Weston Area Health NHS Trust

# Metastatic spinal cord compression (MSCC) protocol

Version 4 2019

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| Directorate / Department responsible (author/owner): | Surgical Directorate / Oncology (T Wells / AOS) |
| Contact details: | thomas.wells@nhs.net |
| Brief summary of contents | Metastatic Spinal Cord Compression protocol |
| Search criteria: | MSCC, metastatic spinal cord compression, |
| Executive Director responsible for Policy: | Medical Director |
| Date revised: | August 2019 |
| This document replaces (exact title of previous version): | Metastatic Spinal Cord Compression protocol |
| Title and date of committee/forum/group consulted during development : | |
| Signature of Executive Director giving approval | |
| Intranet location: | |
| Links to key external standards | |
| Related Documents: | NICE guidelines |
| Training Need Identified? | In-house training of doctors and nurses |

**Version Control Table**

| Date | V | Summary of changes | Author |
|---|---|---|---|
| Aug 2019 | 4 | Change to trust template | Tom Wells |
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| | | | |

**Document Amendment Form – minor amendments**

| No. | Date | Page no | Amendment | Authorised by |
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Ten or less minor amendments can be made before the document is revised.

Major changes must result in immediate review of the document

If printed, copied or otherwise transferred from the Trust intranet, procedural documents will be considered uncontrolled copies. Staff must always consult the most up to date version – located on the intranet.

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## 1. Introduction and purpose

Metastatic spinal cord compression can occur in patients with a diagnosis of cancer, particularly in patients with known metastatic disease to bone. Patients presenting with suspected metastatic spinal cord compression should be urgently assessed with history, full neurological examination and MRI whole spine. The potential sequelae of metastatic spinal cord compression include permanent paralysis from the vertebral level down and bladder, bowel and sexual dysfunction, which would significantly affect the patient's quality of life. Attempting to avoid these sequelae makes prompt diagnosis and treatment of metastatic spinal cord compression a priority.

There is often a delay in identifying these patients and instigating treatment, which resulted in the introduction of Acute Oncology Service (AOS) at Weston General Hospital in 2013. It is an ongoing challenge to ensure patients presenting with metastatic spinal cord compression are treated optimally and the AOS team continues to strive to maintain excellent practice in this area through education and support of the different hospital teams, as well as producing this protocol for the teams to follow.

## 2. Scope

The aim of the pathway is to enable the appropriate management of patients who present with suspected metastatic spinal cord compression.

## 3. Explanation of terms

**Metastatic spinal cord compression** is compression of the spinal cord and/or cauda equina by pathological vertebral collapse and/or direct tumour expansion, which may cause partial or complete loss of neurological function.

## 4. Roles and Responsibilities

The Acute Oncology Service (AOS) Lead Clinician is Dr Thomas Wells, Consultant Medical Oncologist.
The AOS Clinical Nurse Specialist / Sister is Ceri Tucker.
Neutropenic sepsis is one of the common oncology emergencies that is covered by the AOS

The Acute Oncology Service supports patients with metastatic spinal cord compression and helps to facilitate the patient's pathway by:

- Providing expert medical and nursing advice and support for health professionals looking after Oncology & Haematology patients in a general setting.
- Communicating and supporting patients and carers during treatment of metastatic spinal cord compression.

**5. Policy details**

Symptoms suggestive of MSCC (with or without a past history of malignancy)

These symptoms include change in nature/intensity of back pain, reduced power or sensation in arms and/or legs, sphincter disturbance.

Patient contacts healthcare worker [e.g., GP, hospice staff, Acute Oncology Service (AOS) team at Weston General Hospital].

Patient directly attends the Emergency Department (E.D.)

Refer to the Emergency Department (E.D.):

Between 8:00 and 16:00 on weekdays:
patient advised to attend E.D. at Weston General Hospital

At other times:
patient advised to attend E.D. at a hospital with access to out-of-hours MRI (because there is no out-of-hours MRI at Weston General Hospital). Hospitals with 24/7 MRI are UHBristol, Southmead and Musgrove Park Taunton.

For patients attending E.D. at Weston General Hospital:

1. Urgent assessment in E.D. – full history and neurological examination – including urgent review by the MSCC co-ordinator (On-call Medical Registrar).
2. Risk of MSCC is stratified – either MSCC is unlikely or MSCC falls into **'IMMEDIATE ACTION GROUP' (high risk of MSCC)** or **'URGENT ACTION GROUP' (moderate risk of MSCC).**

**IMMEDIATE (within 24 hours) ACTION GROUP:**

Any neurological symptoms (radicular pain, new limb numbness/weakness, difficulty walking/falls, bladder/bowel dysfunction) and/or neurological signs.

MANAGEMENT:

- Nurse flat if unstable spine is clinically suspected (worsening mechanical pain on load-bearing or worsening neurology)
- Commence Dexamethasone (16 mg PO stat, then 8 mg PO bd) with proton pump inhibitor gastro-protection (Omeprazole 20 mg PO od).
- **MRI whole spine and treatment plan within 24 hours.**

In-hours: organise MRI whole spine at Weston General Hospital and inform on-call oncology registrar in Bristol / AOS team at Weston General Hospital

**URGENT (within one week) ACTION GROUP:**

Suspicious spinal pain.

Suspicious spinal pain (as per NICE guidelines 2008) includes pain in cervical or thoracic spine, progressive lumbar spine pain, severe unremitting lumbar spine pain, spinal pain aggravated by straining, localised spinal tenderness, nocturnal spinal pain preventing sleep.

MANAGEMENT:

- **MRI whole spine and treatment plan within one week.**
- Inform AOS team at Weston General Hospital (bleep 310, extension 3990).
- Advise patient to seek immediate medical assessment if develops any weakness or numbness in arms and/or legs or any sphincter disturbance while waiting for the MRI whole spine.

MSCC confirmed on MRI whole spine

- Need to check that MRI whole spine has been performed – if not, will need MRI whole spine because MSCC can occur at multiple vertebral levels.
- If not already started, start Dexamethasone 16 mg PO stat, then 8 mg PO bd , with proton pump inhibitor gastro-protection (Omeprazole 20 mg PO od).

If unstable spine is evident based on Spinal Instability Neoplastic Score (SINS) ⊙, continue to nurse flat and take guidance from clinicians/physiotherapy/OT.

Discuss **treatment options** with oncology team (on-call oncology registrar in Bristol, switchboard 0119 923 0000), who if appropriate will advise discussion with the Spinal Surgeons / Neurosurgeons based at Southmead (switchboard 0117 9505050

**Surgery +/- post-op RT:**

- Spinal instability
- Histological diagnosis needed and no option to biopsy other sites
- MSCC in an area previously irradiated to tolerance
- Deterioration despite radiotherapy

Spinal Surgeons/ Neurosurgeons are based at Southmead Hospital (switchboard 0117 950 5050)

**Radiotherapy:**
(Radiotherapy to start within 24 hours)

- Patient either not suitable for or not fit for surgery
- Poor prognosis patients

Function is unlikely to improve if complete tetraplegia or paraplegia for > 24 hours – consider radiotherapy for pain control (rather than neurological benefit) in these patients

**Chemotherapy / hormone therapy:**

- Chemo-sensitive disease (e.g., small cell lung cancer, lymphoma, leukemia, germ cell tumour, Ewing's sarcoma)
- Hormone-sensitive disease (e.g., prostate cancer) – also consider radiotherapy

For all patients, need to refer to palliative care, physiotherapy and occupational therapy (OT).

⊙ **Spinal Instability Neoplastic Score (SINS):**
this is principally a radiological assessment of spine stability – calculate a total score based on features below to determine if: **stable** (0 to 6 points), **indeterminate with possible impending instability** (7 to 12 points), **unstable** (13 to 18 points).

**Location** (3 points = junctional = occiput-C2, C7-T2, T11-L1, L5-S1; 2 points = mobile spine = C3-C6, L2-L4; 1 point = semi-rigid = T3-T10; 0 points = rigid =S2-S5).
**Pain** (3 points = yes; 1 point = occasional pain but not mechanical; 0 points = pain-free lesion).
**Bone lesion** (2 points = lytic; 1 point = mixed lytic/blastic; 0 points = blastic).
**Radiographic spinal alignment** (4 points = subluxation/translation present; 2 points = de novo kyphosis or scoliosis; 0 points = normal alignment).
**Vertebral body collapse** (3 points = >50% collapse; 2 points = <50% collapse; 1 point = no collapse with >50% vertebral body involved; 0 points = none of the above).
**Postero-lateral involvement of spinal elements** (3 points = bilateral; 1 point = unilateral; 0 points = none of the above).

## 6. Dissemination

The protocol will be available on the trust intranet site in the policy library and on the AOS homepage.

The protocol will be referred to in relevant teaching sessions.

## 7. Implementation

This protocol will be used when patients are either referred or admitted with metastatic spinal cord compression.

## 8. Monitoring Compliance and Effectiveness

**Table 1. Mandatory Elements of Monitoring Compliance.**

| Element to be monitored | Compliance with the Metastatic Spinal Cord Compression protocol and NICE guidelines |
|---|---|
| Lead | AOS Lead Consultant, AOS team and QI HUB |
| Tool | Metastatic Spinal Cord Compression protocol and NICE guidelines. |
| Frequency | Annual report for peer review |
| Reporting arrangements | Acute Oncology Group meetings |
| Acting on recommendations and Lead(s) | Acute Oncology Group meetings |
| Change in practice and lessons to be shared | Through Acute Oncology Group meetings |

## 9. Reference and bibliography

National Institute for Health and Care Excellence (NICE): Metastatic Spinal Cord Compression in adults, February 2014.

## 10. WAHT associated records

No associated records

## 11. Staff compliance statement

All staff must comply with the Trust-wide procedural document and failure to do so may be considered a disciplinary matter leading to action being taken under the Trust's Disciplinary Procedure. Actions which constitute breach of confidence, fraud, misuse of NHS resources or illegal activity will be treated as serious misconduct and may result in dismissal from employment and may in addition lead to other legal action against the individual concerned.

## 12. Equality and Diversity statement

The Trust aims to design and implement services, policies and measures that meet the diverse needs of users of our services, population and workforce, ensuring that none are placed at a disadvantage over others.

**Equality Impact Assessment Screening Tool**

To be completed for any procedural document when submitted to the appropriate committee for approval.

| | | Yes/No | Rationale |
|---|---|---|---|
| 1 | Does the policy/guidance affect one group less or more favourably than another on the basis of: | | |
| | • Race | No | |
| | • Ethnic origins (including gypsies and travellers) | No | |
| | • Nationality | No | |
| | • Gender | No | |
| | • Culture | No | |
| | • Religion or belief | No | |
| | • Sexual orientation | No | |
| | • Age | No | |
| | • Disability - learning disabilities, physical disability, sensory impairment and mental health problems | No | |
| 2 | Is there any evidence that some groups are affected differently? | No | |
| 3 | If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable? | No | |
| 4 | Is the impact of the policy/guidance likely to be negative? | No | |
| 5 | If so can the impact be avoided? | No | |
| 6 | What alternatives are there to achieving the policy/guidance without the impact? | No | |
| 7 | Can we reduce the impact by taking different action? | No | |
| 8 | Actions identified following screening process | None | |
| 9 | Screening identified a full impact assessment. | No | |

If you have identified a potential discriminatory impact of this policy/procedure, please refer it the appropriate Director in the first instance, together with suggested actions required to avoid/reduce this impact. For advice in respect of answering the above questions, please contact the H.R Department. For advice on completion of this form please contact the Governance Team.

## Appendix I

**Title**

## Appendix II

**Title**

## Appendix III

**Title**