

Policy for Ultrasound screening of soft tissue masses in the trunk and extremity

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Introduction

Soft tissue masses in the trunk and extremity are common and most are benign. However, it is very important to rapidly identify malignant tumours, including soft tissue sarcomas.

Clinical features of concern include; Increasing in size, size > 5cm, painful lesions.

Lipomatous tumours are common in the trunk and extremity. They can be classified as superficial (subcutaneous) or deep (subfascial or inter/intramuscular). The majority are benign, with a higher propensity for atypical lipomatous tumours (ALT) in the deep soft tissues.

Tumours which are confirmed by ultrasound examination to be lipomatous, superficial and subcutaneous are rarely malignant or ALTs, even if there are atypical features on ultrasound. These patients can safely be reassured and advised to observe the mass for changes.

Ultrasound technique for evaluation of soft tissue masses

- Scan should be performed by a sonographer experience in musculoskeletal ultrasound.
- A clinical history should be taken, including details of:
 1. Size
 2. Duration
 3. Rate of growth
 4. Associated symptoms, particularly pain.
- Ultrasound examination should evaluate:
 1. Size in 3 planes
 2. Location (relationship to fascia)
 3. Echotexture; whether cystic, solid or mixed
 4. Doppler characteristics (at low flow settings)

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Recommendations for action after ultrasound scan

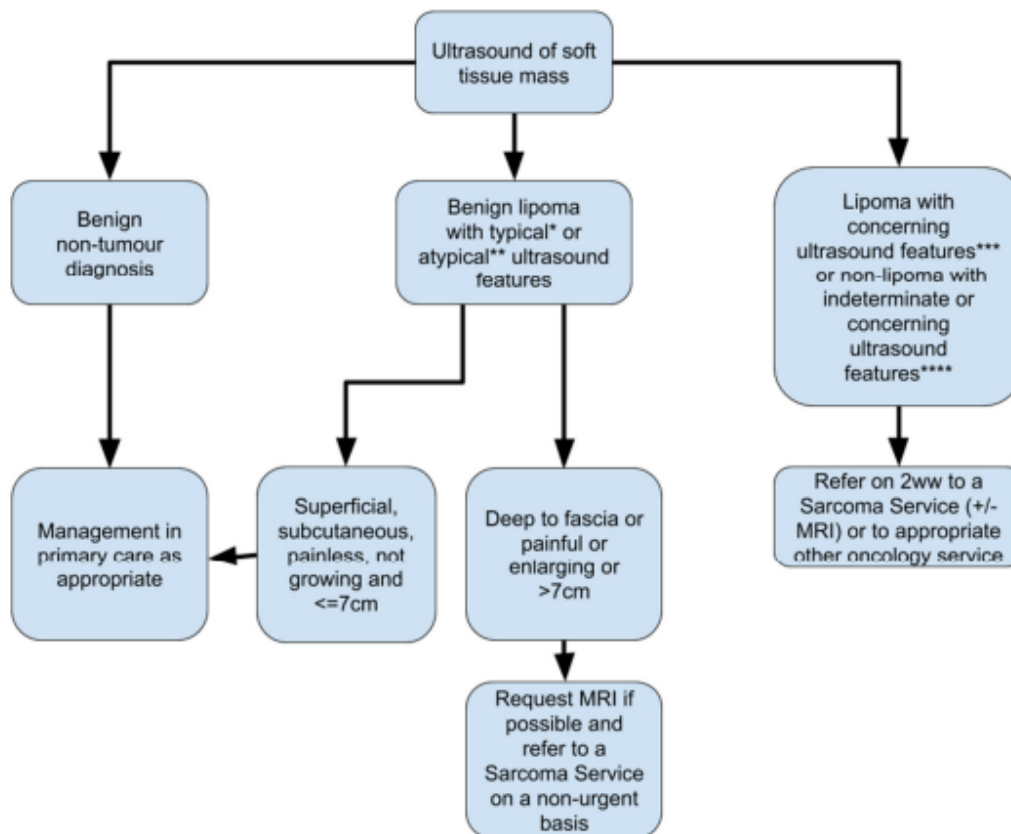
- Scan diagnostic of a benign non-tumour diagnosis (such as a ganglion): report back to the referrer to manage as appropriate.
- Scan diagnostic of a benign superficial lipoma with typical* or atypical**, painless and not growing: reassure and refer back to primary care for further management/observation.
- Scan diagnostic of a benign lipoma with typical* or atypical** ultrasound features deep to fascia, painful or enlarging should be further investigated: GP to refer to Sarcoma Service for MRI.
- Lipoma with significantly concerning ultrasound features, or a non-lipoma with indeterminate or concerning ultrasound features, alert GP to refer via the 2-week wait Sarcoma Service.
- Scans diagnostic or suspicious of a malignant non-sarcomatous mass (such as a lymph node mass): alert GP for urgent referral to the acute oncology service (Figure 1).

Guide for Ultrasound Imaging of Lipomatous Tumours

- Benign lipoma with typical ultrasound features*
 - Homogeneous mass
 - No or septal linear power Doppler flow
 - No or thin (2mm)
- Benign lipoma with atypical ultrasound features**
 - Lipoma but very thick septa (>2mm)
 - Nodular area(s) of oedema or fat necrosis in predominantly fatty lesion
 - Disorganised power Doppler flow in predominantly fatty lesion
- Lipoma with concerning ultrasound features***
 - Nodular area of non-fat signal in a deep lipomatous mass
- Non-lipoma with indeterminate or concerning ultrasound features****
 - Solid non lipomatous mass
 - Heterogeneous mass
 - Invasive margins
 - Disorganised power Doppler flow in solid heterogeneous lesion

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Figure 1. Guide for Ultrasound Imaging of Trunk and Extremity Tumours



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