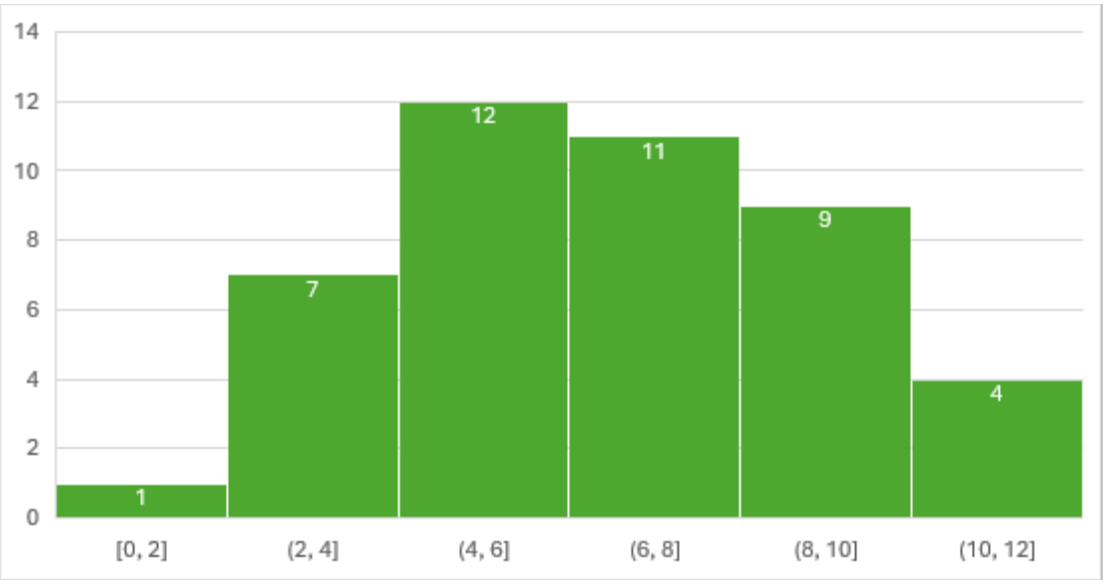
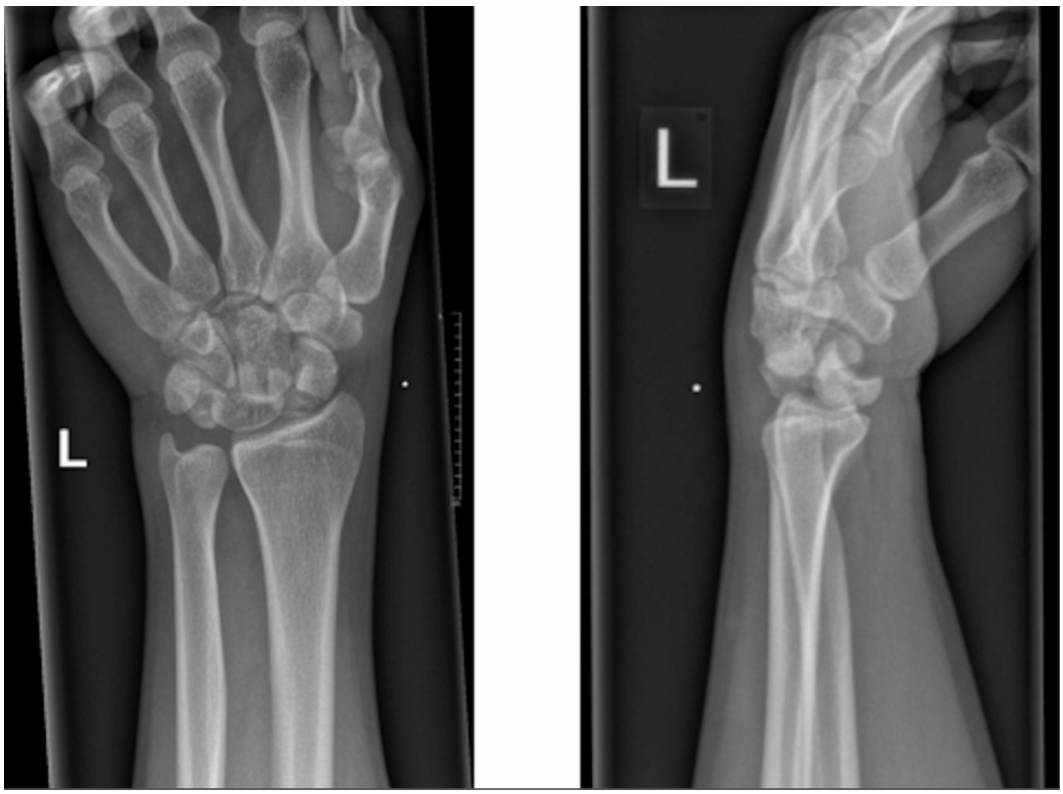
Question 16 (12 marks)

Median candidate score of 9.5



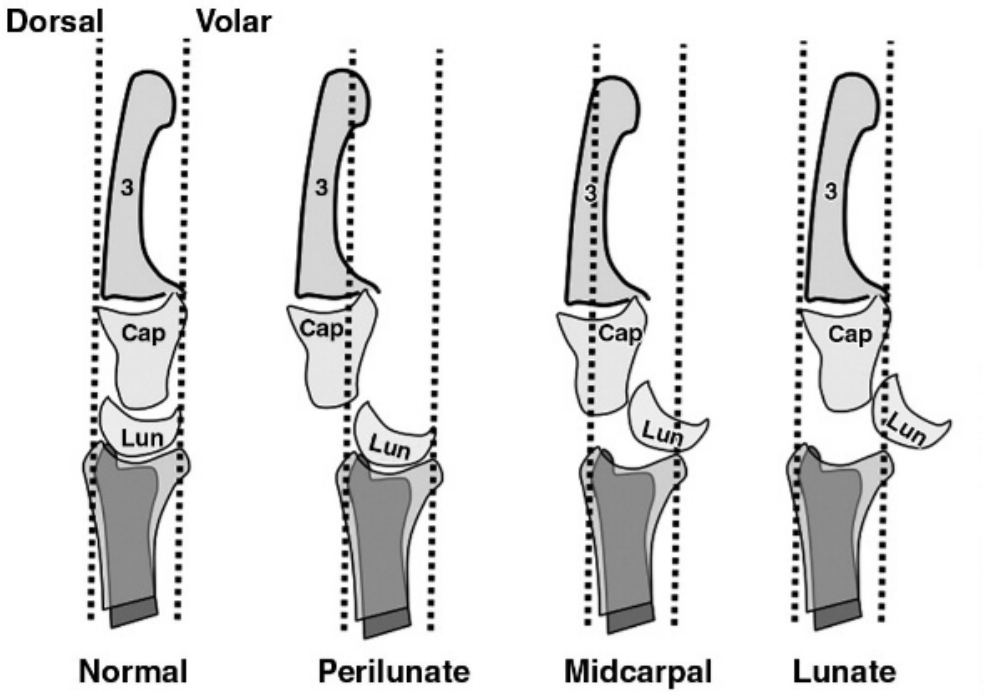
Stem:

A 37-year-old fell off a ladder onto his outstretched hand. He has an isolated LEFT wrist injury. Posteroanterior and lateral views of his wrist are obtained.



a. List the abnormal findings (2 marks)

- Scaphoid waist fracture
- Mid-carpal dislocation



Only one candidate stated mid-carpal. There was a mix of peri-lunate and lunate answers. Given this controversy, I brought the images to a specialist MSK radiologist here at the Alfred. It was confirmed as a Class 3 mid-carpal fracture (classification absolutely not required knowledge for the exam).

If a carpal dislocation was recognised, it did not impact your ability to gain full marks in the rest of the question.

A few missed the carpal dislocation entirely or wrote soft tissue swelling. It is clinically important as ~25% are missed on first presentation.

Quite a few also missed the scaphoid fracture. It is commonly associated with carpal dislocations.

b. Fill out the table below in relation to the above injury (4 marks)

Bolded answers were essential.

Immediate complications	Delayed complications
Median nerve injury Compartment syndrome of hand Pressure necrosis Severe pain	**Avascular necrosis of scaphoid** Non-union of scaphoid SNAC wrist (scaphoid non-union advanced collapse) SLAC wrist (scapholunate associated collapse – a ligamentous injury) Loss of median nerve function to hand Wrist dysfunction/Wrist instability/DISI (Degenerative) arthritis Transient ischaemia of lunate

Compartment syndrome was also accepted as a late complication (1 candidate)

Direct injury to the radial artery itself is highly unlikely. It was also mentioned.

c. He has altered sensation over the radial or lateral aspect of the palm with significant pain not responsive to simple oral analgesia. His distal perfusion is intact. What is the complication? (1 mark)

- Median nerve injury/palsy/compression

Several seemed unclear on radial/median/ulnar nerve distributions. It is core knowledge and frequent exam fodder.

A couple wrote radian or medial nerve – be careful with typo's!

A few went with compartment syndrome. Early compartment syndrome did gain a mark. I would re-write this part a bit differently as it wasn't intended to trip people up.

d. Your next management steps (4 marks)

Any sensible variant of the below accepted. Proceeding to emergent ED reduction and patient analgesia required.

- Analgesia – dose/route/frequency - IV opiate analgesia
- Procedural sedation - drug/dose/route or regional nerve block/Bier's
- ED emergent reduction as neurological compromise
  (FYI wrist in extension with longitudinal traction, apply pressure with your thumb over palmar surface to reduce lunate under capitate)
- Elevate limb and POP - sugar tong splint/volar backslab/thumb spica/charnley
- Orthopaedic referral AFTER ED reduction also accepted

Some placed the sedation and reduction on the same line. Can typically split that into 2 separate answers.

A lot gained 0.5 marks only for not mentioning a drug/dose/route +/- endpoint. That is exam technique easily tweaked to gain you more marks in the real exam.

e. What further investigation could you perform? (1 mark)

- CT or MRI wrist

Some wasted their time typing justifying the investigation. That wasn't needed. Refresh yourselves with ACEMs Glossary of Terms for examinations. List, interpret, describe etc all have specific meanings when answering the SAQ's and indeed the OSCE.

Good Luck everyone on the day!