# Unstable total hip arthroplasty – my choice: Dual Mobility ! (why not a big head?)

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Disclosure Smith&Nephew

## THA DISLOCATION

**USA : First cause of revision ( 22,5% of the revisions )**

**FRANCE: Second cause of revision (13% of the revisions )**

**Symposium SOFCOT 2012**

An average additional cost of 70 % compared with the primary THA

We shall not speak dislocations in 3 months

**Factors linked to the surgery and to the implants:**

The recurrent dislocation before 5 years :
- Malposition of implants (retroversion of the cup)
- Insufficiency of abductors ( no-consolidation after an osteotomy of the great trochanter).

The recurrent dislocation after 5 years :
- Polyethylene wear,
- Stretching of the capsula,
- Decrease of the muscular strength
- Malposition of implants, often by modification of the lumbar lordosis

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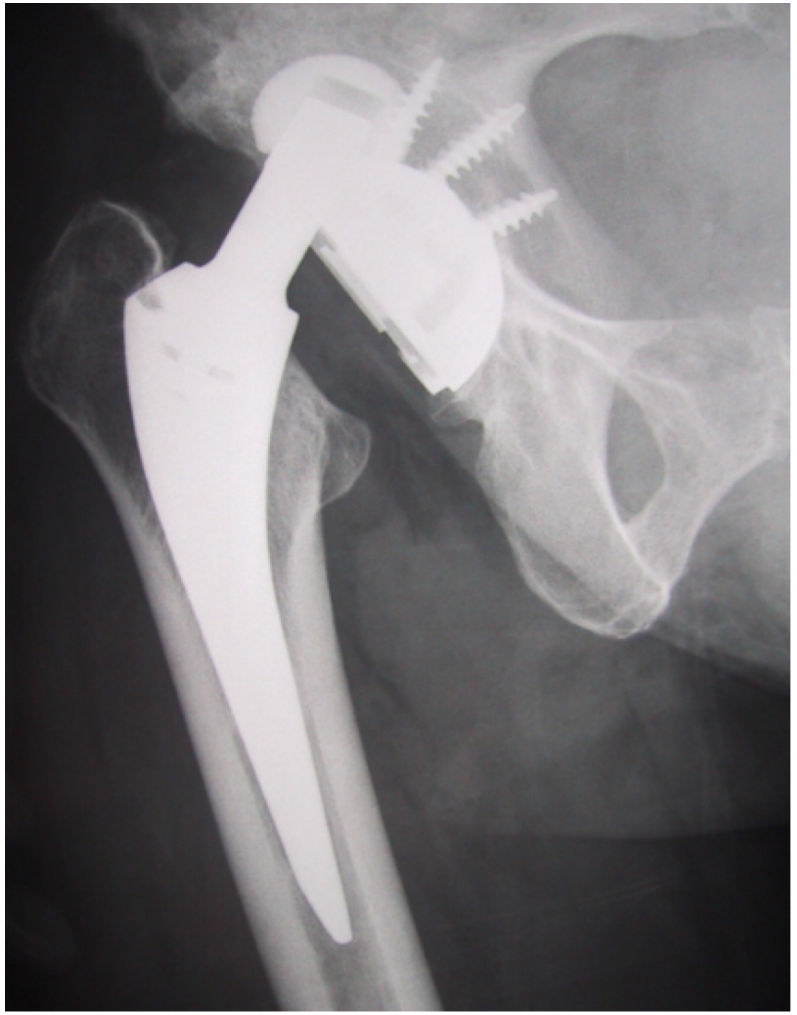
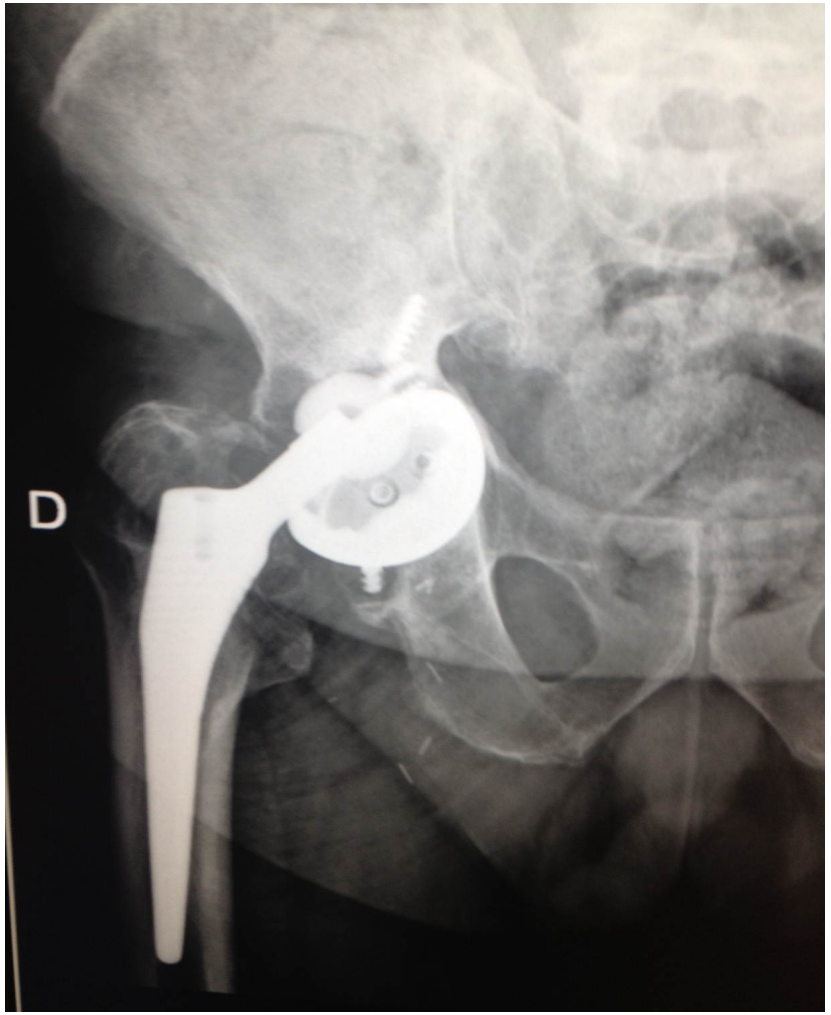




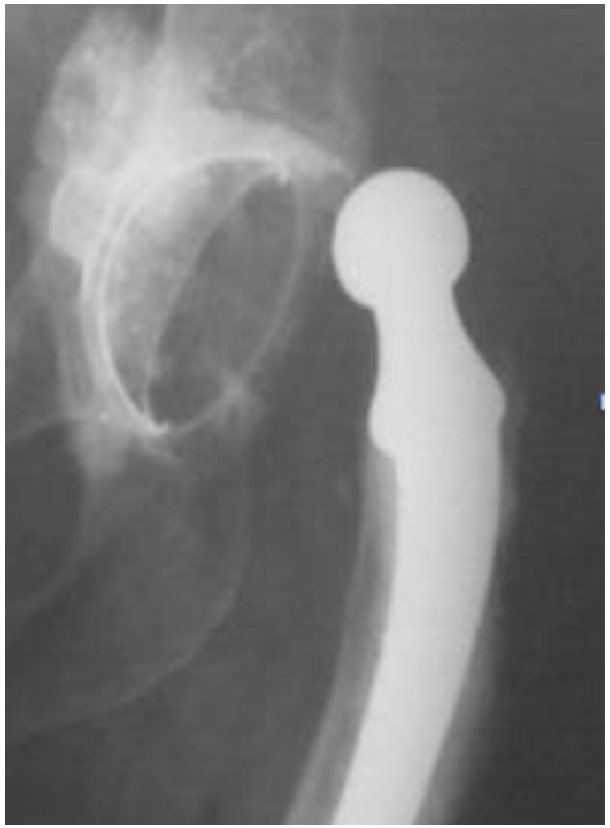
**The factors linked to the patient:**

Inflammatory arthritis,
Advanced age,
Co-morbidity
Cognitive disorders
Excess weight or conversely IMC < 18,5 kg/m

Femoral neck fracture (can exceed the risk more than 10%)

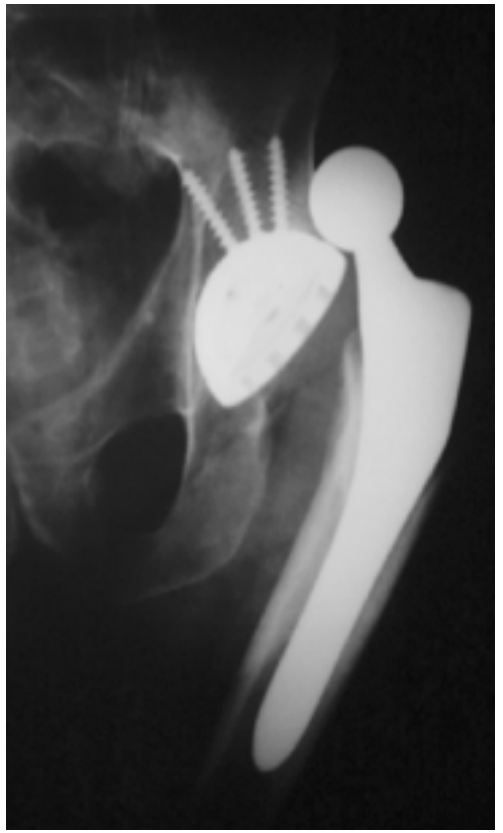
Revision surgery doubles the risk of dislocation

# Dislocation rates after THA



- **Primary** **1 to 9 %**
- **Revision** **4,8 to 28 %**

(DJ.Berry, MV Knoch, CD Schleck, WS Harmen, AAOS 2003)



**RECURRENT DISLOCATION:**

When we have the opportunity to have a well identified cause,

the surgical revision is easy,

Just remove the cause to have a good long-term result

**RECURRENT DISLOCATION:**

But most often the cause is badly identified,

then we have difficult therapeutic choice

with a bad long-term result.

**RECURRENT DISLOCATION:**

In the absence of malposition of the implant, we attribute the instability to an inadequate myofasciale tension.
The options:

1) Osteotomy of the greater trochanter,

2) Insert with heightened edges,

3) Big head diameter,

4) Double mobility cup.

## RECURRENT DISLOCATION:

- **Constraint liner** 8,6%
  *Kahn, JBJS 2006*
- **Butress or edged liner:** 24%
  *Madam, Ann R Coll Surg Engl 2002*
- **Big heads:** 13%
  *Amstutz, CORR 2001*
- **Jumbo Heads: 8%**
  *Beaule P, JBJS (Am) 2002*
- **Reorientation of the cup and/or stem:** 24%
  *Daly, JBJS 1992*

# PRINCIPLE OF DOUBLE MOBILITY
# 1974

**Professeur Gilles BOUSQUET (1939-1996)**

**Hôpital Universitaire de Saint Etienne, France**

## Combine low-friction to reduce wear with large femoral heads to avoid dislocation

Sir John Charnley

Mac Kee-Farrar

# Dislocation rates with DM Primary THA

## 0.09 % or 1/1100

***LECLERCQ S, EL BLIDI S, AUBRIOT JH*** *: Traitement de la luxation récidivante de prothèse totale de hanche par le cotyle de Bousquet. A propos de 13 cas. Rev Chir Orthop, 1995, 81, 389-394.*

## 0.7 % or 1/139

***FARIZON F, DELAVISON R, AZOULAI JJ, BOUSQUET G*** *: Results with a cementless alumina coated cup with dual mobility. Int Orthop, 1998, 22, 219-224.*

## 0.0 % fu 15 years

**R. Philippot, F. Farizon, J.-P. Camilleri, B. Boyer, G. Derhi, J. Bonnan, M.H. Fessy, F. Lecuire**
*Étude d'une série de 438 cupules non cimentées à double mobilité*
*Survival of dual mobility socket with a mean 17 years follow-up*
Revue de Chirurgie Orthopédique, Vol 94 - N° 1 - 2008

**SOFCOT 2009**

**SYMPOSIUM DUAL MOBILITY**

**481 revisions cases with DM**

Revision due to aseptic loosening N=241

Revision due to recurrent instability N=180

Revision due to septic loosening N=60

REVISION THA for Aseptic loosening

Grade I and II
Dislocation 1,09 %

Grade III and IV
Dislocation 3,3 %

Symposium Dual Mobility SOFCOT Paris2009

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REVISION THA for recurrent dislocation

Dislocation 3,9% (7/180)

Symposium Dual Mobility SOFCOT Paris2009

- **Constraint liner** 8,6%
  *Kahn, JBJS 2006*
- **Butress or edged liner:** 24%
  *Madam, Ann R Coll Surg Engl 2002*
- **Big heads:** 13%
  *Amstutz, CORR 2001*
- **Jumbo Heads: 8%**
  *Beaule P, JBJS (Am) 2002*
- **Reorientation of the cup and/or pivot:** 24%
  *Daly, JBJS 1992*

## CONCLUSION

Dual Mobility systems are the most stable in revisions

Dual mobility is a reliable and effective treatment of recurrent dislocations of THA ,

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## POLARCUP


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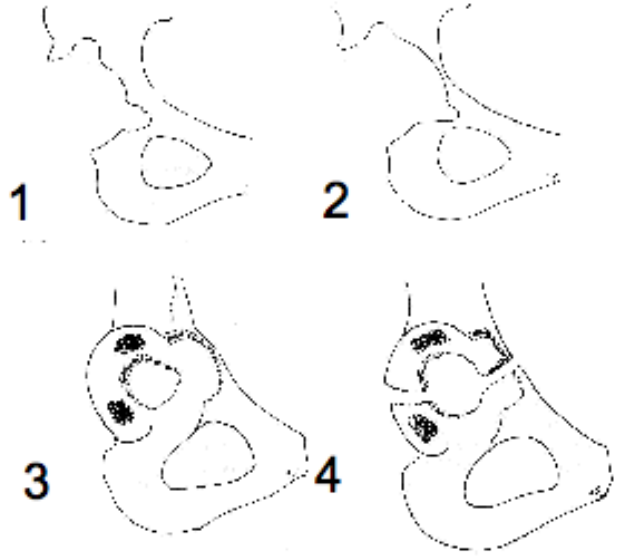
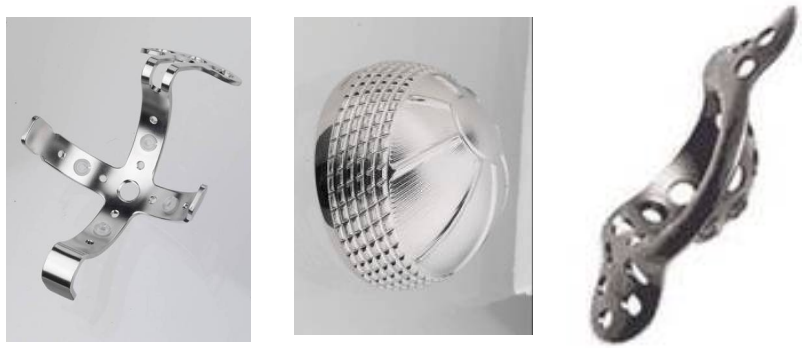
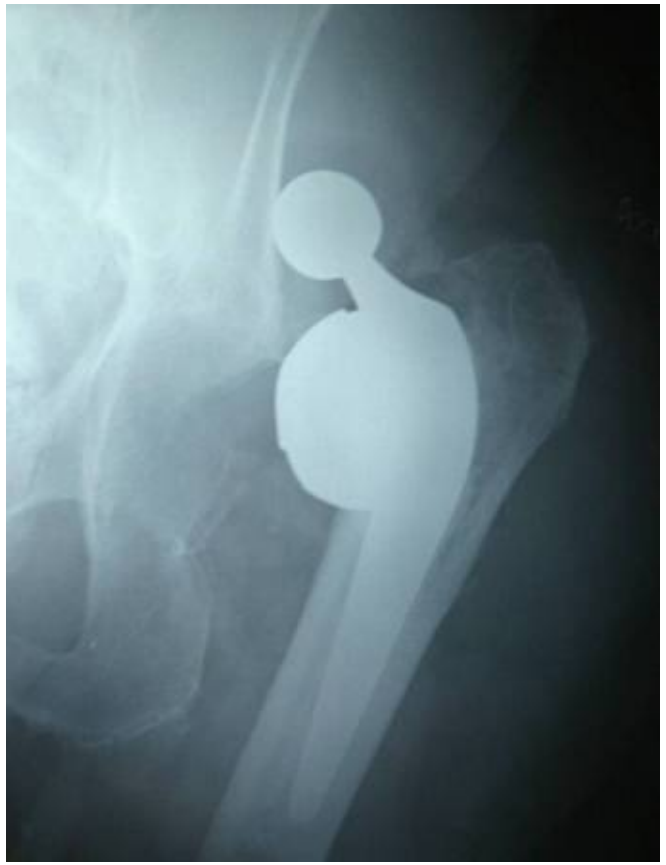
(Vives P, RCO 1989, 75 Suppl I, 23-69)

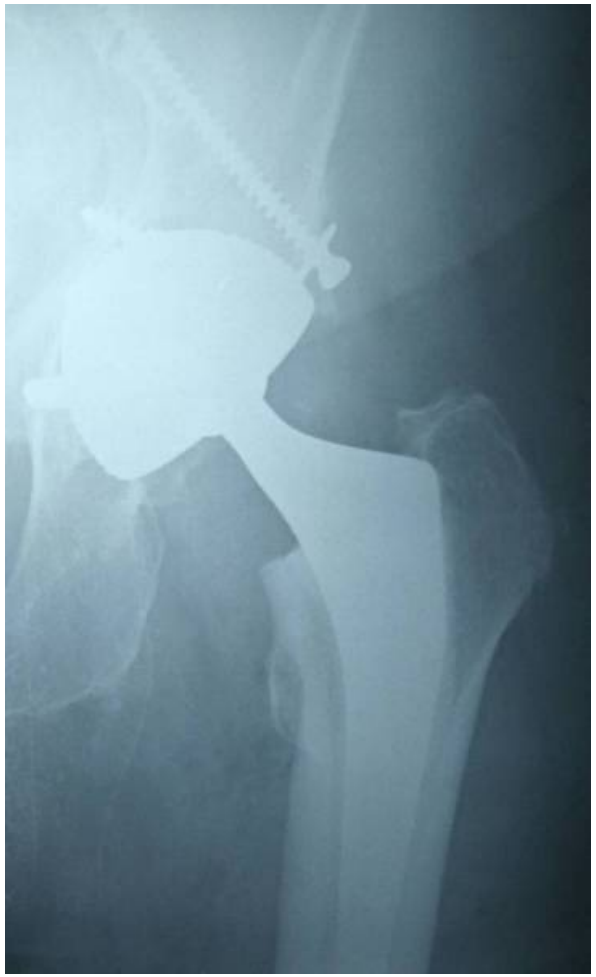


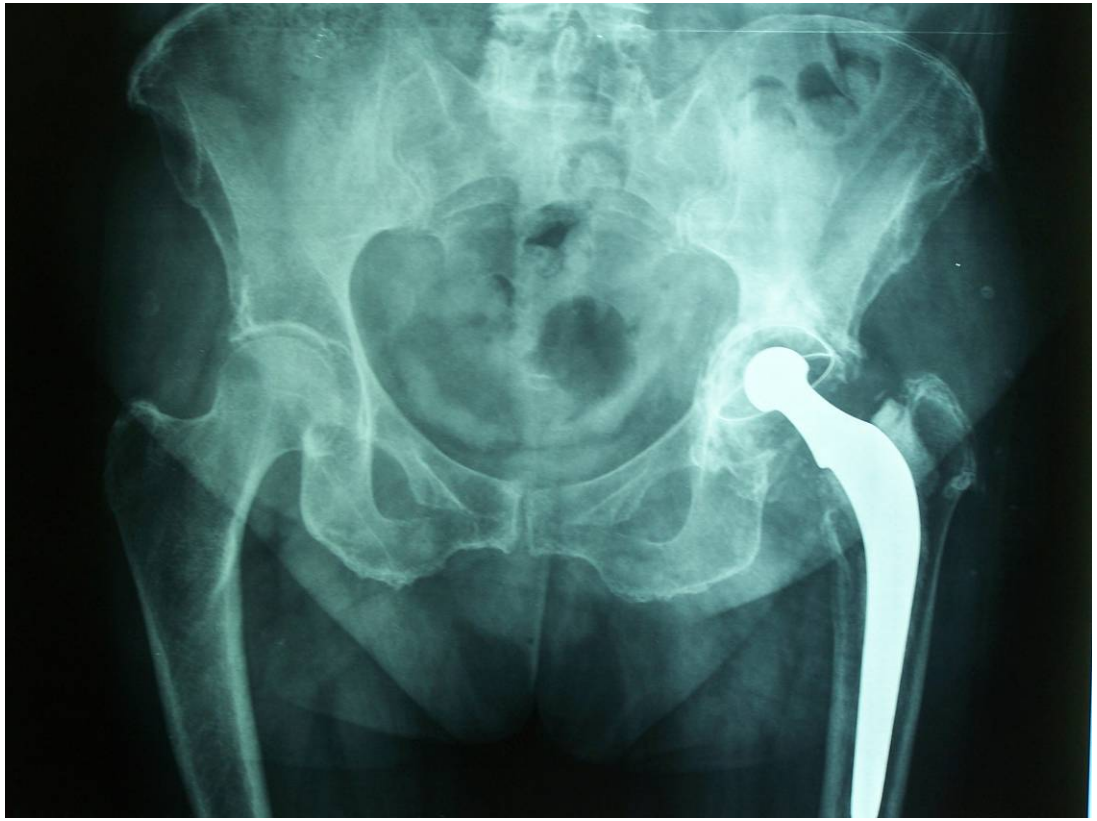
state 0 : Acetabulum intact
state 1 : Good bone quality
state 2 : Acetabulum with no destruction but weak
state 3 : Destruction of two walls
state 4 : Vanishing 2 walls and / or fracture

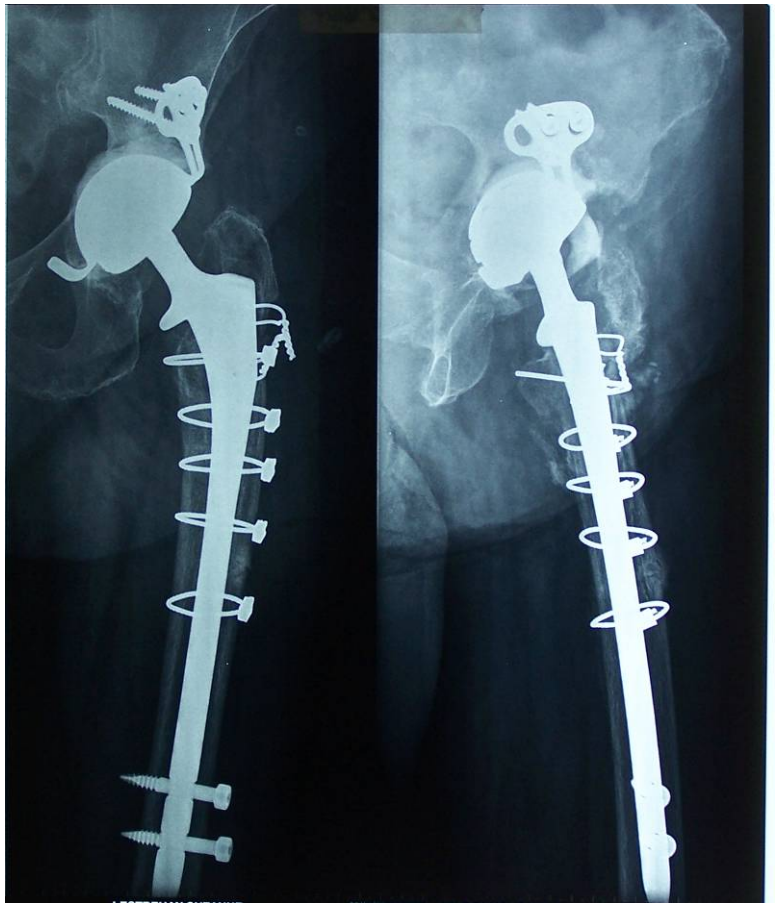
**Simple**



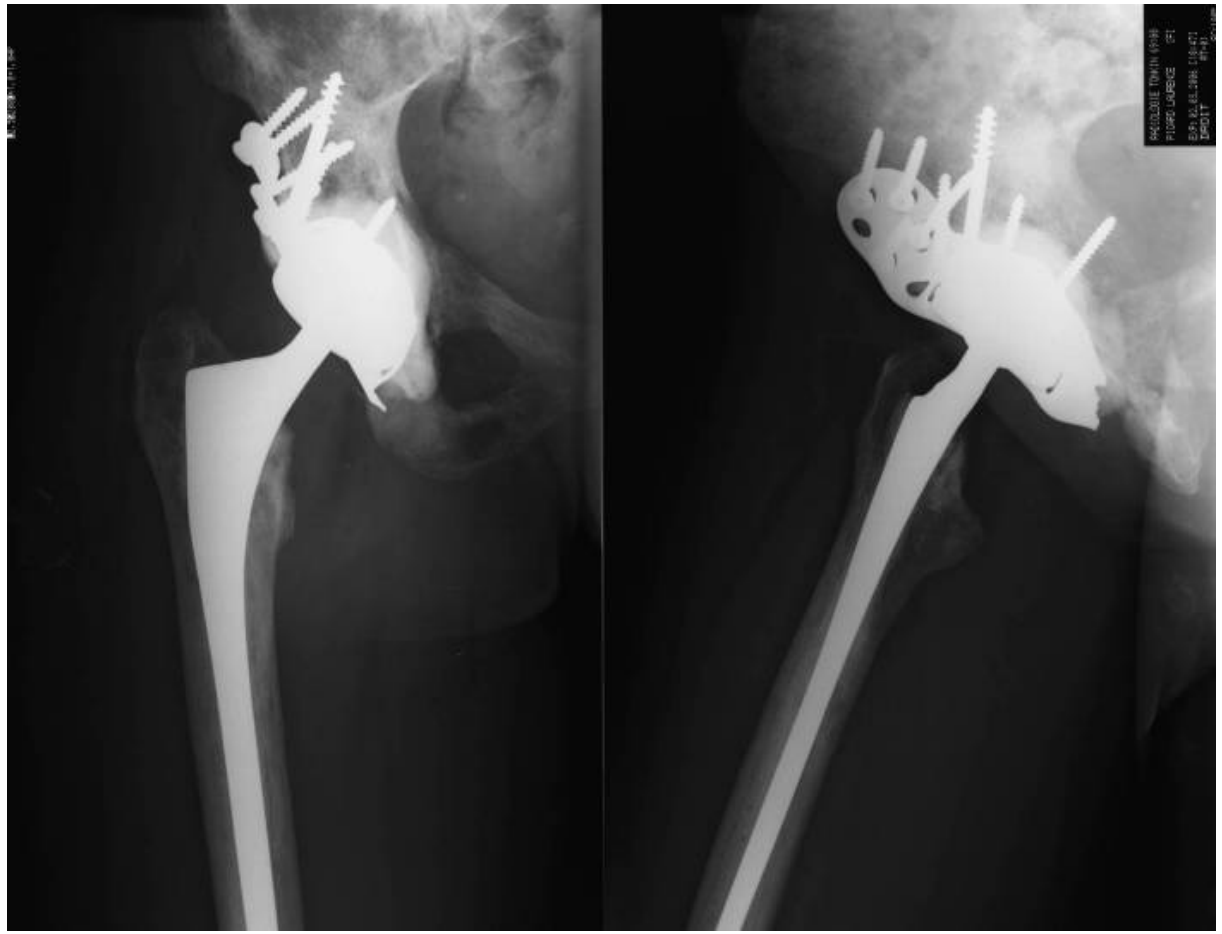


**With PolarCross reinforced ring**

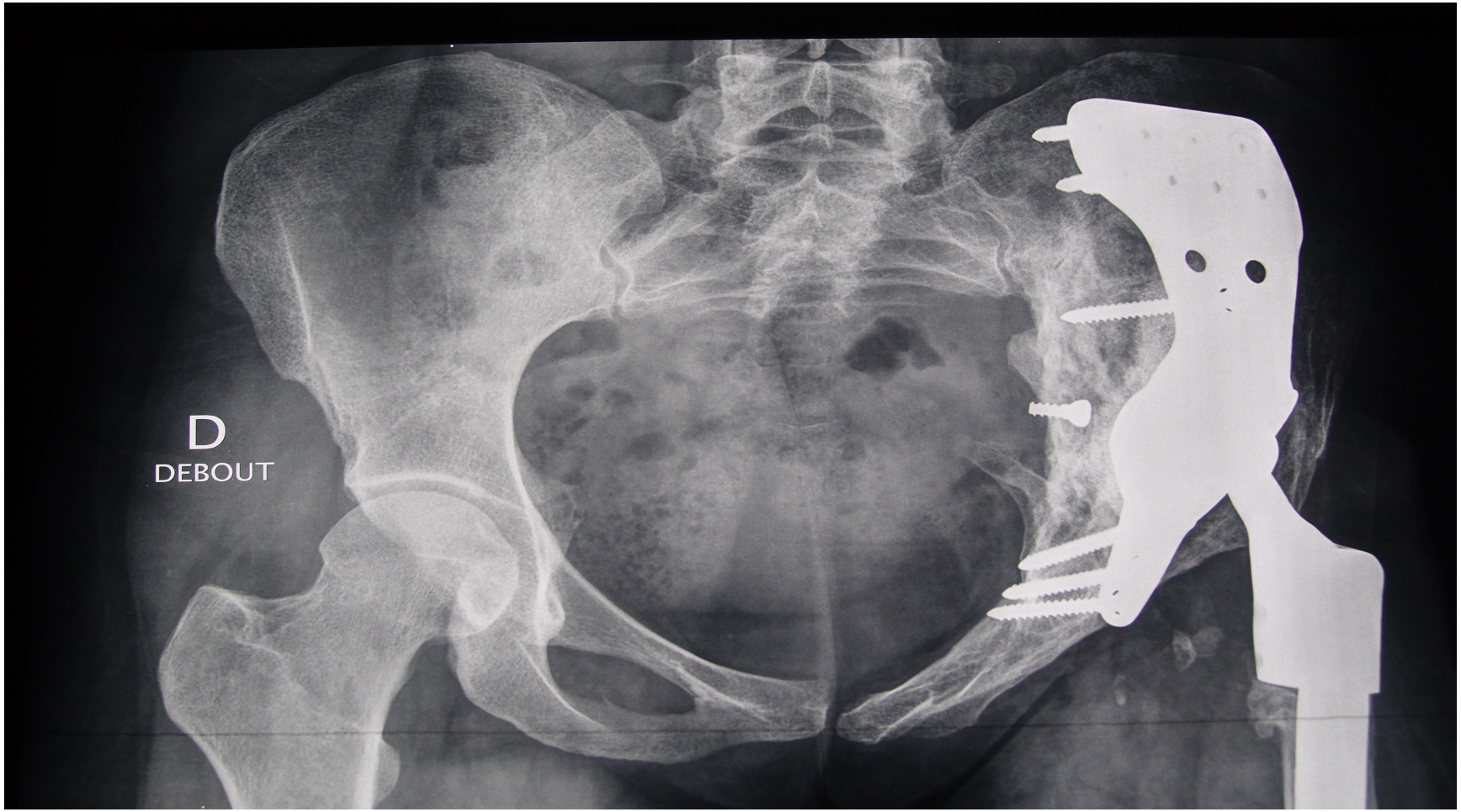




**With Burschneider ring:**



**With a custom-made re-enforced ring**



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## G.I.L.E.S Group

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(Anciens collaborateurs du Pr. Gilles BOUSQUET)

Pr. G. Bousquet
(1939-1996)

**Dr Bonnard, Dr Fiquet, Dr Bauchu, Dr Cyprès, Dr Girardin, Dr Noyer**

Groupe GILES