

The Periacetabular Osteotomy

Jeff Mast M.D.

AO Center

Mammoth Lakes, California

Periacetabular Osteotomy

Developed in Berne, Switzerland in 1984, by Ganz and Mast. A reorientation acetabular osteotomy incorporating intra-
Osseus cuts thru the innominate bone to isolate the Acetabulum as a free segment that can be moved to a new position in all Three planes. The first PAO was done in Bern, Switzerland in 1984 through the ilioinguinal surgical approach.

Subsequent research on cadaveric material revealed that there

Was better access to the pelvis and less danger to the associated

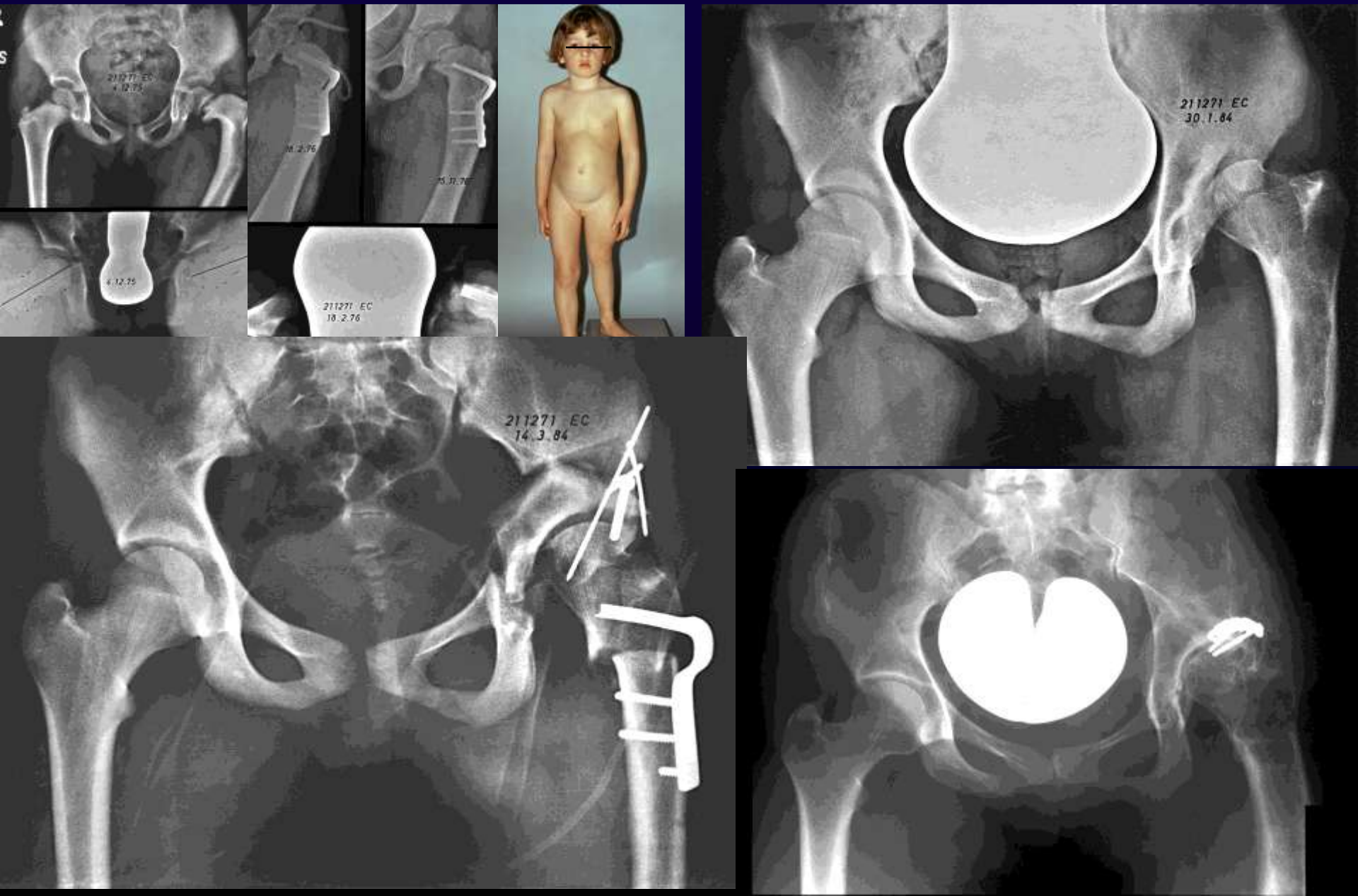
Vessels and nerves through the Modified Smith-Peterson

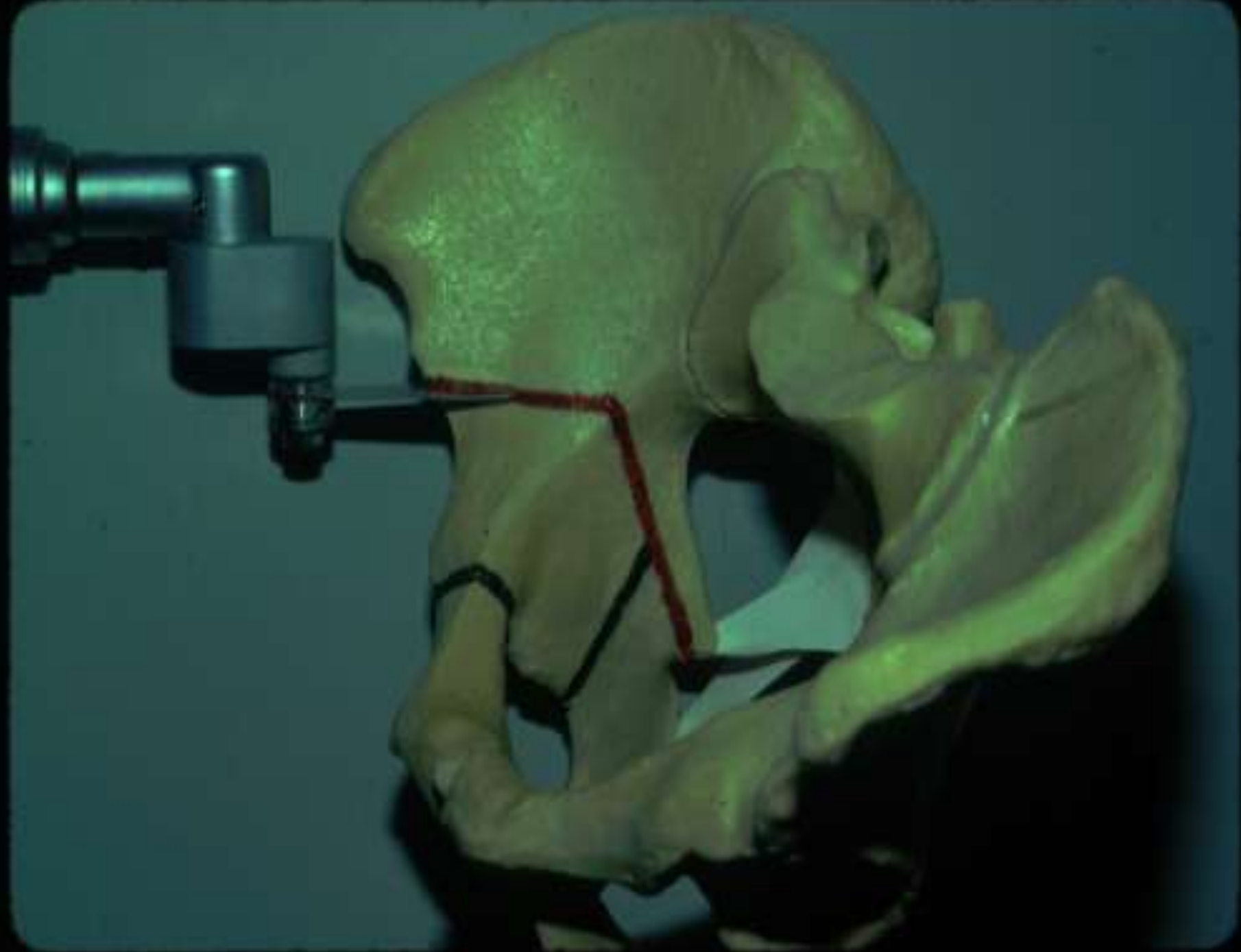
Surgical approach., Klaue K., Tho Son Vinh., Mast J,
Surgical approach..

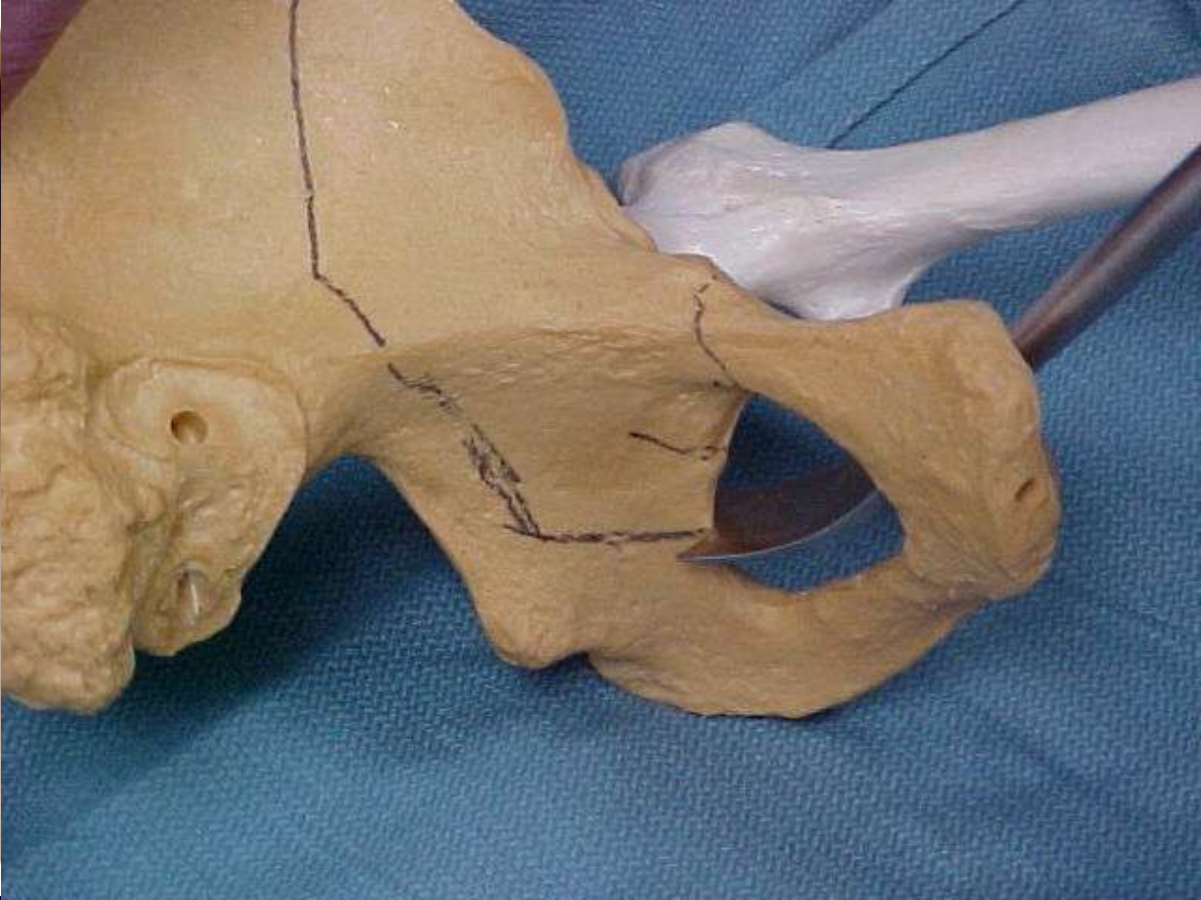
The first written account was in 1988 in CORR, 232:26-36.



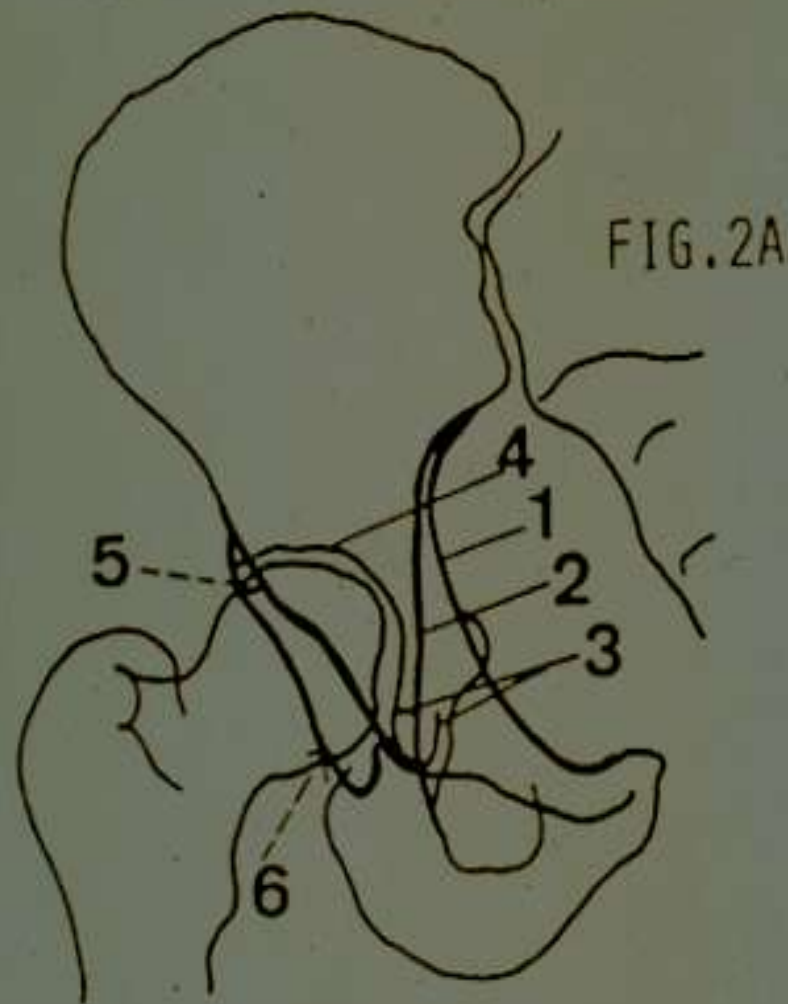
20 year follow-up on the first PAO surg. Ganz Asst: Mast

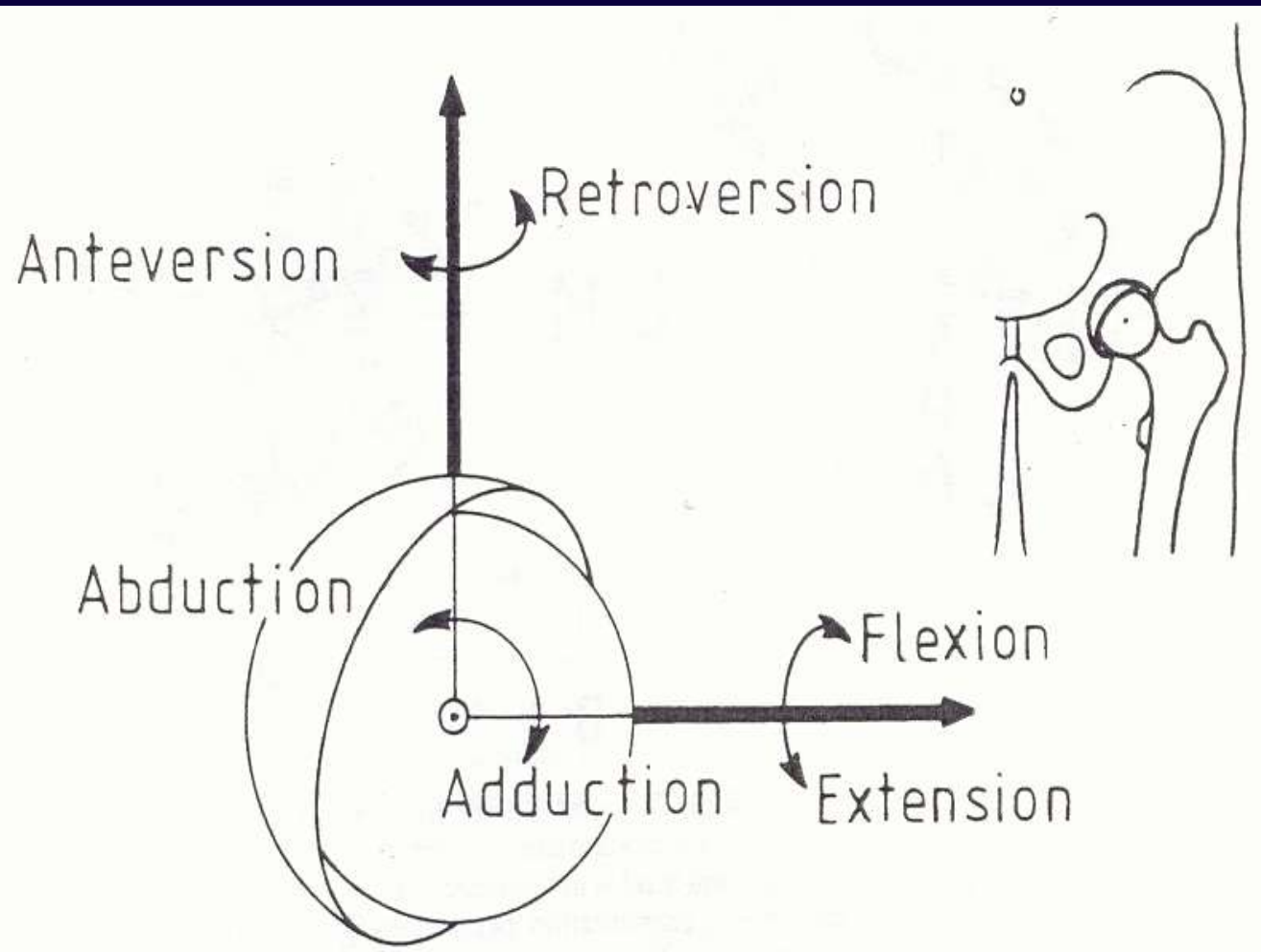






Antero-Posterior View(A.P.)





Challenges

Correct Diagnosis...

Not understanding the x-ray.



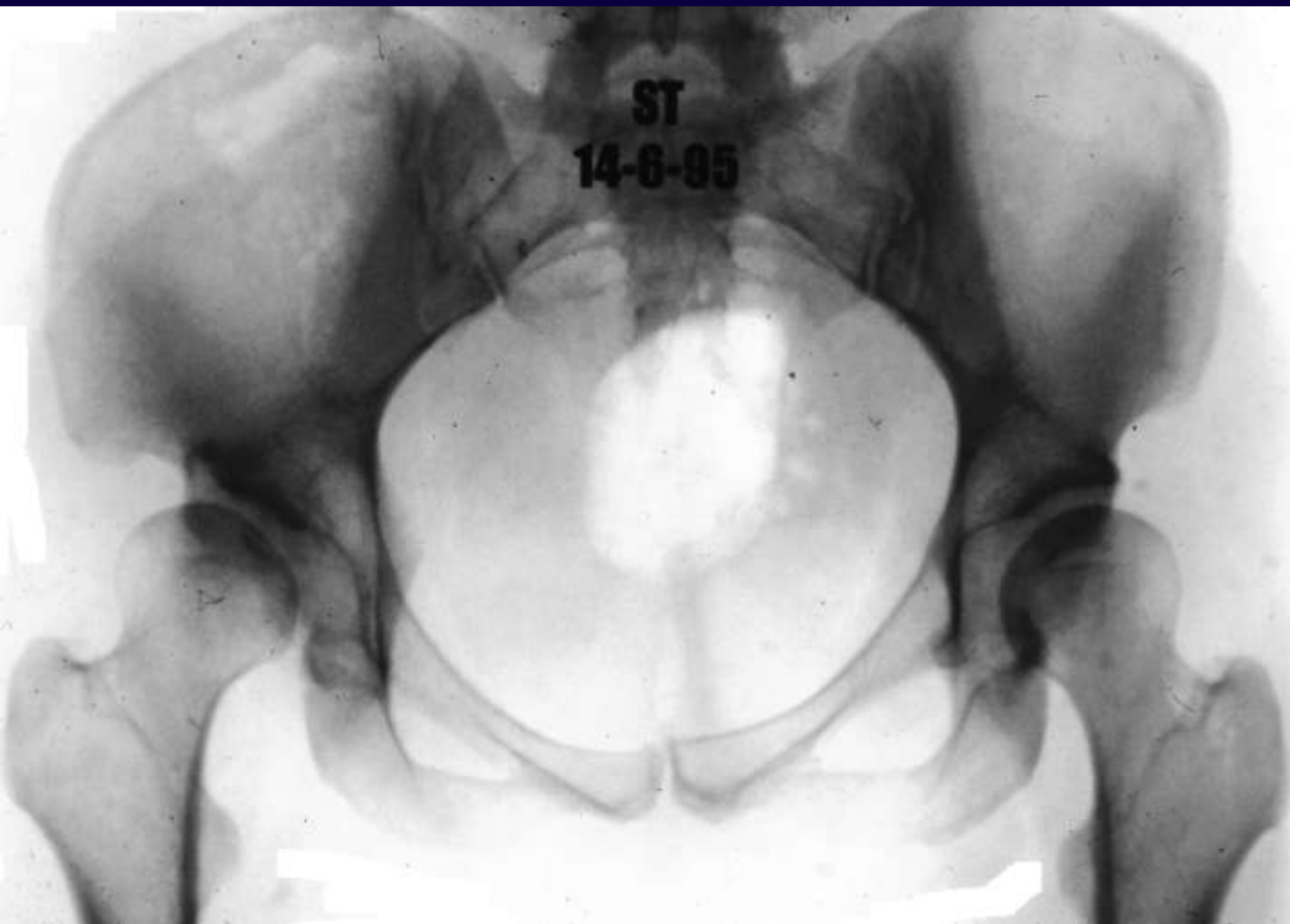
Steel Osteotomy



19 years of age



30 year old female with painful Right Hip



Retroversion with abnormal Wiberg and Shenton's

Line on the right. Subluxation on Fournier's Profile

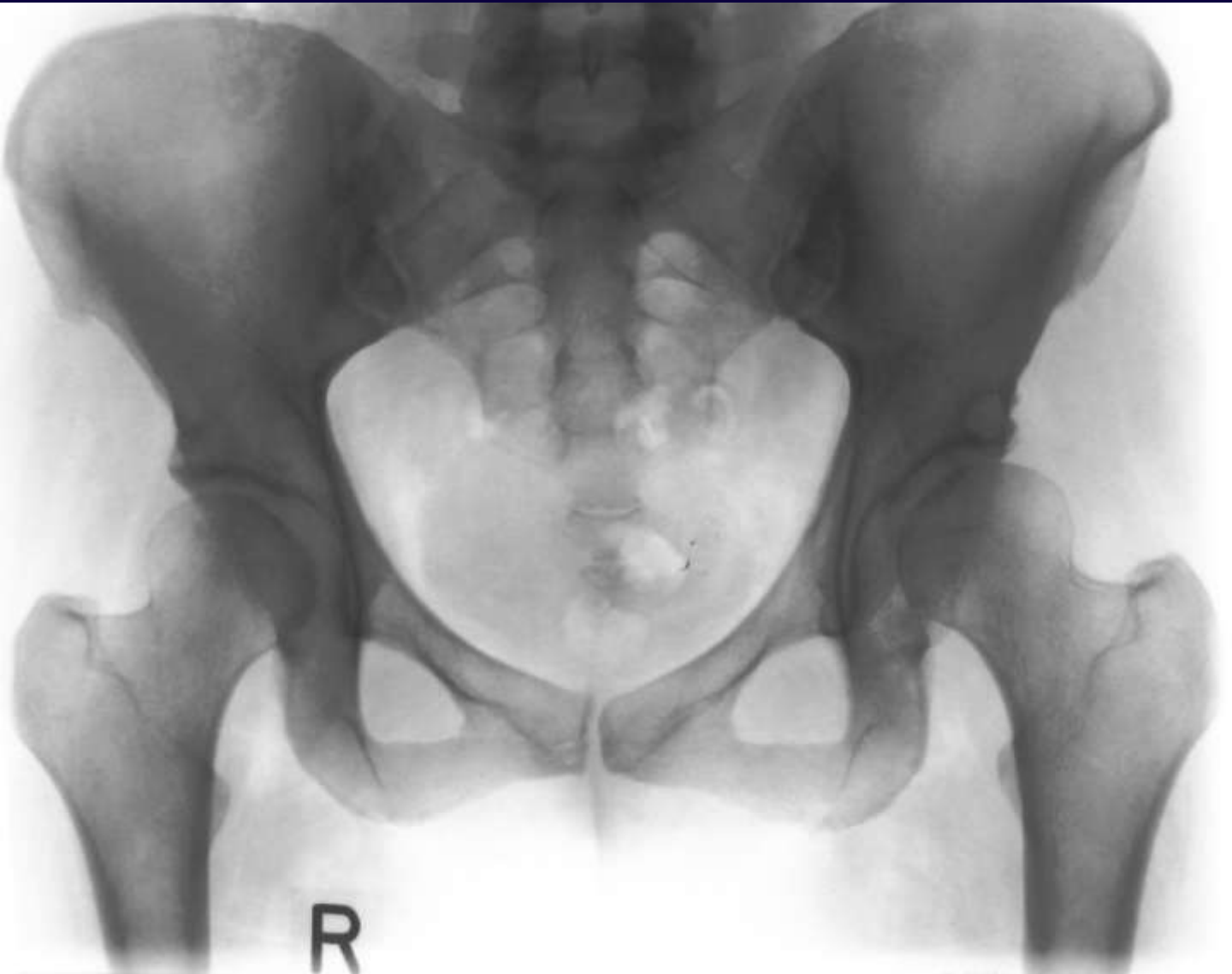
81/2 years post-op



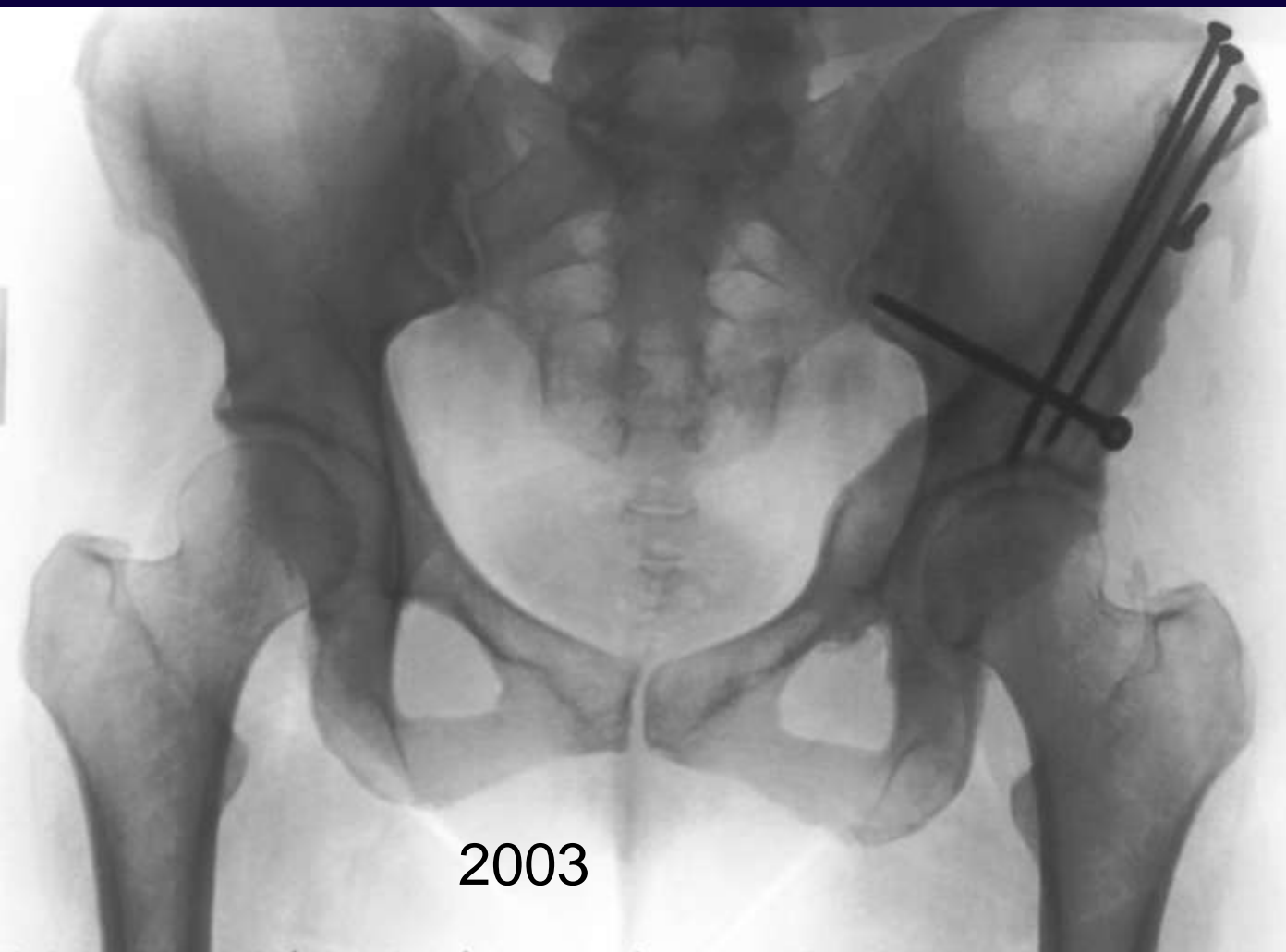
Challenges

Periarticular “cysts” or intra-osseous ganglions, do they require special treatment?

Large intra-osseous ganglion



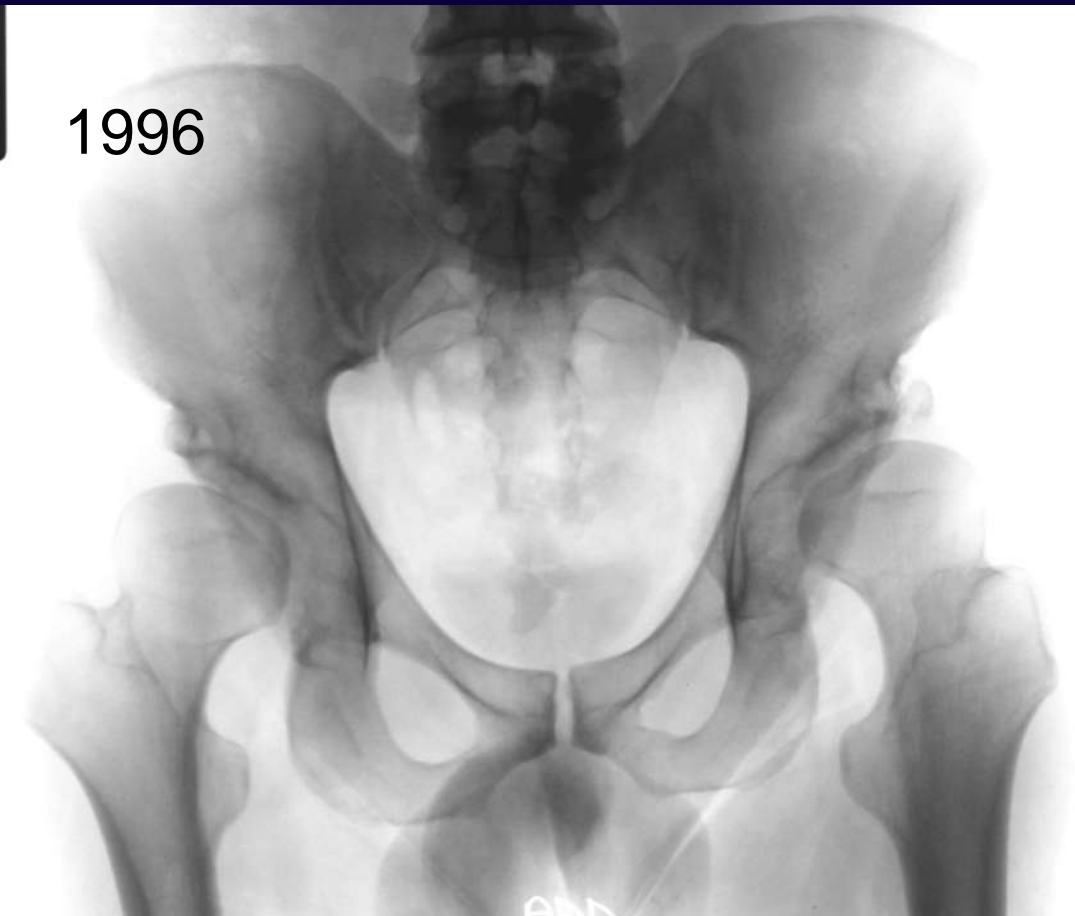
1995



8 years post-op

37 year old male, Bilateral Intra-osseous ganglion with Rim fracture on the left

1996



R



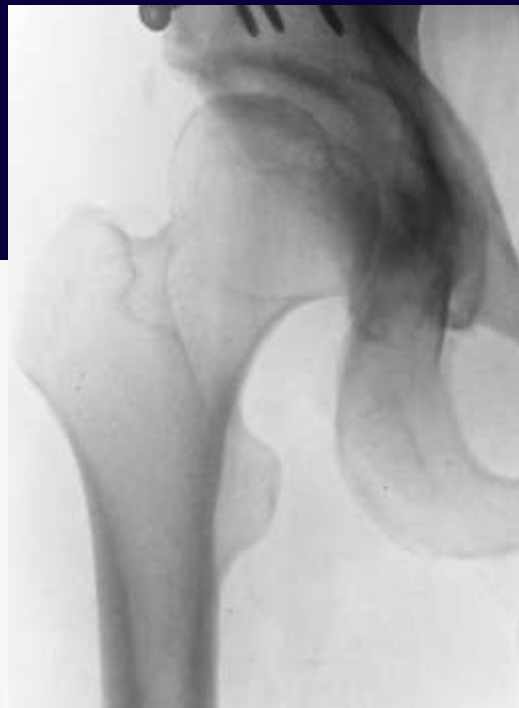
L







7 years post-op PAOs





6 22 01



8 27 01



2 24 03



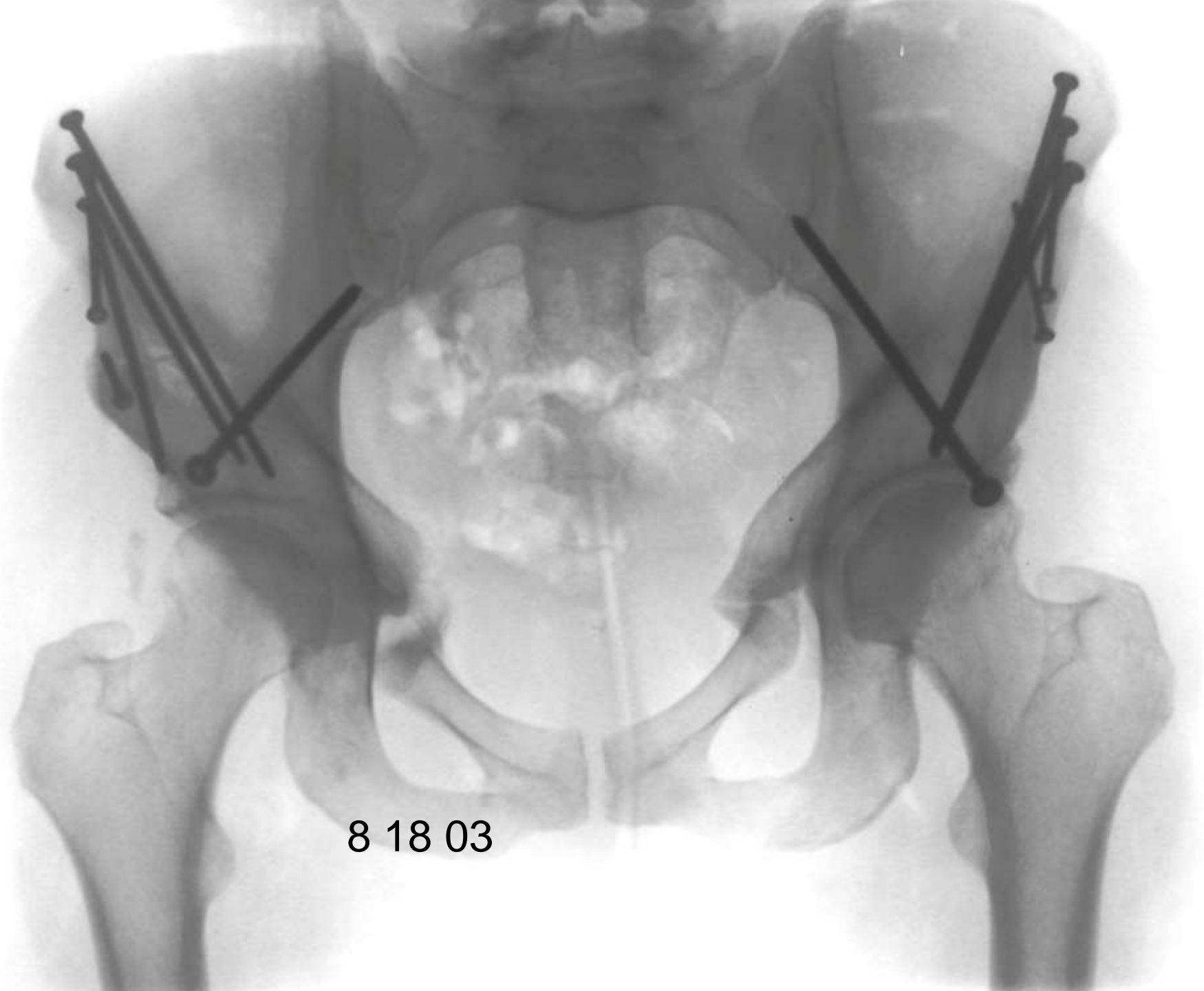


8 27 01

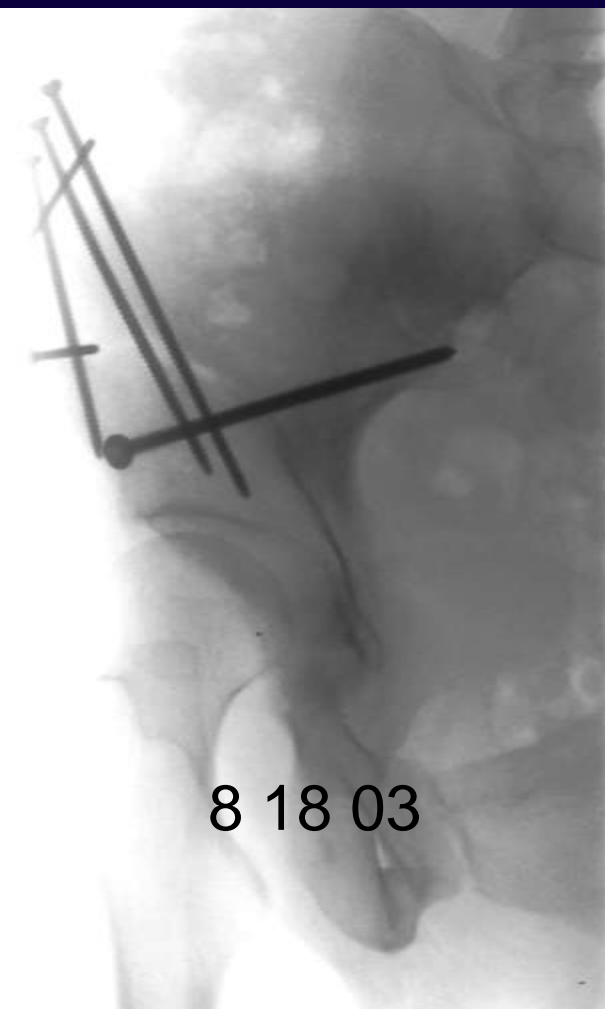




8 27 01

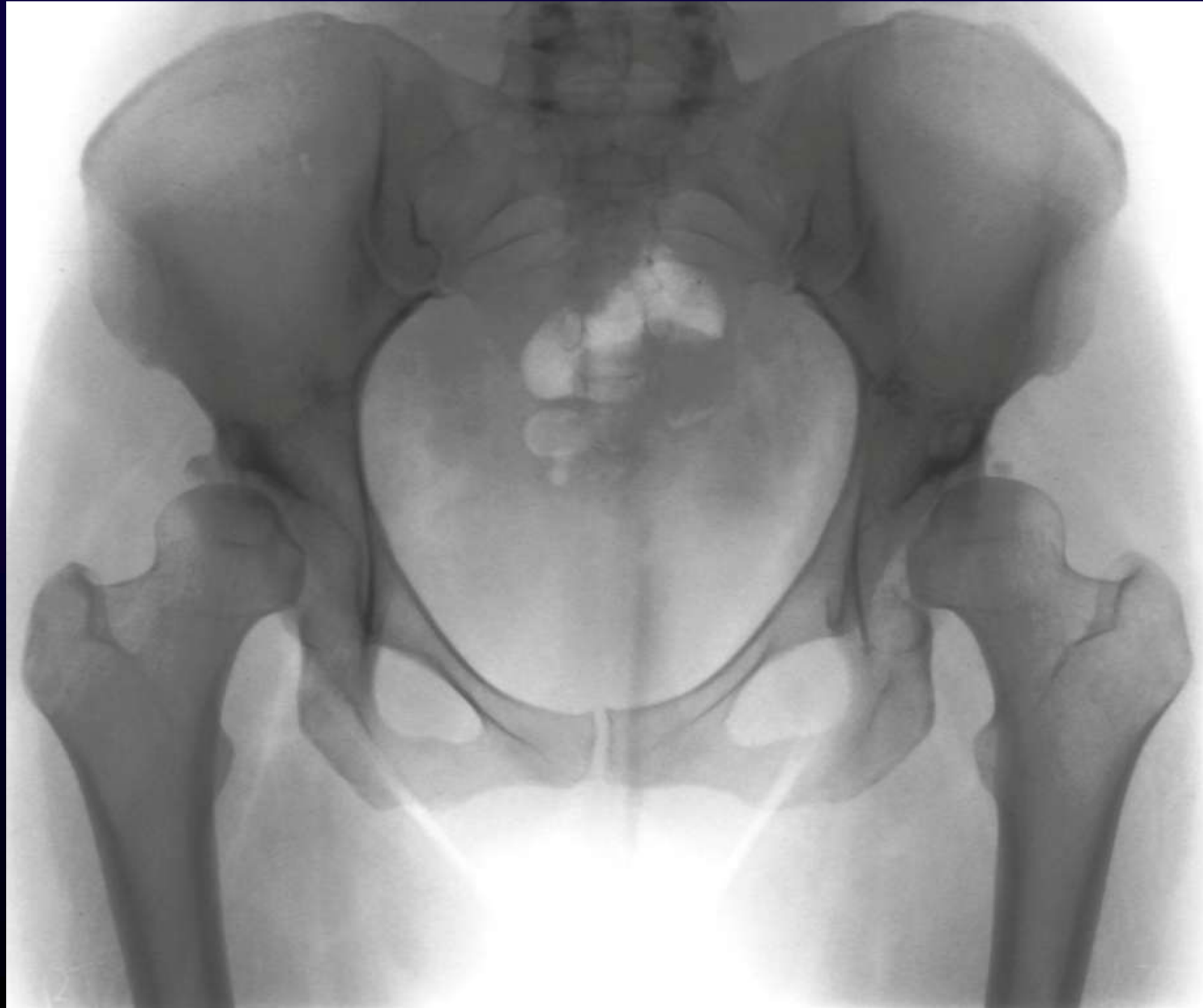


8 18 03



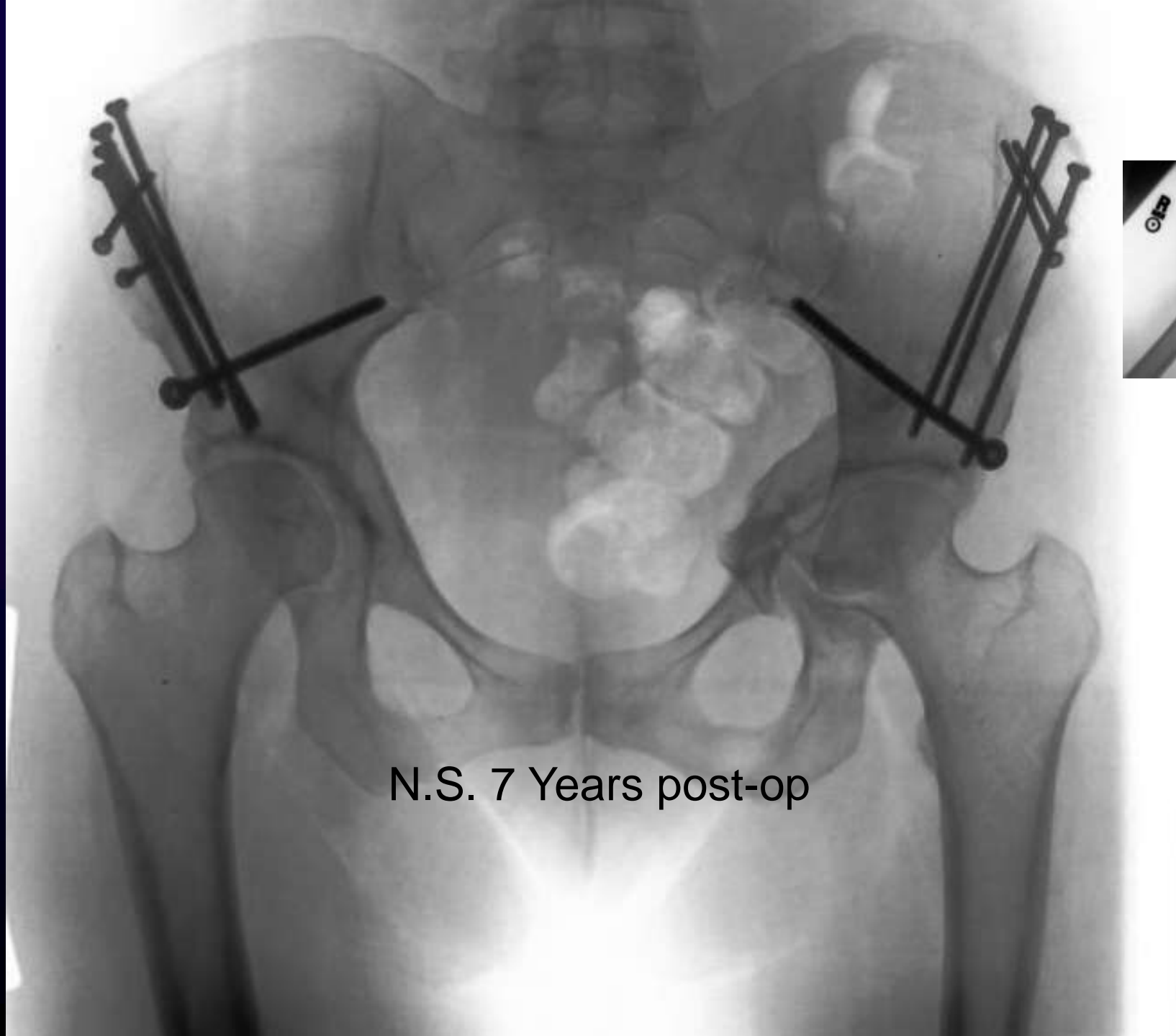
8 18 03











N.S. 7 Years post-op



PAO combined with arthrotomy

- Since 1998 all PAO's have been associated with arthrotomies in which there has been a search for labral damage and the pre and post-operative presence of impingement. When present the femoral contribution to the impingement is treated by decompression of the head neck lesion.
- The acetabular cartilage lesions are not amenable to treatment through this approach.

Summary

- The PAO was developed in 1984
- It is a logical osteotomy cutting the bone intra-osseously, at a places where optimal correction of the known abnormalities may be corrected.
- Surgeons doing this procedure must have mastery of reading x-rays of the hip, so that optimal corrections may be obtained.
- Long term results are promising, good results at 2 years; published in **CORR 363: pp5-93**, as has been shown by Ganz these results are durable in the majority of cases at 10 years

PAO combined with IO

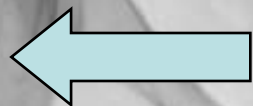
- Excessive Antetortion
- Elliptical Head
- Excessive Valgus
- Previous varus/valgus osteotomy


J.S.
6-3-99




J.S.
6-3-99

R





J.S.
6-3-99

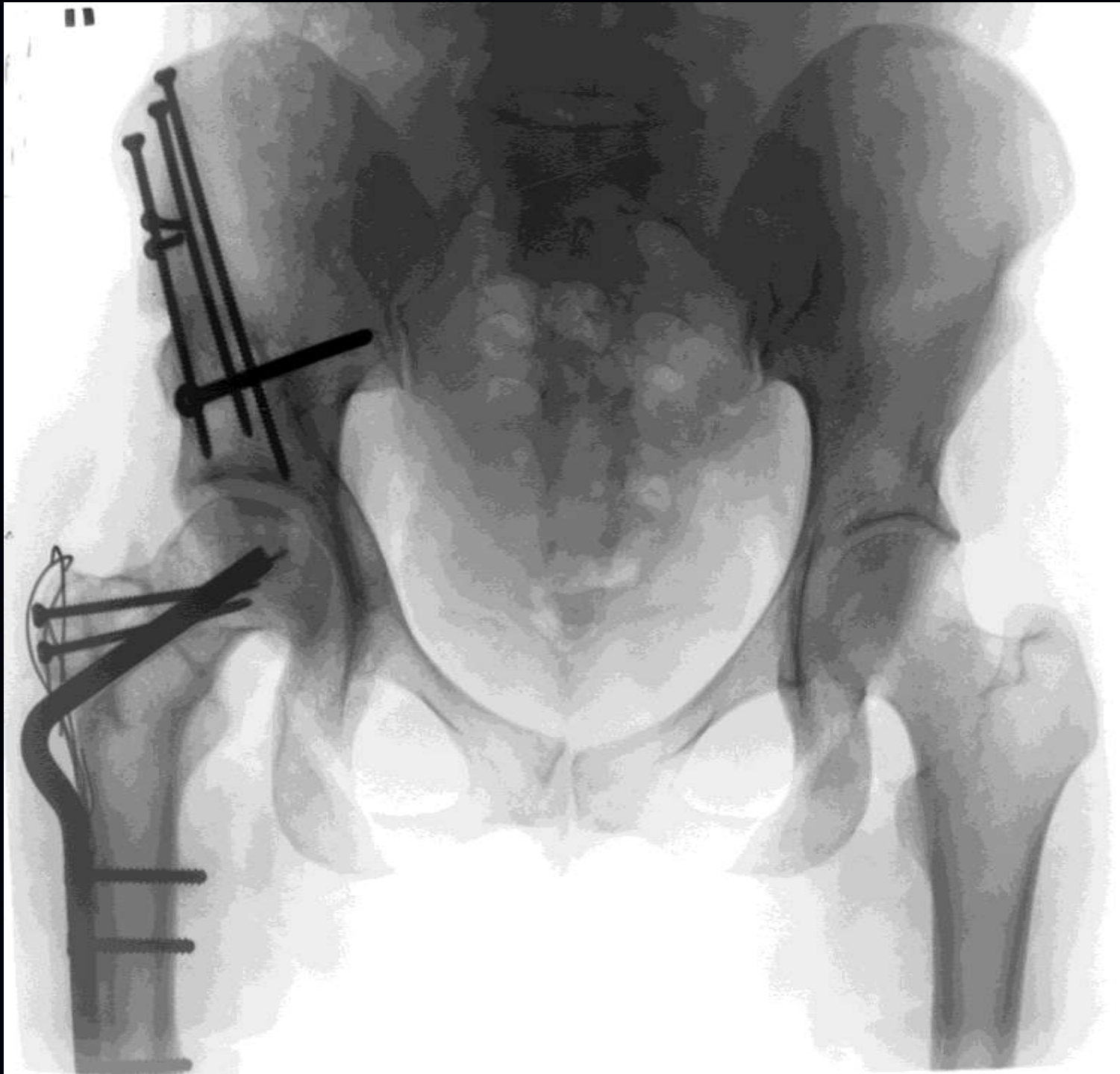


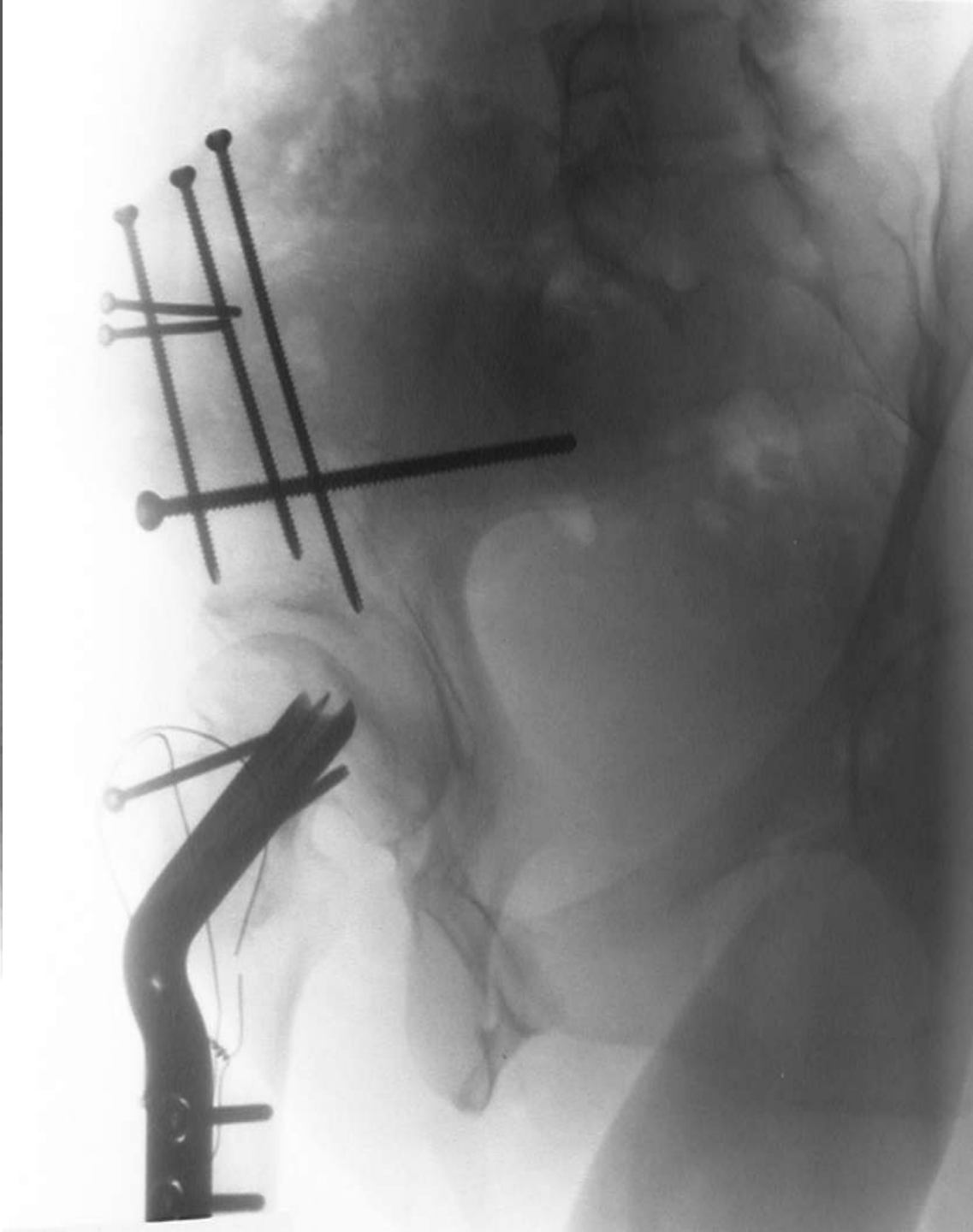
This is an anteroposterior (AP) radiograph of a human pelvis. The image shows the bony structures of the pelvis, including the iliac crests, pubis, ischium, and the sacrum. The hip joints are visible on either side. The central pelvic region shows the bladder and the rectum. The text "J.S." and "11-25-98" is printed in the lower center of the image.

J.S.
11-25-98

J.S.
8-26-99
11 wks PO





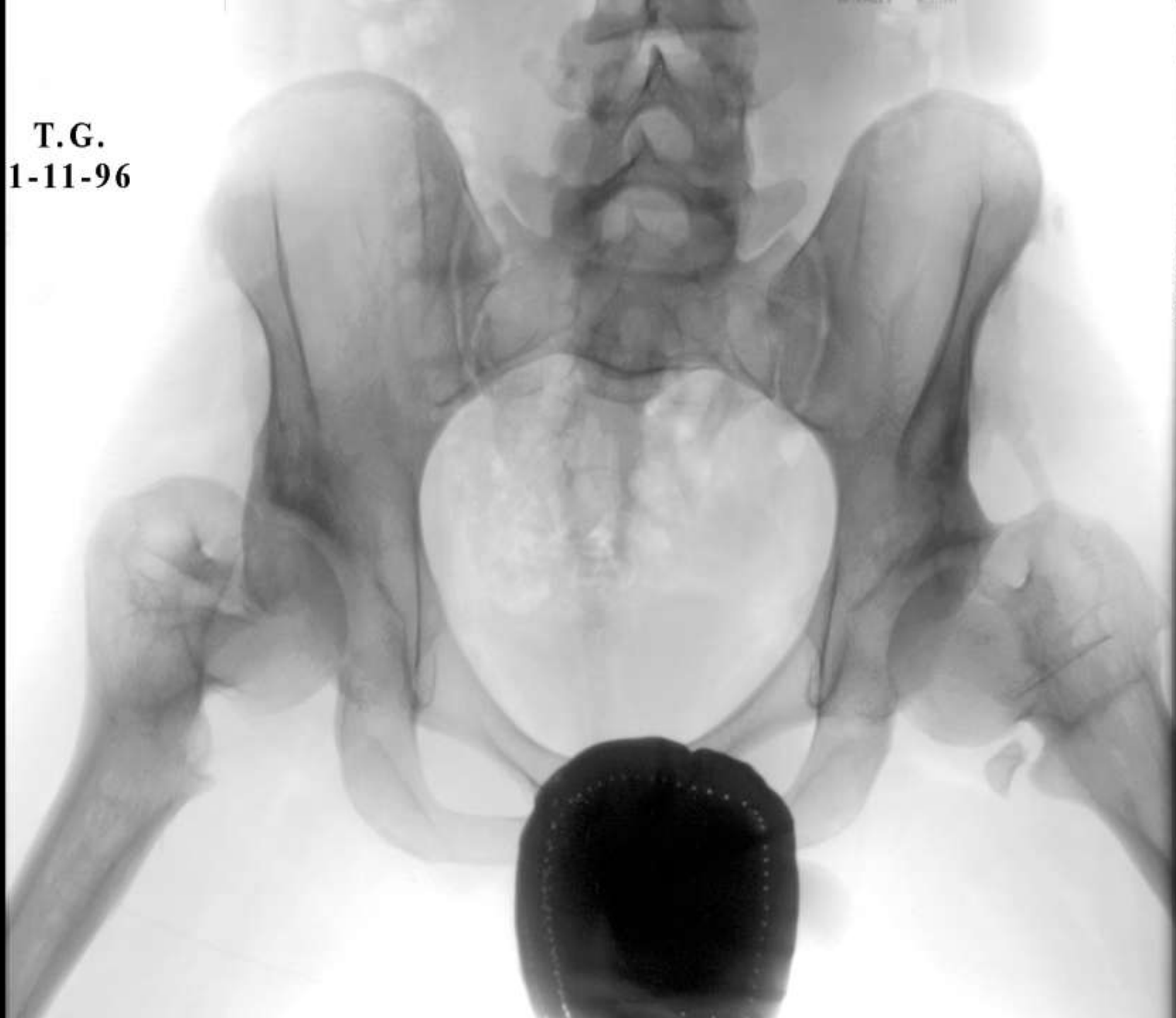


080050 Date 1-11-95
Dearborn, Michigan 48134
Detroit, Michigan 48201

T.G.
1-11-95

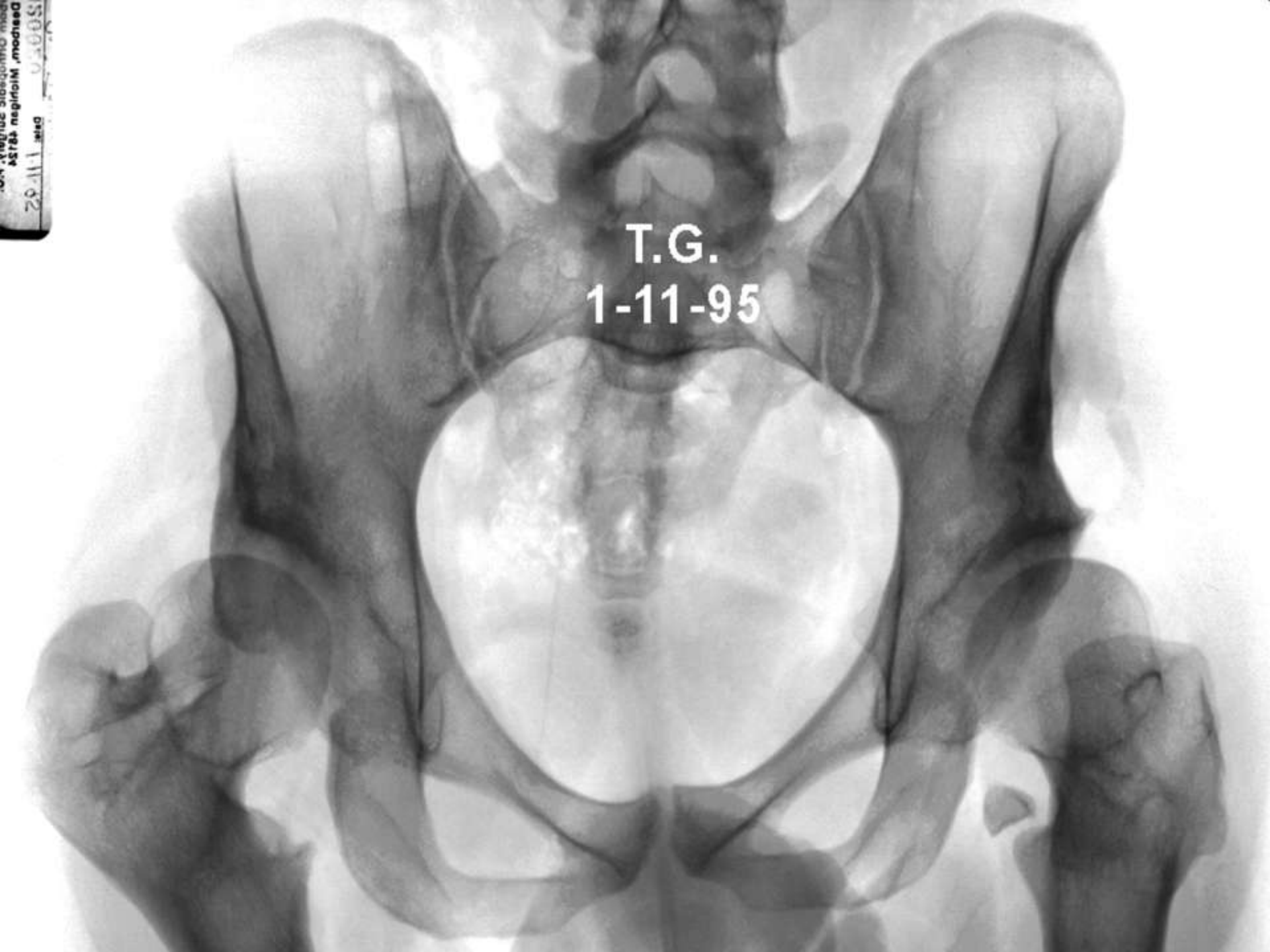


T.G.
1-11-96



50050
Date: 1-11-95
See also: 1995
See also: 1995
See also: 1995

T.G.
1-11-95



TG 1-11-95



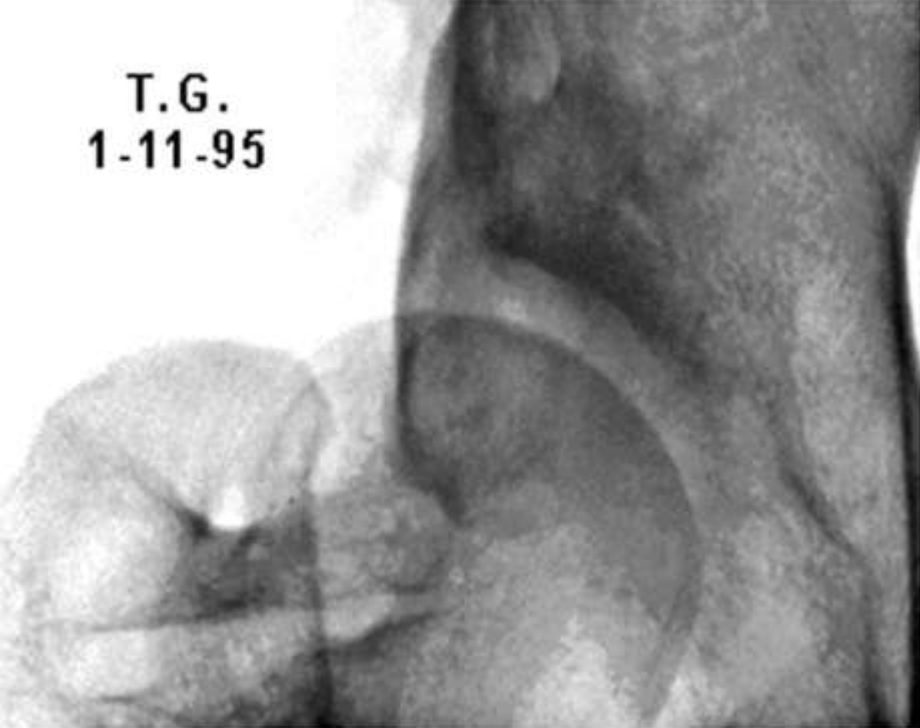
TG



T.G.
10-10-96

R

T.G.
1-11-95



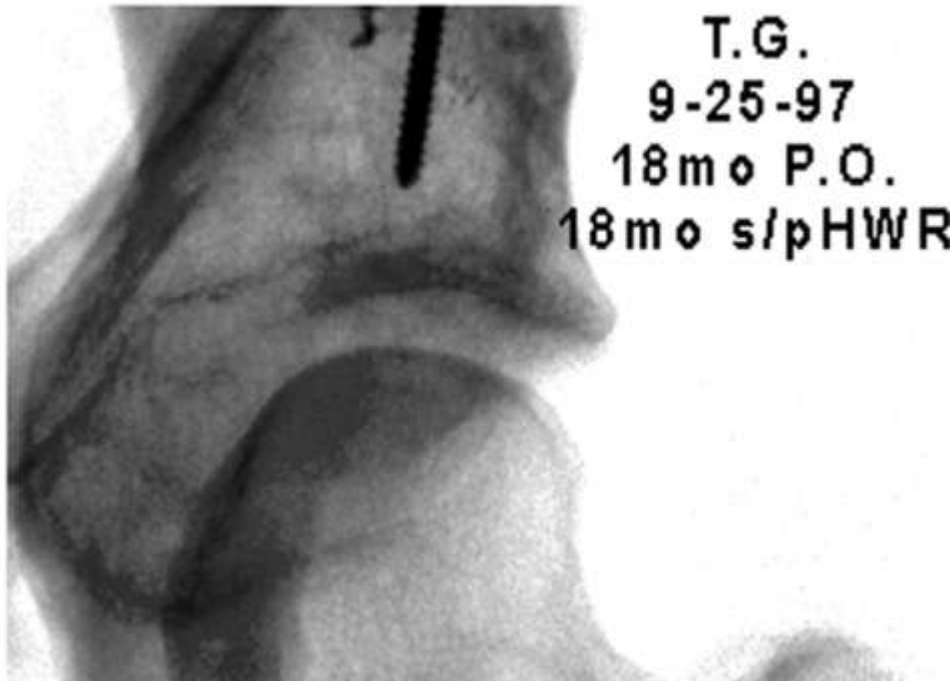
T.G.
1-11-95



T.G.
9-25-97
25mo P.O.
18mo s/pHWR



T.G.
9-25-97
18mo P.O.
18mo s/pHWR



Charcot-Marie Tooth

22 year female





4 years post-op PAO combined
with Intertrochanteric osteotomy