



orthopedic
ONE

Shoulder Pathology and Industrial Injuries

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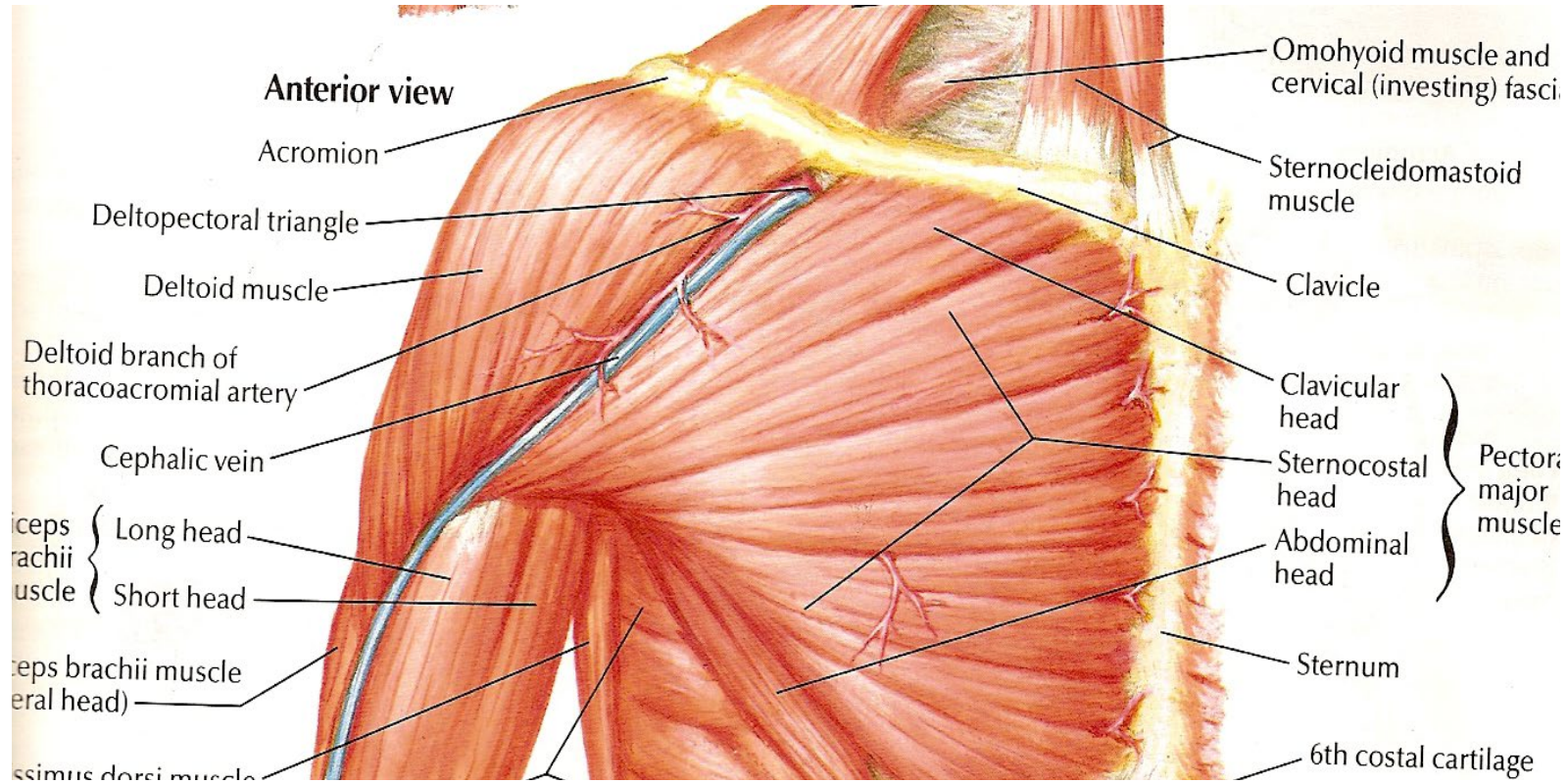
Dublin Methodist Hospital

Shoulder Pathology

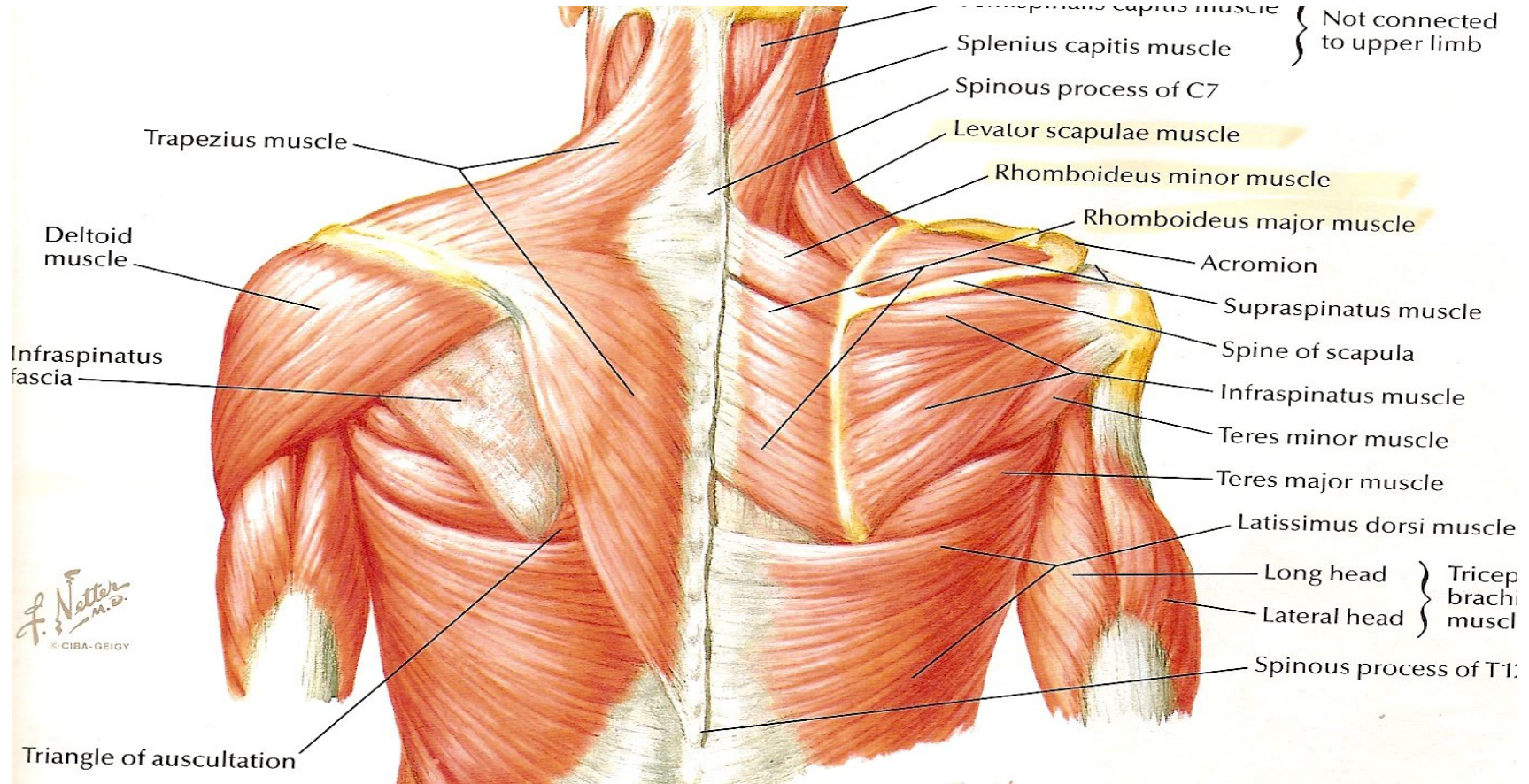
- One of the most common patient complaints
 - Most common musculoskeletal complaint



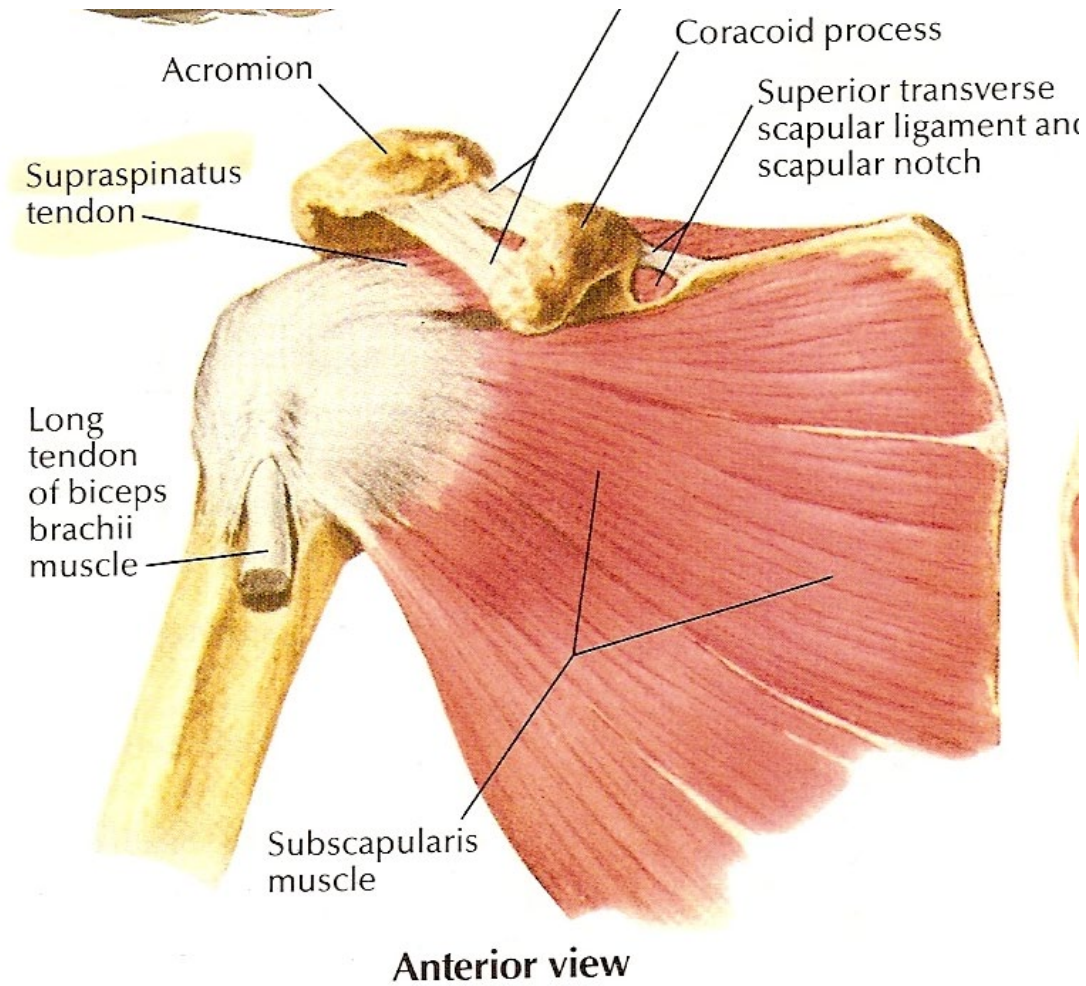
Anatomy



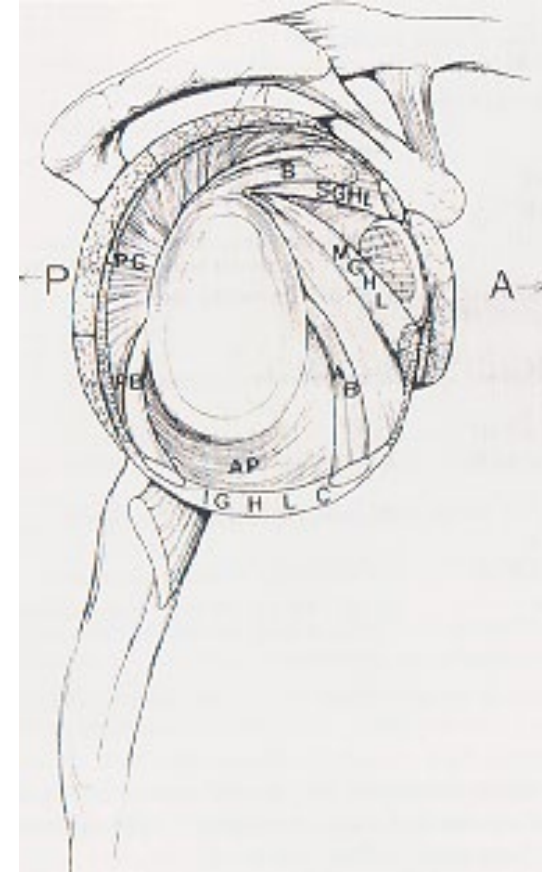
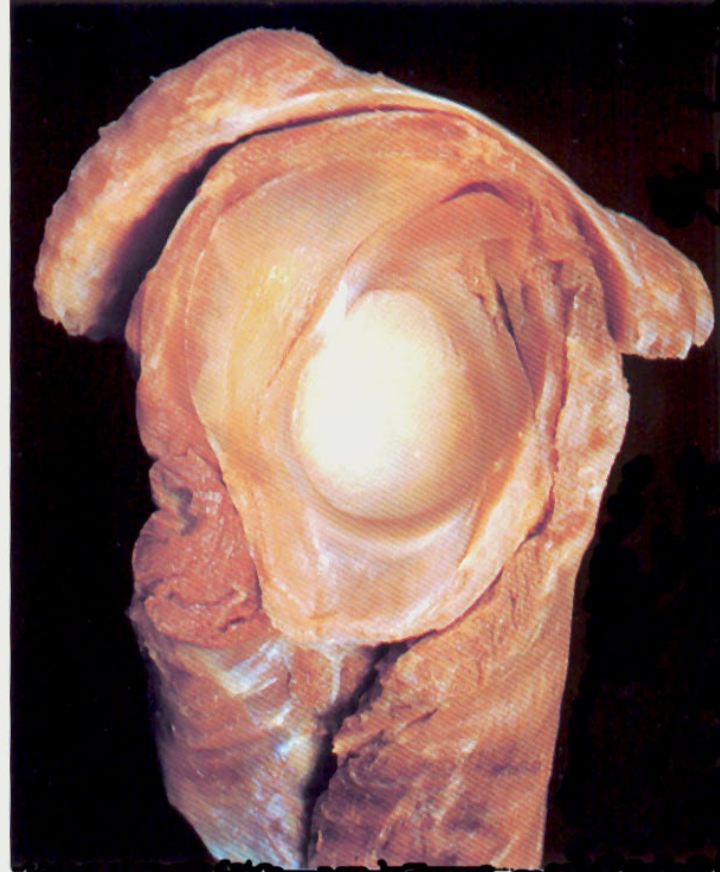
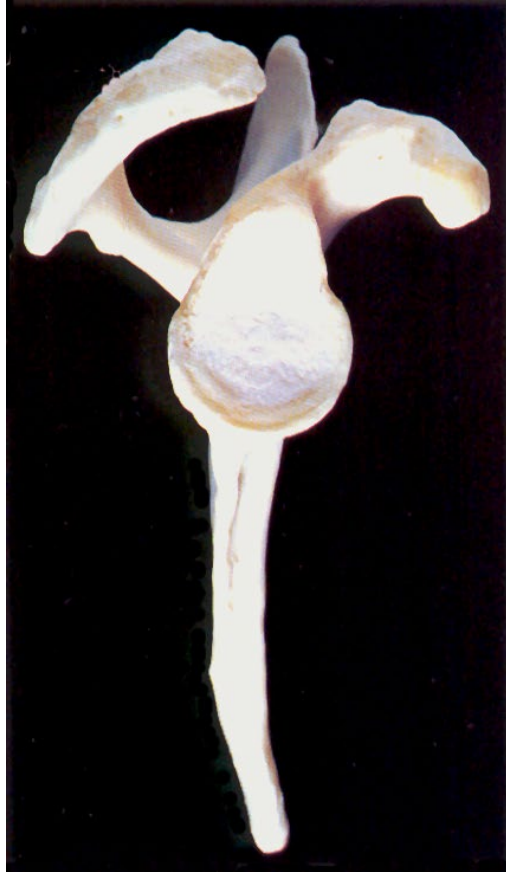
Anatomy



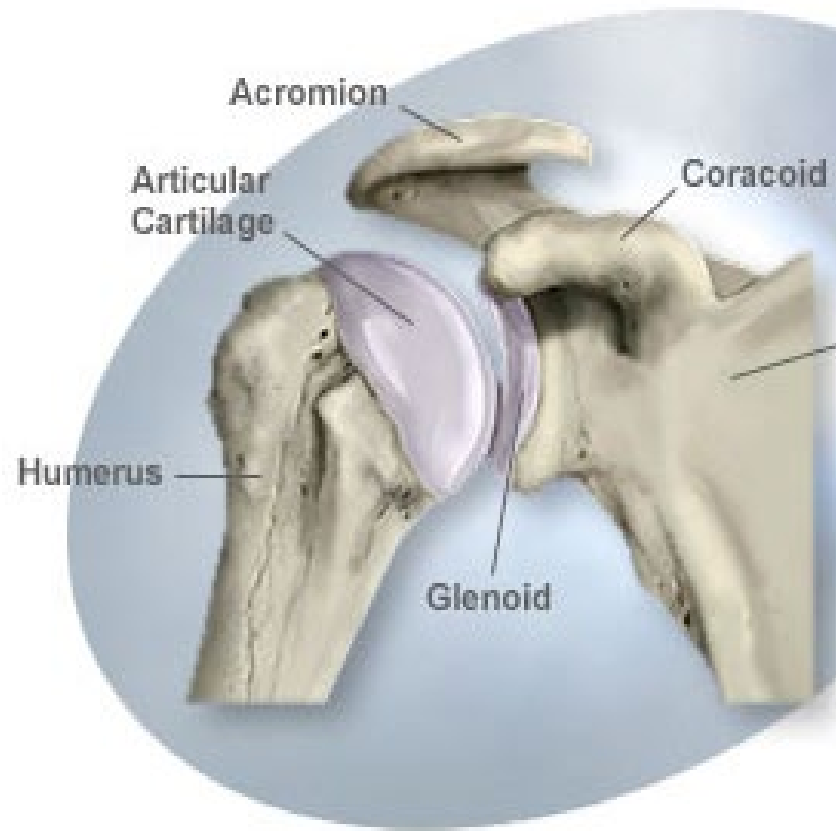
Anatomy



Anatomy



Anatomy



Biomechanics

- Shoulder a complex balance between motion, stability, and strength
- More motion than any other joint to place hand in space
- Force generation

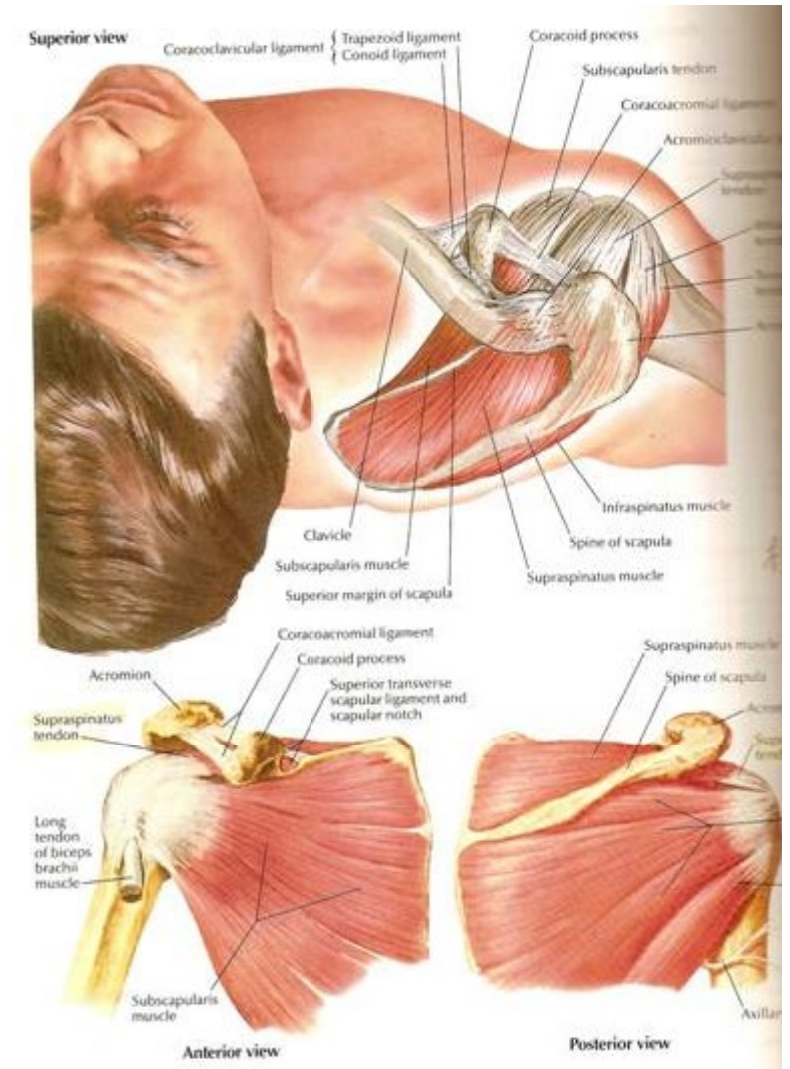


Shoulder Injuries

- Rotator cuff
- Biceps/SLAP tears
- Labrum
- Acromioclavicular joint
- Osteoarthritis
- Adhesive capsulitis
- Cervical pathology

Rotator Cuff

- Smaller, deeper muscles
 - Helps with elevation and rotation but NOT sole generators of torque or abduction
- Along with capsule, helps keep ball centered in socket



Rotator Cuff

- Many rotator cuff conditions are a degenerative process with or without superimposed injury
- Overuse or injury can play a role



Rotator Cuff

- 30-50% of patients over 50 have some tearing of rotator cuff

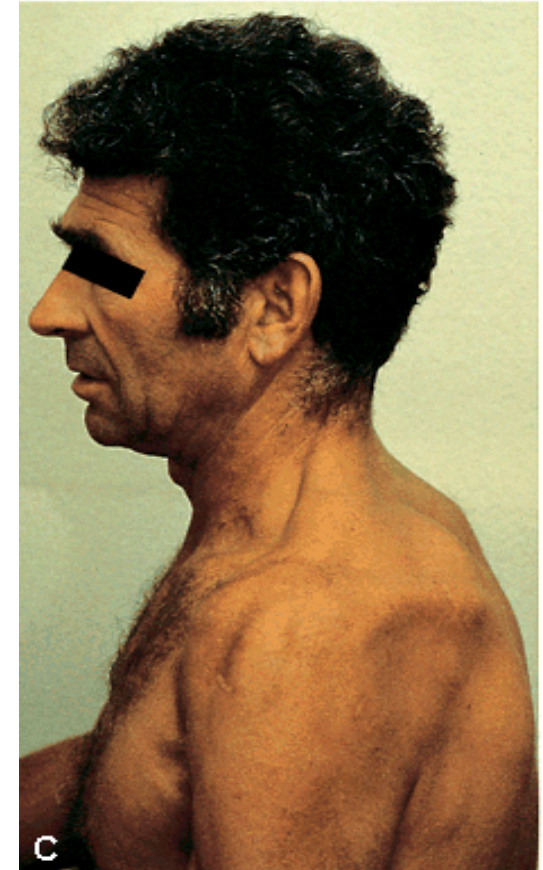


Presentation Clinically

- Acute
 - Fall
 - Lifting
 - Twist/turn/pull
- Acute on chronic
 - Chronic symptoms exacerbated by acute episode
- Chronic
- Traumatic vs insidious

Presentation

- Pain
 - Lateral arm
 - Pain with motion
 - Night pain
- Weakness
 - Difficulty with elevation
- Atrophy



Presentation

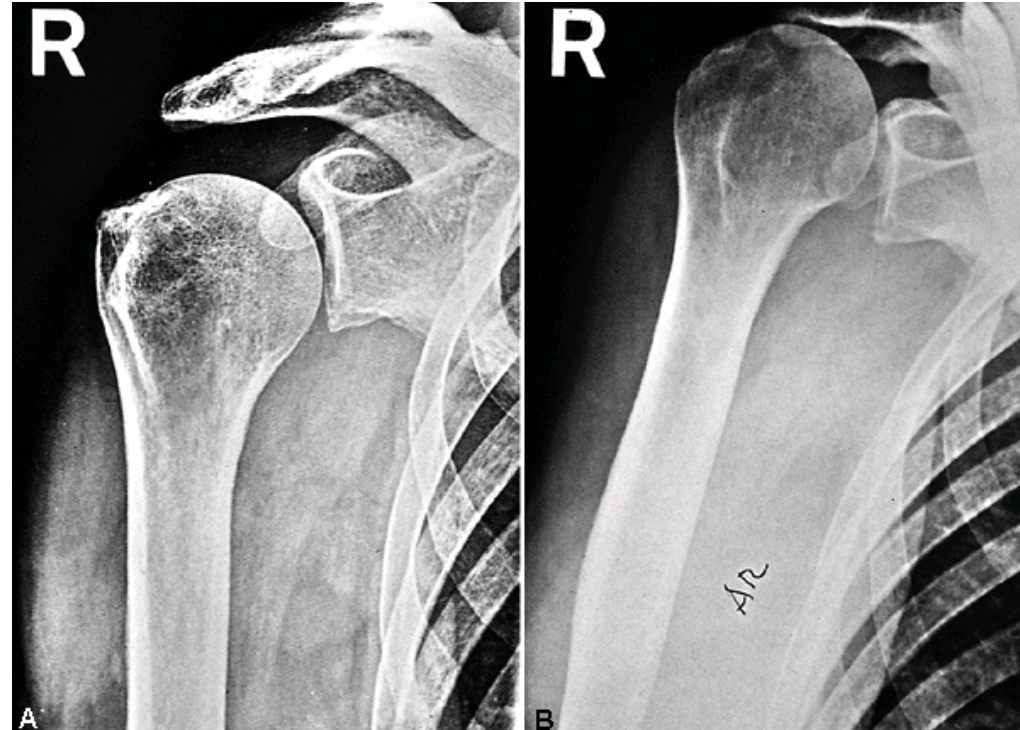
- History of previous shoulder pain/pathology?
- Temporal relationship to injury?
 - Immediate or delayed onset



Studies

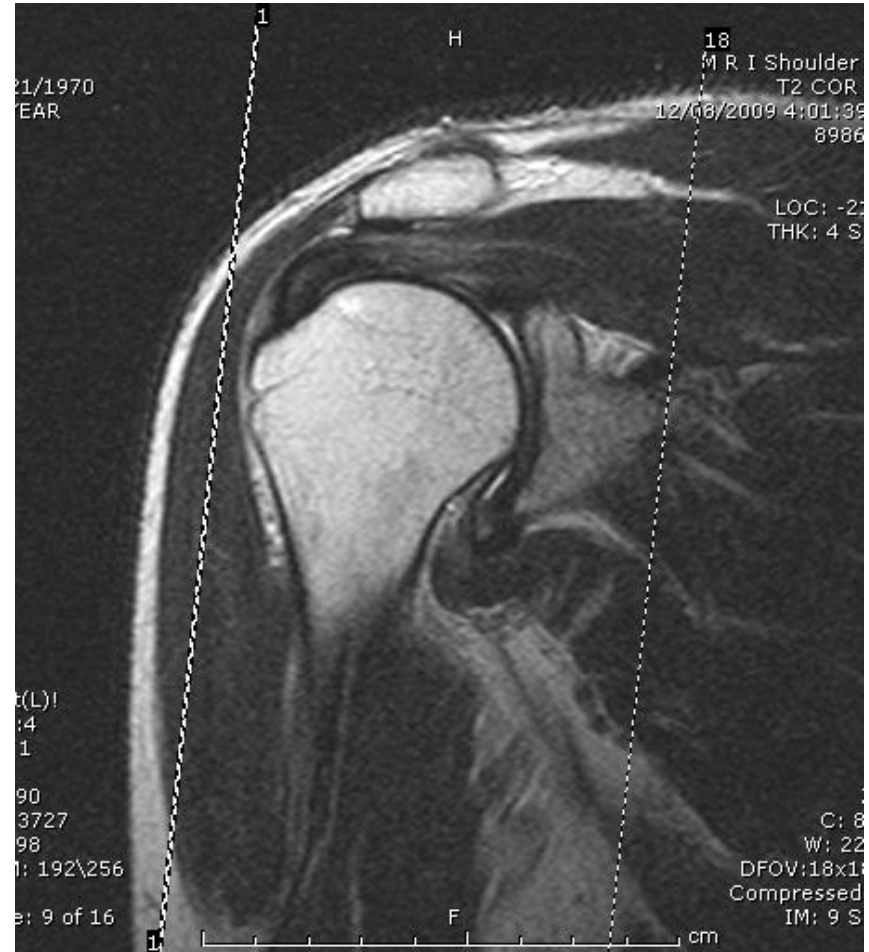
- Plain films

- Spurs
- High riding head
- Fractures
- Arthritis



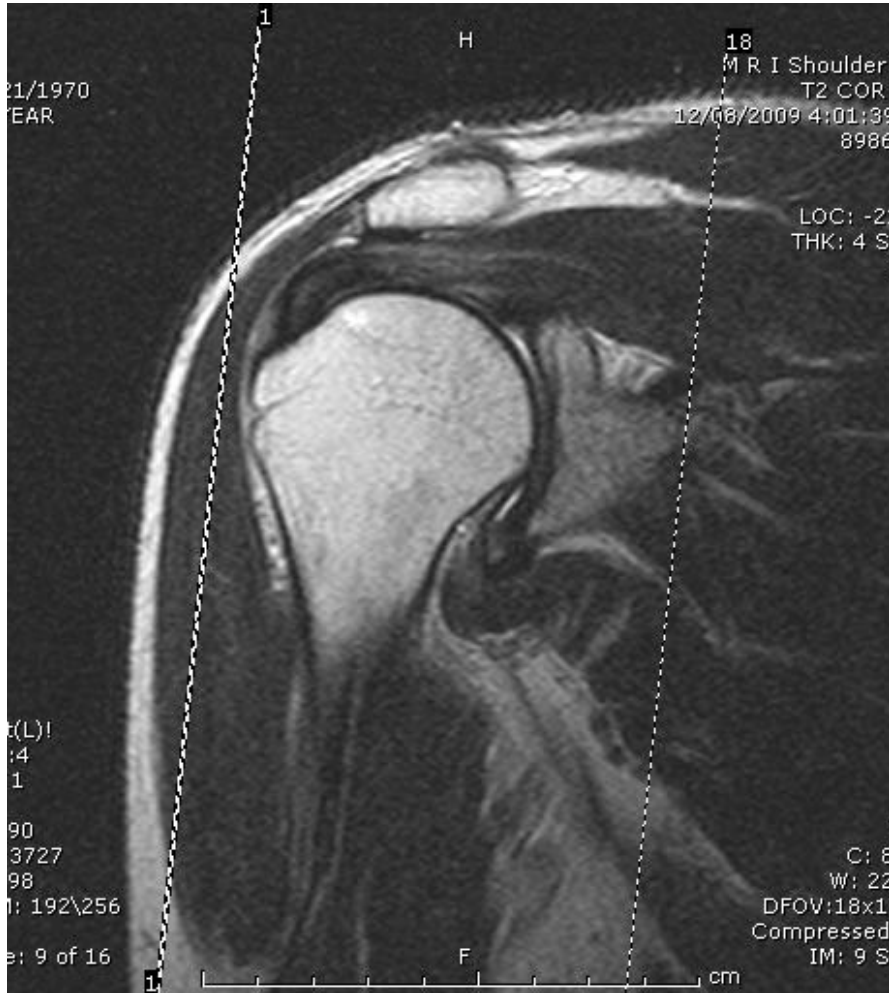
Studies

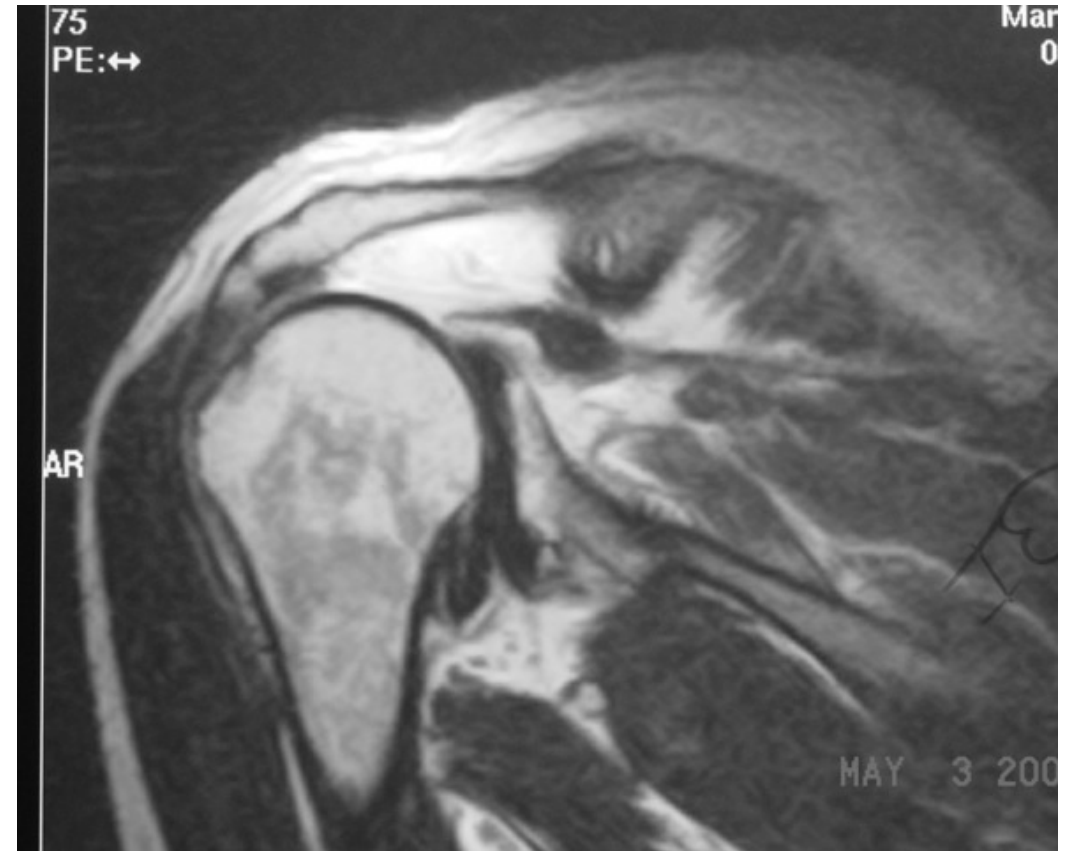
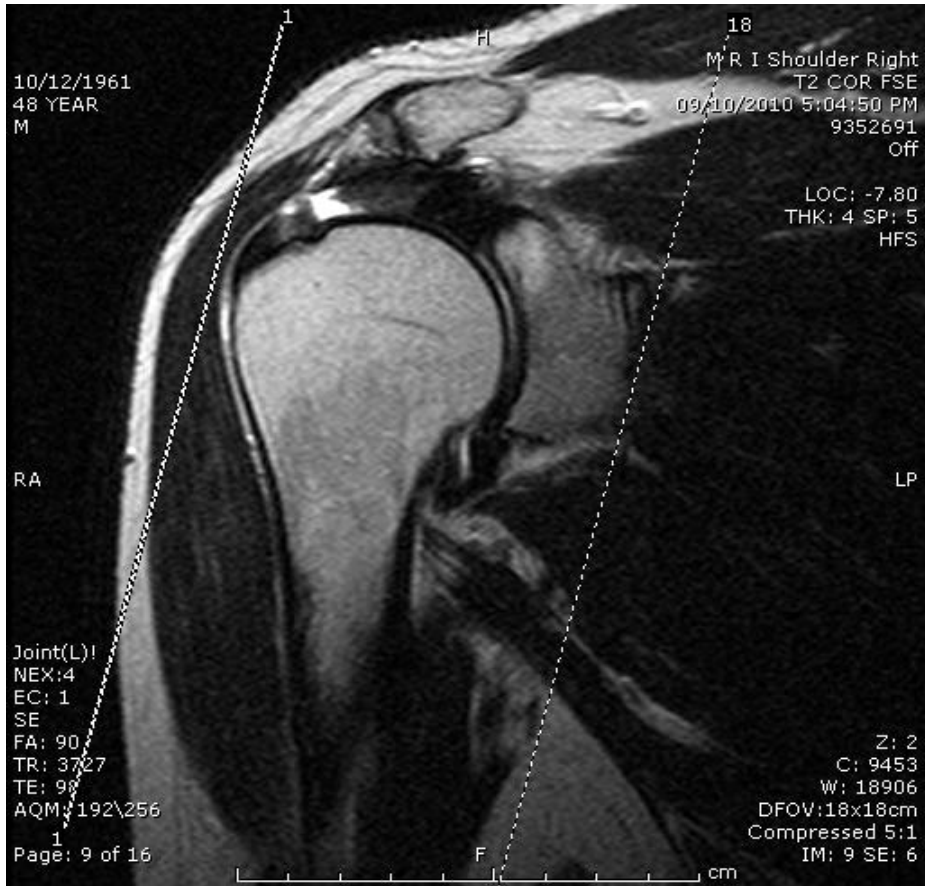
- MRI indications
 - Younger patient
 - Acute injury with weakness
 - Chronic injury that has failed conservative treatment



Presentation

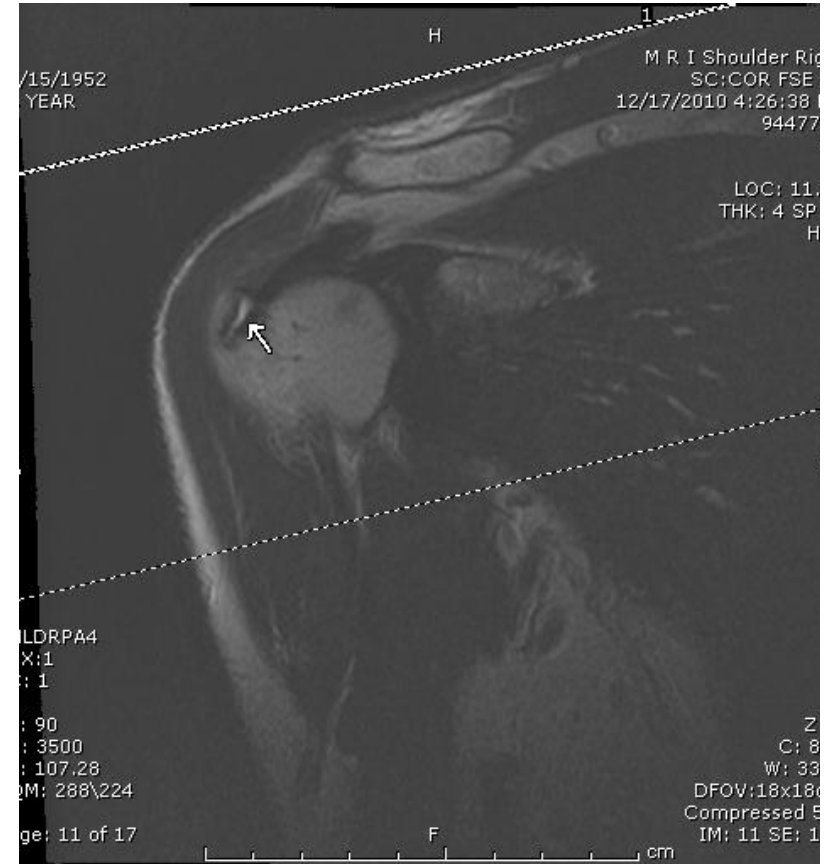
- Spectrum of disease
 - Tendonitis/bursitis
 - Tendonopathy
 - Partial tear
 - Full thickness rotator cuff tear
 - Rotator cuff arthropathy





Treatment

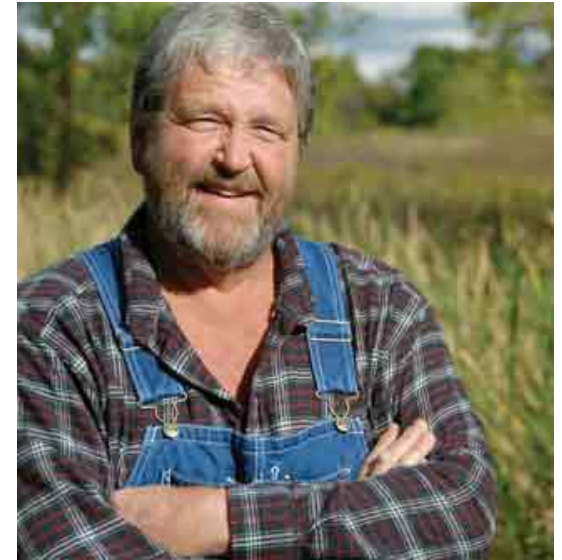
- Not all cuff tears need fixed
- 30-50% of patients over 50 have some tearing of rotator cuff



Treatment

- Factors

- Age
- Activity level
- Acute vs chronic
- Previous treatment
- Degree of disability
- Size/reparability of tear



Treatment

- Nonoperative
 - Older
 - Minimal function
 - Chronic
 - Minimal symptoms
 - Irreparable
- Operative
 - Physiologically younger
 - Active
 - Acute
 - Fixable
 - Failed nonoperative

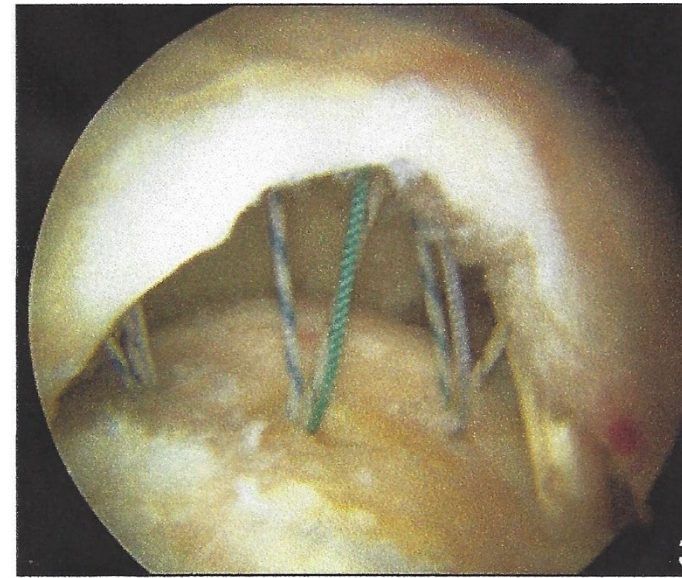
Treatment

- Nonoperative
 - NSAIDS
 - Activity modification
 - Corticosteroid injections
 - Can accelerate degeneration
 - Physical therapy



Treatment

- Arthroscopic rotator cuff repair
 - With or without SAD
 - Treat associated pathology such as biceps pathology

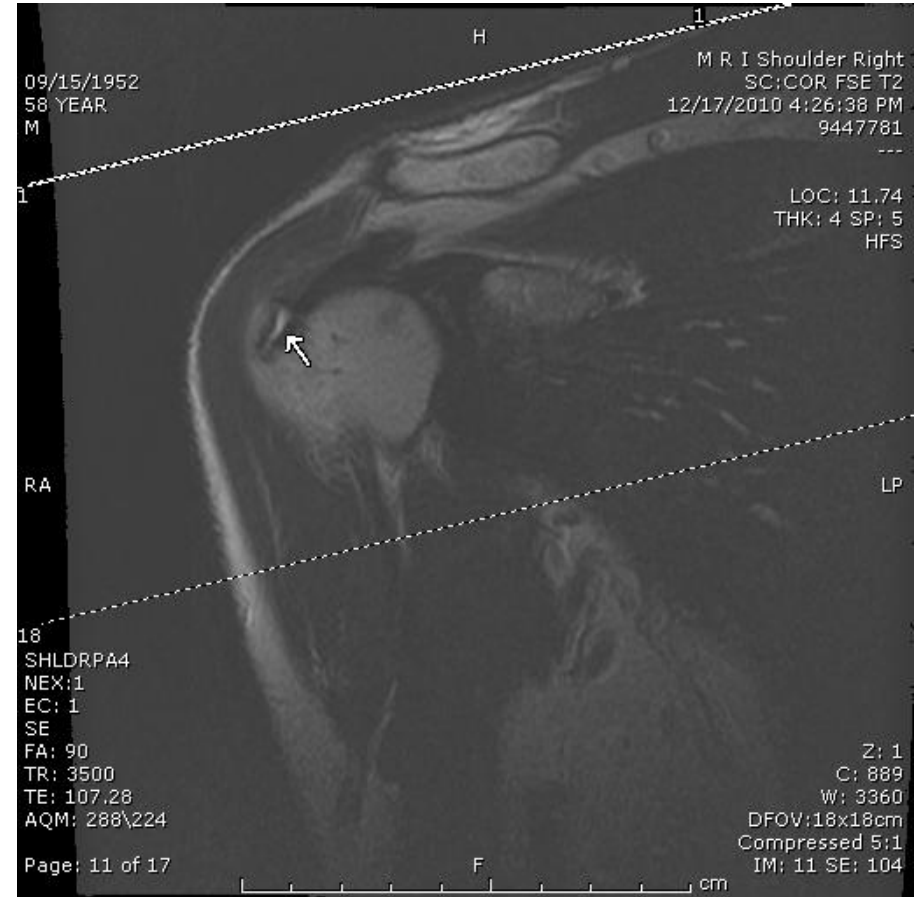


Industrial Claims

- Is rotator cuff tear a work related injury?
- Previous rotator cuff treatment?
- Natural history of rotator cuff injuries
- Irreparable rotator cuff tears and rotator cuff arthropathy
- Outcomes in industrial claim rotator cuff surgery

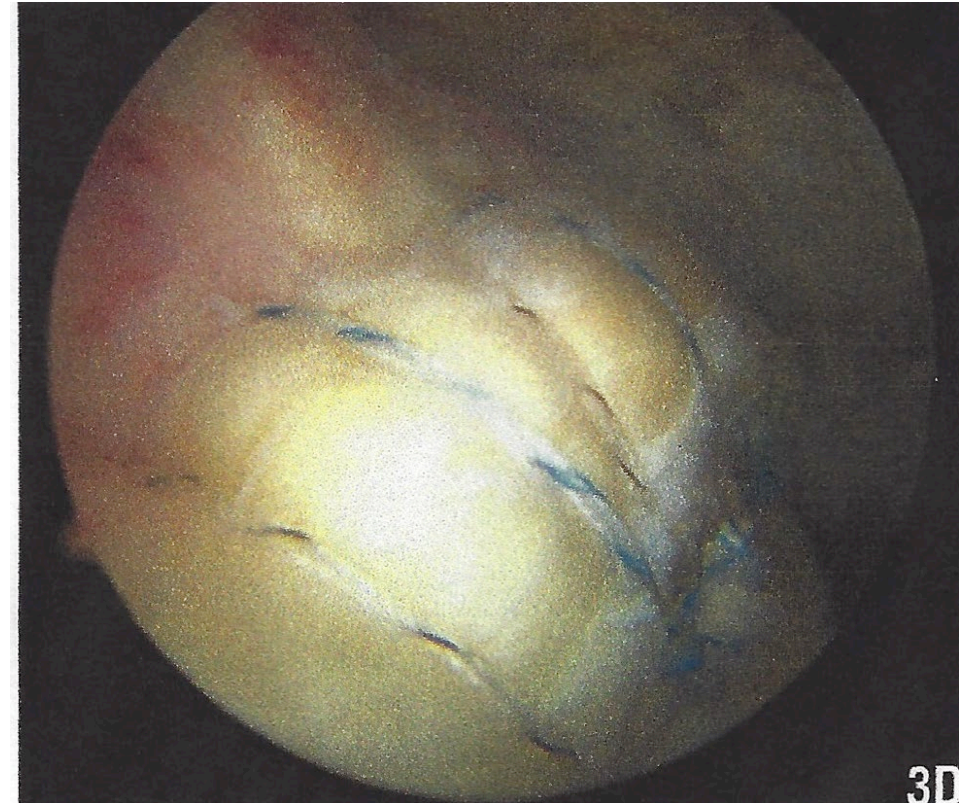
Rotator Cuff

- Natural prevalence of rotator cuff tears in population over 50 y/o
- ? Acute injury
- Previous symptoms/treatment
- "Substantial aggravation of preexisting condition"



Rotator Cuff Repair

- In non-BWC population, can expect success rates of 90-95% with rotator cuff repair
 - Less favorable with large tears, older patients, multiple steroid injections, smokers



Rotator Cuff Repair

- Multiple studies demonstrate that patients with industrial claims have **worse outcomes** with regards to pain and return to function after repair



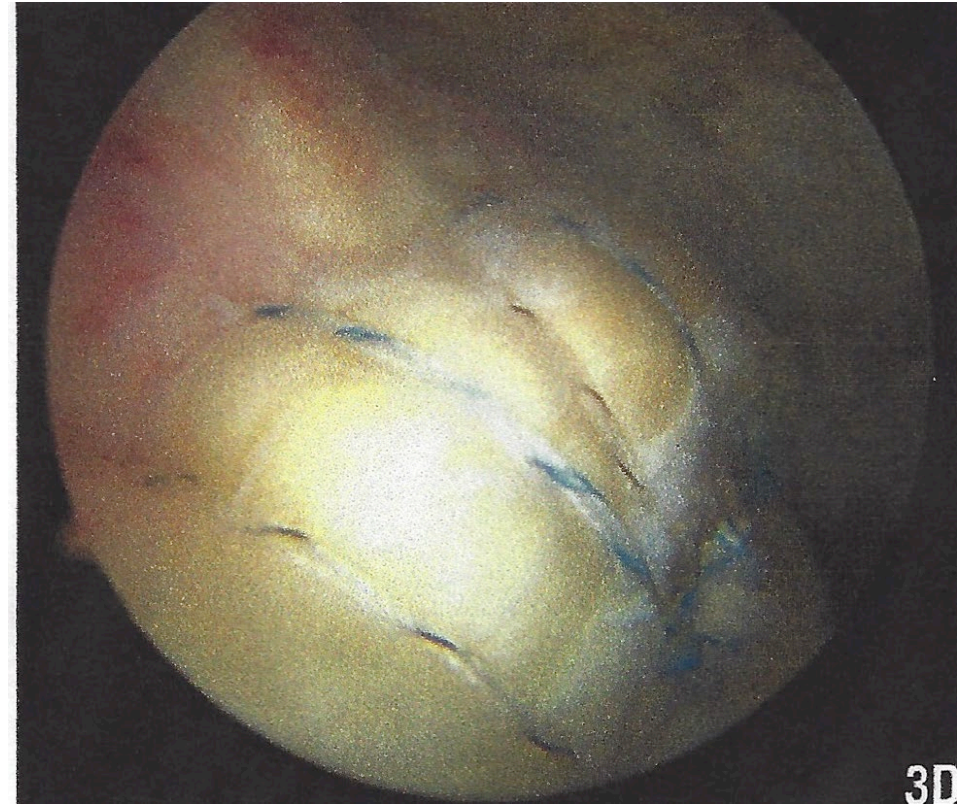
Rotator Cuff Repair

- Patients with WC claims
 - More pain
 - Worse function
 - Longer return to work
 - More noncompliant
 - Preop expectations/attitude



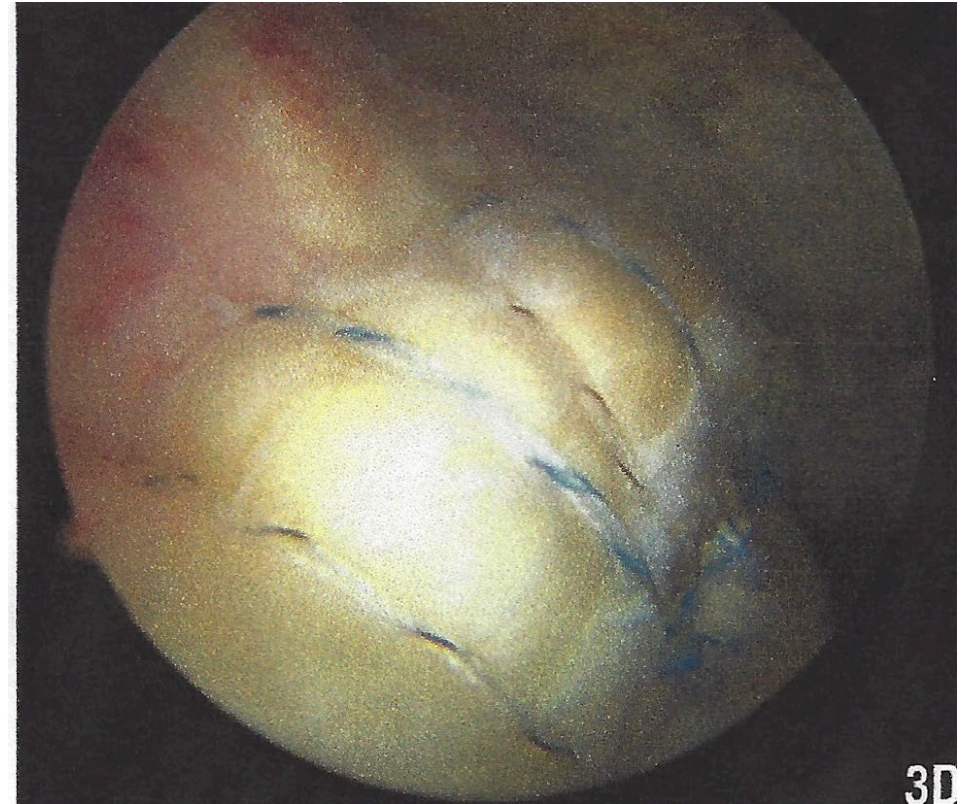
Rotator Cuff Repair

- In addition, these patients often with contributing factors
 - Smokers
 - Delayed treatment
 - Previous surgery
 - Associated pathology
 - Ie cervical



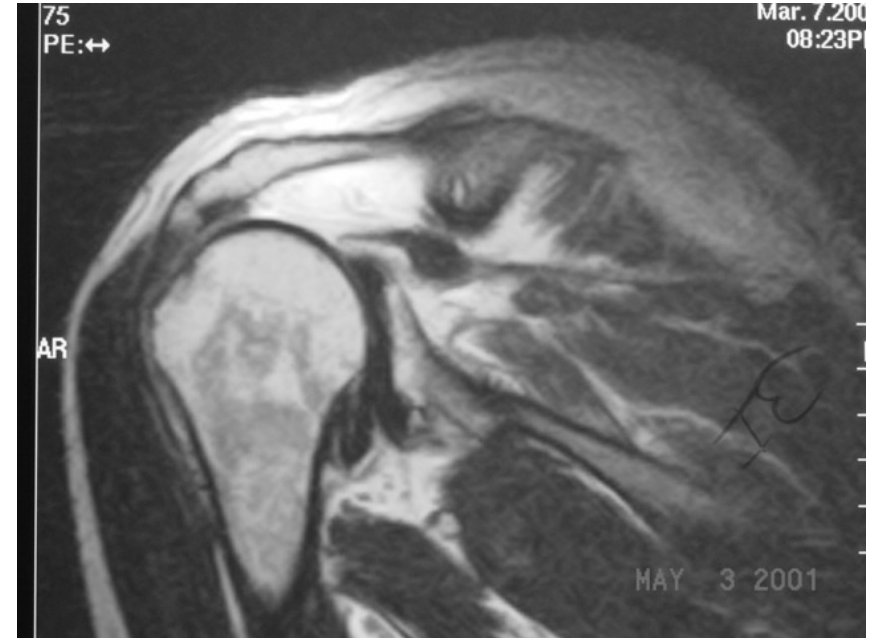
Irreparable tears

- Many with chronic massive degenerative rotator cuff tears can function well
- Acute on chronic?



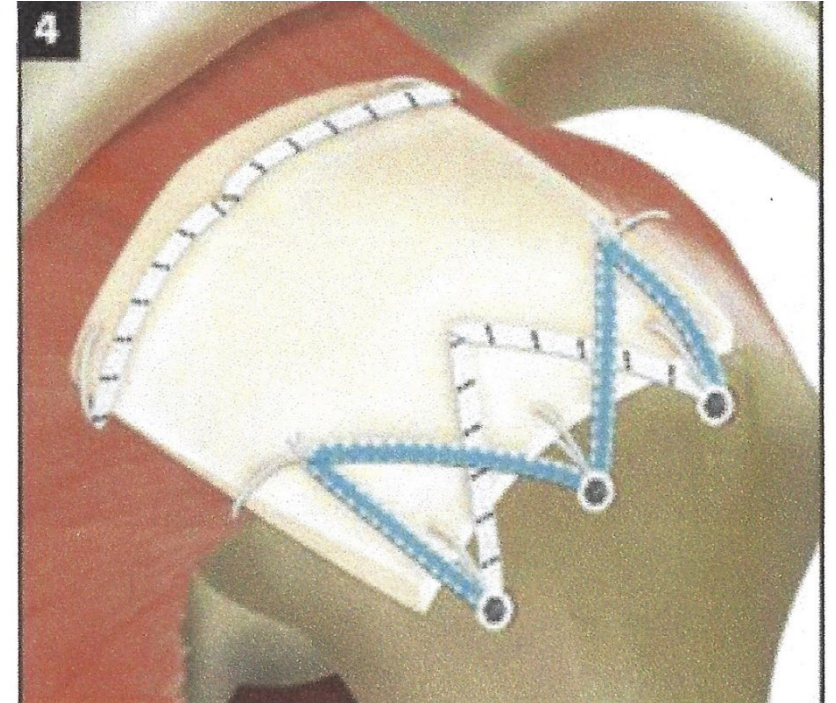
Irreparable tears

- Superior capsular reconstruction
 - Graft over top of head to recreate superior capsule and duplicate head depressing function of cuff
 - Done in conjunction with partial repair



Irreparable tears

- Repair anterior and posterior cuff
- Replace superior cuff with graft from glenoid to humeral head
- Coded as capsular reconstruction and rotator cuff repair



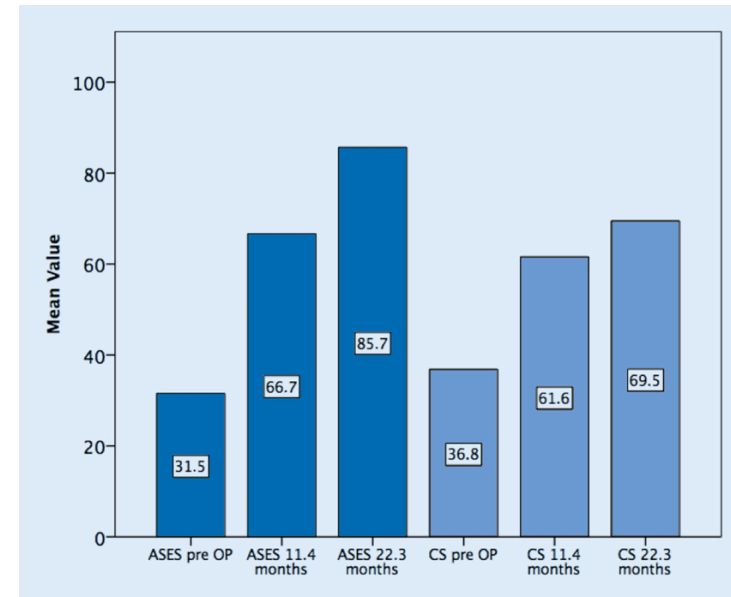
Irreparable tears

- InSpace Subacromial Balloon
 - Depresses humeral head and cushions interval between head and acromion
 - Short recovery
 - No activity limitations



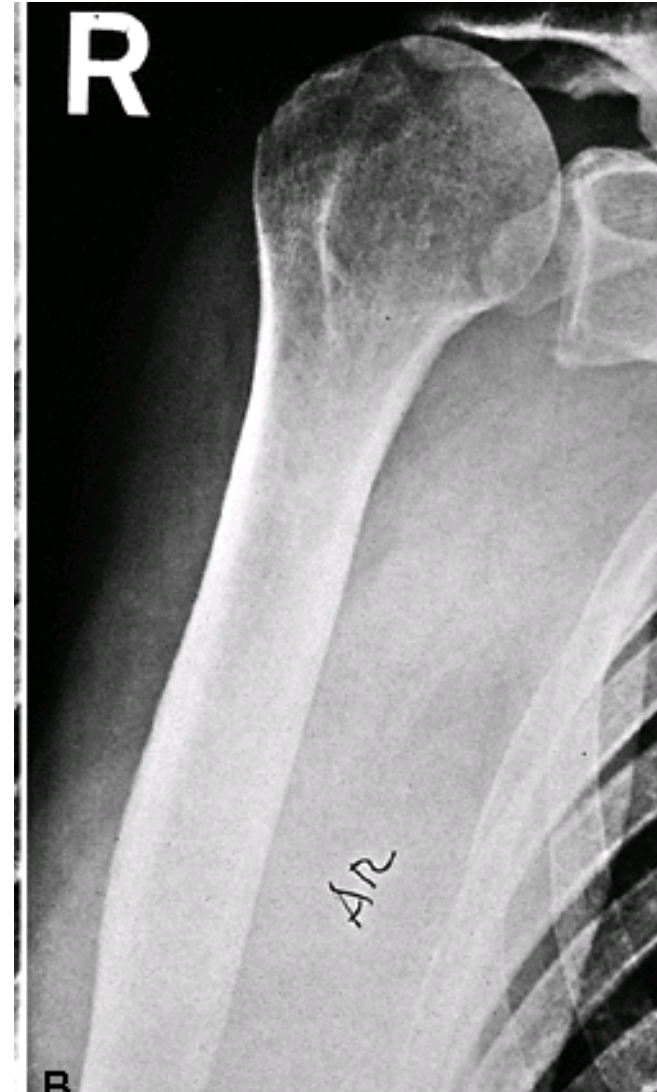
Irreparable tears

- InSpace Subacromial Balloon
 - Good clinical results for several years in Europe
 - Recently approved in US for use in irreparable rotator cuff
 - Works best with preserved motion, no arthritis, intact anterior tendons



Irreparable tears

- Patients with full cuff tear arthropathy not candidates for SCR or balloon
- Reverse total shoulder replacement is only reliable option



Irreparable tears

- Reverse TSA very effective in pain relief and restoring function
- Permanent limitations to lifting may preclude return to previous employment



Irreparable tears

- Reverse arthroplasty is accepted as a treatment option for irreparable rotator cuff tear without arthritis



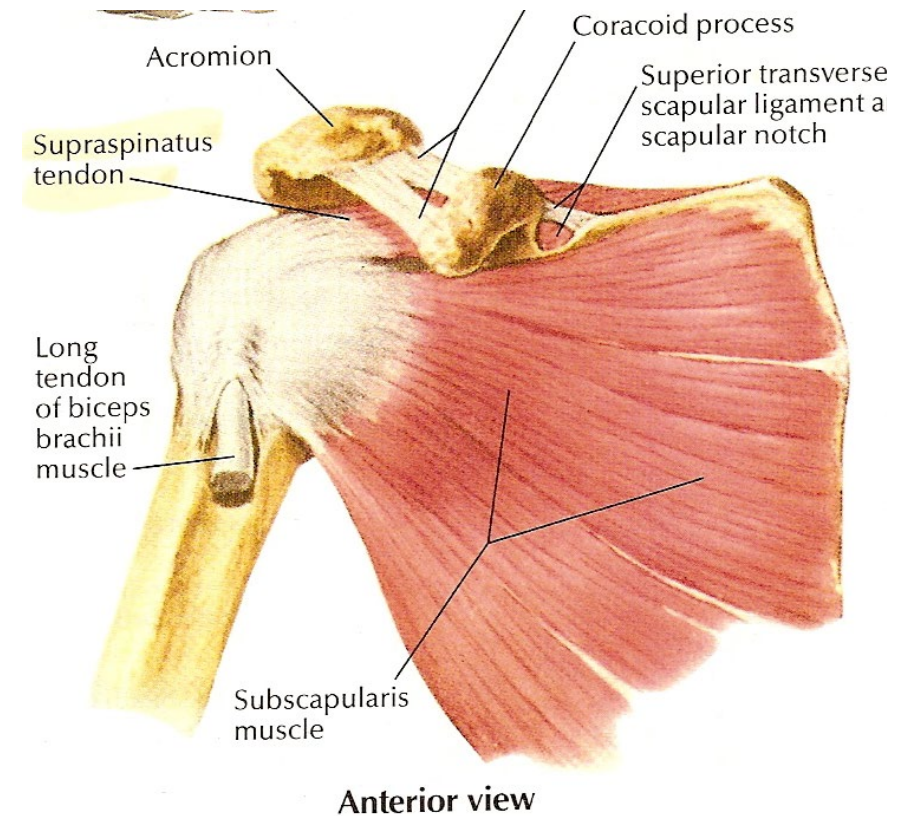
Biceps Pathology

- Biceps tendonopathy/tear
- Biceps subluxation
- SLAP tears



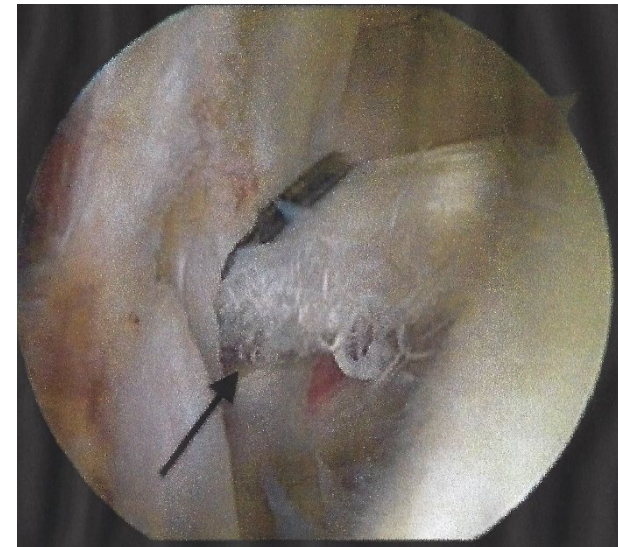
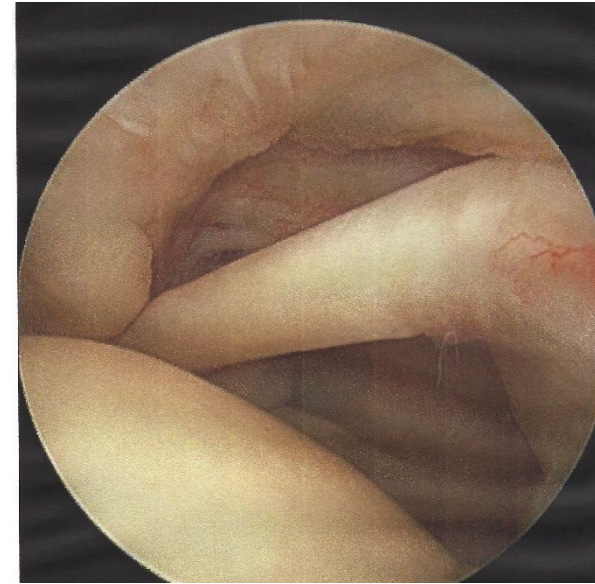
Biceps Pathology

- Biceps tendonopathy, tear, or subluxation often associated with rotator cuff pathology
 - Anterior/anterior-superior cuff tears



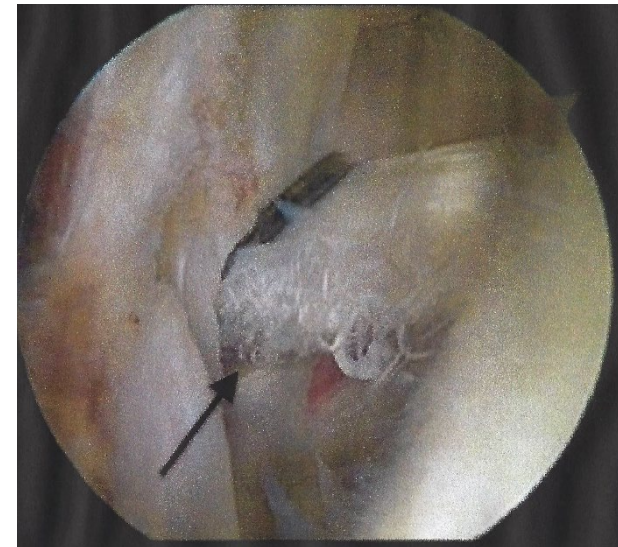
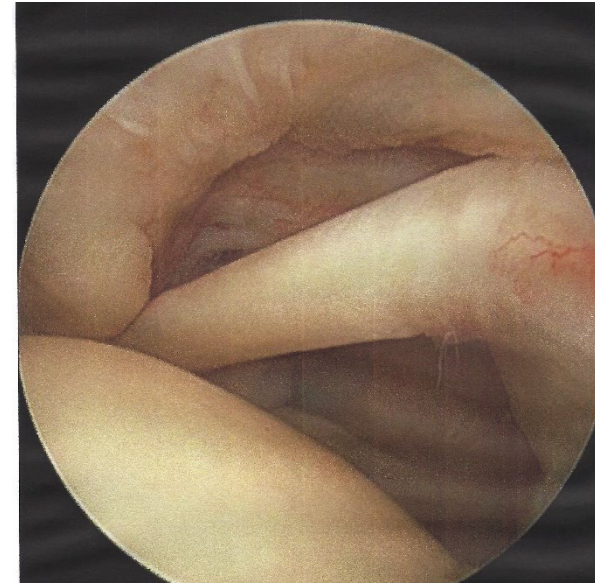
Biceps Pathology

- Biceps can be a significant source of pain
- Tenotomy
 - Cut tendon and let free
 - May get deformity and can (10-15%) have cramping
- Tenodesis
 - Reattach to proximal humerus outside joint



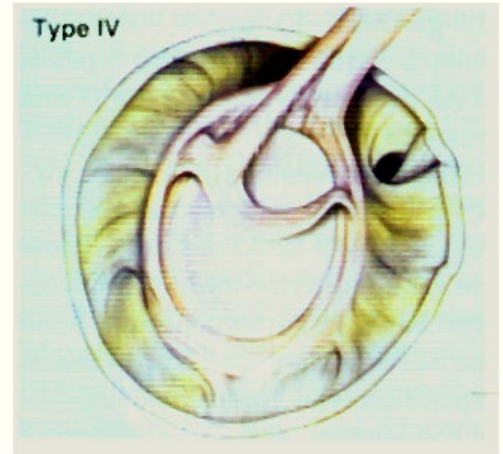
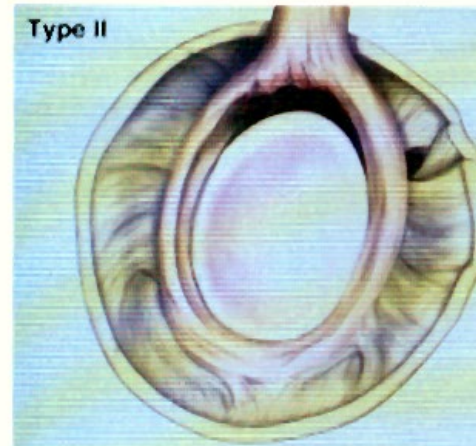
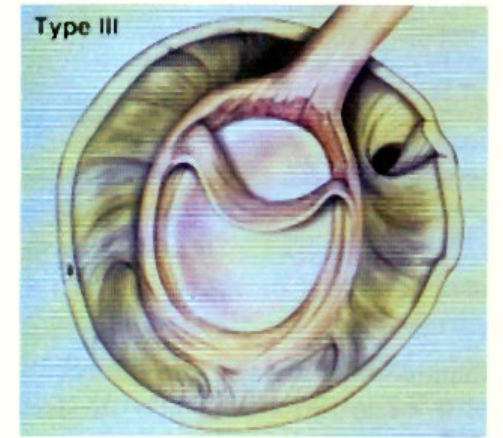
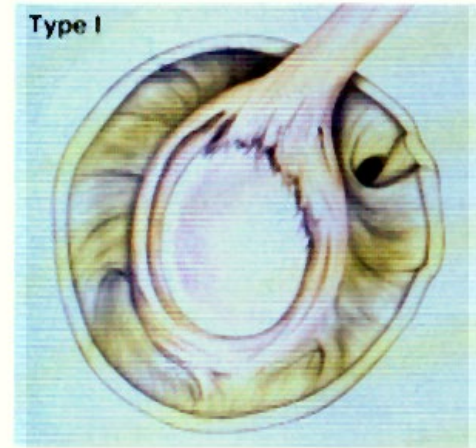
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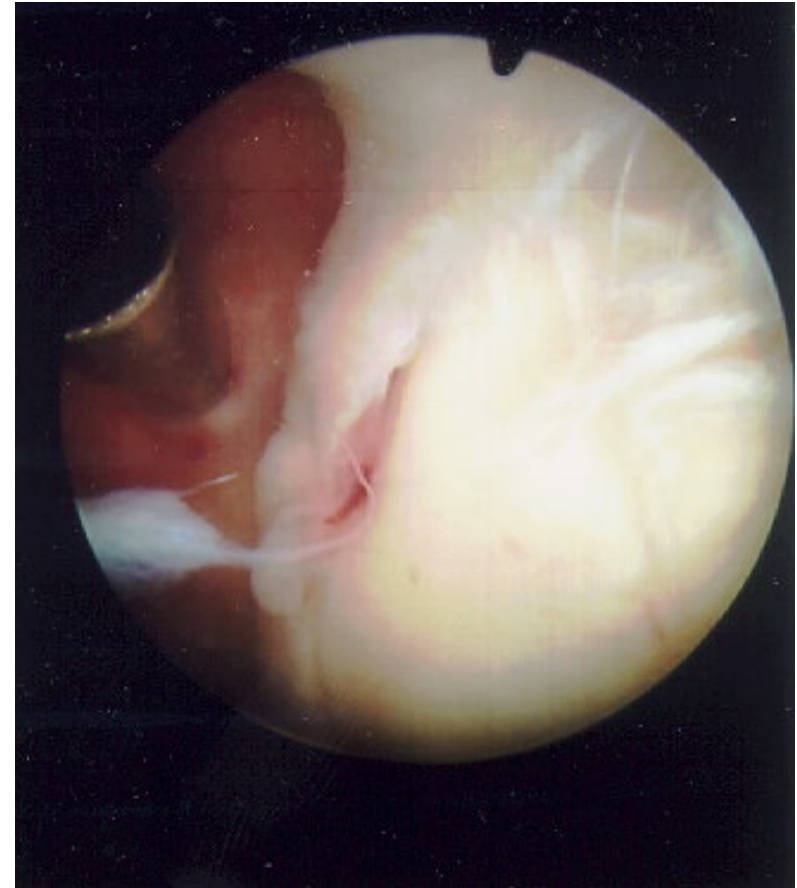
SLAP

- Type I and II tears very common and often degenerative and asymptomatic
 - Must correlate MRI findings with clinical exam



SLAP

- Trend towards treating SLAP tears with biceps tenodesis +/- labral repair
 - >30 yo
 - Concomitant rotator cuff pathology
- SLAP repair reserved for
 - Younger <30
 - Associated instability
 - Throwers



Labral tears

- Traumatic vs degenerative
 - Acute injury?
 - Subluxation/Dislocation?



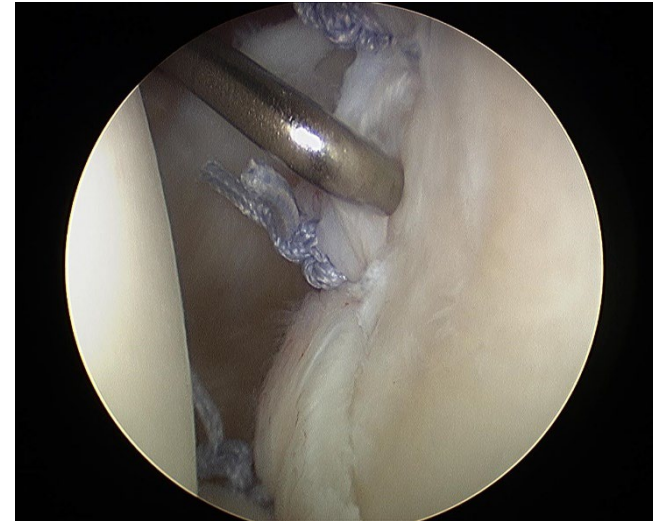
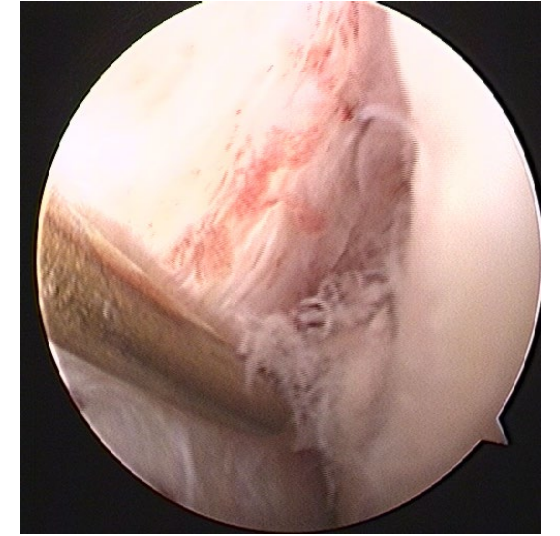
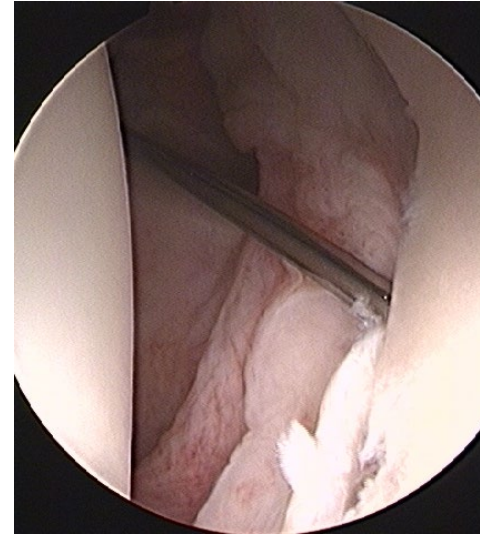
Labral tears

- Often incidental degenerative finding with early OA
- Usually treated with debridement
 - > mid 30s
 - Degenerative tissue
 - In conjunction with rotator cuff tears



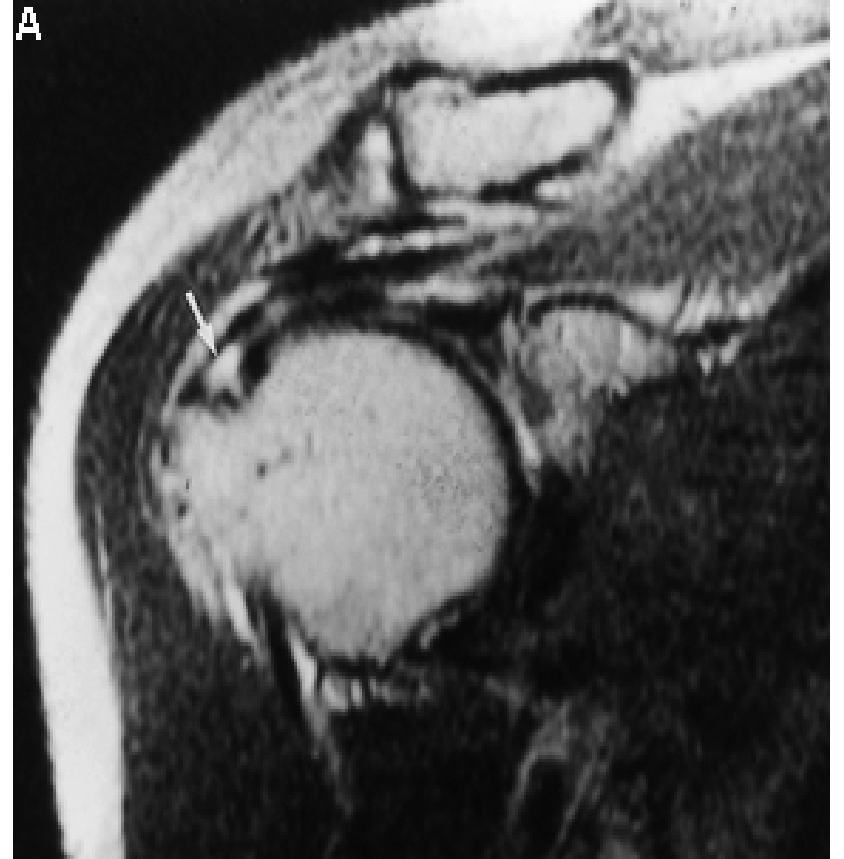
Labral tears

- With dislocation, can lead to recurrent instability
- Bankart tear
- Repair may be indicated in these younger patients (<25-30 yo) if fail conservative treatment



Acromioclavicular joint

- Often degenerative with chronic arthritis
- Most often incidental finding
- Can be difficult to justify approval with other shoulder claims



Physician frustrations with Industrial claims

- Difficult patient population
 - Often with difficult injuries to treat
 - Poorer outcomes
 - ? Motivation to RTW
 - Often difficult to deal with
- Managing the BWC system
 - Delays in treatment
 - Rush back to work or ignoring restrictions
 - Surgeon consulted but recommendations denied
 - Not all pathology approved

Industrial claims

- However, many BWC patients have legitimate claims and want to get better
- Need to be fair to both patient and employer



Thank you

- Questions?
- Discussion?
- Thank you!



JOSEPH MILETI, M.D.

ONLINE PATIENT REVIEWS

★★★★★ 4.7 based on 148 reviews

Dr. Joseph Mileti is a board certified orthopedic surgeon with fellowship training in reconstruction and replacement of the shoulder and elbow at the world renowned Mayo Clinic. He is a top shoulder specialist in central Ohio, and has received numerous honors during his academic training and as a practicing orthopedic surgeon.

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