

Trigger :

You are an intern working in ED. A 21 year old female has come in after falling over at social netball, landing on her outstretched hand. She is bracing her arm and there is an obvious deformity.

As part of the initial steps of management, you order an XR of her L wrist.

Task 1: Interpret the L wrist XR.





Details and demographic	<ul style="list-style-type: none"> • AP and lateral view of L wrist XR.
Where is the fracture?	<ul style="list-style-type: none"> • Distal radius • There is no involvement of the articular surface
What type of fracture?	<ul style="list-style-type: none"> • Transverse fracture • Closed fracture
Is there displacement?	<ul style="list-style-type: none"> • ~30° of dorsal angulation • Dorsal displacement • Shortening (unable to be measured as no scale)
Everything else	<ul style="list-style-type: none"> • No ulnar dislocation • No other fracture visible
Interpretation	<p>In summary, this is an XR of a L wrist, taken following a FOOSH. There is a closed transverse distal radius fracture, associated with dorsal angulation, dorsal displacement and shortening, representing a <u>Colles'</u> fracture. This is unable to be measured accurately without a scale. There is no ulnar dislocation or other injury visible. I would also like to see a L elbow XR.</p>

Follow-up questions:

Question 1: How could you perform a neurovascular examination on this patient?

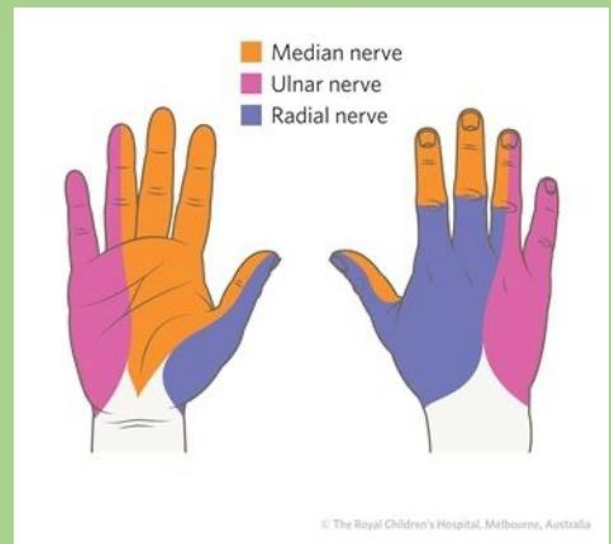
Question 2: What are the indications for non-operative management of a Colles' fracture?

Answers (Q1)

Ideally, you would perform a full upper limb neurological examination.

A brief exam could include:

- Vascular
 - Capillary refill
 - Radial pulse
 - SpO2 on that hand
- Neurological (motor)
 - Radial: Thumbs up or wrist extension
 - Median: Fist or peace sign
 - Ulnar: Peace sign
- Neurological (sensory) – see diagram



Answers (Q2)

A nonoperative approach with closed reduction and splint/cast immobilisation is appropriate if the fracture fulfills the following criteria:

- Extra-articular
- <5mm radial shortening
- Dorsal angulation <5° or within 20° of contralateral distal radius

Resources:

- <https://www.orthobullets.com/trauma/1027/distal-radius-fractures>
- [https://www.rch.org.au/clinicalguide/guideline_index/fractures/Distal radius and or ulna metaphyseal fractures Emergency Department setting/](https://www.rch.org.au/clinicalguide/guideline_index/fractures/Distal_radius_and_or_ulna_metaphyseal_fractures_Emergency_Department_setting/)
- <https://teachmesurgery.com/orthopaedic/wrist-and-hand/distal-radius-fracture/>
- <https://www.nuemblog.com/blog/2018/4/9/hand-exam>