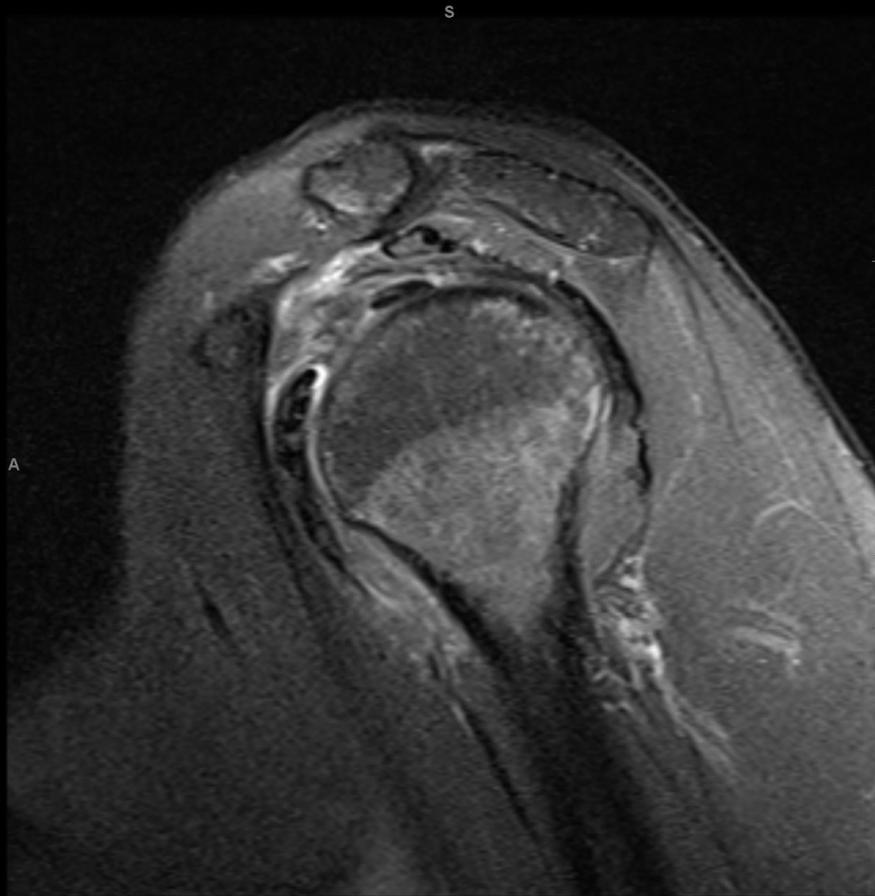
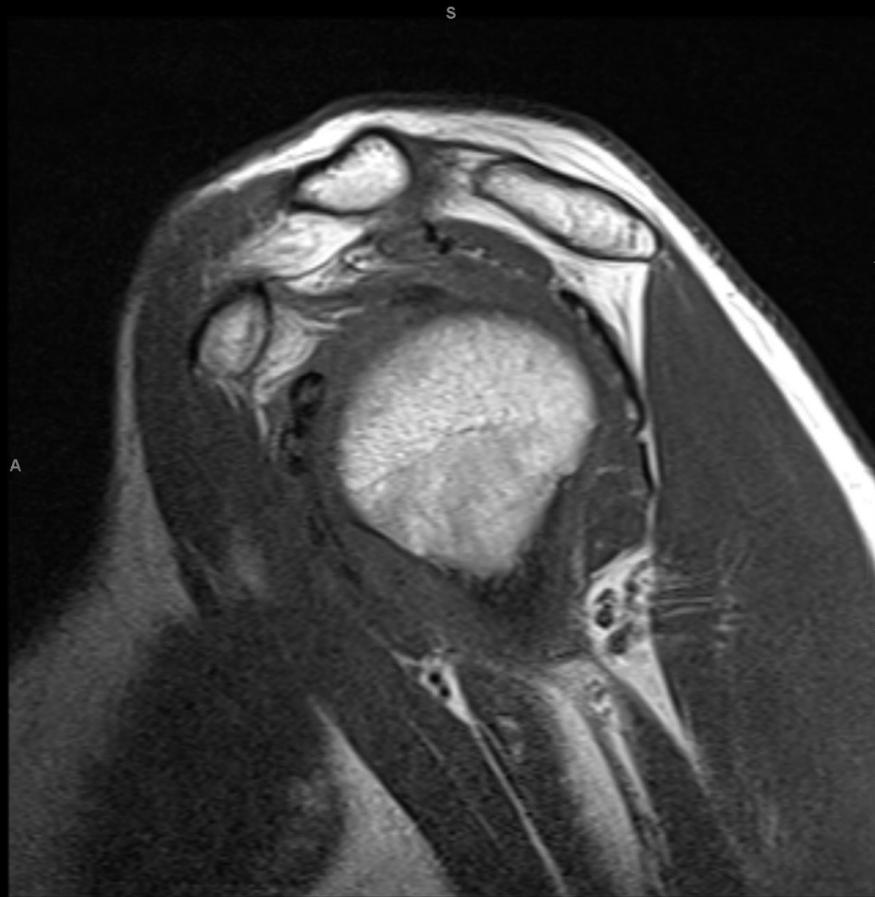
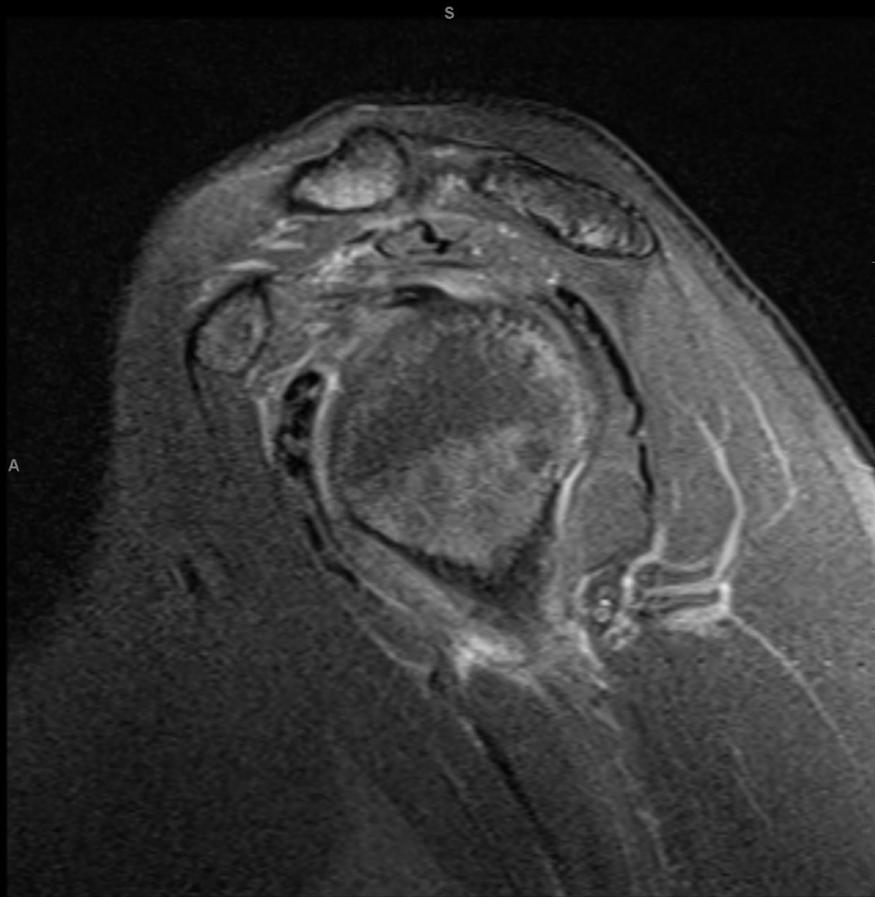


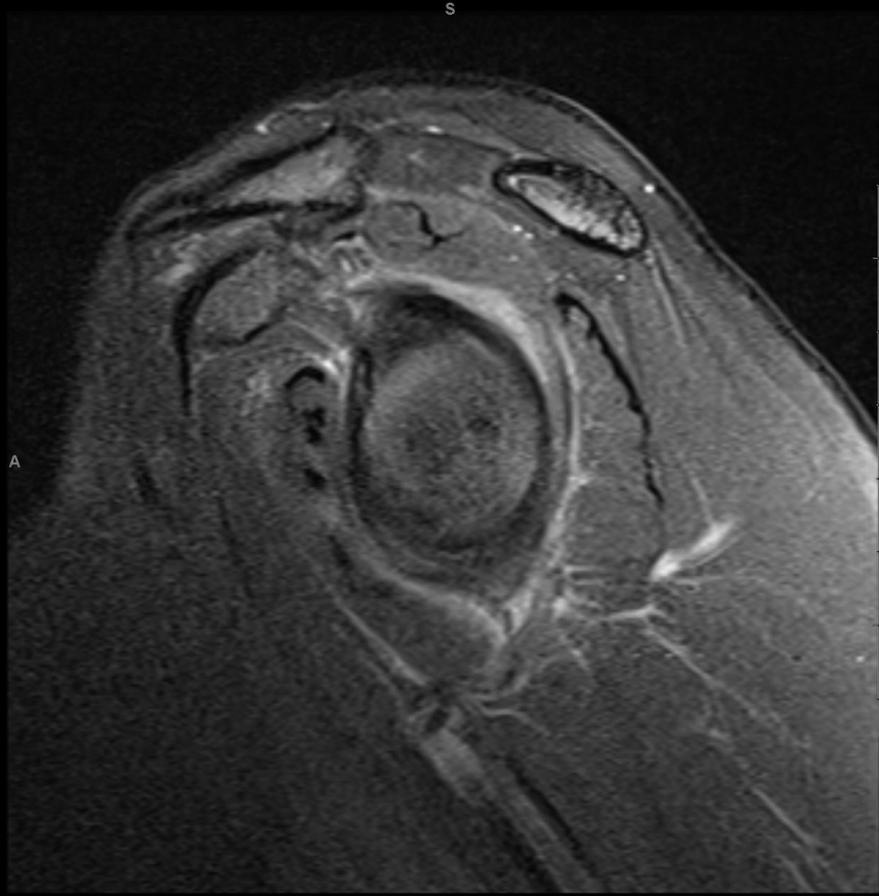


53 F with 4 months of shoulder pain and
decreased ROM

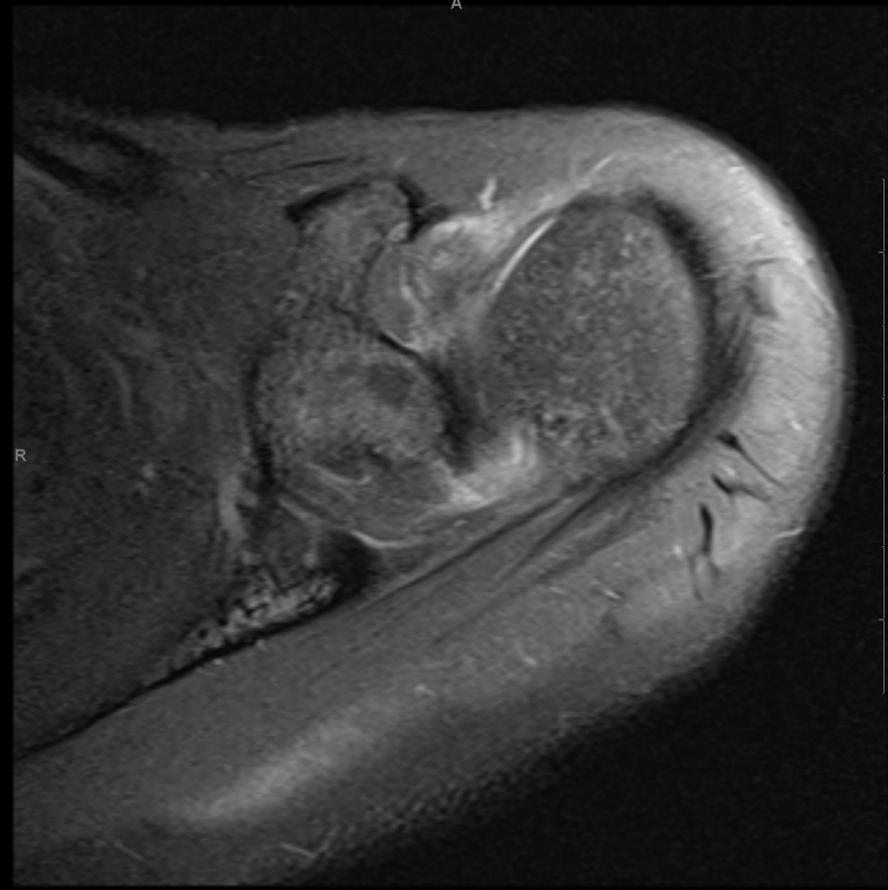
Melanie Chang, MD





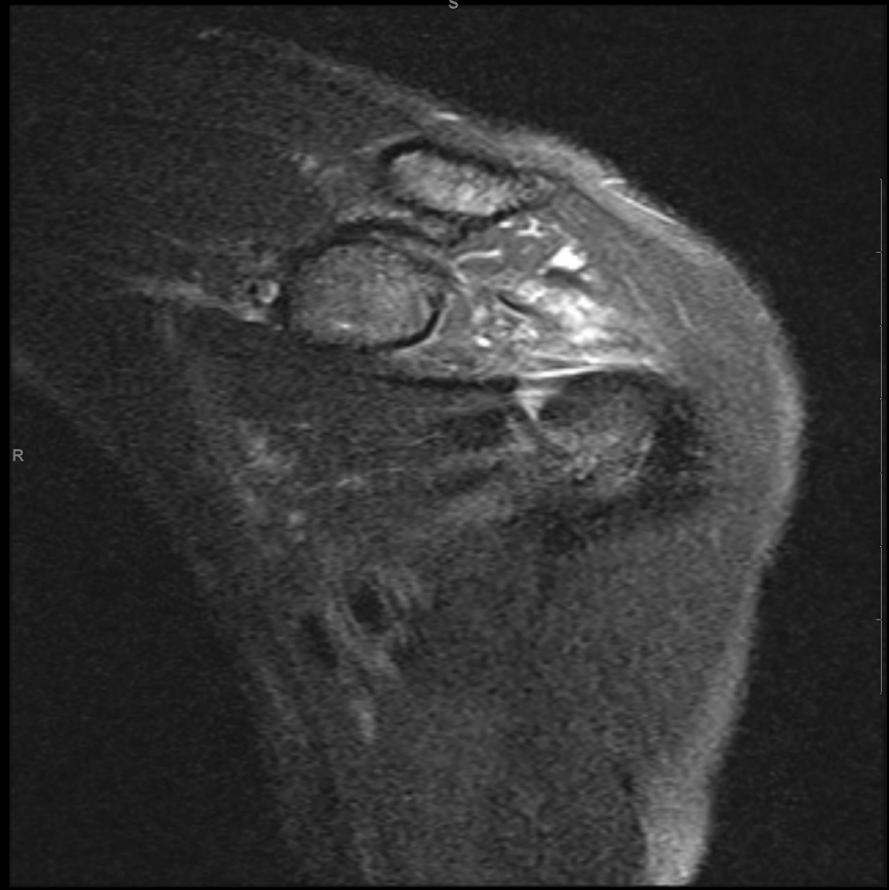


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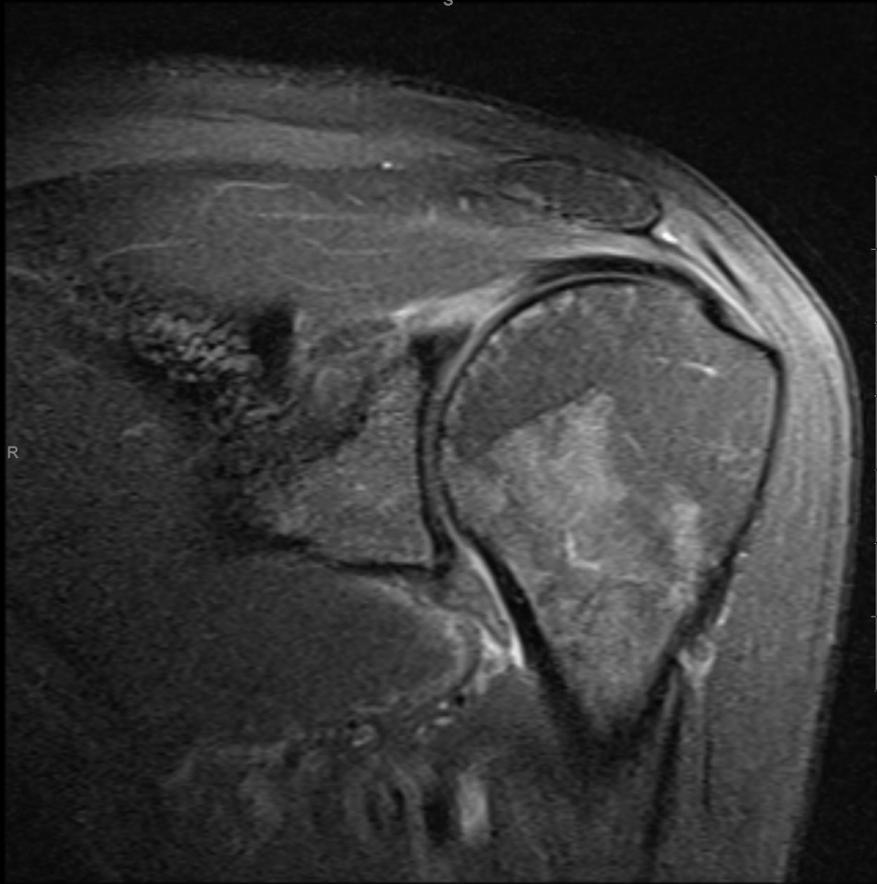


R

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Adhesive Capsulitis

Aka frozen shoulder

Inflammatory hypervascular synovitis in GHJ → fibroblastic response in adjacent capsule → capsular thickening and contraction → restricted ROM

2-5% of general population

MC females 40-60 yo

Strong association with DM

Adhesive Capsulitis

Primary/idiopathic- ? related to immunologic, biochemical, or hormonal imbalances

Secondary- antecedent injury, low-level repetitive trauma, surgery, rheumatologic conditions

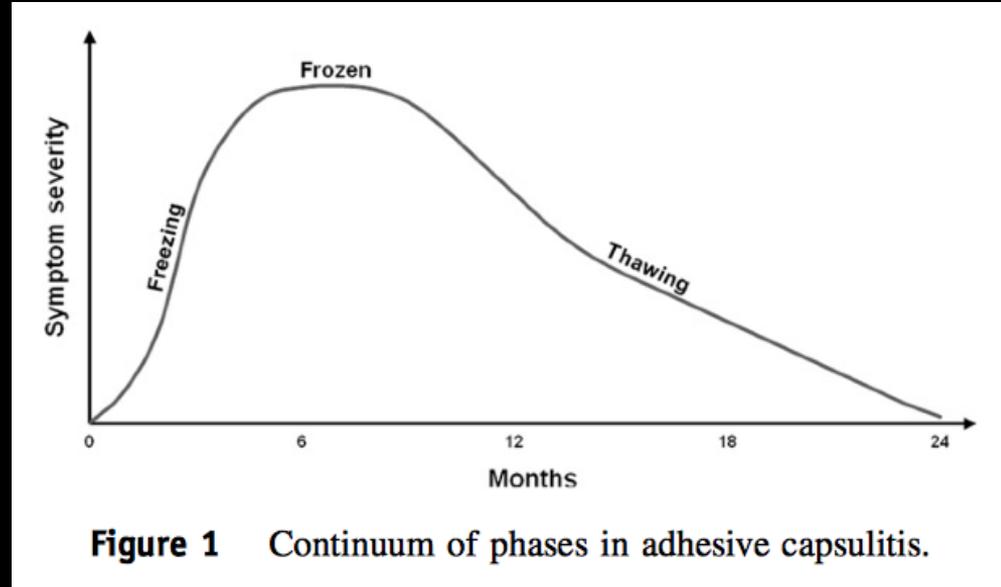
Painful restriction of passive scapulohumeral elevation (<100), night pain, external rotation less than one half of normal

Phases

Freezing- painful, progressive involuntary stiffness (10-36 wks)

Frozen- gradually decreasing pain, continued reduction in ROM (4-12 mos)

Thawing- recovery with gradual spontaneous improvement of shoulder mobility and function over 5-26 mos



Stages

Capsule and synovial thickness (in axillary pouch) demonstrates greatest correlation with clinical stage

Early- greater combined capsule and synovial thickening

Later- only capsular thickening

Rotator interval scarring- no correlation with clinical stage

Sofka CM, et al. Magnetic Resonance Imaging of Adhesive Capsulitis: Correlation with Clinical Staging. *HSSJ*. 2008.

Table 1 Stages of adhesive capsulitis (adapted from Hannafin and Chiaia CORR [2])

	Description
Stage 1	Duration of symptoms 0–3 months Pain with active and passive ROM Limitation of forward flexion, abduction, internal rotation, external rotation EUA: normal or minimal loss of ROM Arthroscopy: diffuse glenohumeral synovitis Pathology: hypertrophic, hypervascular synovitis; rare inflammatory cell infiltrates, normal capsule
Stage 2	Duration of symptoms 3 to 9 months Chronic pain with active and passive ROM Significant limitation of forward flexion, abduction, internal rotation, external rotation EUA: no change in ROM compared with when patient is awake Arthroscopy: diffuse, pedunculated synovitis Pathology: hypertrophic, hypervascular synovitis with perivascular and subsynovial scar, fibroplasias, and scar formation in the underlying capsule
Stage 3	Duration of symptoms 9 to 15 months Minimal pain except at end ROM Significant limitation of ROM with rigid “end feel” EUA: no change in ROM compared with when patient is awake Arthroscopy: no hypervascularity seen; remnants of fibrotic synovium. Diminished capsular volume Pathology: “burned out” synovitis without significant hypertrophy or hypervascularity. Dense scar formation of the capsule
Stage 4	Duration of symptoms: 15 to 24 months Minimal pain Progressive improvement in ROM

ROM Range of motion, *EUA* examination under anesthesia

MRI findings

Soft tissue thickening in RI, encasing CHL, SGHL, biceps anchor

Thickened CHL >4mm (95% specific, 59% sensitive)

RI capsule thickening >7mm (86% specific, 64% sensitive)

Complete obliteration of subcoracoid fat triangle (100% specific, 32% sensitive)

Joint capsule and synovial thickening in axillary recess >4mm (95% specific, 70% sensitive)

Management

Conservative tx: analgesia, PT, +/- steroid injection

Hydrodilatation

Closed manipulation under anesthesia

Surgical tx: arthroscopic/open release

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