

Introduction to ABCs search strategy

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Approach to image interpretation

- Correct request
- Consider basic mechanisms of injury
- Knowledge of technical factors
- Familiarity with anatomy and spectrum of normality
- Apply a systematic approach – the KEY



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ABCs Search Strategy

Adequacy

Alignment

Bones

Cartilage

Soft tissues

satisfaction of search



Adequacy

- Are the views taken correct for the indications
 - Inappropriate request e.g. ankle instead of foot
- Are the radiographs adequate
 - Would any further views be helpful?

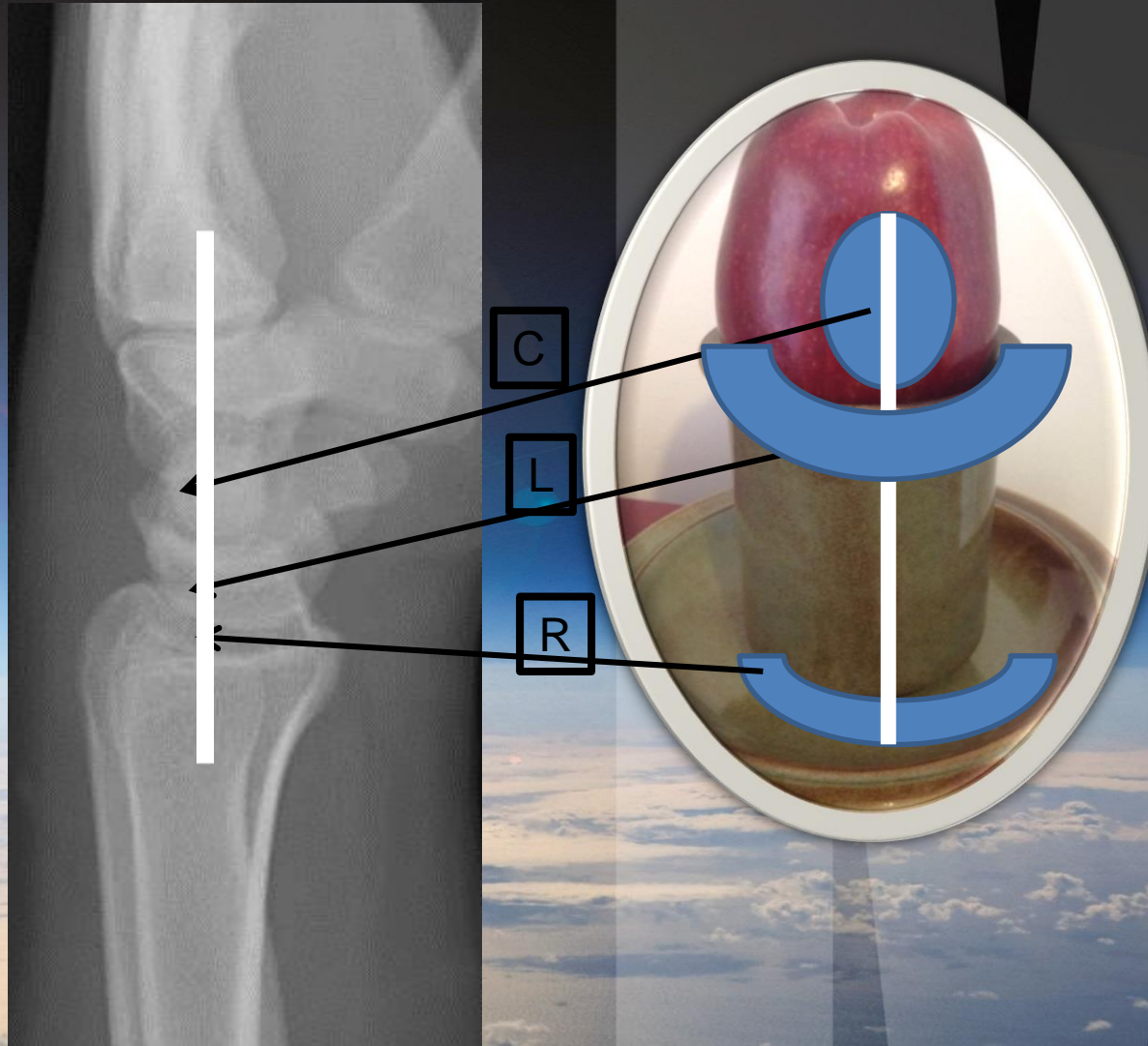


Search Strategy: Alignment

- Check alignment of all of the bones on all radiographic projections.



ALIGNMENT





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ALIGNMENT





Search Strategy: Bones

- Check the cortical margins:
 - Should be a smooth & uninterrupted
 - Search for any breaks / steps in the cortex



- Know types of fracture appearances, e.g. compound vs comminuted
- Fractures have two typical appearances:
 - Lucent lines (DARK) – gap between fractures
 - Sclerotic lines (DENSE WHITE): overlapping fracture fragments



Images: Monash University Department of Medical Imaging and Radiation Sciences



MONASH University Search Strategy: Cartilages and Joints

- Check each joint space & alignment in an orderly fashion.
- Normal alignment: or subluxation (partial dislocation).
 - Search for any associated fractures; e.g. avulsion fractures
 - Identify whether fractures near joints are intra-articular or extra-articular

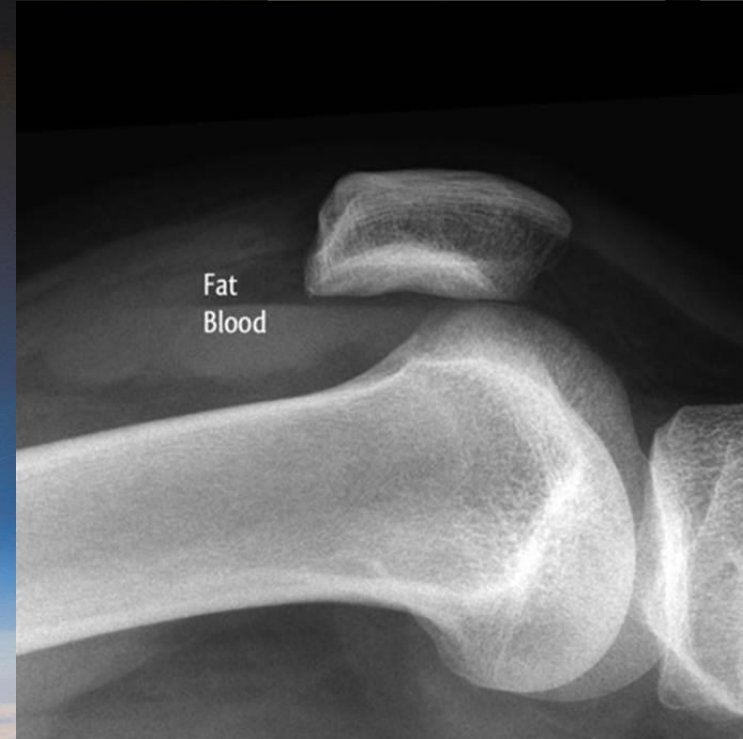
Slide
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Search Strategy: Soft tissue

- Search for:
 - Any areas of soft-tissue swelling;
 - Presence of foreign bodies;
 - Presence of any unusual fat or air.
- Search for soft-tissue signs that could indicate fracture presence; e.g. lipohaemarthrosis, sail sign.

Soft-tissue signs



Images: Monash University Department of Medical Imaging and Radiation Sciences



Finally, ensure that you scrutinise all areas of the radiograph by:

- Looking at the least obvious first, and
- Search for other abnormalities.



Conclusion

- The ABCs search strategy is a simple approach
- Facilitates a systematic approach when viewing radiographic images





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