

IMPINGEMENT SURGERY

SURGICAL TECHNIQUES AND APPROACHES

Patrick Zingg

Department of Orthopaedics

University of Zurich, Balgrist

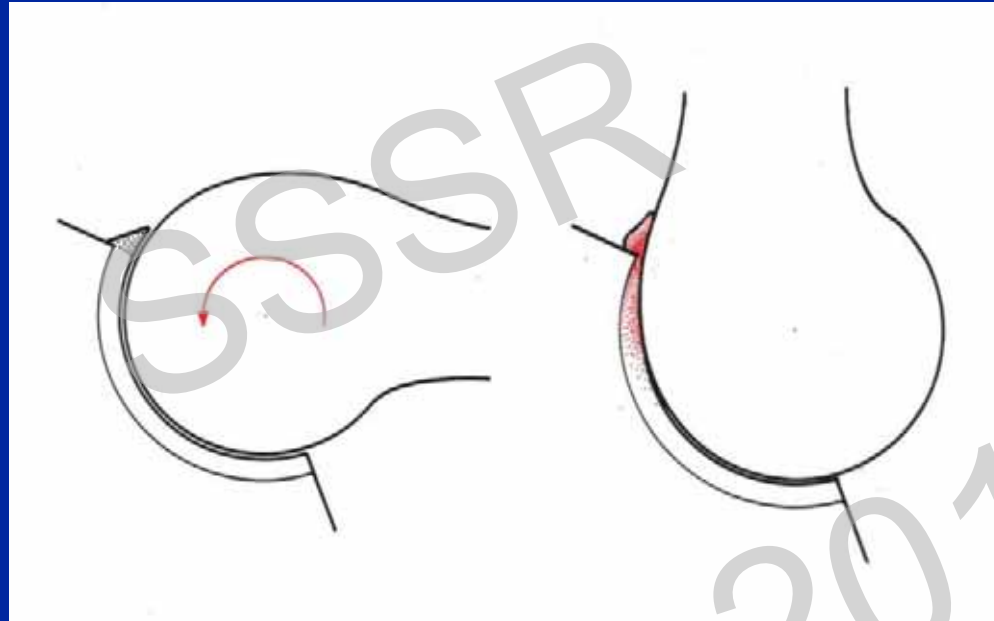
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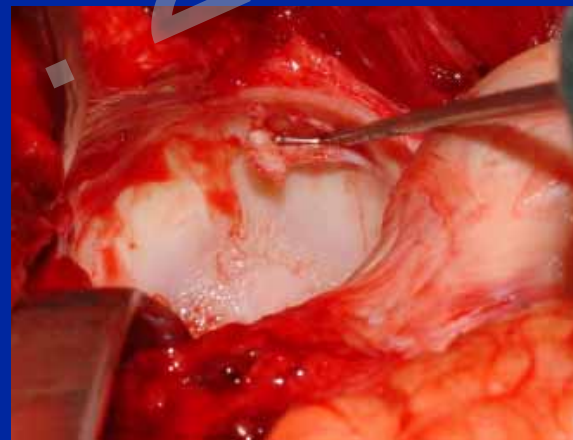


FEMOROACETABULAR IMPINGEMENT

„CAM“



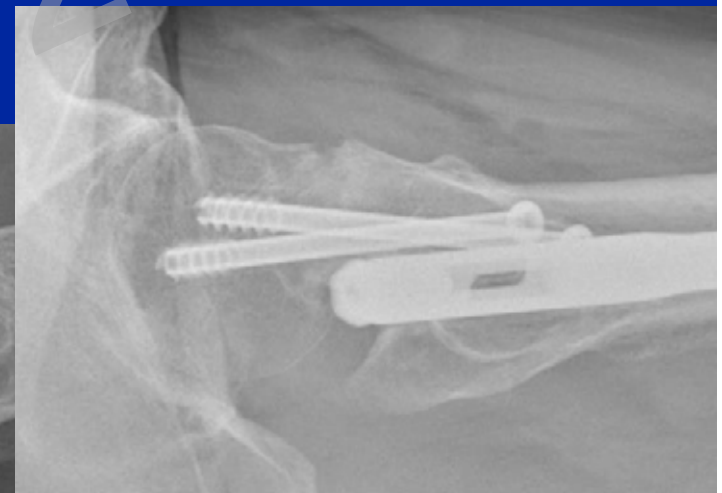
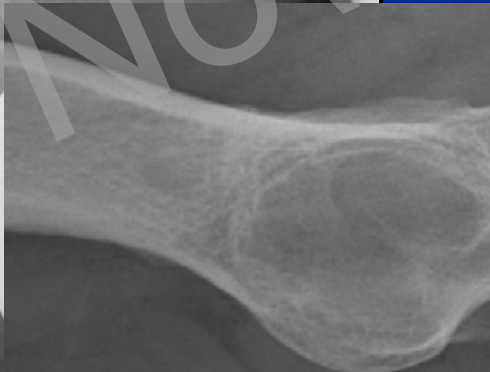
Ganz R, CORR (417):112-120, 2003



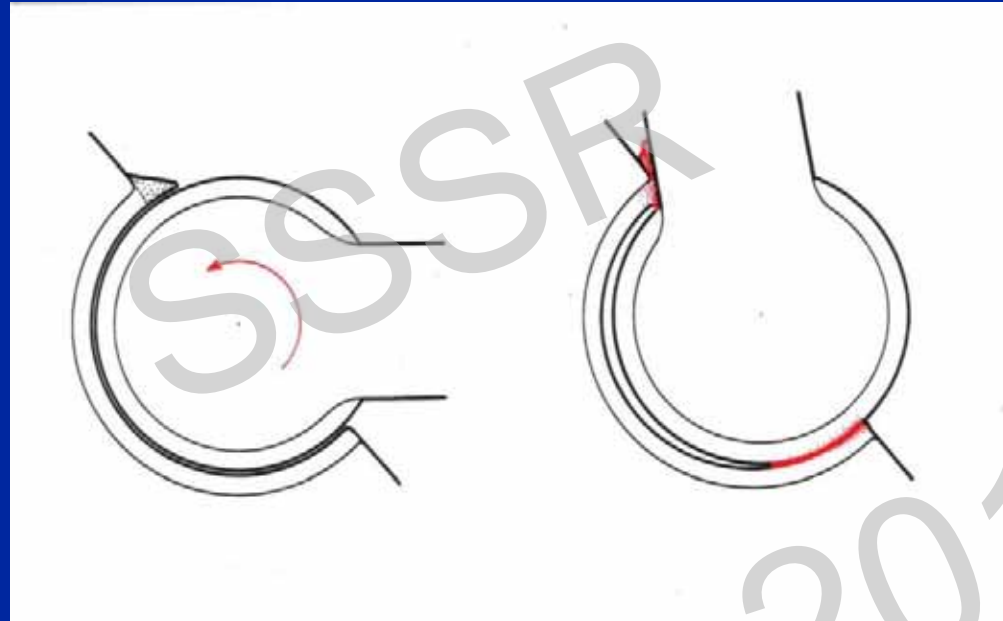
FEMOROACETABULAR IMPINGEMENT „CAM“

Asphericity

- primary
- secondary (slipped capital femoral epiphysis, Perthes disease, posttraumatic, postsurgical)



FEMOROACETABULAR IMPINGEMENT „PINCER“



Ganz R, CORR (417):112-120, 2003



FEMOROACETABULAR IMPINGEMENT „PINCER“

Overcoverage:

- local
- global

Reduced femoral torsion (13° retrotorsion)

(reduced)



SYMPTOMS AND CLINICAL FINDINGS

groin pain

reduced internal
rotation

positive impingement
test



THERAPY

conservative: activity level ↓
 activity modification
 pain killer, injection

operative: failed conservative treatment
 curative versus palliative

contraindication:

- relevant cartilage degeneration
- (- painfree patient)

IMPINGEMENT MORPHOLOGY



=

**4-fold
increased risk of
osteoarthritis
within 30y**

(Odds: 4.1, CI:1.7-9.2)

impingement morphology \neq femoroacetabular impingement

Retrospective comparative study (n=104)

Ducomun, Dissertation, 2011 under preparation



SURGICAL TECHNIQUES

arthroscopy / surgical hip dislocation

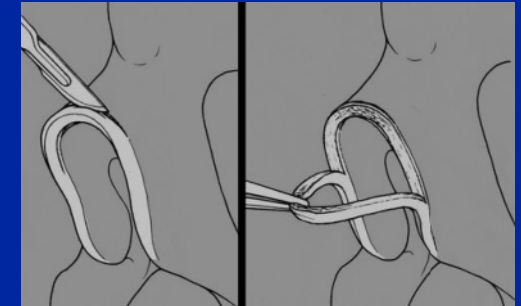
- labral resection, refixation
- acetabular rim trimming
- femoral osteochondroplasty

reversed periacetabular osteotomy

- reorientation acetabulum

subtrochanteric osteotomy

- increase of femoral torion



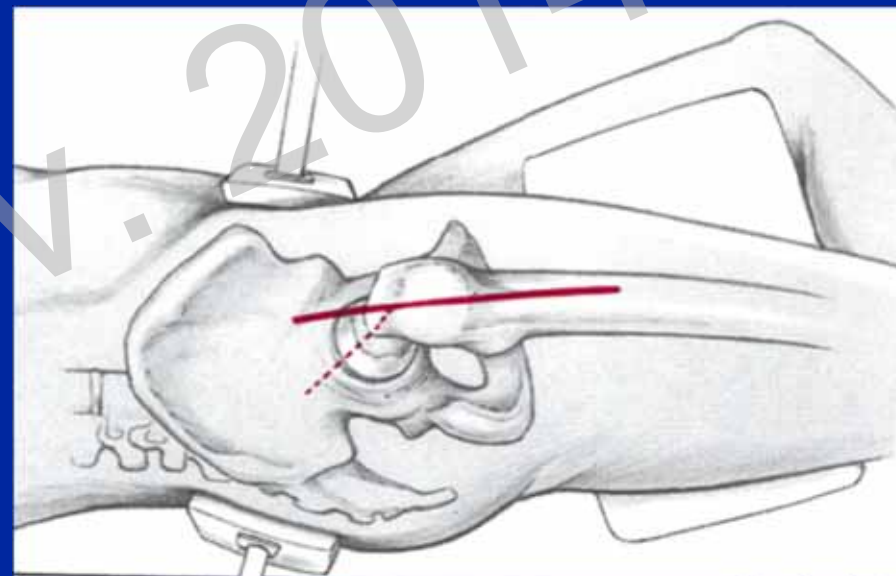
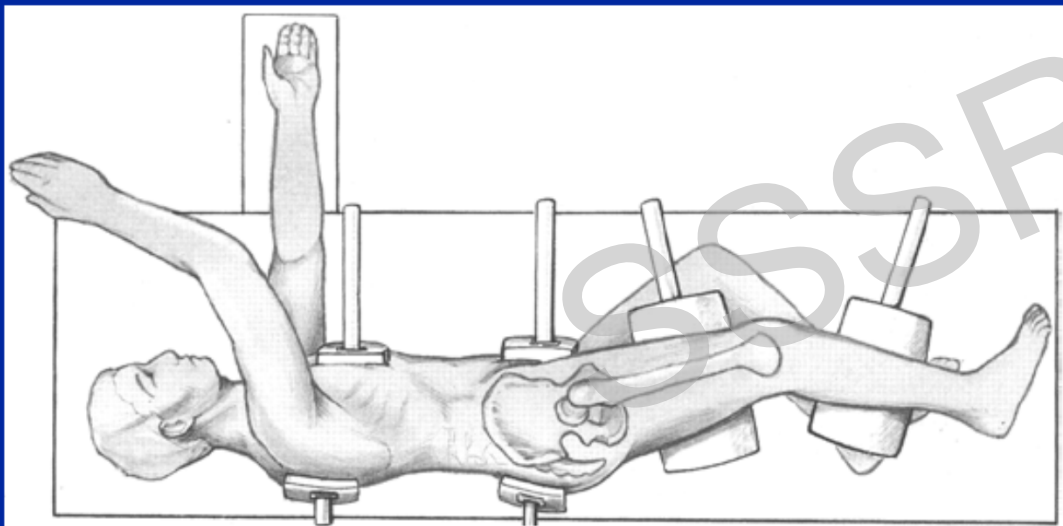
SURGICAL HIP DISLOCATION

indication:

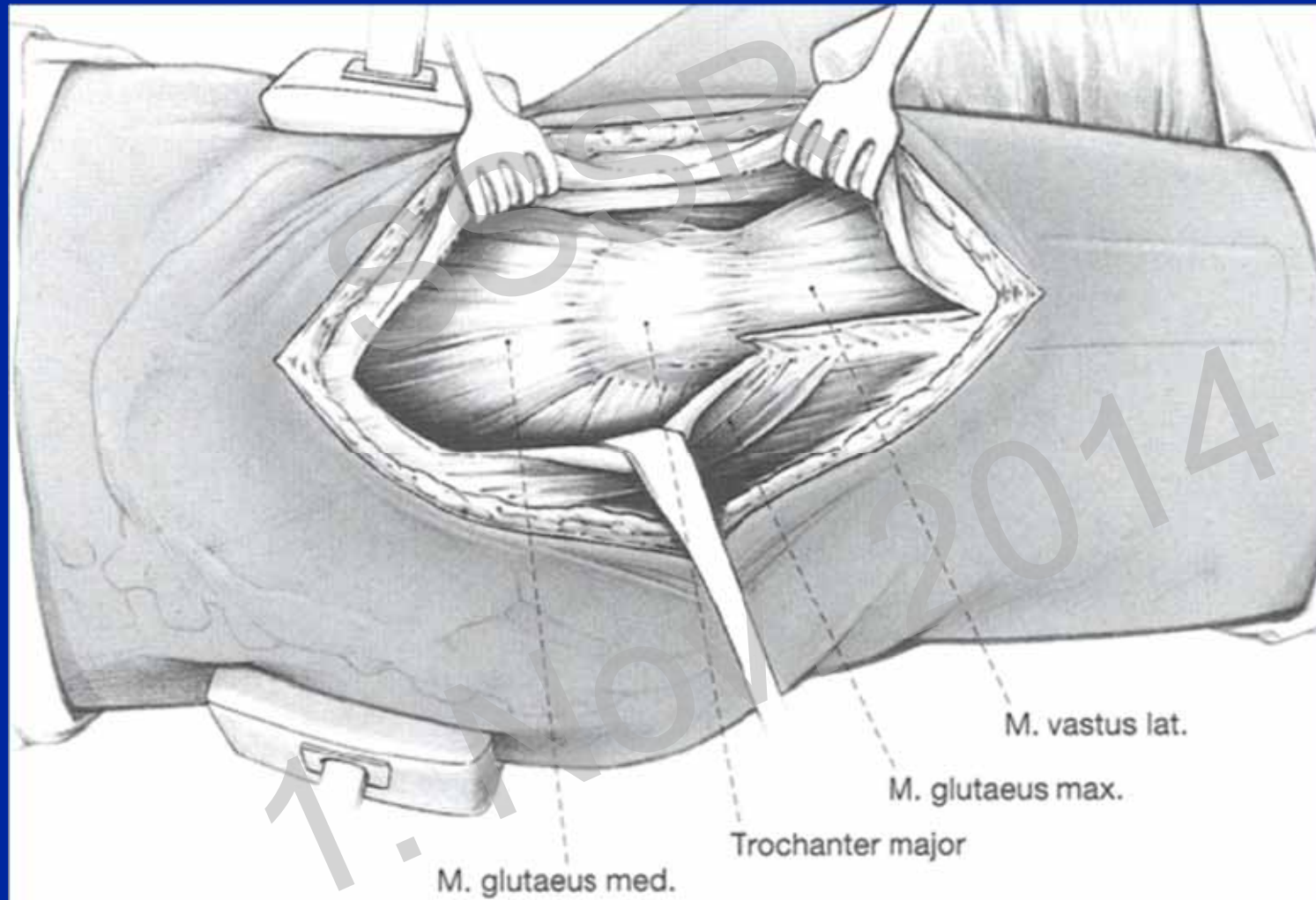
- (past gold standard: labrum, trimming, osteochondroplasty)
- complex deformity of proximal femur
→ need for additional osteotomy



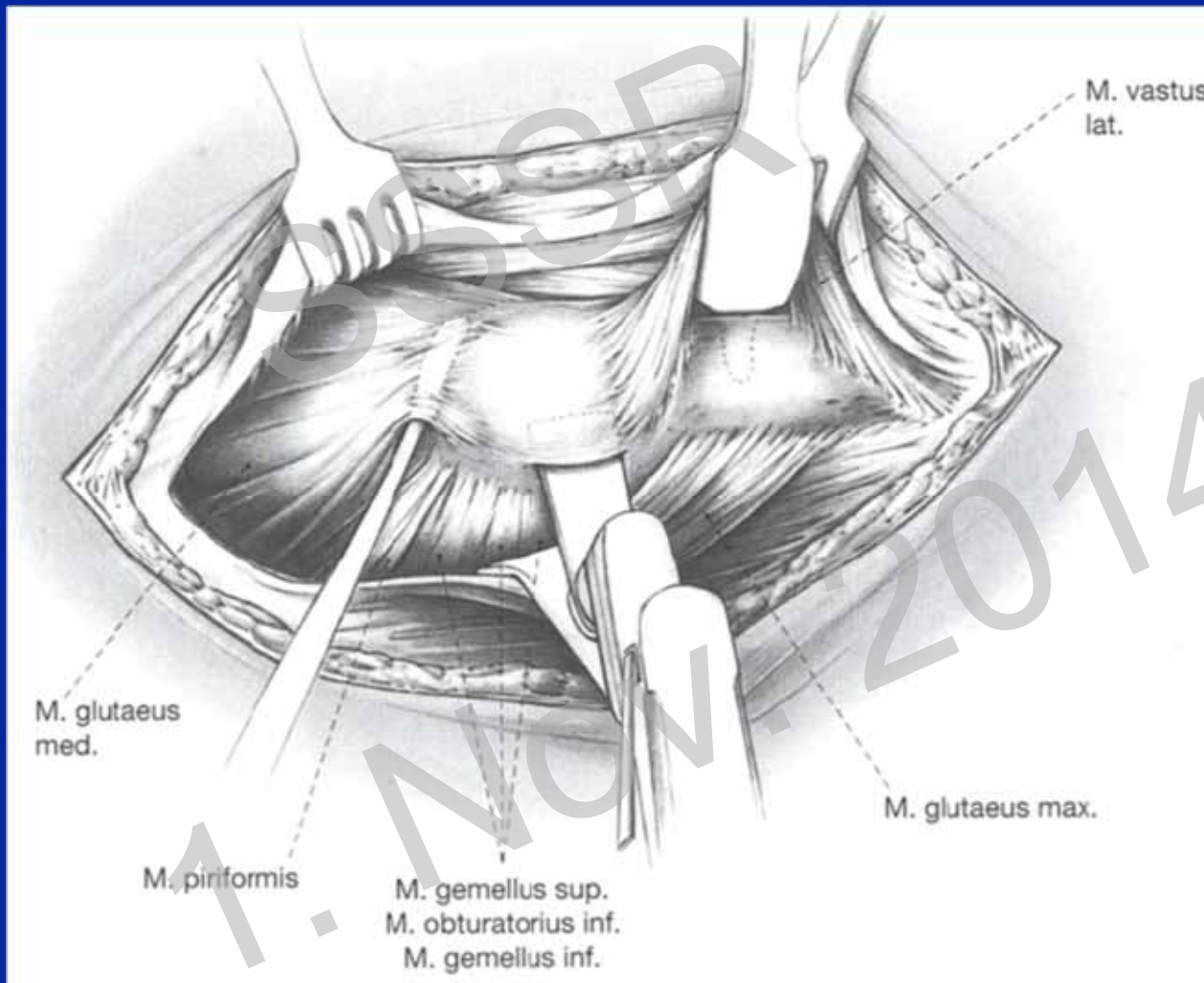
DIGASTRIC TROCHANTERIC OSTEOTOMY



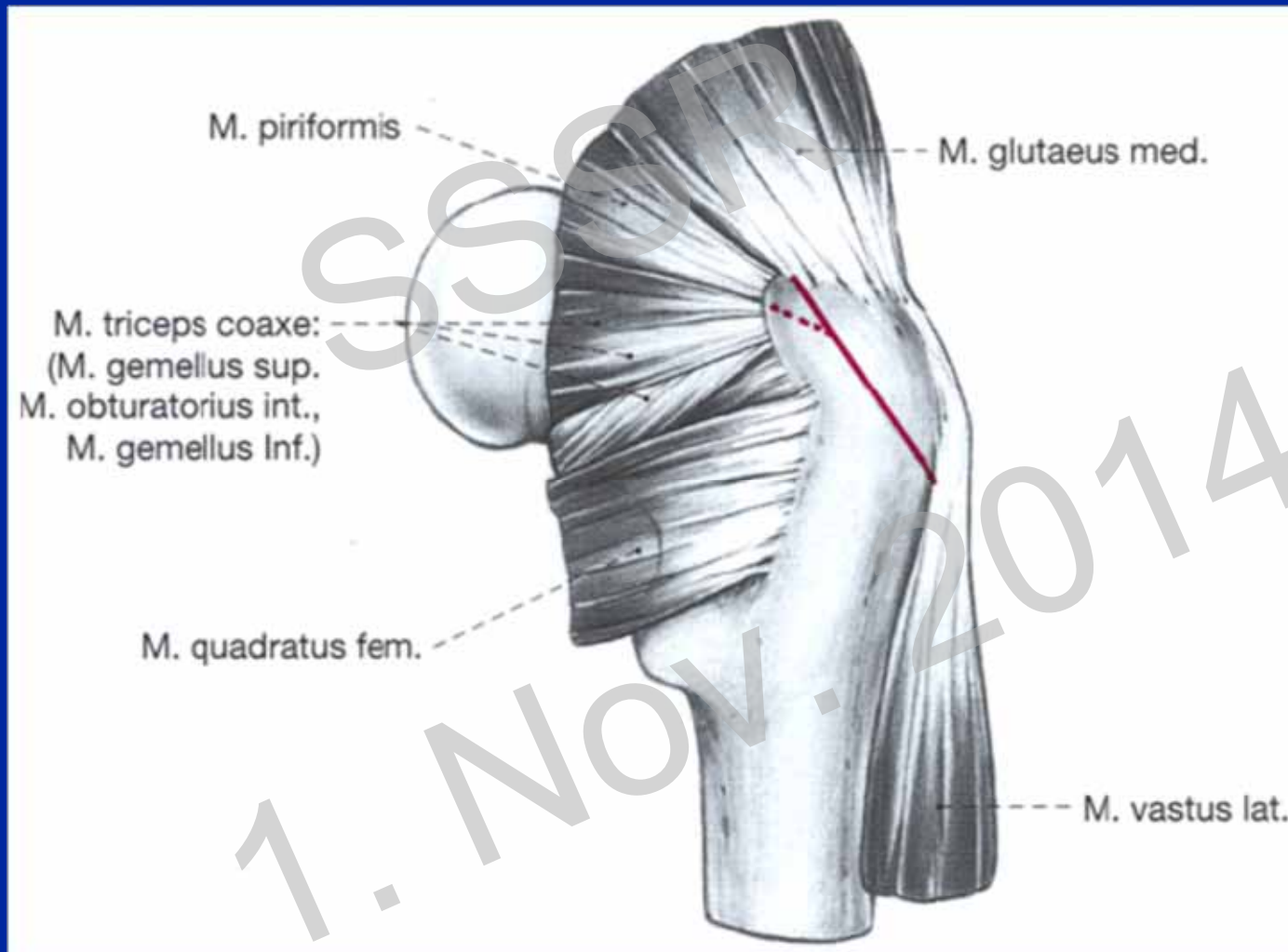
DEEP DISECTION



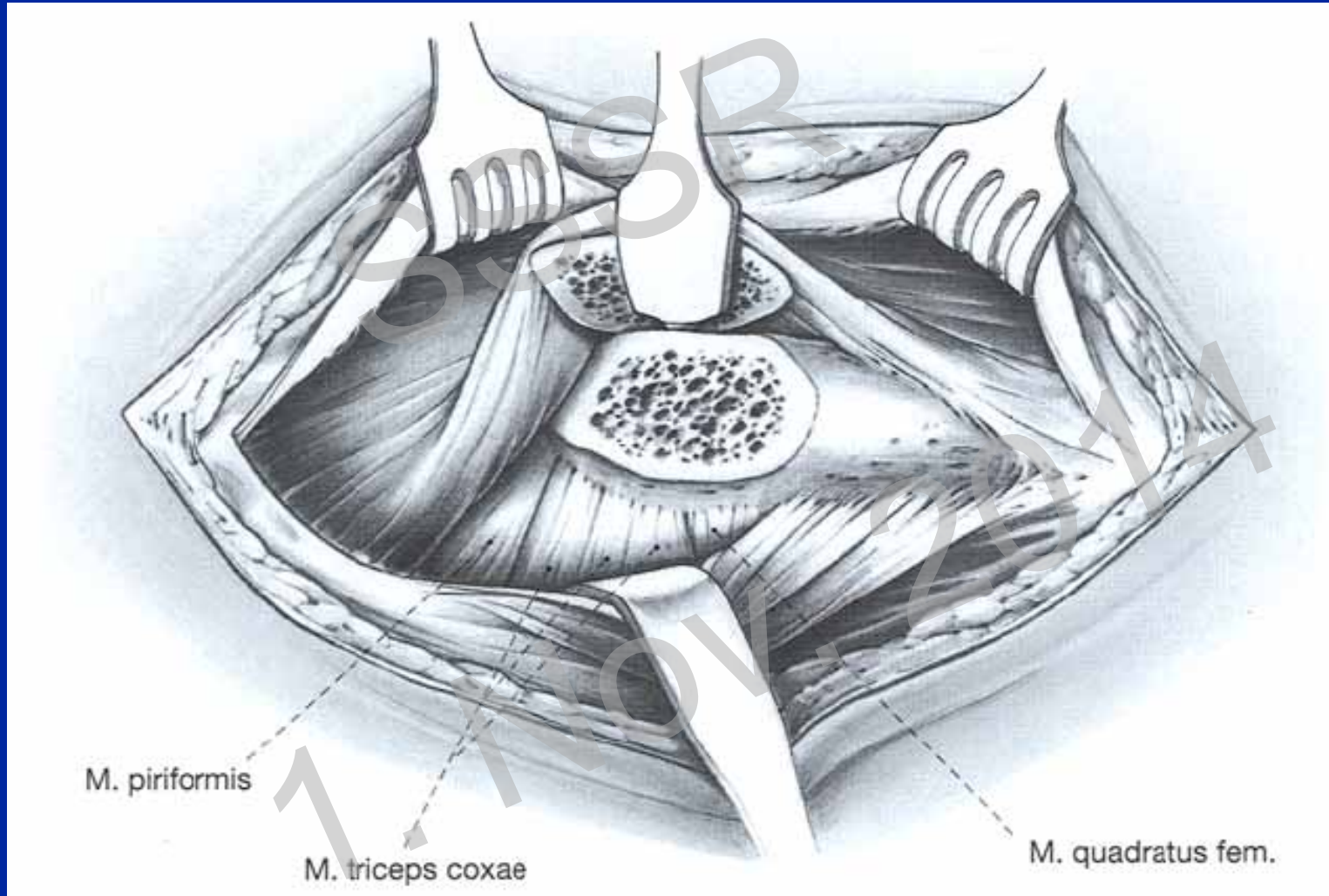
OSTEOTOMY



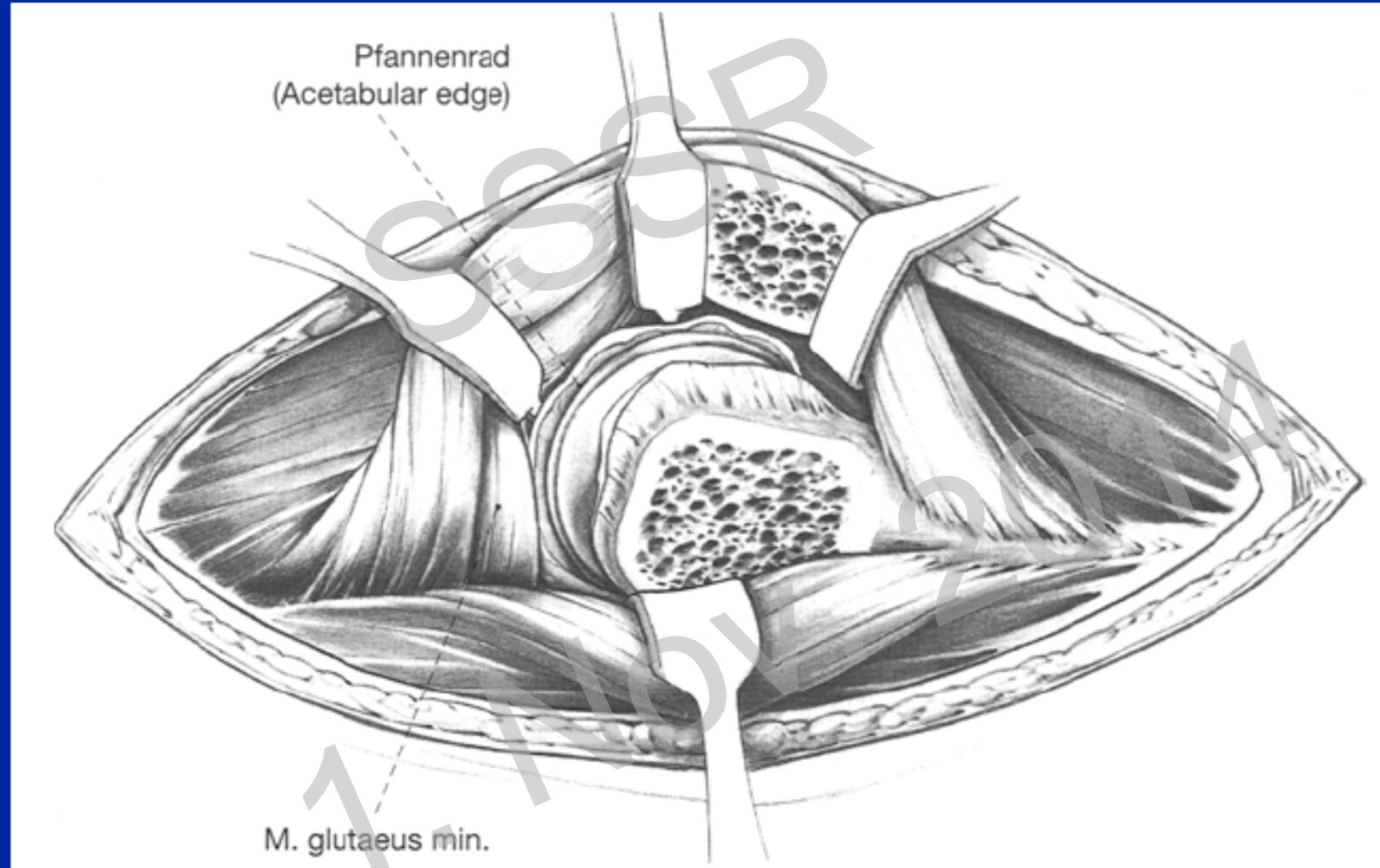
OSTEOTOMY



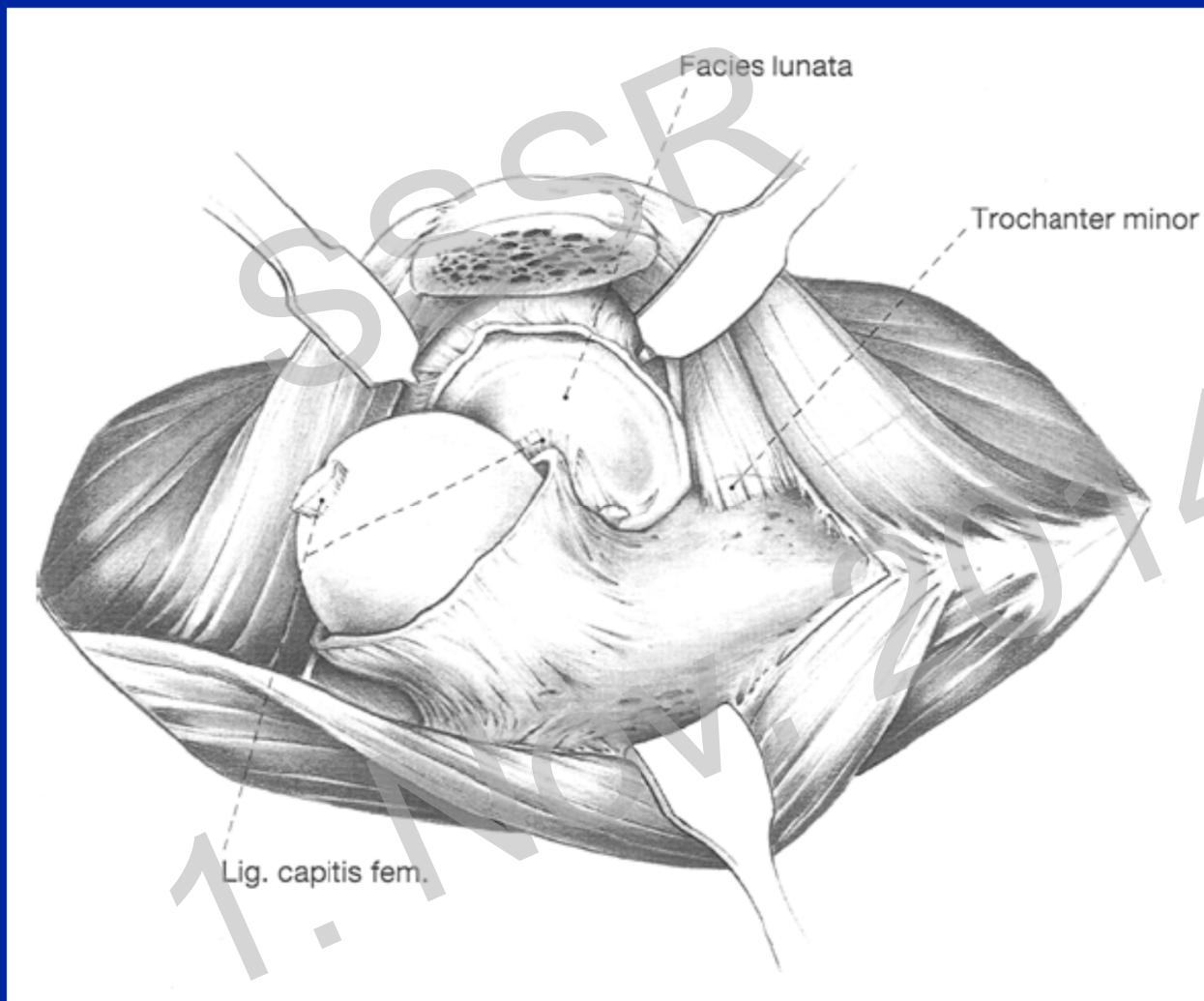
OSTEOTOMY



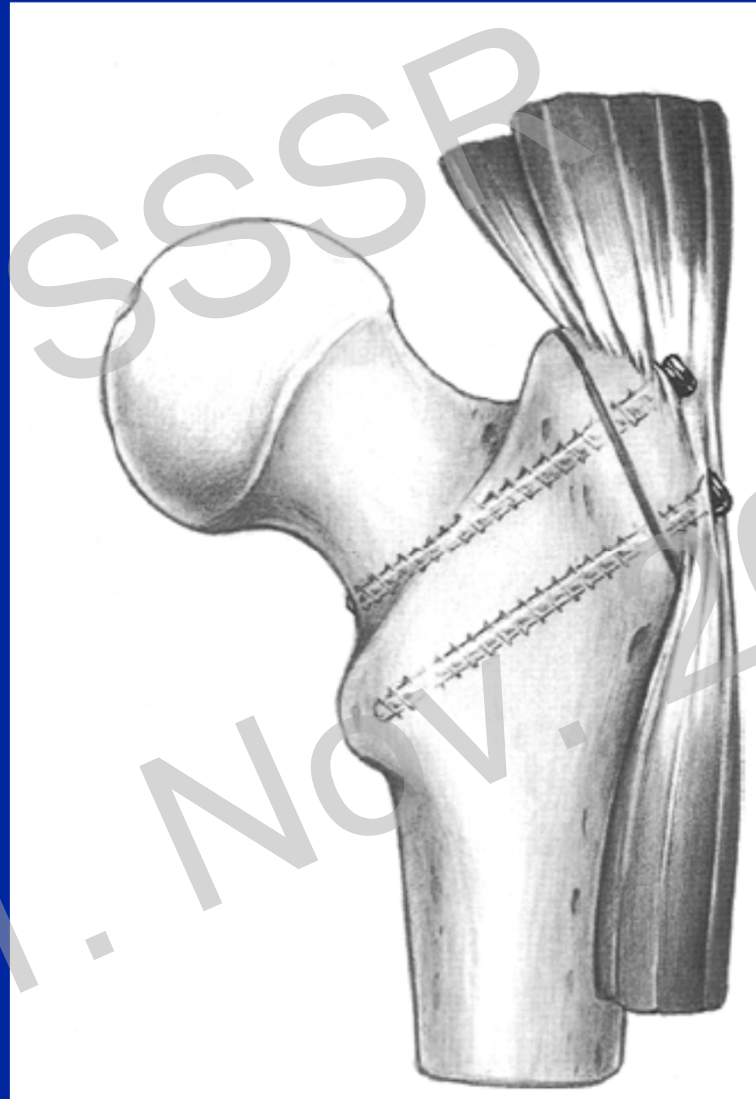
CAPSULOTOMY



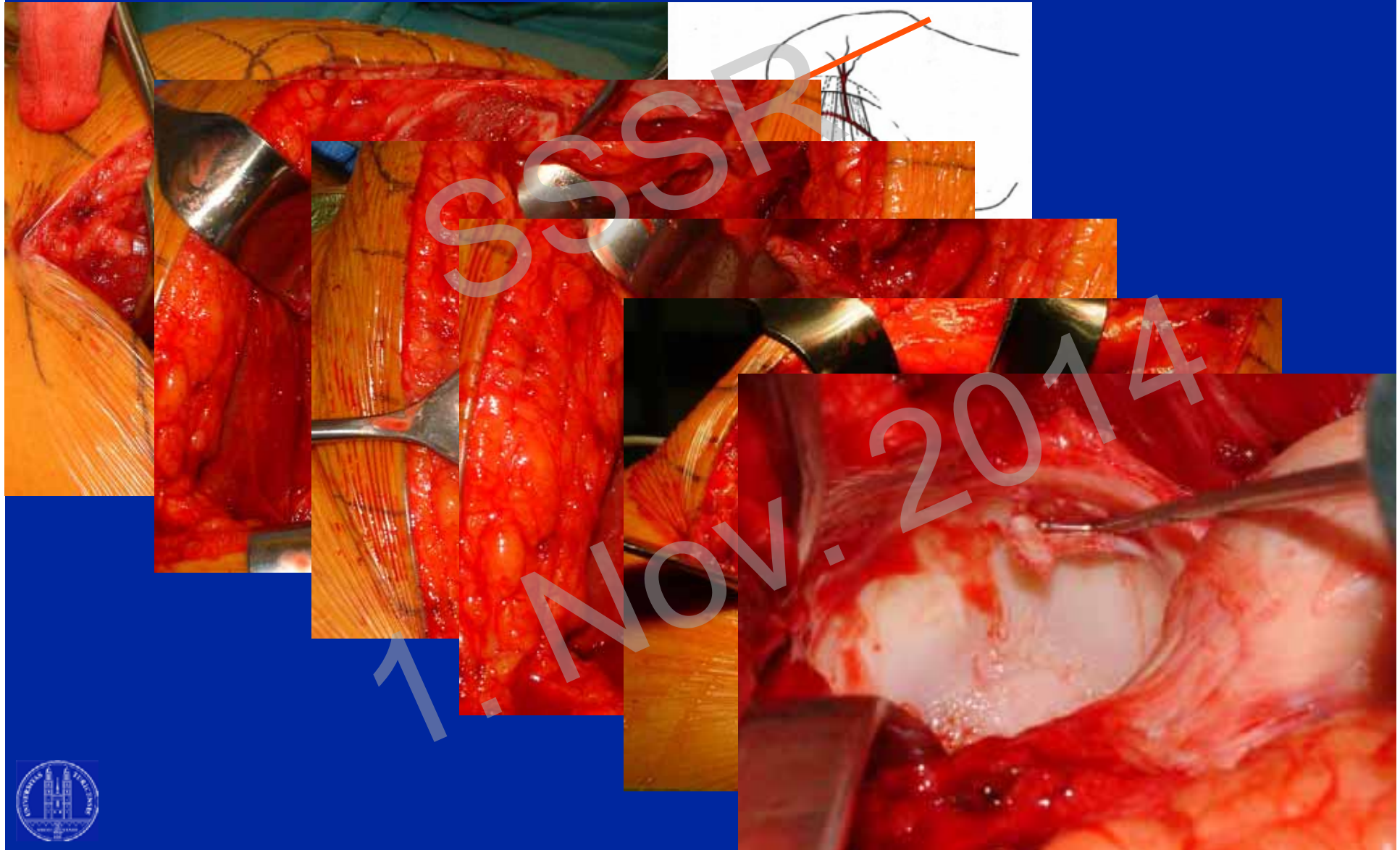
DISLOCATION



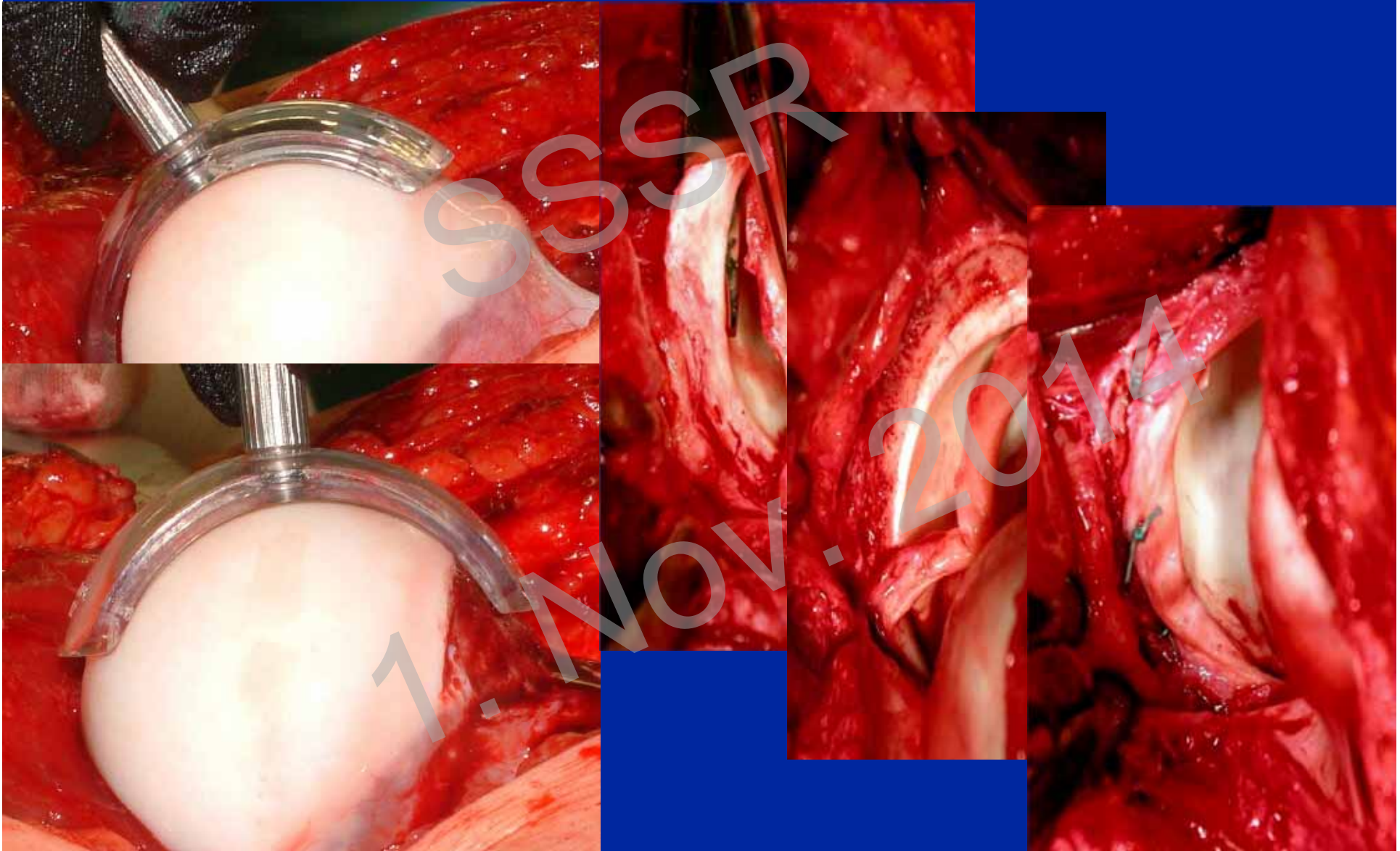
REFIXATION OF GREATER TROCHANTER



SURGICAL HIP DISLOCATION



IMPINGEMENT SURGERY



OPEN IMPINGEMENT SURGERY

reha protocol: - partial weight bearing 6 weeks
- daily bicycling exercises

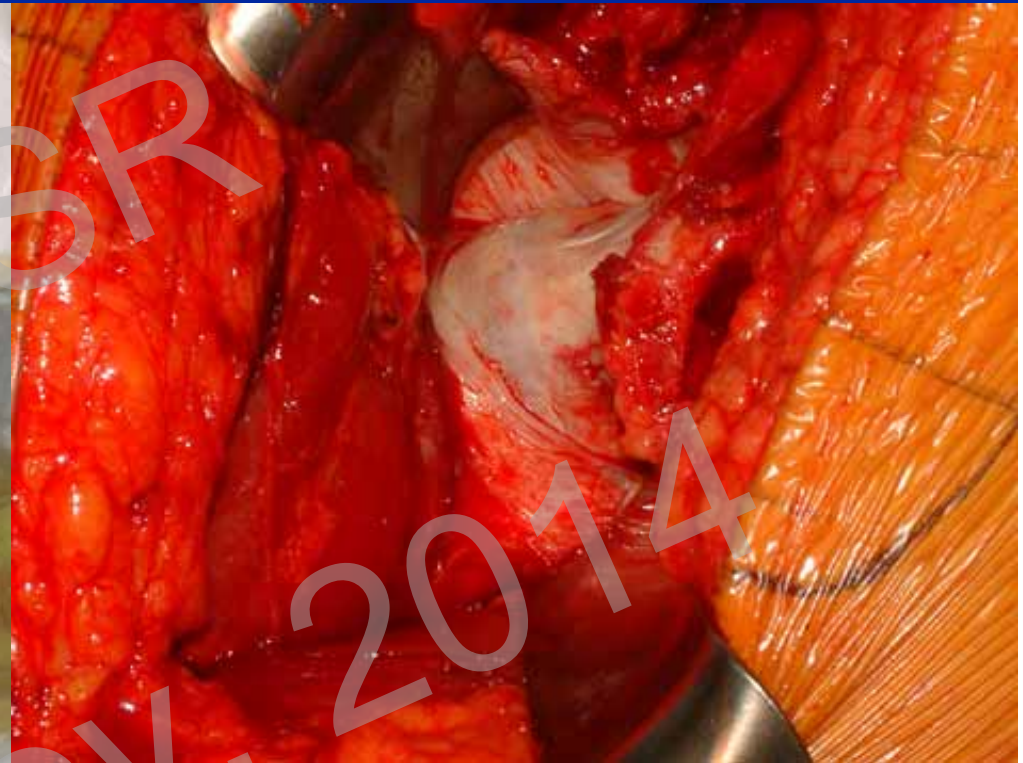
risk: - pseudarthrosis of greater trochanter, hardware removal, adhesions, heterotopic ossifications



COMPLEX IMPINGEMENT SURGERY



ARTHROSCOPIC VERSUS OPEN SURGERY



Zingg P, AOTS, Jan;133(1):69-79, 2013
Botser, Arthroscopy, 27 (2), 270, 2011

uniklinik
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HIP ARTRHOSCOPY GOLD STANDARD



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balgrist



ANTEROLATERAL PORTAL



ANTERIOR PORTAL



1. Nov. 2014

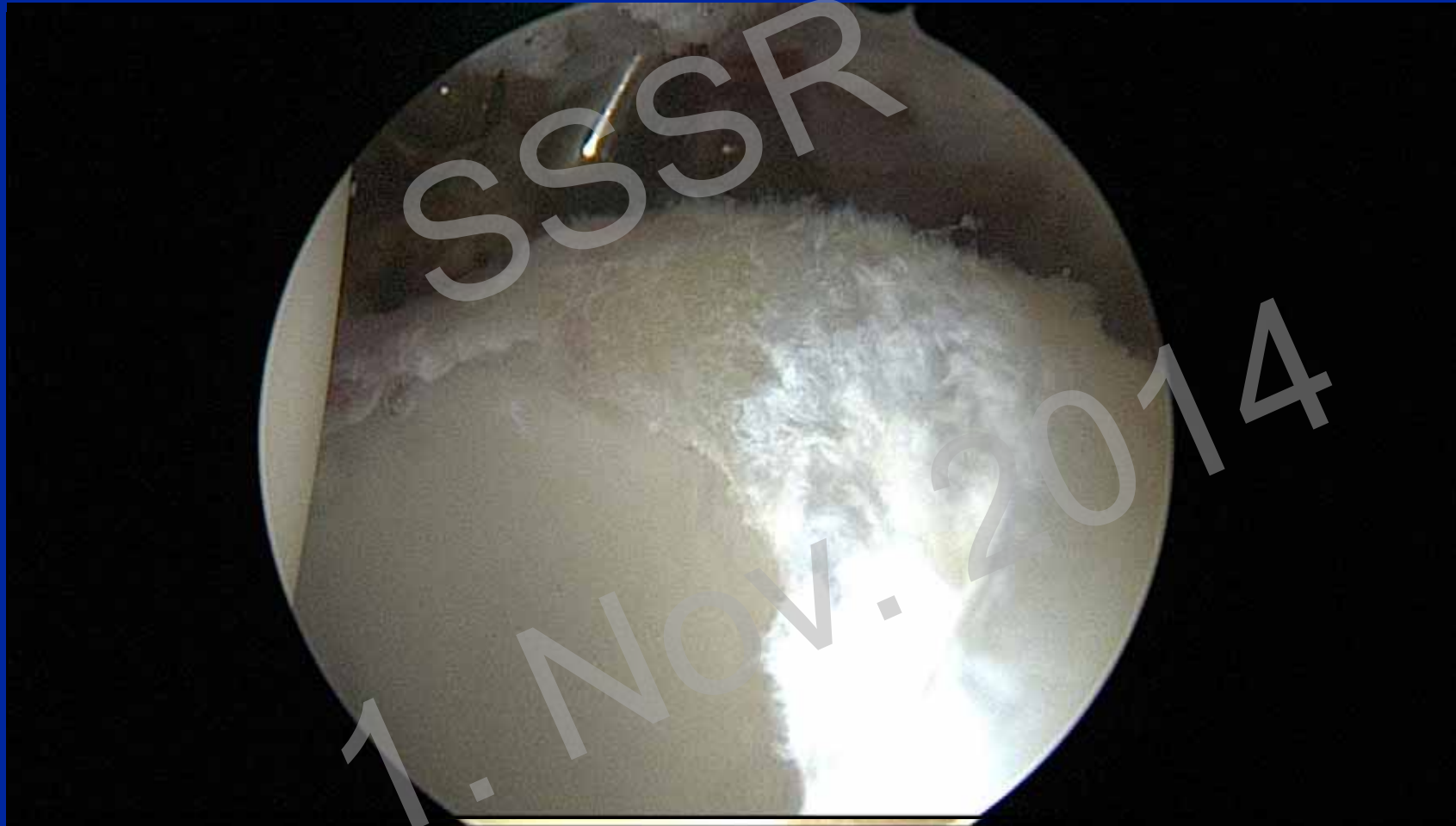
LABRAL DEBRIDMENT



ACETABULAR RIM TRIMMING



LABRAL REFIXATION



PERIPHERAL PORTAL



OSTEOCHONDROPLASTY



IMPINGEMENT FREE MOTION

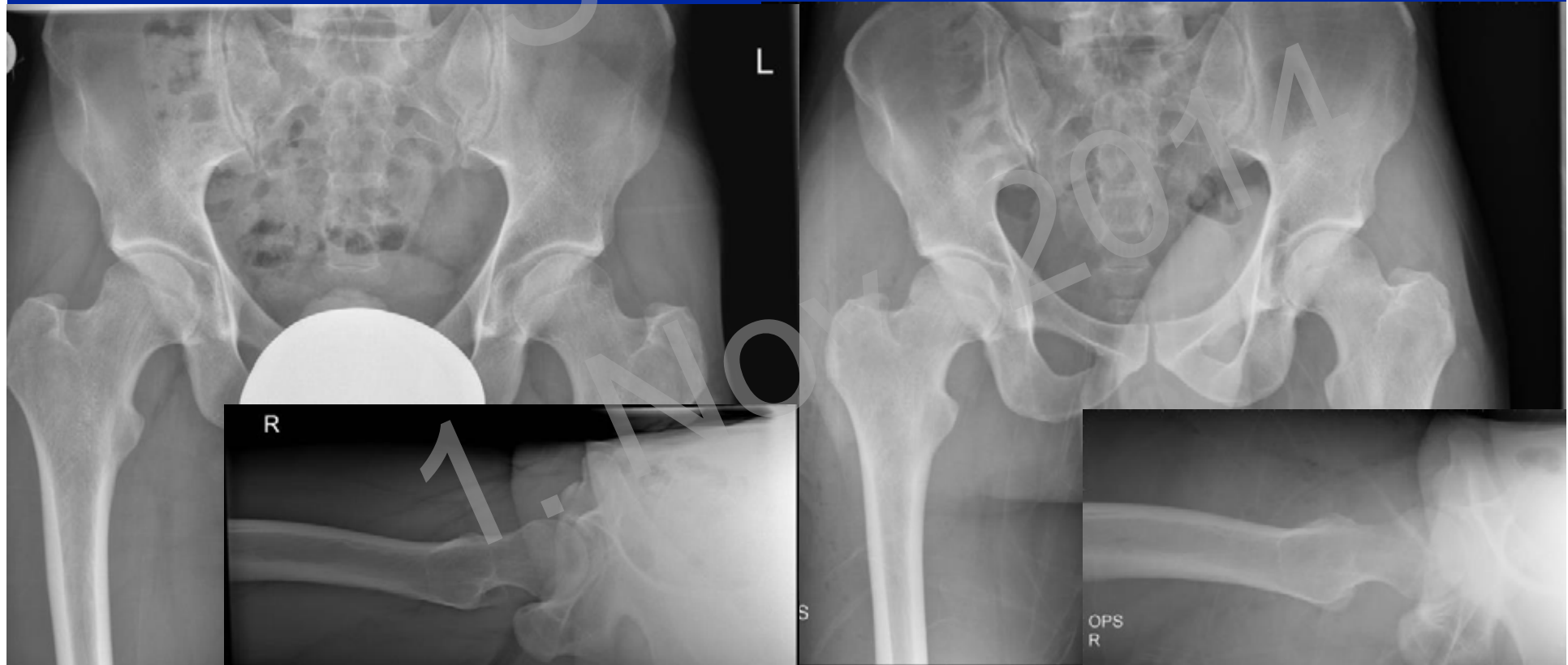


ARTHROSCOPIC IMPINGEMENT SURGERY

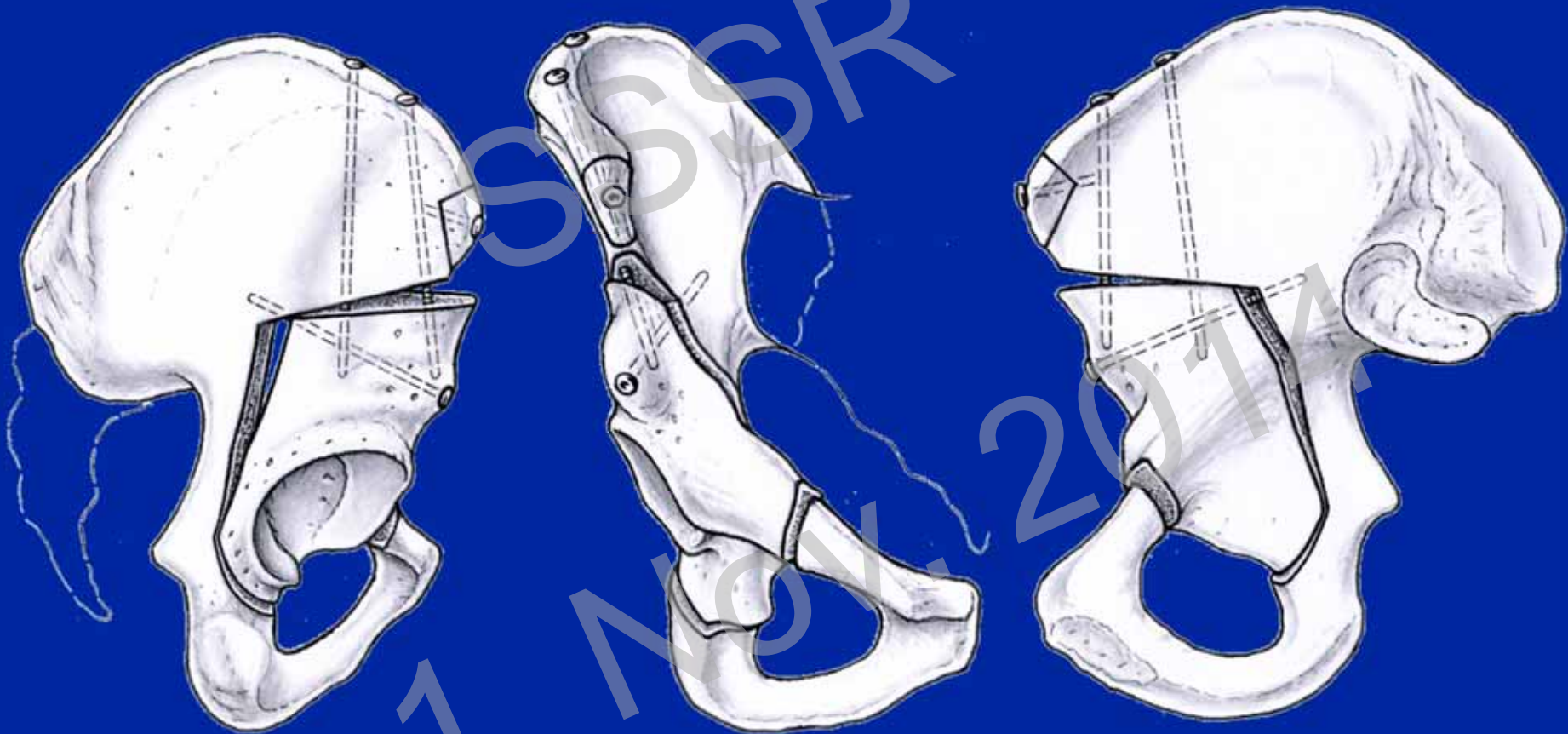


reha protocol: - full weight bearing on crutches for 6 weeks
- daily bicycling exercises

Risk: adhesions, heterotopic ossifications

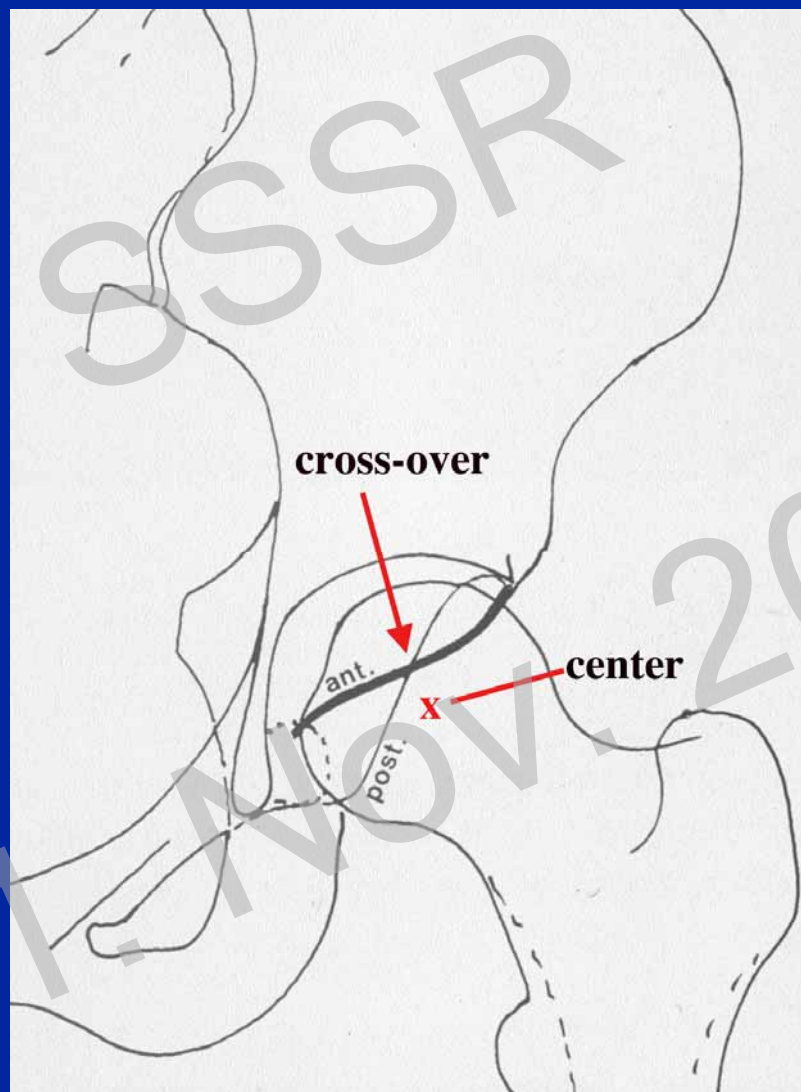


PERIACETABULAR OSTEOTOMY FOR FAI

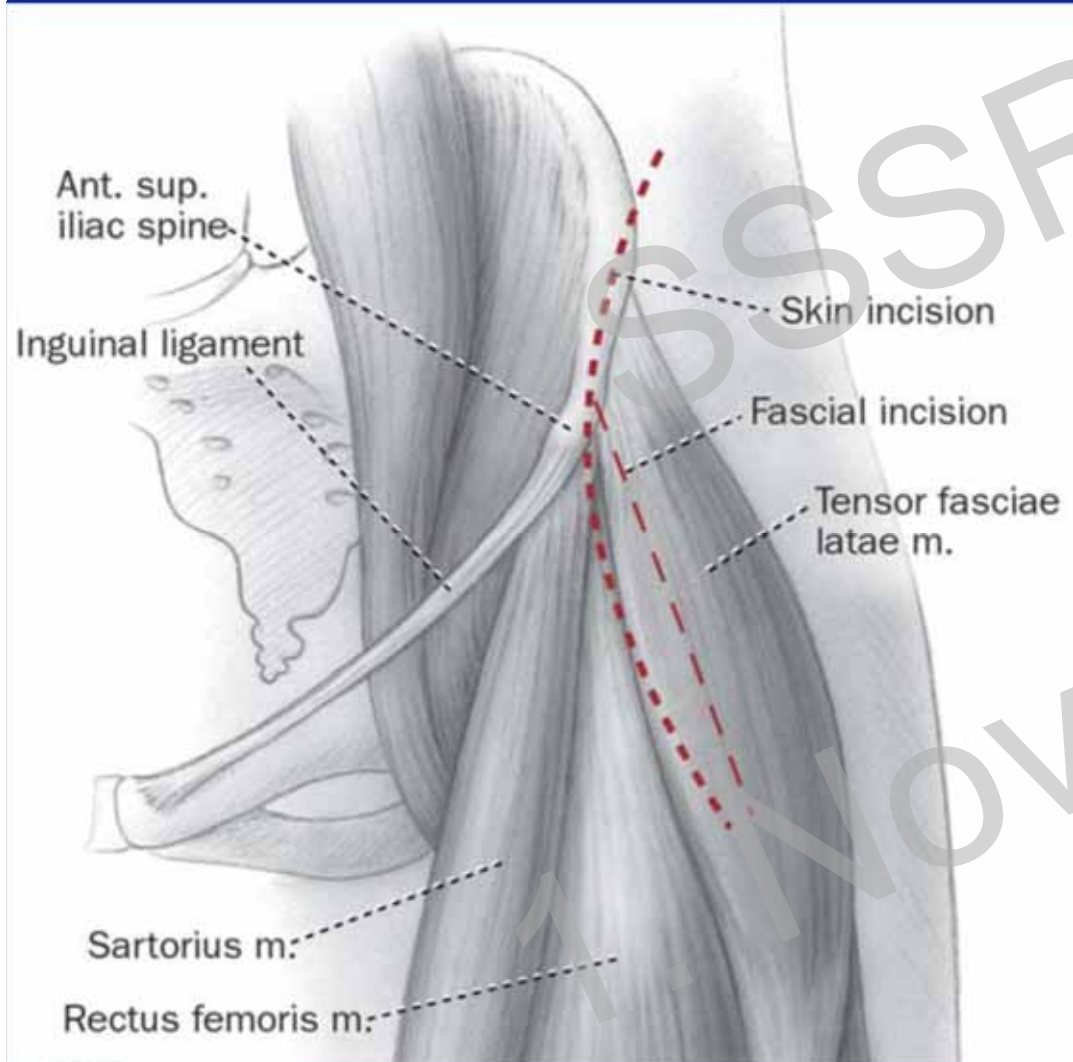


Ganz R, CORR, Jul(232):26-36, 1988

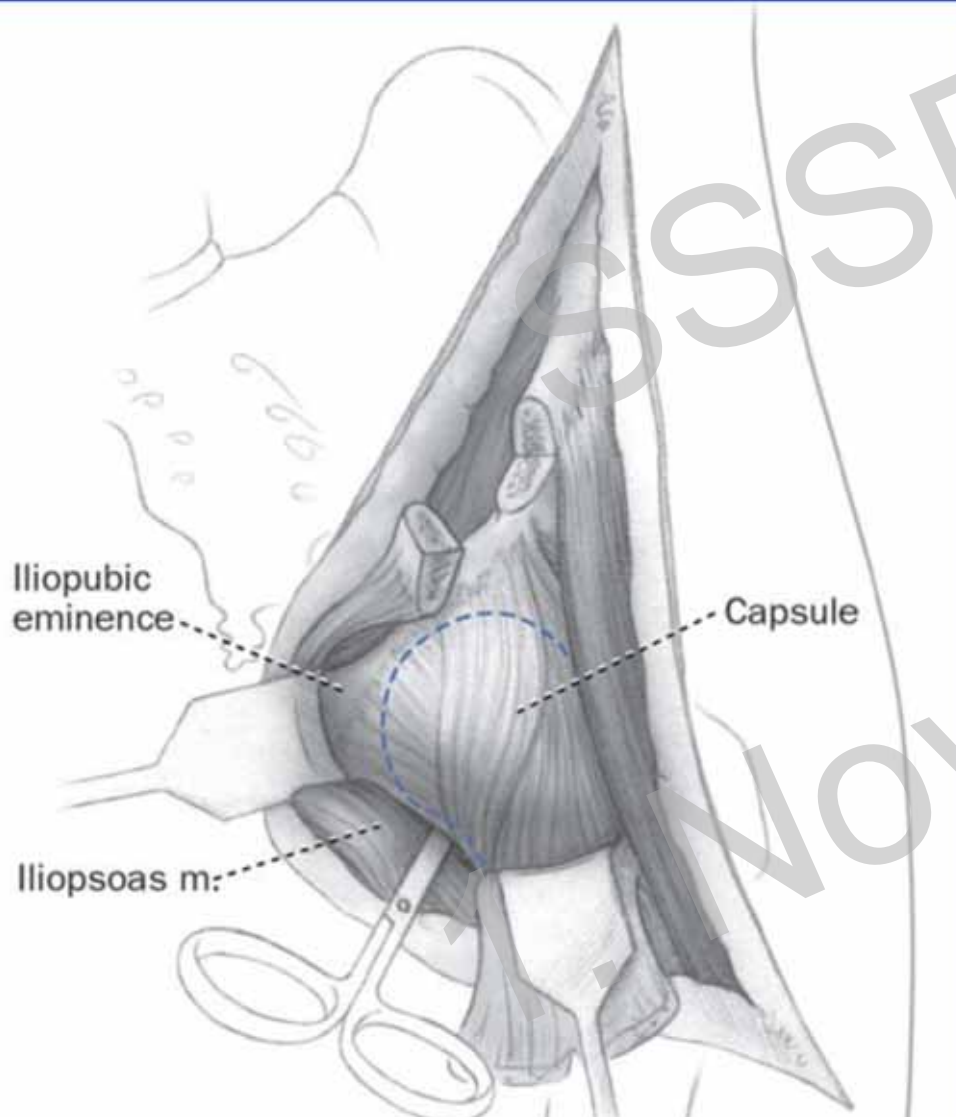
INDICATION



APPROACH



APPROACH



PARTIAL ISCHIAL OSTEOTOMY



COMPLET PUBIC OSTEOTOMY



INCOMPLETE SUPRAACETABULAR OSTEOTOMY



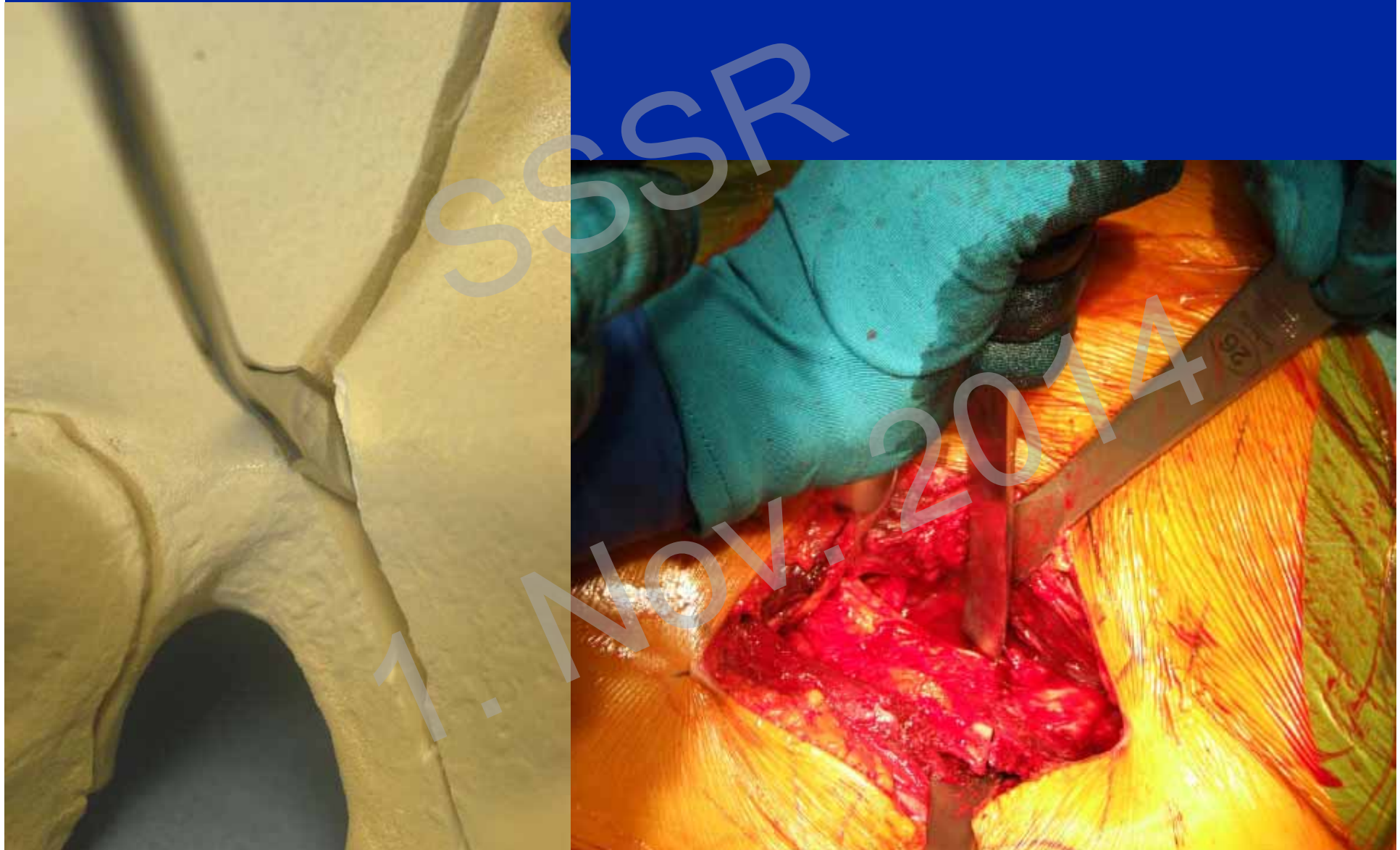
SSSR
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OSTEOTOMY ALONG POSTERIOR COLUMN

SSSR
Swiss Society of
Musculoskeletal Radiology

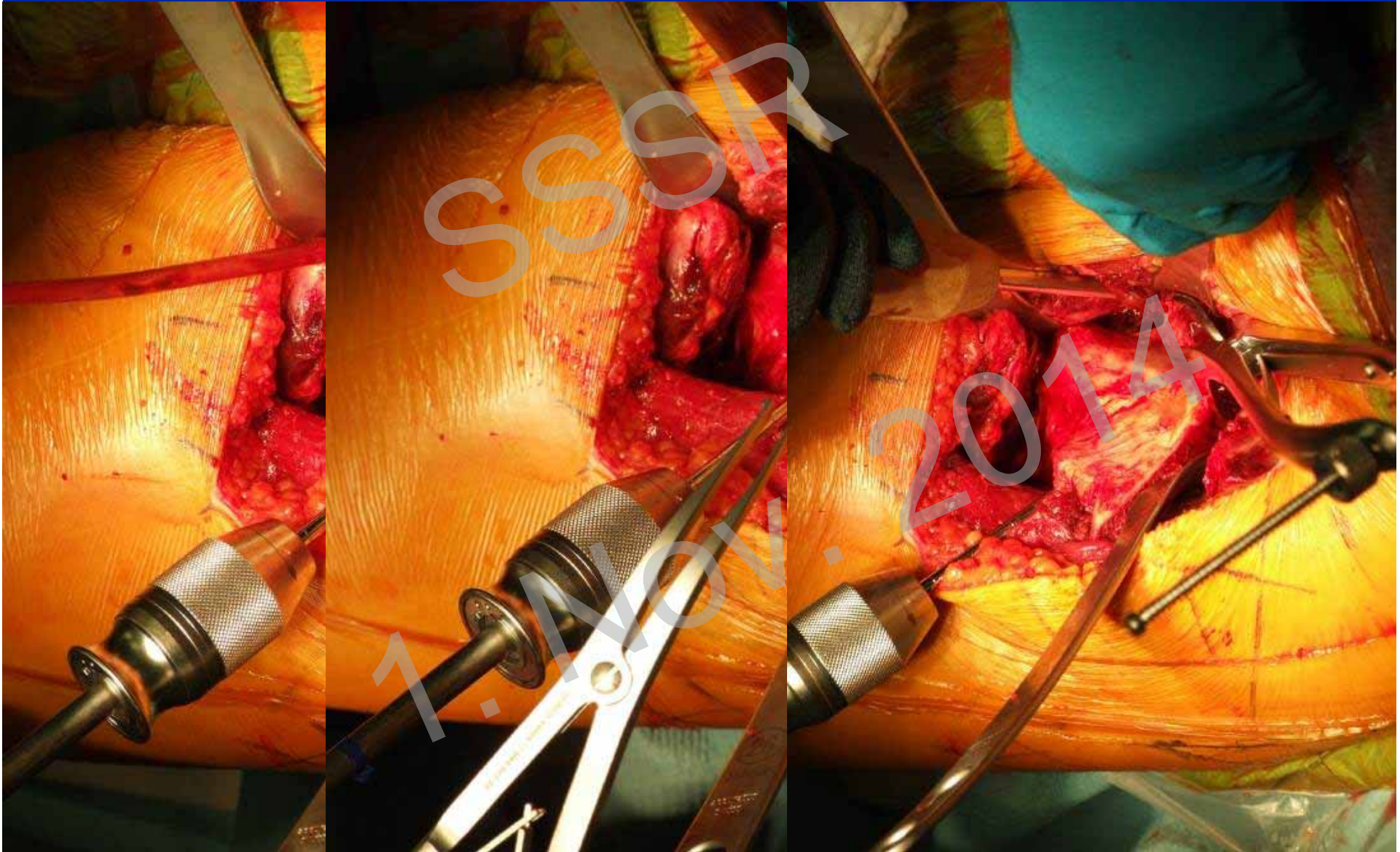


OSTEOTOMY PELVIC BRIM



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MOBILISATION AND FRACTURE



CORRECTION



ARTHROTOMY / OFFSET



REVERSED PAO

reha protocol: - partial weight bearing for 8-10 weeks
- daily bicycling exercises

risk: adhesions, heterotopic ossifications, pseudarthrosis



SUMMARY

impingement morphology \neq femoroacetabular impingement

no prophylactic surgery

arthroscopy = gold standard

**reversed PAO or surgical hip dislocation
for complex impingement**

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1. Nov. 2014

