

THE PAINFUL HIP

Diagnosis & Management

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Workman's compensation nurse case managers
conference

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Disclaimer

I HAVE NO
CONFLICTS OF
INTEREST TO
DISCLOSE FOR
THIS TOPIC



Objectives

1. Review frequent diagnosis of hip pain.
2. Discuss the physical examination and imaging studies associated with accurate diagnosis.
3. Talk about surgical and non-surgical management of hip pain.

Who gets hip pain?



Hip pain affects patients of all ages

- represents 6% of pediatric MSK patients
- 14.3% of adults over 60 report hip pain on a regular basis
- 7% females and 4% males age 45-64
-complain of hip pain requiring absence from work
- 30-40% of adults who participate in athletics complain of chronic hip pain

Anatomy of the hip

Pelvis

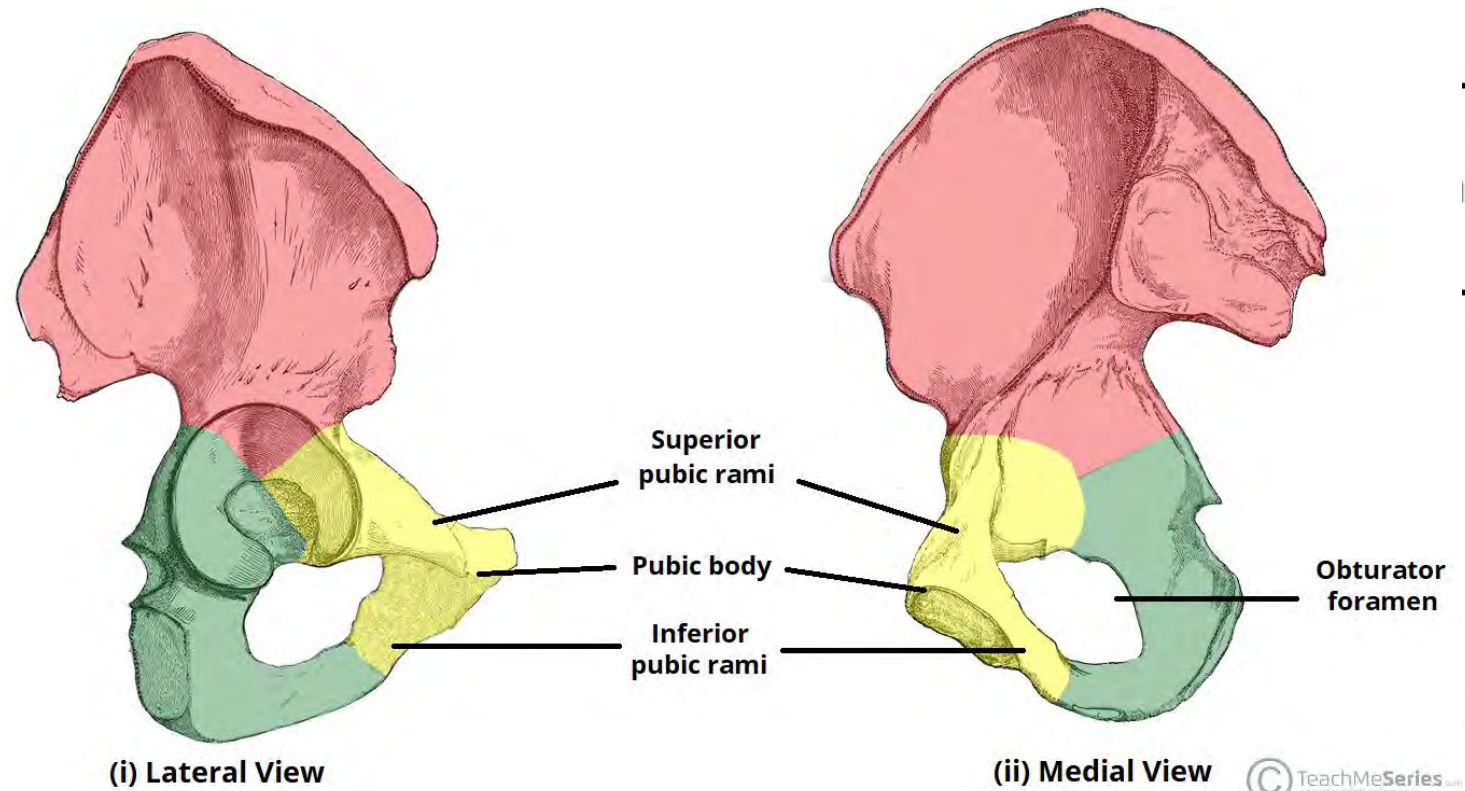
Sacrum

Innominate

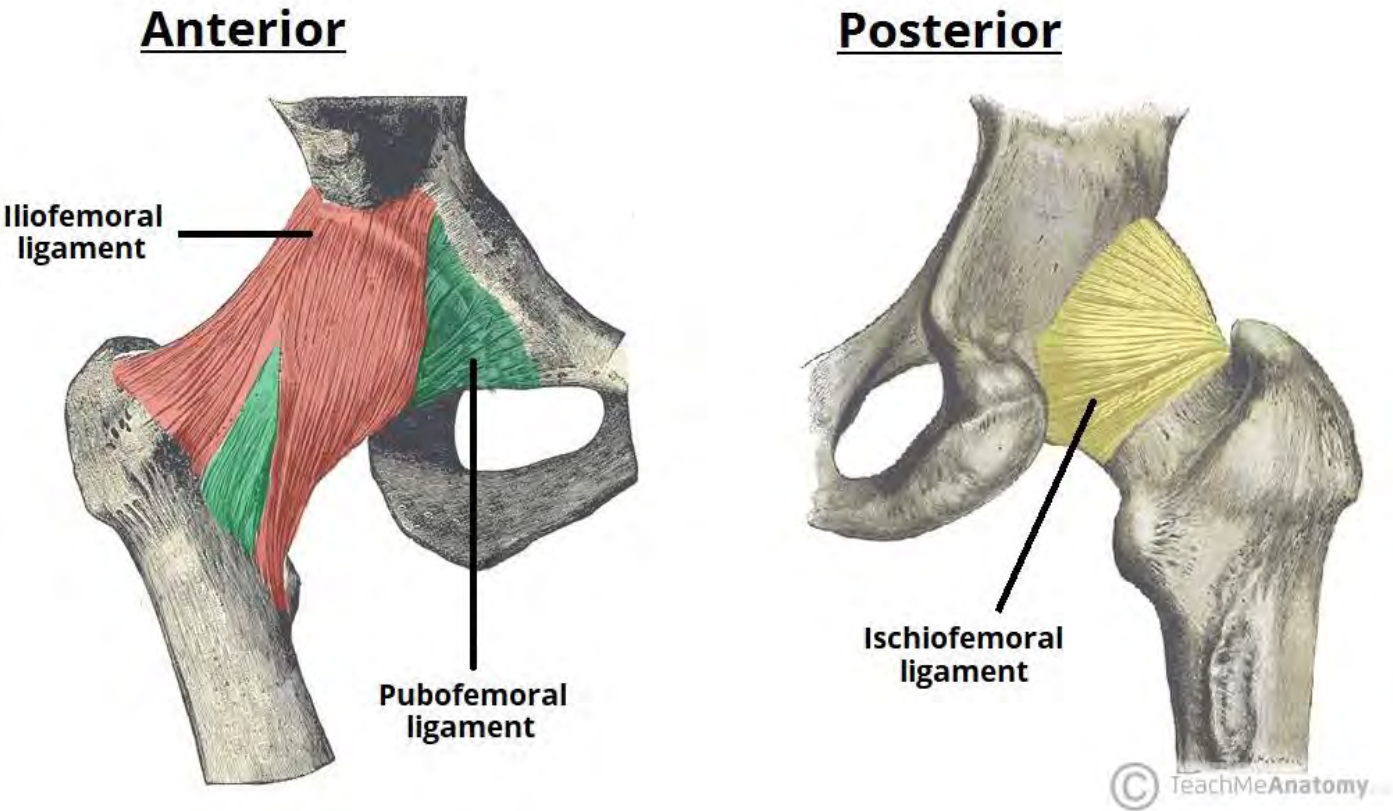
Ilium

Ischium

Pubis



Anatomy – Hip joint



- Femoral head
- Acetabulum
 - Articular cartilage
 - Labrum
- Ligamentum Teres
- Joint capsule

Extra-articular anatomy - Tendons

Tendons

Abductor tendons

Iliopsoas

Rectus femoris

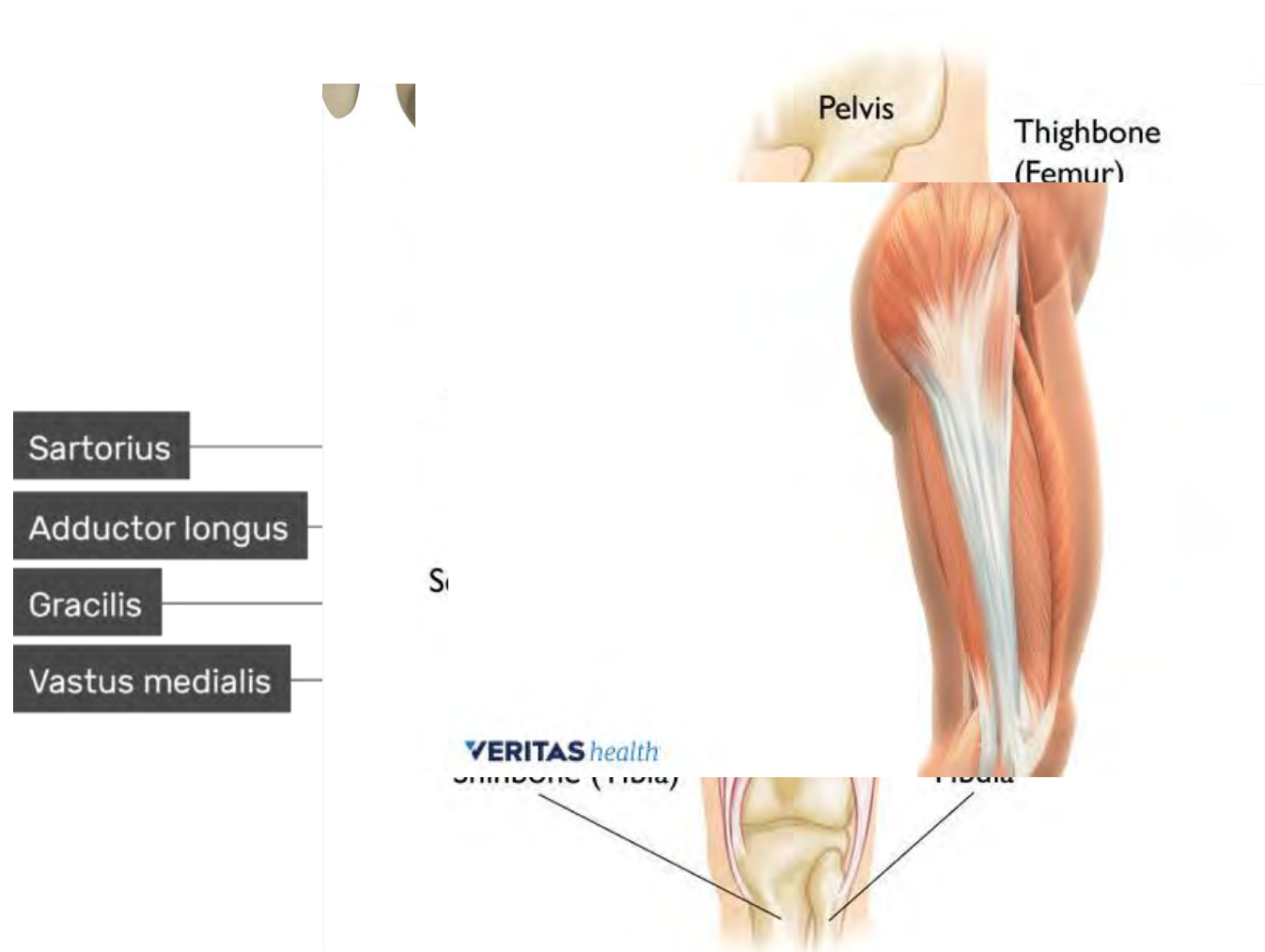
Sartorius

Piriformis

Quadratus lumborum

Hamstring tendons

Iliotibial band



Anatomy – Nerves, Vessels and Bursae

Nerves

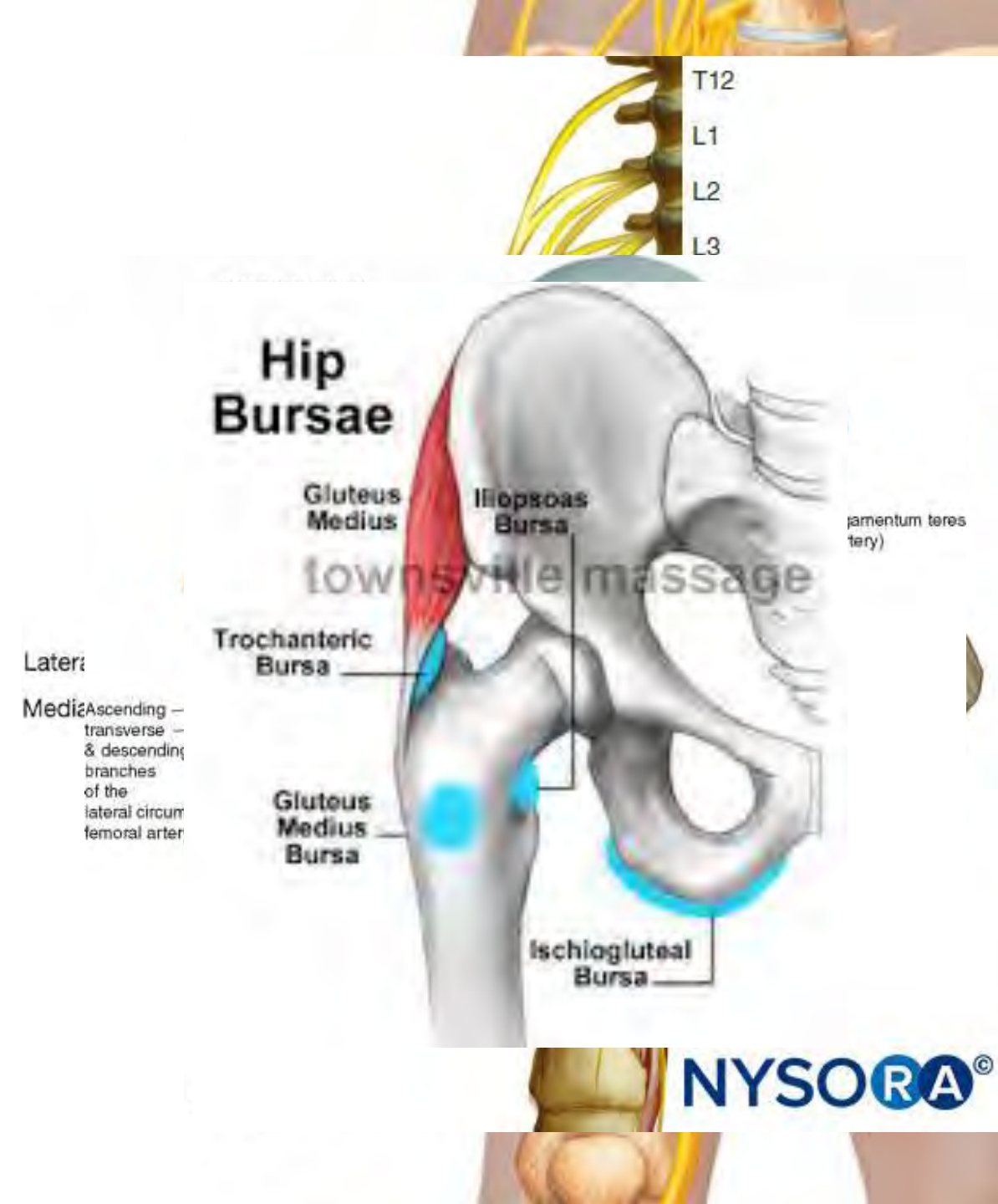
Femoral, Sciatic, Lateral Femoral Cutaneous, Obturator and Pudendal

Vessels

Femoral Artery and Vein
Medial and lateral circumflex A.

Bursae

Trochanteric, Iliopsoas



Pediatric causes of hip pain

Transient synovitis of the hip

Septic arthritis of the hip

Developmental dysplasia of the hip

Legg-Calve- Perthes

Slipped Capital Femoral Epiphysis

Fracture

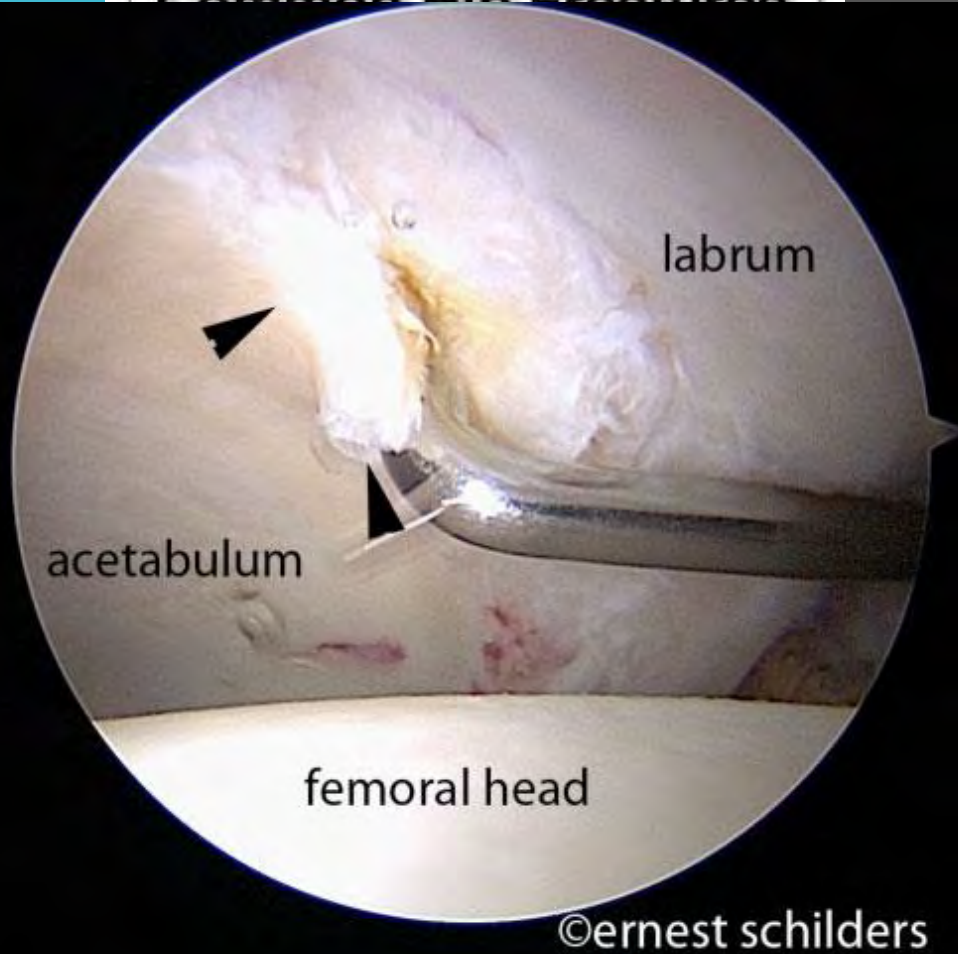
ASIS

AIIS





Common Hip Fractures



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Traumatic Causes of hip pain

- Fracture
 - Pubic Rami
 - Proximal femur
 - Femoral neck
 - Femoral head
 - Intertrochanteric and Subtrochanteric
 - Acetabular
- Chondral injury
- Labral tearing

Non-traumatic

Arthritis

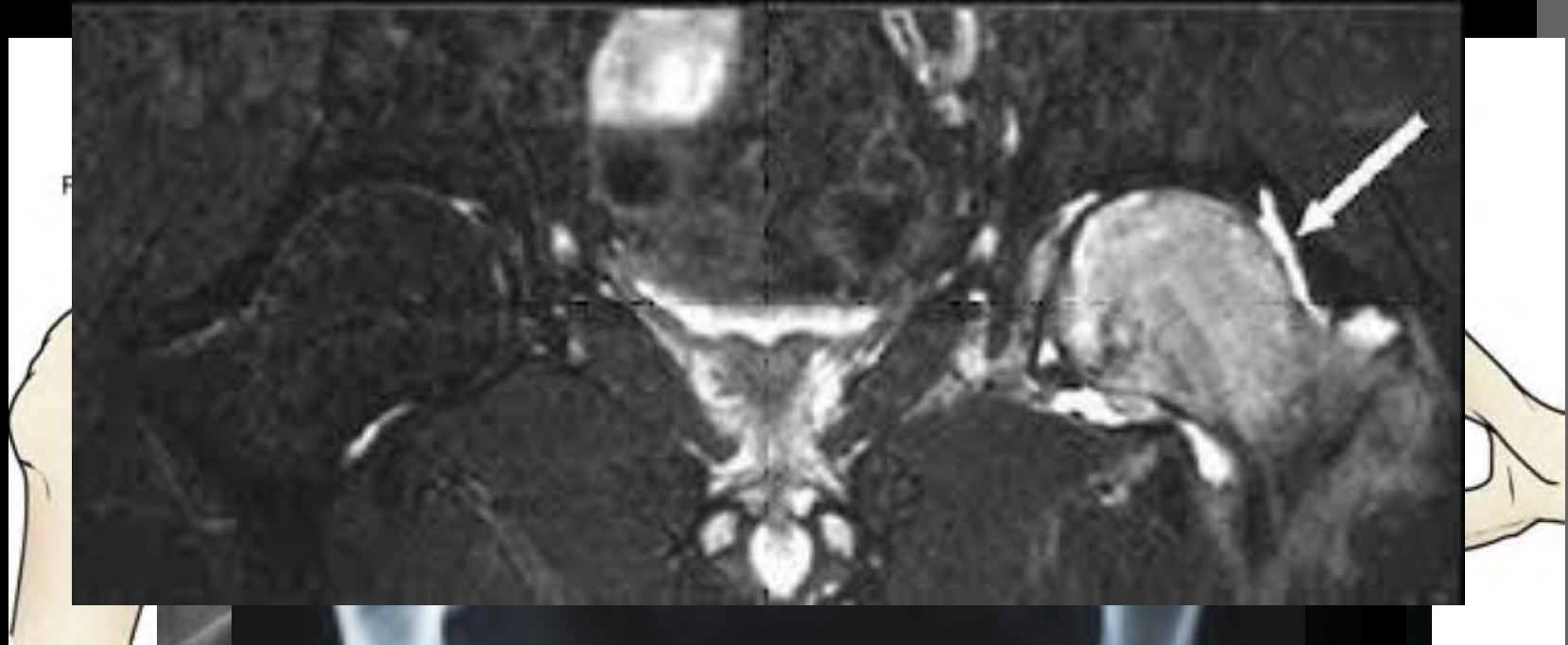
Femoral acetabular
impingement (FAI)

Chondrolabral injury

Avascular Necrosis (AVN)

Synovial Chondromatosis

Transient osteoporosis of
the hip (TOP)



FAI

Typically acquired
10-15% of population

Male > female

Asymptomatic Cam:
Athletes 55%

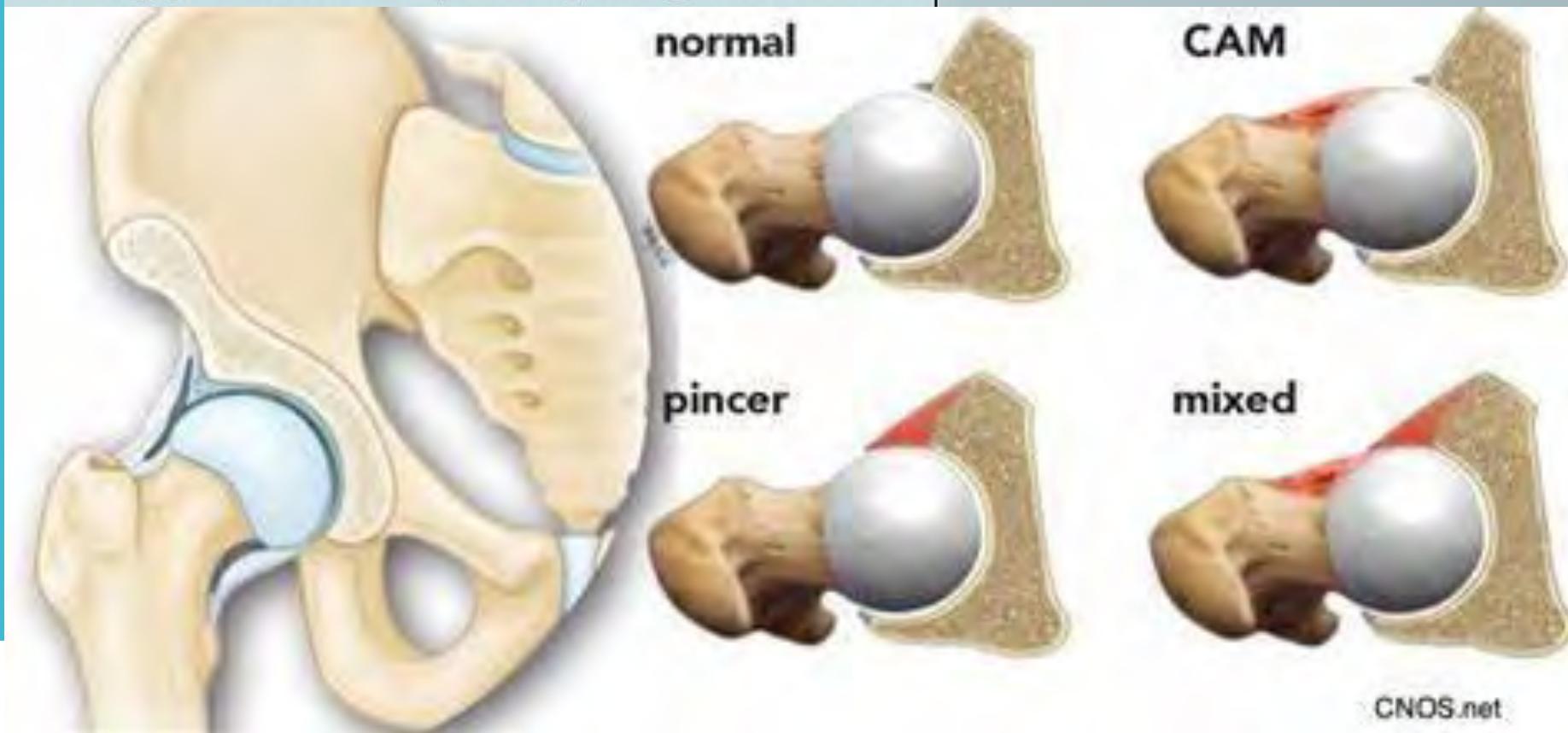
Non-athlete 23%

80% opposite hip within
2 years



FAI and labral tearing

3 Types of Hip Impingement



Subspinous impingement

Post AIIS fracture

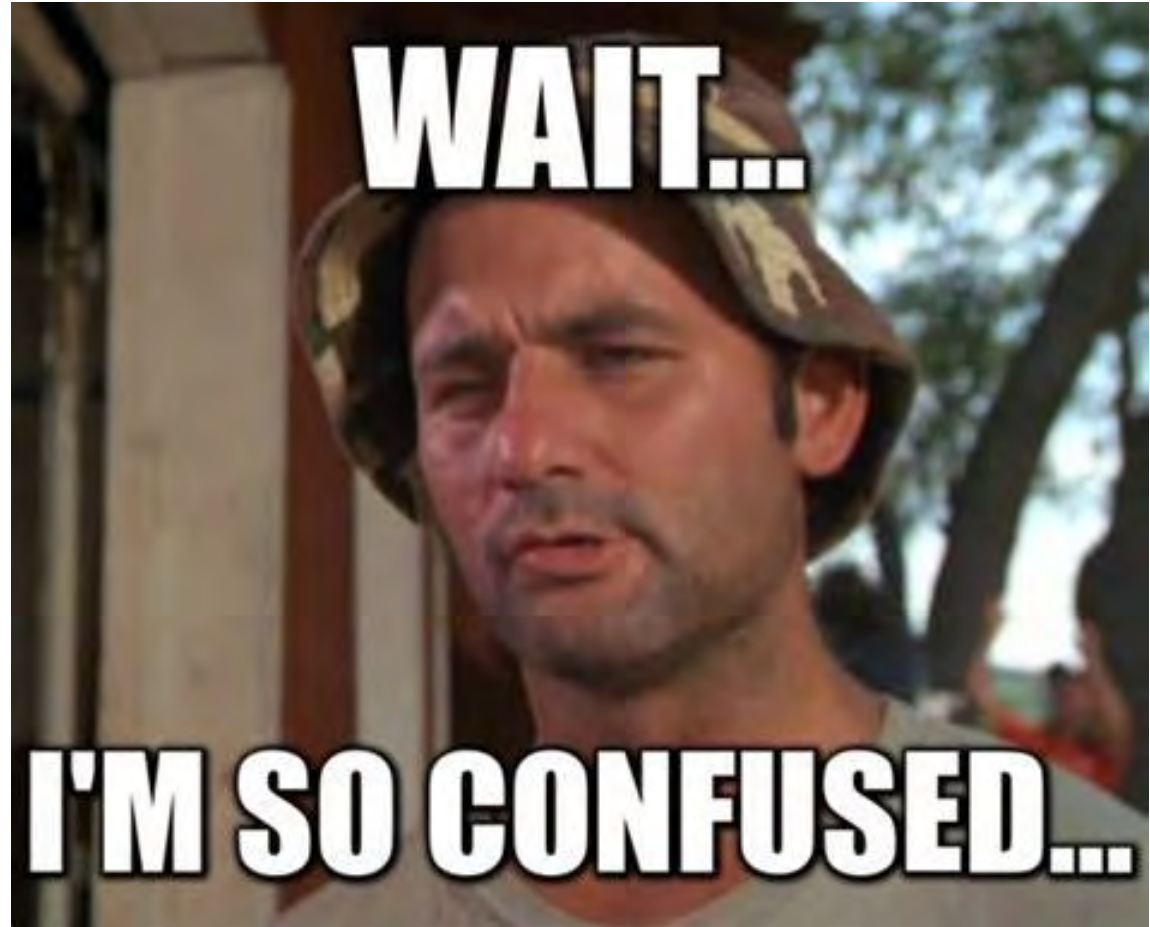
Enthesopathy

Source of Pincer
impingement



Non-hip causes of “hip pain”

- Lumbar
- GYN
- GI
- GU



Difficult to diagnosis

Patients average 3.3 health care providers before acquiring an accurate diagnosis

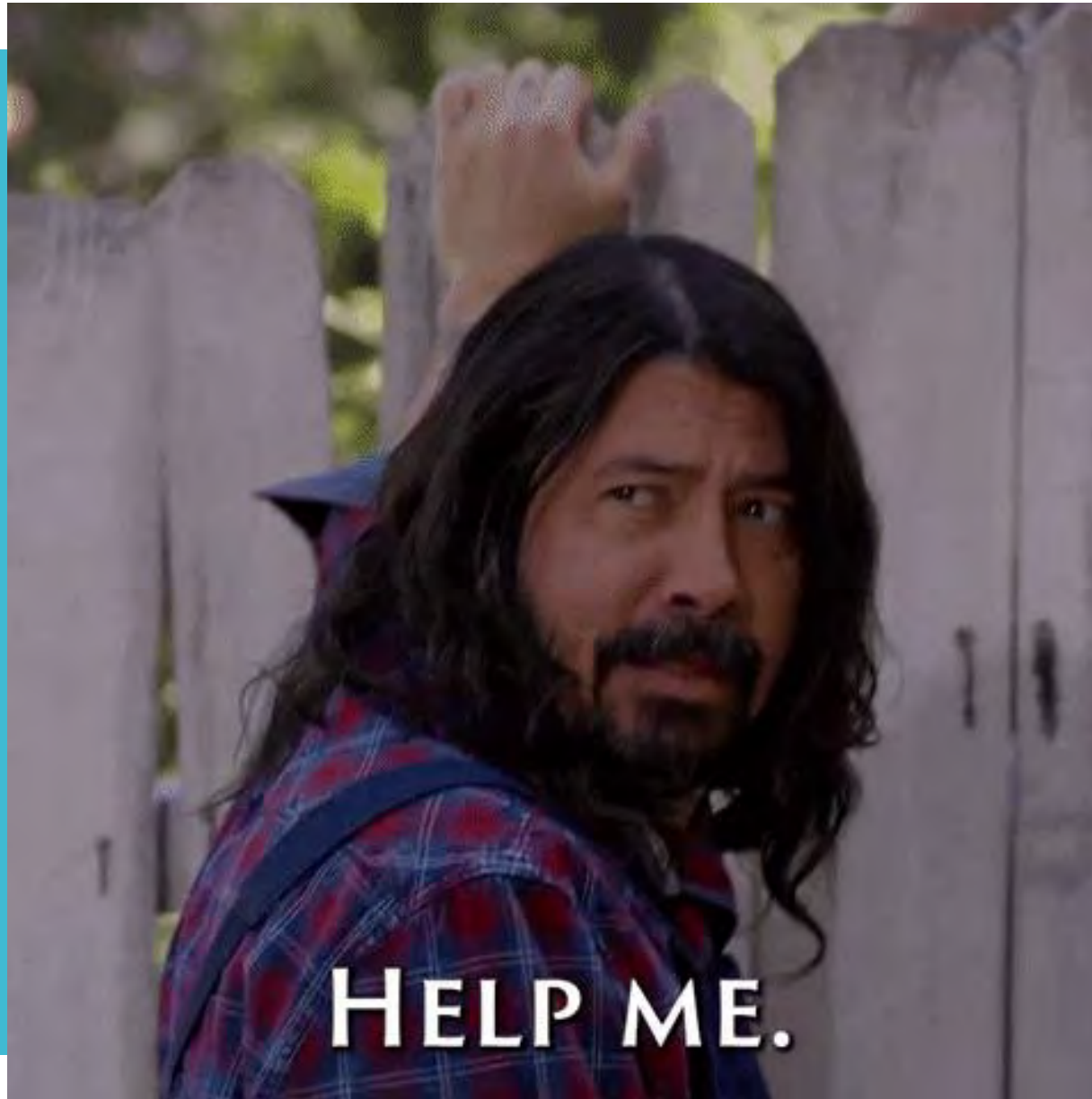
The average time from onset to diagnosis is 21 months

33% receive an alternate initial diagnosis



So...What is
hip pain?





History

Where is the pain?

When did it start?

Is it work related?

What makes it worse?

Are you taking medications?
What have you done for it?

Numbness or altered sensation?

Worse with cough or sneeze?

History

Pain onset

40% traumatic

Often complaint of sharp groin pain

May catch and increased with flexion or extension

May be exacerbated with an athletic activity

Symptoms often linger

Pt complaint of weakness or poor balance

Pain laying on the affected side

Difficulty with sleep

Pain with intercourse

Positional or dyspareunia





Physical Exam

General

Skin

Neurovascular status

DTR's

General strength

Range of motion

Hip and knee

Gait



Physical continued

Hip Range of motion

Compare to opposite side

Looking for excessive anteversion or
retroversion of the hip

Log roll

Stinchfield Test

FABER's test

FADIR's test

Impingement test



Physical exam

Lateral straight leg raise

Ober's test

Thomas test

Palpation

Greater trochanter

SI joint

Rectus femoris tendon

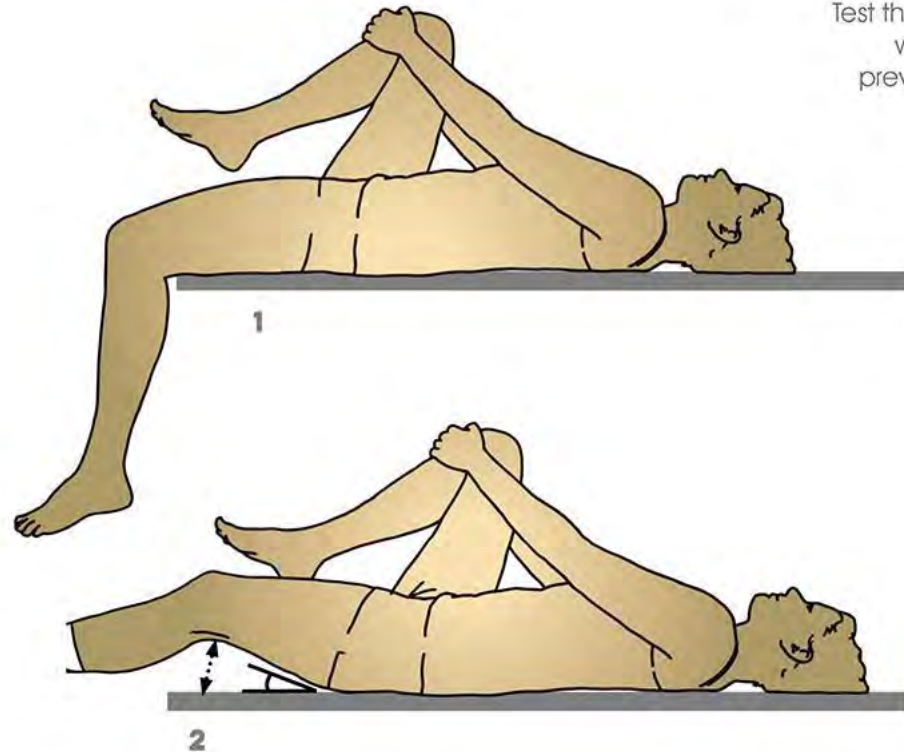
Lumbar spine

THOMAS TEST

Test the rectus femoris muscle
which may be restricted,
preventing flattening of leg.

1: normal condition

2: restricted condition



Additional examination

Lateral straight leg raise
AB-HEER



Imaging - Radiographs

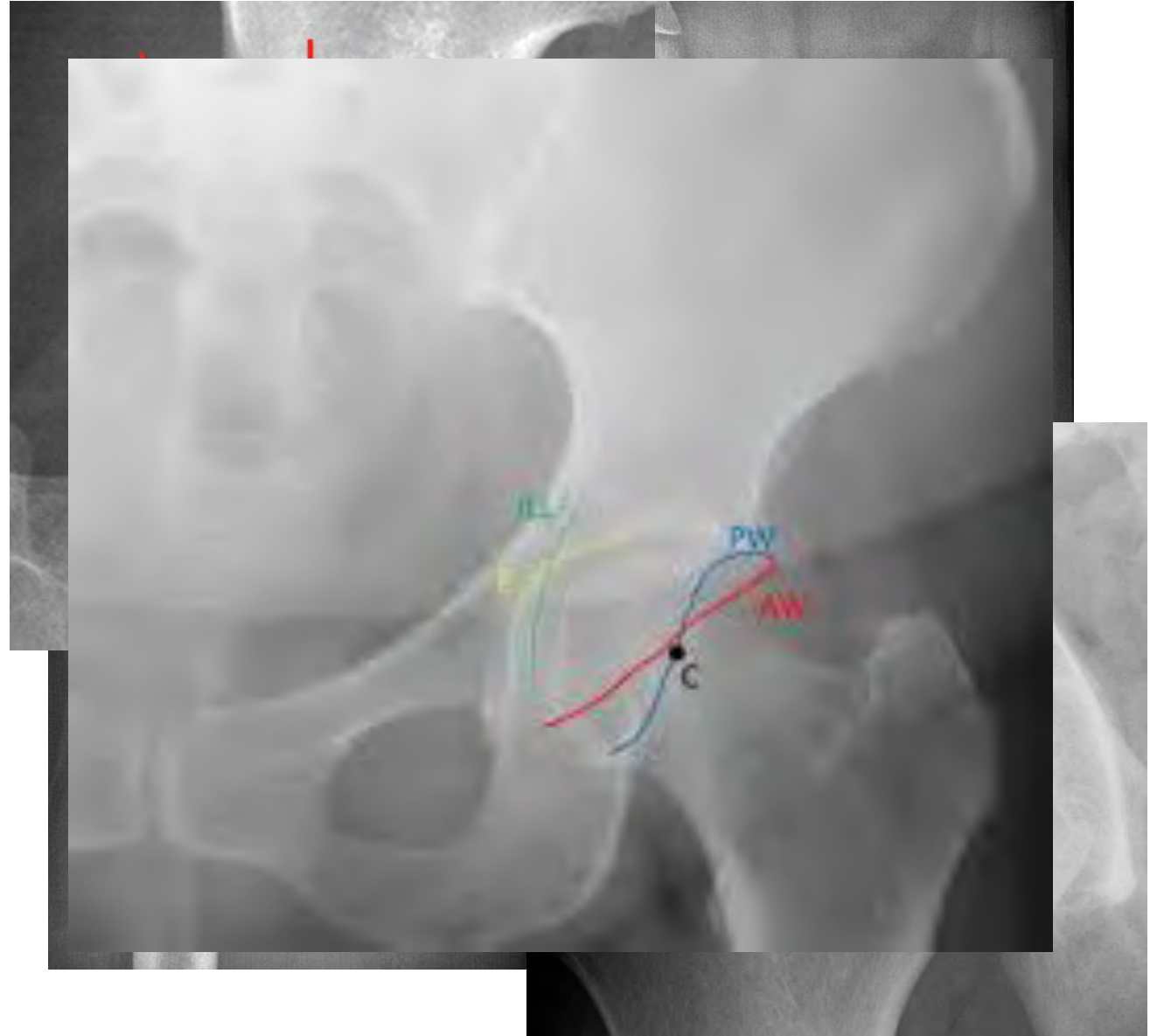
Plain films first choice in
imaging

- AP pelvis

- Dunn view

- False profile

- Fog leg lateral



MRI - hip

Arthrogram more sensitive for intraarticular pathology

Needs to be images of the specific hip

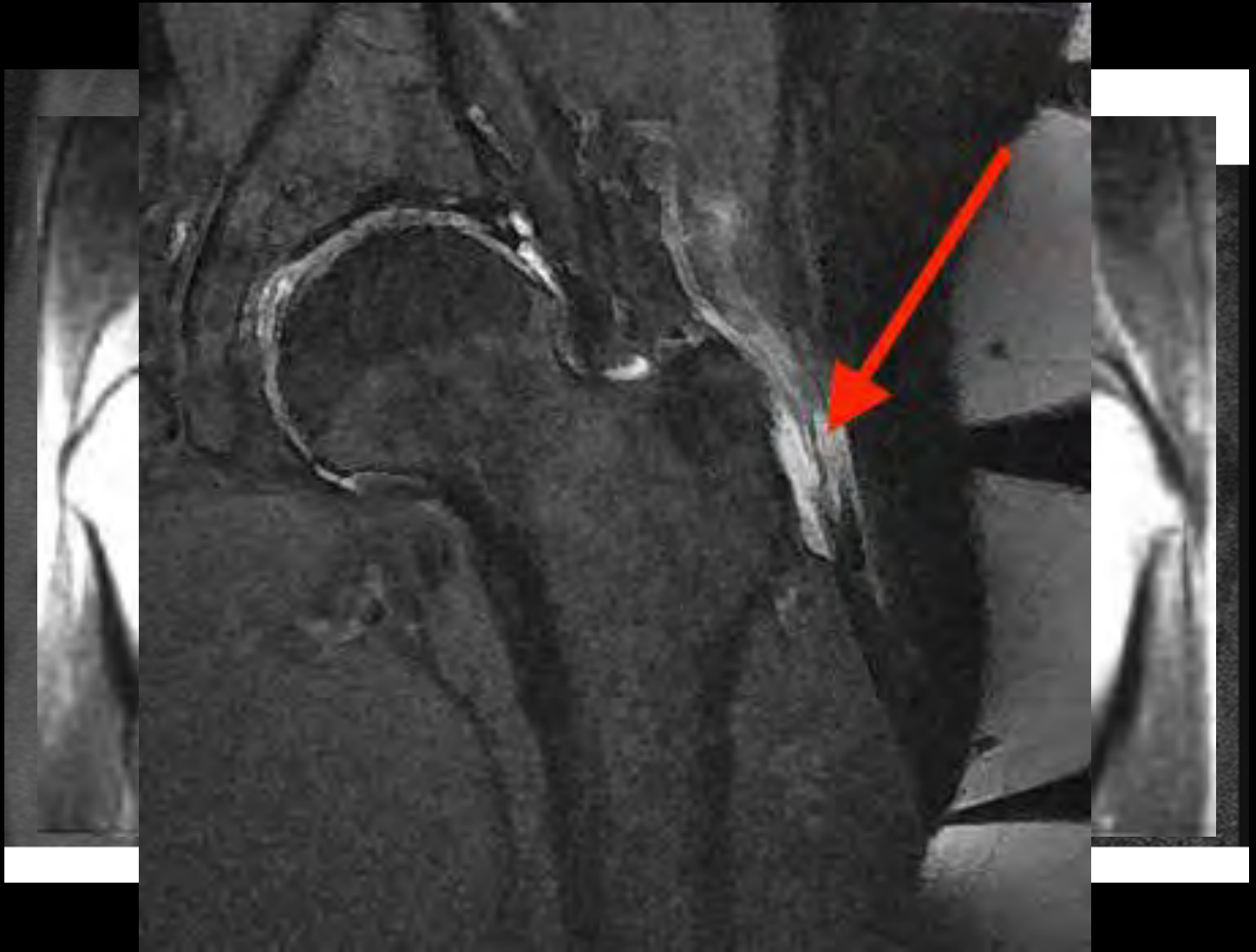
Pelvis MRI too large of a field for diagnosis of labral pathology

Tendon pathology

Hip Abductor tendons

Hamstring tendons

Trochanteric bursitis



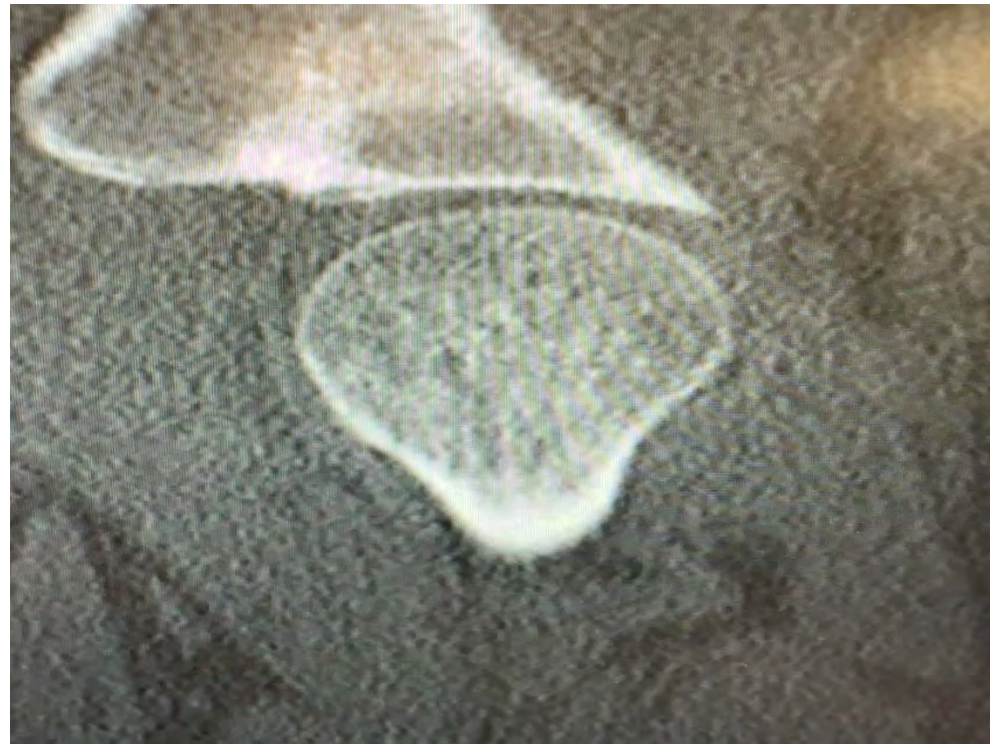
CT scan

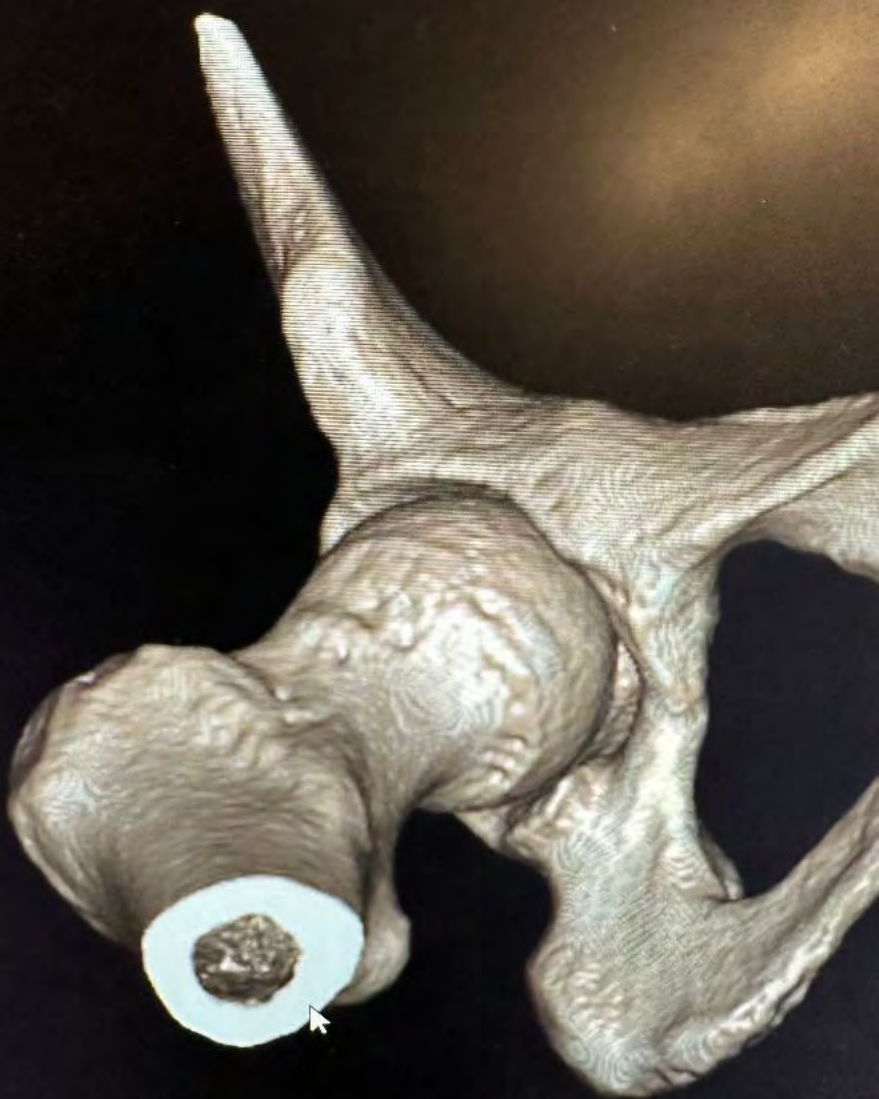
Better for bone evaluation
Cystic change

Can help with pre op planning
3D reconstruction is
beneficial









SOMETHING

DOESN'T SEEM RIGHT

Other studies

- EMG
- Bone scan
- Ultrasound
- MRI – Lumbar spine

Hip Preservation

Avoidance of a hip replacement

- Successful and reproducible surgery
- Highest patient satisfaction rates of all orthopaedic surgeries



Why hip preservation?

Hip replacement is not for everyone

Prior to early 2000's no other options

Hip pain = arthritis

The goal is to preserve anatomy and function





Who benefits from hip preservation?



- Patients with non-arthritic hip pain
 - Age is not a factor
 - Arthritis is difficult to manage
- Many treatments may increase quality of life
 - Delay onset of THA
 - Improve later outcomes of THA

Non-surgical treatments

Activity modifications

Does it hurt during or after the activity?

Can it be replaced by a similar activity?

Many patients are reluctant

Weight loss

Decreased stress on the joint



Medications

Supplements

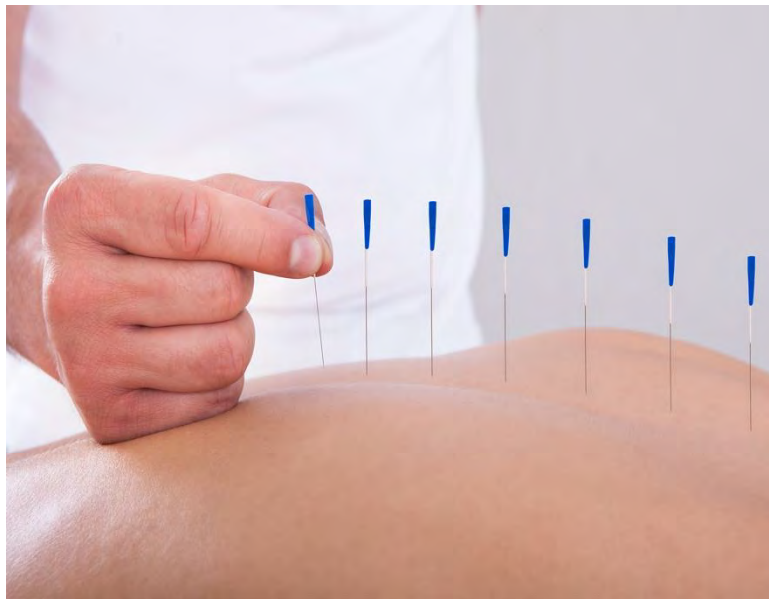
Topicals

NSAID's

Steroids

Opioids

Muscle relaxants





Physical therapy

- Physical therapy can be significantly beneficial for hip dysfunction
 - Because the dysfunction has been present for an extended period of time many muscle segments are not functioning in sync
- In addition to strengthening and stretching
 - PNF
 - Dry needling
 - Gait eval and training
 - Pelvic floor evaluation and strengthening



Injections

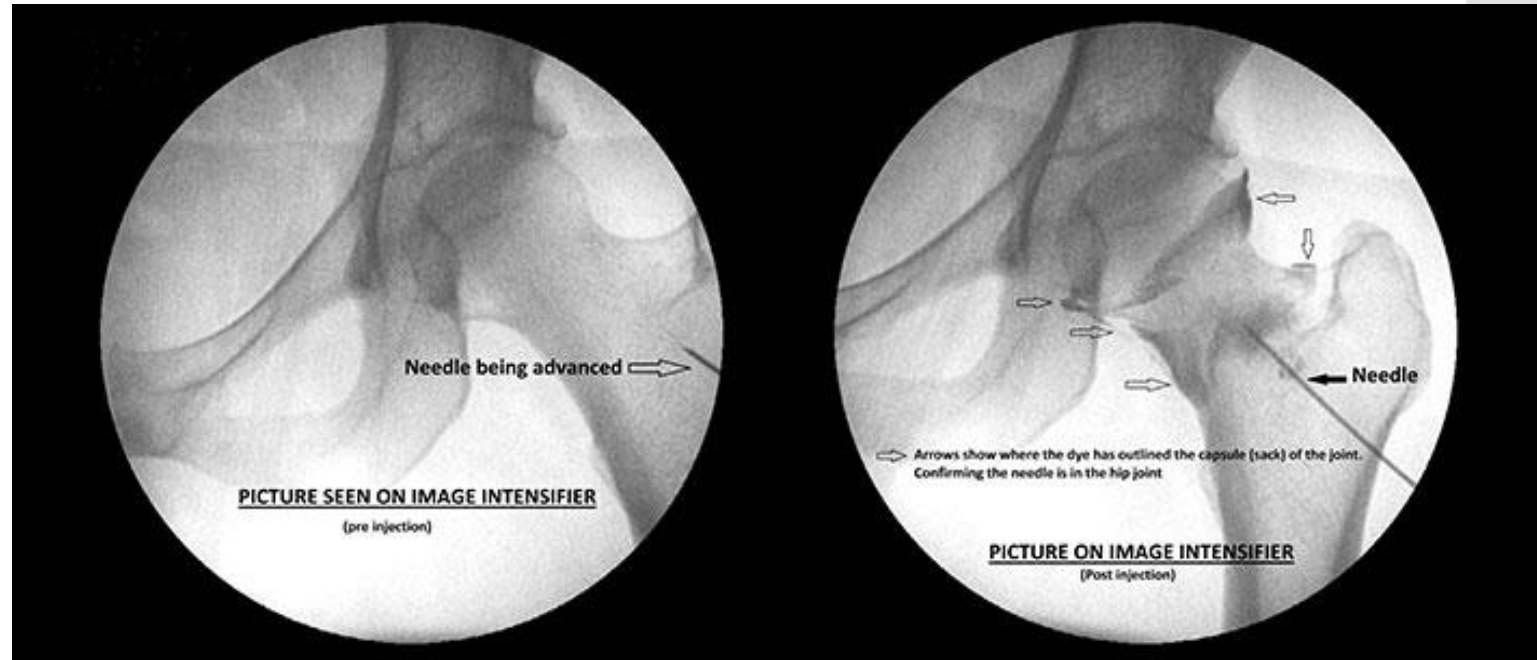
Most initial injections are lidocaine or lidocaine with a corticosteroid

Make sure no prior difficulty with steroid and blood sugars well controlled

Where to inject?

Where is the pain?

Lateral hip, groin, posterior hip, ischial tuberosity/ hamstring tendon/bursae



Orthobiologics

Expanding field

- PRP, stem cells

- Research still inconclusive

- Does not appear to build new cartilage

- Can be important for symptom management

The next frontier?

Patient driven

- Expectations may be unrealistic

- Must be set upfront

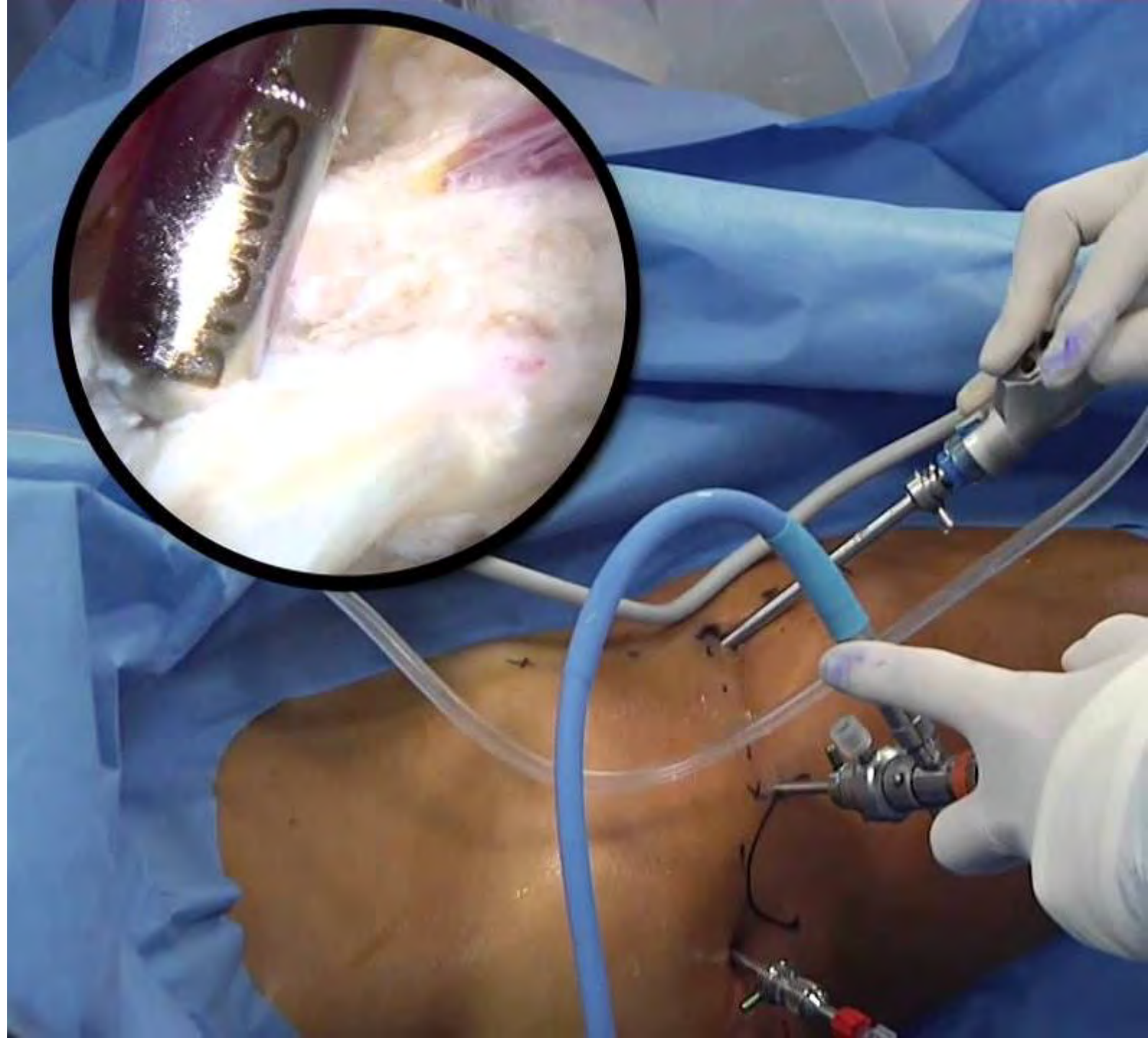




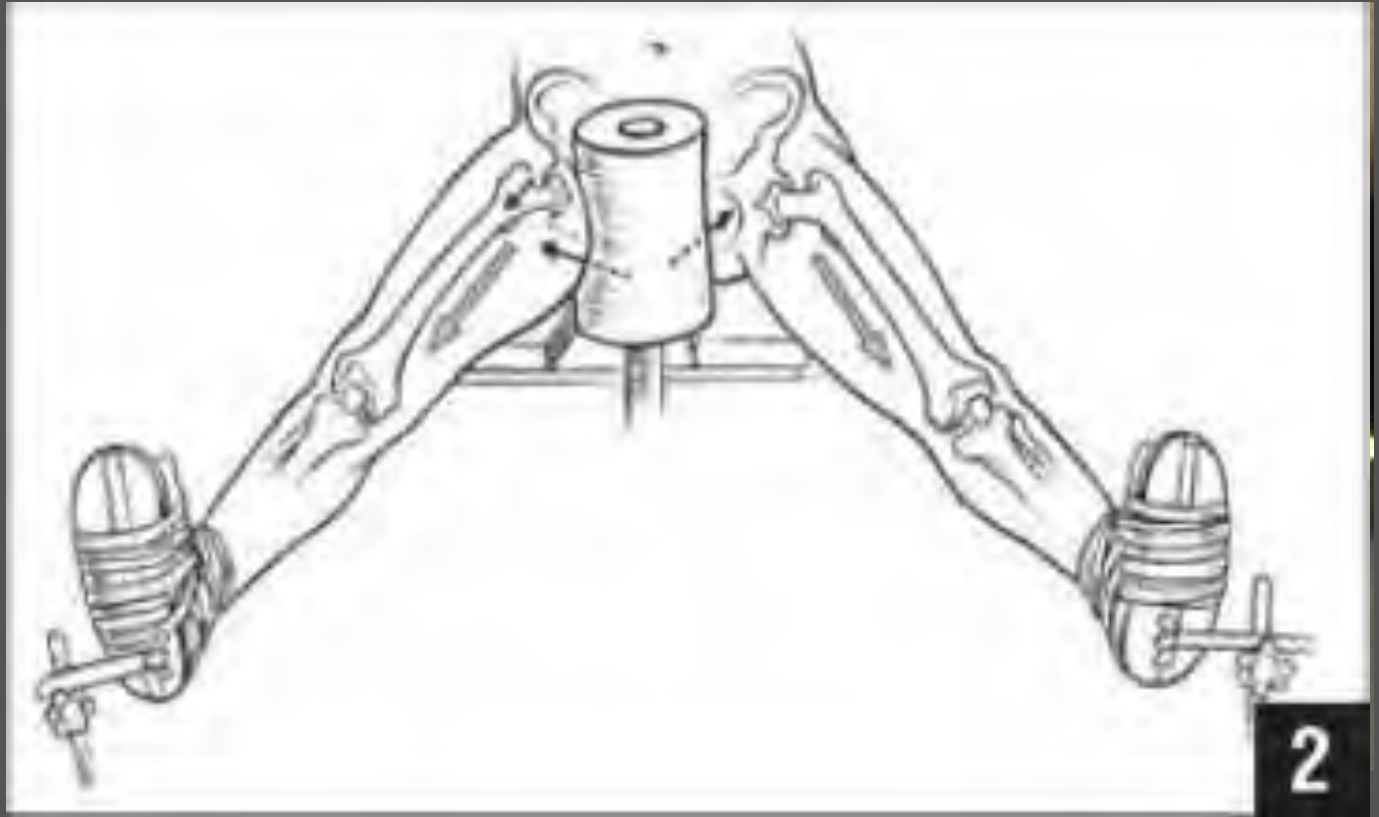
Surgical management

Arthroscopic surgery
Typically reserved for
failed conservative
management

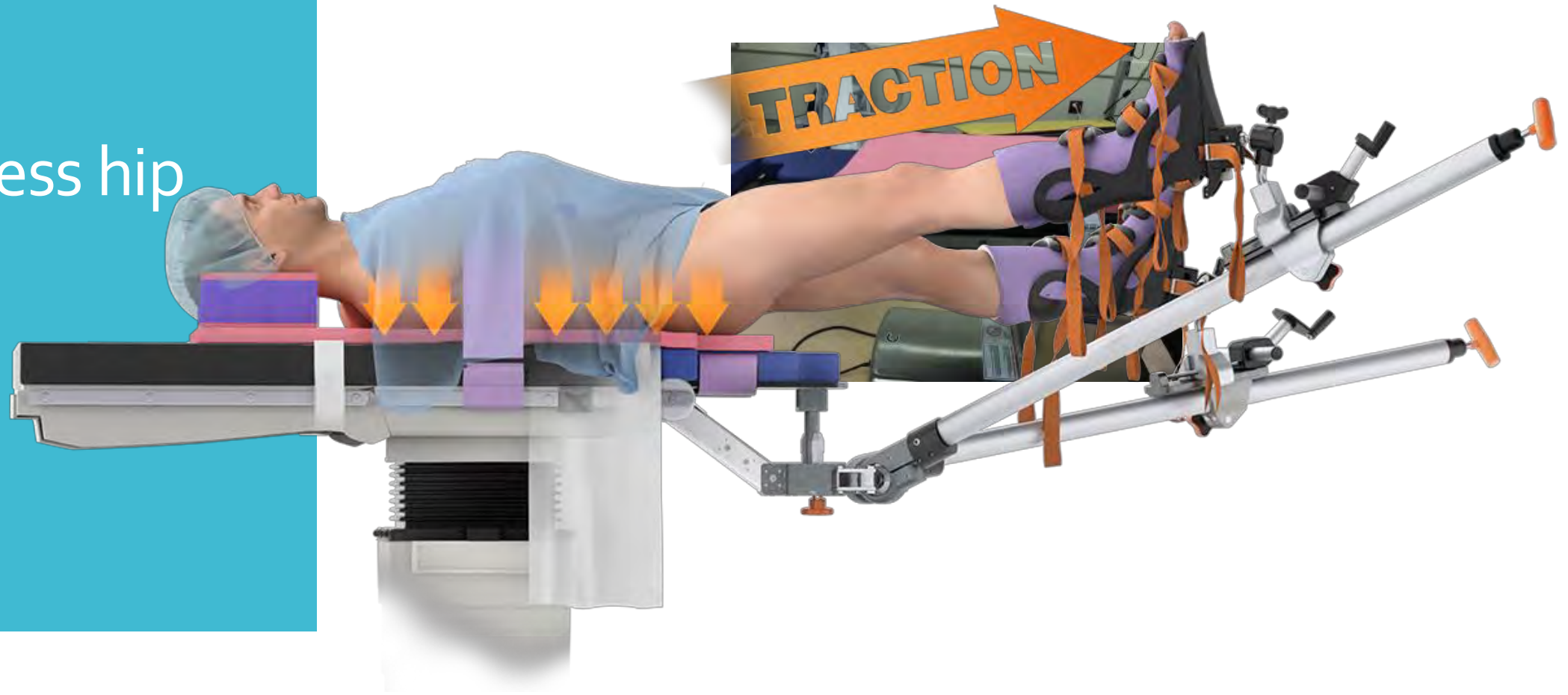
FAI, labral pathology,
Abductor tearing,
snapping hip,
Ligamentum teres
tearing, Trochanteric
bursitis



Patient set up and positioning



Post-less hip
set up



Hip set up



Hip arthroscopy

Set up

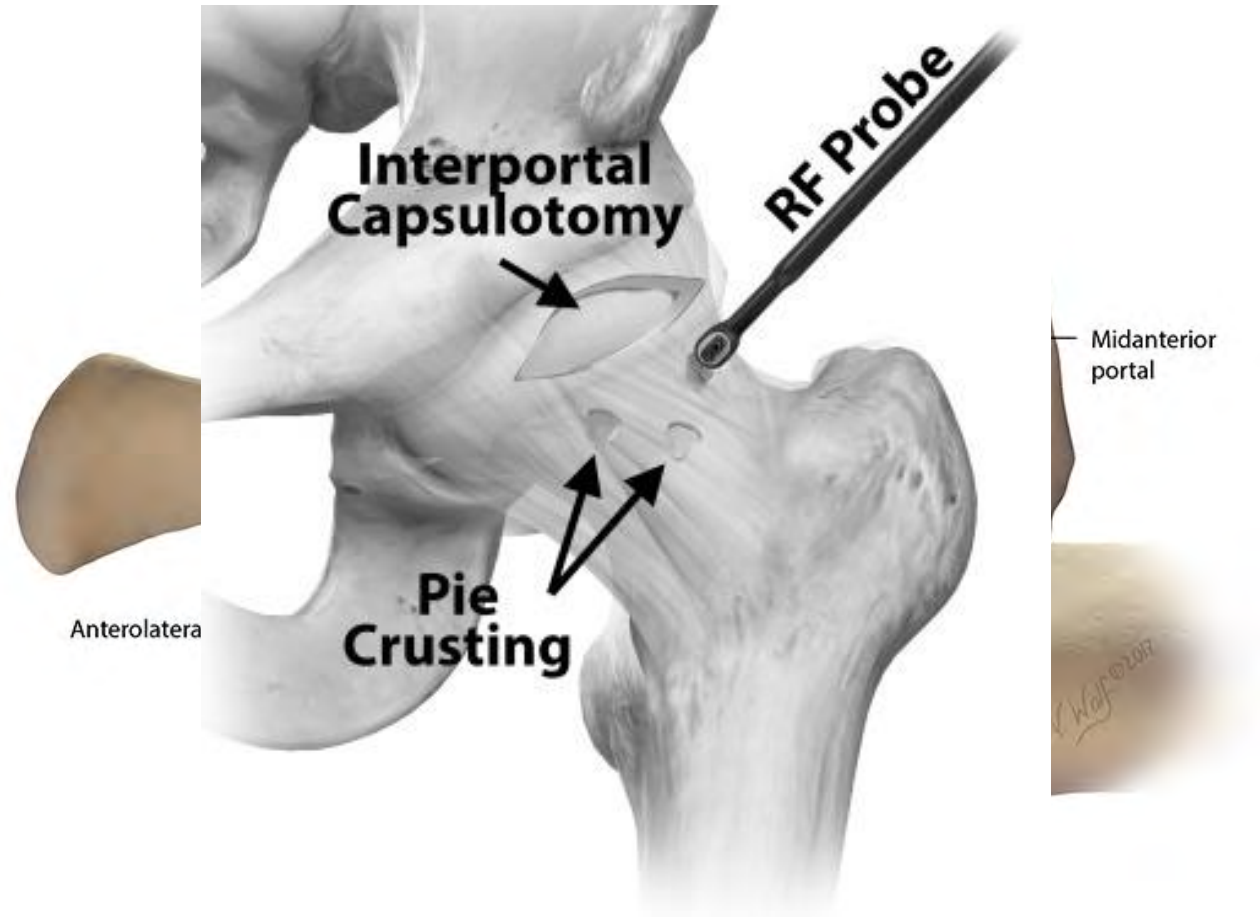
Traction

2:00 max traction

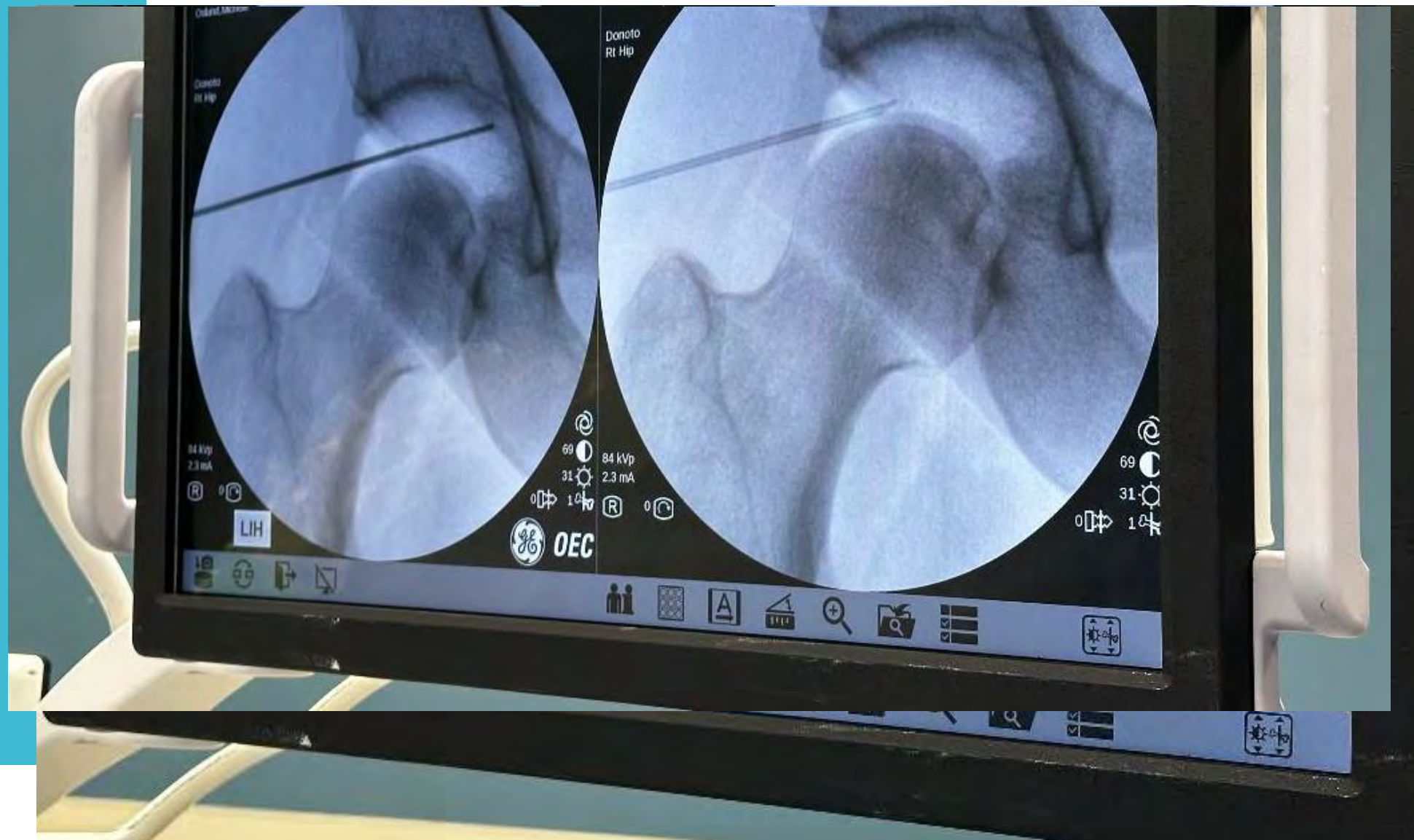
Portals

Safe zone

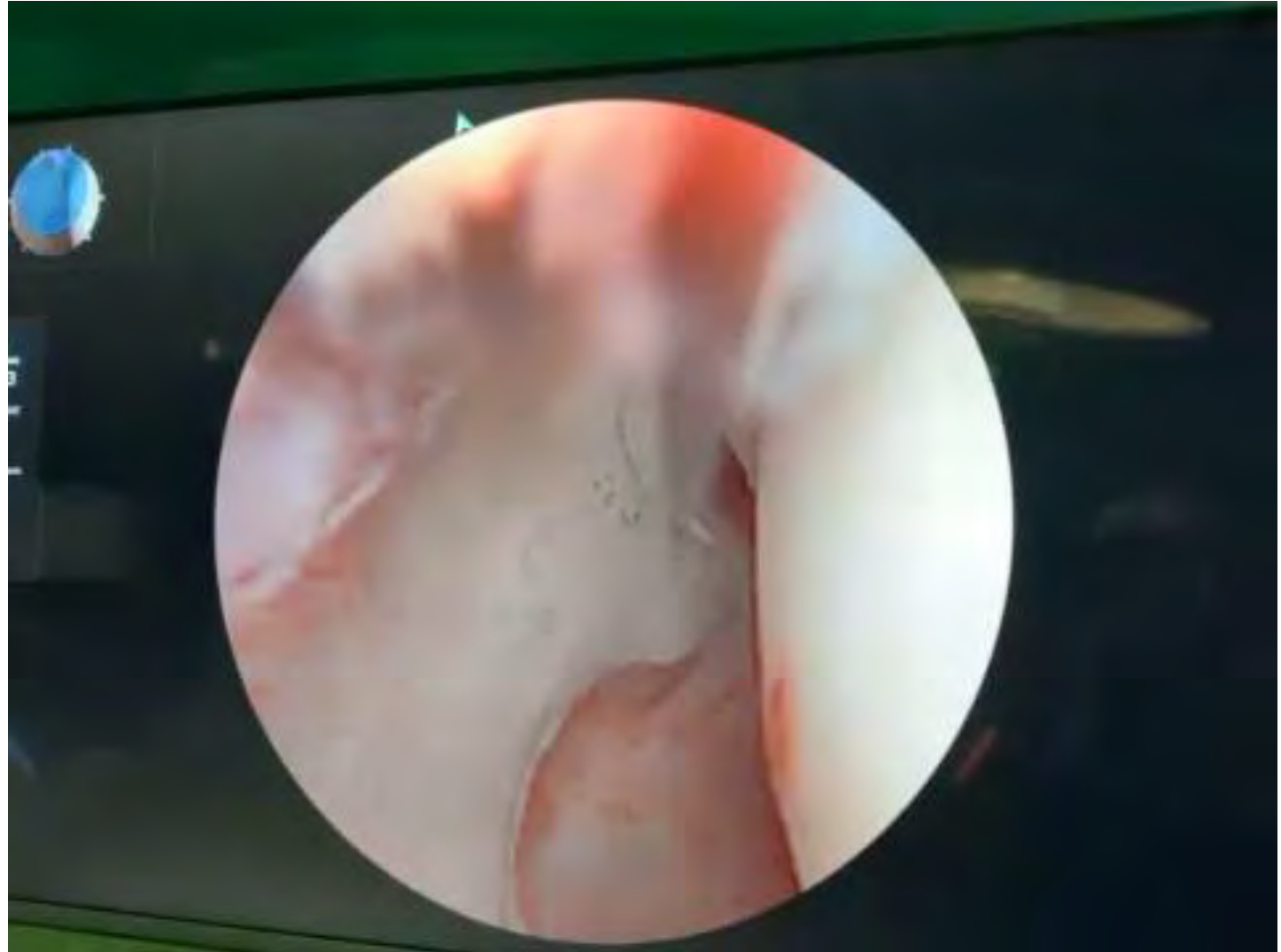
Interportal
capsulotomy



Fluro views



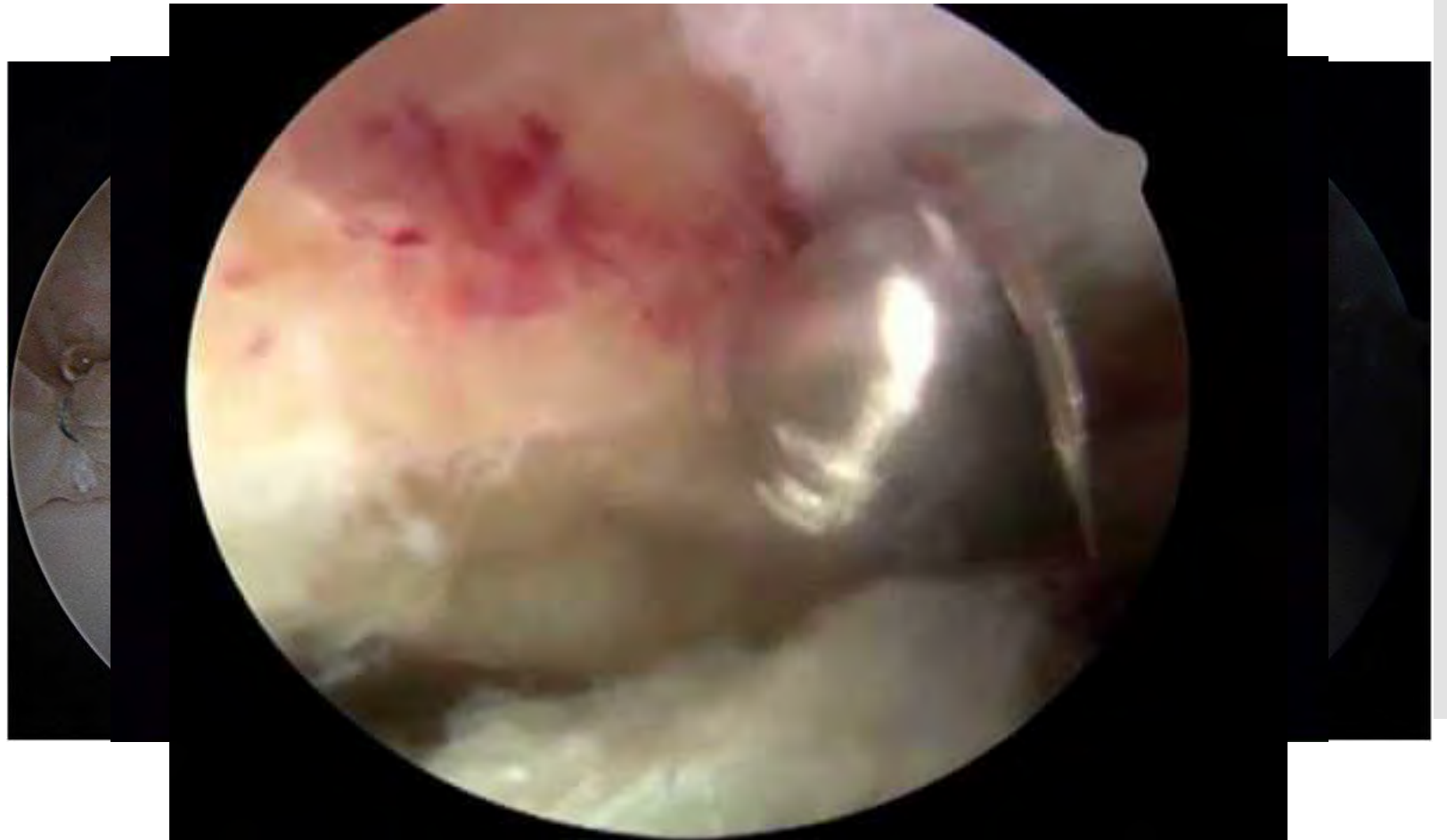
Capsulotomy Hip access



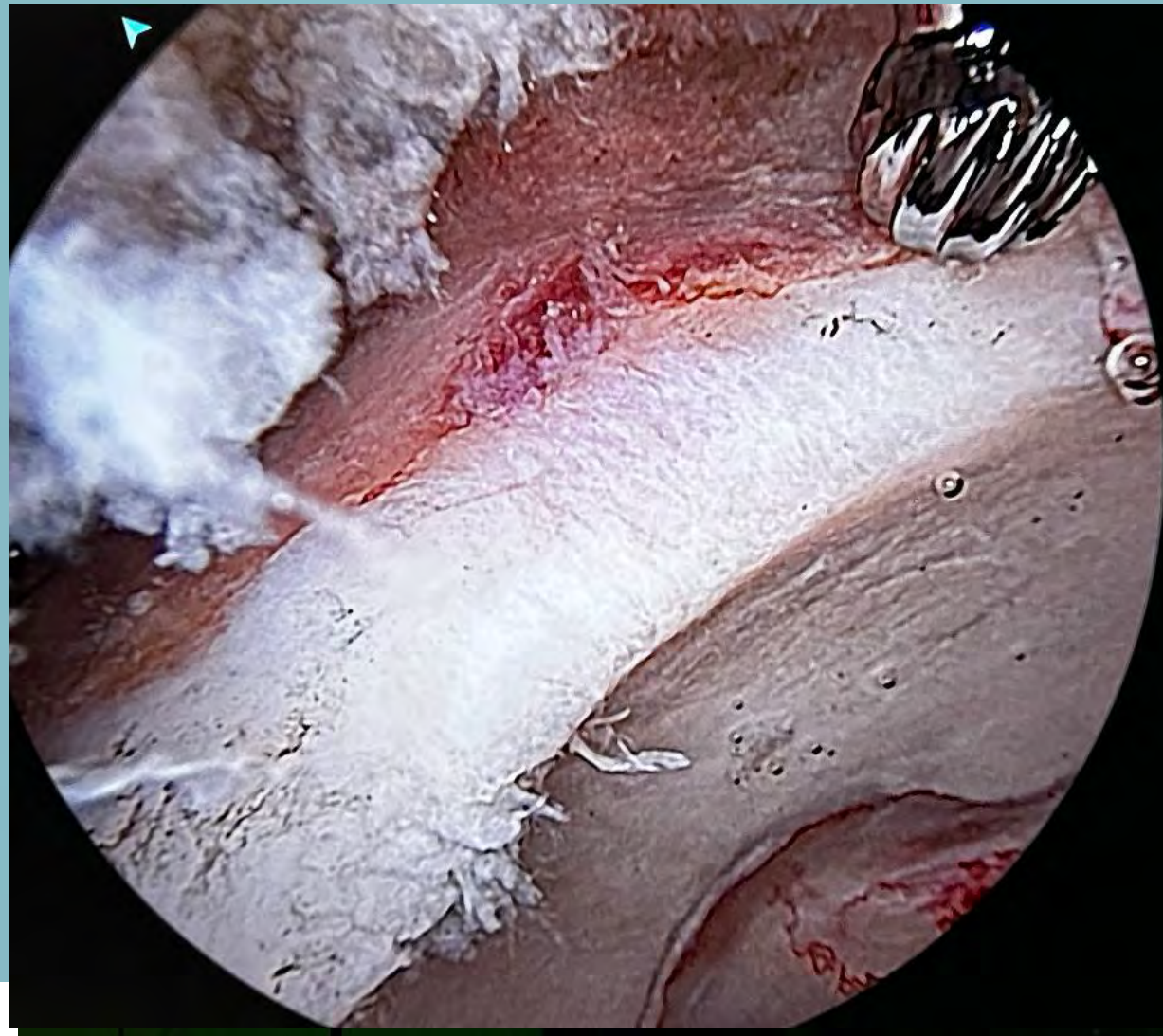
Hip Arthroscopy – Central compartment

Treatment of the
intraarticular portion of the
hip

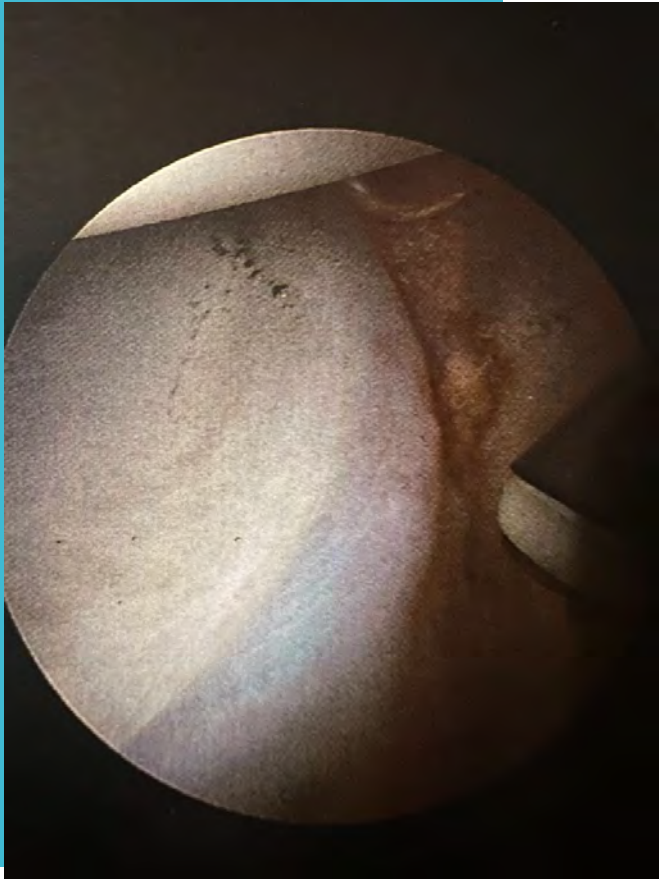
Labrum, articular cartilage,
ligamentum teres,
subspinous impingement
and pincer lesion

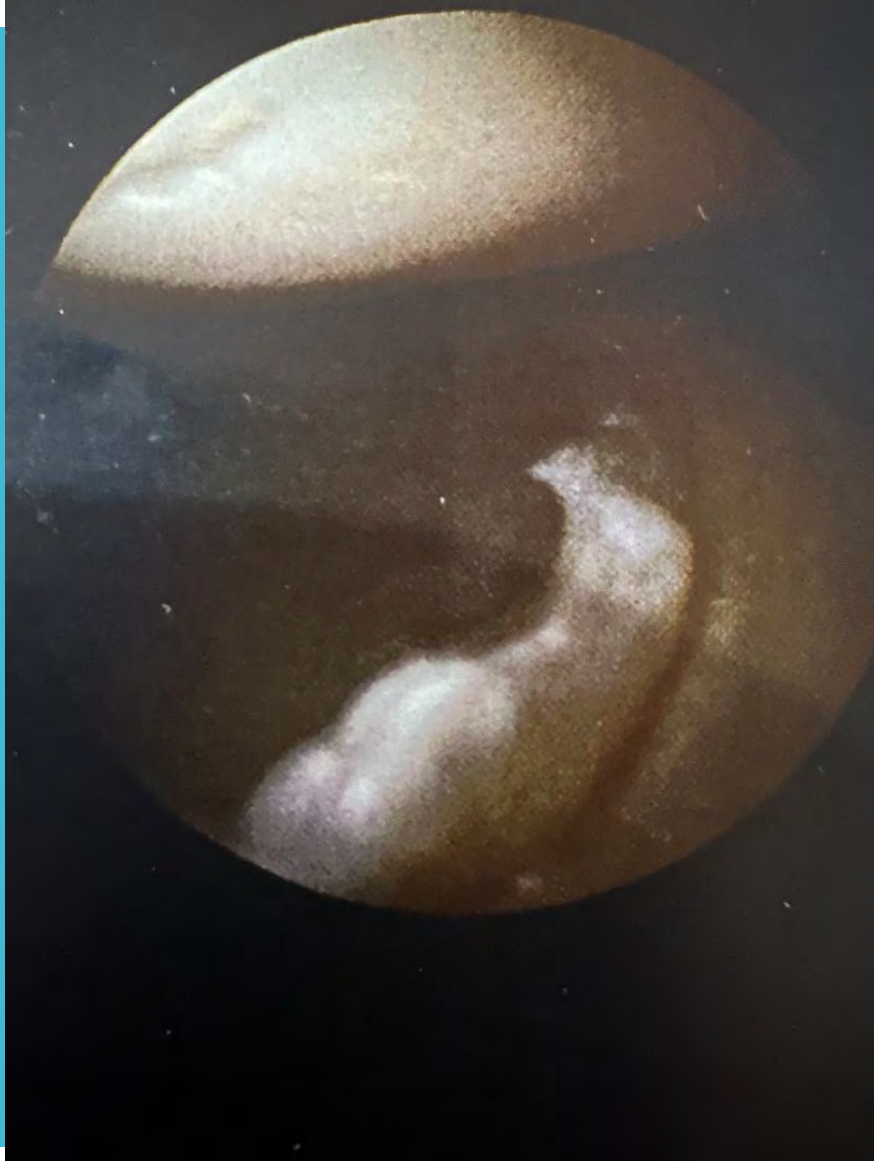


Labral ossification

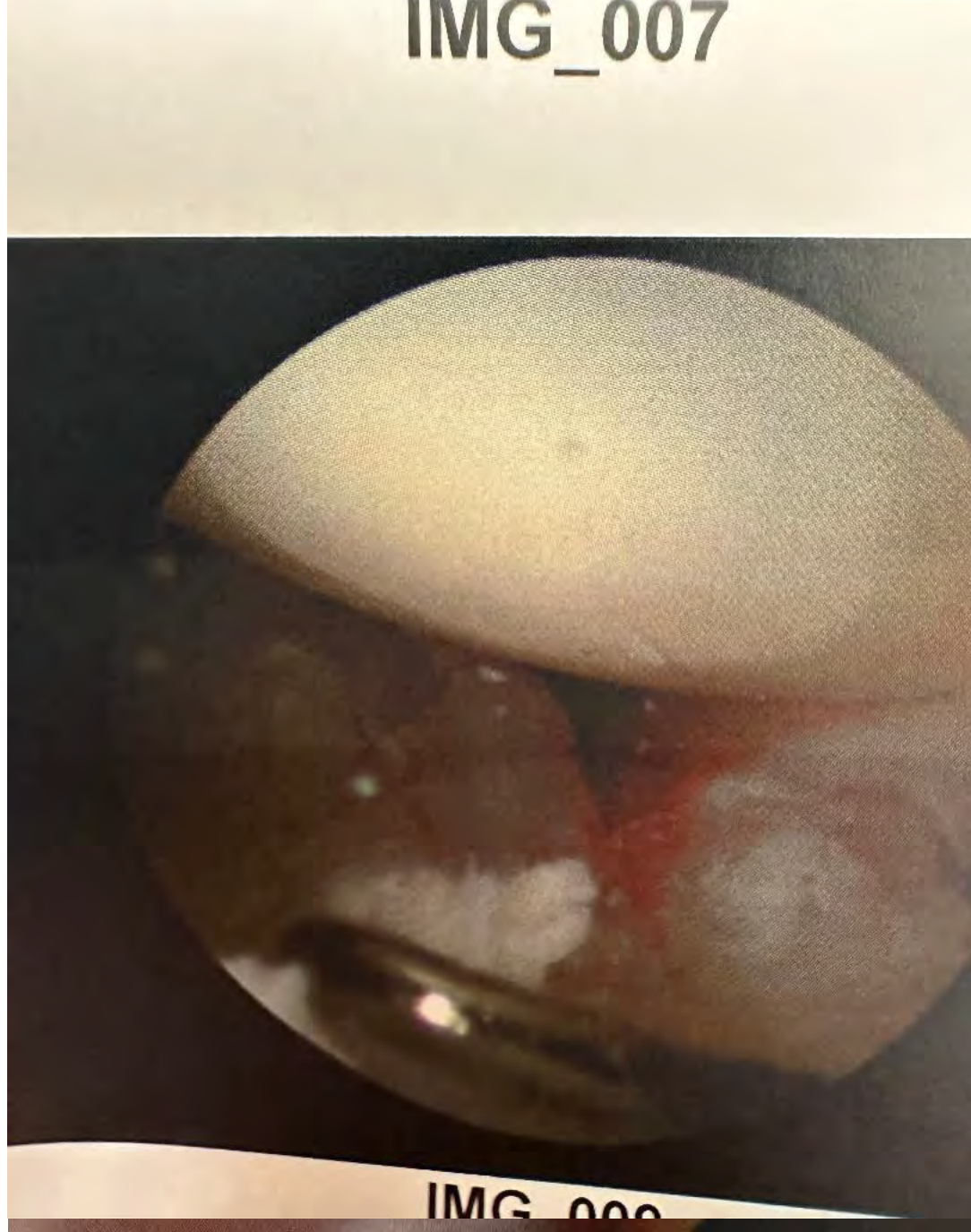


Chondrolabral seperation



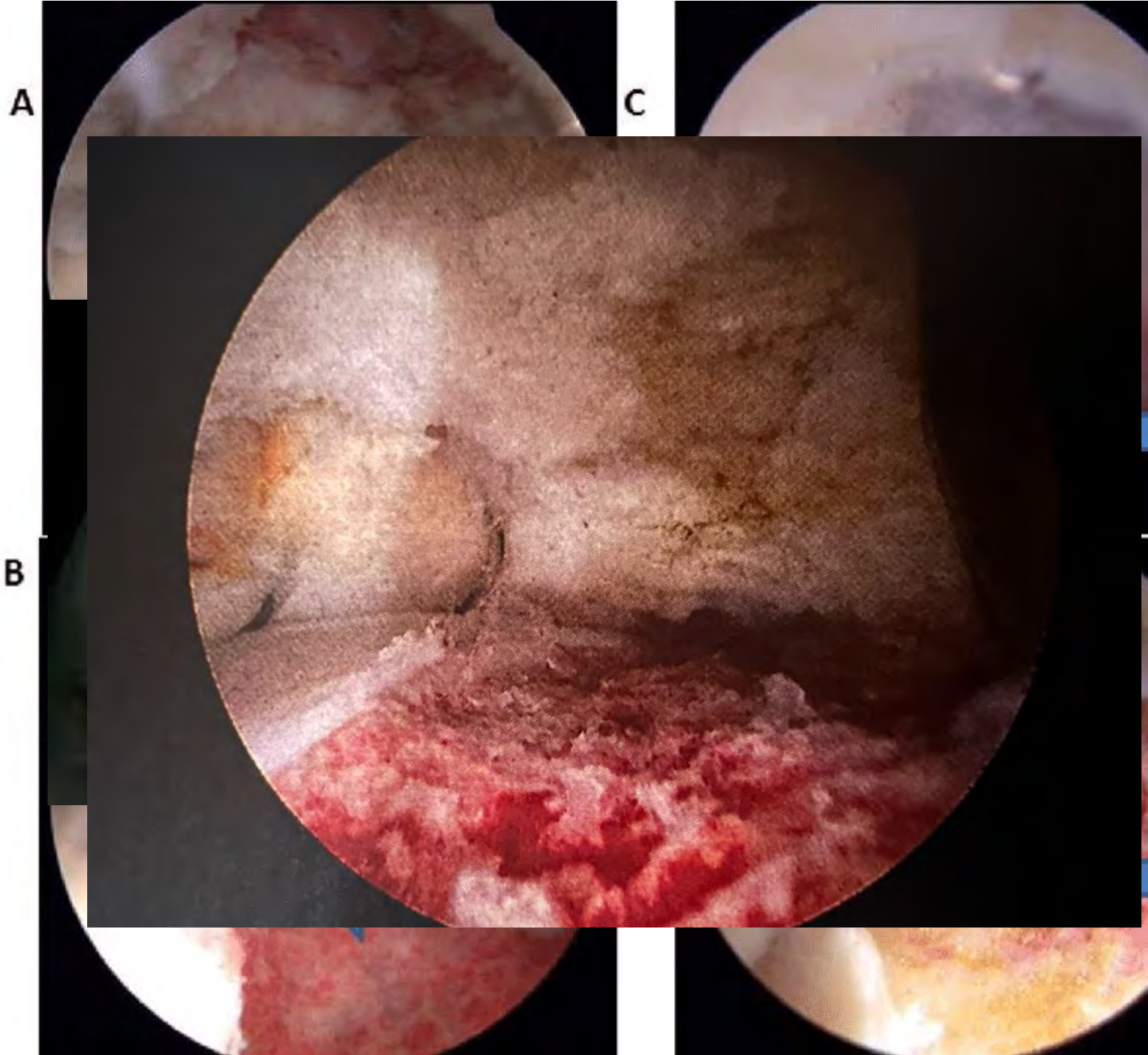


Chondrolabral
separation
with calcific
labritis



Peripheral compartment

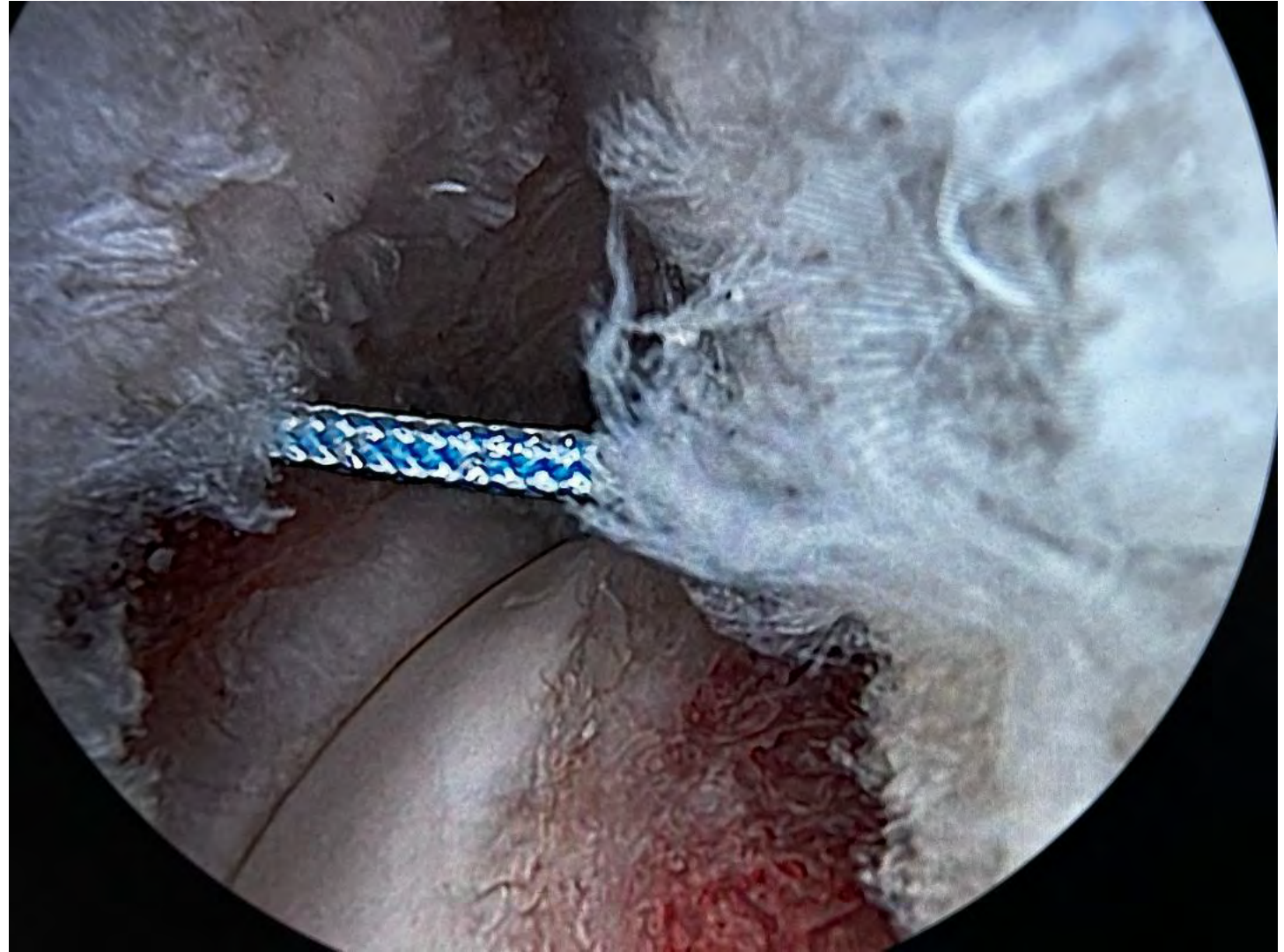
- Location of cam lesion, loose bodies and joint capsule
- Performed off traction
- Femoral osteoplasty
- Capsule closure



Femoroplasty

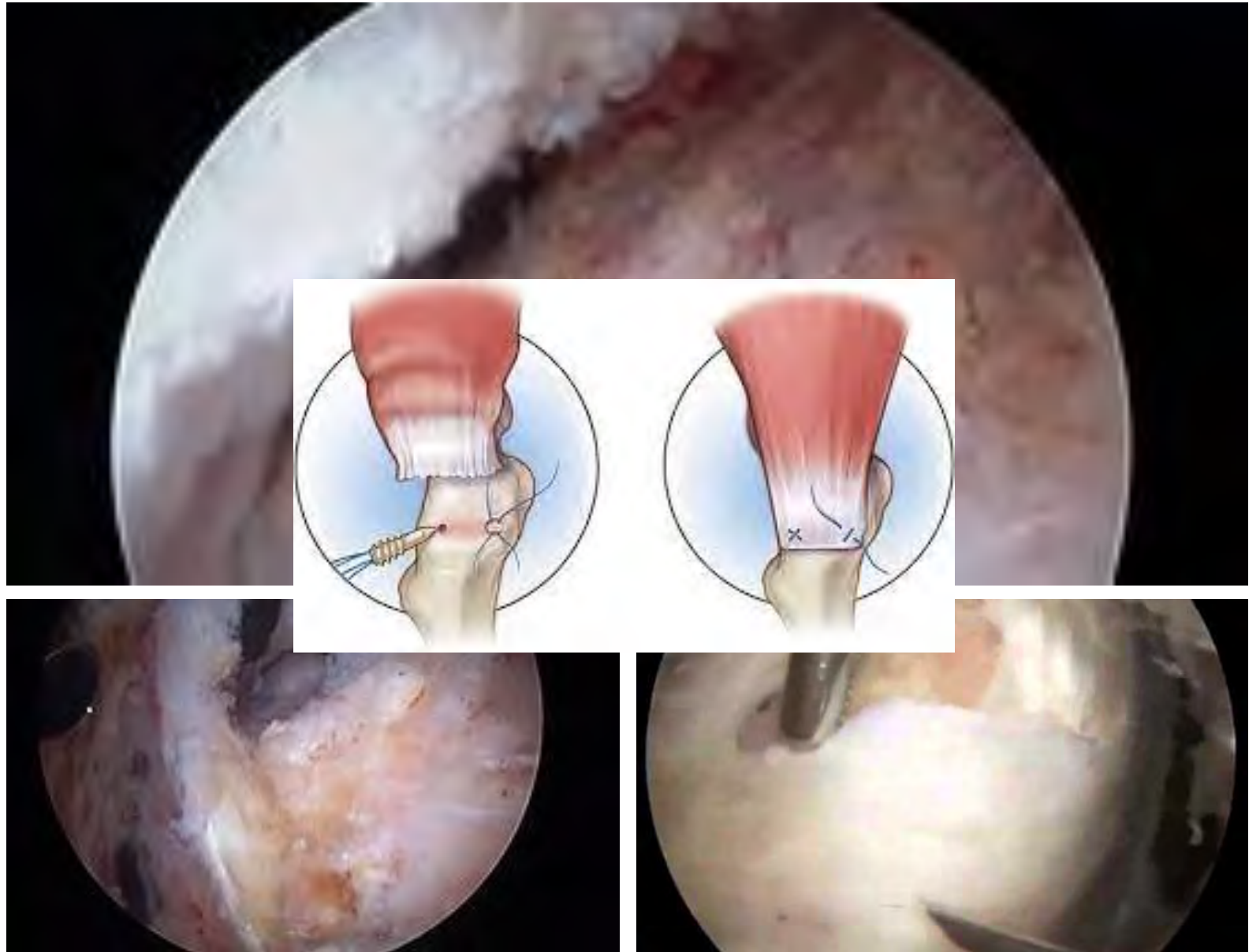


Capsule closure

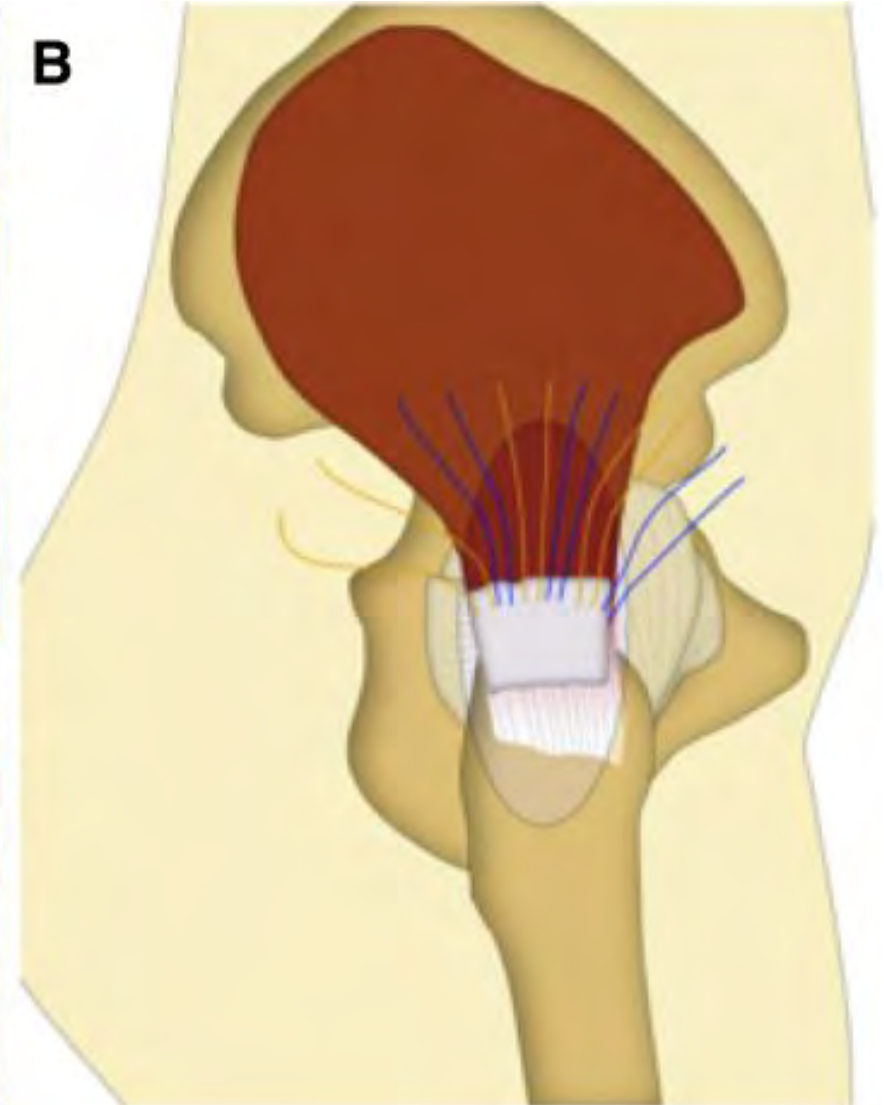
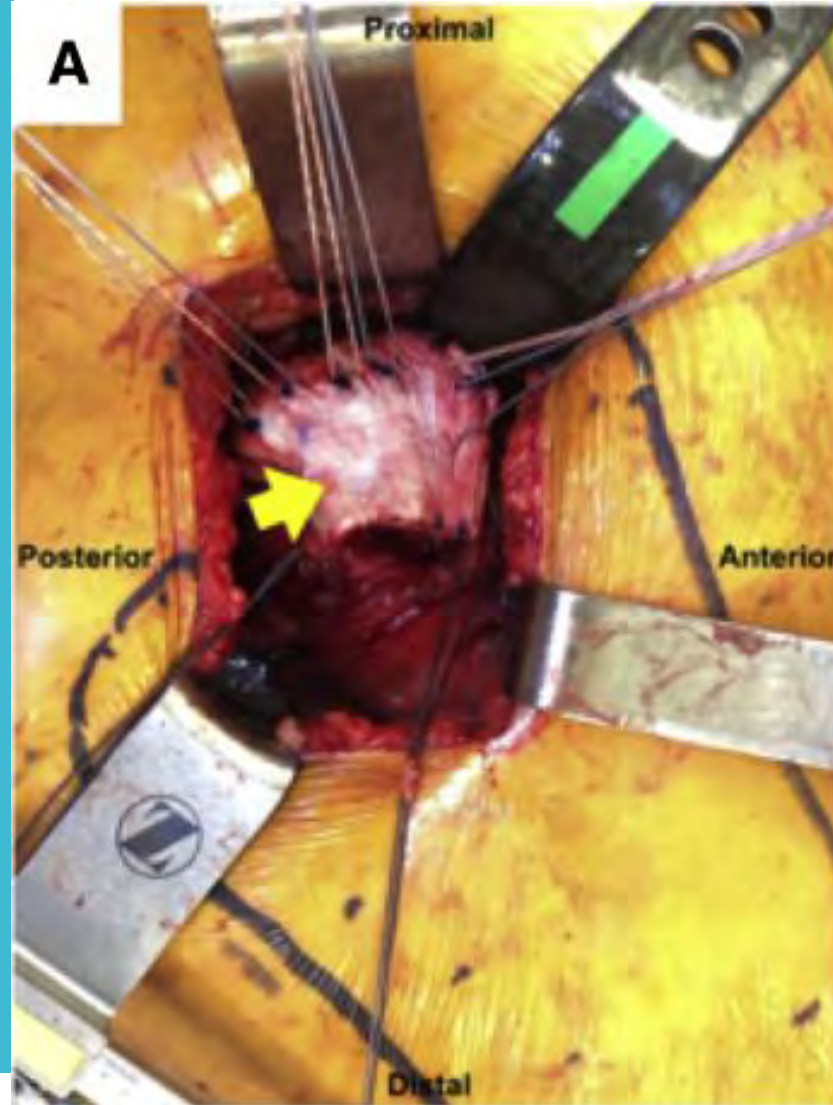


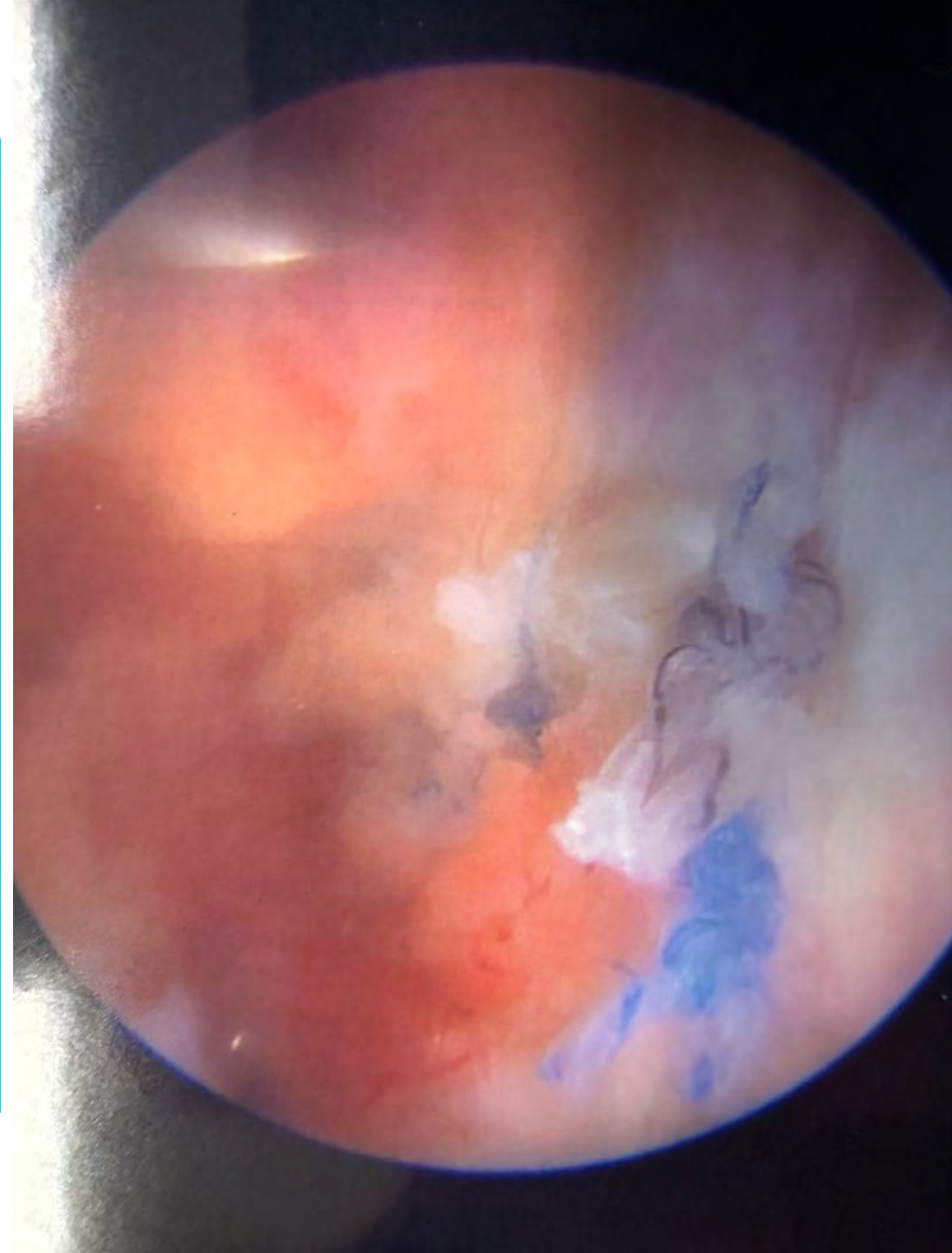
Hip – pertrochanteric region

- Abductor pathology
 - Repairs
- Trochanteric bursectomy



Open or
Arthroscopic

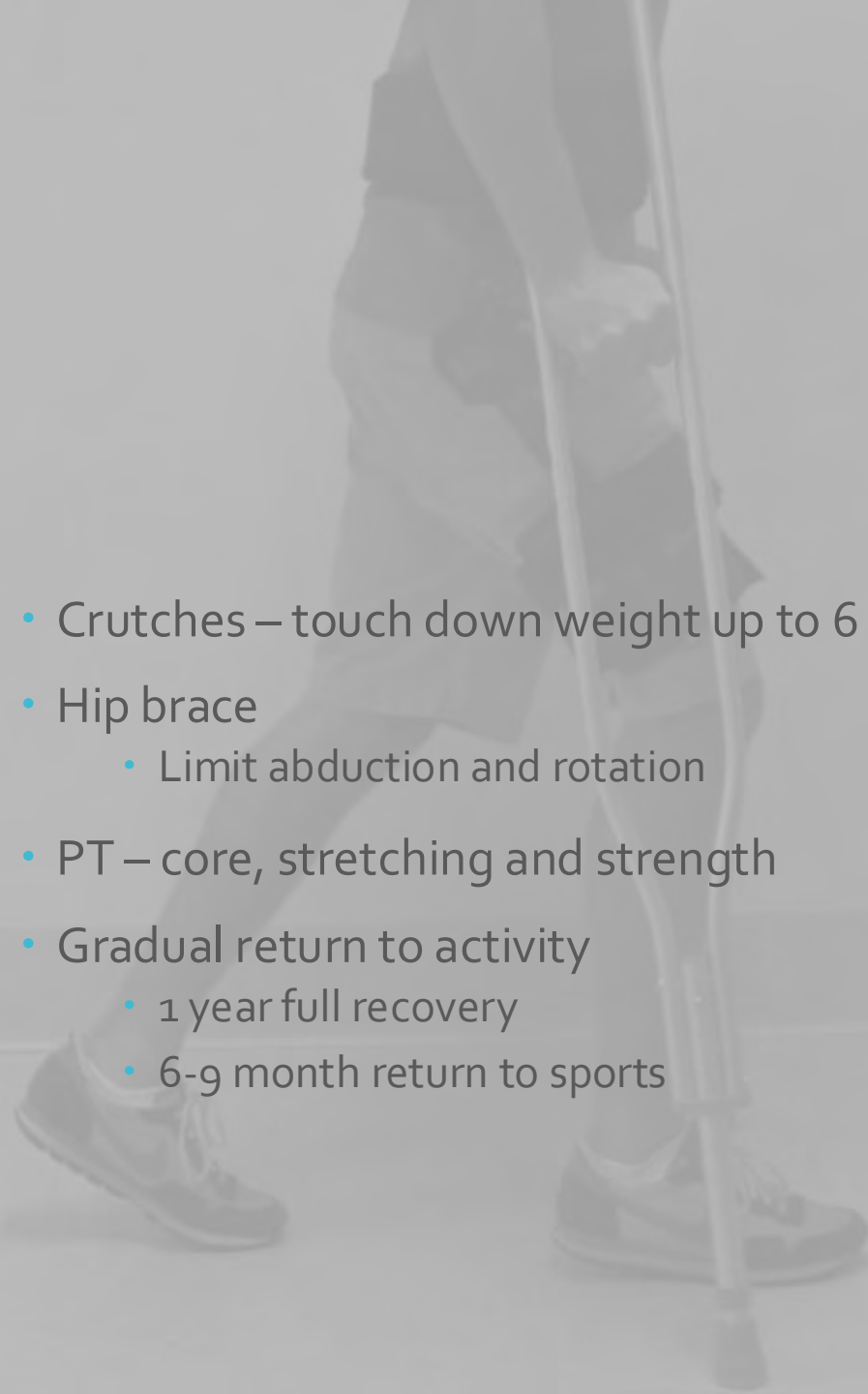




P



- Crutches – touch down weight up to 6 weeks
- Hip brace
 - Limit abduction and rotation
- PT – core, stretching and strength
- Gradual return to activity
 - 1 year full recovery
 - 6-9 month return to sports





complications

- AVN
- Fracture
- Instability
- Pain
- Nerve injury
- DVT
- Sexual dysfunction – distraction post related
- Failure of repair
- Narcotic related concerns

**COMPLICATIONS
AHEAD**



conclusion

- Advances in hip preservation are allowing patients a safer course of recovery.
- Hip arthroscopy is a valuable tool in managing hip pain and allowing return to high level activities.
- Continued advancements in this space should be expected.

Questions



Shout out to our WC program!



- 2014- 3 Million work place injuries
 - In the US – average 3.2/100 FTE
 - Of those 30% lose days from work
 - 2008 – 1.1M work related individuals missed 8.5M days of work
- Employees who do not return to work within 6 months, < 50% RTW
- WC programs can return injured workers back to work 1-3 months faster

Thank You!

