

ProFHER TRIAL: Neer's X-ray Classification Proforma

Trial Participant ID :

Rater :

1. Please record a cross in the box(es) below that apply:

X-ray ID	Anteroposterior (Scapular plane)	Anteroposterior (Coronal plane)	Axillary (or modified axillary)	Scapular Y-lateral	Other - please describe
<input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/>	
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2. Are there at least two projections in planes perpendicular to each other?
(Please cross one box only) Yes No

3. For each X-ray projection is the:

X-ray ID	Proximal humerus visible?	Glenohumeral joint visible?	Clip on Left / Right marker available? *	Clear / gross distortion in size?
	Yes / No	Yes / No	Yes / No	Yes / No
<input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>
<input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>
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* This applies to a clip that was added to the cassette at the time of image acquisition

4. Are proximal humerus and glenohumeral joint seen on each projection
[of at least two different views?] (Please cross one box only) Yes No

5. For each X-ray, can you clearly identify the following:

X-ray ID	Humeral shaft?	Greater tuberosity?	Lesser tuberosity?	Head of humerus?	Glenohumeral joint?
	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
<input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>	<input style="width: 20px; height: 20px;" type="checkbox"/> <input style="width: 20px; height: 20px;" type="checkbox"/>
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6. Considering all the available views together, can you visualise the location of all five
structures (the humeral shaft, greater tuberosity, lesser tuberosity, head of humerus
and glenohumeral joint) sufficiently to determine the position and displacement of the
fractured segments? (Please cross one box only) Yes No

7. Please give your overall assessment of quality for this set of images (i.e. in terms of exposure and patient
positioning) based on the three grades: (Please cross one box only)

- a) Good: Optimal image definition & content, good for classification
- b) Fair: Suboptimal image definition & content, but adequate for classification
- c) Poor: Suboptimal image definition & content, inadequate for classification

Displacement

Criteria / terms for displacement:

- "involved" - this includes any indication of a fracture for that anatomical structure
- "undisplaced" - either not displaced or clearly insufficient to meet Neer's criteria
- "displaced (unclear if Neer)" - indicates marginal cases: some uncertainty that displacement meets Neer's criteria (lack of scale marker or poor quality image may be reasons)
- "displaced (Neer)" - gross (including complete displacement), clearly meets Neer's criteria (45°; 1cm - linear measurement may not be possible for some x-rays)

"No contact fracture" (of the surgical neck) - the shaft has displaced fully in relation to the head and these segments have no contact with each other

Fracture dislocation applies to the dislocation of the humeral head from the glenoid.

8. Please record a cross in the box(es) below that apply: (N.B. If you do record that an anatomical structure is 'involved' then choose one of the three other descriptors (undisplaced, displaced (unclear if Neer), displaced (Neer)) to indicate the extent of displacement according to Neer's criteria.

	X-ray ID <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	X-ray ID <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	X-ray ID <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	X-ray ID <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Verdict
Anatomical neck					
- involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- undisplaced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- displaced (unclear if Neer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- displaced (Neer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surgical neck					
- involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- undisplaced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- displaced (unclear if Neer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- displaced (Neer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- no contact fracture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- impacted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greater tuberosity					
- involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- undisplaced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- displaced (unclear if Neer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- displaced (Neer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lesser tuberosity					
- involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- undisplaced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- displaced (unclear if Neer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- displaced (Neer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fracture dislocation					
- anterior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- posterior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head splitting #					
Is there an articular surface fracture?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head position					
Head segment in varus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head segment in valgus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Using the separate sheet provided of Neer's classification 1 to 16 and your verdicts above ("displaced (Neer)" only), please record Neer's category: