

GUIDELINES FOR THE DIAGNOSIS AND MANAGEMENT OF ADULTS AT RISK OF AND WITH METASTATIC SPINAL CORD COMPRESSION

Guideline Author and Job Title	Jenni Thomas Acute Oncology Team Lead & Dr Anna Lock Palliative Medicine Consultant
Group, Directorate and Specialty	Oncology, Admitted Care A, Medicine & Emergency Care Group
Approving Body and Date of Approval	Admitted Care A Directorate meeting (24/01/2023) Medicine & Emergency Care Group Governance meeting (TBC 28/04/2023)
MPEG Approval Date	10/03/2023
Guideline Reference	SWBH/Pt Care/093
Date Uploaded onto Connect	28/04/2023
Next Review Date	28/04/2026

- **If review of existing guideline what has been changed:**

Minor adjustments to all sections

- **What National Guidance has been incorporated:**

This builds on the West Midlands Strategic Clinical Network MSCC, Acute Oncology and Cancer of Unknown Primary Expert Advisory Group MSCC Guideline for the Referral of Patients with Spinal Metastatic Disease and Suspected metastatic Spinal Cord Compression and Protocol for mobilisation and Rehabilitation following non-surgical management of Metastatic Spinal Cord Compression (MSCC) V1.0.

National Institute for Health and Care Excellence, Metastatic spinal cord compression in adults: risk assessment, diagnosis and management, Clinical guideline CG75.

DOCUMENT CONTROL AND HISTORY

Version No	Date Approved	Date of implementation	Next Review Date	Reason for change (e.g. full rewrite, amendment to reflect new legislation, updated flowchart, etc.)
1	September 2012	September 2012	September 2015	New MRI weekend availability, incorporation of Peer review recommendations
1	June 2013	June 2013	June 2016	
1	June 2014	June 2014	June 2017	Minor changes and addition of care bundle as appendix 4
1	August 2014	August 2014	August 2017	Minor changes to section 6.2 (2) and appendix 4
1	August 2015	August 2015	August 2017	Minor changes to oncology team working hours
2	October 2018	November 2018	November 2021	Amendments to include updates in best practice
3	March 2023	March 2023	March 2026	Minor amendments to include updates in best practice by 1. Dr Anna Lock, Consultant in Palliative Medicine SWBH 2. Jenni Thomas, Lead Acute Oncology CNS, SWBH

- **Scope (who does the guidelines apply to or not apply to):**

ESSENTIAL READING FOR THE FOLLOWING STAFF GROUPS:

1. **Acute Medical team**
2. **Orthopaedic surgical team**
3. **Accident and emergency staff,**
4. **Rehabilitation team**
5. **Neurology team**
6. **Acute Oncology team**
7. **Oncologists**
8. **Radiologists and MRI radiographers**

STAFF GROUPS WHICH SHOULD BE AWARE OF THE POLICY FOR REFERENCE PURPOSES:

1. **Primary Care staff**
2. **Specialist Palliative Care Team**

CONTENTS

1	KEY POINTS.....	5
2	INTRODUCTION.....	6
3	DEFINITIONS	6
4	PROCESSES TO ENSURE EARLY DETECTION	7
4.1	Patient and carer information	7
4.2	Flagging patients at risk	7
5	CLINICAL PRESENTATIONS OF SPINAL MALIGNANCY	7
5.1	Urgent Presentation: Spinal Metastasis suspected	7
5.2	Emergency Presentation: Metastatic Spinal Cord Compression suspected	8
6	PATHWAY IF MSCC SUSPECTED	8
6.1	Patient in primary care setting.....	8
6.2	Patient in acute care setting [O&E].....	9
6.3	Emergency MRI Access at SWBH	10
6.4	Getting the MRI.....	10
6.5	Positive result for MSCC or unstable spine with impending MSCC	11
6.5.1	Immediate actions.....	11
6.5.2	If Anaesthetic review needed	11
6.5.3	Referral to Macmillan Therapy Team	12
6.6	Bone metastasis without cord compression	12
6.7	Patient deemed not appropriate for further investigation, radiotherapy or surgery. 12	
6.7.1	Actions:.....	12
6.8	No spinal malignancy.....	12
6.8.1	Actions:.....	12
7	IMAGING IN PATIENTS WITH SUSPECTED MSCC.....	13
8	NURSING GUIDANCE ON CARE FOR PATIENTS WITH SUSPECTED METASTATIC SPINAL CORD COMPRESSION	13
8.1	Key Actions.....	13
8.2	Holistic Assessment.....	14
8.2.1	Pain	14
8.2.2	Autonomic dysfunction.....	14
8.2.3	Motor & Sensory deficits	15
8.2.4	Psychological care	15
8.2.5	Transfer for treatment with radiotherapy or spinal surgery	15
9	ASSESSMENT OF SPINAL STABILITY.....	15
9.1	Background.....	15
9.2	Spinal stability in metastatic spine disease	16
9.3	If spinal instability is suspected at diagnosis of cord compression.....	17
9.4	Re-assessment may be needed.....	17
9.5	Use of collars	17
10	BOWEL MANAGEMENT IN PATIENTS WITH METASTATIC SPINAL CORD COMPRESSION.....	17
10.1	Assessment.....	17
10.2	Take an ABC approach	18
10.3	Management strategy.....	18
11	POST- METASTATIC SPINAL CORD COMPRESSION TREATMENT GUIDANCE ...	19
11.1	Medical Team.....	19
11.2	Nursing Team.....	19
11.3	Therapy team	20
11.4	Discharge planning.....	20
12	PROTOCOL FOR MOBILISATION AND REHABILITATION	20
12.1	Key points	20
12.2	On Admission.....	20

12.3	Following treatment with radiotherapy or surgery	21
12.4	Unwell and bed bound patients	21
12.5	Ongoing care options to consider with patient and carers.....	21
13	OTHER DOCUMENTS TO WHICH THIS GUIDELINE RELATES	22
14	ROLES AND RESPONSIBILITIES	22
15	CONSULTATION	24
16	AUDITABLE STANDARDS/PROCESS FOR MONITORING EFFECTIVENESS	24
17	EQUALITY AND DIVERSITY	24
18	REVIEW	25
19	REFERENCES.....	25
20	FURTHER ENQUIRIES.....	25
21	APPENDICES	25
21.1	Appendix 1	26
21.2	Appendix 2: Clinical flow chart for new possible Metastatic Spinal Cord Compression.....	27
21.3	28
21.4	Appendix 3 Guidance to support Radiologists when imaging findings in Oncology/Haematology Inpatients and Outpatients may need urgent action	28
21.5	Appendix 4 SIN Scoring system	29
21.6	Appendix 5 MSCC UHB On-Call proforma	30

1 KEY POINTS

1. Metastatic Spinal Cord Compression is a medical emergency
2. Referral early for investigation to improve quality of life outcomes and minimise disability
3. Give dexamethasone 16 mg immediately after diagnosis suspected unless contraindicated and continue once daily until alternative plan in place
4. Immobilise spine where spinal instability suspected
5. Arrange a whole spine MRI within 24 hours of presentation
6. Refer the same day for treatment if well enough for treatment
7. Involve rehabilitation services early to support early discharge and improve quality of life.
8. An active approach to bowel and bladder care will improve quality of life.

PLEASE NOTE THAT THE ABOVE LIST IS DESIGNED TO ACT AS A QUICK REFERENCE GUIDE ONLY AND IS NOT INTENDED TO REPLACE THE NEED TO READ THE FULL GUIDELINE

2 INTRODUCTION

Metastatic spinal cord compression (MSCC) is defined in this guideline as in the 2008 and 2014 NICE guideline as spinal cord or cauda equina compression by direct pressure and/or induction of vertebral collapse or instability by metastatic spread or direct extension of malignancy that threatens or causes neurological disability.

It occurs most commonly in patients with bone metastasis secondary to breast, prostate and lung cancer accounting for more than 50% of MSCC diagnoses, although about 23% of people presenting with MSCC are not previously known to have a cancer.

Early detection and rapid referral pathways optimises outcomes for patients and prompt treatment before neurological signs are present with the appropriate modality can prevent progression of paralysis and preserve continence of bowel and bladder.

In this document we support the local implementation within SWB area of the NICE guidance to ensure efficient and effective diagnosis, treatment, rehabilitation and ongoing care of patients with MSCC

3 DEFINITIONS

Metastatic Spinal cord compression (MSCC): When cancer has spread from elsewhere in a person's body to their spine and is causing spinal cord or cauda equina compression by direct pressure and/or induction of pathological vertebral collapse or instability by metastatic spread or direct extension of malignancy that threatens or causes neurological disability.

MSCC co-ordinator role: within SWB this is fulfilled by the Acute Oncology Service: generally, covers core hours of Monday–Friday 08.30–18.00, for up-to-date hours please refer to the [AOS team section of the SWBH intranet](#).

Sandwell site bleep: 5900

City site bleep: 5871

Out of these hours medical/ surgical teams will need to follow these guidelines to avoid delay in care.

BODY OF THE GUIDELINE

4 PROCESSES TO ENSURE EARLY DETECTION

4.1 Patient and carer information

Patients newly diagnosed with bone metastasis at SWBH should be counselled as to the risk of MSCC by an experienced clinician such as an Oncologist, Cancer Site Specific Clinical Nurse Specialist or Specialist Palliative Care Team member and if appropriate offered a patient information card detailing the symptoms and signs to watch out for. For patients who are awaiting referral on to the oncology team, the patient should be given the SWBH AOS 24-hour emergency helpline number and card.

The clinical team caring for them should also communicate this information to the primary care team, including reference specifically to the patient information leaflet.

4.2 Flagging patients at risk

When a patient receives a new diagnosis of bony metastases an ICM healthcare flag is created. When a patient who is flagged is admitted as an inpatient an email alert is sent to the AOS team. AOS will ascertain reason for admission and if suspicion/suggestion of MSCC will visit patient to support the patient and the acute medical team.

Patients with suspected spinal cord compression will have their pathway facilitated by the AOS who will also record prospective audit data.

5 CLINICAL PRESENTATIONS OF SPINAL MALIGNANCY

5.1 Urgent Presentation: Spinal Metastasis suspected

Consider for people with a history of metastatic cancer/suspected cancer (common in breast, prostate, lung, renal, myeloma) N.B. May also be first presentation of a previously undiagnosed cancer

Symptoms and signs suggestive of new spinal metastasis include:

- Pain in the middle (thoracic) or upper (cervical) spine
- Progressive lower (lumbar) spinal pain
- Severe unremitting lower spinal pain
- Spinal pain aggravated by straining (for example, when opening bowels, or when coughing or sneezing)
- Localised spinal tenderness
- Nocturnal spinal pain preventing sleep.

These patients should have an urgent MRI to allow time for definitive treatment to be planned within one week of the suspected diagnosis in the case of spinal pain suggestive of spinal metastases or sooner if there is a pressing clinical need for emergency surgery.

If spinal metastasis on MRI:

Actions:

1. Initial discussion with Oncologist is appropriate re. radiotherapy/systemic therapy/surgery.

2. Oncologist to decide whether onward referral if appropriate to Royal Orthopaedic Hospital (or other spinal centre).
3. For consideration of surgery if recommended:
Online referral should be made by the SWB medical team to ROH through <https://www.referapatient.org/refer-a-patient> with images transferred urgently through PACs.
4. Ensure urgent linking of images to oncology and surgical teams via email to PACS - swb-tr.pacs@nhs.net, out of hours contact the on-call radiographer via switchboard. Email to include: Urgent transfer required/Patient's name/NHS Number/Hospital number/Destination Hospital/Trust/How the transfer of data will influence the patient's management (i.e. why do you want them transferred)/For whose attention at receiving Trust/The examinations required to be transferred.

5.2 Emergency Presentation: Metastatic Spinal Cord Compression suspected

Patients presenting with symptoms suggesting MSCC should be treated as an emergency and MRI completed within 24 hours of being identified or sooner if clinically indicated to allow definitive treatment planning.

The presenting features of suspected MSCC include **any** of the symptoms listed above in 7.1 plus neurological symptoms including:

- Radicular pain
- Any limb weakness
- Difficulty walking (including a history of falls)
- Sensory loss or bladder or bowel dysfunction

Remember that neurological signs of spinal cord or cauda equine develop late.

6 PATHWAY IF MSCC SUSPECTED

For patients who have the clinical red flags for MSCC it should be treated as a medical emergency to prevent neurological deterioration.

6.1 Patient in primary care setting

1. An assessment made by the clinician to exclude the patient being in the last few days of life when transfer may not be in the patient's best interest. If patient does not want imaging or clinicians feel this is futile there should be a full assessment of their palliative and supportive care needs.
2. Discussion with the patient +/- carers to ensure:
 - A hospital transfer is acceptable.
 - They understand that the patient will need urgent MRI scan
 - There is a high risk of paralysis if intervention is too late and symptoms progress
3. If the patient and their carers are agreeable to transfer to hospital follow flow chart in Appendix 1:
 - **Mon–Fri 08.00–18.00:** Contact [Acute Oncology](#) CNS Bleep Sandwell 5900 City 5871 who will advise re admission to SWB AMU if bed available, if not may need to go via A&E

- **All other times:** Refer in to SWB Acute Medical Unit (AMU) for urgent MRI imaging
4. An emergency ambulance should be arranged for stretcher transfer to SWB.
 5. If by using clinical judgement the patient is in the last days of their life and admission to hospital is not appropriate, if not clear additional support and advice may be sought from either the oncologist who knows the patient, acute oncology team or the palliative care team. Referral can then be made to the [Connected Palliative Care Hub](#) for nursing and therapies support to maximise quality of life and assess moving and handling requirements.

6.2 Patient in acute care setting ^[08]

1. Clinicians should commence this [MSCC pathway](#) as per Appendix 2 and document in the electronic patient record that they are at risk of MSCC and this guidance document should be followed
2. If patient not an inpatient (e.g., if in ED or clinic setting) they must be advised to be admitted and if refuse clear documentation of the conversation including risk of permanent neurological damage and loss of continence. If patient refuses then a formal assessment of their mental capacity should be done as per [trust policy](#).
3. Nursing staff to utilise nursing guidance on care for patients with [suspected metastatic spinal cord compression, section 10 of this document](#).
4. A clinical assessment made by the multi-disciplinary team to exclude the patient being in the last few days of life when further investigation or treatment may not be in the patient's best interest. Additional support and advice may be sought from UHB oncology team (7/7 availability), acute oncology team or the palliative care team. If uncertainty as to appropriateness of completing MSCC pathway bed rest and dexamethasone can be given as an interim measure to protect the spine and decision as to whether to complete MRI can be made within working hours when multidisciplinary colleagues available.
5. If patient does not want imaging or clinicians feel this is futile there should be a full assessment of their palliative and supportive care needs which can be initiated by ward team utilising the Supportive Care Plan both medical and nursing assessment as a baseline assessment with referral to Connected Palliative Care to support. ..
6. Patients with suspected MSCC who have been completely paraplegic, or tetraplegic for more than 24 hours should wherever possible be discussed urgently with their primary oncologist or on-call clinical oncologist at UHB before any imaging or hospital transfer.
7. Contact acute oncology service for support Tel: 07976 499140 or via bleep for Sandwell bleep 5900 City Bleep 5871 (Up-to-date working hours can be found on the [Trust Connect Teams page for AOS](#)). Outside of SWB AOS working hours, then please contact UHB on-call Oncology Registrar.
8. Discussion with the patient +/-carers to ensure:
 - a. MRI scan is acceptable (can cause claustrophobia or be limited by severe pain) if MRI not possible consider a CT scan whole spine instead. If still not possible there should be a discussion with Oncology service for alternative investigation.
 - a. They understand that there is a high risk of paralysis if intervention late
 - b. That they would consider hospital transfer for radiotherapy or surgery

9. Prescription and dispensing to patient immediately of Dexamethasone 16 mg orally plus lansoprazole 30 mg orally unless contraindicated.

Dexamethasone to continue **once daily** (am) until decision made re definitive treatment.

NB If new lymphoma diagnosis suspected, steroids may interfere with diagnosis contact consultant Haematologist immediately for advice

10. Patient to be on strict bedrest until MRI results available and if necessary spinal stability assessment undertaken
11. Review of the need for analgesics/bed rest – [See Assessment of Spinal Stability](#)
12. Review of need for analgesics
13. Emergency MRI should be:
 - a. Booked immediately.
 - b. Performed within 24 hours
 - c. Reported urgently verbally to the referring clinician on the same day

6.3 Emergency MRI Access at SWBH

Sandwell General Hospital

Mon–Fri 08.00–20.00 (protected slot 12.30–13.00)

Sat and Sun Request directly to consultant Radiologist before 10.00 for midday slot

City Hospital

Mon-Thurs 08.00–19.00 (protected slot 12.30–13.00)

Fri 08.00–17.00 (protected slot 12.30–13.00)

Sat and Sun Request directly to consultant Radiologist before 10.00 for midday slot.

6.4 Getting the MRI

This will be facilitated by duty emergency radiographer for the day.

The imaging department have introduced a duty radiologist system from 09.00 to 17.00 on weekdays. There will be a telephone number for City patients (extension 5670) and a number for Sandwell patients (extension 4716). The calls will be triaged by medical secretaries and then forwarded onto the duty radiologist as required.

1. Request the imaging examination first before calling. If you put adequate clinical information then the request will be accepted, protocolled and scheduled without you having to discuss the case. This will be done within 30 minutes of the request (ASAP for ED requests).
2. Check Unity before calling for an update on reporting.

In the event of more than 4 requests which all need scanning within 24 hours; if after consultant-consultant discussion all fit criteria for imaging or capacity issue due to other priority imaging, then escalation should be to the Executive Committee member on call for the day for identification of resources.

6.5 Positive result for MSCC or unstable spine with impending MSCC

6.5.1 Immediate actions

1. Immediate request to PACS team to image link MRI to UHB for Oncology team to review this can be done via email to swb-tr.pacs@nhs.net out of hours via on call radiographer. Email to include: Urgent transfer/Patient's name/NHS Number/Hospital number/Destination Hospital/Trust/How the transfer of data will influence the patient's management (i.e. why do you want them transferred)/For whose attention at receiving Trust/The examinations required to be transferred
2. On the same day the Medical team should contact patient's own Oncologist, if not known or not available contact on call clinical oncologist for the day via UHB switchboard (24 hour availability) to review MRI images for a definitive management plan within 24 hours. The Oncologists will be completing a proforma a copy of which can be seen in Appendix 5, so ensure all information readily available when referring patient.
3. If no staging images available from the last 2 months, then urgent CT thorax, abdomen and pelvis to be requested to help guide treatment plan. Images should also be requested in sagittal and coronal format, as this helps the surgeons assess spine for potential surgery.
4. Where appropriate the Oncologist will advise the medical team to liaise with the spinal surgeons at the Royal Orthopaedic Hospital to assess whether surgical review is indicated. **This should be a registrar or consultant.** This will include decision as to whether a biopsy needed if the patient is previously unknown to have cancer or has a cancer of unknown primary.
5. Radiotherapy if indicated should be arranged to start within 24 hours.
6. Surgery if indicated should be arranged within 24 hours by:
 - a. Online referral to be completed by SWB medical team to ROH Spinal Oncology on [referapatient](#) as well as telephone referral via the Spinal Oncology Co-ordinator 08.00–16.00 Monday–Friday Tel: 0121 685 4000 ext. 55351 or bleep 2705, or out of hours contact the spinal surgical registrar on call, again should be a registrar or consultant.
 - b. Urgent PACs Image linking to ROH
7. If surgery is indicated then anaesthetic review to be requested for the patient, specifying the nature and extent of proposed surgery.

6.5.2 If Anaesthetic review needed

This should be done with input from a senior anaesthetist following the below advice:

Provide a risk assessment and use scoring systems to estimate the predicted mortality and morbidity of general anaesthesia for an operation

Advise on the nature of complications that may arise in the postoperative period and how it might affect outcomes, for example, 'This patient has a 15% mortality risk and is at high risk of developing complications such as heart attack, breathing failure, multiple organ failure and death in the postoperative period.'

A commonly used tool for this at SWB is the ACS NSQIP Surgical Risk Calculator: <https://riskcalculator.facs.org/RiskCalculator/>
This is not the only risk scoring tool available.

The risks associated with general anaesthesia differ depending on the reason it is being administered. For example, the risk of anaesthesia to facilitate a MRI scan will be less than the risks associated with a major reconstructive procedure. The risk to a patient of serious complications is usually associated with the degree of physiological insult from the procedure rather than the administration of anaesthesia *per se*.

The SWB anaesthesia team is unlikely to be fully aware of the nature and extent of the proposed surgery to be done at ROH and the potential complications associated with it and decision making of fitness for surgery should take place in consultation with the ROH team

Based on the overall risk assessment, the decision to offer to operate or not should be made by the operating team involving the wider clinical team involved in delivering patient care. The final decision to proceed with a proposed operation lies with the patient, or their advocate, through the process of informed consent

6.5.3 Referral to Macmillan Therapy Team

They work with the patient to maintain or increase functional independence, prolong life by preventing complications and improve quality of life. They will;

- a. Refer to physiotherapy to provide prophylactic breathing exercises and assist with passive/active leg exercises as required.
- b. Commence discharge planning in accordance with the patient's wishes and to their preferred place of care wherever possible

6.6 Bone metastasis without cord compression

See section above on [Spinal Metastasis](#)

6.7 Patient deemed not appropriate for further investigation, radiotherapy or surgery

6.7.1 Actions:

1. Manage symptoms including pain using the [West Midlands Palliative Care Physicians Guidance](#)
2. Discuss with Oncologist the possible use of palliative steroids to maintain function, with clear plan for dose reduction
3. Utilise the Supportive Care Plan to guide symptom control and support for patient and family.
4. Refer to Macmillan Therapy team to assist with discharge planning.
5. Consider [referral to SWBH Connected Palliative Care Team](#) ,ext. 3611, seven days a week or if at home their appropriate community specialist palliative care team.
6. Assess for psychological distress and address; consider onward referrals for additional support if needed.

6.8 No spinal malignancy

6.8.1 Actions:

Alternative care should be arranged appropriate to clinical findings such as trauma and orthopaedic team if non-malignant spinal disease.

7 IMAGING IN PATIENTS WITH SUSPECTED MSCC

1. Unless there is a specific contraindication MRI of the whole spine should be performed within:
2. 24 hours in cases where spinal pain, neurological symptoms or clinical red flags are suggestive of MSCC.
3. 1 week in cases where pain is suggestive of spinal metastases.
4. Reports for MRI spine to be available on the day of scan, when metastatic spinal cord compression red flags are described on referral or if signs of compression seen on the MRI. If verbal report is given to the medical team, the written report needs to be available on patients' electronic record the following morning.
5. MRI report to include information to enable completion of the Spinal Neoplastic Instability Score (SINS) scoring tool, appendix 4. Further information on spinal stability and the SIN score can be found in section 11 of this document. Discussion is currently ongoing with radiology regarding implementation of the SINS scoring. The radiologist may be contacted by the home medical team caring for the patient in the interim to assist with scoring as it will be required for referral to UHB. If this is problematic further discussion will need to be undertaken with UHB and the Acute Oncology Service. It should not cause delay in referral or discussions.
6. Conclusion of the scan report for suspected MSCC should clearly state either: no cord compression, impending cord compression or cord compression and at what level.
7. If there is more than one patient in a day for an urgent MRI spine then the duty radiologist will prioritise patients according to clinical information available. If further information is required to make this decision the radiologist will contact the requester directly.
8. For patients that are potentially suitable candidates for spinal surgery or there is no recent staging images, within 8 weeks, then to provide urgent CT Thorax Abdomen Pelvis this can guide treatment plan for patients. Images to be taken in sagittal and coronal format to provide further information on the bones of the spine for the surgical team to use when considering surgery as well as stage of cancer.
9. For incidental findings of potential MSCC or impending cord compression found on CT or MRI scans, please follow "Guidance to support Radiologists when imaging findings in Oncology/Haematology Inpatients and Outpatients may need urgent action" (appendix 3).

8 NURSING GUIDANCE ON CARE FOR PATIENTS WITH SUSPECTED METASTATIC SPINAL CORD COMPRESSION

This is intended as guidance for general nursing staff that may care for patients with suspected MSCC to allow identification of potential problems at the earliest opportunity, maintenance of comfort and safety and to manage associated problems as effectively as possible.

8.1 Key Actions

1. Ensure that the patient remains on strict bed rest until spinal instability is ruled out. If spinal instability is suspected, nurse flat and log role when moving/turning.

2. Refer to Macmillan Therapy Team to be seen within 24 hours of suspicion of MSCC.
3. Carry out a holistic nursing assessment but assess for specific signs and symptoms of spinal cord compression e.g. back pain, upper and lower motor deficits, sensory deficits and autonomic dysfunction.
4. Steroids should be prescribed and given **immediately**.
5. Ensure [acute oncology service](#) aware of patient via bleep through SWB switchboard (Mon–Fri, check intranet page for hours) , if out of their working hours please email swbh.aos@nhs.net, for ongoing support. NB if urgent change in neurology e.g. paralysis, escalating pain or new urinary retention contact Medical Registrar Cover via switchboard.
6. If cervical lesion is responsible for the cord compression then refer urgently to orthotics by email: Swb-tr.SWBH-GM-Orthotics@nhs.net Ensure urgent referral is in email heading, the patient will be reviewed to fit a cervical hard collar (Miami J or Philadelphia) and give further advice to prevent movement of head. Orthotics working hours are Mon–Fri between 07.00am and 3.00pm, and they visit the wards in the afternoon for urgent referrals. For further advice contact orthotics on ext. 2784/4358. Out of these hours or whilst awaiting orthotics review use neck blocks to immobilise head.

8.2 Holistic Assessment

8.2.1 Pain

1. Observe for any pain and allow the patient to describe the nature of this pain. Ensure pain assessment is completed on Unity and a care plan commenced.
2. Give prescribed analgesia and observe effect. Seek advice from specialist palliative care team if indicated and patient consents.
3. Continue strict bed rest, nurse flat and ensure careful positioning and handling to minimise further back pain and seek advice from the physiotherapy or Macmillan Therapy team.

8.2.2 Autonomic dysfunction

1. Observe for signs of urinary hesitancy or retention or incontinence, encourage regular toileting and promote diuresis.
2. If incontinent of urine, catheterise on doctor's instructions and ensure catheter/skin care is carried out, adequate intake of oral fluids and monitor for infection.
3. Observe the patient's bowel habit daily; assessing for constipation, loss of urge to defecate or incontinence.
4. Give prescribed laxatives; administer suppositories/enema if necessary, providing dignity, support and skin care as appropriate (refer to [Guidance on Bowel Management in Patients with Metastatic Spinal Cord Compression](#)).

8.2.3 Motor & Sensory deficits

When weakness, heaviness, stiffness, loss of coordination or paralysis in limbs and/or numbness, paraesthesia:-

1. Liaise with physiotherapists or Macmillan Therapy team who will conduct assessment of motor function and sensory deficits; and will provide advice/instruction in respect of nursing management.
2. Observe pressure areas daily and avoid injury to skin. Nurse the patient on a profiling bed and pressure relieving mattress but not airflow.
3. Assist with personal hygiene ensuring spine stays in line, give effective analgesia prior to activity if required.
4. Observe for signs of chest infection (increased respirations, pyrexia, cough, sputum) and report.
5. Observe for any signs of DVT due to immobility.

8.2.4 Psychological care

1. Assess the patient's psychological state, listen, support, explain and reassure as appropriate.
2. If required refer for psychological assessment by trained personnel, such as specialist palliative care team or cancer clinical nurse specialist. If needs not met sufficiently then additional input from the psychiatric liaison service could be sought.

8.2.5 Transfer for treatment with radiotherapy or spinal surgery

1. There should be provision for pain relief prior to journey. Send additional oral analgesia to accompany outpatients, which can be used if necessary while they are off site.
2. Patients need to be accompanied by an escort, if they need to be able to administer medication during the visit, then a trained nurse would be necessary.
3. The patient will need to bring food and drink with them for their visit if attending an outpatient appointment.
4. Copies of health records and drug charts must accompany patient.

9 ASSESSMENT OF SPINAL STABILITY

9.1 Background

Spinal instability refers to the actual or potential risk for neurological damage as a result of movements of the diseased spine. It is a major concern in management of traumatic spinal injury.

Spinal column infiltrated by metastatic tumour is likely to be weakened and therefore potentially less stable. However, in metastatic spine disease, whether the spine is stable or not can be difficult to decide.

Clinical studies in this subject are too few to support the formation of evidence-based guidelines. Even patients judged to have a stable spine may develop instability, following minor trauma or further tumour growth along the spinal column.

A frequently reported dilemma is when and how to mobilise a patient with MSCC. The aim of this document is to provide guidance to assist with making those decisions based on NICE Guidance and the best available other evidence.

Results of the only study assessing timing of mobilisation shows that early mobilisation of appropriate patients led to a decreased complication rate and a significant increase in patient survival at 60 weeks. Neurological function was not compromised by implementation of early mobilisation by appropriately skilled professionals.

This guideline has been adapted from Christie Hospital's Guidelines for assessment of spinal stability. It is also in line with the West Midlands Strategic Clinical Network MSCC, Acute Oncology and Cancer of Unknown Primary Expert Advisory Group Guideline for the Referral of Patients with Spinal Metastatic Disease and Suspected Metastatic Spinal Cord Compression.

9.2 Spinal stability in metastatic spine disease

Is dependent on the following factors:

1. Site of disease (cervical, thoracic or lumbar): For example, in the thoracic spine the presence of ribs and chest wall provide added support to the spinal column affected by metastatic disease, whereas this is lacking in the cervical spine.
2. Extent of tumour infiltration: In general, the greater the tumour involvement of the vertebrae, (particularly of the vertebral body) the more likely it is that stability is compromised. Collapsed vertebrae are also less likely to be stable.
3. Co-morbidity: For example, pre-existing osteoporosis of the vertebrae (related to old age, chronic steroid use etc.) will lead to weakened bones, which when infiltrated by tumour is likely to be less stable.
4. Effect of open surgery or disease progression: Decompressive surgery alone may alter the stability status of the spine fixation. Spinal stability may also be compromised in some patients managed non-surgically, due to tumour progression. In this instance follow pathway for urgent radiotherapy

An assessment of the risk of spinal instability should be made in each patient by the medical/surgical team, using the Spinal Instability Neoplastic Score (SINS) scoring tool based upon clinical and radiological information. A template of the SINS table can be seen in Appendix 4.

The MRI report for threatened or confirmed MSCC should include the information to enable completion of the SINS score, with the doctors assessing the patient's pain. Dependant on the score will guide the teams as to the risk for mobilisation and instability.

SIN Score:

0–6: stable

7–12: indeterminate (possibly impending) instability

13–18: instability

If the score indicates indeterminate or instability, then you should, obtain a surgical opinion from the Spinal Surgeon on call at the Royal Orthopaedic Hospital via their switchboard.

9.3 If spinal instability is suspected at diagnosis of cord compression

1. Ensure patient is nursed on flat bed and log rolled with appropriate pressure area care and VTE management, mindful that patients may require urgent surgery.
2. If cervical lesion is responsible for the cord compression then refer urgently to orthotics by email: Swb-tr.SWBH-GM-Orthotics@nhs.net Ensure urgent referral is in email heading, the patient will be reviewed to fit a cervical hard collar (Miami J or Philadelphia) and give further advice to prevent movement of head. Orthotics working hours are Mon–Fri between 07.00 and 15.00, and they visit the wards in the afternoon for urgent referrals. For further advice contact orthotics on ext. 2784/4358. Out of these hours or whilst awaiting orthotics review use neck blocks to immobilise head which can be obtained from both hospital's emergency departments.
3. In addition to MRI and if the overall clinical situation suggests surgery may be appropriate a staging CT scan will normally be suggested. This should include transverse images of any involved spinal levels with sagittal and coronal reformats which will facilitate decisions about stability and suitability for vertebroplasty. (This should not delay referral of urgent cases i.e. deteriorating neurology).
4. Obtain an urgent surgical opinion from [Royal Orthopaedic Hospital spinal surgeons](#).

9.4 Re-assessment may be needed

- a. Spinal instability should be considered if there are new neurological symptoms/signs and/or significant pain on vertical loading on initial attempts at mobilisation of the patient. Patients with cord compression, who have received radiotherapy, may subsequently develop instability with or without tumour progression.
- b. All patients with metastatic spine disease, considered initially stable, need to be educated with respect to the warning signs of progression to instability and cord compression.

9.5 Use of collars

In certain patients mobilization may be considered after a suitable thoraco-lumbar brace (or hard collar in cervical spine disease) has been fitted but seek surgical advice first.

10 BOWEL MANAGEMENT IN PATIENTS WITH METASTATIC SPINAL CORD COMPRESSION

10.1 Assessment

Autonomic dysfunction is a late sign of spinal cord compression that can cause significant disturbance in bowel habit. This can be manifest as loss of rectal sensation, constipation, diarrhoea or incontinence.

Management may be influenced by the level of the vertebral lesion:

Above T12–L1 'reflex bowel' (reflex arcs intact)

- Cauda equina intact → spastic bowel; sacral reflex generally preserved

Below T12–L1 ‘flaccid bowel’ (reflex arcs damaged)

- Cauda equina involved → flaccid bowel; generally requires manual evacuation of rectum

10.2 Take an ABC approach

Assessment

1. What is the level of compression?
2. Document the current bowel habit
3. Review and document the current medication:
 - laxatives / suppositories
 - constipating drugs (e.g. opiates)
4. Examination – including PR, assessment of anal tone, faecal loading
5. Assess bladder function (constipation may contribute to bladder symptoms)

Baseline abdominal x-ray

If suspicion of obstruction or to assess for faecal loading

Control protocol

- Aim is regular evacuation of formed faeces every 1–3 days
- Controlled continence may take weeks to achieve - the protocol below should be varied according to response to treatment and individual needs

10.3 Management strategy

Step 1 If faecal loading:

- 1st line: insert 2 glycerol suppositories or micro-enema deep into the rectum
- Digital manual stimulation may be useful if spastic bowel (lesion above T12–L1)*
- 2nd line sodium citrate enema
- 3rd line phosphate enema
- 4th line: gentle digital manual evacuation (Generally required if flaccid bowel – lesions below T12–L1)*

Step 2 Establish regular bowel routine:

- Review diet / fluid intake (high fibre diet, high fluid intake)
- Regular oral laxatives with PR intervention every 1–3 days may be required to achieve controlled continence (see below)
- Consider anti-diarrhoeal preparations (e.g. loperamide or codeine) as *part of a* control regime if there is persistent faecal leakage

Step 3 Recommended regular oral laxatives regime

Softener: Sodium docusate 200 mg bd

Stimulant: Senna 2 tabs alt. nights (or night before PR intervention)**

Step 4 Recommended regular PR intervention regime

Suppositories: Glycerol 1 suppository each night

If not effective: Sodium citrate (Miralax[®]) enema (instead of suppositories)

* Follow trust guidelines for [digital rectal examination digital rectal stimulation and digital removal of faeces for adults for use by nurses available on trust intranet](#)

**Also consider Movicol® (1-2 sachets) if required - up to 6 sachets if faecal impaction

Note: Autonomic dysreflexia

- Autonomic dysreflexia is a potential problem if the spinal lesion is above T7
- It presents as headache (often pounding), profuse sweating, nasal stuffiness, facial flushing, hypertension and bradycardia
- It is caused by a stimulus below the level of the lesion causing sympathetic autonomic over activity → vasoconstriction and hypertension; this stimulates parasympathetic over activity above the lesion via the carotid and aortic baroreceptors
- Action: treat the cause - check urinary catheter; PR assessment

11 POST- METASTATIC SPINAL CORD COMPRESSION TREATMENT GUIDANCE

This is intended as guidance for general staff that may care for patients with suspected MSCC to allow identification of potential problems at the earliest opportunity, maintenance of comfort and safety and to manage associated problems as effectively as possible. Each part of the caring team has a role to play,

11.1 Medical Team

- Check patient and carer understanding of treatment, including giving information leaflets
- From day 2 post completion of **radiotherapy** reduce dexamethasone dose by 4 mg every two days unless directed otherwise by the treating oncologist.
 - If patients develop worsening pain or neurological signs / symptoms increase to previous dose and seek advice
- Post **spinal surgery**, review surgical plan for steroid reduction and mobilisation, if none available contact surgeons directly for advice.
- Ensure adequate analgesia prescribed, including prn
- Ensure thromboprophylaxis guidelines followed (LMWH and anti-embolism stockings) unless contraindication.
- Monitor chest for signs of infection.
- Monitor for spinal shock (low BP, tachycardia).
- Consider commencement of the Supportive Care Plan, for more information see Connected Palliative Care's [Supportive Care Plan intranet page](#).

11.2 Nursing Team

- Document pressure areas and assess Waterlow score.
- Perform 2-hourly turns and checks if patient immobile.
- Ensure bowels open – refer to [Guidance on Bowel Management in Patients with Metastatic Spinal Cord Compression, section 12 of this document](#).
- Ensure passing urine adequately – if uncertain perform bladder scan
 - Catheterise if necessary
- Support patient and family psychologically.
- Observe for any pain and allow the patient to describe the nature of this pain.
- Give prescribed analgesia and observe effect.
- Ensure regular observations performed (HR, BP, RR, pulse oximetry)
- Check blood sugar if on steroids (dexamethasone)
- Refer to specialist palliative care team if patient consents
- Refer to other HCPs as needed (e.g.) dietician, social worker
- Referral should be made to both the Macmillan Therapy Team and Physiotherapy within 24 hours of admission
- Escalation of any concerns to the medical team

11.3 Therapy team

Therapist to see [Protocol for Mobilisation and Rehabilitation Following Treatment for Spinal Cord Compression](#)

- Staged assessment of Physical ability, cognitive function, psychological state and functional ADLs
- Mobilisation of patients should only be attempted by therapists with specialist knowledge of this area (e.g., specialist neurology or oncology physiotherapists).
- Assess respiratory function and need for breathing exercises / assisted coughing
- BP should be checked prior to mobilising to assess for postural hypotension. If blood pressure remains stable and no significant increase in pain or neurological symptoms occurs patient can begin verticalisation or graduated sitting to 60 degrees over a period of 3-4 hours.
- Once able to sit upright, assess sitting balance and continue attempts to mobilise.
- Use brace / collar if spinal instability suspected
- Liaise closely with OT regarding realistic goal setting and early consideration of discharge planning.

11.4 Discharge planning

- All members of the MDT should be involved in discharge planning which should start early in the patient journey.
- Ensure transfer sheet is completed and forwarded to relevant professionals.

12 PROTOCOL FOR MOBILISATION AND REHABILITATION

The aim of rehabilitation is to improve quality of life, maintain or increase functional independence, prolong life by preventing complications and to return the patient to the community wherever possible.

12.1 Key points

- a. Referral should be made to both the Macmillan Therapy Team and Physiotherapy within 24 hours of admission and all patients assessed within 24–48 hours, wherever possible.
- b. Initial physiotherapy and occupational therapy assessments and management should be performed following discussion with the medical team regarding spinal stability.
- c. Rehabilitation should be patient-centred with short-term, realistic goals, which focus on functional outcomes in order to achieve the best quality of life for each individual patient.
- d. All patients with MSCC should have daily re-assessment for changes in their condition and the treatment plan revised accordingly.
- e. Even if functional outcome is limited; quality of life may be achieved by providing patients with physical, social and emotional support and a sense of control.

12.2 On Admission

- a. Patient on flat bed rest, nursed profiling bed – assume spine unstable, until radiological evidence/clinical findings suggest otherwise.
- b. If cervical lesion suspected – fit with Miami J collar/sandbags to stabilise spine (available in Emergency Departments).
- c. Assessment of muscle power and sensation – record Unity.
- d. Assessment of respiratory function.

- e. Advice/reassurance and ensure patient information sheet given.
- f. Teach passive/active leg exercises, calf massage (if not on anticoagulants), thoracic breathing exercises, assisted cough (if applicable).

12.3 Following treatment with radiotherapy or surgery

- Day 1:** If radiotherapy, discuss MRI results and treatment with medical team and if necessary the treating oncologist. If spinal surgery then review written surgical plan, if none available then contact surgical team directly by telephone. If spine and neurology stable and pain permit:
- Re-assess muscle power and sensation – record on chart.
 - Once spinal shock has settled gradual sitting to 60° over a period of 3–4 hours. Re-assess at intervals.
 - Passive/active leg exercises, calf massage, breathing exercises.

- Day 2:** If clinical findings stable and pain permits commence gentle mobilization (if able) by:
- sitting edge of bed/in chair
 - standing/walking (mobility aids, as required)

N.B. Monitor any changes. If increased pain or deterioration in neurology, return to flat bed rest and report to medical team.

- Day 3:** Set appropriate and realistic goals with patient.
- Continue all above + progress mobility, as able
 - Patients with incomplete/complete paraplegia:
 - sitting balance
 - supply wheelchair for loan in hospital
 - assess functional grip

- Day 4:** Patients with incomplete/complete paraplegia, progress to:
- rolling supine → side
 - lying → sitting
 - improved sitting balance
 - sliding board transfers
 - wheelchair assessment
 - pressure lifts / pressure care
 - wheelchair skills
 - advanced transfers
 - assessment and practice of personal and domestic activities of daily living
 - provide appropriate aids
 - If pain persists, consider use of external support (collar and braces)
 - If patient has not achieved sitting balance within 1 week, unlikely to be able to do sliding board transfers and will require hoisting

12.4 Unwell and bed bound patients

Prophylactic care: Passive leg exercises, teach relatives calf massage and TA stretch

12.5 Ongoing care options to consider with patient and carers

- a. Home with input from community services
- b. Intermediate care for rehabilitation
- c. [Specialist Palliative Care Team](#) input for symptom control and discuss care options e.g., end of life care or hospice beds which will depend on prognosis and needs.

- d. Nursing home (palliative, intermediate, long-term care, no prospect of rehabilitation)
- e. Spinal unit/rehabilitation unit (good general condition/long-term prognosis, i.e. months to years)
- f. If rehabilitation not appropriate, screen for CHC (NHS Continuing Health Care)

For further advice regarding rehabilitation, contact the Macmillan Therapy Team.

13 OTHER DOCUMENTS TO WHICH THIS GUIDELINE RELATES

This builds on the West Midlands Strategic Clinical Network MSCC, Acute Oncology and Cancer of Unknown Primary Expert Advisory Group MSCC Guideline for the Referral of Patients with Spinal Metastatic Disease and Suspected metastatic Spinal Cord Compression.

14 ROLES AND RESPONSIBILITIES

Clinical team making diagnosis of bone metastasis	<ul style="list-style-type: none"> • Counsel patient on risks of MSCC • Give written information on Bone Metastasis and risk of MSCC wallet sized cards obtainable from Acute Oncology team or Macmillan
Information technology department SWBH	<ul style="list-style-type: none"> • Ensure alert process in place when people known to have bone metastasis are admitted to hospital
Primary care team	<ul style="list-style-type: none"> • Be alert for signs and symptoms of impending MSCC • Refer urgently for investigation as per guidance
Acute Hospital care team	<ul style="list-style-type: none"> • Give dexamethasone 16 mg OD as long as not contraindicated (i.e., in suspected new haematological malignancy) when diagnosis considered • Complete full neurological assessment with clear documentation of this. • Refer urgently for MRI with appropriate clinical information to allow prioritisation • If positive scan for MSCC, to refer immediately to appropriate Clinical Oncologist • Contact ROH spinal Registrar to refer patient and complete online referral using link: referapatient • If spinal surgery proposed arrange senior anaesthetic assessment of fitness for general anaesthetic • Refer early to Macmillan Therapy Team • When uncontrolled symptoms especially of pain refer for Specialist Palliative Care support.
Imaging Department	<ul style="list-style-type: none"> • Perform and report whole spine MRI within: <ol style="list-style-type: none"> a. 1 week when a new diagnosis of spinal metastasis is suspected b. 24 hours of request when MSCC is suspected • Report scan results with clear wording in the conclusion detailing either: no concerns of cord compression, threatened or confirmed cord compression • Provide details in MRI report to enable SINS score to be completed, for all patients with threatened cord or confirmed MSCC

	<ul style="list-style-type: none"> • Contacts AOS or the on-call Registrar covering AMU with results flagged as needing urgent medical action. • Report scans either verbally to referrer or in writing on same day • Notify AOS or Medical registrar directly if MSCC or unstable spine with high risk of MSCC noted on imaging
Acute Oncology Service, SWBH	<ul style="list-style-type: none"> • Liaise with clinical oncology and spinal surgeons to expedite pathway • Advise the medical or surgical teams caring for inpatients regarding the MSCC pathway • Provide regular visits to inpatients whilst on the MSCC pathway to ensure high standards of care • Prospectively collect and report audit data • Provide ongoing education and awareness training on MSCC
Macmillan Therapy Team	<ul style="list-style-type: none"> • To provide prophylactic breathing exercises • To provide advice and support to the ward staff regarding mobility once information obtained about spinal stability • Assist with passive/active leg exercises as required • Provide advice and equipment for patients and carers regarding mobility once definitive treatment plan in place
Clinical Nurse Specialists SWB	<ul style="list-style-type: none"> • They can review patients who are deteriorating and support junior staff to escalate as appropriate • Counsel and give information to patients at risk of developing MSCC
Executive team, SWB	<ul style="list-style-type: none"> • Ultimate responsibility in prioritisation and allocation of resources in the event of more than 4 requests for emergency MRI within the same 24 hours, which senior clinicians agree all fit the criteria
Clinical Oncology team University Hospital Birmingham & Royal Wolverhampton NHS Trust	<ul style="list-style-type: none"> • Be accessible to provide prompt opinion on appropriateness of radiotherapy within 24 hours for patients known to their department or if patient has not previously been known to an Oncology service • To be involved in case discussion if local team are unsure about appropriateness for surgical intervention to advise whether a surgical referral is likely to be of benefit to patient. To be involved in the case discussion with spinal surgeons if required • Ensure access to radiotherapy treatment if required within 24 hours of confirmed diagnosis of MSCC • Ensure access to radiotherapy treatment if required for painful spinal metastasis within 1 week, regardless of whether they are known to an oncologist
Spinal surgeons Royal Orthopaedic Hospital, Birmingham	<ul style="list-style-type: none"> • Be accessible to provide prompt opinion on appropriateness of spinal surgery • Advise on spinal stability and mobilisation • Liaise with patient's clinical oncology team if needed • Arrange assessment of patient at ROH and plan surgical management • Arrange surgery before further neurological deterioration
Anaesthetic team	<ul style="list-style-type: none"> • Assess if requested suitability for spinal surgery

- | | |
|--|--|
| | <ul style="list-style-type: none">• Further detail of assessment required is available in the main body of this document |
|--|--|

15 CONSULTATION

This process and guideline has been updated in 2022/2023 by:

1. Dr Anna Lock, Consultant in Palliative Medicine SWBH
2. Jenni Thomas, Lead Acute Oncology CNS, SWBH

This process and guideline document has been updated previously by:

1. Dr Anna Lock, Consultant in Palliative Medicine SWBH
2. Lisa Shyamalan, Macmillan Therapy Team Leader, SWBH
3. Dr Jenny Pascoe Consultant Medical Oncologist, University Hospitals Birmingham and joint lead of SWBH Acute Oncology Team
4. Jenni Thomas, Lead Acute Oncology CNS, SWBH

Sent for comments to:

1. Dr Neelsuraj Patel, Acute Physician SWBH
2. Dr Sarbjit Clare, Acute Physician SWBH
3. Dr Bishwajeet Elangbam, Consultant Emergency Medicine
4. Dr Ahmed El-Modir, Consultant Clinical Oncologist, University Hospitals Birmingham
4. Dr Sundus Yahya, Consultant Clinical Oncologist, University Hospitals Birmingham
5. Emily Harris, Spinal Cord Compression Co-ordinator Royal Orthopaedic Hospital
6. Dr Nigel Trudgill Consultant Gastroenterologist
7. Dr Jonathan Hulme, Consultant Anaesthetist
8. Dr Farooq Wandroo Consultant Haematologist
9. Dr Yasmin Hasan, Consultant Haematologist, Speciality Lead for Haematology & Oncology
10. Dr Sarah Yusuf Consultant Radiologist
11. Dr Vishal Bhalla Consultant Radiologist
12. Gale Warren, Service Manager Radiology

16 AUDITABLE STANDARDS/PROCESS FOR MONITORING EFFECTIVENESS

Audit standards which will be monitored for compliance are in line with [NICE](#) standards

Data pertaining to the above standards will be collected prospectively by the acute oncology service and reviewed at bimonthly clinical meetings to monitor effectiveness of care and drive improvement of service.

Clinical issues will be escalated via Trust Clinical Incident process and pathway and service concerns to the Haematology, Oncology Group.

17 EQUALITY AND DIVERSITY

The Trust recognises the diversity of the local community and those in its employment. Our aim is, therefore, to provide a safe environment free from discrimination and a place where all individuals are treated fairly, with dignity and appropriately to their need. The Trust recognises that equality impacts on all aspects of its day-to-day operations and has produced an Equality Policy Statement to reflect this. All policies are assessed in

accordance with the SWBH Equality Impact Assessment Toolkit, the results for which are monitored centrally.

18 REVIEW

This guideline will be reviewed in 3 years.

19 REFERENCES

1. NICE guideline on Metastatic Spinal Cord Compression(CG75) (2008) Available at: <https://www.nice.org.uk/guidance/cg75>
2. Christie Hospital's Guidance, Assessment of Spinal Stability (2020) Available at: <https://www.christie.nhs.uk/patients-and-visitors/services/metastatic-spinal-cord-compression-mscc/information-about-mscc-for-healthcare-professionals/mscc-guidelines-for-professionals>
3. Christie Hospital's Guidance (2013), Bowel management in patients with Metastatic spinal cord compression. Available at: <https://www.christie.nhs.uk/patients-and-visitors/services/metastatic-spinal-cord-compression-mscc/information-about-mscc-for-healthcare-professionals/mscc-guidelines-for-professionals>
4. Royal College of Nursing (2019). Bowel care: Management of lower bowel dysfunction, including digital rectal examination and digital removal of faeces. Available at: <https://www.rcn.org.uk/professional-development/publications/pub-007522>
5. Norton C et al, Management of faecal incontinence in adults: summary of NICE guidance, BMJ 2007;334:1370-1
6. West Midlands Strategic Clinical Network MSCC, Acute Oncology and Cancer of Unknown Primary Expert Advisory Group Guideline for the Referral of Patients with Spinal Metastatic disease and Suspected Metastatic Spinal Cord Compression, V3.0 (April 2022). Available at: https://wmcanceralliance.nhs.uk/images/Documents/MSCC_AO_and_CUP/WMCA_Guidelines_for_Referral_of_Patients_with_Spinal_Metastatic_Disease_final_April_2022_v3.0_.pdf
7. Metastatic Spinal Cord Compression, Acute Oncology and Cancer of Unknown Primary Expert Advisory Group (MSCC, AO & CUP EAG), Protocol for Mobilisation and Rehabilitation following nonsurgical management of Metastatic Spinal Cord Compression (MSCC) V1.0 (April 2022). Available at: https://wmcanceralliance.nhs.uk/images/Documents/MSCC_AO_and_CUP/WMCA_post-MSCC_Mobilisation_Rehab_Protocol_Final_April_2022_v1.0.pdf

20 FURTHER ENQUIRIES

Questions about this guideline should be directed to Dr Anna Lock, Consultant in Palliative Medicine and Jenni Thomas Acute Oncology Lead Nurse.

21 APPENDICES

**Could your community patient have Metastatic Spinal Cord Compression (MSCC)?
EMERGENCY REFERRAL TODAY**

Metastatic cancer/suspected cancer (common in breast, prostate, lung, renal, myeloma), NB can occur as first presentation of a previously undiagnosed cancer
Severe suspicious pain, band like chest pain, shooting nerve pain, nocturnal pain, progressive spinal pain, sensory impairment

+/- **C**ontinence- difficulty in controlling bladder or bowels (late sign)

+/- **C**annot work legs \ arms, loss of power (late sign)



Exclude last few days of life

Discuss with patient and carers

1. Patient will need urgent MRI scan
2. High risk of paralysis if intervention late
3. Acceptability of hospital transfer



Mon–Fri 8.30am–4.30pm

Contact Acute Oncology CNS via SWB switchboard

All other times

Refer to AMU for admission and urgent MRI imaging



Emergency ambulance for stretcher transfer to SWB



Acute trust will liaise with cancer centre if spinal cord compression confirmed for possible spinal surgery, radiotherapy and supportive care

21.2 Appendix 2: Clinical flow chart for new possible Metastatic Spinal Cord Compression

**Could your patient have Metastatic Spinal Cord Compression?
EMERGENCY ACTION TODAY**

Metastatic cancer/suspected cancer (common in breast, prostate, lung, renal, myeloma), NB can occur as first presentation of a previously undiagnosed cancer
Severe suspicious pain, band like chest pain, shooting nerve pain, nocturnal pain, progressive spinal pain, sensory impairment

+/- Continenence- difficulty in controlling bladder or bowels (late sign) **catheterise if necessary**

+/- Cannot work legs \ arms, loss of power (late sign)

- a. Exclude last few days of life
- b. Discuss with patient and carers
 - Patient will need urgent MRI scan
 - High risk of paralysis if intervention late
 - Acceptability of hospital transfer for radiotherapy or surgery

1. Give dexamethasone 16 mg stat p.o. plus lansoprazole 30 mg unless contraindications (to continue o.d. mane, seek AOS advice)
2. Review need for analgesics/bed rest –
3. Contact Acute Oncology Service via switchboard

Emergency MRI within 24 hours (consultant or registrar to book)

Sandwell General Hospital

Mon–Fri 08.00–20.00hrs (protected slot 12.30–13.00hrs)
 Sat, Sun D/W Consultant radiologist & BH before 10am for 12.00hrs slot

City Hospital

Mon–Thurs 08.00–19.00hrs (protected slot 12.30–13.00hrs)
 Fri 08.00–17.00 (protected slot 12.30–13.00hrs)
 Sat, Sun D/W Consultant radiologist & BH before 10am for 12.00hrs slot

Same day verbal result

Positive result

Same day: Medical team to contact patients own Oncologist, if not known or not available/Out of Hours contact Oncall Clinical Oncologist for the day via UHB switchboard (24 hr availability) Tel: 0121 371 2000

If surgical opinion suggested by Oncology to contact ROH Spinal Oncology Co-ordinator 08.00–16.00 Monday–Friday Tel: 0121 685 4000 ext. 55351 or bleep 2705, out of hours the on call spinal team registrar via switch 0121 685 4000

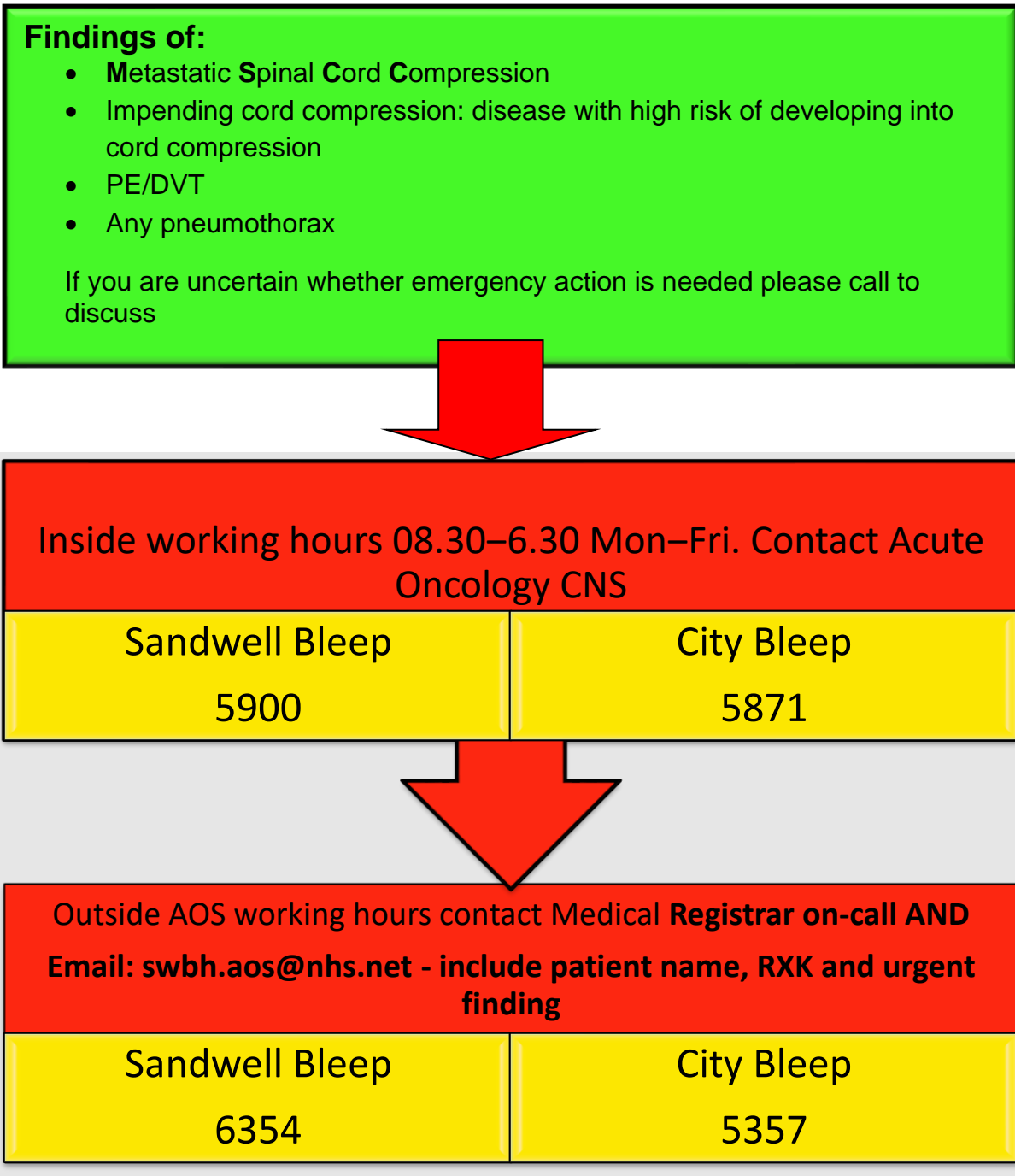
[Referpatient](#)

Negative result

Alternative care arranged

Plan of care in place within 24 hours
 Surgery/radiotherapy/supportive care

21.3 Appendix 3 Guidance to support Radiologists when imaging findings in Oncology/Haematology Inpatients and Outpatients may need urgent action



21.4 Appendix 4 SIN Scoring system

SINS score Table

		Point score
Location	Junctional (C0–2, C7–T2, T11–L1, L5–S1) = 3 Mobile spine (C3–6, L2–4) = 2 Semi-rigid (T3–10) = 1 Rigid (S2–5) = 0	
Bone Lesion	Lytic = 2 Mixed (lytic/blastic) = 1 Blastic = 0	
Radiographic spinal alignment	Subluxation/translation present = 4 De novo deformity (kyphosis/scoliosis) = 2 Normal alignment = 0	
Vertebral body collapse	>50% collapse = 3 <50% collapse = 2 No collapse with >50%involvement = 1 None of these = 0	
Posterolateral involvement of the spinal elements (facet, pedicle or costovertebral joint fracture or replacement with tumour)	Bi-lateral = 3 Uni-lateral = 1 None of these = 0	
Pain relief with recumbency and/or pain with movement/loading of spine	Yes = 3 No (occasional pain but not mechanical) = 1 Pain free lesion = 0	
Total	0–6 = stable 7–12 = indeterminate (possibly impending) instability 13–18 = instability	

21.5 Appendix 5 MSCC UHB On-Call proforma

**Please note all referrals require a follow up telephone call
& please send all available imaging, histology, copies of reports and pain relief**

Patient Name: []	QEHB/NHS Number: []	D.O.B: []
Patient Address: []	Patient Tel No: []	GP: []
Referring Hospital: []	Referring Consultant: []	Date/ time of referral []
Referrer Email: []	Referrer phone number: []	
Date Discussed at local MDT: []	Has the MDT agreed To radiotherapy: []	
Referral to QEHB Consultant: <input type="radio"/> Yes <input type="radio"/> No	Name: []	
Cord compression: Yes <input type="radio"/> No <input type="radio"/>	Level of vertebral compression: []	
Impending cord compression: Yes <input type="radio"/> No <input type="radio"/>	Is the patient for Resus: Yes / No	If not, send DNACPR with notes
Clinical Details: (Include current hospital and ward, any prior treatment, radiology, histology and PMH, current medication) []		
Significant Comorbidities []	Weight :	[]
*Please document walking status, any sensory level and incontinence (record PR/anal tone findings): []	:	*SINS score: [] Refer to table
Is spine stable : Y /N	If not: has patient been immobilised with collar /strict bed rest Y/N	
Discussed with surgeons (name of consultant ROH/ QEH (date/time) []	Is patient being log rolled Y/ N	
Has surgery been excluded Yes <input type="radio"/> No <input type="radio"/>	Has patient had previous radiotherapy to same site <input type="radio"/> Yes <input type="radio"/> No	
*DIAGNOSIS: []	DATE: []	
PATHOLOGY:	*PS 0-1 <input type="radio"/> 2 <input type="radio"/>	If PS >3, specify reason for referral below
Previous known Primary: []	On treatment: []	Date: []
Estimated Prognosis []	[]	Date: []
Dexamethasone: []	Dose: []	Date: []
CT scan report : []	Location: []	Date: []
MRI scan report: []	Location: []	Date: []
Is patient aware of Diagnosis/ treatment: []	Location: []	Date: []
Have you arranged nurse escort: []	Location: []	Date: []
Pain relief prescribed: []	Dose: []	Date: []
Any other information: []		