The Presentation Pathway: Soft Tissue Sarcomas of the Limb and Trunk Wall. Agreed by SAG Chair. (Measure 11-1C-105l)

While confirmed sarcoma diagnoses are rare, they are clinically indistinguishable from a variety of common benign conditions. Even by applying the criteria for urgent referral, it is thought that the ratio of benign to malignant diagnoses will be about 10 to 1. It is clear therefore that there is a significant diagnostic workload which must be addressed to identify the small number of patients with confirmed sarcoma and route them to the expert multi-disciplinary team.
As described in the IOG, ad hoc referral from GPs to local general surgeons may be contributing to the problem of delays in diagnosis of sarcomas and treatment by non-specialist clinicians and may account for poorer than necessary outcomes. The guidance mandates commissioners to set up, in each cancer network, centralised diagnostic services that will link smoothly and directly with Sarcoma MDTs for those with confirmed diagnoses. The diagnostic services must be clearly defined and publicised to local GPs and secondary tier services.

Criteria for urgent referral for suspicion of soft tissue sarcoma

Soft tissue sarcomas are a rare and heterogeneous group of tumours. Their recognition is important because timely investigation and treatment can result in cure. Their management requires close collaboration between designated specialists in a multi-disciplinary team and early referral to a specialist service will lead to the best clinical and cost effective care. The role of this team is to investigate and treat soft tissue 'lumps' which are potentially cancerous.

Soft tissue sarcomas increase in frequency with age. Some, particularly in younger patients, may be associated with familial syndromes such as neurofibromatosis. They usually present as a painless mass.

Indications for urgent referral of suspicious soft tissue masses to designated diagnostic clinics:

Size > 5cm diameter
Enlarging
Painful
Deep to the fascia
Recurrence at the site of previous excision regardless of histology

It has been agreed that any patient referred to his/her GP or non-sarcoma hospital Consultant with a lump of the extremity or trunk with any of these features should be referred urgently as an HSC205 referral to one of the designated diagnostic clinics.

(NOTE - lymph node masses should initially be referred to the relevant site specific MDT as these are unlikely to be sarcomas. Neck lumps should also be referred initially to the neck lump clinic at the local hospital. Neck lump clinics are held at all hospitals except The Christie across GMCCN.

Designated Diagnostic Clinics:

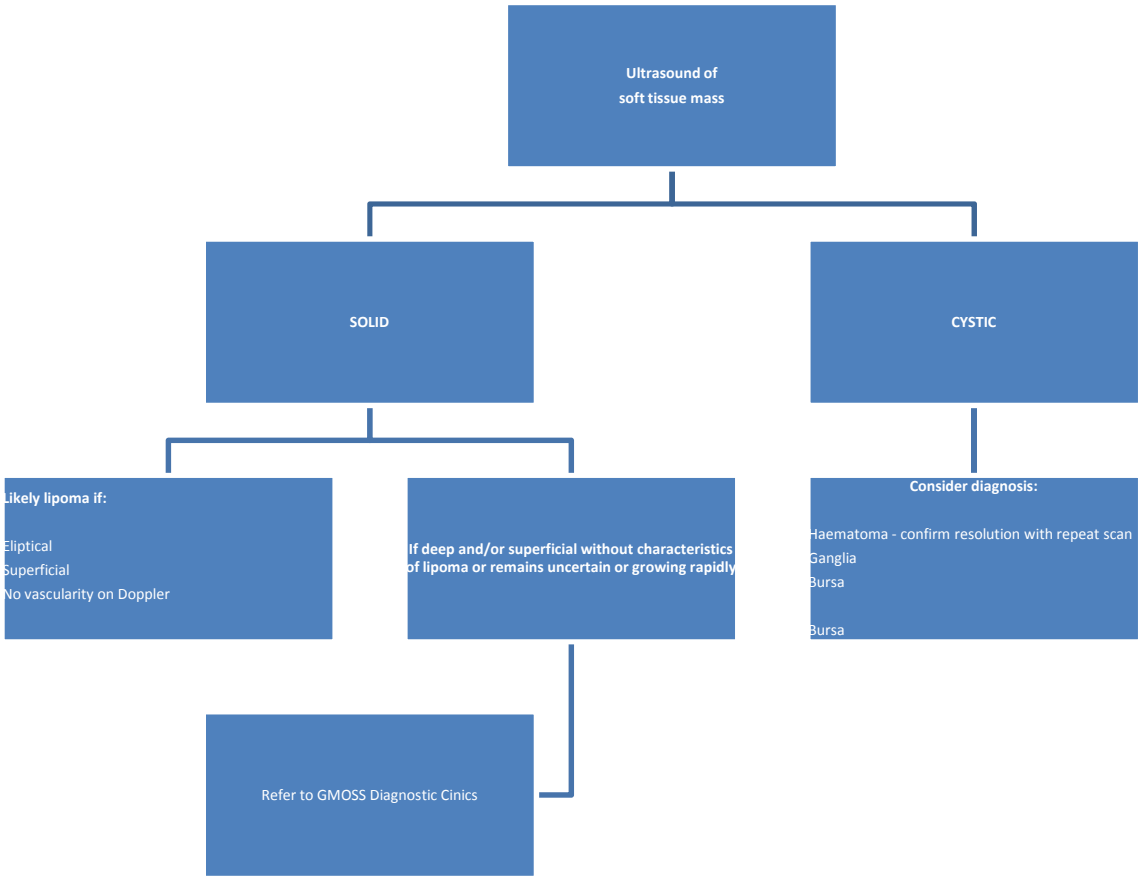
Sarcoma diagnostic clinics are based at MRI and RJAH Hospitals and it has been agreed that all diagnostic interventions, including biopsy can be performed at these clinics. Broadly, patients from North Wales and the designated parts of GMCN will be referred to RJAH and patients from GMCCN will be referred to MRI. Guidelines for referrals and the specific referral form is available on www.mstumour.com or http://www.cmft.nhs.uk/royal-

infirmary/our-services/greater-manchester-and-oswestry-sarcoma-service.aspx An example referral form is shown on page 5.

GPs and non-sarcoma Hospital Consultants can use ultrasound to better select patients at greatest risk of a sarcoma diagnosis prior to referral. GMOSS suggest the following flow diagram to be followed for this purpose. Alternatively, patients with extremity/trunk based lumps can be referred directly to MRI or RJAH diagnostic clinics for assessment and arrangement of appropriate investigations.

US GUIDELINES

- Location; superficial / deep to fascia
  - Attempt anatomical localisation; muscle group, joint, NV structures etc
- Cystic
  - Anechoic
  - Posterior acoustic enhancement
  - No Doppler
- Solid
  - Echotexture
  - Doppler character
- Size; 3 dimensions
- Good practice for ?STM to obtain plain films
  - Calcification
  - Bone involvement



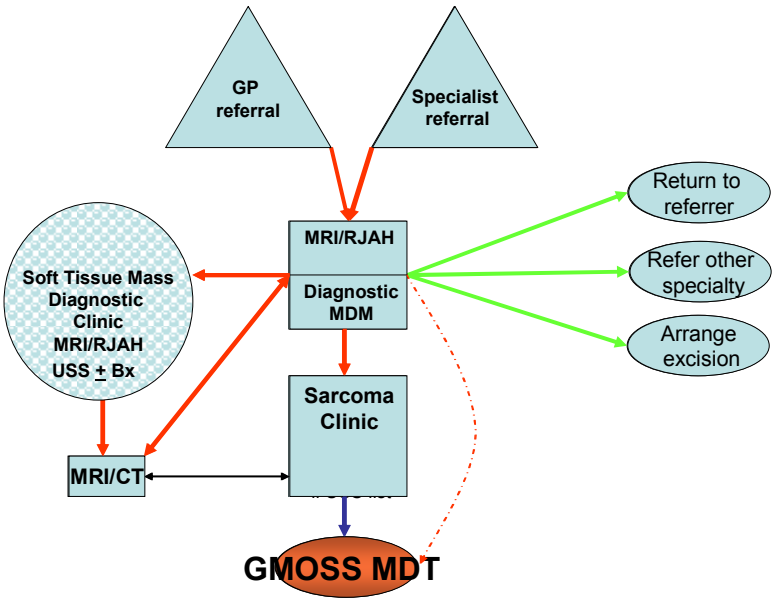
Terms of reference for the diagnostic clinics

- Diagnostic clinics are only based at MRI and RJAH Hospitals.
- They provide expertise in sarcoma diagnosis and deliver an efficient diagnostic pathway for patients with suspected sarcoma and ensure timely and accurate diagnosis
- Weekly multi-disciplinary meetings (MDM) are based at both RJAH and MRI which process all new referrals and agree additional investigations in order to confirm or refute a sarcoma diagnosis.
- The diagnostic clinics are responsible for ensuring that all appropriate investigation and intervention are performed on patients with a suspected sarcoma (e.g. review of outside excision specimen by specialist sarcoma pathologist, biopsy or excision biopsy as indicated, appropriate imaging e.g. MRI affected area and CT thorax)
- It is permitted for patients to have the required radiological investigation (Chest CT, MRI of affected area) prior to referral but only if this is not going to impede the pathway. MRI investigations should adhere to GMOSS MRI protocols (see below).
- At the end of the diagnostic pathway patients should broadly be identified as “definite sarcoma”, “possible sarcoma” , “non sarcoma malignancy” or “benign”
- Patients with proven benign or non sarcoma pathology are referred back to referring clinician or may be dealt with by diagnostic surgical group.
- Patients identified with possible or definite sarcoma are subsequently referred to the weekly GMOSS MDT in order for a multi-disciplinary management plan.
- The diagnostic service is available to all patients fulfilling the GP criteria for urgent referral with suspicion of soft tissue sarcoma living within the boundaries of the joint cancer networks. Referrals from further afield are also welcomed with a particular view towards North and Mid Wales and according to patient choice
- The team will also accept referrals from any secondary tier clinician within the joint cancer networks of a patient with a clinical suspicion of soft tissue sarcoma
- Additionally, the service will provide expert advice and, if appropriate, accept referrals of patients who do not fulfil the criteria for urgent referral but are strongly suspected to have a sarcoma diagnosis.
- The team will accept referrals from any clinician within the joint cancer networks of a patient with a confirmed sarcoma diagnosis
- Management of sarcoma in special anatomical locations may involve close liaison with a affiliated MDT
- The team will provide expert input on teenage and young adults (TYA) (16-24 years) with suspected sarcoma and will work in conjunction with the TYA MDT
- The team will also accept referrals from other geographical locations both nationally and internationally as would be appropriate for a highly specialised expert team.
- Any patient with such lesions should be immediately referred to the diagnostic service.
- Patient will be seen within two weeks of receipt of referral
- All patients with proven or highly suspected soft tissue sarcoma will be referred to the weekly GMOSS MDT for further discussion

NOTE

Patients with symptoms of recurrence should either be referred back to the core GMOSS member who treated the patient or can be re-referred via the diagnostic clinics using the agreed referral form.

GMOSS
Greater Manchester & Oswestry Sarcoma Service



MRI Diagnostic Service contact details

All urgent referrals should be faxed to the booking centre by the patient's GP, on 0161 276 8006 using the urgent referral form. As soon as the patient is referred, any scan or x-ray reports need to be sent urgently to the department.

Mr Ashok Paul	Lead Clinician (sarcoma and complex and benign tumours)	0161 276 5068 (OncologySecretary)
Mr Jonathan Gregory	Consultant Orthopaedic Surgeon (sarcoma and complex and benign tumours)	0161 276 5068 (OncologySecretary

RJAH Diagnostic Service contact details

Diagnostic services are run by Mr Cool or Miss Cribb at RJAH. Guidelines for referrals are available on www.mstumour.com
Referrals should be faxed to the tumour office and are triaged daily
An agreed proforma is shown below

Tel 0845 8383429
Fax 0845 8383428
E-mail Tumour@rjah.nhs.uk

GREATER MANCHESTER and OSWESTRY
Bone and Soft Tissue Sarcoma Service

URGENT REFERRAL FOR MUSCULO SKELETAL TUMOURS

SOFT TISSUE – MANCHESTER ROYAL INFIRMARY TEL: 0161 276 3639 FAX: 0161 276 8006
BONE AND SOFT TISSUE – OSWESTRY TEL: 01691 404107 FAX: 01691 404268

PATIENT DETAILS

NAME
ADDRESS

DATE OF BIRTH
CONTACT PHONE NUMBER
FIRST LANGUAGE INTERPRETER REQUIRED?

GP DETAILS

NAME
ADDRESS

PHONE
DATE OF REFERRAL

MALIGNANCY SUSPECTED

SOFT TISSUE: > 5CM ☐ ENLARGING ☐ PAINFUL ☐ DEEP TO FASCIA ☐ LOCAL RECURRENCE ☐

PRIMARY BONE TUMOUR: SOLITARY BONE LESION ☐ NIGHT PAIN ☐ NON-MECHANICAL PAIN ☐

NOTE: The Sarcoma service strongly advise that **solitary bony lesions with or without a known primary tumour** should be referred to Oswestry for an opinion and possible biopsy

CLINICAL INFORMATION

PATEINT HISTORY

INVESTIGATIONS PERFORMED AND WHERE	WHAT HAS THE PATIENT BEEN TOLD

PLEASE FORWARD ANY RELEVANT IMAGING AND/OR RESULTS.

PLEASE FAX THIS FORM TO EITHER MANCHESTER ROYAL INFIRMARY FOR SOFT TISSUE TUMOURS AND OWESTRY FOR BONE TUMOURS.

www.mstumour.com

The Presentation Pathway: Bone Sarcomas. Agreed by SAG Chair (Measure 11-1C-106I)

Because of their rarity, bone sarcomas are frequently difficult to diagnose. The diagnosis and surgical treatment of primary bone tumours are very complex. The overriding principle is that any patient with a suspected or possible sarcoma needs to follow a clear and rapid pathway to diagnosis.

The symptoms of malignant bone tumours cannot be reliably distinguished from a number of benign and self-limiting conditions. The diagnosis of a malignant bone tumour relies upon timely referral of the patient for an X-ray and recognition of the abnormality on the X-ray. Because of the rarity of bone tumours, failure to recognise an abnormality on an X-ray or failure to identify it as being a tumour frequently contributes to the diagnostic delay for patients with bone sarcomas. Access to expert opinion to interpret abnormal X-rays is likely to be highly effective in triaging patients with abnormal X-rays and deciding what further investigations are required and where these should be carried out.

Patients with clinical symptoms suggestive of bone sarcoma (nocturnal or non-mechanical pain) should be referred urgently for a radiograph. This referral can be made to the patient's local hospital. Subsequently, the patient should be referred urgently to Oswestry for review and further staging.

All patients with a probable bone sarcoma should be referred directly to a bone tumour treatment centre for diagnosis and management. For GMCCN and defined areas of GMCN the designated diagnostic centre for bone sarcoma is the Robert Jones and Agnes Hunt Orthopaedic Hospital in Oswestry. The unit is one of five units that is nationally accredited by AGNSS (Advisory Group for National Specialised Services) for the diagnosis and surgical treatment of patient with suspected primary bone tumours.

All patients with a proven or suspicious bone sarcoma within GMCCN and defined areas within GMCN should be referred directly to RJAH for complete diagnostic work up and surgical treatment. These include:

- all patients with X-rays or other images (including incidental findings) which are thought to be possibly indicative of a primary bone sarcoma.
- all patients with clinical symptoms (nocturnal or non-mechanical pain) or signs suspicious of a primary bone sarcoma.
- all patients diagnosed post-operatively with a previously unsuspected bone sarcoma.
- All patients with symptoms or signs of recurrence

It is agreed that biopsy of suspected patients should only be carried out by RJAH.

Guidelines for referral are obtainable on www.mstumour.com

Note: It is expected that metastatic bone tumours are dealt with by the relevant local orthopaedic teams.

All small cell sarcomas have molecular/cytogenetic testing on site at RJAH e.g. fluorescent In Situ Hybridization (FISH) analysis (eg FUS, EWS, MDM-2 and SYT) to detect sarcoma specific translocations in tumours such as Ewings. Samples for Polymerase Chain Reaction (RT-PCR) for Ewing's transcript variants are also available at RJAH

Referrals should be faxed to the tumour office and are triaged daily. The same referral form is used for bone and soft tissue tumours and is obtained from Tumour@rjah.nhs.uk and is shown on page 5.

Tel 0845 8383429
Fax 0845 8383428
E-mail Tumour@rjah.nhs.uk

Patients with symptoms of recurrence should either be referred back to the core GMOSS member who treated the patient or can be re-referred via the diagnostic clinics using the agreed referral form.

An algorithm of this pathway is shown below

GMOSS
Greater Manchester & Oswestry Sarcoma Service
NHS