Cheshire and Merseyside
Strategic Clinical Networks

Metastatic Spinal Cord Compression (MSCC) Clinical guidelines and pathway

Version 2.1: August 2013

To be read in conjunction with NICE CG75

Developed by consensus by:

Dr Peter Robson, Consultant Oncologist, Clatterbridge Cancer Centre, Joint lead for MSCC in Merseyside and Cheshire

Mr Zaid Sarsam, Consultant Neurosurgeon, The Walton Centre, Joint lead for MSCC in Merseyside and Cheshire

Dr Paula Powell, Consultant in Palliative Medicine, St Helens & Knowsley Community Palliative Care Team

Dr Clare Littlewood, Macmillan Consultant, Palliative Medicine, St Helens & Knowsley NHS Trust

Dr Ernie Marshall, Acute Oncologist, St Helens & Knowsley NHS Trust

With the support and feedback of the clinical network groups in Merseyside and Cheshire Cancer Network and colleagues involved in the diagnosis and care of people with MSCC

These guidelines have been prepared to support health professionals to:

* Recognise the signs and symptoms of MSCC

* Inform clinical assessment when MSCC is suspected

* Advise what actions need to be taken when MSCC is suspected

* Describe the network MSCC care pathway - to ensure prompt clinical decisions are made, and timely treatment can commence

Agreed: August 2013

Review date: February 2015

Malignant/ Metastatic Spinal Cord Compression (MSCC)

What is it?

- **MSCC** follows tumour spreading to the spine, either directly within the spinal canal or from collapse of weakened, tumour-infiltrated spinal bone.

Why is it important?

- **Potentially preventable** cause of profound spinal cord damage e.g. quadriplegia/paraplegia, loss of bowel and bladder function.
- Some patients may maintain walking ability, continence and require less pain control if caught early enough. More patients approaching the end of their disease pathway are likely to be independent as a result.
- Some patients have a good prognosis with a long life-expectancy
- Often presents as a **neurological emergency** (**patient may develop irreversible neurological damage within hours/days**) usually following a long preceding history of pain.
- **Rapid assessment, referral, investigation and treatment are key to prevention of irreversible neurological damage.**

Who is at risk?

- Bone is the commonest site of metatstatic spread in cancer patients; of these patients, 75 % develop spinal metastases. Of these, spinal cord compression occurs in 3 – 5% of patients with cancer.
- Occurs in 10-15% of patients with vertebral metastases; most likely to occur in cancers where bony disease is most frequent (e.g. myeloma, lymphoma, prostate, lung and breast cancers).
- 23% of patients with MSCC are **not** previously known to have malignancy.

Be alert to:

- Development of unremitting spinal pain (particularly thoracic; 2/3 of patients with spinal mets involve the thoracic spine) not typical of musculo-skeletal back pain. Any patient with a diagnosis of cancer and thoracic back pain should be considered to have a potential spinal metastasis until proven otherwise.
- Development of neurological symptoms or signs e.g. weakness, sensory change, sphincter disturbance, bladder changes.
- Symptoms as above in patients without a cancer diagnosis.

Diagnosis:

- MRI of the **whole** spine is the imaging of choice for suspected MSCC. Plain x-rays or bone scans may not identify metastases and can delay diagnosis by giving false reassurance.
- **Any cancer patient developing <u>any</u> neurological signs or symptoms should undergo MRI scanning urgently, and to enable treatment potentially to take place within 24 hours.**
- If pain is the patient's only symptom, MRI should be carried out as soon as possible to allow definitive treatment to take place within one week.

Treatment:

- Patients with confirmed MSCC are likely to receive radiotherapy as an in-patient, some patients will require surgical intervention.
- Most patients will require rehabilitation and ongoing management of resulting disability.

Communication with patients:

- NICE guidelines require that patients who are at high risk of developing bone metastases, patients with diagnosed bone metastases, or patients with cancer who present with spinal pain be informed about the symptoms of MSCC and the actions they should take if they develop these symptoms. Information should be offered to patients about these risks verbally and in written format e.g. a leaflet.
- Ensure that patients with MSCC and their families and carers know who to contact if their symptoms progress while they are waiting for urgent investigation of suspected MSCC.

Signs and symptoms of malignant/ metastatic spinal cord compression

Initial symptoms/signs suggestive of spinal metastases

- **Progressive/ increasingly severe, unremitting localised spinal pain at any level**
- Nocturnal spinal pain preventing sleep
- Pain aggravated by straining e.g. at stool or coughing/sneezing
- Spinal bony tenderness
- Developing neuropathic pain e.g. referred to limbs, burning, shooting, pins and needles

Signs and symptoms of cord compression (present in 95% of patients)

- **Features which suggest neurological damage**
- 95% of patients have severe spinal pain +/- neuropathic pain – e.g. referred pain to limbs, pain in a dermatomal distribution, shooting or burning pain
- 85% have unexplained new weakness of limbs – e.g. **quadriplegia/paraplegia**, deterioration in mobility, heaviness of legs, inability to climb stairs
- 50% have sensory loss/disturbance – e.g. numbness, paraesthesia
- Unexplained bowel or bladder disturbance – e.g. constipation, urinary retention or incontinence; sphincter problems
- All symptoms do not need to be present to suggest MSCC

- Where patient has **progressive spinal pain only (no neurological signs) and no cancer diagnosis**- manage and refer urgently for urgent spinal assessment as per regional spinal assessment clinic protocols
- A patient without a cancer diagnosis who has severe pain and is developing neurological signs **may have MSCC.** Admit urgently via acute medical route as appropriate. Flag as 'suspected MSCC'

Actions to take – if symptoms suggest MSCC

- Urgent, same day senior medical assessment. Neurological examination should be conducted as may elicit subtle signs not apparent from history
- Consider whether fit for MRI and possible treatment (usually radiotherapy, occasionally neurosurgery)
- Explain concerns, plan for investigation and treatment, and seek consent from patient/ discuss with carer.

Care pathway for patients where MSCC is suspected

Urgent senior clinical assessment within 2 hours of contact – history, neurological examination, fitness to treat

Unfit(e.g. Poor performance status or no neurological function for >48 hours. Unfit patients with severe pain may still be considered for radiotherapy but do not require an MRI)

Inform the referring clinician urgently. Contact specialist palliative care/acute oncology for further management of symptoms. Do not discharge until a full care package/placement is in place.

Fit to treat

Patient has cancer*

+

Progressive spinal pain
(no neurological symptoms or signs; no neuropathic pain features)

Escalating spinal pain with neurological signs e.g. weakness, sensory loss, bowel /bladder disturbance.

Standard - MRI and treatment within 24 hours

Contact oncologist/ specialist palliative care consultant/ site specific team/ cancer clinician who has seen the patient most recently

Choose clinician actively managing the patient, (or the clinician who has most recently seen the patient if not under active management).

Make same day contact with responsible consultant or covering colleague.

Flag letter 'SUSPECTED MSCC' Do not just send referral/ fax a letter- may cause delay.

Agree who will organise and be responsible for MRI

Standard – investigation and treatment concluded within 1 week

If the patient develops neurological symptoms in the meantime, arrange urgent admission for MRI and flag as 'suspected spinal cord compression'.

If the patient does not have symptoms of neurology, but evidence of MSCC is seen

Triage as 'suspected malignant spinal cord compression' - assess within 2 hours of presentation. Inform senior medical staff of suspected diagnosis.

Document and time full history and physical examination, including a neurological examination.

Organise MRI urgently – do not waste time doing bone scans nor allow plain film x ray to delay MRI. Identify who will receive the MRI report and give their details to the MRI department. (Contact the Walton Centre for advice where MRI is contraindicated).

Advise patient to remain flat until MRI if possible. Fit TED stockings. Do not start low molecular weight heparin until discussed with MSCC Coordinator.

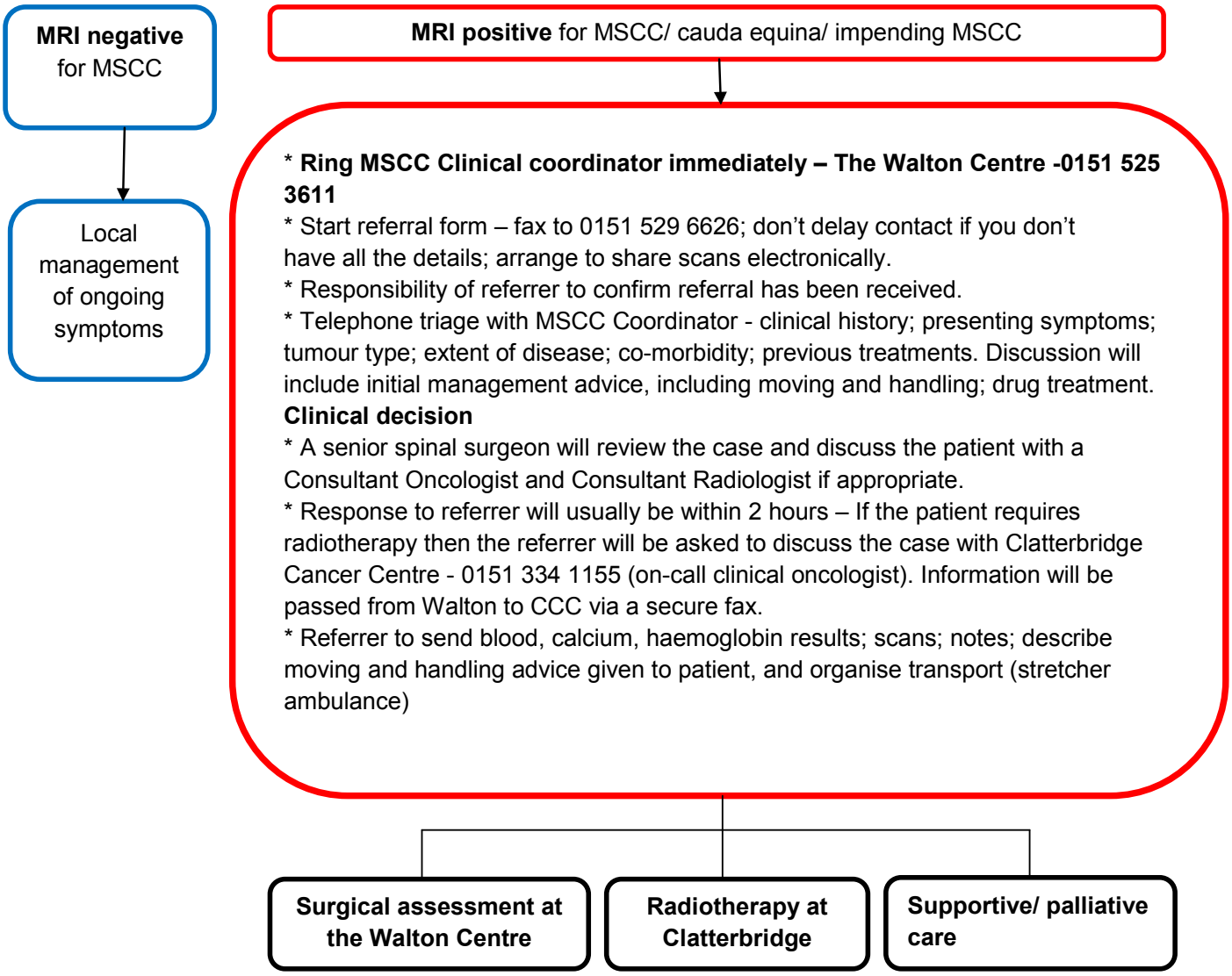
Assess pain control and prescribe analgesics. Specialist palliative care can advise if required. If patient can't lie flat due to pain, complete MRI compatibility/ request form and consider sedation if indicated, to prevent delays

Give dexamethasone 16mg daily orally or subcutaneously (unless you have a strong suspicion of lymphoma) and consider proton pump inhibitor for gastric protection.

Starve patient.

Communicate 'suspected MSCC' if handing over to another team.

***Where patient has no cancer diagnosis, progressive spinal pain only (no neurological signs) manage and refer urgently for urgent spinal assessment as per regional spinal assessment protocols.**



Additional notes:

- Urgent referrals(mechanical spinal pain without neurology) – for patients requiring an urgent (within 24 hours) but not immediate opinion - fax referral form to 0151 529 6626 and forward scans to the Walton Centre via image link. Contact the Metastatic Spinal Cord Compression Coordinator via - 0151 525 3611 - who will bring the case to the attention of the Consultant on call for MSCC. The fax machine is accessible 24/7. This does not infer acceptance of the referral until subsequently notified.
- Patients already under the care of a Consultant Oncologist (or discussed at an MDT with the Consultant Oncologist) who are thought not to be suitable for a surgical opinion (due to widespread metastatic disease, very poor prognosis, <3 months, or extensive co-morbidity) may be referred directly to Clatterbridge Cancer Centre for urgent radiotherapy. These patients should still be registered with the Walton Centre for audit purposes and the reason why they are not suitable or surgery noted on the proforma.
- The Walton Centre NHS Foundation Trust is the coordinating centre for metastatic spinal cord compression across Merseyside and Cheshire. Coordination is provided by a team: The **spinal specialist nurse** is the MSCC coordinator in hours Monday – Friday, 9 -5 and is contactable via bleep 5385. Out of hours, and at weekends, coordination is undertaken by the **on-call neurosurgical registrar**.

Metastatic Spinal Disease Referral Form

Date _____ Time _____

Emergency referral □ Referral for urgent opinion (within 24 hrs) □

Notification for audit only (to be used by oncologists only) □

Please send all available imaging & copies of reports urgently to the Walton Centre

An acknowledgement will be communicated – please provide contact no:_____

Discussed with Walton Centre on: _____ (date) _____ (time)

Patient Details	Person responsible for care
Surname	Consultant/ GP
Forename	Contact No (Mobile) Are they are aware of referral Yes / No
D.O.B. Male/ Female	Oncologist (If already diagnosed)
Address	Contact No (mobile) Is Oncologist aware of referral Yes / No
Postcode	**Current Relevant Co-morbidities** None
Telephone No	1
NHS No	2
In / Out Patient	3
Hospital and Ward	4
Direct Dial Number	**Hb Ca++ Alb**
	Is patient anticoagulated? Yes / No

Tumour Presentation (circle provisional diagnosis)	**Prior Discussion at MDT** Yes / No
Previous known primary: probable mets	If yes: Hospital Date discussed Specialty
Previous unknown primary; probable mets	
Probable musculo-skeletal primary	**Patient understanding**
Probable intradural primary	Has diagnosis and possible surgery been discussed with patient? Yes / No
Estimated prognosis >3 months Y/ N/ not known	Does Patient wish to consider surgery? Yes / No
Biopsy Yes / No Result Date	Has information about MSCC been given to the patient? Yes / No
	Has information about MSCC been given to the relative/ carer? Yes / No

Please send all available imaging & copies of reports **Page 1 of 2**

Please complete as fully as possible and fax to Walton Centre 0151 529 6626

Metastatic Spinal Disease Referral Form cont.

Please send all available imaging & copies of reports urgently to the Walton Centre

Patient Name:	**DOB**
TUMOUR	**SPINE**
Primary tumour (if known) Approximate date of diagnosis: Treatment (s):	Presenting Complaint Pain only Y / N since (date) Location: Type: Non specific Mechanical Postural Pattern: Nocturnal Diurnal Constant Neurological Symptoms Y / N since (date) Neurological Signs Y / N since (date) *****Spinal Cord compression*:** ***Stable Unstable Uncertain None***
*****Previous radiotherapy? Y/ N*** ***If yes, to which area:*** ***Date given, if known:*** ***Previous treating hospital, if known:***	*****Walking Status:*** ***Normal*** ***Unsteady since (date)*** ***Not ambulant since (date)***
Previous Metastases Y / N Define	
Current staging:	
Osseous Mets Y / N demonstrated by: Isotope scan -date / Not done Plain Radiographs -date / Not done Sites:-	**Incontinence** Urinary Y / N since (date) Faecal Y / N since (date)
Visceral Mets Y / N Demonstrated by: CT Chest /Abdo -date / Not done CXR -date / Not done Liver US -date / Not done Sites:-	**Sensory Level** Y / N Define Since **Lowest MRC grade** 0 1 2 3 4 5 Muscle Group(s) Since
Other relevant information:	**MRI (whole spine)** Yes / Not done Date & time scan requested Date & time scan undertaken Which hospital scanned patient
	Details of clinician responsible for ongoing care of the patient following surgery. Name:- Contact No:-

Please send all available imaging & copies of reports. Please complete as fully as possible and fax to Walton Centre 0151 529 6626. * Highlighted areas – priority for completion **Page 2 of 2**