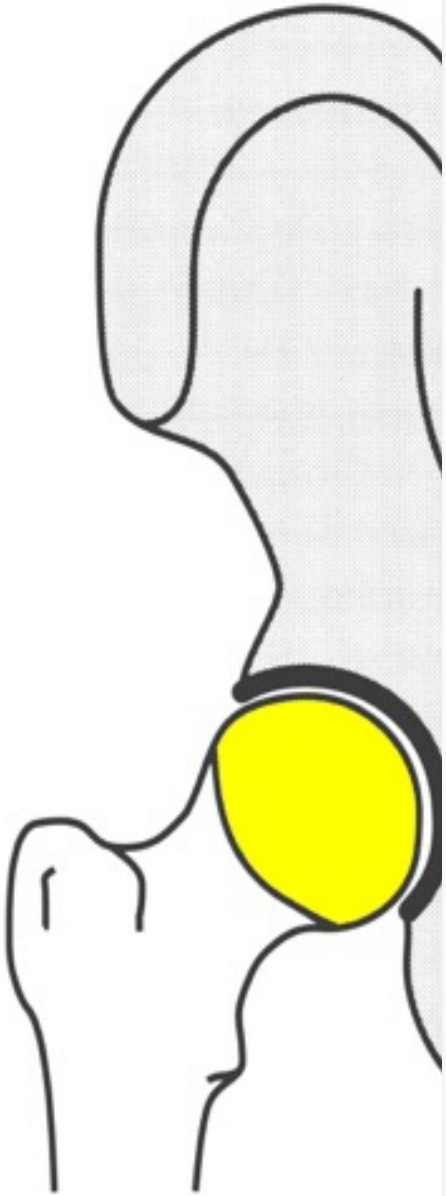
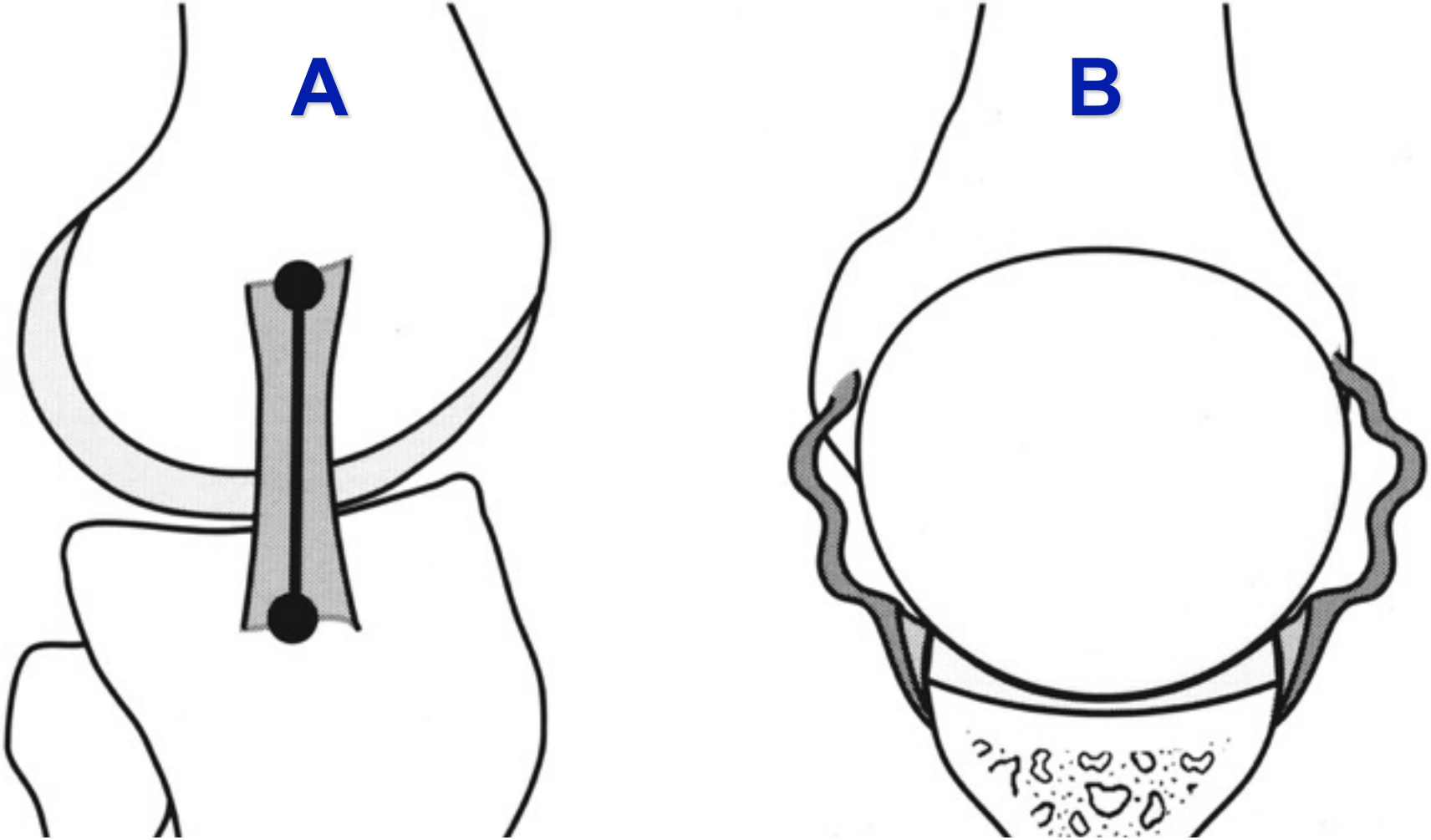

SHOULDER
INSTABILITY
2016


“MY HOW THINGS HAVE CHANGED”



"On a socket not in a socket"

or stability
ater motion
ow (2.5mm)
e 1/3 of HH
IC than hip

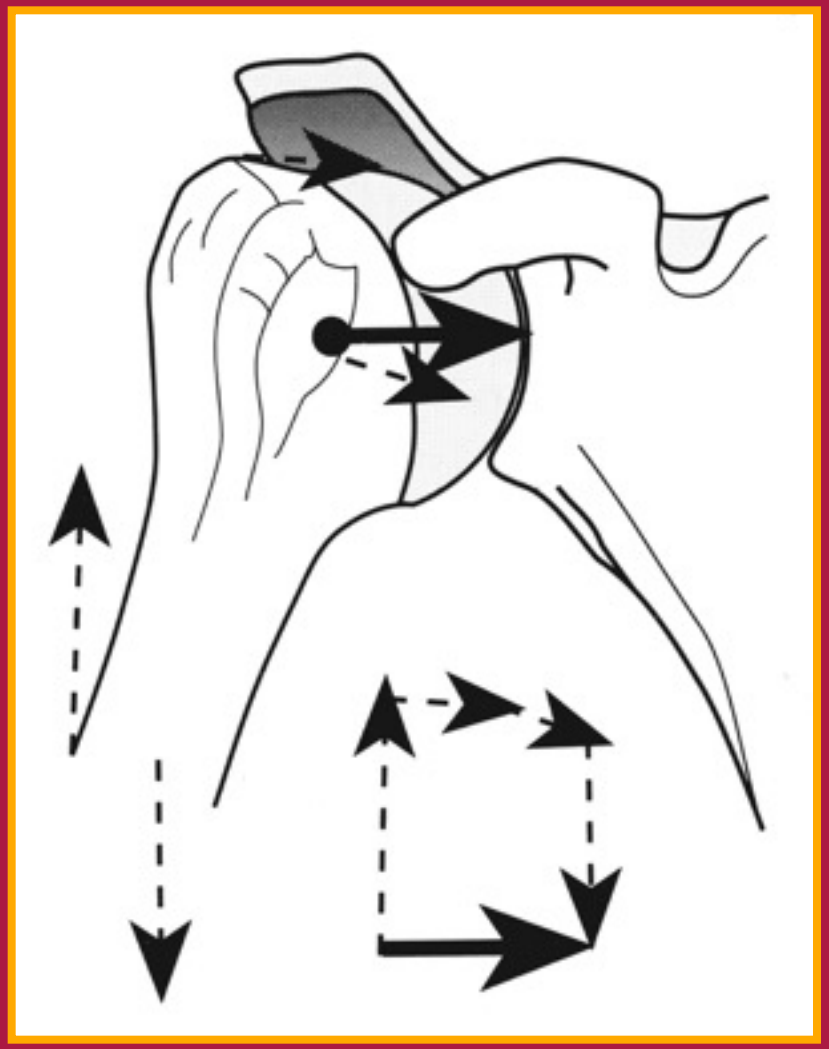


In contrast with the knee, where the ligaments remain isometric during joint motion (A), the GHL's are slack in many joint positions (B)

SHOULDER STABILIZERS

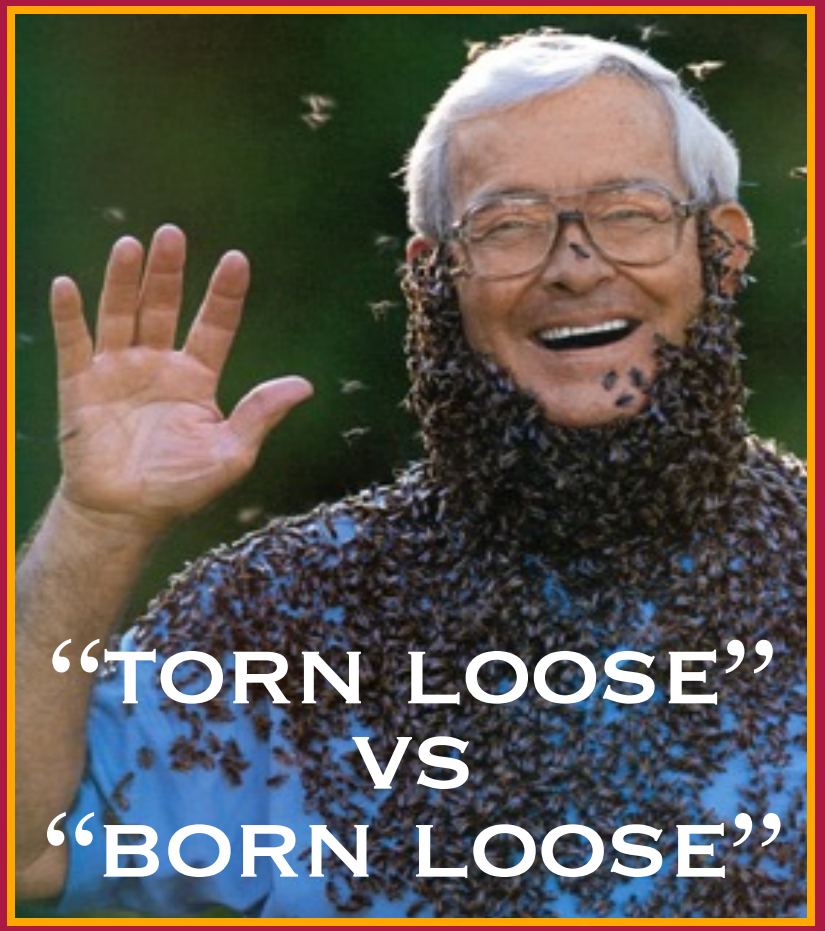
- STATIC
  - Glenoid fossa
  - Capsule
  - Ligaments
- DYNAMIC
  - Muscle groups

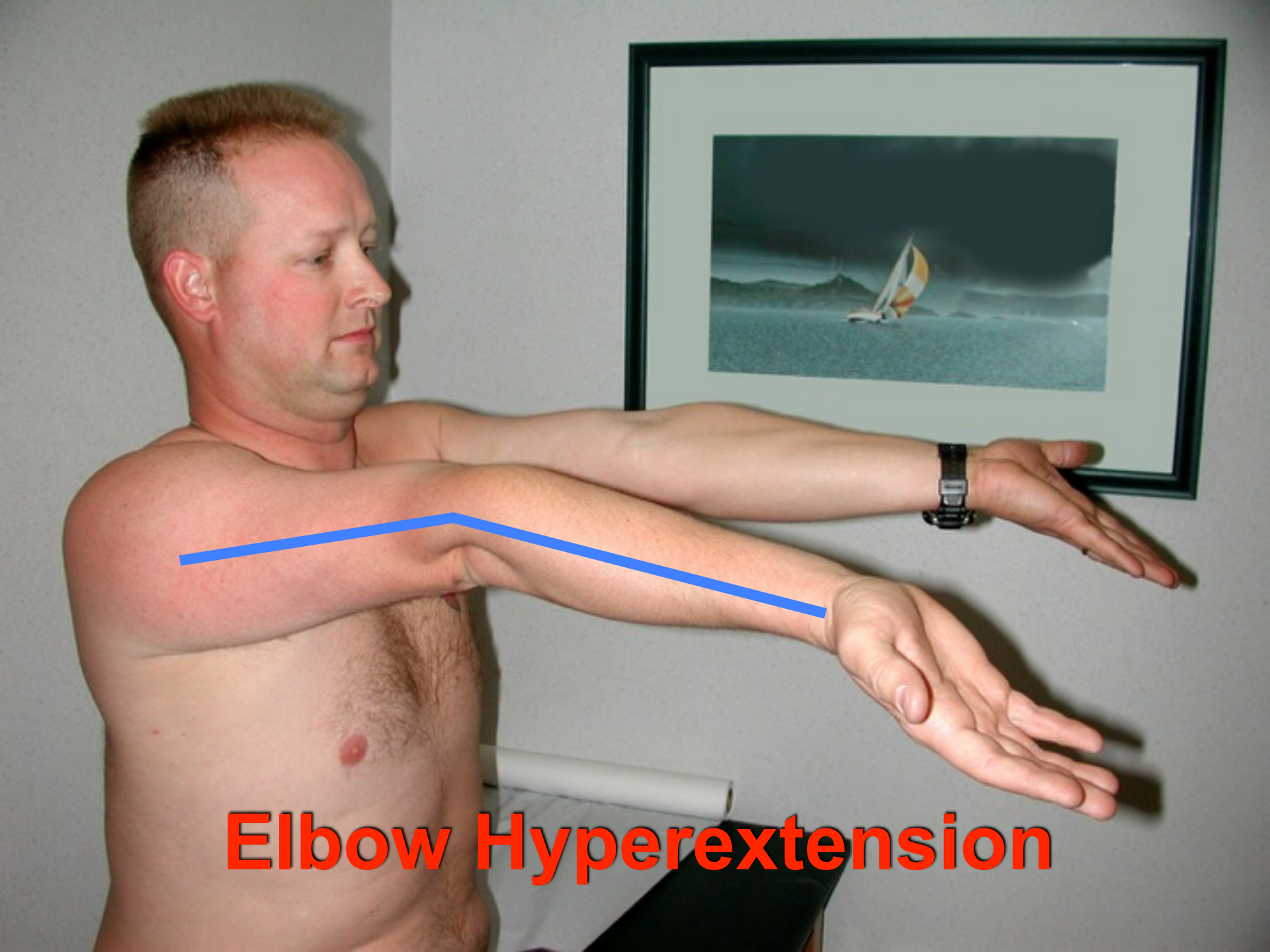
- Net humeral jnt reaction



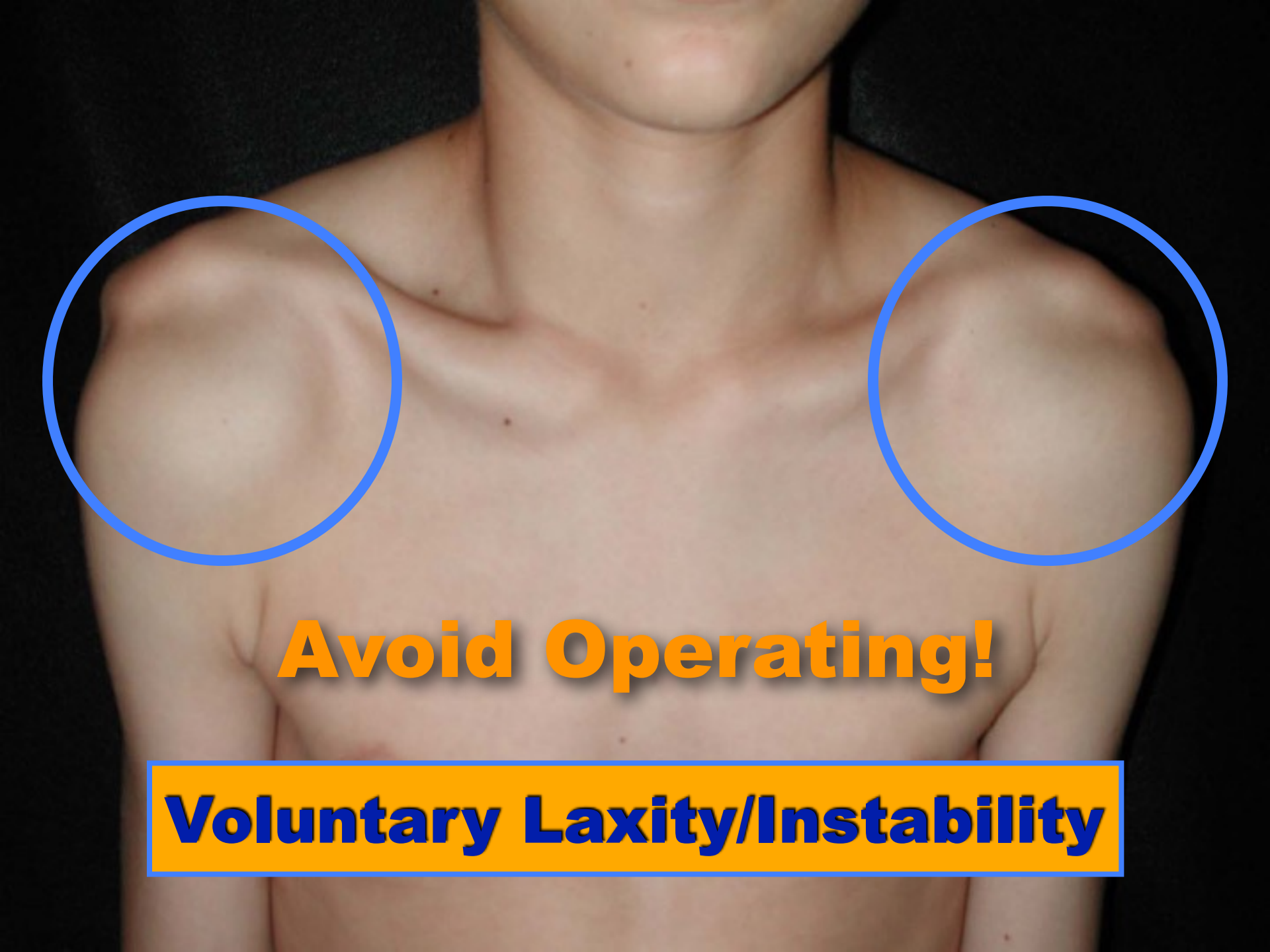
INSTABILITY CLASSIFICATION

- TUBS Syndrome
  - Traumatic episode
  - Unidirectional
  - Bankart lesion
  - Surgical repair
- AMBRII Syndrome
  - Atraumatic
  - Multidirectional
  - Bilateral
  - Rehab 1° tx
  - Surgical repair rare
  - Capsular plication

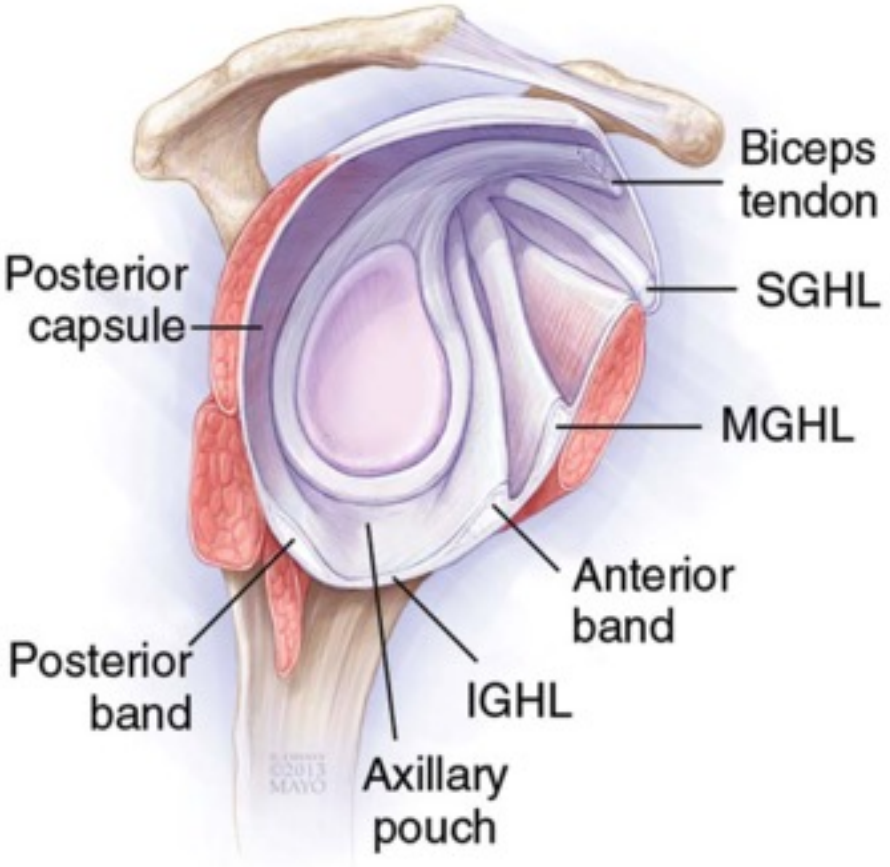


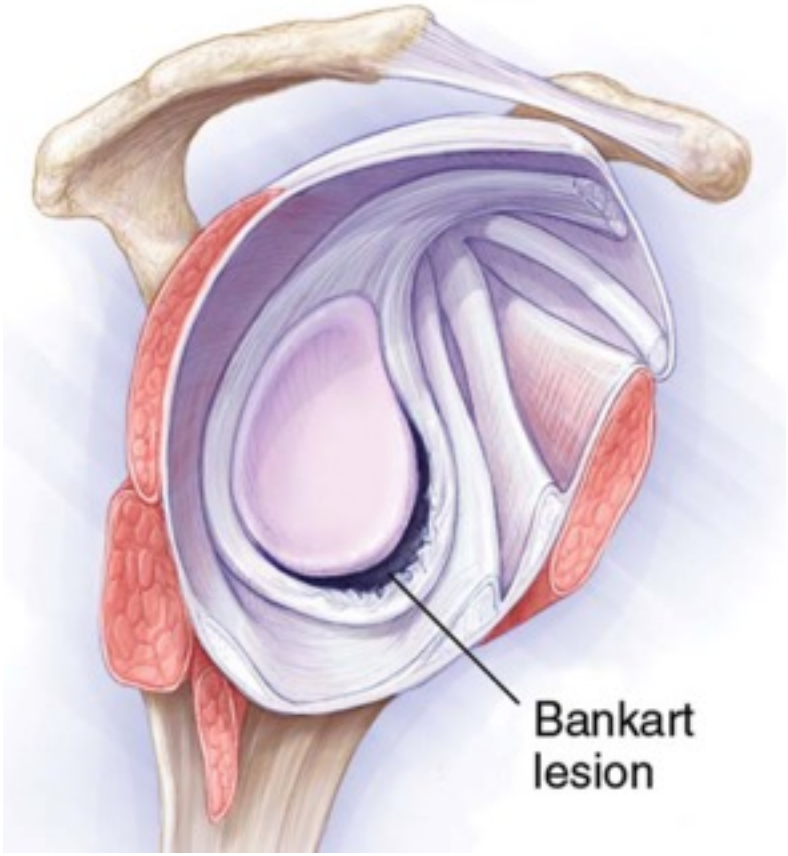

Elbow Hyperextension

Hyperlaxity


Avoid Operating!
Voluntary Laxity/Instability

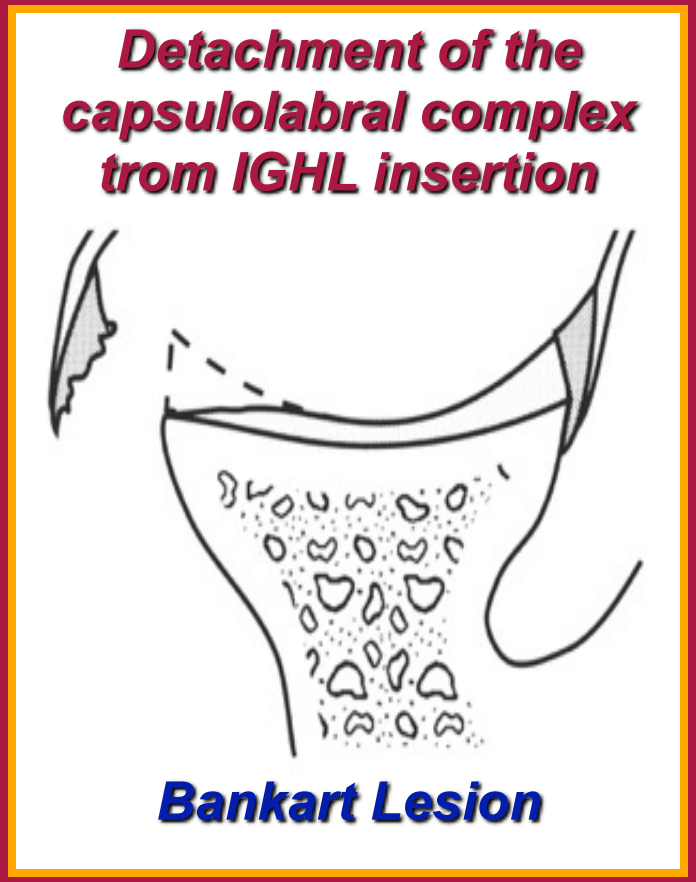
Bankart Lesion





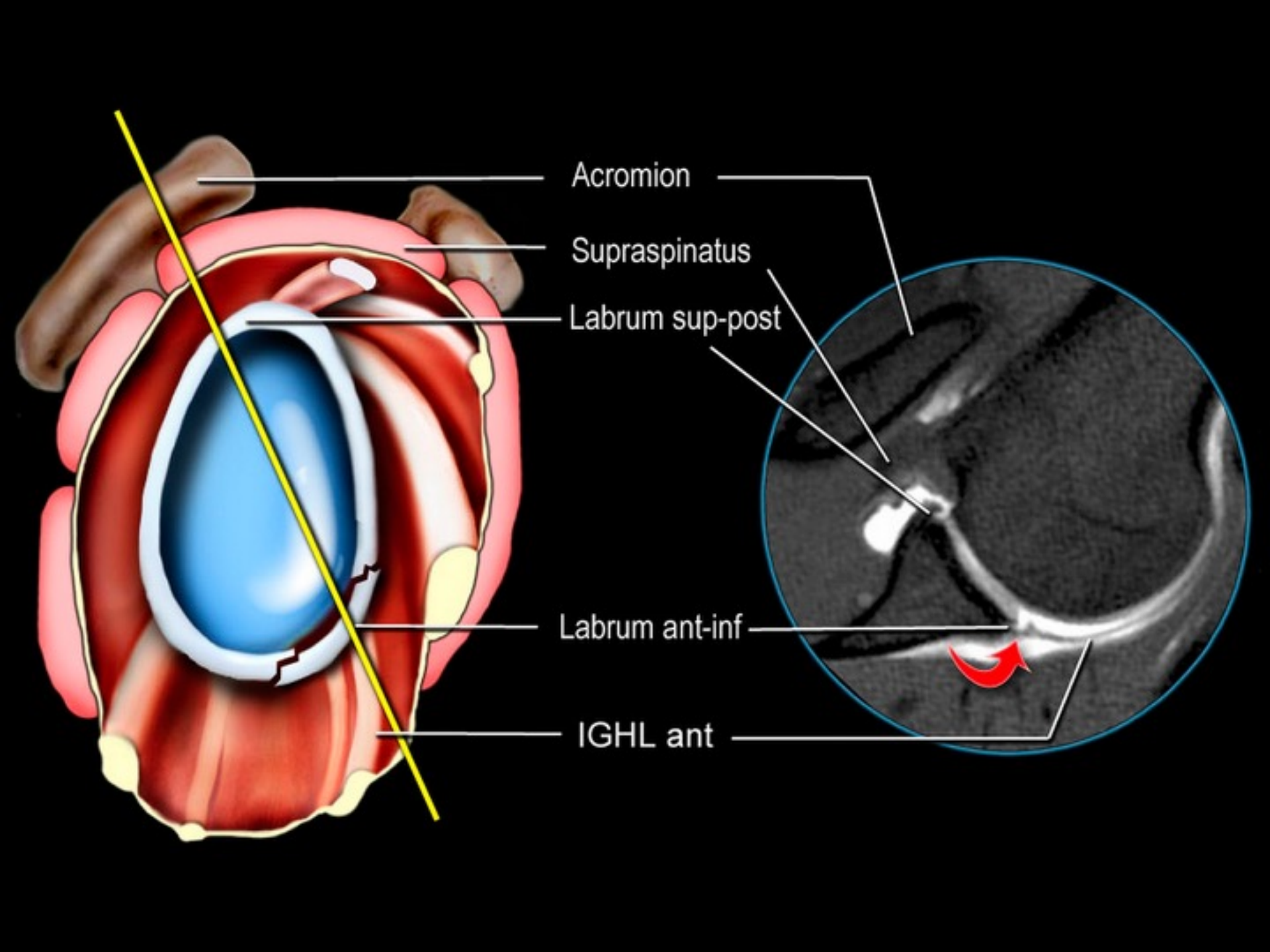
TUBS ESSENTIAL LESION

- Present in > 90% traumatic dlc
- In lab, Bankart alone doesn't allow enough ant translation for dlc
- "Essential lesion" is associated with variable stretching of IGHL complex

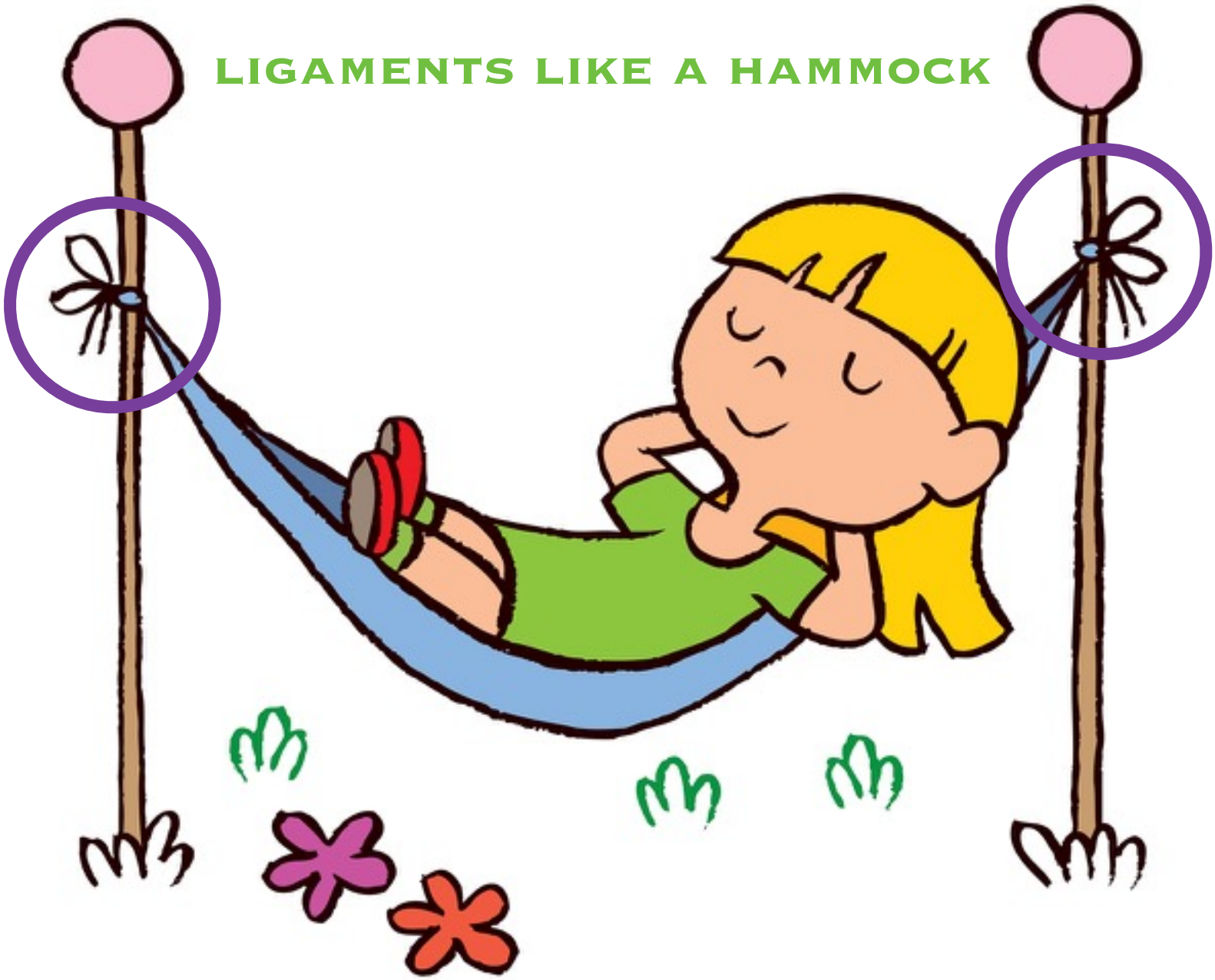



CHECK FOR ATROPHY

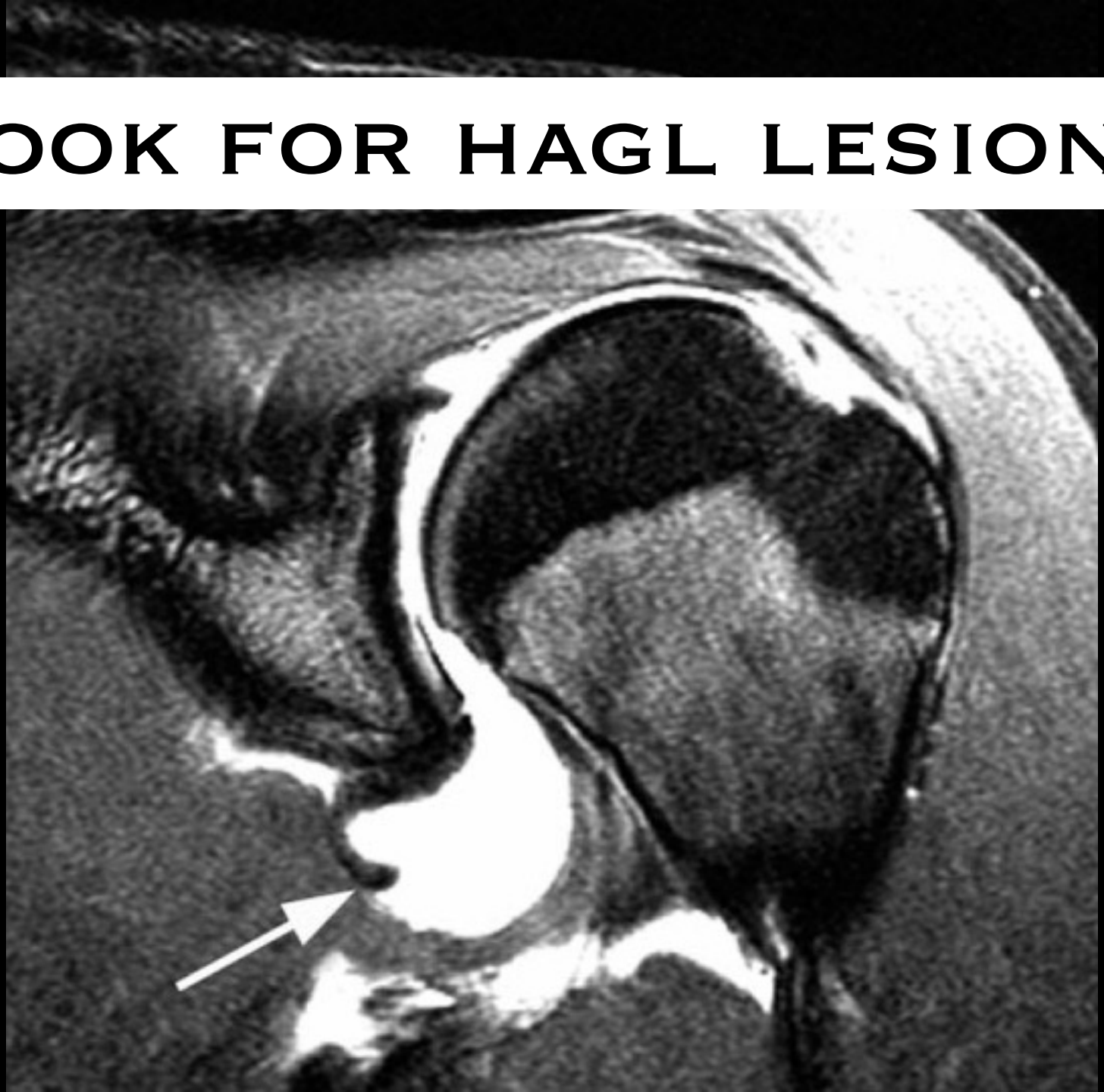

Scapular Dyskinesis

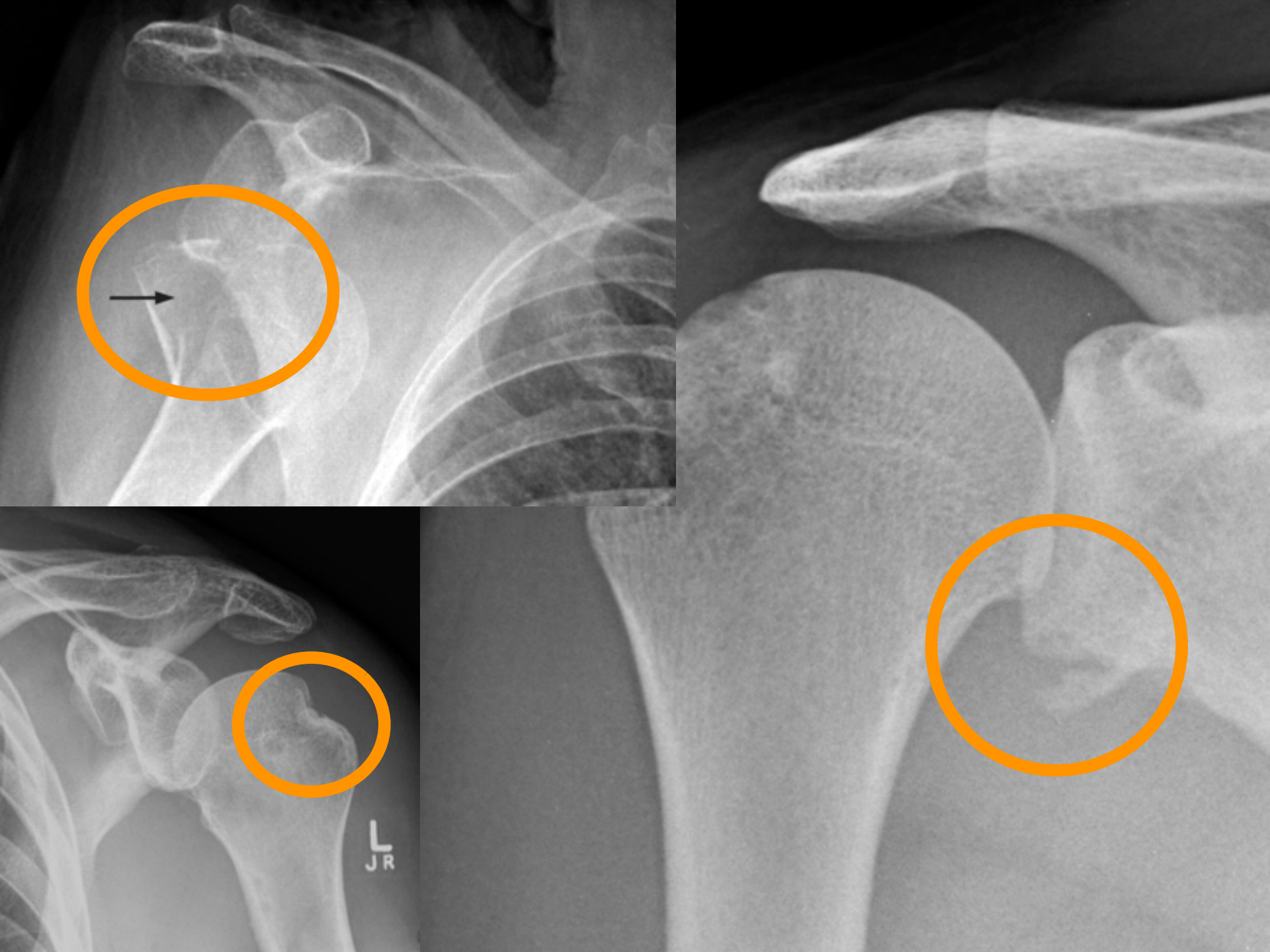

Acromion
Supraspinatus
Labrum sup-post
Labrum ant-inf
IGHL ant

LIGAMENTS LIKE A HAMMOCK

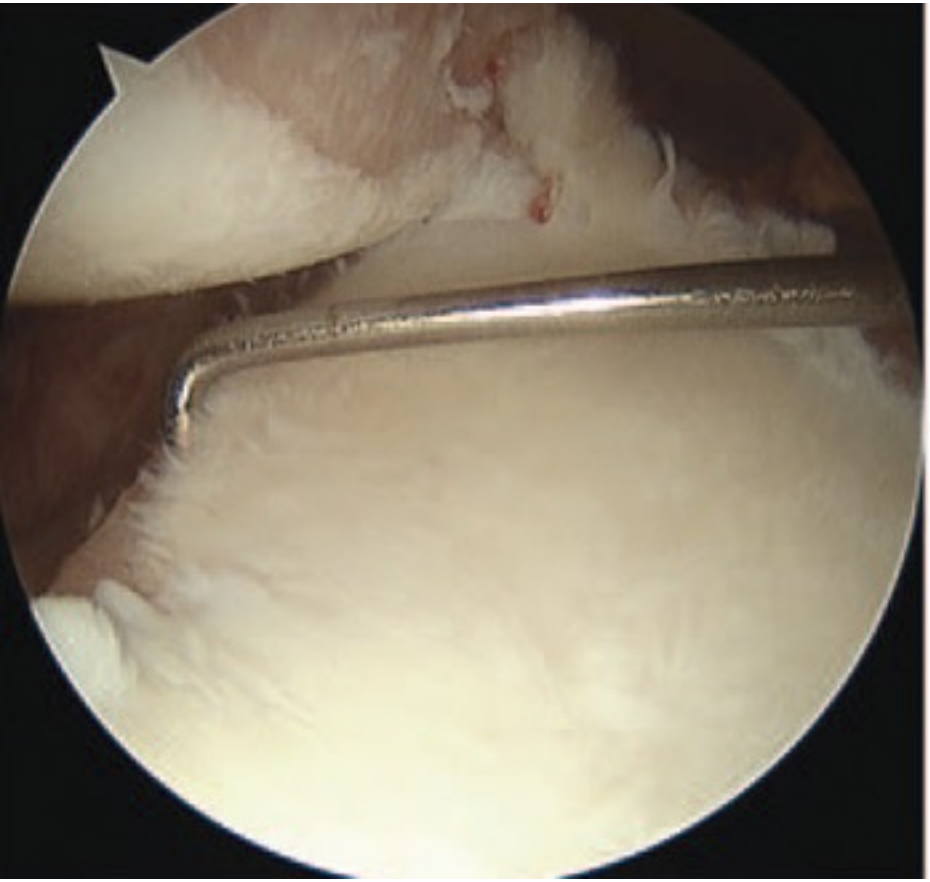


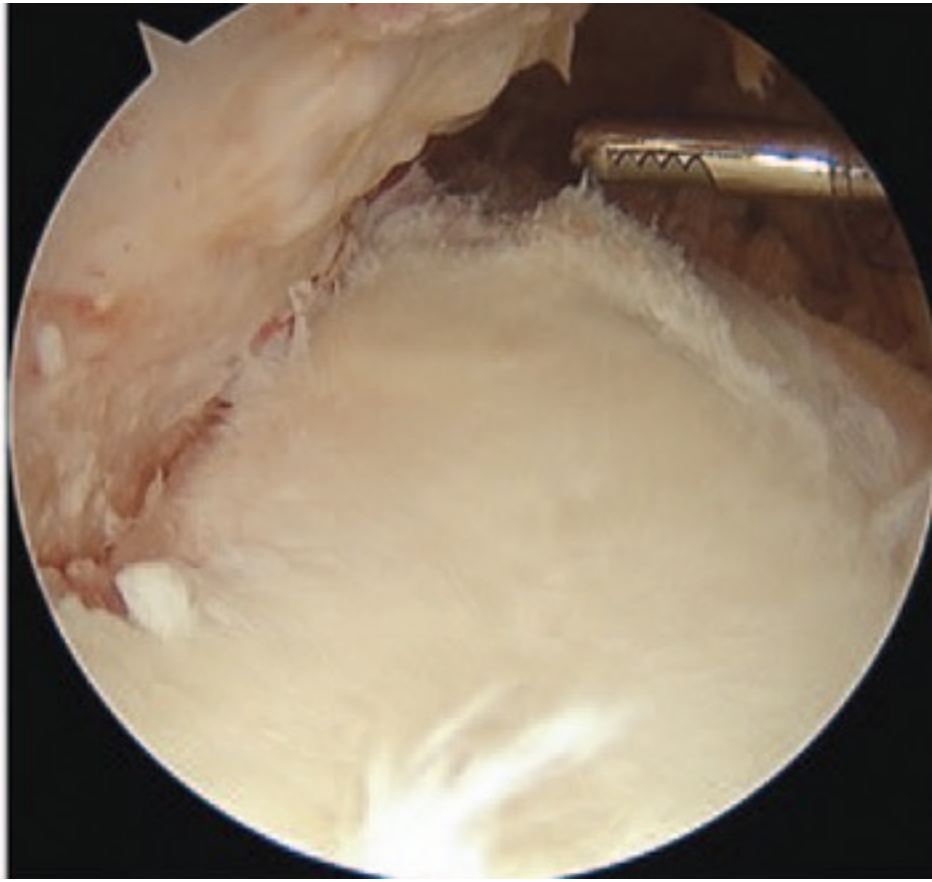
LOOK FOR HAGL LESIONS




L
JR

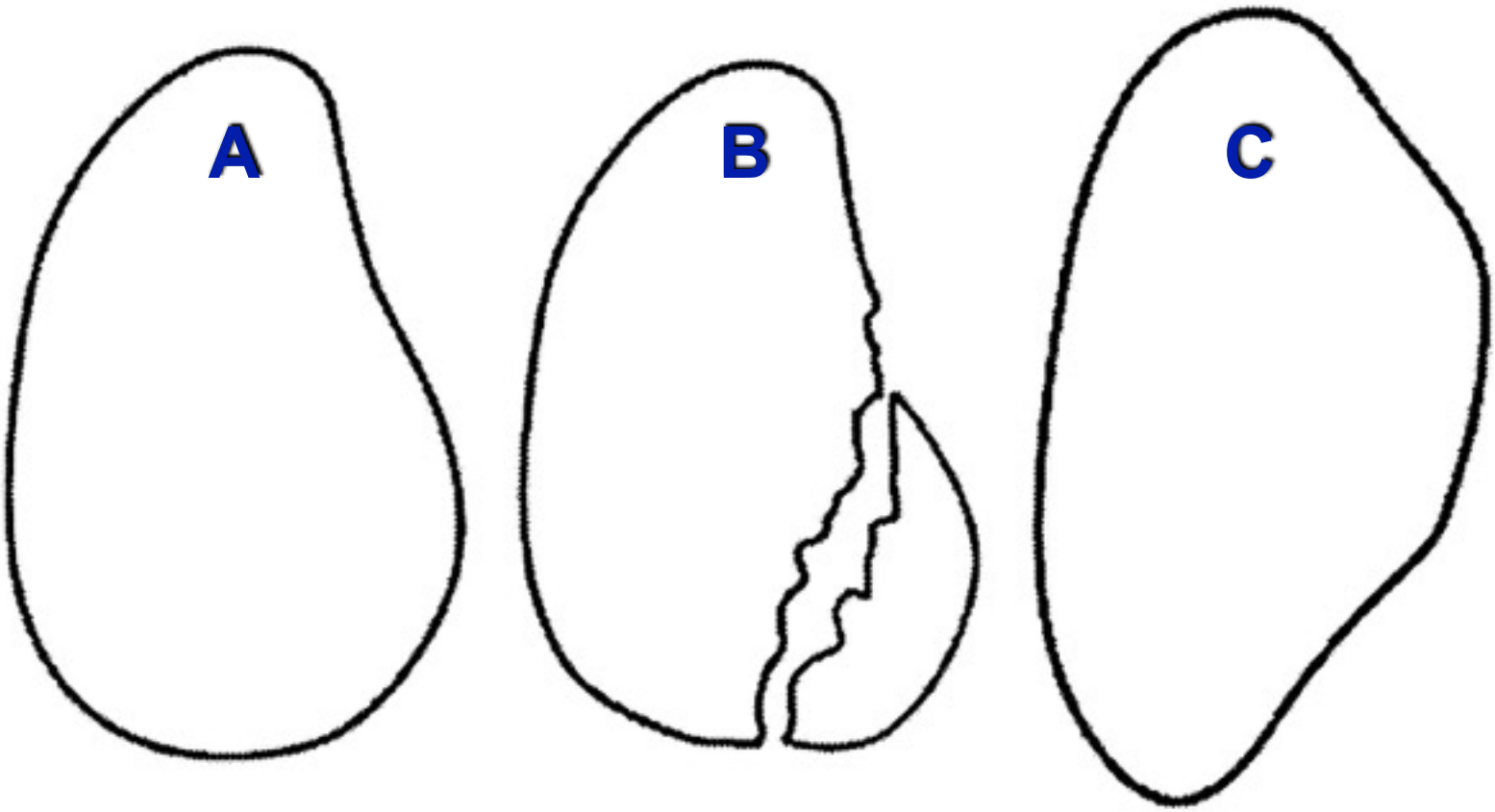
BIPOLAR LESIONS



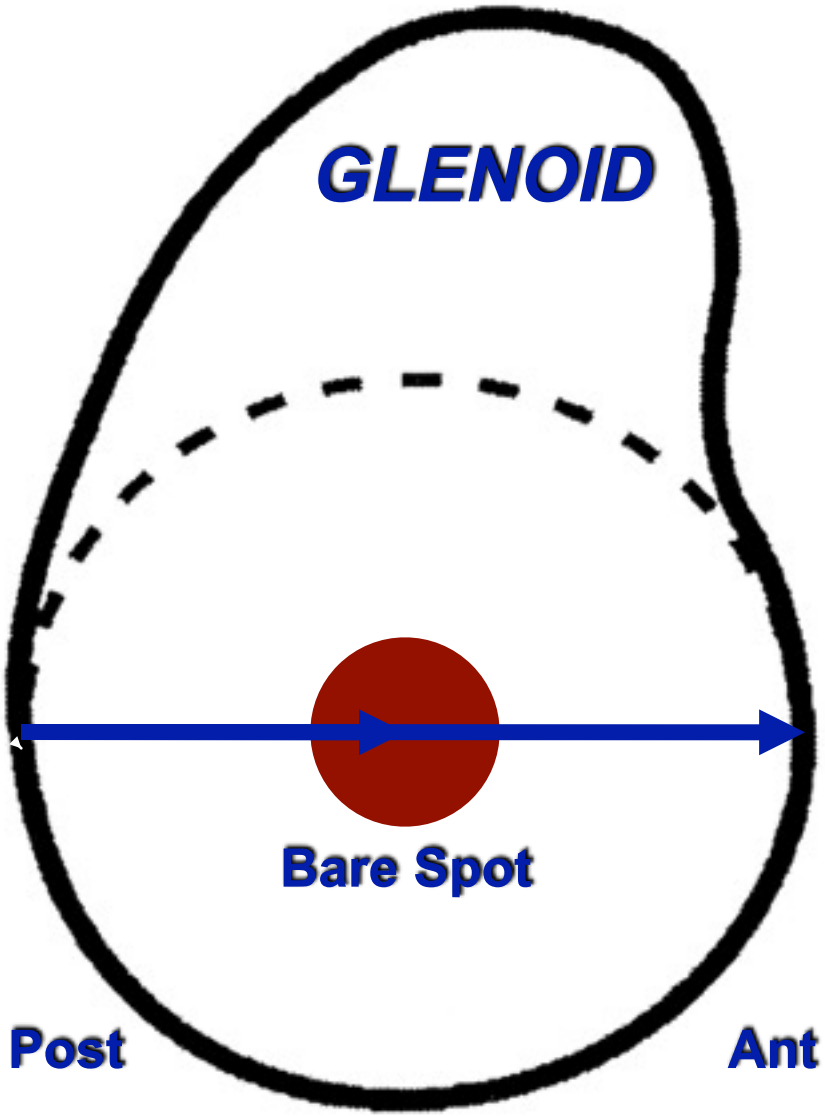


BONY BANKART + HILL-SACHS LESIONS

GLENOID MORPHOLOGY



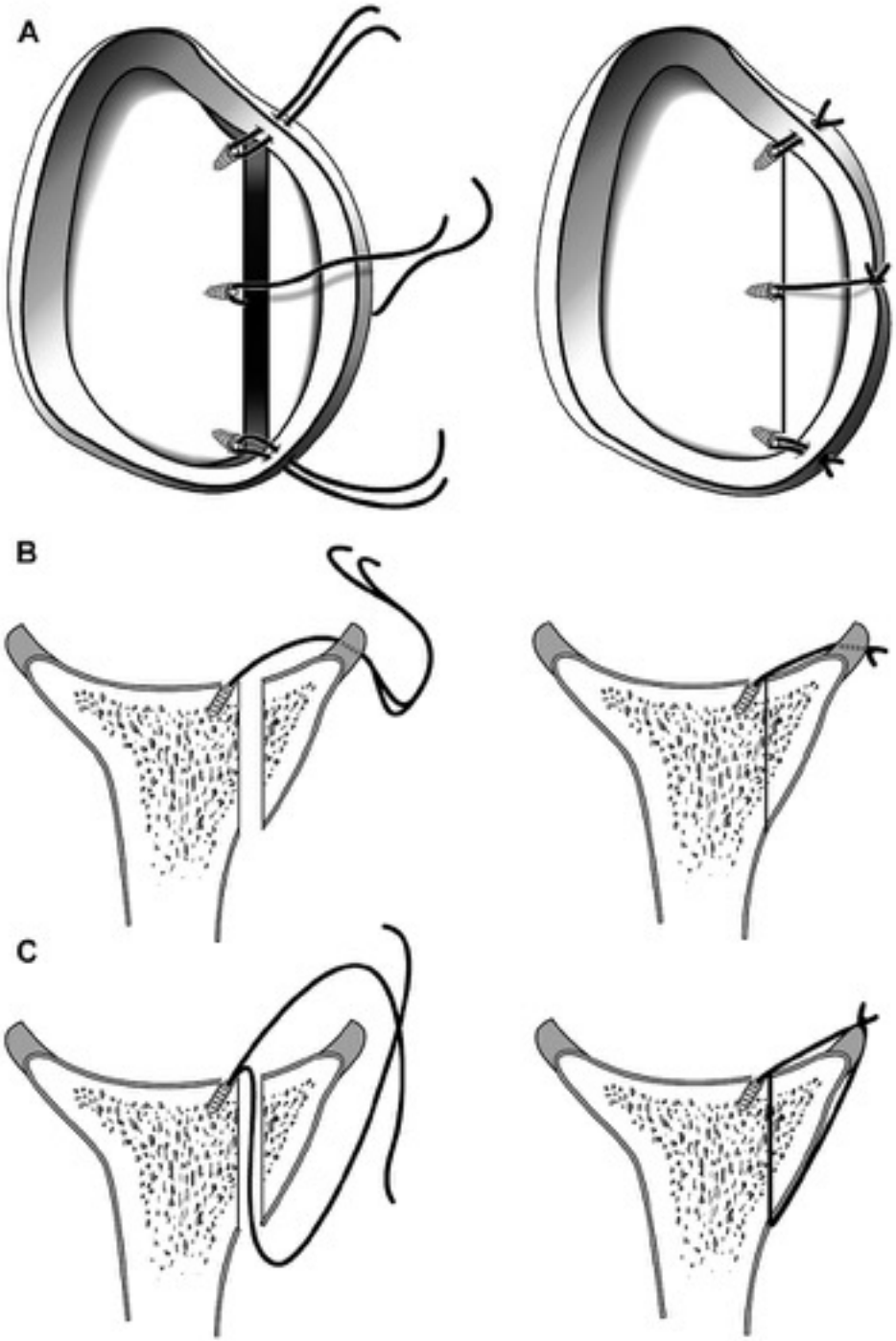
(A) (B) A compression Bankart lesion can also create an inverted pear glenoid



The bare spot of the glenoid is located at the geometric center of the inferior glenoid, allowing accurate measurement of the anatomy of the bony glenoid even in cases of bone loss.

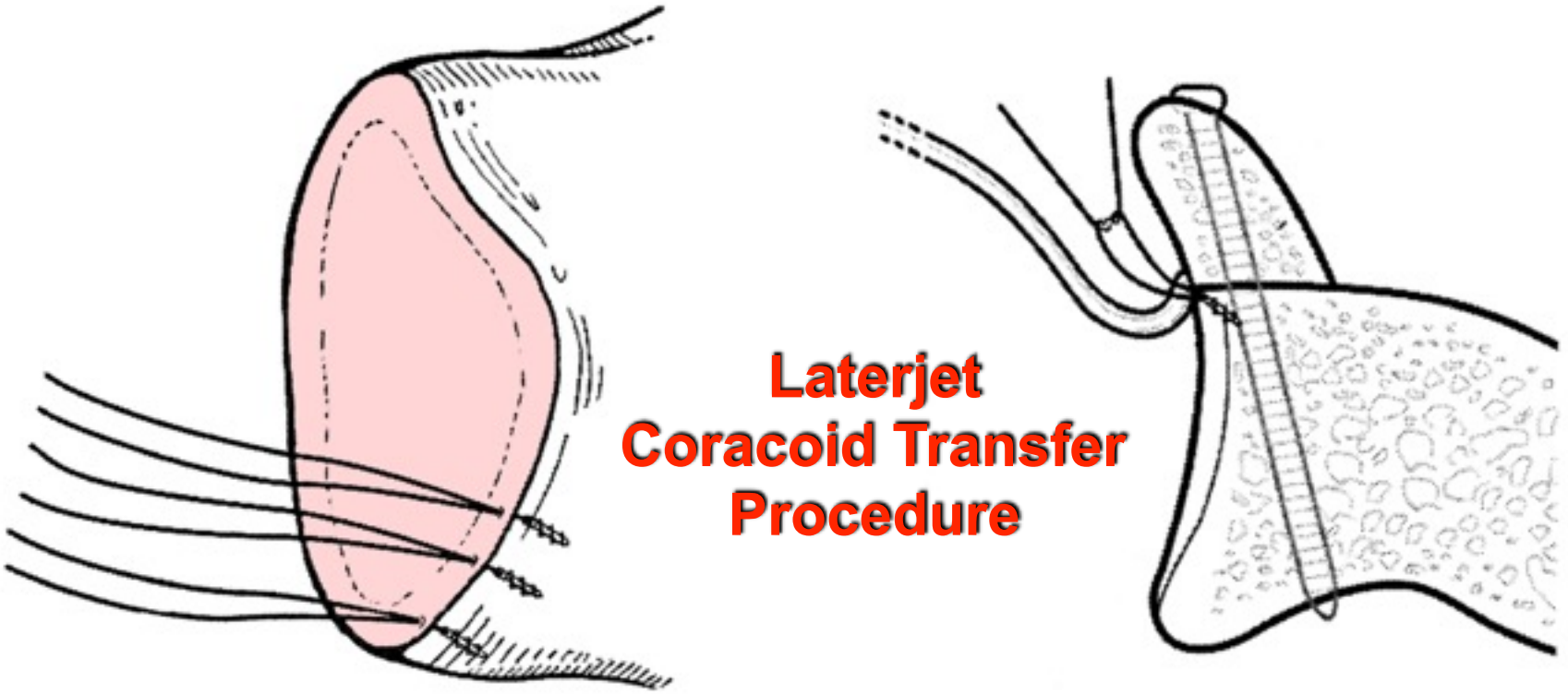
Anteroinferior glenoid bone loss > 25% is associated with a poor prognosis

BONY



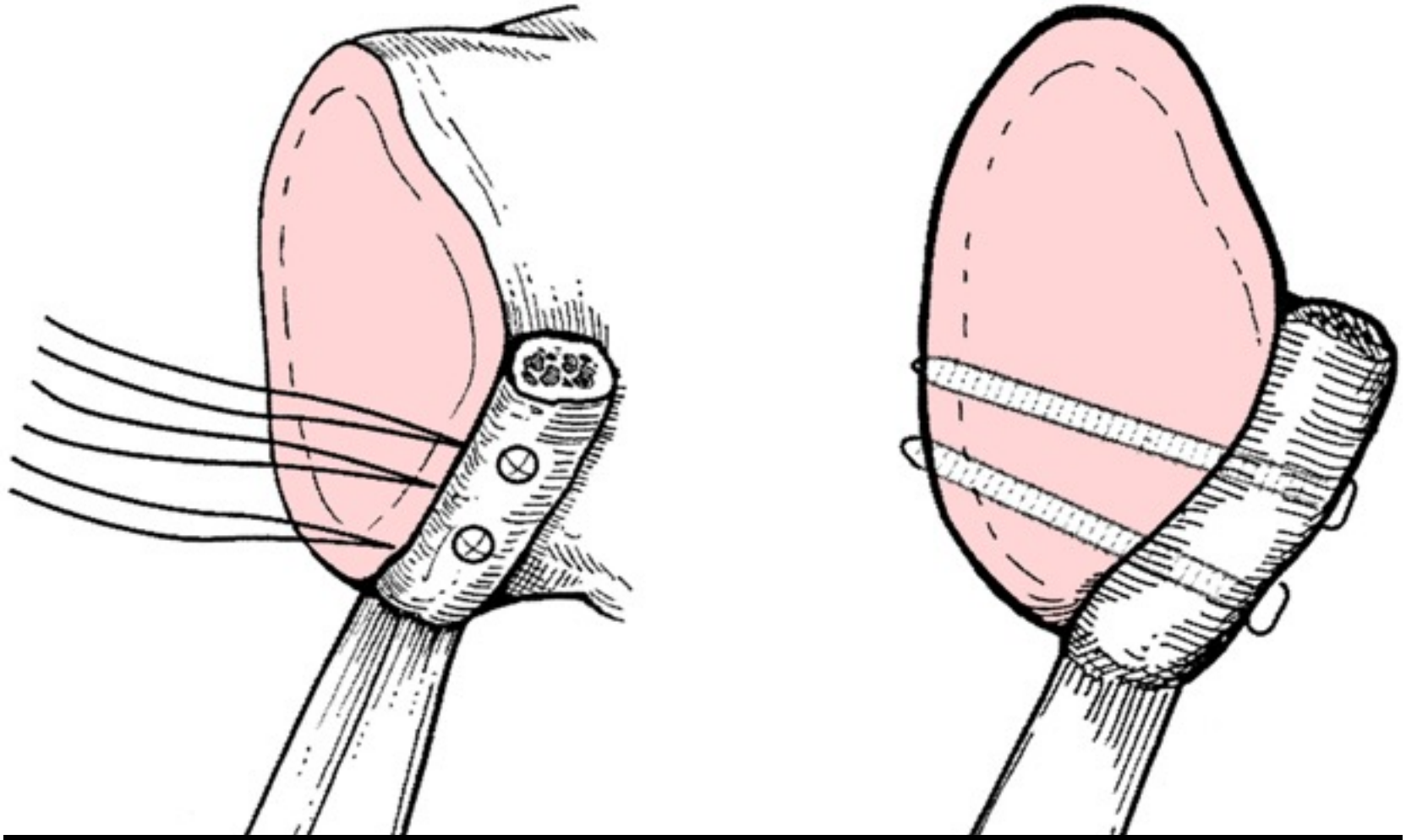
BANKART

Suture anchors are used to attach labrum

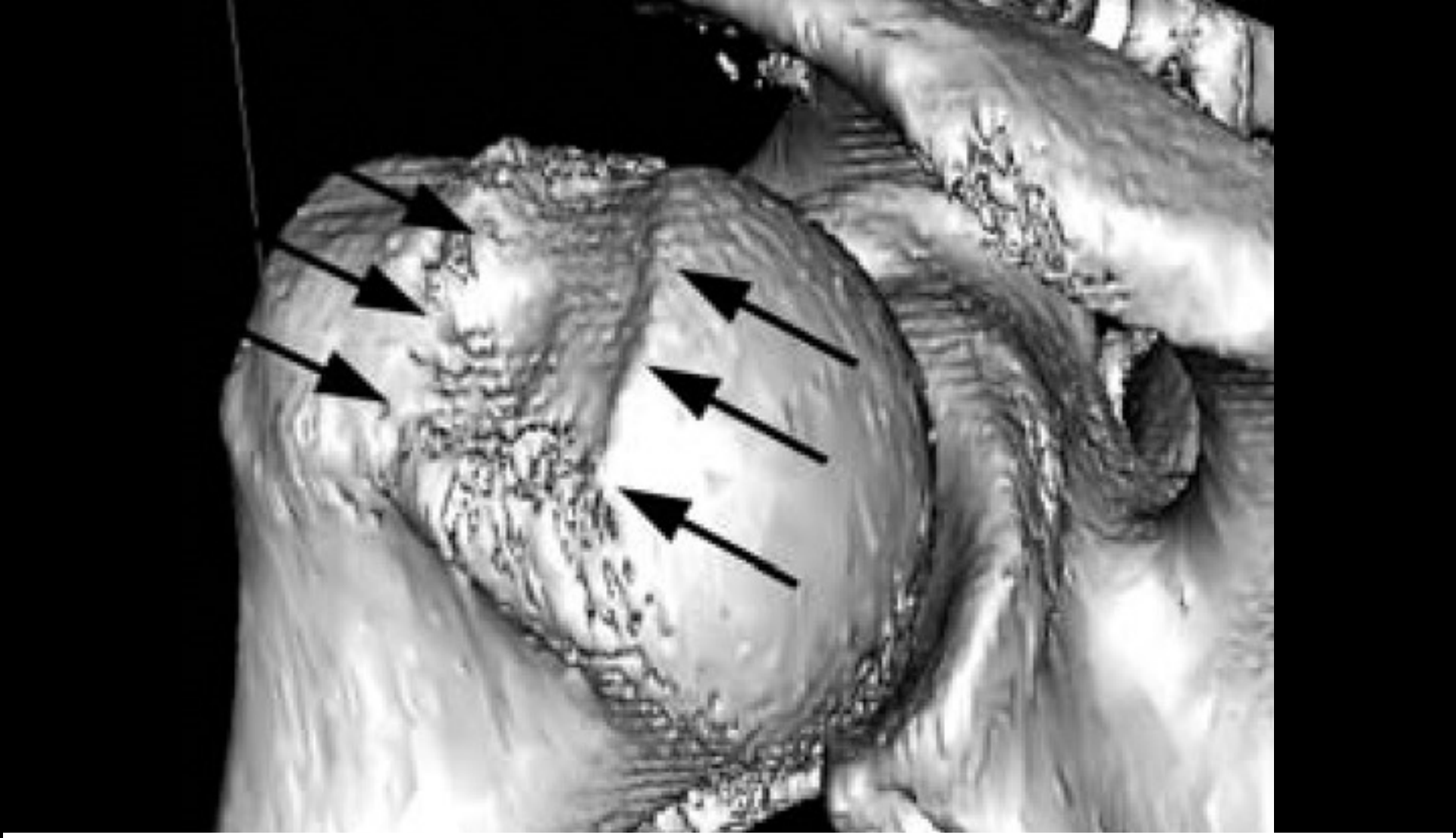


The graft is placed so that it becomes an extra-articular platform that acts as an extension of the articular arc of the glenoid

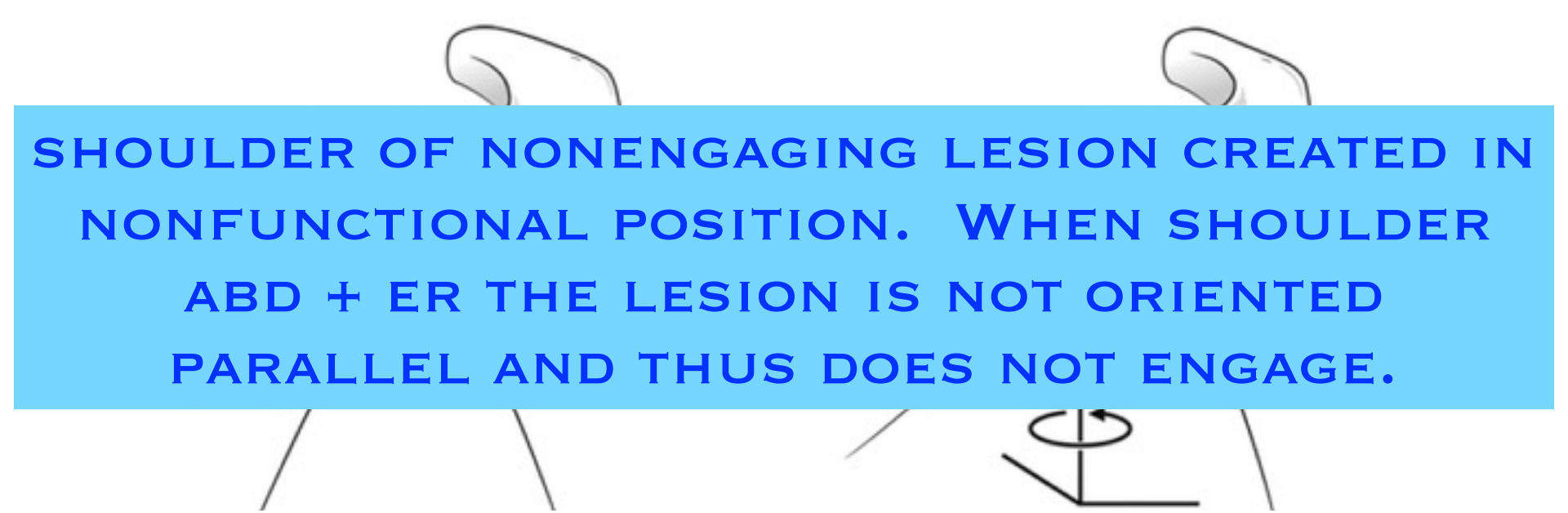
Coracoid graft fixed to glenoid with 2 screws



Graft restores the pear shape of glenoid

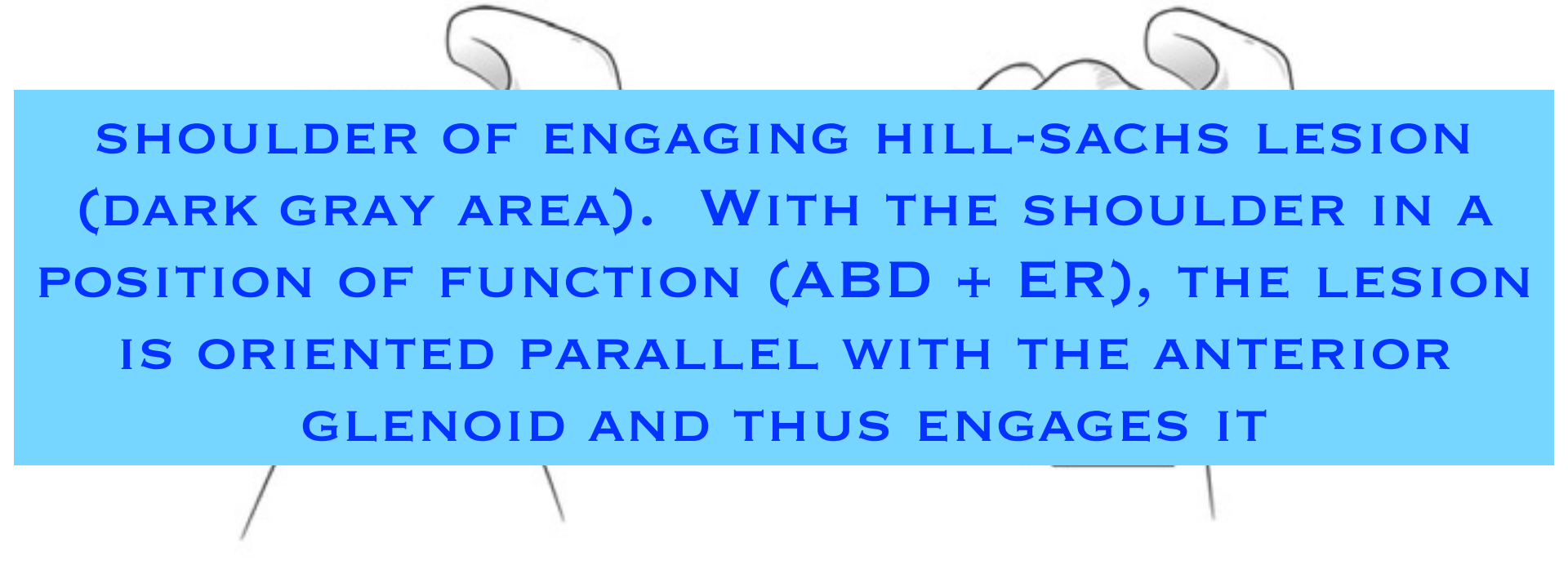


THREE DIMENSIONAL CT SCAN SHOWING TYPICAL LOCATION OF HILL-SACHS LESION AT THE SUPEROLATERAL ASPECT OF HUMERAL HEAD



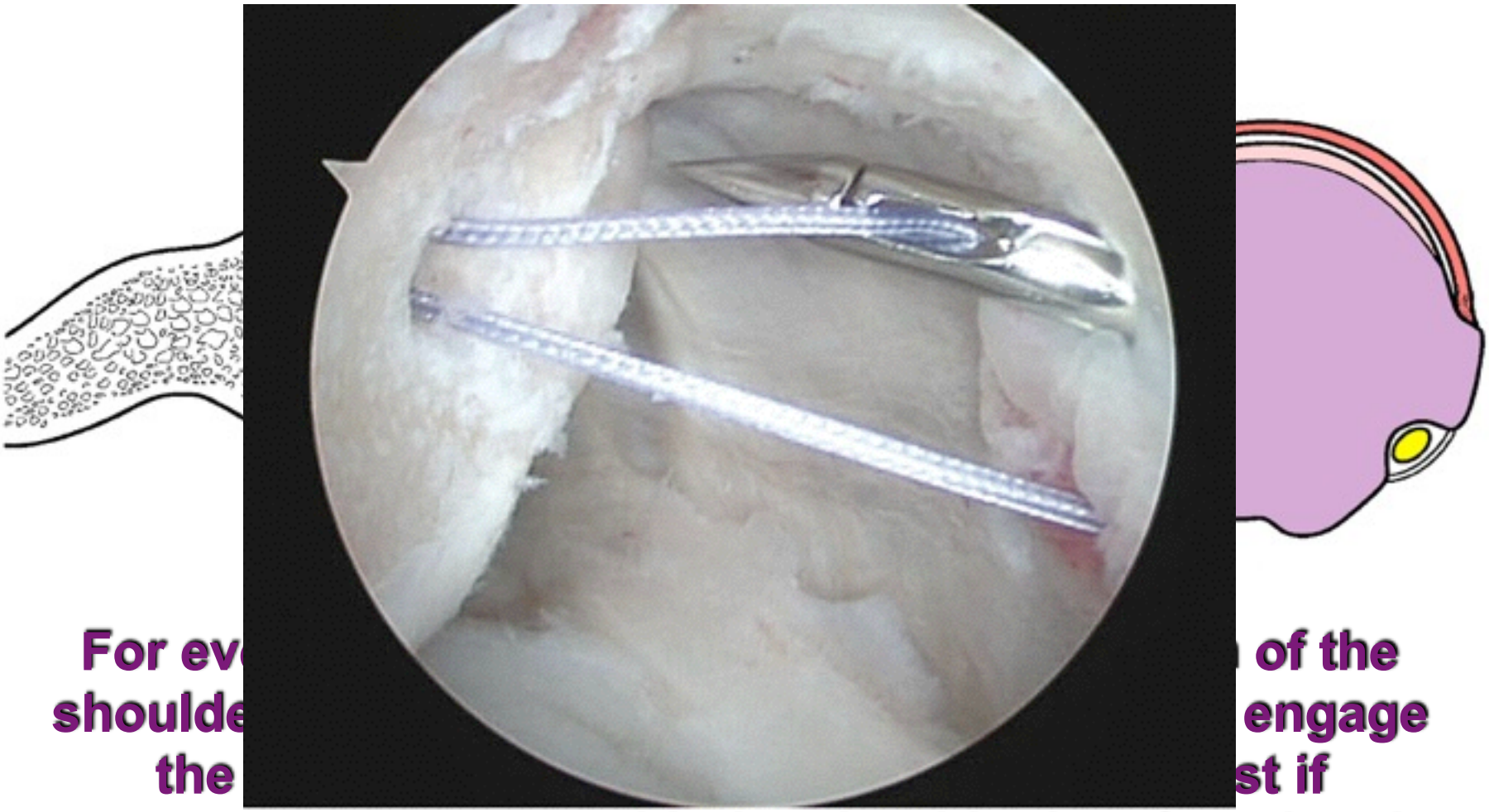
SHOULDER OF NONENGAGING LESION CREATED IN NONFUNCTIONAL POSITION. WHEN SHOULDER ABD + ER THE LESION IS NOT ORIENTED PARALLEL AND THUS DOES NOT ENGAGE.

ENGAGING VS NONENGAGING HILL-SACKS LESION

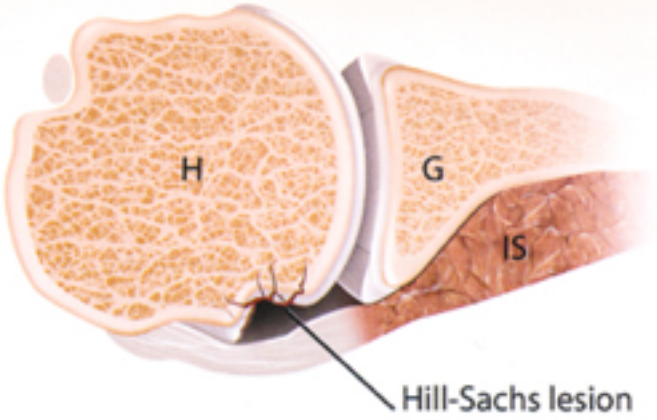


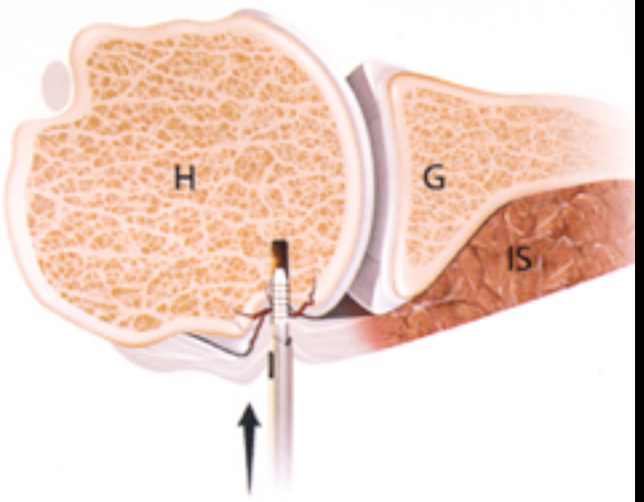
SHOULDER OF ENGAGING HILL-SACHS LESION (DARK GRAY AREA). WITH THE SHOULDER IN A POSITION OF FUNCTION (ABD + ER), THE LESION IS ORIENTED PARALLEL WITH THE ANTERIOR GLENOID AND THUS ENGAGES IT

Engaging vs Nonengaging Hill-Sachs Lesion



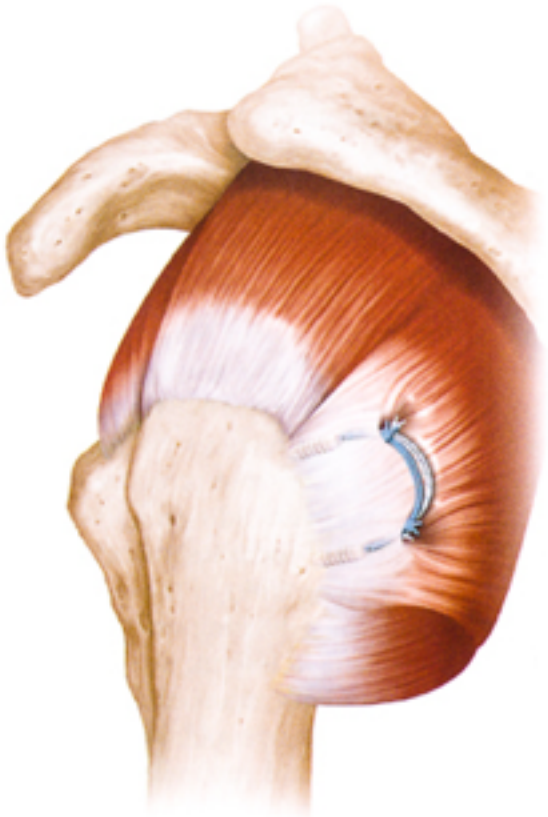
For ev of the
shoulde engage
the st if
engagement occurs with the shoulder in a functional position…flexion, abduction, and external rotation

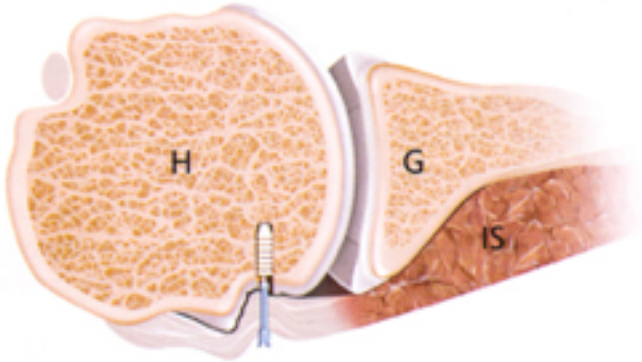




Remplissage

PLACE ANCHORS FIRST
USE LABRAL ANCHORS OR TAP
PASS SUTURES SECOND
TIE AFTER ANTERIOR RECON
DON'T OVER ADVANCE
REHAB LIKE CUFF REPAIR



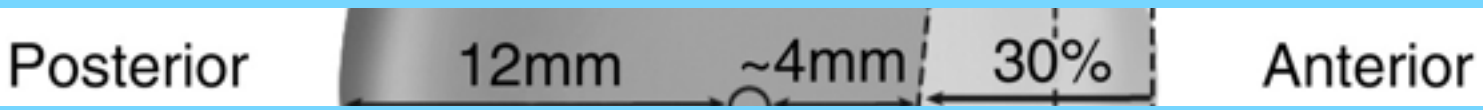


1st Time Dislocator

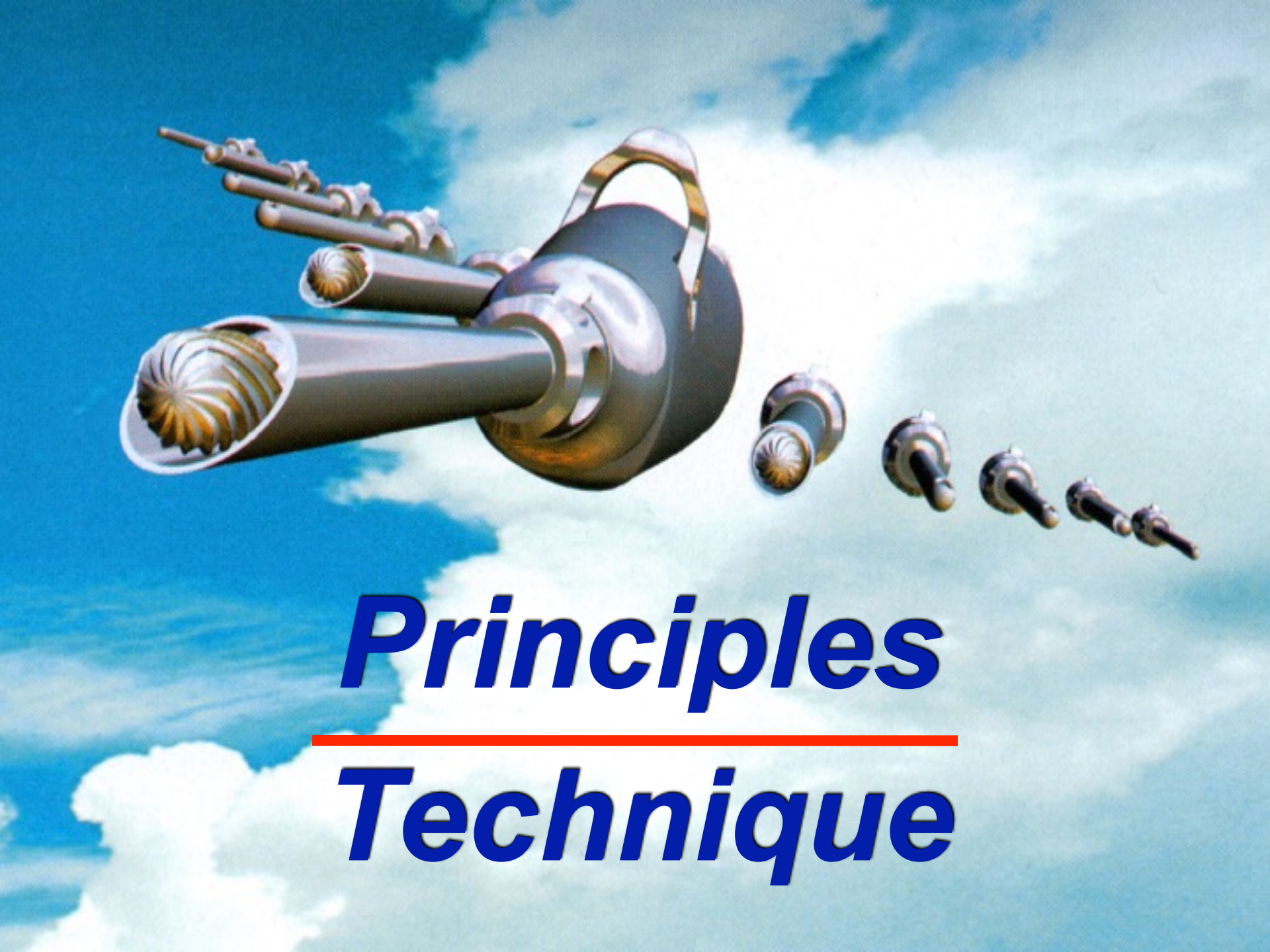
Despite incredibly high recurrence rates with nonop tx of instability in athletic young people, many surgeons continue to recommend immobilization followed by rehab as the preferred tx in all firsttime-dislocators

With repeated dislocations bone loss and articular cartilage damage are rapidly cumulative

People with recurrent dislocations whose total time with the shoulder "out of joint" is > 5h will have significant bone loss that will require bone grafting

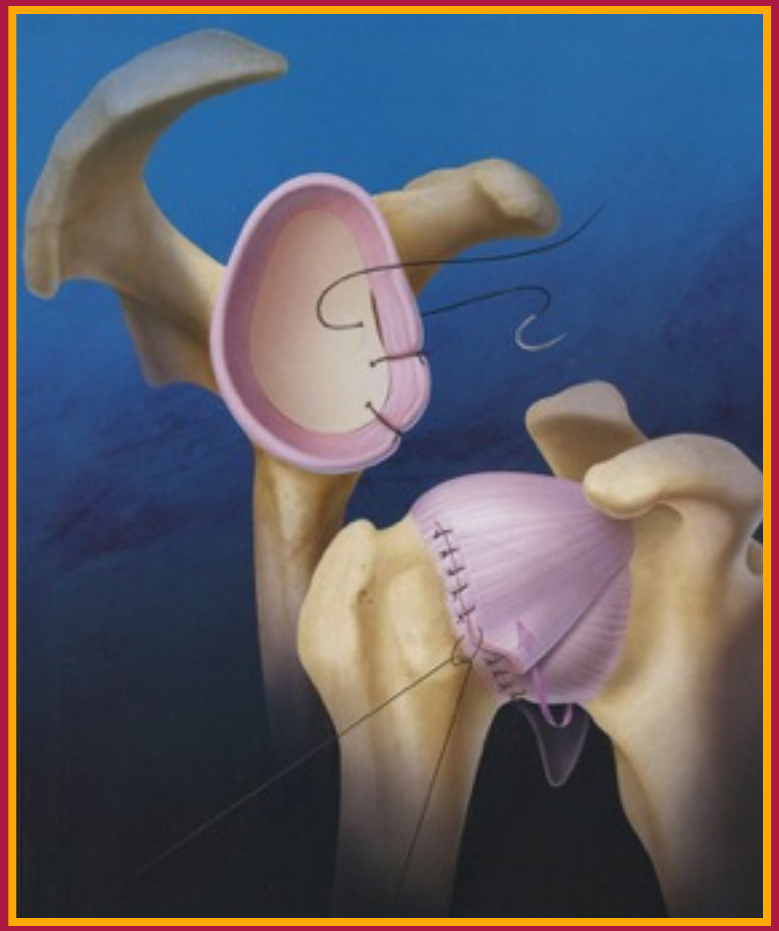


My philosophy is that I would much prefer to treat these patients with a less invasive arthroscopic procedure before bone loss reaches a significant level necessitating a more invasive option


Principles
Technique

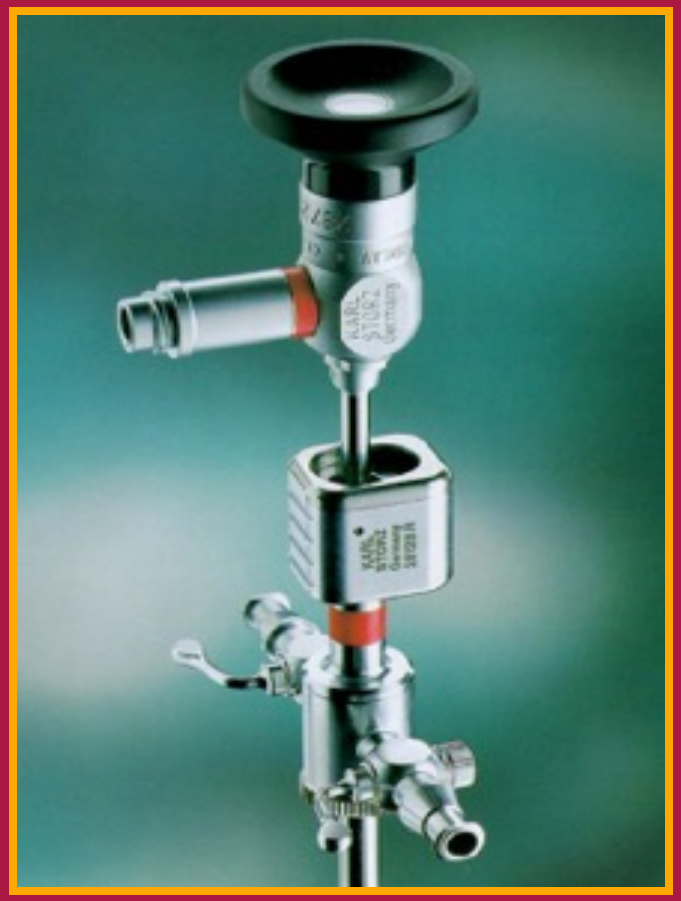
OPERATIVE PRINCIPLES

- Define pathology
- Good exposure
- Mobilize labrum
- Prepare glenoid
- Reattach labrum
- Tighten capsule
- Associated lesions
- Minimal morbidity
- Scope or Open



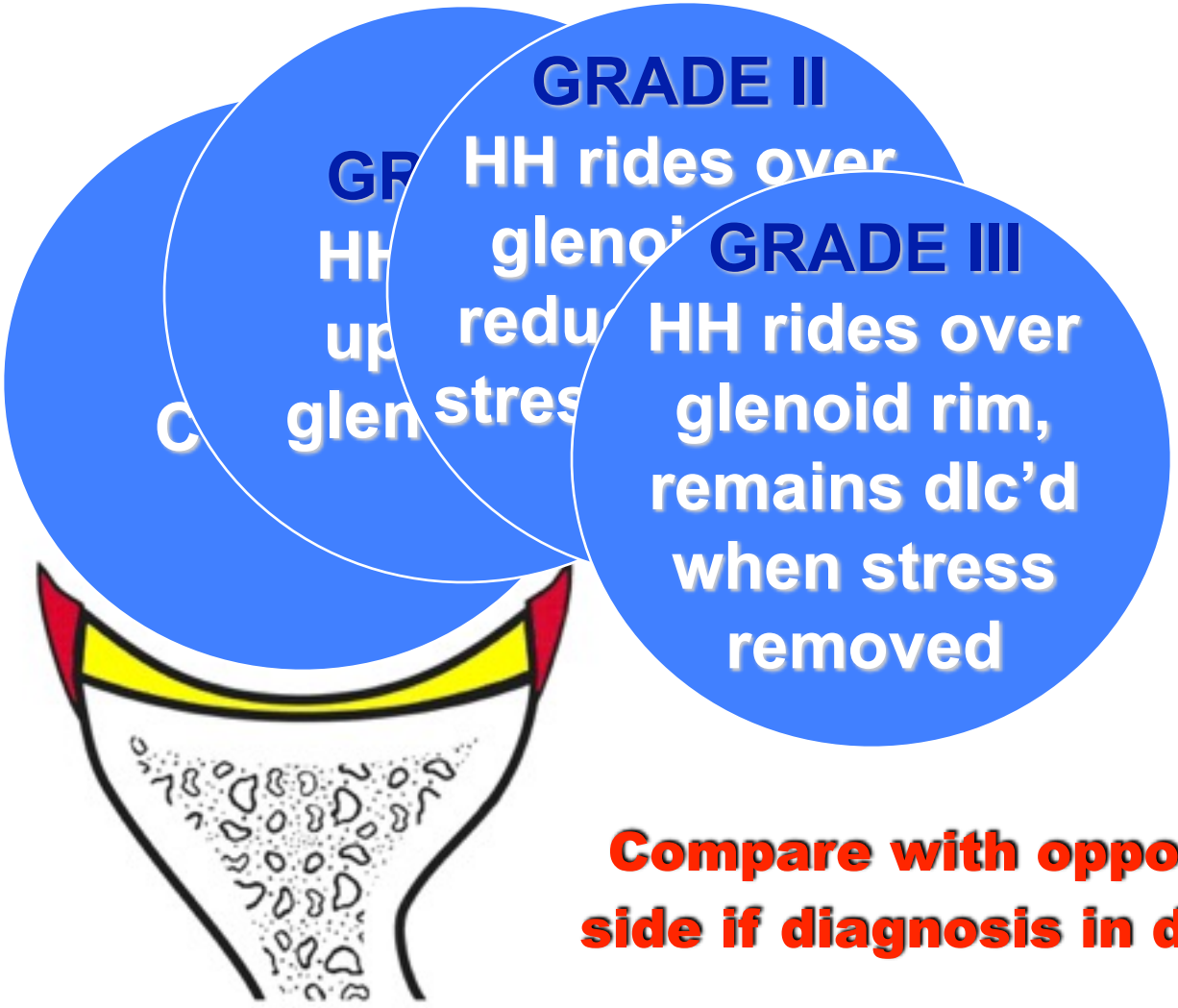
OPEN VS SCOPE

- Technically easier?
- ↑ Dx accuracy?
- Cheaper?
- Easier to address all associated path?
- Less morbidity?
- Less complications?
- Best results?

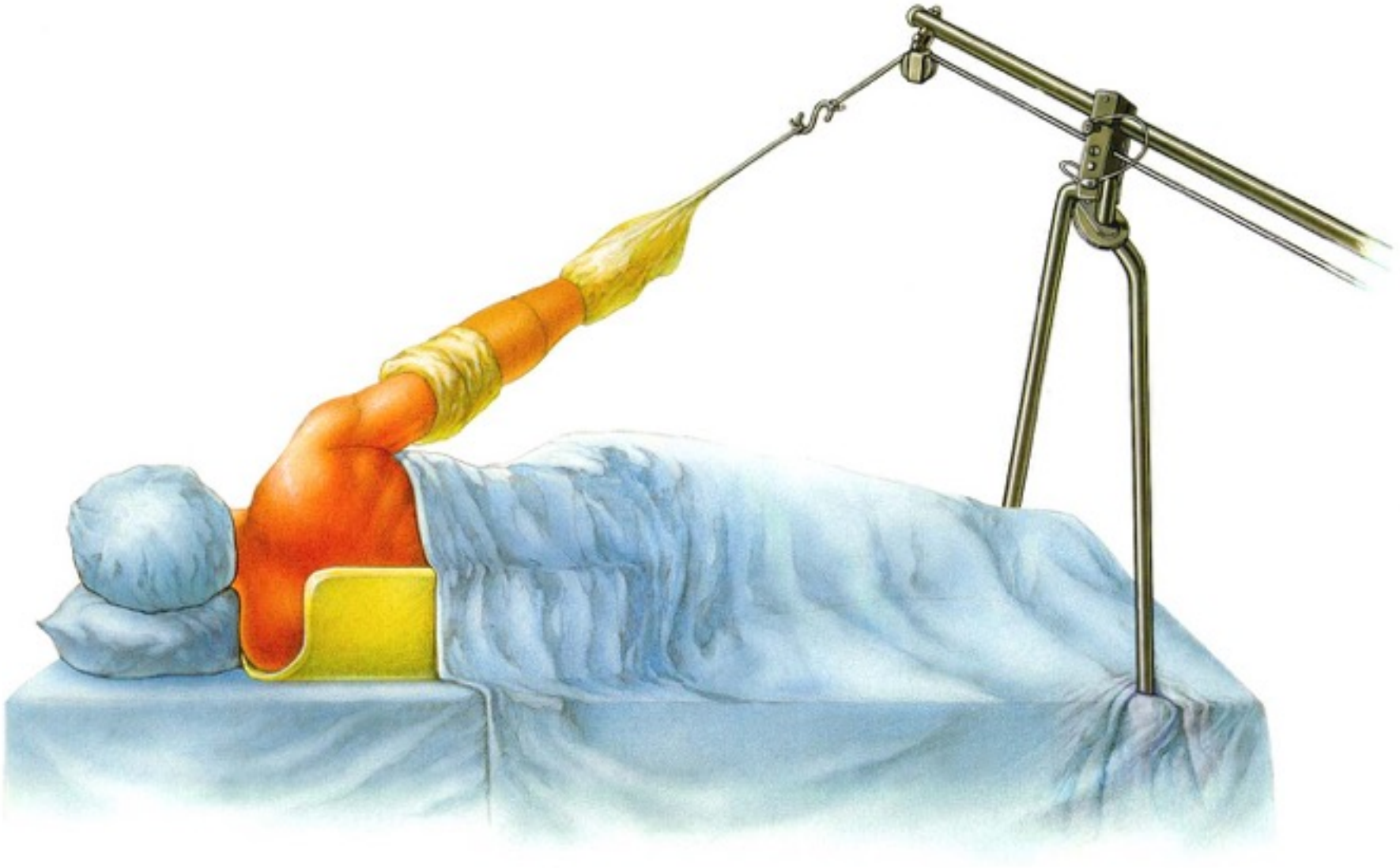



Examination under anesthesia

SHOULDER LAXITY GRADING SYSTEM

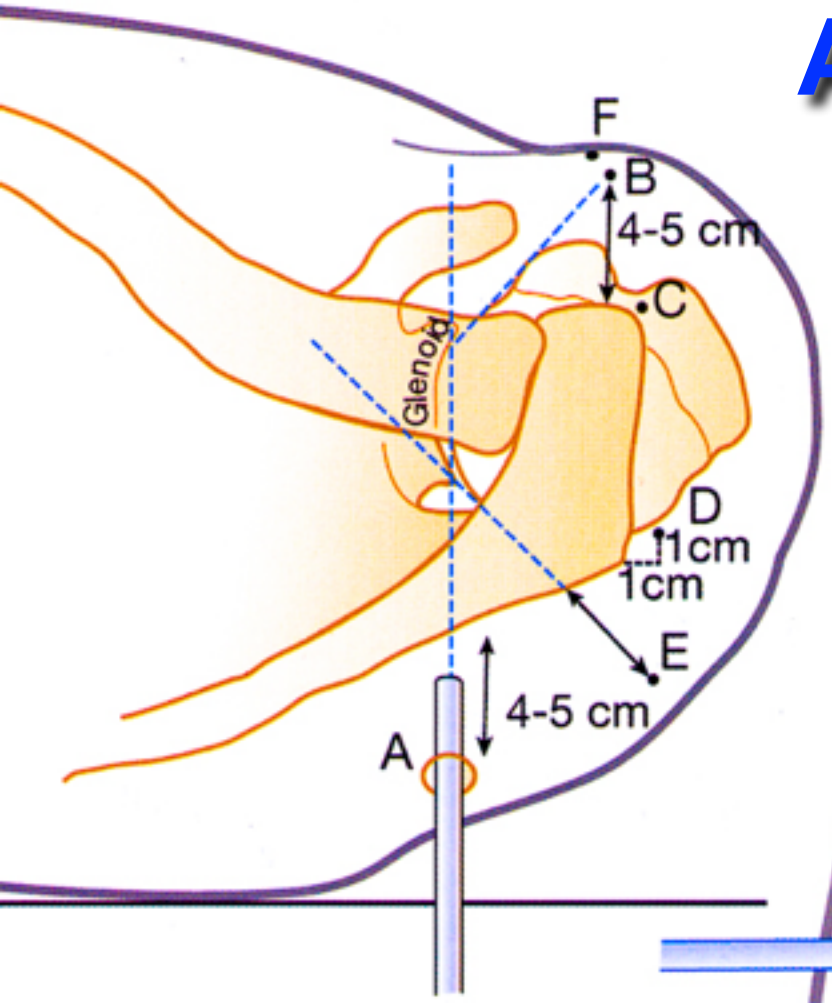


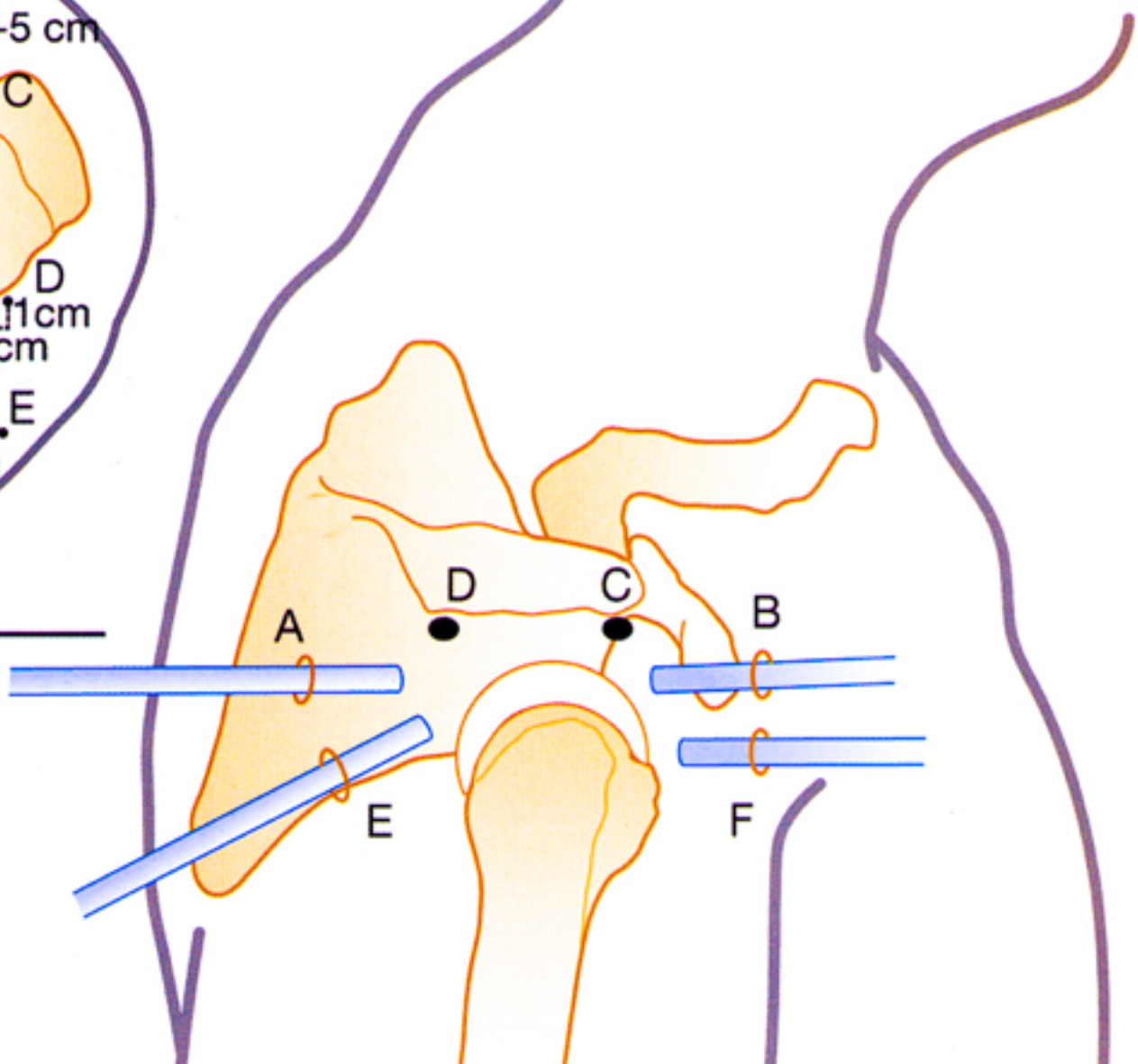
Compare with opposite side if diagnosis in doubt

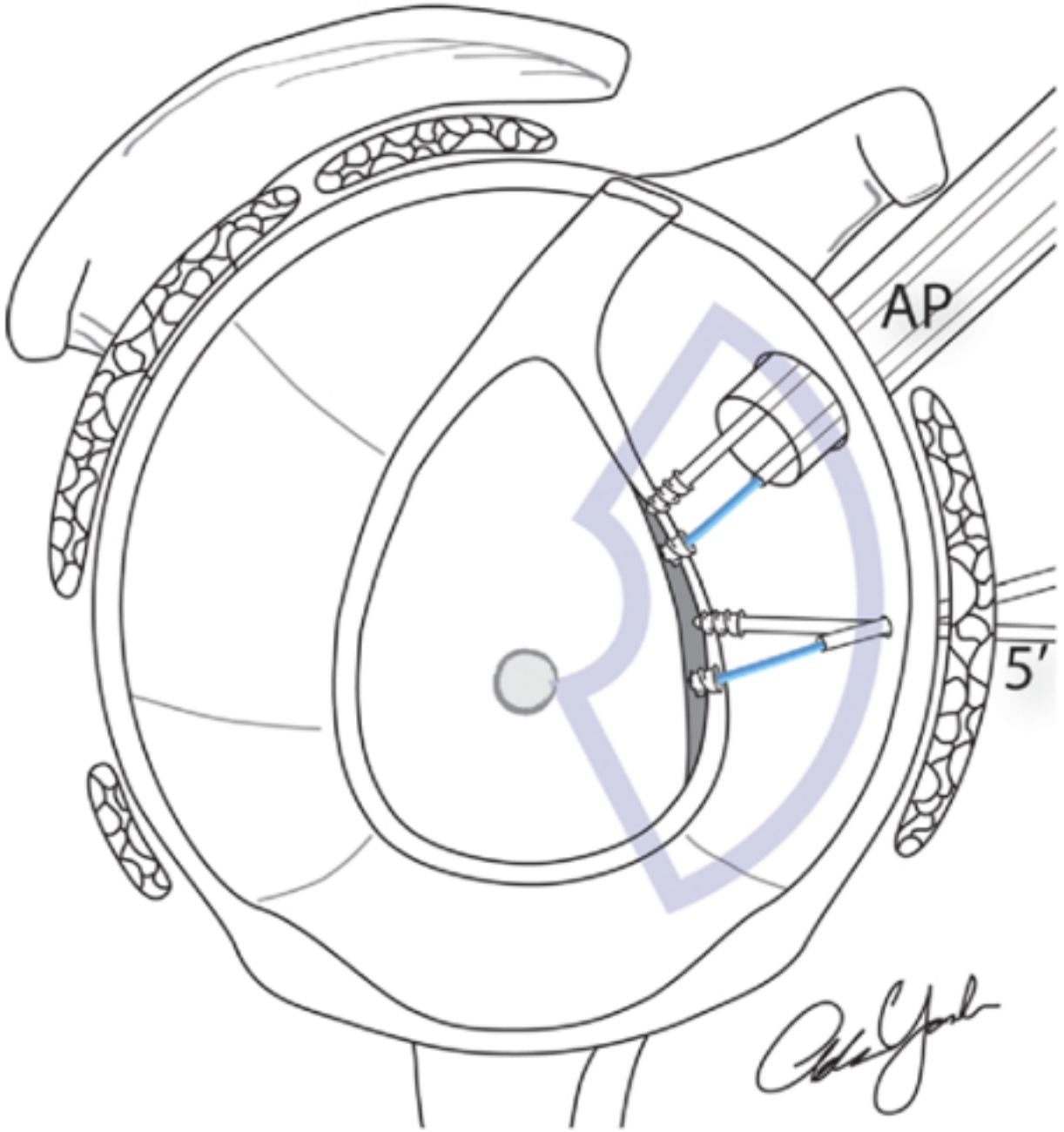


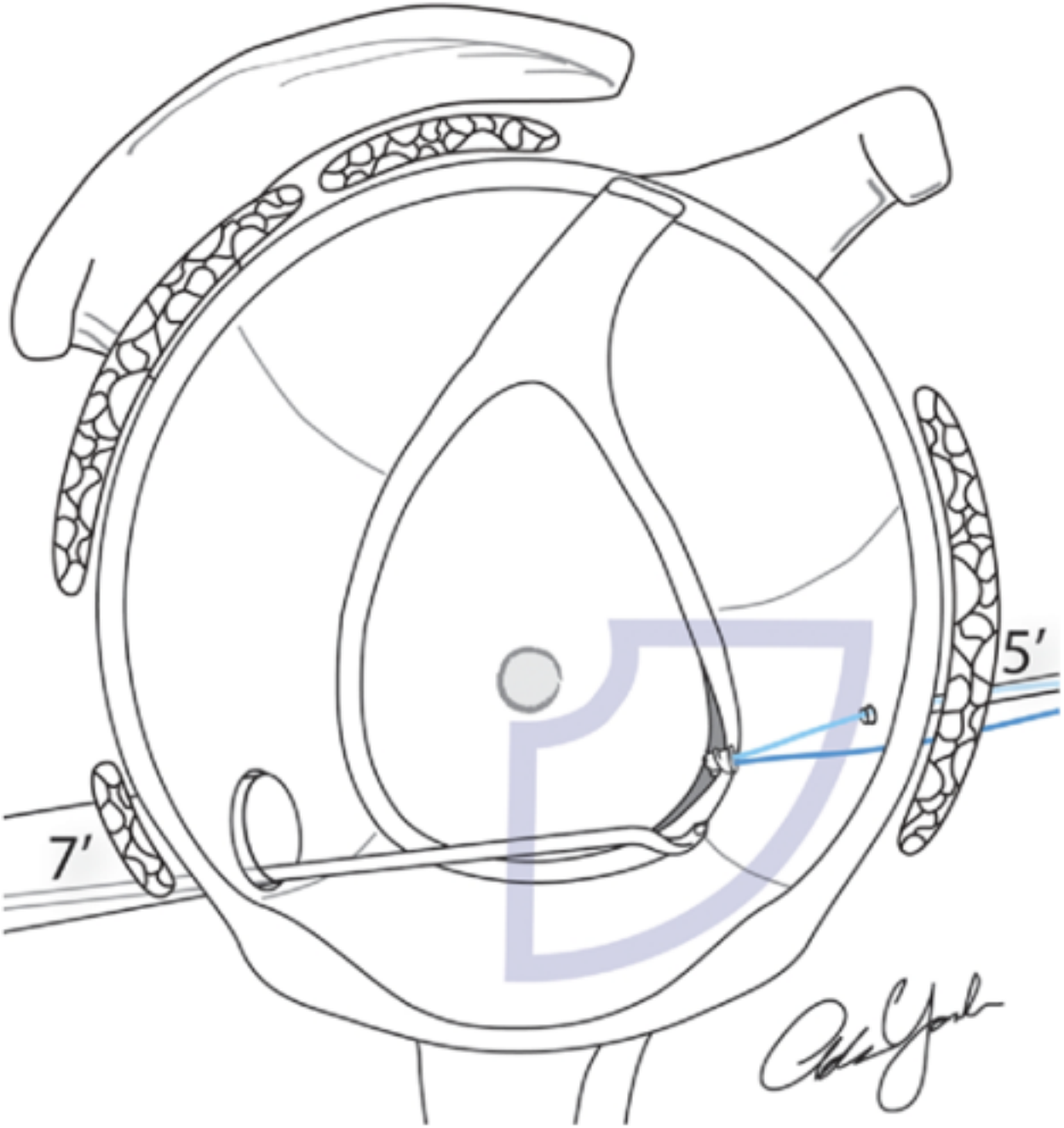
Lateral Decubitus Position

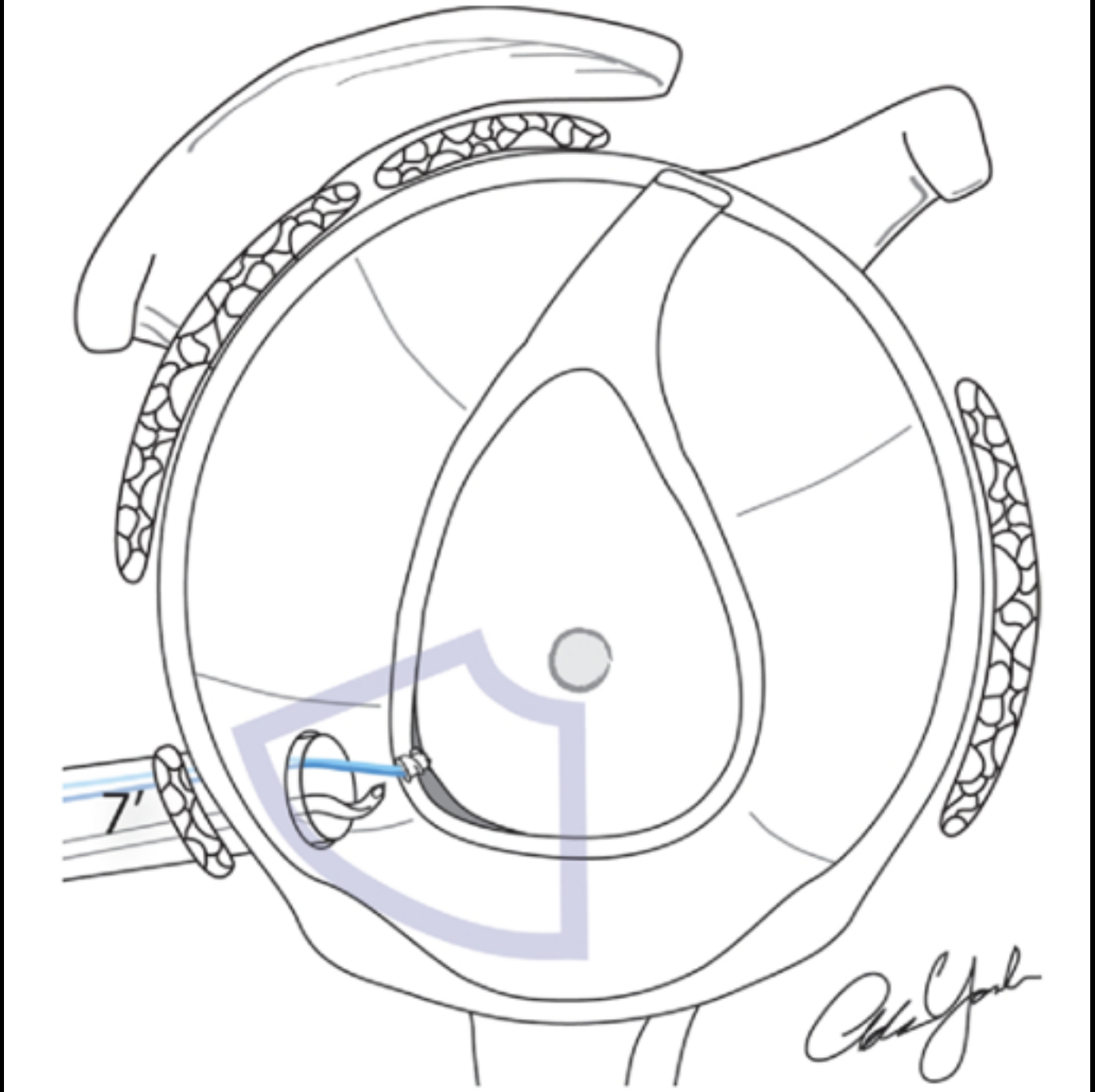
Arthroscopic Portals

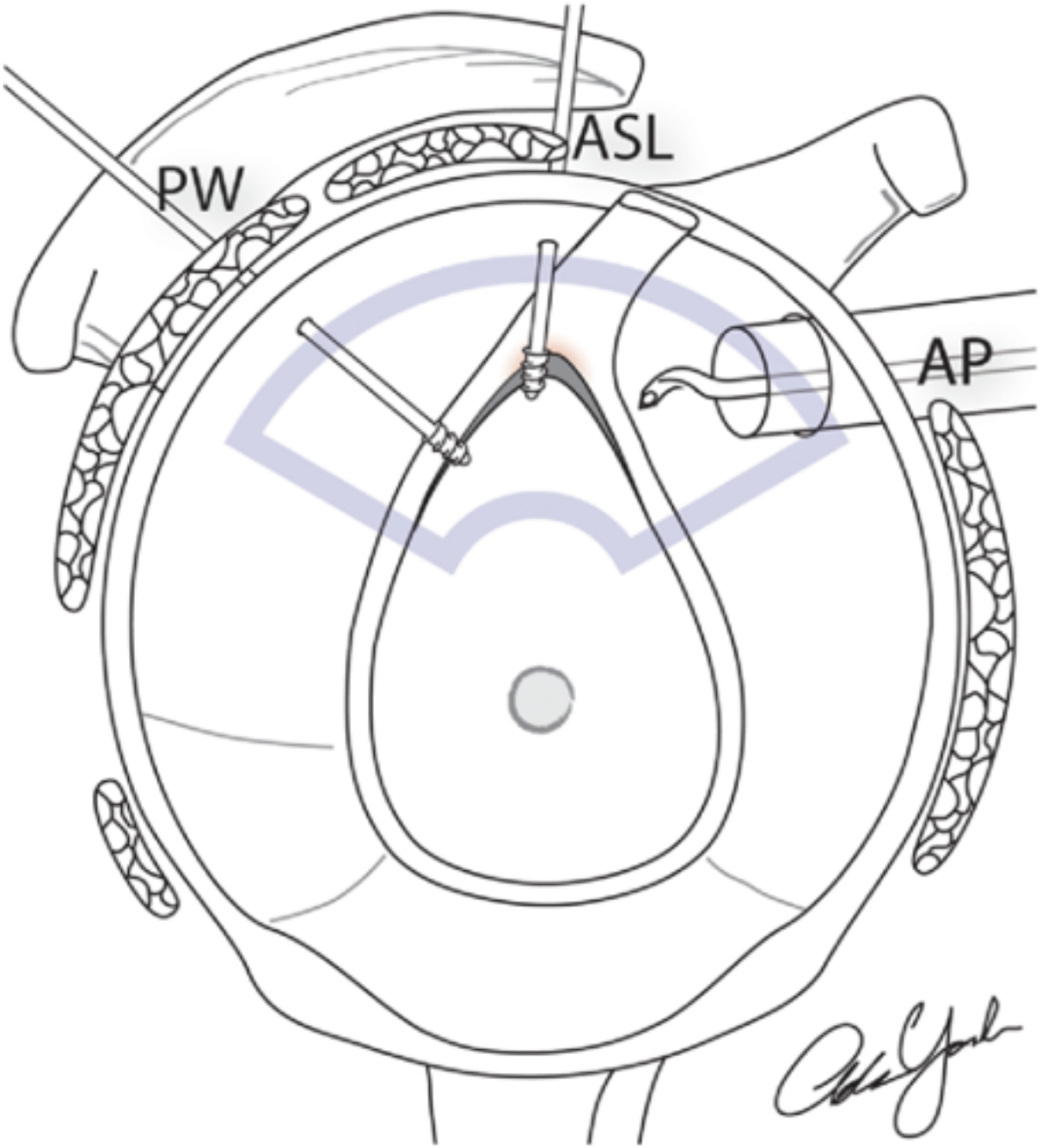


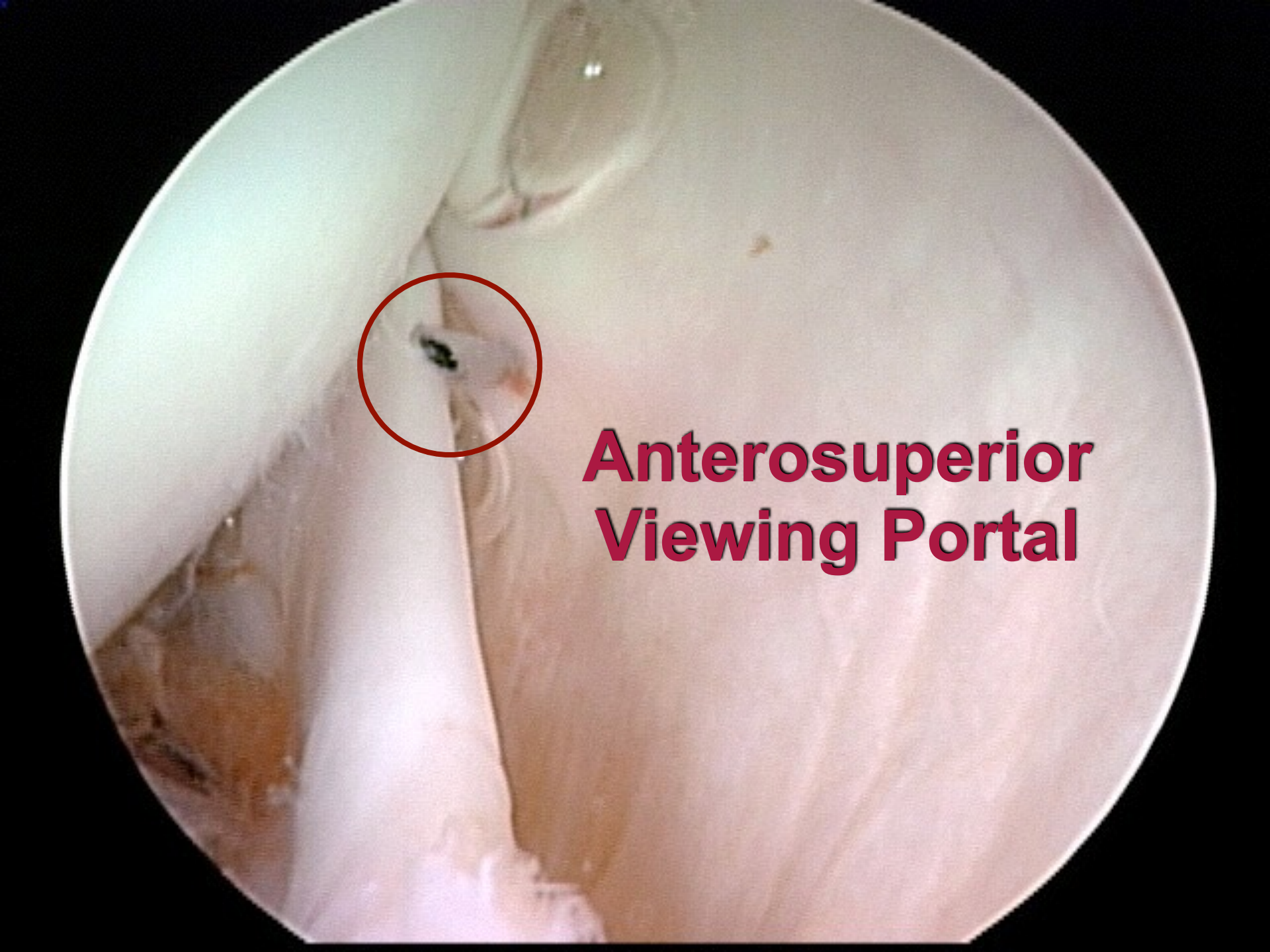



AP
5'

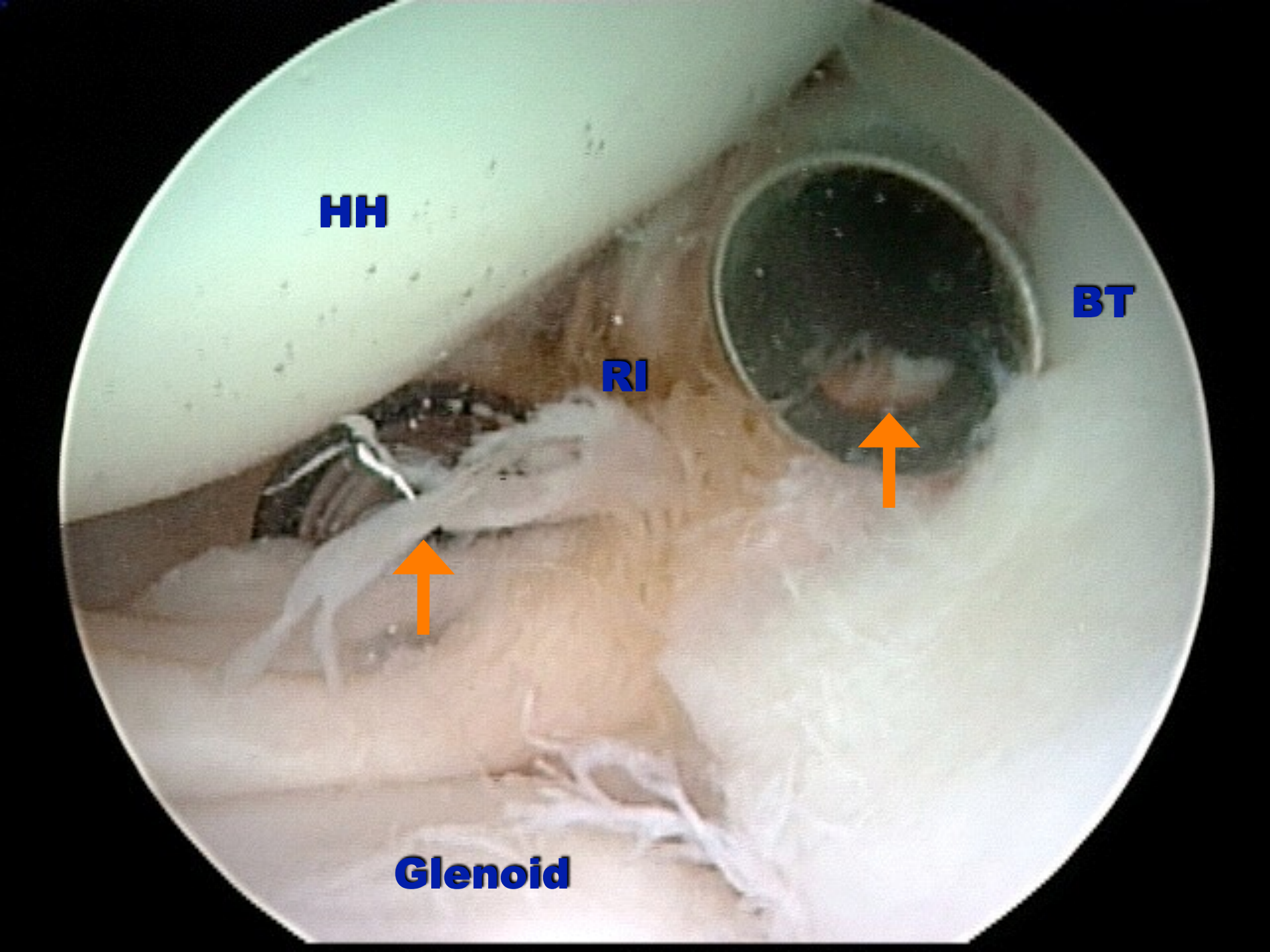

5′
7′


7'

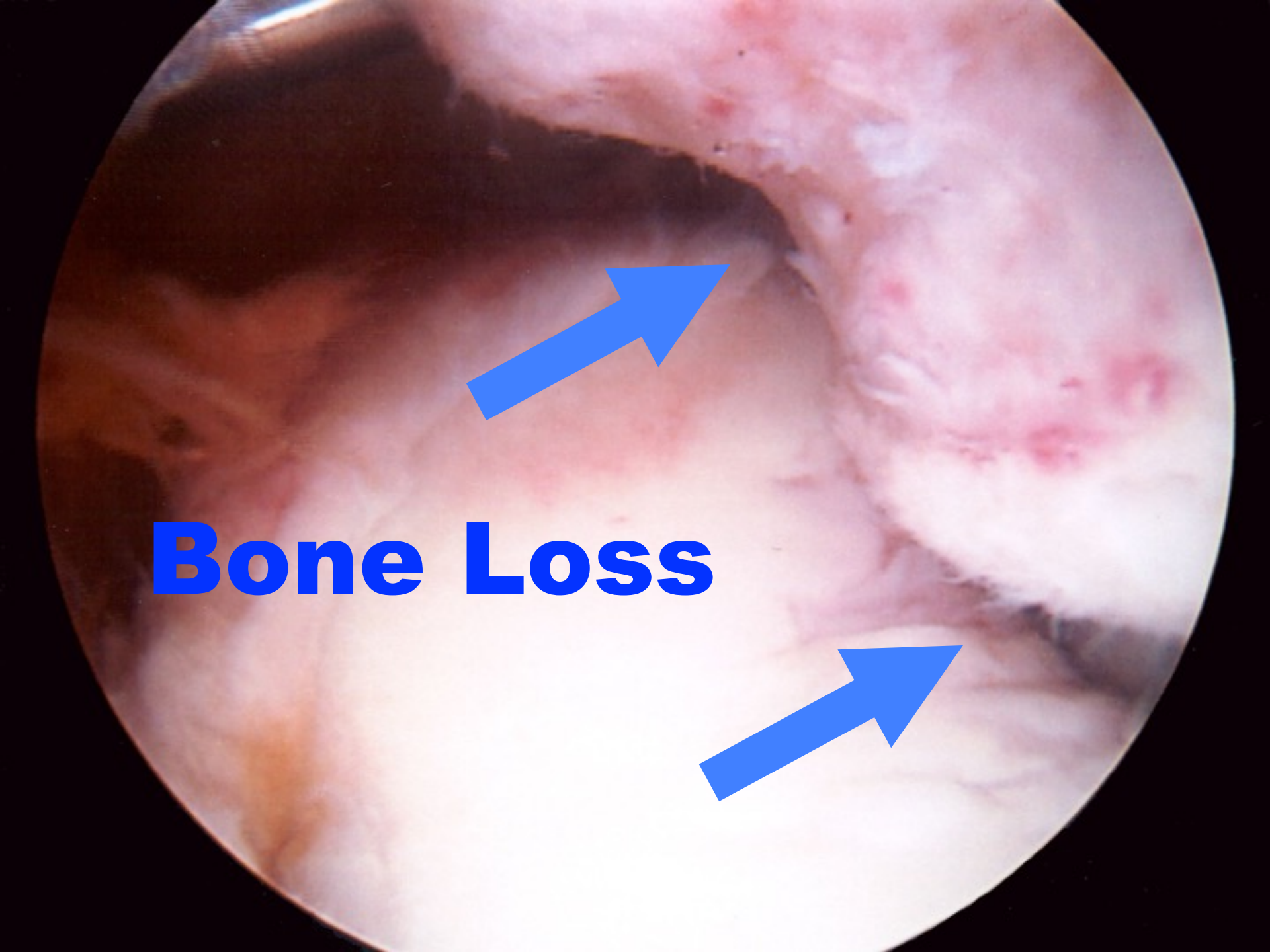

PW
ASL
AP

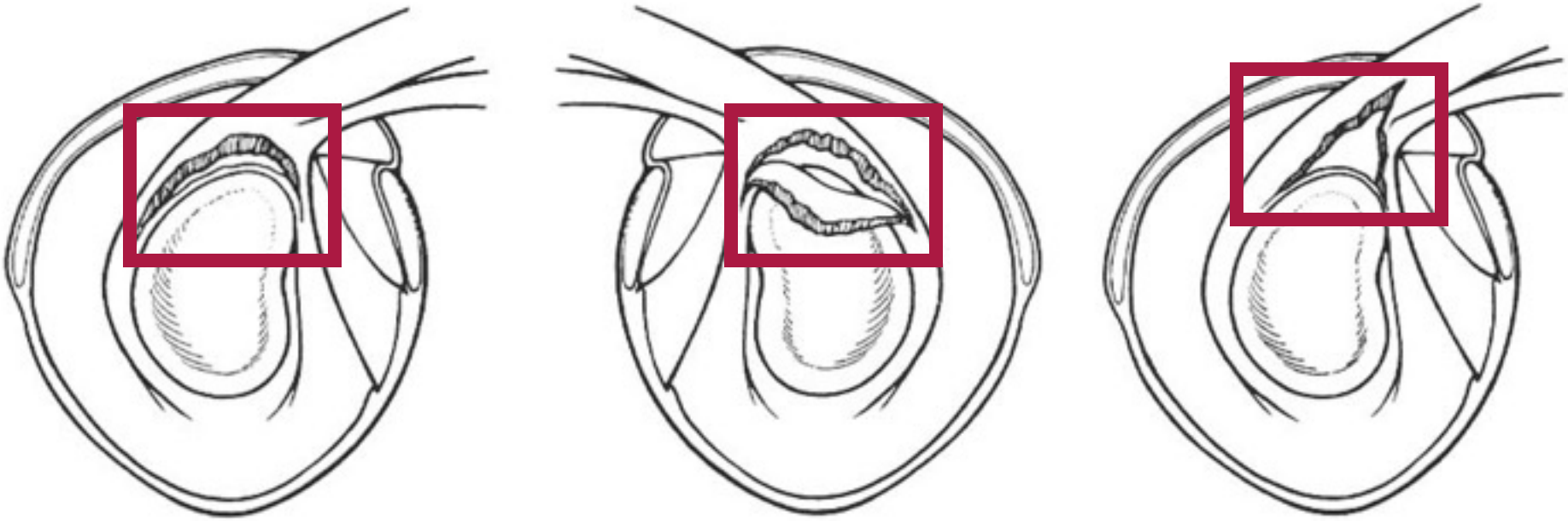

Anterosuperior
Viewing Portal


Externally, keep cannulas at least 3cm apart!
Anteroinferior Working Portal


HH
BT
RI
Glenoid


Assess all pathology


Bone Loss

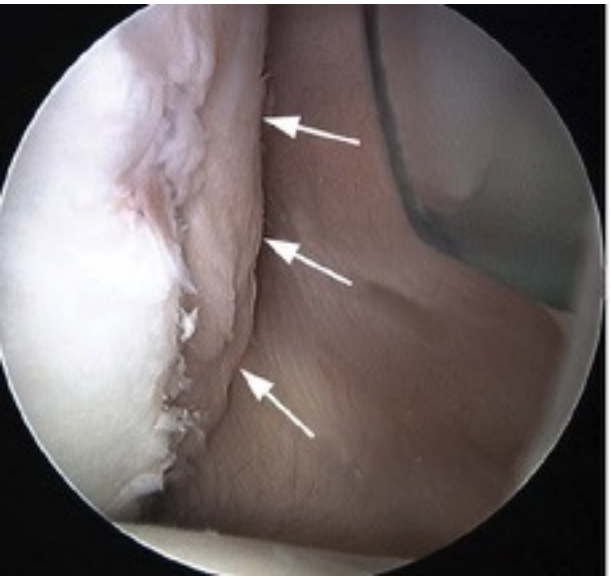


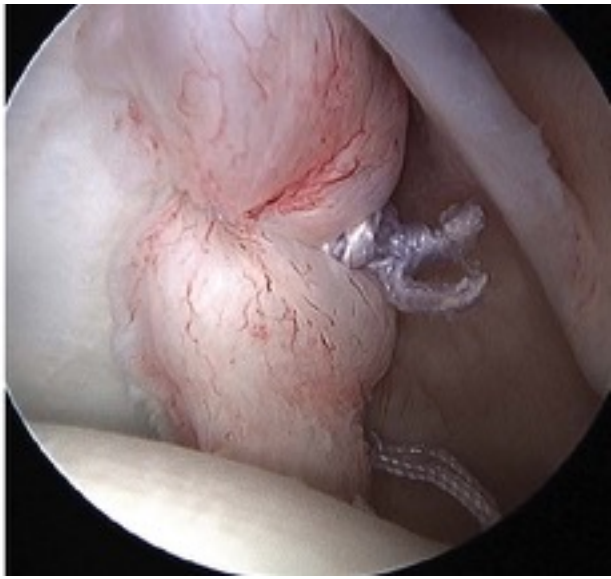
SLAP LESIONS

(Superior Labrum Anterior and Posterior)


Rotator Cuff Pathology

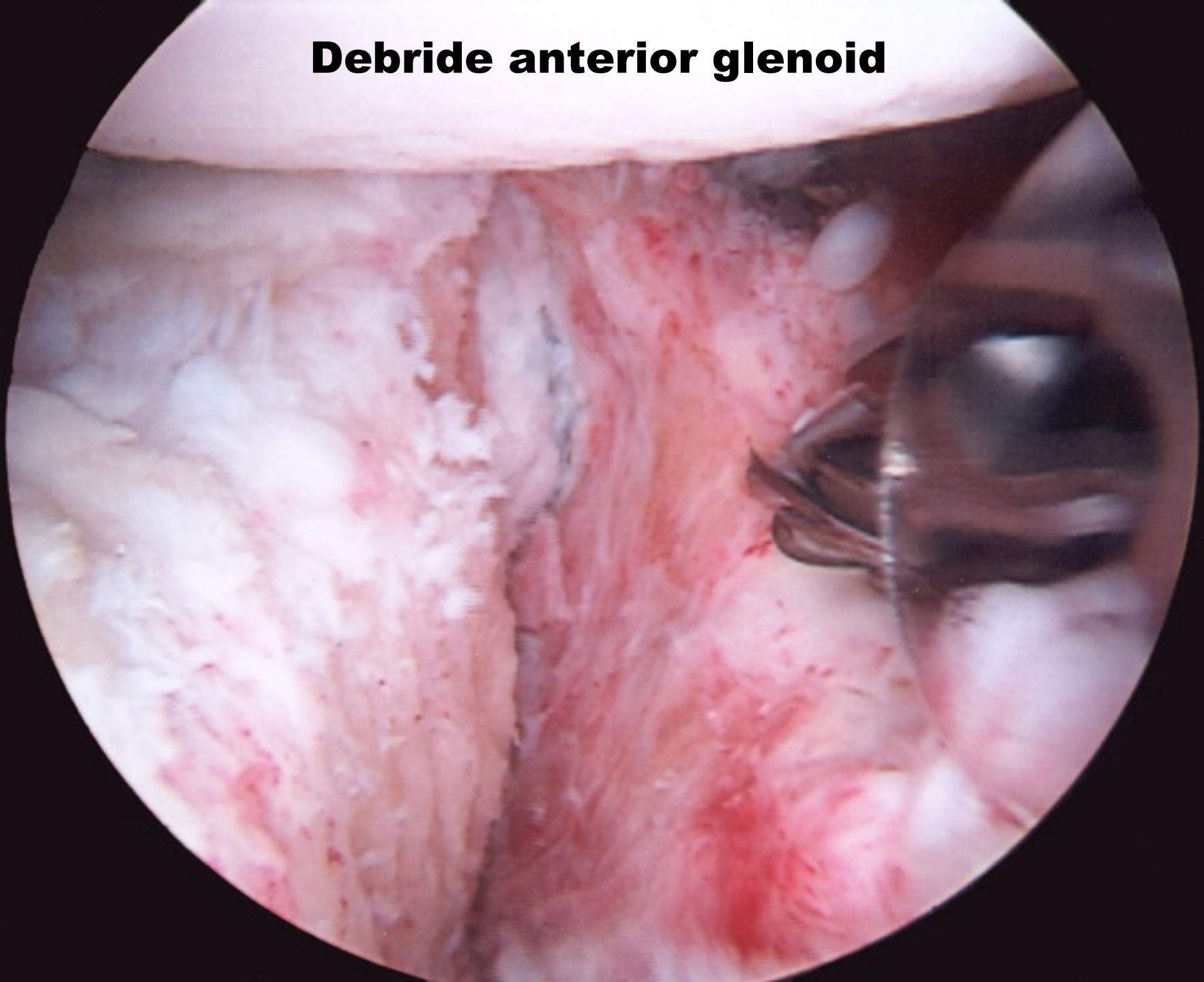
ALPSA LESION

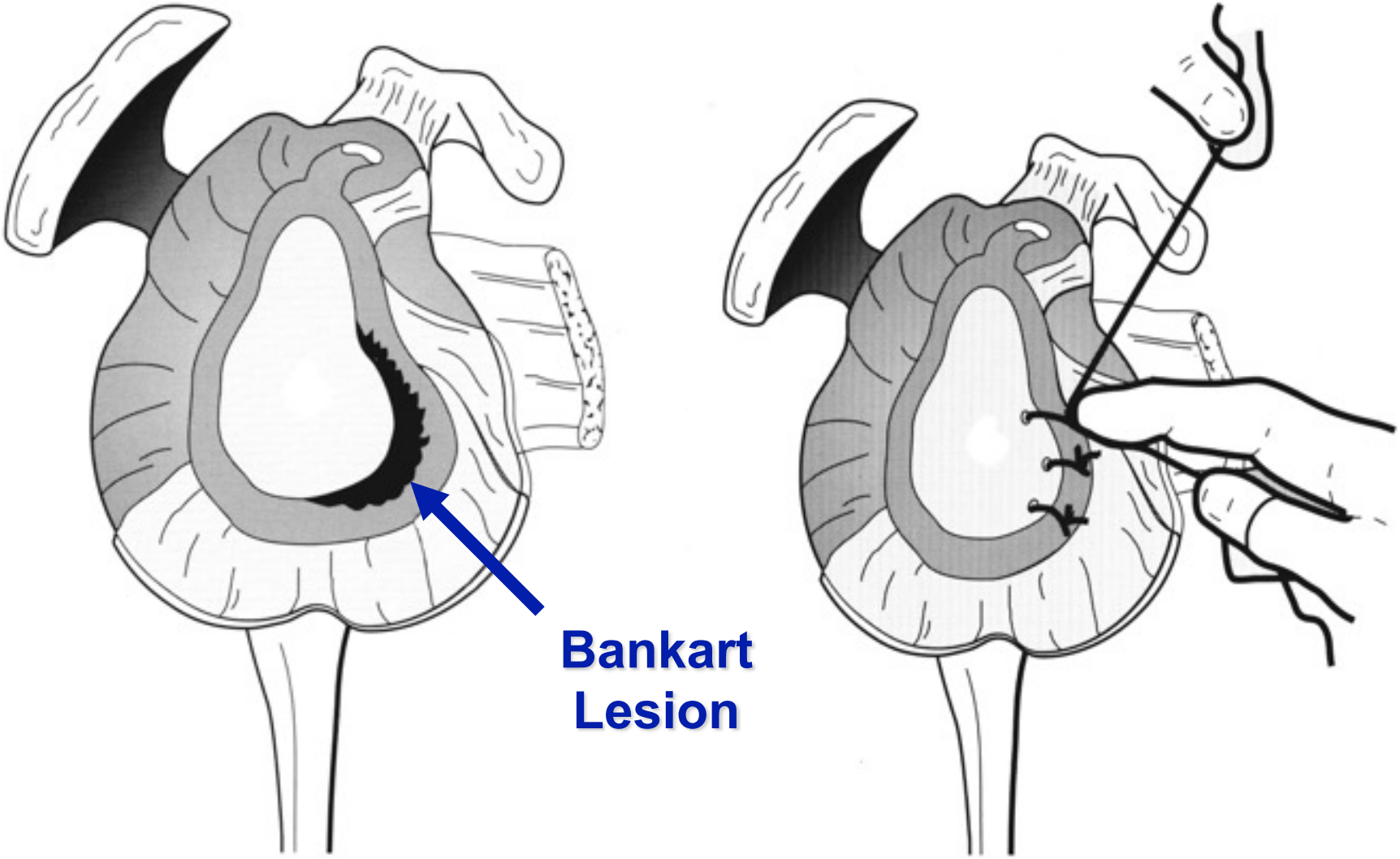




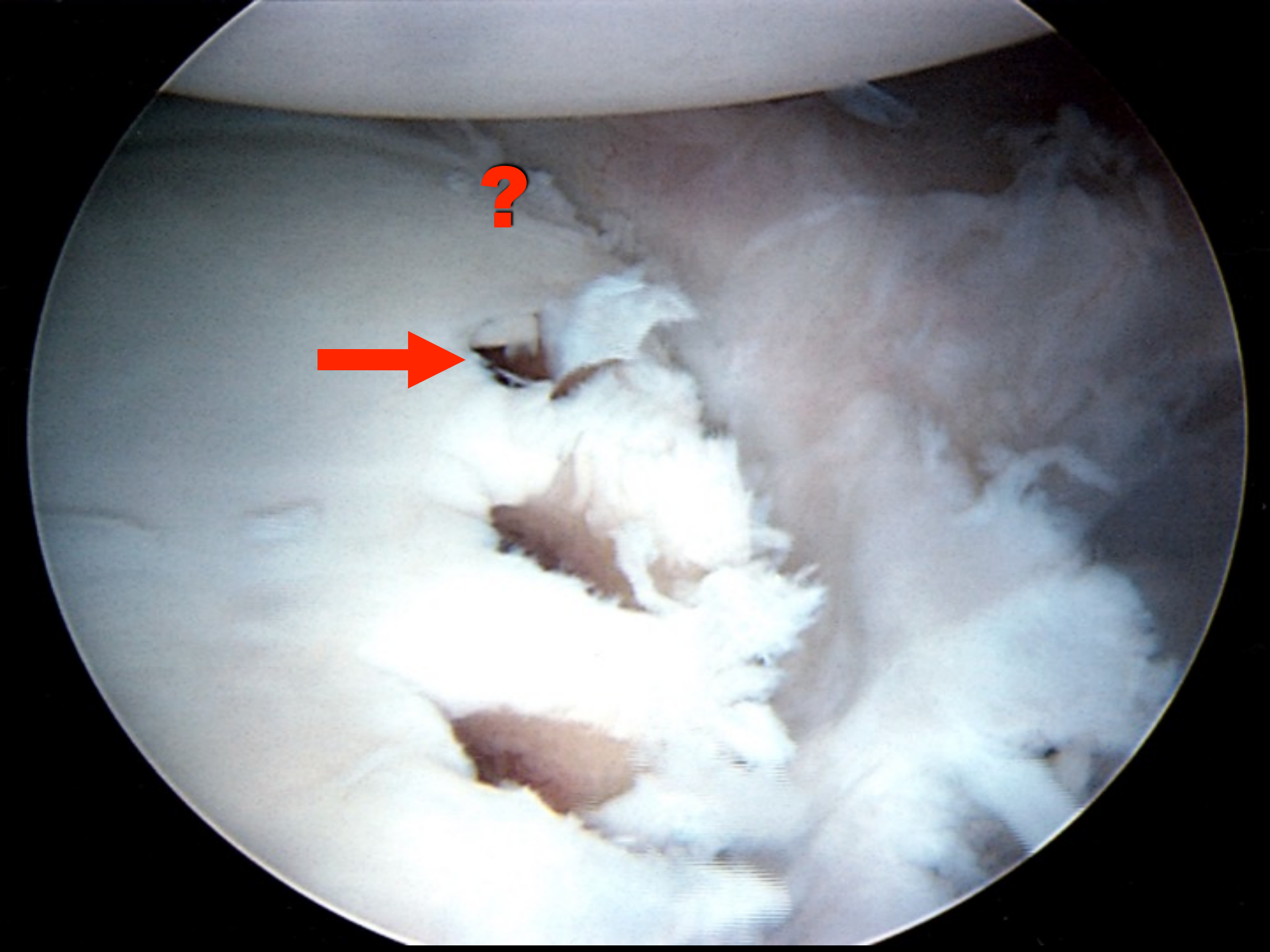
ANTERIOR PERIOSTEAL SLEEVE AVULSION

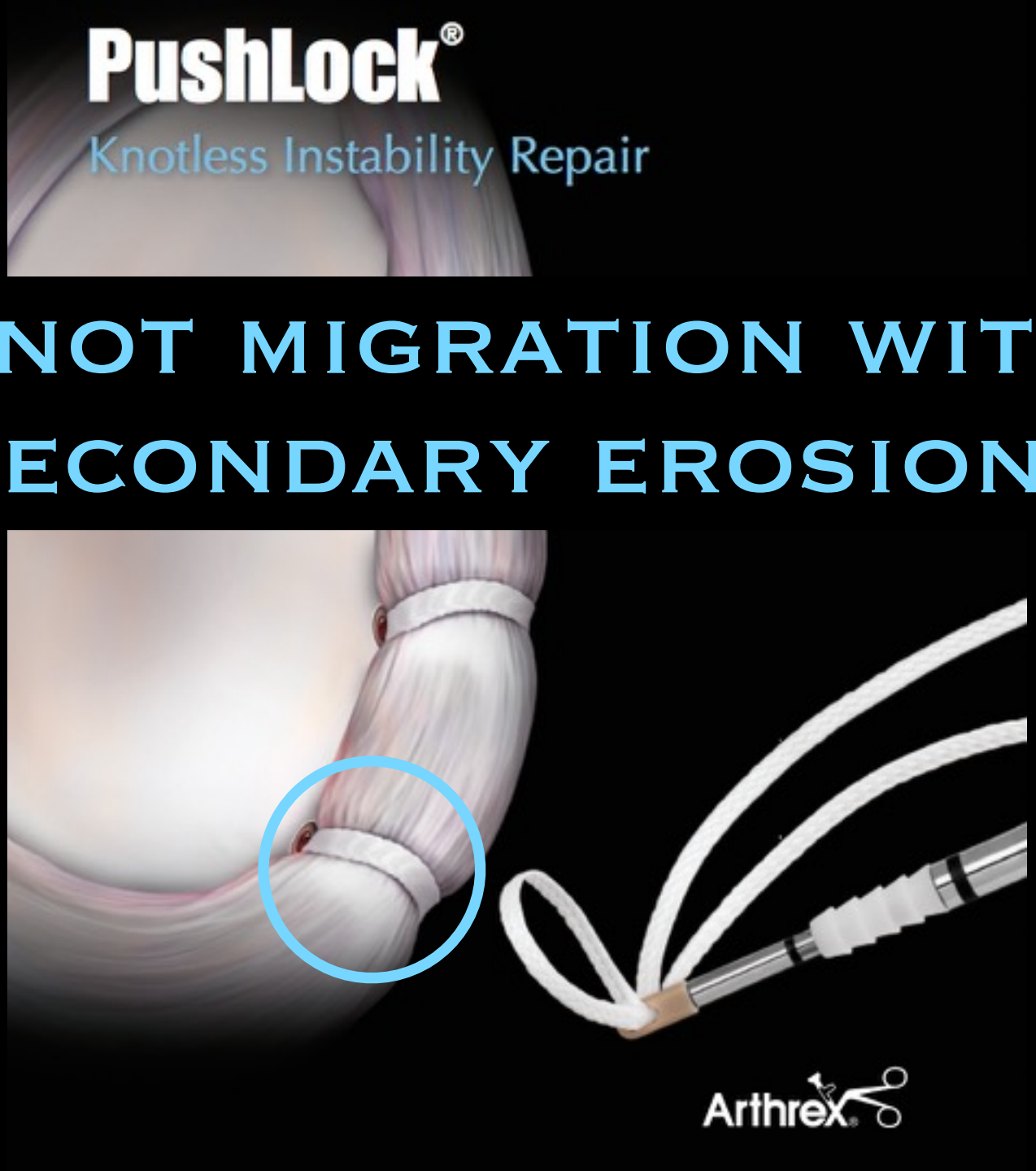
Debride anterior glenoid

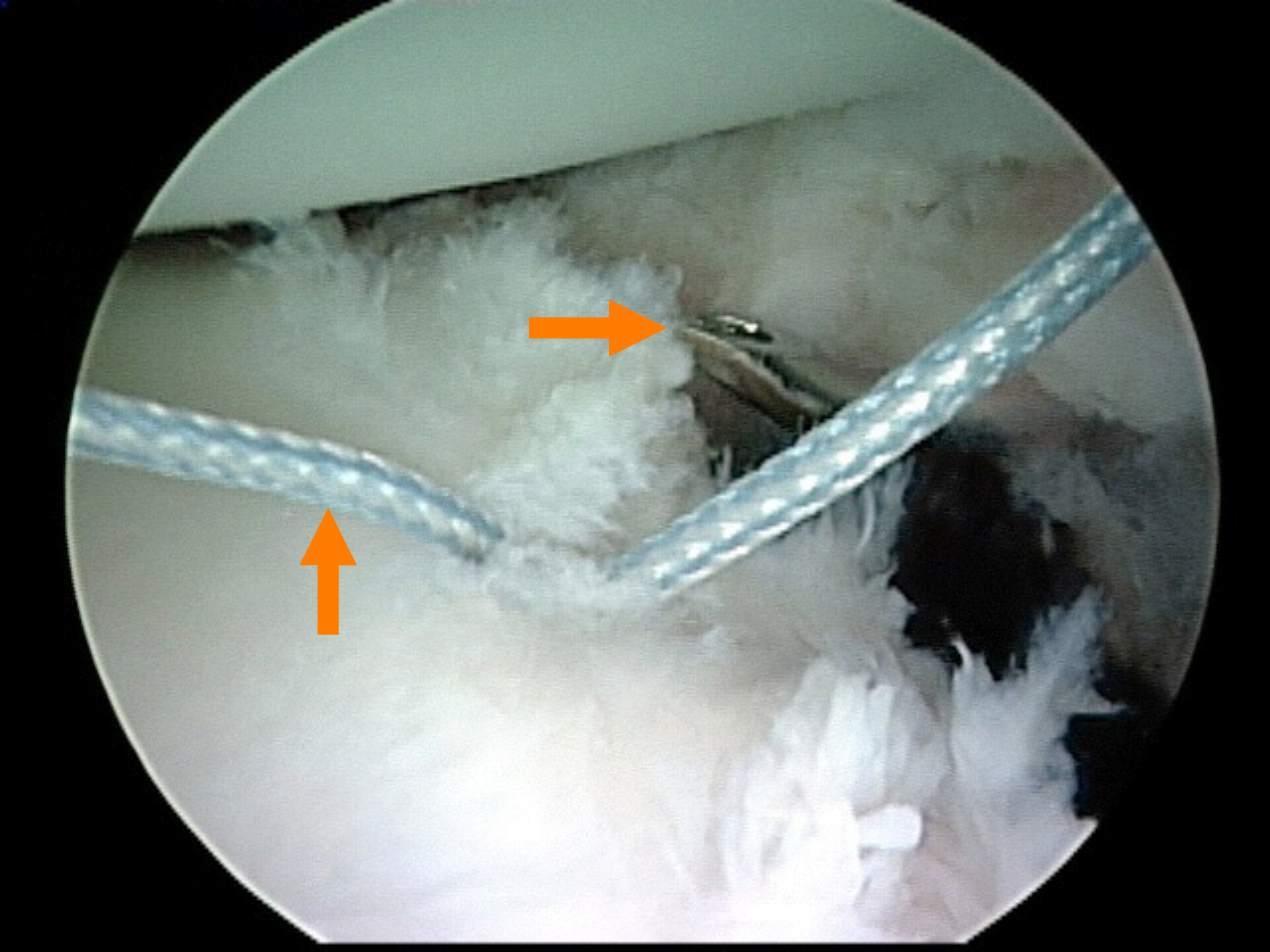




Bankart Repair

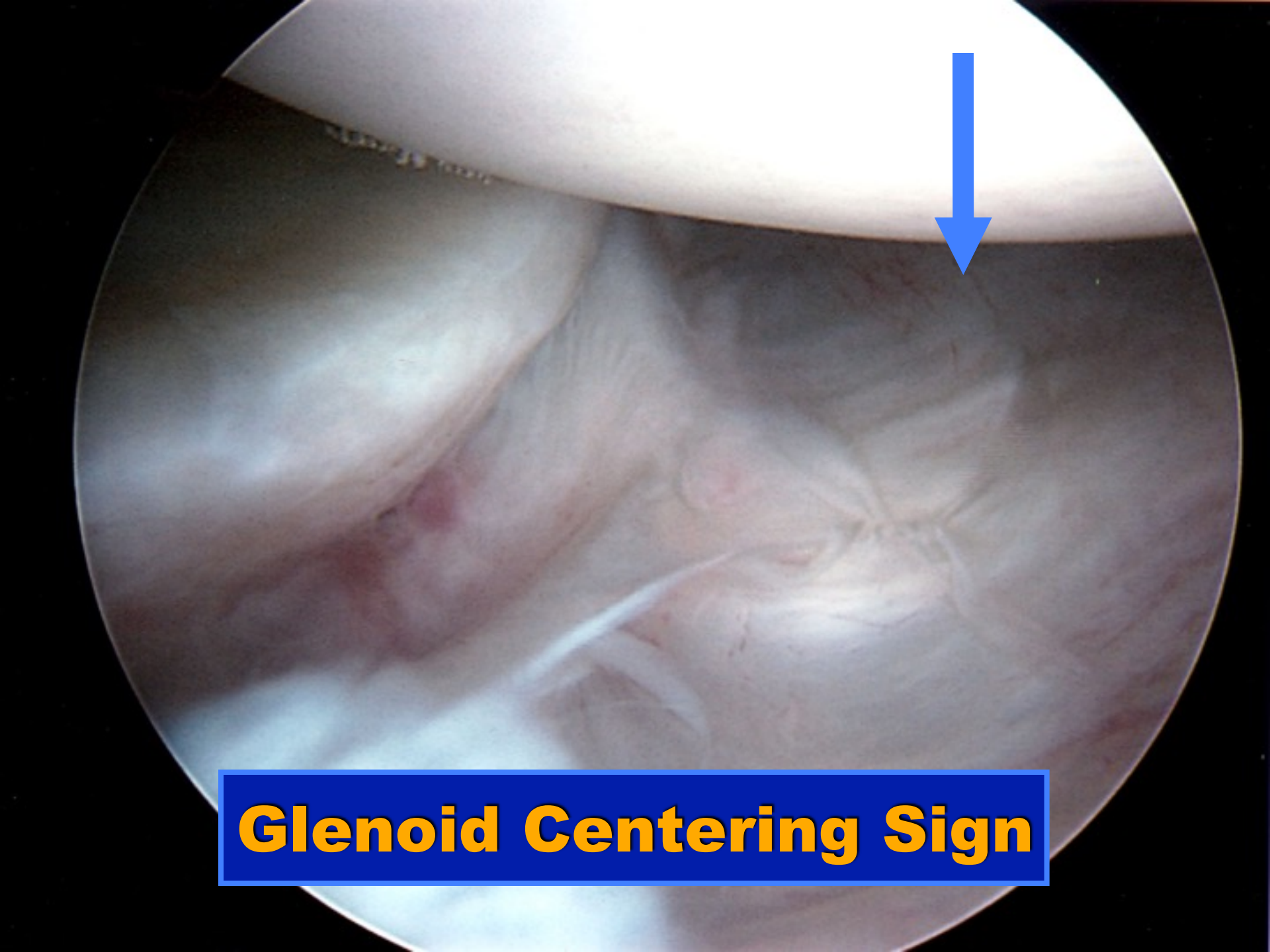



PushLock®
Knotless Instability Repair
KNOT MIGRATION WITH SECONDARY EROSION?
Arthrex

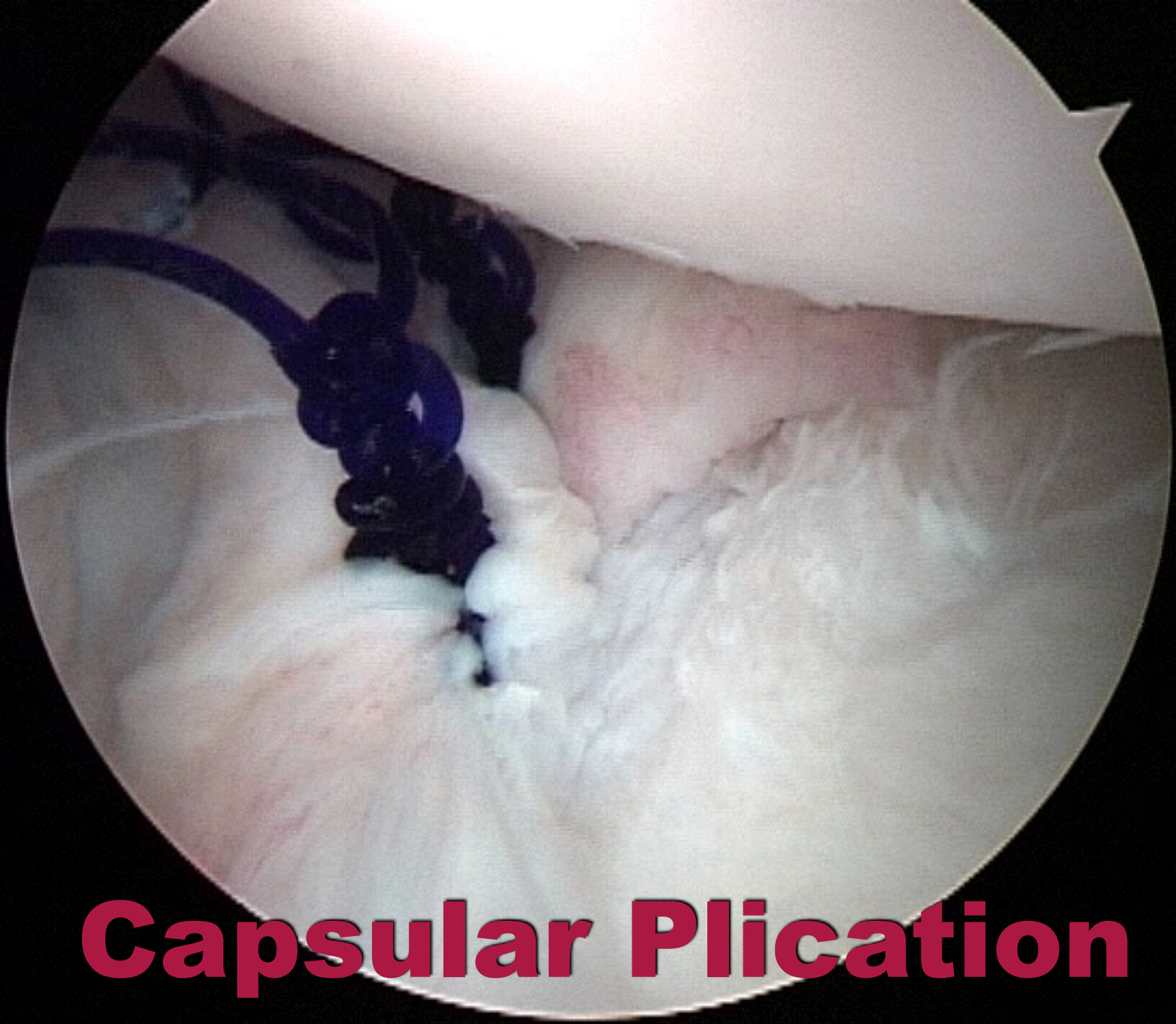



Recreate
Bumper
Effect


Reestablish
“Chock-block”


Glenoid Centering Sign

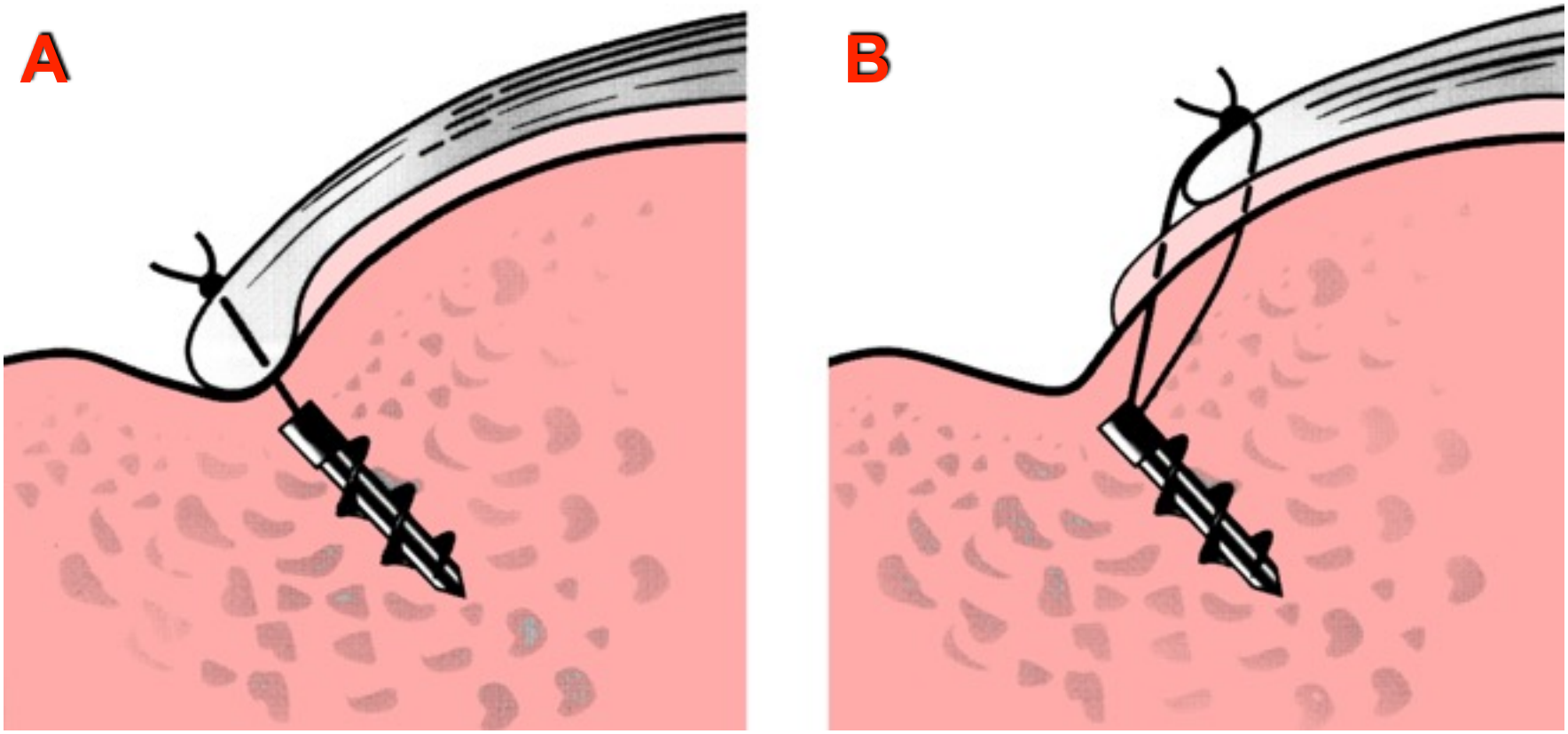

Glenoid Centering Sign



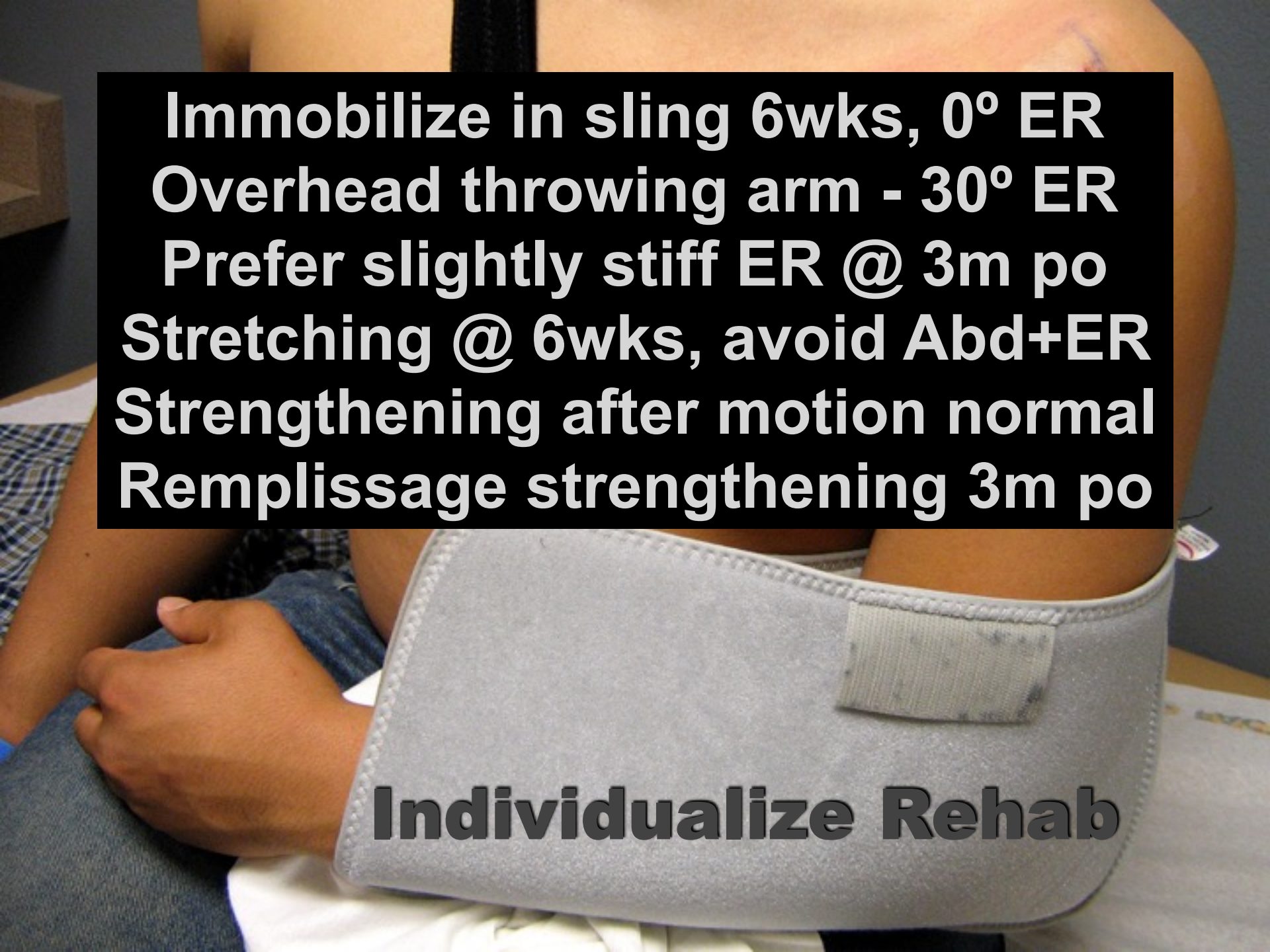
Capsular Plication


Arthroscopic Knot Tying

LOOP AND KNOT SECURTIY



(B) A loose loop allows the soft tissue to pull away from the prepared bone bed, regardless of how securely the knot may be tied


Immobilize in sling 6wks, 0º ER
Overhead throwing arm - 30º ER
Prefer slightly stiff ER @ 3m po
Stretching @ 6wks, avoid Abd+ER
Strengthening after motion normal
Remplissage strengthening 3m po
Individualize Rehab

CAPSULORRHAPHY ARTHROPATHY

- Overtightening the anterior structures, with stiffness, can drive the humeral hd posteriorly creating shear on the cartilage and early arthrosis
- No clear threshold beyond which these biomechanical consequenses are realized
- Loss of ER > 50% compared to normal contralateral shoulder?


THERMAL
CAPSULOGRAPHY

LITERATURE REVIEW

- Definition of success
  - Recurrence of dlc
  - Range of motion
  - Return to work, sport
  - Which shoulder score
- Multiple surgeons
- Multiple techniques
- Variety of instability patterns & pathology


Current literature reflects single digit recurrence rates when returning patients back to “normal” lifestyle

WHAT I TELL MY PATIENTS

90% won't redislocate

"Success" may be slight tightness or an occasional feeling of looseness

A "good" result at 2yrs may have an instability episode at 5-10yrs

"You dislocated the shoulder God made for you. I'm not God, and I won't be able to make it better than normal"