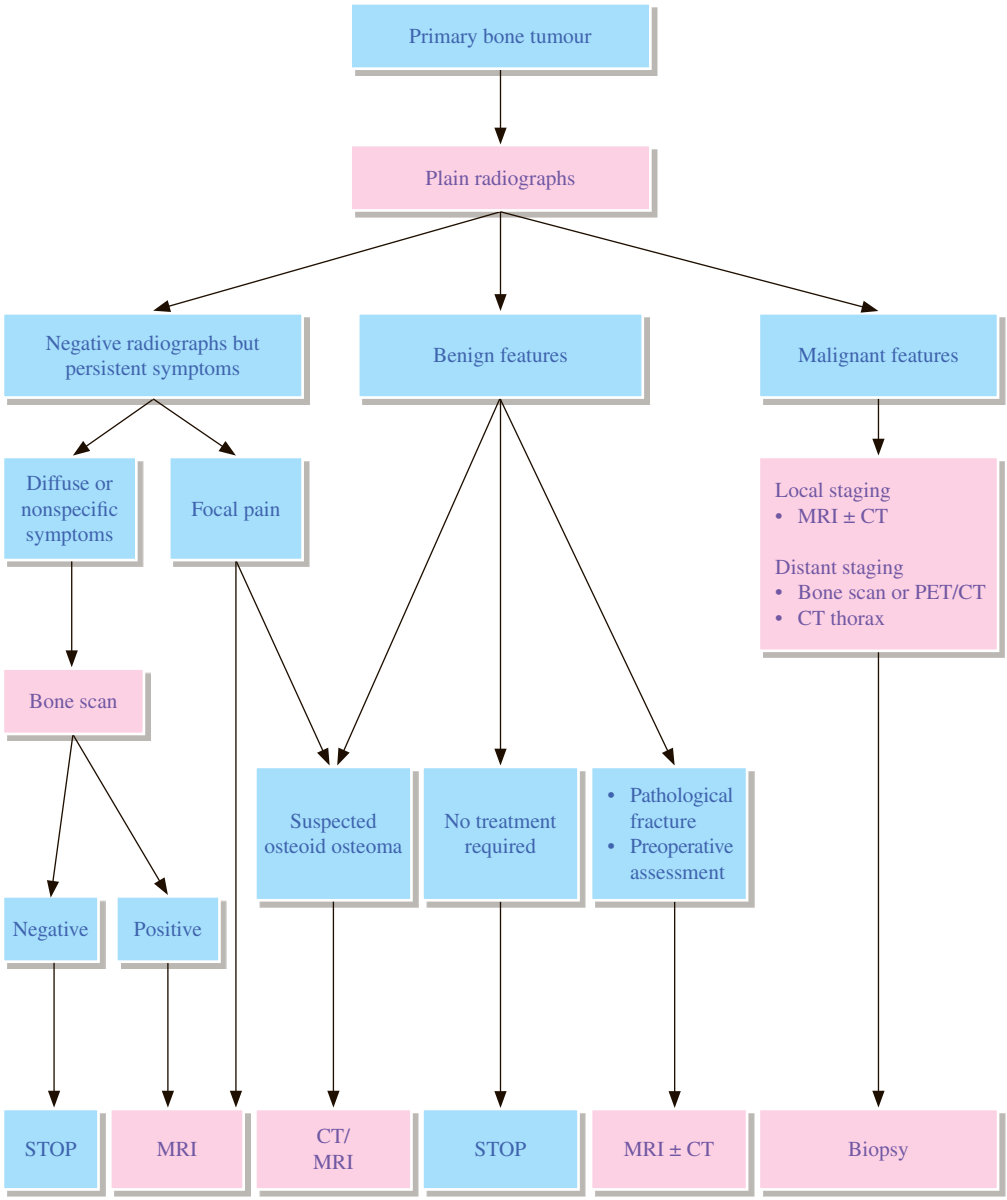
MS 4 Primary bone tumour



REMARKS

1 Plain radiograph

1.1 Regional radiographs are necessary for suspected bone tumour and remain the initial technique for the detection and characterization of tumours and tumour-like lesions.

1.2 For typical benign lesions, no further imaging is required unless there is a suspected complication or surgery is being considered.

2 Nuclear medicine

2.1 Bone scan is helpful when bony metastasis is suspected.

2.2 Baseline bone scan can exclude multicentricity.

3 CT

3.1 CT is the preferred method for assessment of cortical involvement, cortically-based tumours, flat bones with little marrow, and demonstration of tumour mineralization or calcification. It is complementary to MRI in this regard.

3.2 CT is indicated for confirmation and pre-surgical localization of osteoid osteoma following positive radiograph or bone scan.

4 MRI

4.1 MRI is the imaging modality of choice for assessment of bone marrow, soft tissue, juxta-articular and neurovascular involvement (i.e. local staging).

5 PET/CT

5.1 PET/CT has higher sensitivity and specificity than CT, MRI and bone scan for detecting distant metastases (except being less sensitive to pulmonary nodules).

5.2 It also has high sensitivity (90%), specificity (96%) and accuracy (95%) for differentiating primary bone tumour from osseous metastases.

6 Pathological diagnosis

6.1 Staging of the primary tumour should be completed first before any biopsy.

6.2 Biopsy should be carried out in close consultation with the orthopaedic surgeon planning the definitive treatment.

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