MS 5  Soft tissue tumour

**Soft tissue tumour**

- **Physical examination**
  - **Diagnosis uncertain**
    - **Deep lesion**
      - **US ± Plain radiographs**
        - **Lesion not diagnosed**
          - **Plain radiographs**
            - **Positive**
              - **Ossification or mineralization**
                - **Present**
                  - **CT**
                    - **Myositis ossificans**
                - **Absent**
                  - **Negative**
          - **Absence**
            - **Extent not delineated**
            - **Extent defined**
            - **MRI ± angiography**
            - **Myositis ossificans**
          - **Lesion diagnosed**
    - **Superficial lesion**
  - **Diagnosis established**

^Remarks: Use angiography for subsequent treatment after the non-invasive diagnosis and mapping
REMARKS

1 Plain radiograph
   1.1 Regional radiograph should be the initial imaging examination in evaluating soft tissue tumour, especially deep and non-palpable one.
   1.2 Radiograph helps to identify any underlying skeletal deformity (e.g. callus), exostosis (which simulates a soft tissue mass), coexisting osseous involvement (remodeling, periosteal reaction or overt destruction) and soft tissue calcification (e.g. phlebolith in haemangioma).
   1.3 Low kV technique is preferred to enhance radiographic density of differences between soft tissue such as fat and muscle.

2 US
   2.1 US is useful for superficial mass.
   2.2 It can differentiate a localized mass from diffuse edema and solid from cystic lesion.
   2.3 The role of US is to confirm the presence of a suspected lesion, identify its size, determine its internal characteristics, and guide percutaneous biopsy.

3 CT
   3.1 CT is complementary to MRI in detecting soft tissue calcification or ossification and subtle bony abnormality.
   3.2 Zonal pattern of mineralization of early myositis ossificans can be seen on CT allowing early diagnosis.

4 MRI
   4.1 MRI is the examination of choice in imaging soft tissue lesion.
   4.2 It is also useful in post-treatment follow-up.
   4.3 It can be difficult to differentiate benignancy from malignancy with imaging alone.

5 PET
   5.1 PET is useful for staging and monitoring treatment response of the tumour.
   5.2 It identifies nodal and osseous metastatic disease.
   5.3 It may direct biopsy of those metabolically active areas in the tumour.

REFERENCES