DIAGNOSTIC IMAGING PATHWAYS
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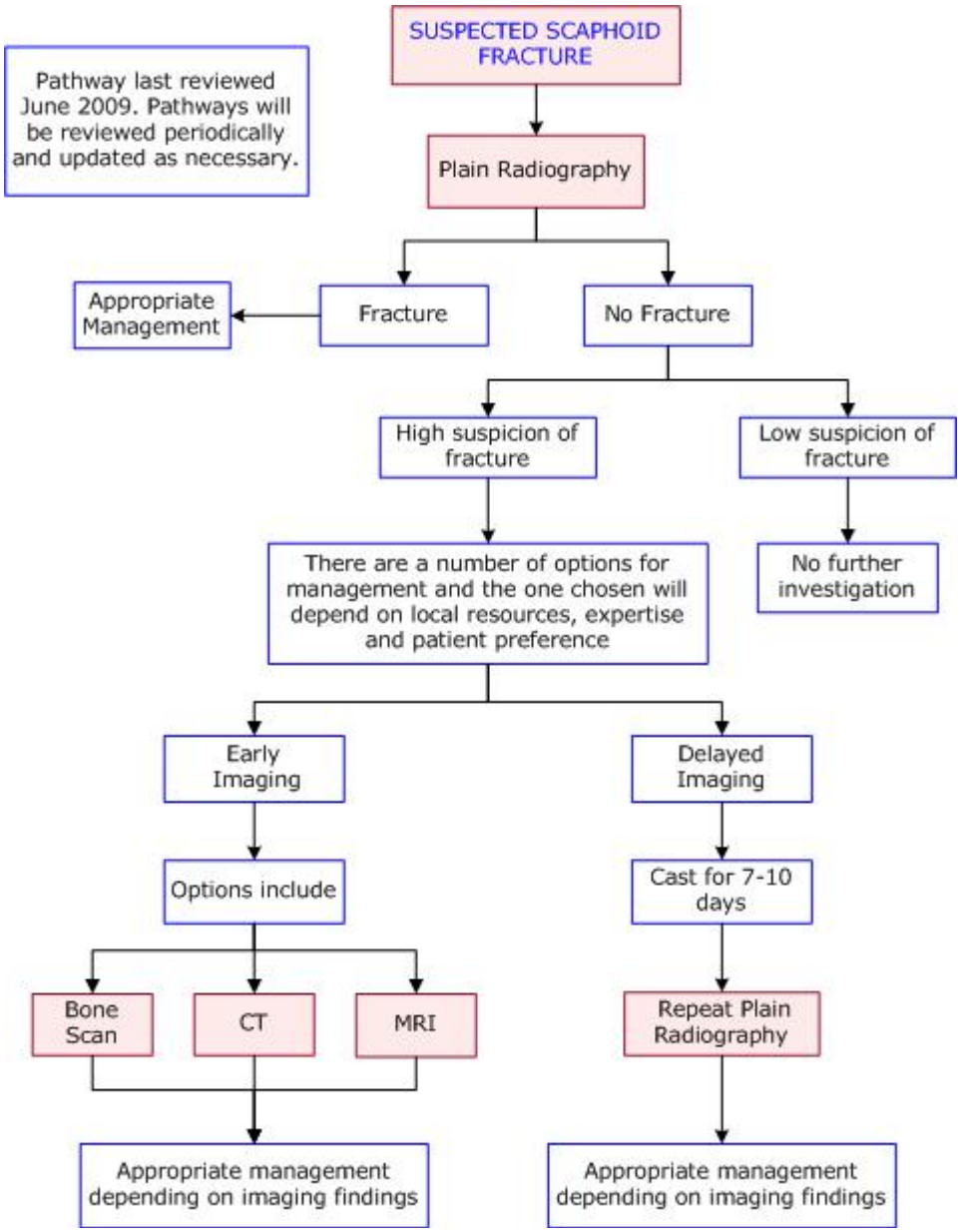

PLAIN RADIOGRAPHY

- Screening method of choice for evaluating clinically suspected scaphoid fracture. 1-3
- Standard four view series (PA, Lateral, PA with ulnar deviation & obliques) are recommended. 1-3
- Up to 25% of scaphoid fractures can be missed on plain radiographs. 4
- Standard practice in patients with clinically suspected scaphoid fractures but normal initial radiographs is to apply a cast and repeat radiographs in 10-14 days, when resorption at the fracture line should make previously occult fractures visible. 5,6
- Some institutions advocate early use of bone scan/CT/MRI when initial radiographs are normal to avoid unnecessary immobilisation of wrist in plaster cast. 7,8

BONE SCAN

- Screening method of choice for evaluating clinically suspected scaphoid fracture. 1-3
- Standard four view series (PA, Lateral, PA with ulnar deviation & obliques) are recommended. 1-3
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- Standard practice in patients with clinically suspected scaphoid fractures but normal initial radiographs is to apply a cast and repeat radiographs in 10-14 days, when resorption at the fracture line should make previously occult fractures visible. 5,6
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COMPUTED TOMOGRAPHY

- Indicated when repeat clinical and radiographic examinations are inconclusive. 1-3
- Useful in:
    1. Detection of occult fractures of the wrist and displacement of fractures. 11
    2. Determining the location and direction of the displaced carpal bones in complicated fracture-dislocations. 12
    3. Assessment of union/nonunion and avascular necrosis. 13

MAGNETIC RESONANCE IMAGING

- Indicated when repeat clinical and radiographic examinations are inconclusive. 1-3
- High accuracy for detection of radiographically occult fractures. 14-17
- Gadolinium-enhanced MRI can be used to evaluate vascularity of the proximal pole in scaphoid non-unions. 18
- Advantages: no ionising radiation, superior soft tissue detail, and can demonstrate marrow abnormalities (such as avascular necrosis, bone marrow oedema).
- Disadvantages: expensive and limited availability.

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FURTHER READING

1. Krasin E, Goldwirth M, Gold A, et al. **Review of the current methods in the diagnosis and treatment of scaphoid fractures.** Postgrad Med J 2001;77:235-7

Website

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