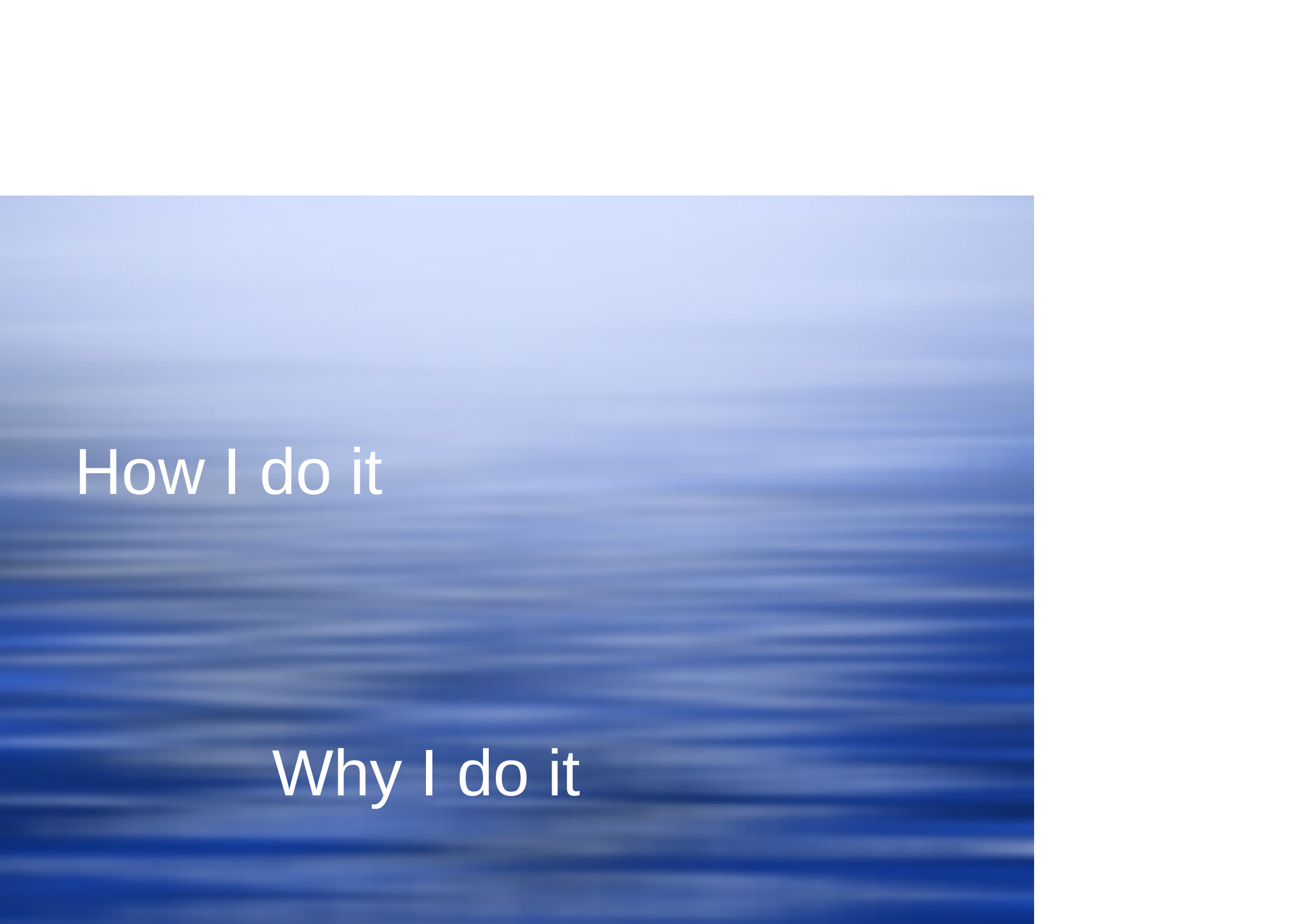


Shoulder Impingement

Peter Gendall





How I do it

Why I do it

Accuracy of Shoulder Ultrasound

For rotator cuff tears

For impingement

Compared with MR

Compared with Operative findings

Prior Probability

Prior

Probability

Prior Probability

Ultrasonography of symptomatic rotator cuff tears compared with MR imaging and surgery.

Fotiadou AN, Vlychou M, Papadopoulos P, Karataglis DS, Palladas P, Fezoulidis IV.

Radiology Department, University Hospital of Larissa, Mezourlo 41110, Larissa, Greece; Radiology Department, G. Papanikolaou Hospital, Exochi 32100, Thessaloniki, Greece.

The findings in 88 patients were compared with arthroscopy or open surgery. RESULTS: Full-thickness tear was confirmed in 57 cases, partial-thickness tear in 30 cases and degenerative changes without tear in 1. In all 57 cases of full-thickness tear and in 28 out of 30 cases of partial-thickness tear the supraspinatus tendon was involved. The accuracy in the detection of full-thickness tears was 98 and 100% for ultrasonography and magnetic resonance imaging, respectively. The accuracy in the detection of bursal or articular partial-thickness tears was 87 and 90% for ultrasonography and magnetic resonance imaging, respectively.

The clinical role of shoulder ultrasound.

Sonnabend DH, Hughes JS, Giuffre BM, Farrell R.

Department of Traumatic and Orthopaedic Surgery,
Prince of Wales Hospital
New South Wales, Australia

: Ultrasound was found to be reliable for the detection of full-thickness cuff tears (positive predictive value 96%). In the assessment of partial thickness tears, ultrasound produced few false positives, but failed to diagnose a significant proportion of these lesions. Lamination and other interstitial cuff pathology were not reliably detected by ultrasound. In the diagnosis of subacromial impingement, ultrasound produced few false positives (positive predictive value 95%), but did produce a significant number of false negative results (negative predictive value 66%)

Diagnosis of rotator cuff lesions: comparison of US and MRI on 38 joint specimens.

Bachmann GF, Melzer C, Heinrichs CM, Möhring B, Rominger MB.

Department of Diagnostic Radiology, Justus Liebig University, D-35 392 Giessen, Germany.

An experimental study was performed on cadaveric joint specimens of the shoulder to determine the accuracy of US and MRI in diagnosis of abnormalities of the rotator cuff. The value of different morphological criteria was evaluated for discrimination of degeneration as well as partial and complete disruption. A total of 38 surgically exposed specimens of the shoulder joint were examined by US, MRI and pathological methods visualising the tendons of the rotator cuff in same axial and longitudinal orientations. The three imaging modalities were reviewed separately by experienced examiners, respectively, who were blind to other results

Findings in US and MRI were finally compared with pathology to assess sensitivity and specificity.

sis of rotator cuff lesions: comparison of US and MRI on 38 joint specimens.

Mann GF, Melzer C, Heinrichs CM, Möhring B, Rominger MB.

Department of Diagnostic Radiology, Justus Liebig University, D-35 392 Giessen, Germany.

. Findings in US and MRI were finally compared with pathology to assess sensitivity and specificity. Pathology demonstrated 4 full-thickness tears, 6 partial-thickness tears, 16 cases with degeneration and 12 normal rotator cuffs. Ultrasound showed pathological signs in all abnormal cuffs, and one MRI report was false negative. Specificity was 67 % in US (4 of 12 cases were false positive) and 100 % in MRI (no abnormal findings in healthy tendons). Discrimination of different pathological disorders of the rotator cuff was reduced in both methods. Using US only 10 of 16 cases of degeneration, 2 of 6 partial tears and 3 of 4 complete tears were correctly defined. Using MRI 13 of 16 degenerations, 3 of 6 partial tears and 3 of 4 complete tears were detected. The MRI technique failed to visualise intratendinous calcifications in all 3 cases

Conclusions

CONCLUSIONS: Ultrasound and MRI are both sensitive and specific in the diagnosis of rotator cuff impingement and partial tears but is very much operator dependent

We conclude that MRI and US are both sensitive in the detection of abnormalities of the rotator cuff. Ultrasound should be the primary diagnostic method of choice because it is economic and fast. The MRI technique should be used secondarily because it provides more information about the extent of tendons and has lower risk of artefacts.

Technical editor: ultrasound

Snabe, Hughes, Siffert, Farrell
Department of Orthopaedic Surgery
Prince of Wales Hospital, New South Wales, Australia

Dagis, Fractures, Complications, and Rotator Cuff Tears.

**Bach, Mizer, Harris, Ching, B
Ringer, MB**

Department of Orthopaedics, University of
California, Los Angeles, CA 90095

Opinions

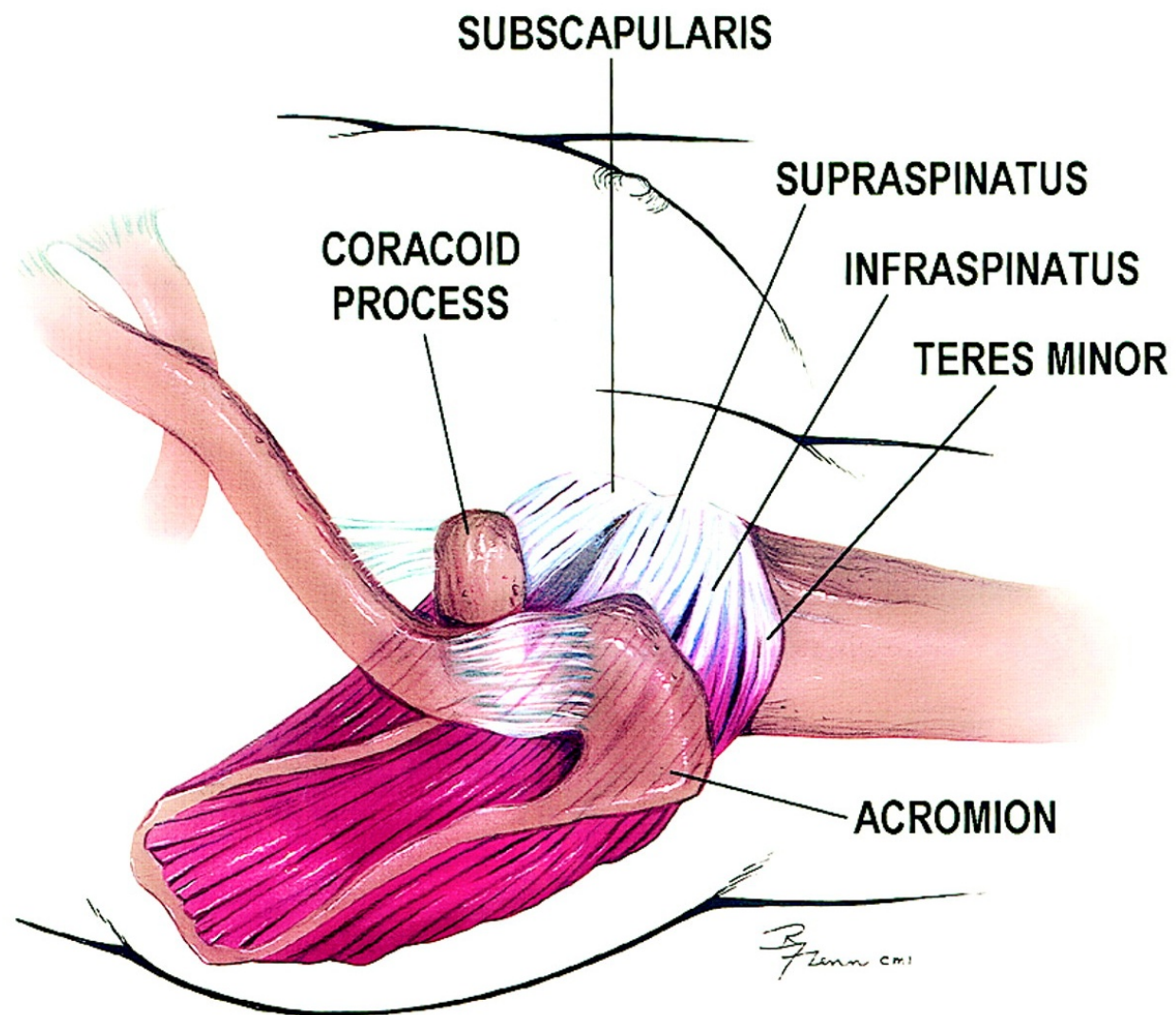
Multiple modalities may be necessary

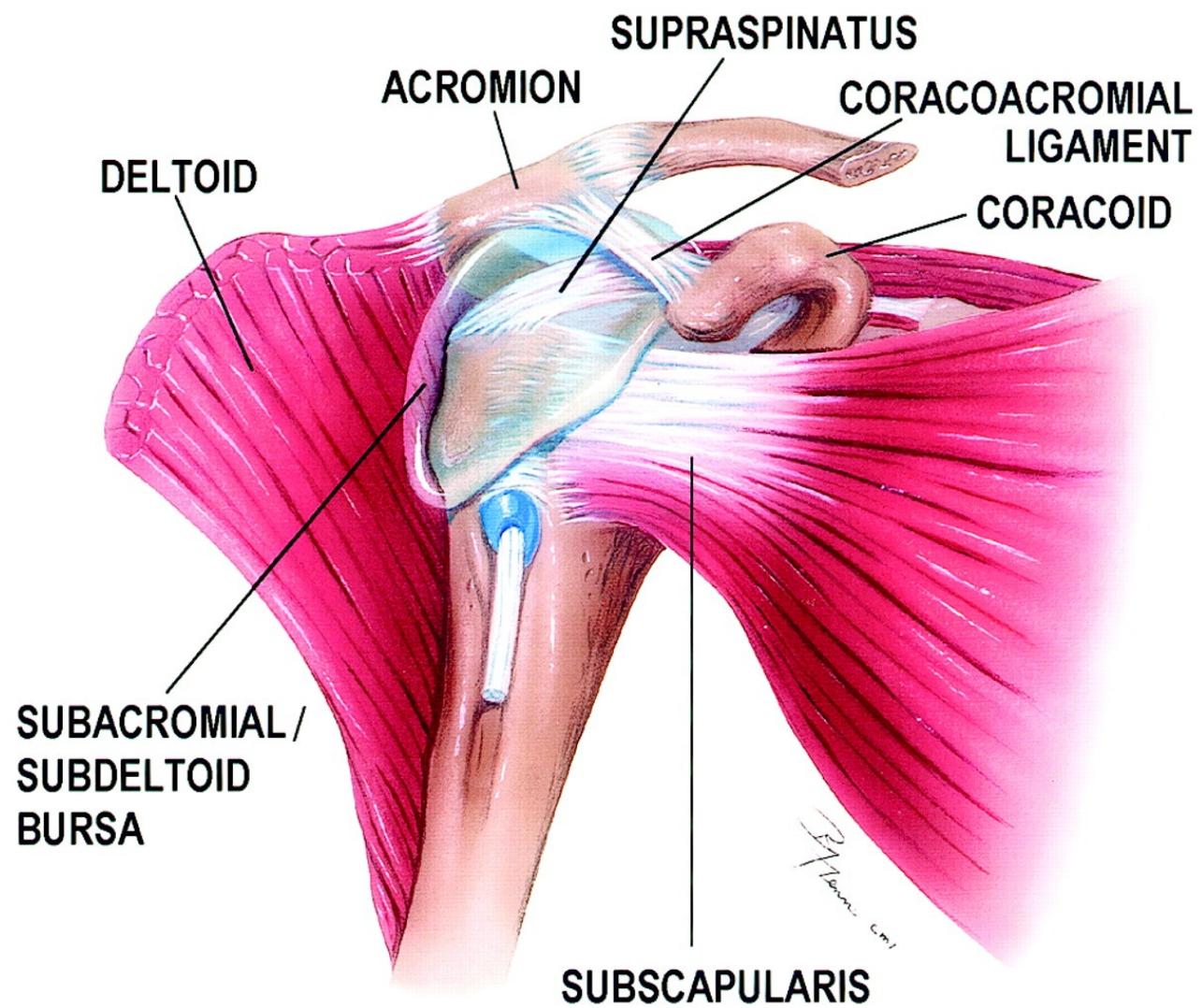
Optimal Imaging needs to be clinically directed

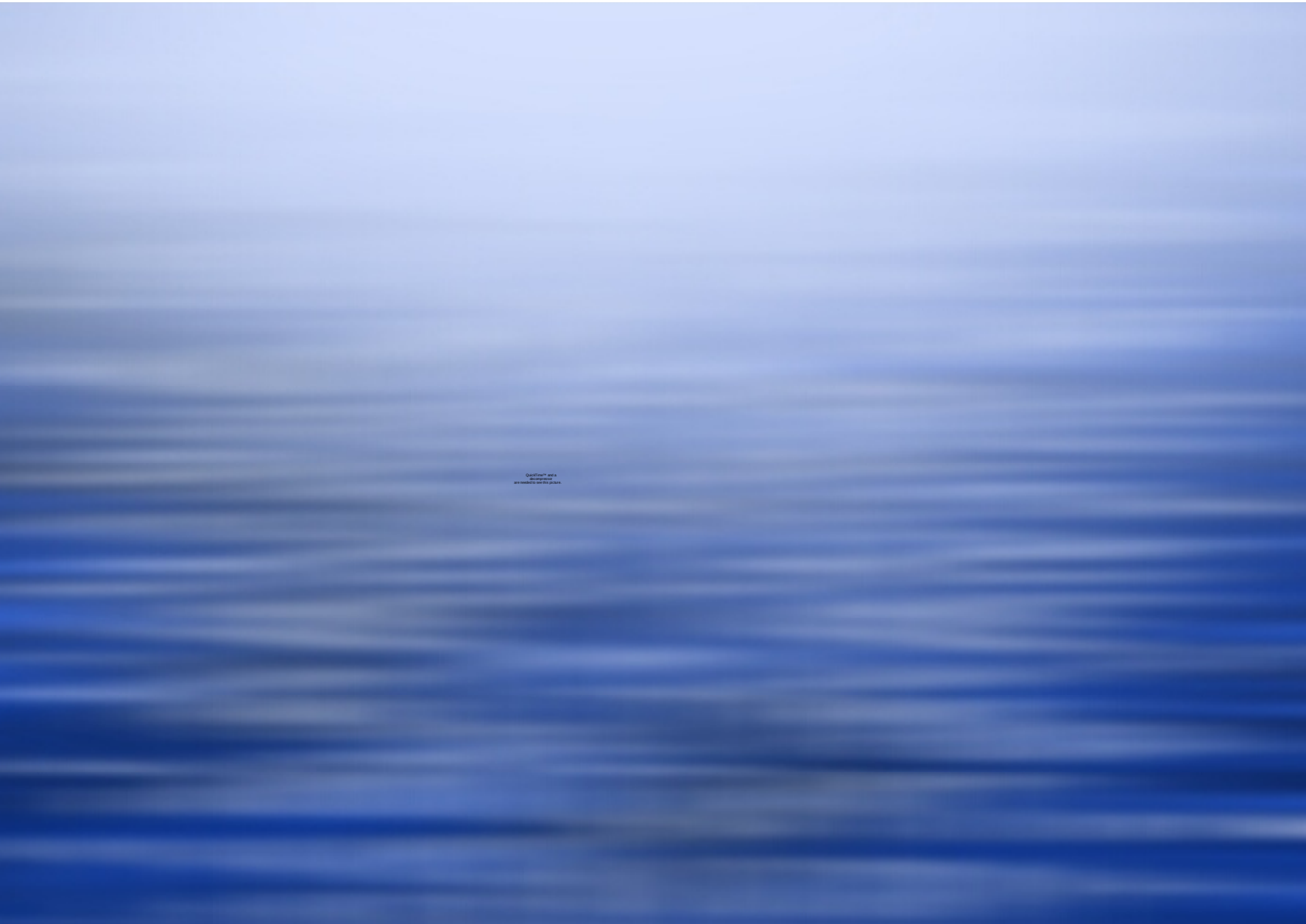
Many studies are from subspecialty units and these do not take account of the problems handled in the community by primary practitioners and community radiologists

Shoulder pain is a significant cause of morbidity worldwide with an incidence of 11-19 cases per 1,000 patients per year. The prevalence of shoulder pain among persons 50-70 years old is 6.7%. The prevalence increases with age, shoulder pain affecting 21% of persons 70 years and older. In 70% of these cases pain relates to derangement of the rotator cuff. The true prevalence of rotator cuff disease is even higher (asymptomatic tears)

Lambly et al Am J Roentgenol 2007;189(5):1179-1184

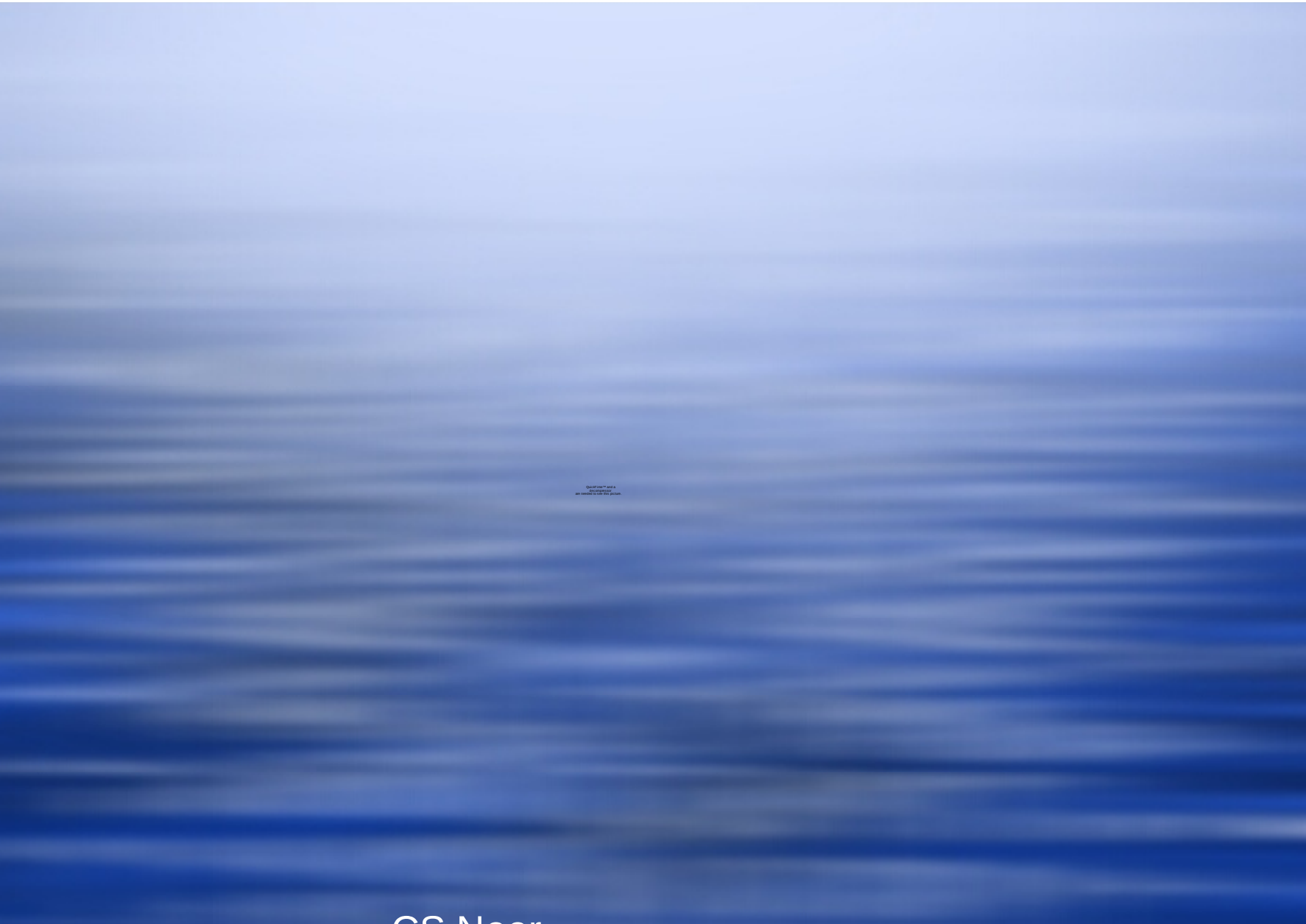






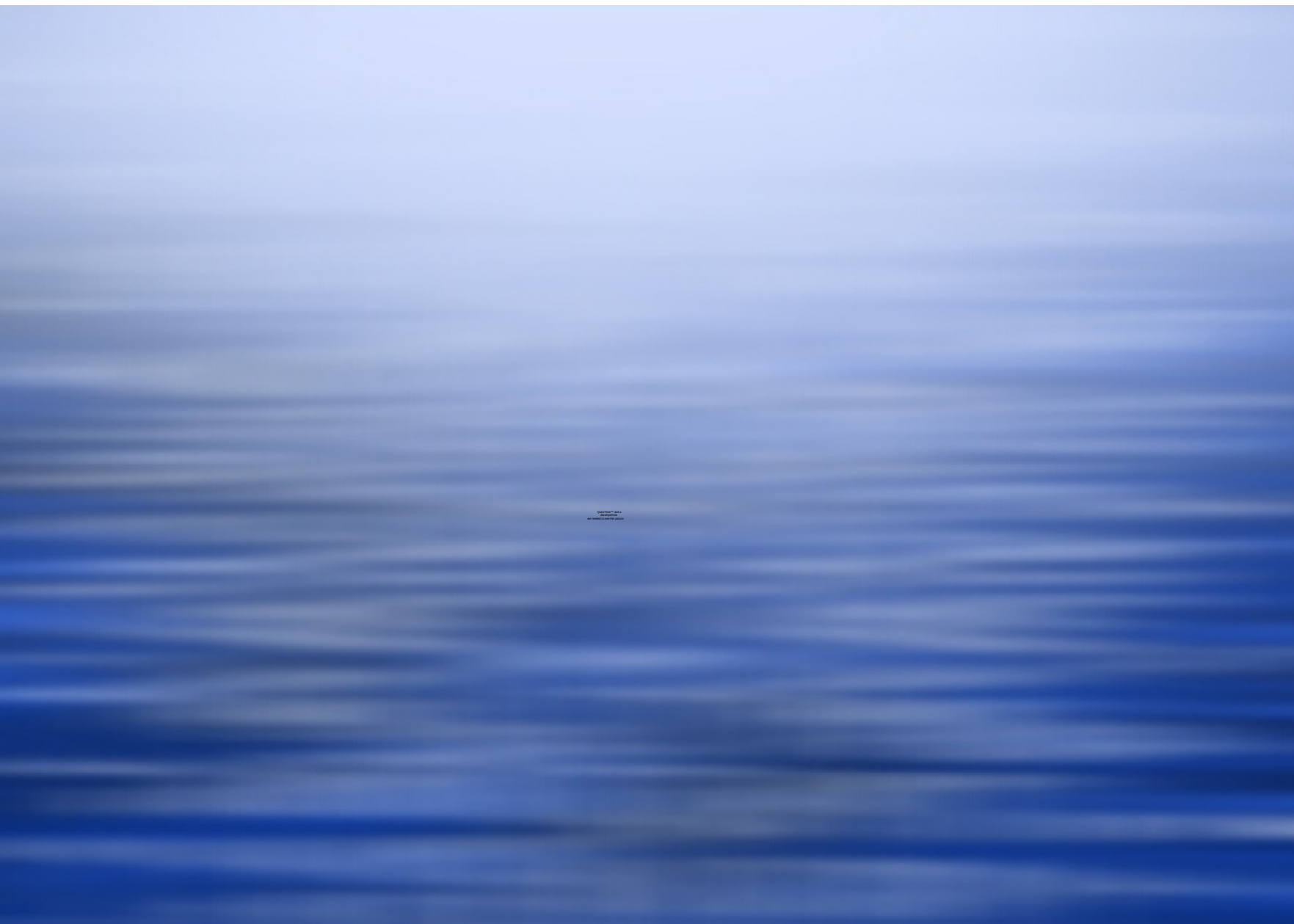
Qualitative and
Quantitative
Research Methods
and Data Analysis





Quantum and its
components
are needed to solve the problem.

CG Near



Acromial spur

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Lateral downsloping of the acromion

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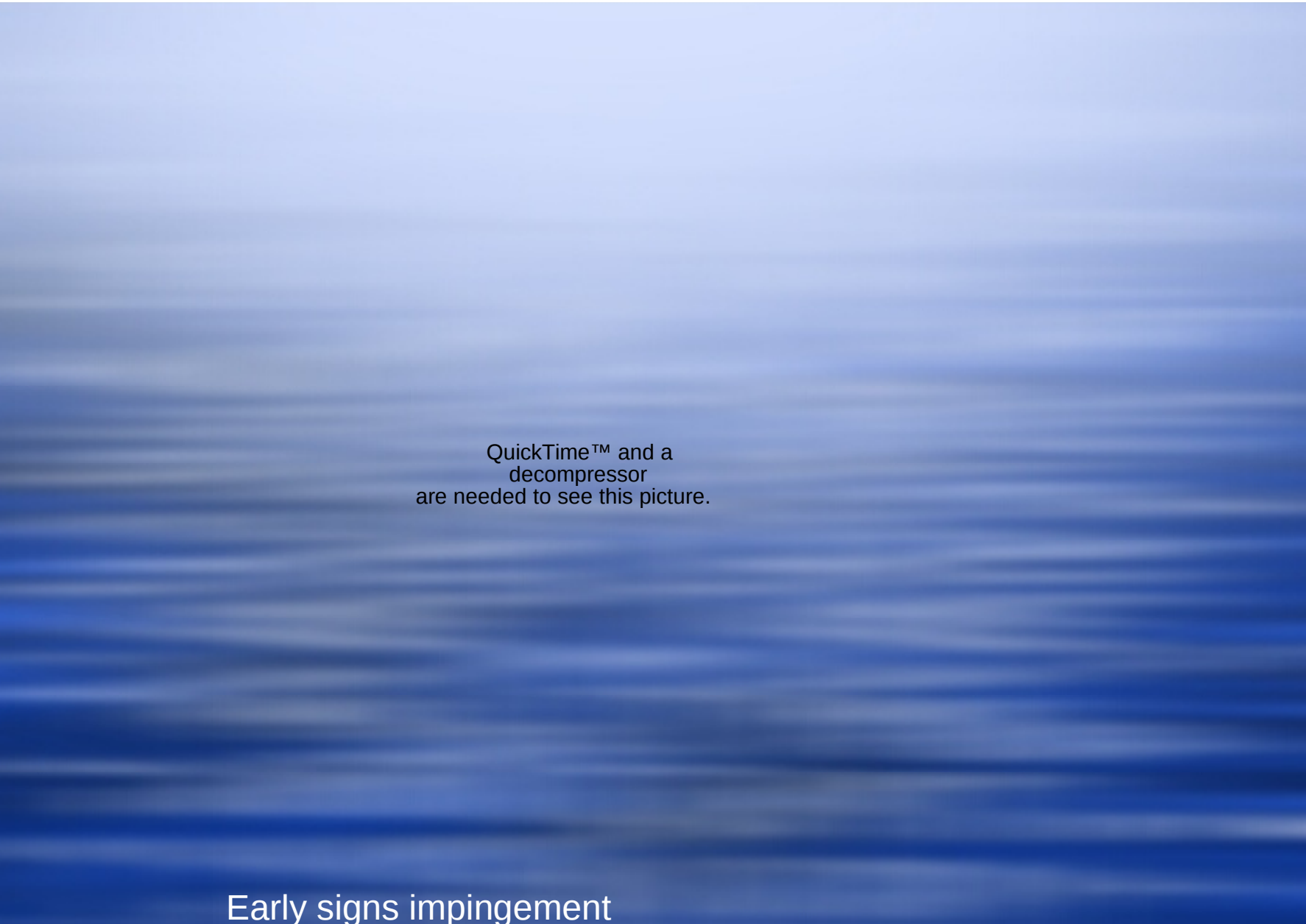
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Shoulder Impingement series

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Early signs impingement

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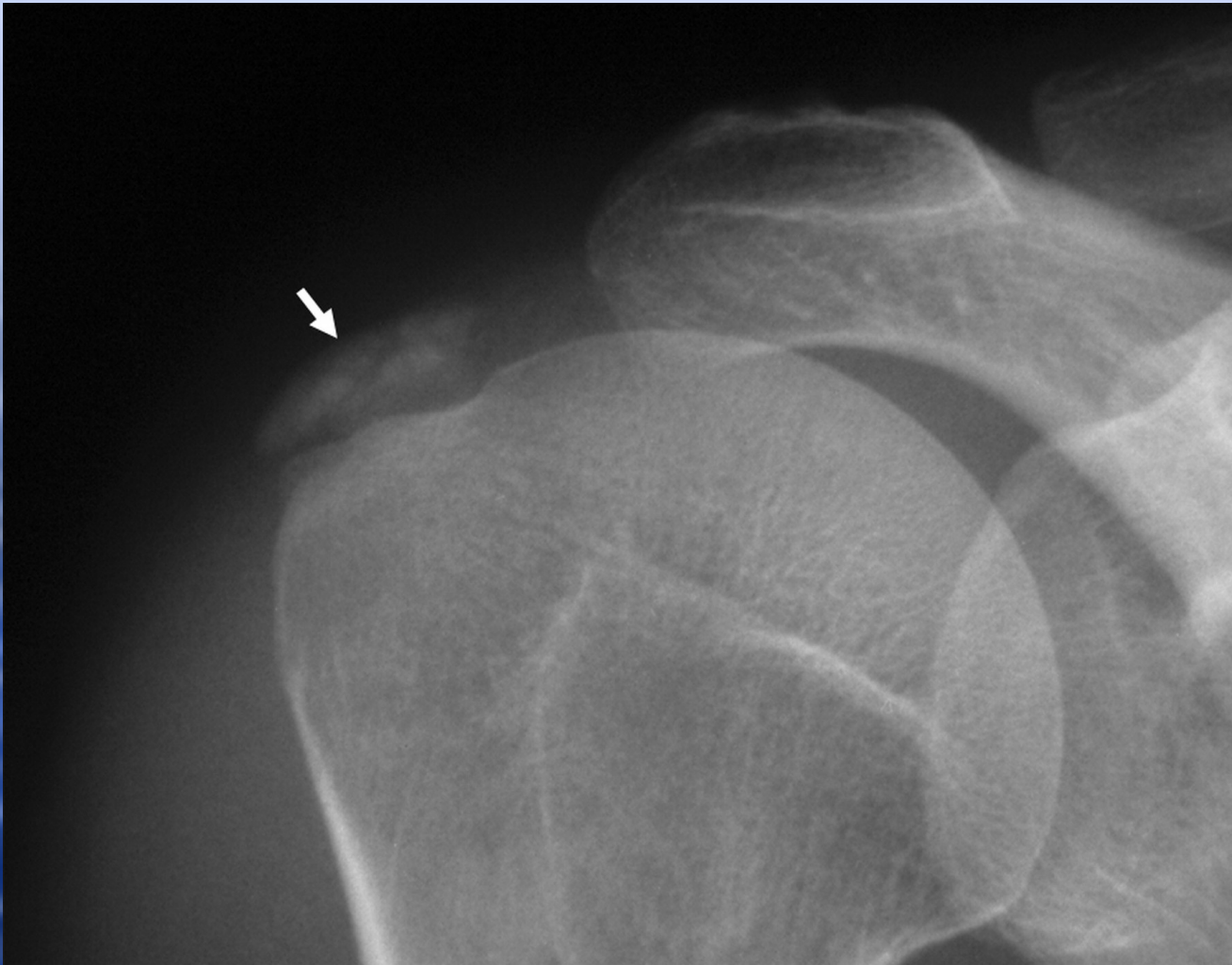
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Calcific tendonitis

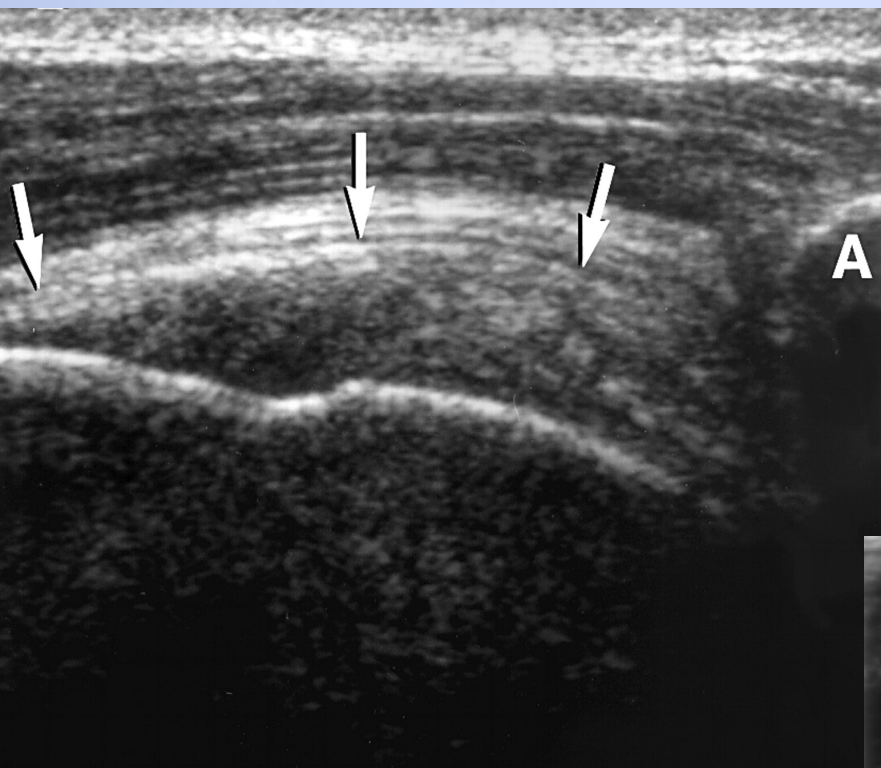


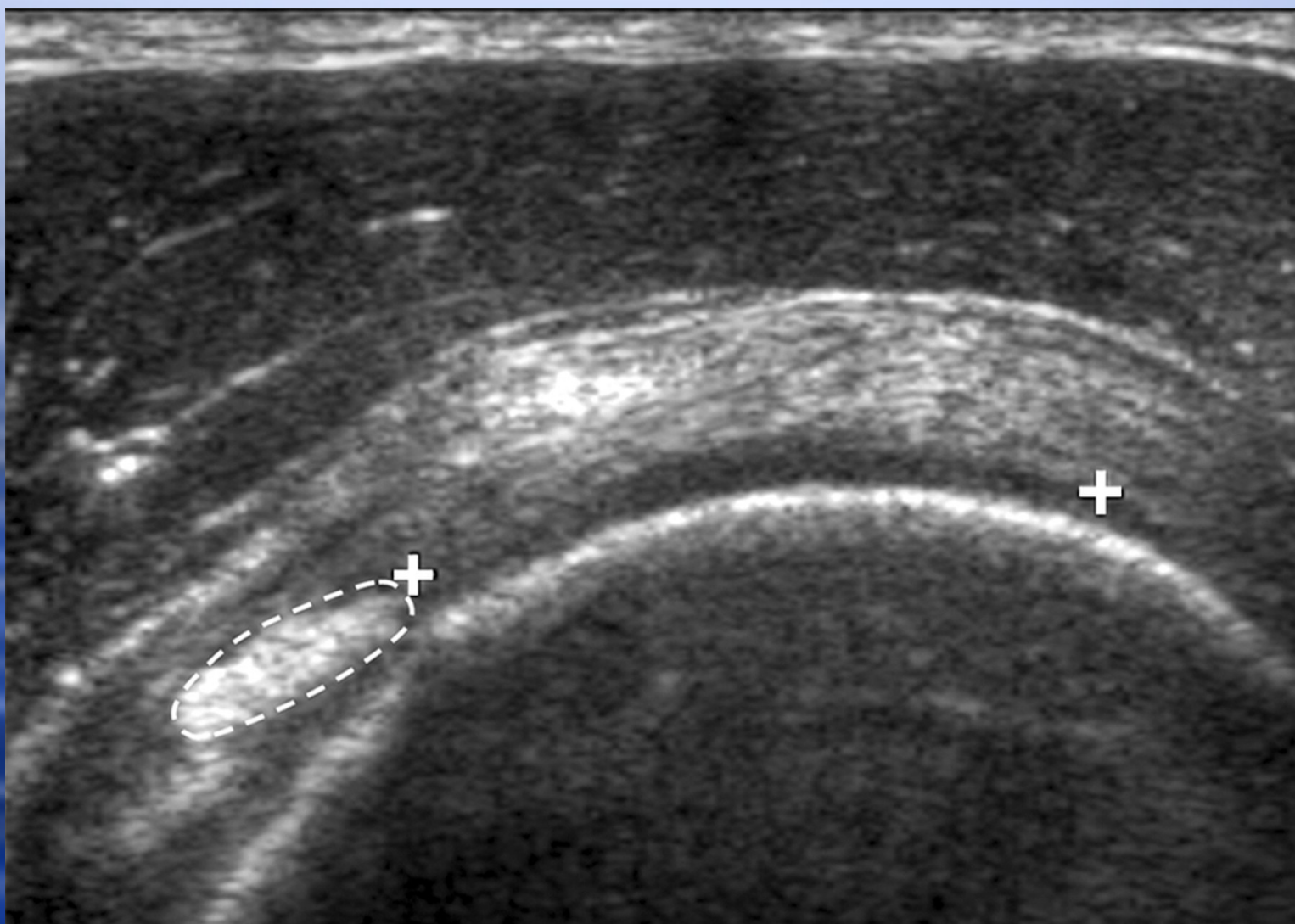
Calcification in supraspinatus

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Glenohumeral arthritis
Cuff disease







QuickTime™ and a
H.264 decoder
are needed to see this picture.

