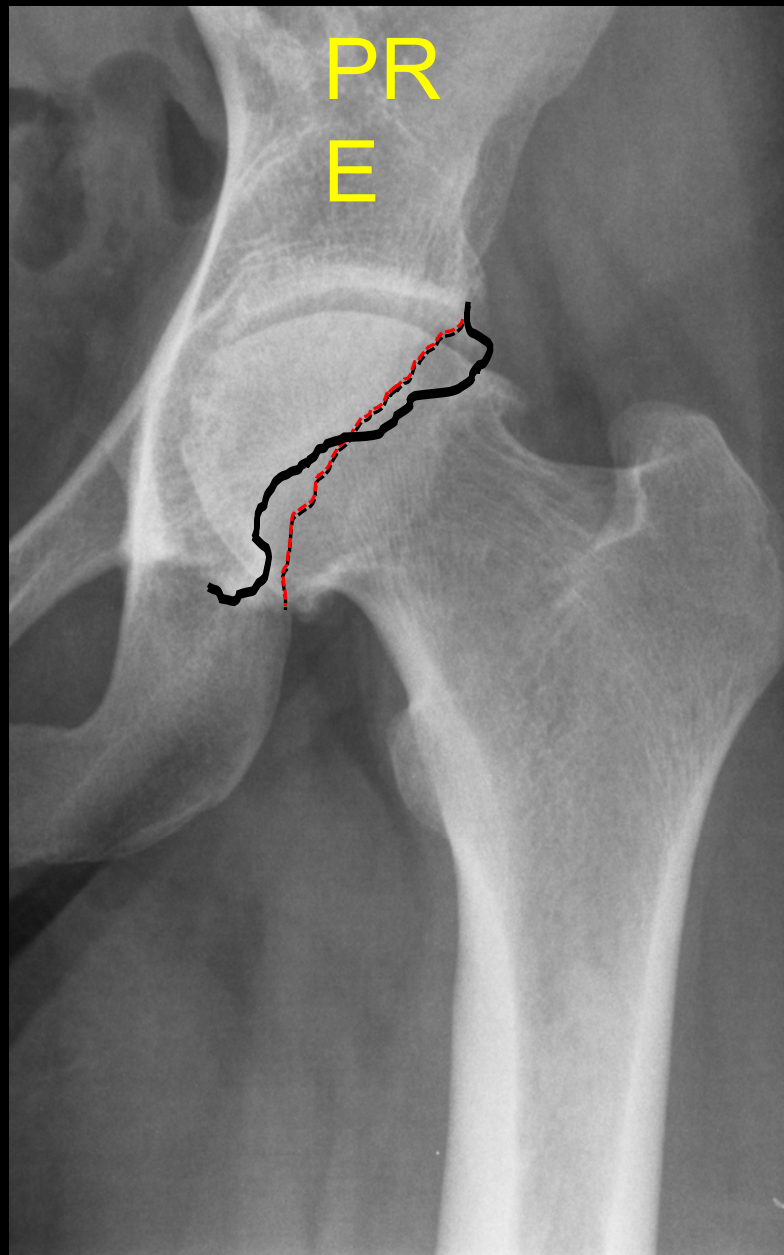
POST-OP

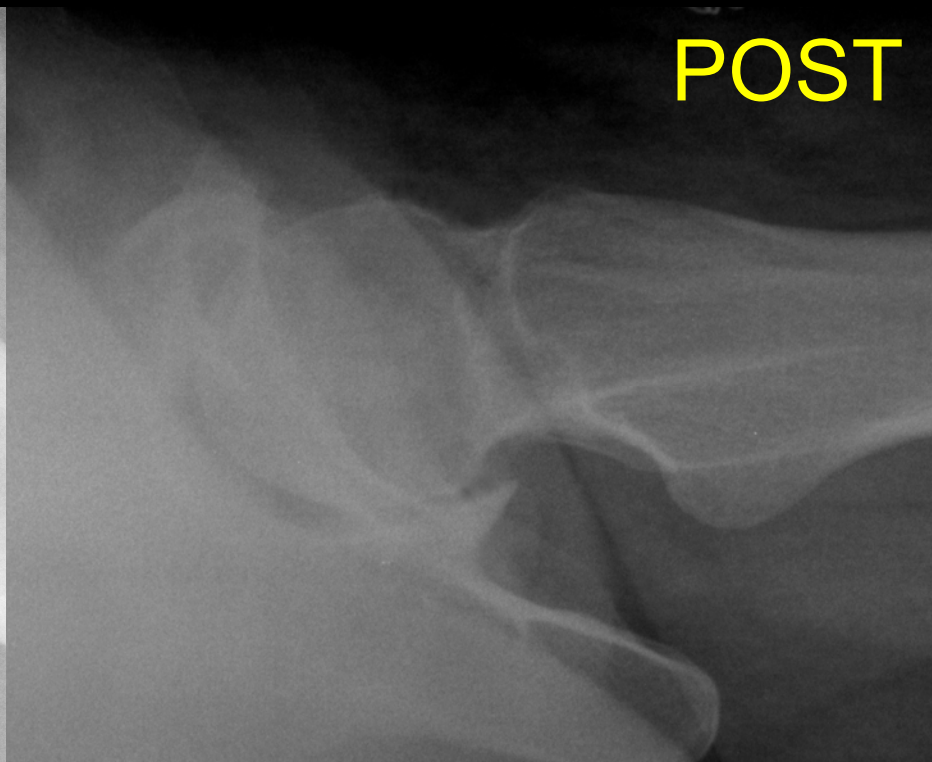
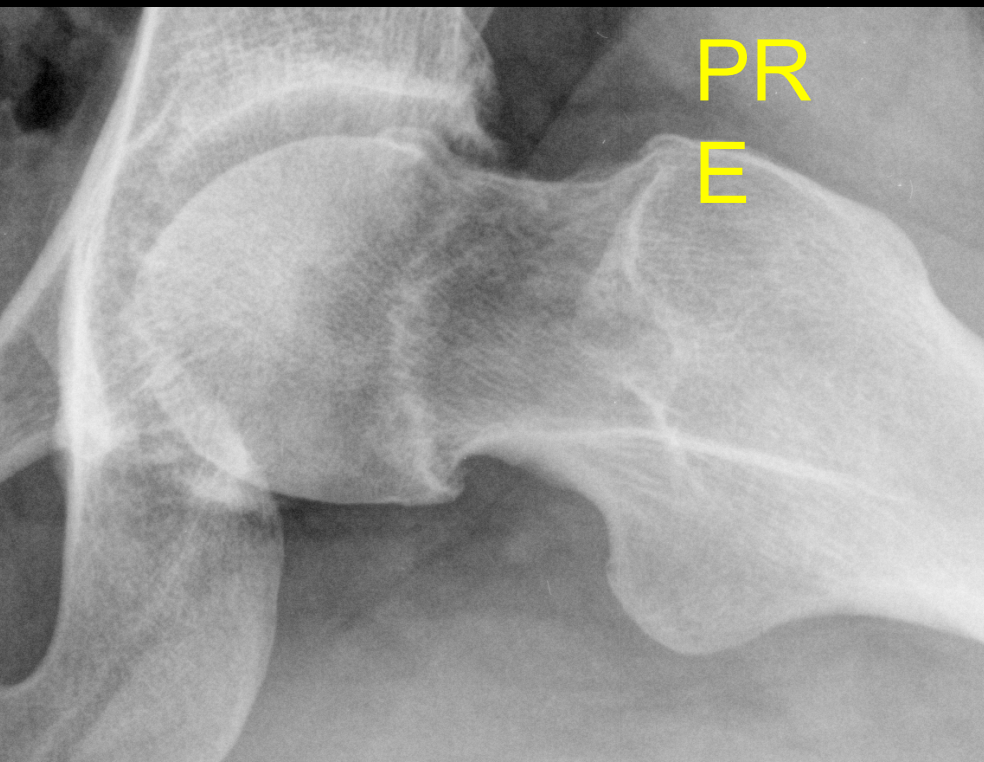
DX

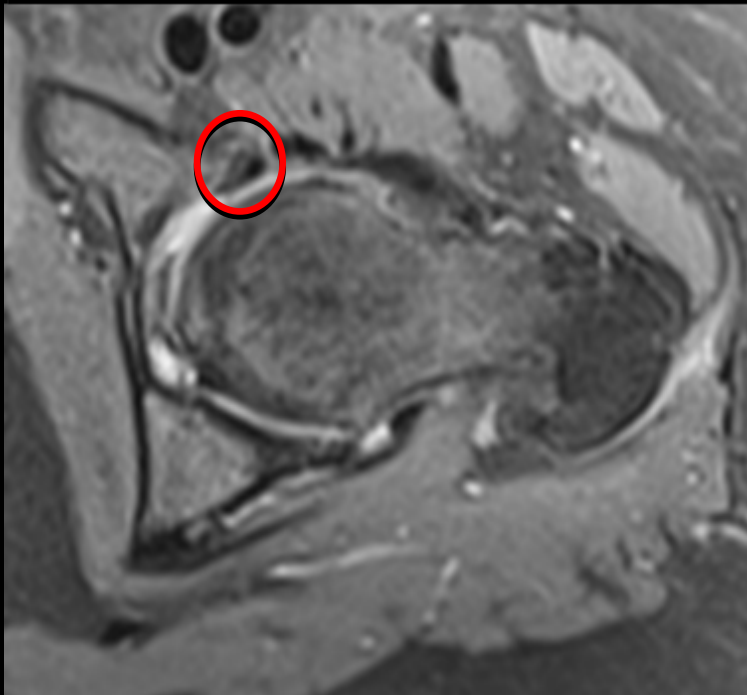
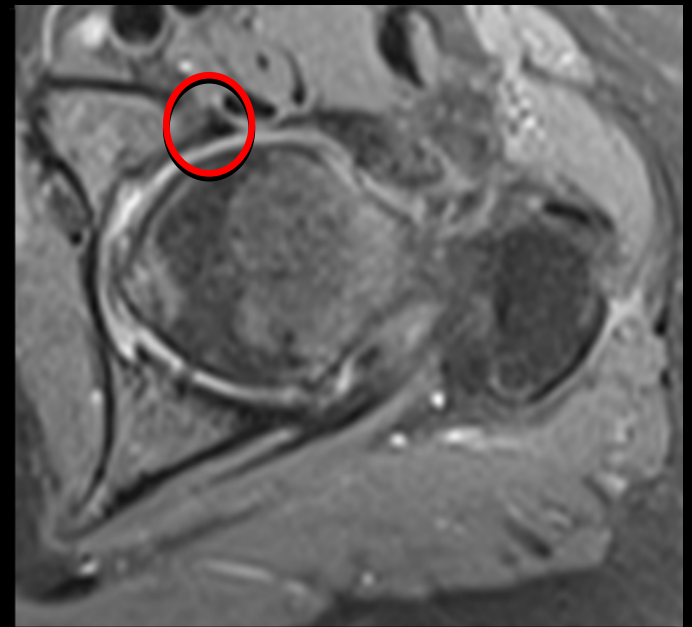
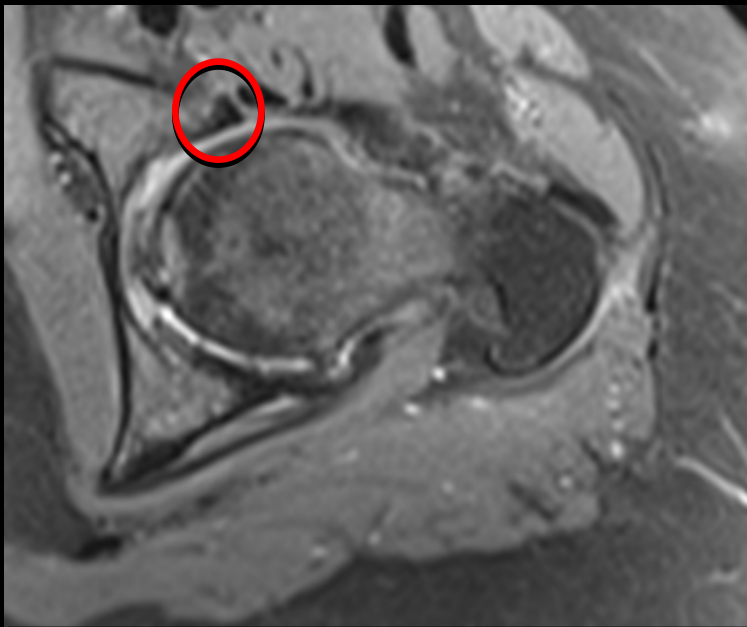
Sin



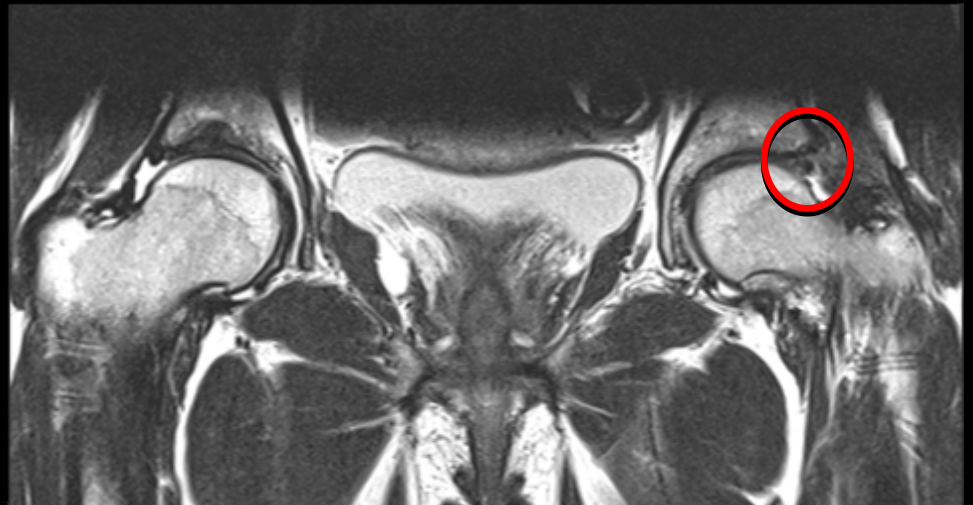








FOLLOW UP: 6 MESI



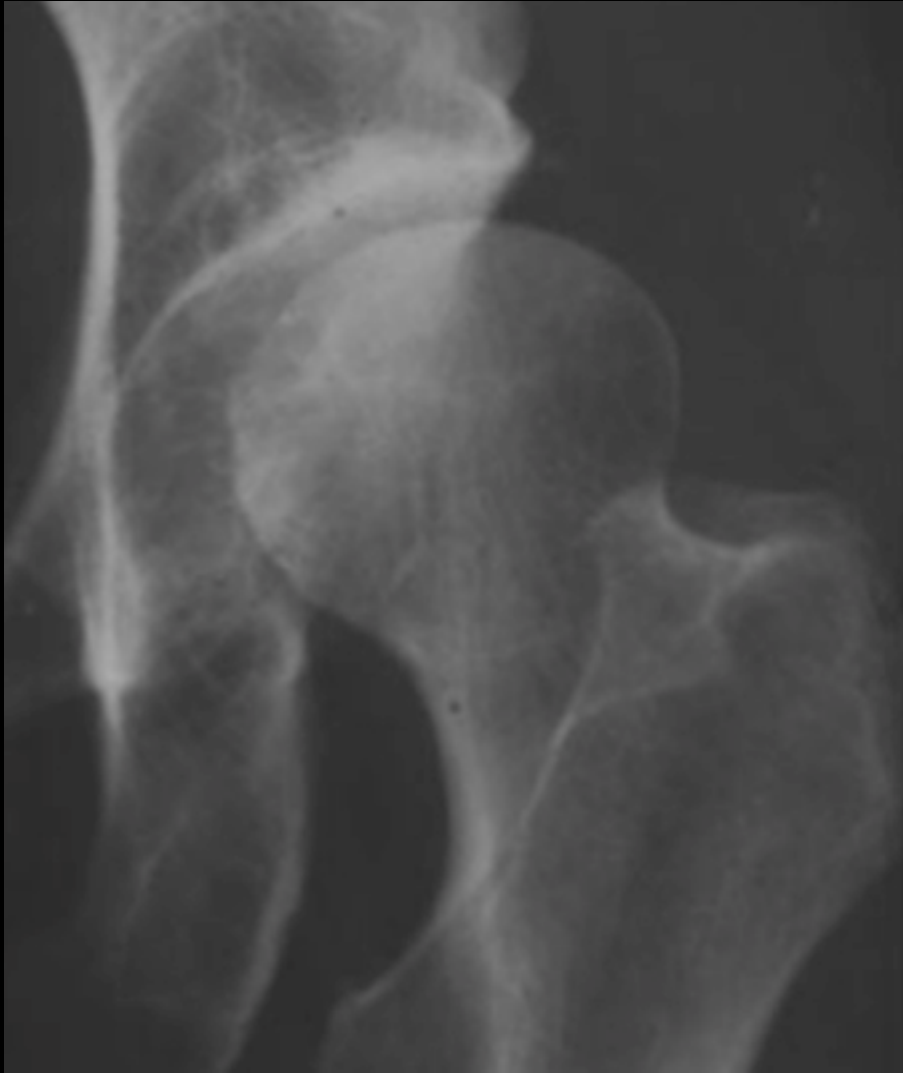
Follow up 1
anno

MHHS:
90,4

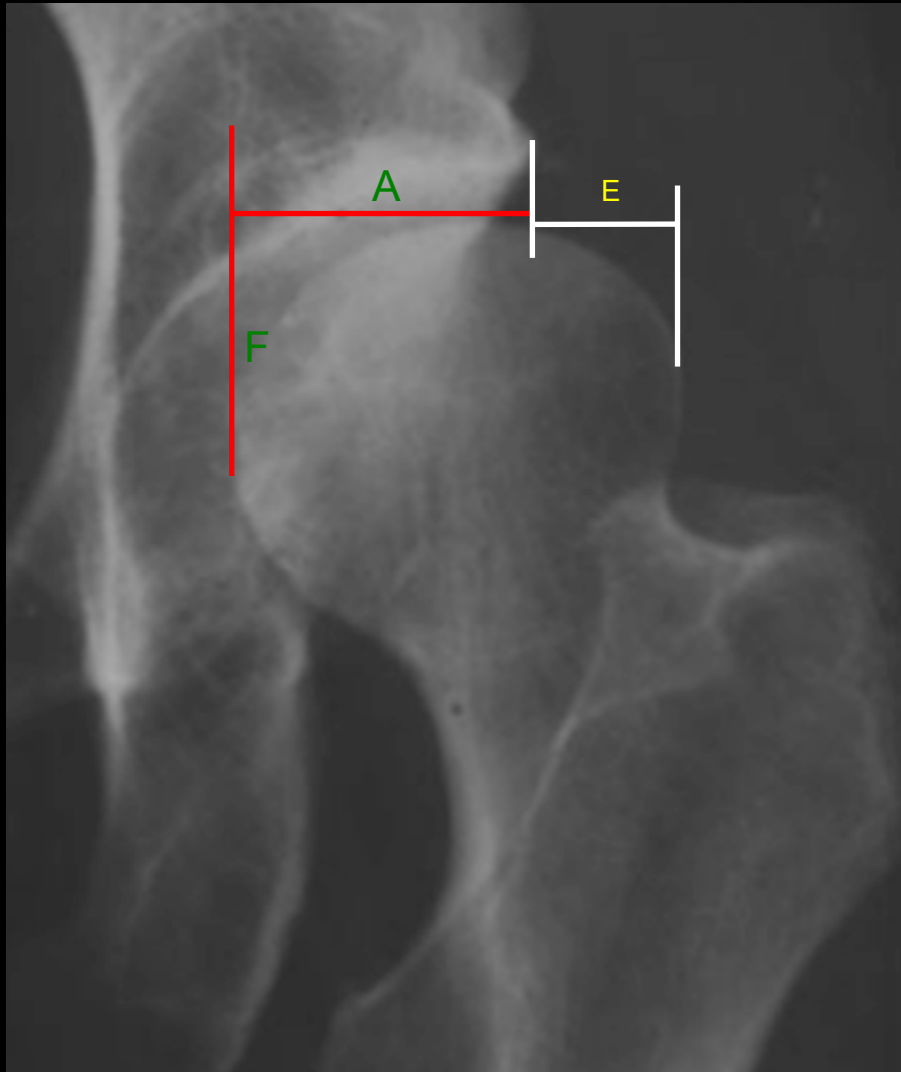


QUANDO L'ARTROSCOPIA NON E'
INDICATA?...





Anca displasica



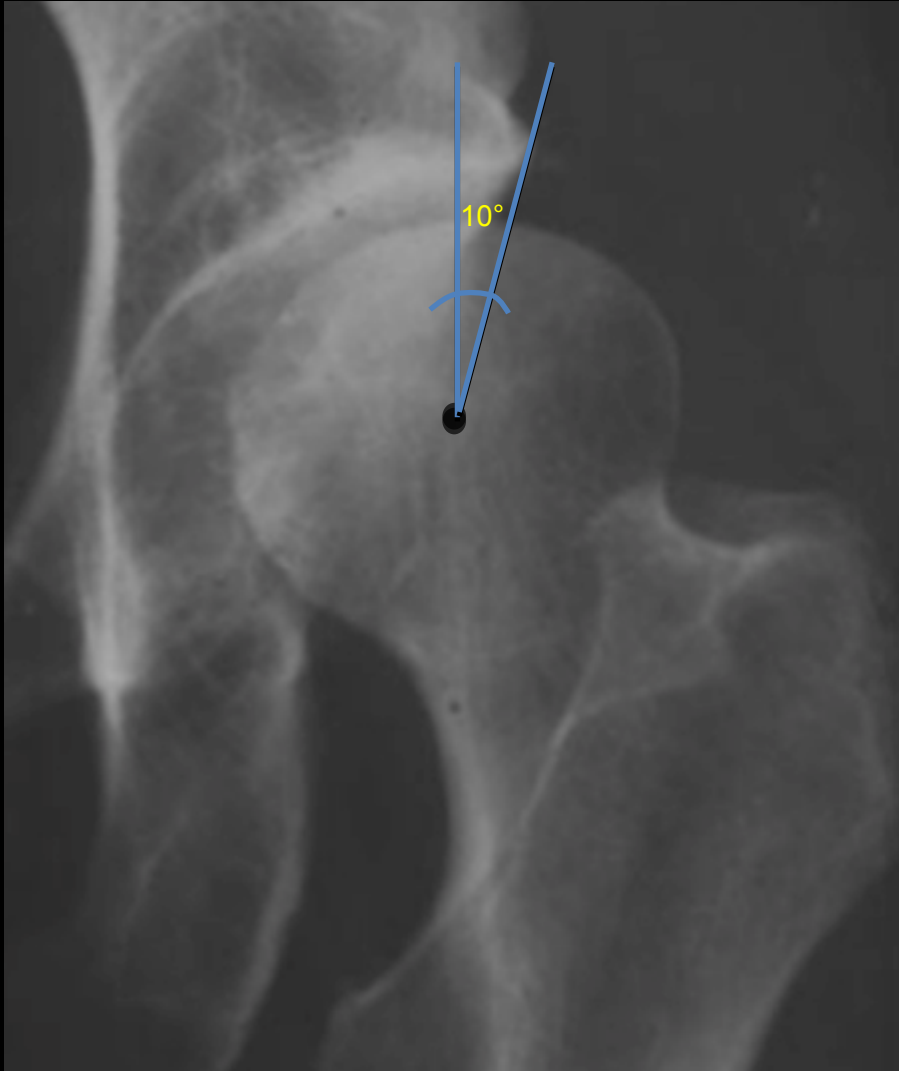
Extrusion index:

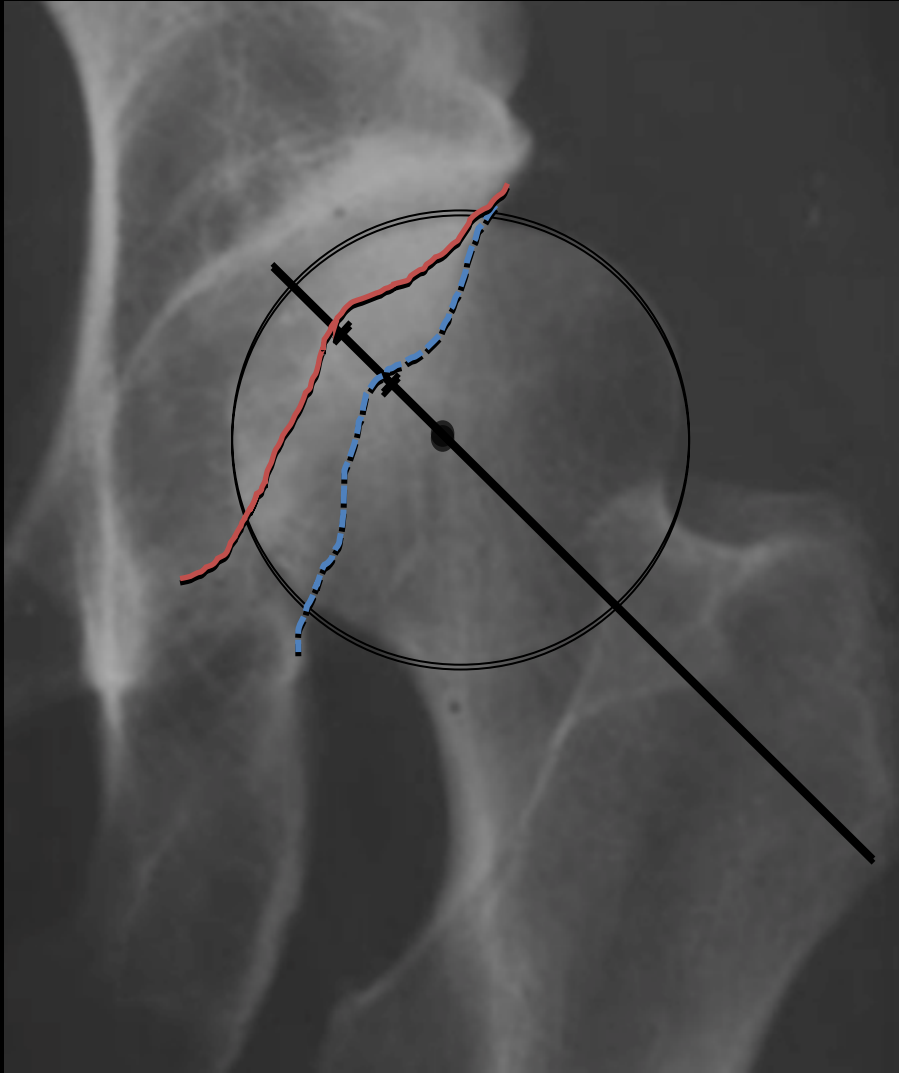
Anca displasica

Angolo di Wiberg Center-Edge (CE) angle:

Normale: 20-40°

Anca displasica





Muro anteriore:

- Cade nel 1/3 più mediale del raggio

Muro posteriore:

- Cade medialmente al centro della testa del femore
(Posterior wall sign +)



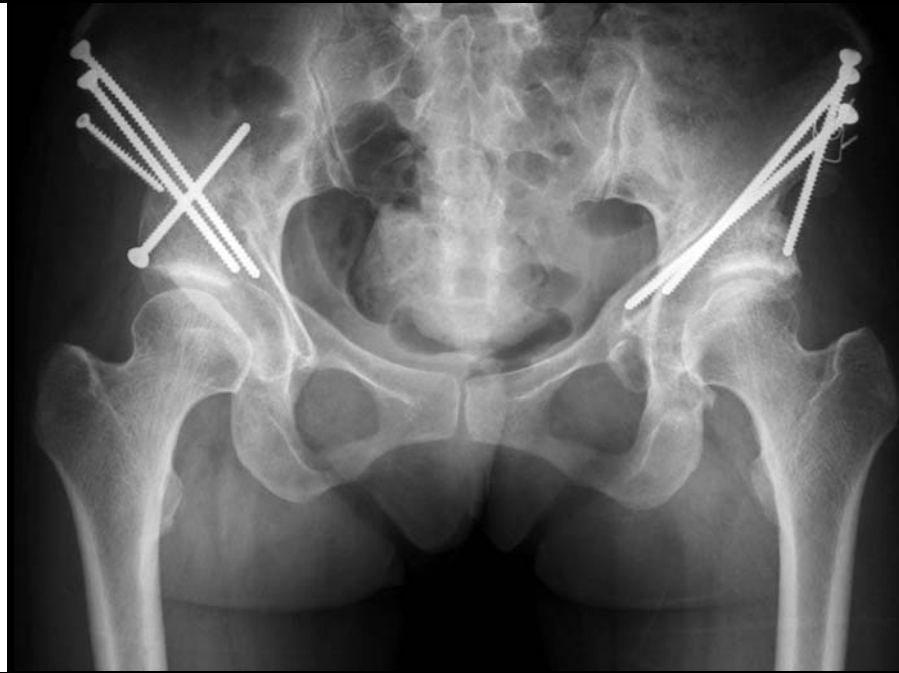
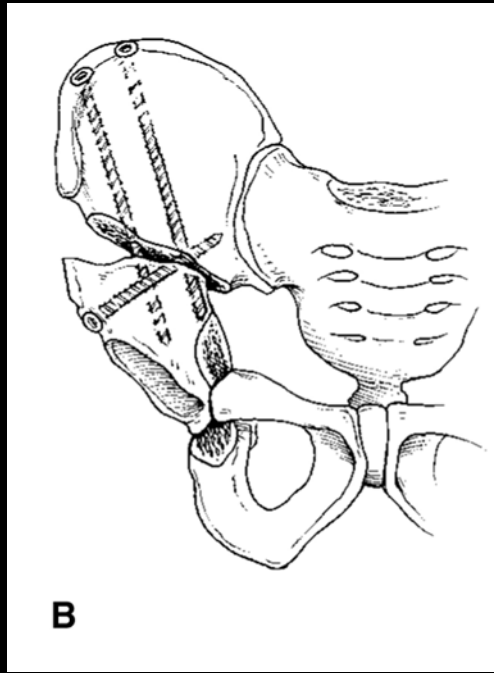
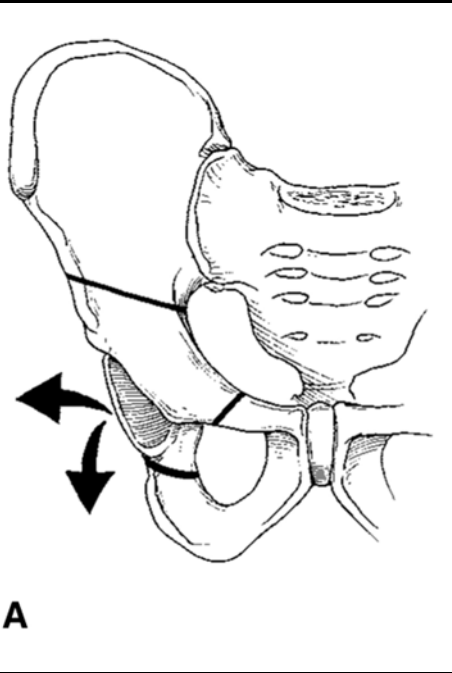
Margine anteriore

Margine posteriore

Posterior wall sign +
Cross over sign

ECCESSIVA RETROVERSIONE
ACETABOLARE

Osteotomia periacetabolare Bernese (Ganz et al.1988)

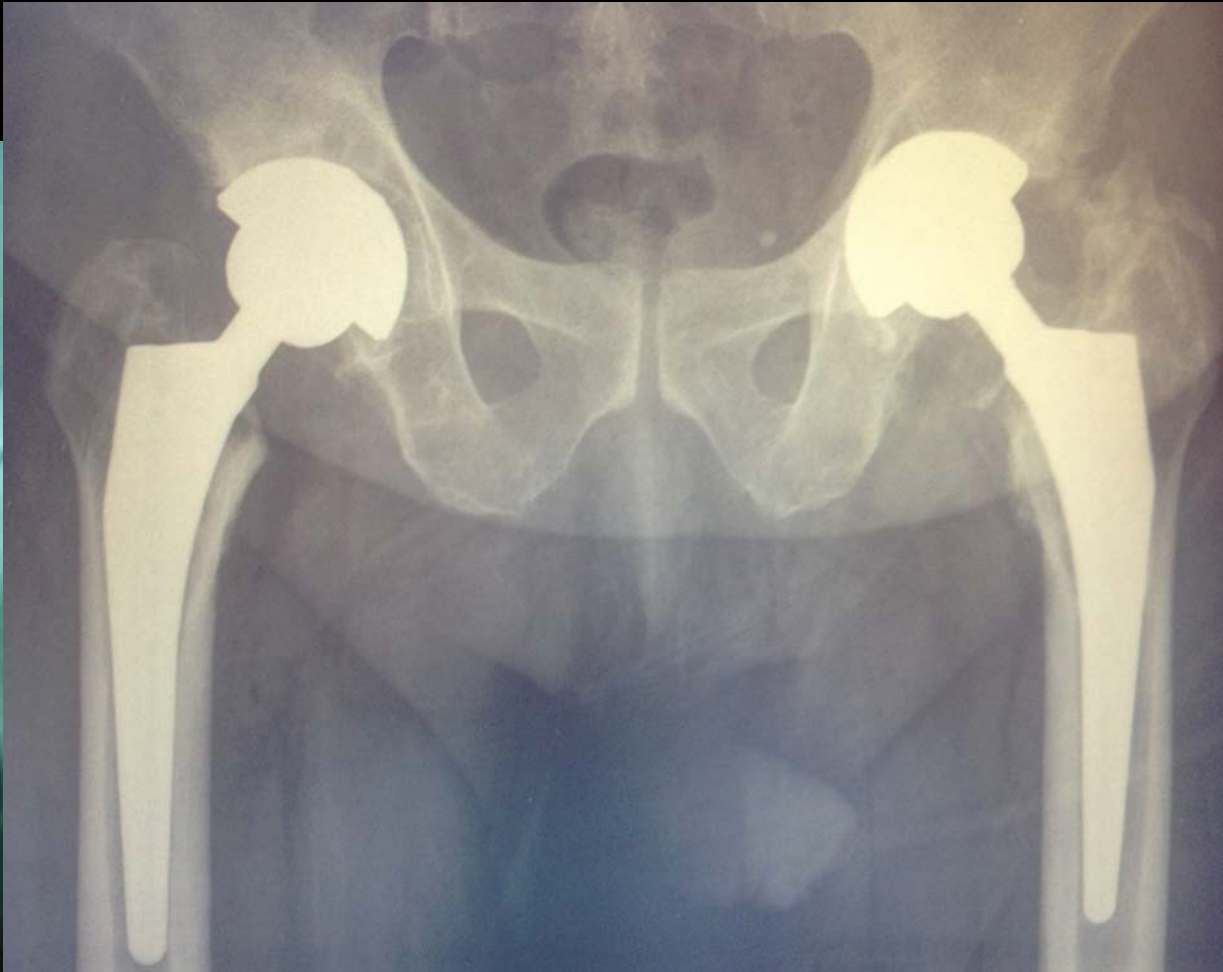


Anca Displasica

Acetabolo eccessivamente retroverso

Siebenrock, Ganz et al. Anterior Femoro-Acetabular Impingement due to Acetabular Retroversion J.B.J.S.. Am 2003;85A-278-286

Gravi forme di artrosi



E NEGLI ANZIANI?...



Hip Arthroscopy for Femoroacetabular Impingement in Patients Aged 50 Years or Older

Marc J. Philippon, M.D., Bruno G. Schroder e Souza, M.D., and Karen K. Briggs, M.P.H.

Arthroscopy: The Journal of Arthroscopic and Related Surgery, Vol 28, No 1 (January), 2012; pp 59-65

- 153 pazienti affetti da conflitto Femoro Acetabolare
- Età media: 57 anni (range, da 50 a 77 anni)
- Valutazione dello spazio articolare
- Follow up 3 anni

RISULTATI

- **OTTIMI** nei pazienti con rima articolare > 2mm
- Risoluzione della sintomatologia dolorosa
- Nessuno ha avuto bisogno più di una Protesi d'anca

CONCLUSIONI

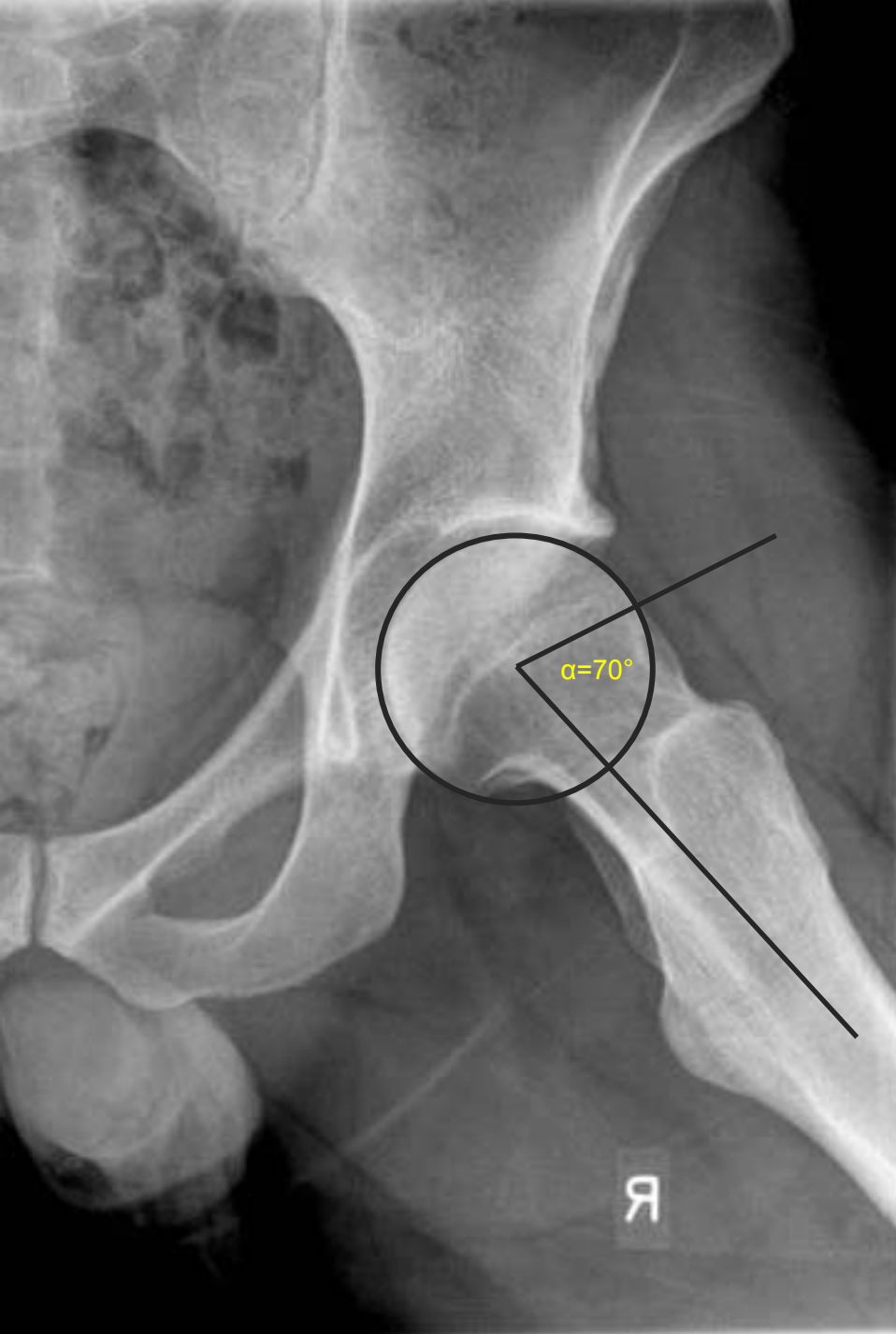
- Il conflitto femoro acetabolare è la conseguenza di una deformità anatomica che causa dolore all'anca e conduce all'artrosi
- Il trattamento chirurgico di scelta è quello artroscopico
- L'età non influisce sull'indicazione chirurgica all'artroscopia dell'anca

CONCLUSIONI

- Le evidenze scientifiche attuali ci dicono che:

Quando operati in tempo con indicazione giusta e con la tecnica corretta si può giungere alla completa risoluzione della sintomatologia dolorosa ed al
rallentamento fino probabilmente all'arresto della
progressione artrosica

GRAZIE



Alpha Angle

patologico $> 50^\circ$