

AUC for Traumatic Shoulder Pain Evidence Table

Author/Year	Title	Journal	Recommendation	Oxford Grade	Test/Modality	Notes
282 - Loew 2015	How to discriminate between acute traumatic and chronic degenerative rotator cuff lesions: an analysis of specific criteria on radiography and magnetic resonance imaging.	Journal of shoulder and elbow surgery	MRI, but not radiography, can be used to help discriminate between traumatic and nontraumatic RCLs.	2b - Prospective exploratory cohort study with good reference standards; CDR" after derivation, or validated only on split-sample or databases	Plain film vs. MRI	50 patients, consecutively enrolled, radiographs and MRI evaluated in standard protocol
46 - McAdams 2002	The role of plain films and computed tomography in the evaluation of scapular neck fractures.	Journal of orthopaedic trauma	Routine CT in patients with scapular neck fractures not recommended. Intra-articular extension on plain films warrants CT.	2b - Retrospective cohort study, or poor follow-up	Plain film vs. CT	20 patients at single Level I center, 4 reviewers
70 - Bahrs 2009	Indications for computed tomography (CT-) diagnostics in proximal humeral fractures: a comparative study of plain radiography and computed tomography.	BMC musculoskeletal disorders	CT-diagnostics allowed a significantly better assessment of the relevant structures than conventional diagnostics ($p < 0.05$) independently of the fracture severity (two-, three-, and four-part fractures). CT should be performed independent of the number of fractured parts when the proximal humerus and shoulder joint are not presented with sufficient quality to establish treatment plan.	3b - Prospective comparative. Analysis based on limited alternatives or costs, poor quality estimates of data, but including sensitivity analyses incorporating clinically sensible variations.	Digital radiographs, analogous radiographs, CT	Two Level I trauma centers, 44 patients
296 - Ng 2016	Axillary Artery Injury Associated with Proximal Humeral Fractures: Review of Long-Term Vascular, Orthopedic, and Neurologic Outcomes.	Annals of vascular surgery	Injury to the first part of the axillary artery was noted in 52% of patients with proximal humeral fractures.	3b - retrospective comparative study with very limited population	CTA	21 patients in two trauma centers in Australia
211 - Bruinsma 2013	Interobserver reliability of classification and characterization of proximal humeral fractures: a comparison of two and three-dimensional CT.	The Journal of bone and joint surgery.	In proximal humeral head fractures, there remains poor interobserver variability with statistically but clinically insignificant differences of 2D-CT versus 3D-CT on interobserver reliability.	3b - Retrospective comparative. Analysis based on limited alternatives or costs, poor quality estimates of data, but including sensitivity analyses incorporating clinically sensible variations.	Radiographs + 2D or 3D CT	15 fractures graded by 135 surgeons

AUC for Traumatic Shoulder Pain Evidence Table

Author/Year	Title	Journal	Recommendation	Oxford Grade	Test/Modality	Notes
35 - Hendey 2000	Necessity of radiographs in the emergency department management of shoulder dislocations.	Annals of emergency medicine	Physicians are highly accurate at clinically determining shoulder dislocation. Pre-reduction films indicated for any traumatic mechanisms and anyone found to have fracture-dislocation.	3b - prospective case control	Nothing vs. radiographs	104 patients, 98 shoulder dislocations, 78 from traumatic mechanism.
381 - Callaghan 2017	A prospective, observational cohort study of patients presenting to an emergency department with acute shoulder trauma: the Manchester emergency shoulder (MESH) project.	BMC emergency medicine	Significant soft tissue abnormalities in patients who cannot actively abduct the arm to 90° two weeks after injury are present and warrant magnetic resonance arthrography.	3b - Prospective observational cohort study with very limited population	Radiographs vs. MRA	26 patients with acute shoulder trauma, no identifiable radiograph abnormality proceed to MRA two weeks later if they could not abduct > 90 degrees.
73 - Brunner 2009	The impact of stereo-visualization of three-dimensional CT datasets on the inter- and intraobserver reliability of the AO/OTA and Neer classifications in the assessment of fractures of the proximal humerus.	The Journal of bone and joint surgery.	AO and Neer classification showed moderate reliability with plain radiographs and 2D CT. 3D CT improved this to good. Stereo visualization of 3D volume rendering improved intraobserver variability to good for AO and excellent for Neer.	3b - retrospective cohort with limited population	Radiographs, 2D or 3D CT	4 independent observers classified 40 fractures
351 - Dugarte 2018	Comparison of 2 versus 3 dimensional fracture mapping strategies for 3 dimensional computerized tomography reconstructions of scapula neck and body fractures.	Journal of orthopaedic research	Half of 2D renderings possessed hidden fracture lines revealed on 3D imaging.	3b - retrospective comparative study with very limited population	2D vs. 3D CT	10 patients from single center evaluated
122 - Foroohar 2011	Classification and treatment of proximal humerus fractures: inter-observer reliability and agreement across imaging modalities and experience.	Journal of orthopaedic surgery and research	Among upper extremity specialists, 2D and 3D CT scans resulted in higher agreement in classification. 2D and 3D CT scan had higher scores than X-ray for 4-part fractures.	3b - retrospective comparative study with very limited population	Radiographs, 2D CT, 3D CT	16 fractures, 3 image series generated each, evaluated by 16 orthopedic surgeons
237 - vanOostveen 2014	Glenoid fractures: a review of pathology, classification, treatment and results.	Acta orthopaedica Belgica	"Computerized tomographic scanning is usually necessary due to the complex osseous anatomy in the region".	5 - Expert opinion	No direct comparison	Review article
449 - Amini 2018	ACR Appropriateness Criteria® Shoulder Pain-Traumatic.	Journal of the American College of Radiology	Plain films appropriate for initial imaging. CT appropriate for any fracture found on plain film. MR/arthrography indications separate.	5 - Expert opinion	Plain films, CT, MRI, arthrography	
38 - Newberg 2000	Shoulder trauma. American College of Radiology. ACR Appropriateness Criteria.	Radiology	Prior ACR criteria: Plain film agreed recommended. CT not recommended. Updated guidelines more specific.	5 - Expert opinion	Radiographs, CT, MR, arthrography	