

# NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

## Guideline scope

### Metastatic spinal cord compression in adults (update)

This guideline will update and replace the [NICE guideline on metastatic spinal cord compression in adults: risk assessment, diagnosis and management](#) (CG75).

The guideline will be developed using the methods and processes outlined in [developing NICE guidelines: the manual](#).

This guideline will also be used to update the [NICE quality standard for metastatic spinal cord compression in adults](#) (QS56).

#### **1 Why the update is needed**

New evidence that could affect recommendations was identified through the surveillance process. Topic experts, including those who helped to develop the existing guideline, advised NICE on whether areas should be updated or new areas added. Full details are set out in the [surveillance review decision for CG75](#).

#### **Why the guideline is needed**

Metastatic spinal cord compression is a well-recognised complication of progressive vertebral column involvement in the spread of cancer. It is frequently an oncological or surgical emergency.

Metastatic spinal cord compression occurs when there is pathological vertebral body collapse or direct metastatic tumour progression causing compression of the spinal cord. The cauda equina and nerve roots can be similarly involved. Potential neurological damage can occur, with irreversible loss of spinal cord function in the worst cases. Early diagnosis and

intervention are necessary to prevent neurological consequences. To achieve this, early recognition and reporting of symptoms, simple and rapid referral pathways, urgent investigations and prompt, appropriate treatment are all needed.

### **Key facts and figures**

- Metastases to the spinal column occur in 3% to 5% of all people with cancer and may cause pain, vertebral collapse and spinal cord compression. They are most common in people with breast cancer, prostate cancer and lung cancer, in whom incidence may be as high as 19%.
- People with breast, lung and prostate cancer account for more than 50% of metastatic spinal cord compression presentations. However, it can develop in any type of malignancy in association with vertebral metastases, and occasionally as a result of an isolated extradural tumour, as in lymphoma.
- The NHS estimates that by 2028, 55,000 more people each year will survive their cancer for 5 years or more. This will potentially lead to more people developing metastatic spinal cord compression and therefore an increase in the resources needed to treat them.

### **Current practice**

Practice has evolved since the publication of the original guideline in 2008. New evidence has been published, some of which may not be consistent with the recommendations, and this has resulted in variation in current practice.

### **Policy, legislation, regulation and commissioning**

The [NHS Long Term Plan for Cancer](#) has several ambitions that are relevant to this guideline. The plan aims to create Rapid Diagnostic Centres across the country; introduce a new, faster diagnosis standard to diagnose or rule out cancer within 28 days; and give people with cancer personalised care packages. However, the COVID-19 pandemic had a significant impact on cancer services and treatment, which has created barriers to achieving these aims.

## 2 Who the guideline is for

This guideline is for:

- healthcare professionals working in primary, secondary and tertiary care
- cancer alliances
- commissioners of metastatic spinal cord preventative, diagnostic and treatment services (including clinical commissioning groups and NHS England specialised commissioning)
- voluntary sector organisations working with people with suspected or diagnosed metastatic spinal cord compression
- healthcare professionals working in palliative care services or hospices
- people with suspected or diagnosed metastatic spinal cord compression, their families and carers

NICE guidelines cover health and care in England. Decisions on how they apply in other UK countries are made by ministers in the [Welsh Government](#), [Scottish Government](#), and [Northern Ireland Executive](#).

### Equality considerations

NICE has carried out an [equality impact assessment](#) during scoping. The assessment:

- lists equality issues identified, and how they have been addressed
- explains why any groups are excluded from the scope.

There are a number of equality issues related to cancer, as shown by [data from Cancer Research UK](#). For example, the data from 2015 to 2017 indicate that cancer [mortality](#) is higher in men than in women, and is also higher in more socioeconomically deprived areas of the country. [NHS statistics \(2019/2020\)](#) have also shown that there are geographical inequalities related to access to CT and MRI scans.

## **3 What the guideline will cover**

### **3.1 Who is the focus?**

#### **Groups that will be covered**

- Adults with suspected or confirmed metastatic spinal disease.
- Adults with suspected or confirmed direct malignant infiltration of the spine.
- Adults with suspected or confirmed spinal cord or nerve root compression because of metastatic spinal disease or direct malignant infiltration of the spine.

#### **Groups that will not be covered**

- Adults with spinal cord compression because of primary tumours of the spinal cord, meninges or nerve roots.
- Adults with spinal cord compression because of non-malignant causes.
- Adults with primary bone tumours of the spinal column.
- Children and young people under the age of 18.

#### **Settings that will be covered**

All settings where NHS commissioned care is provided.

### **3.2 Activities, services or aspects of care**

#### **Key areas that will be covered**

We will look at evidence in the areas below when developing the guideline, but it may not be possible to make recommendations in all the areas.

- 1 Information and support
- 2 Service configuration and delivery
  - configuration of services and delivery arrangements for investigations and referral
  - configuration of services and delivery arrangements for management and early rehabilitation
- 3 Recognition

- symptoms and signs of spinal metastatic malignant disease or direct malignant infiltration of the spine
  - symptoms and signs of spinal cord compression
- 4 Investigations
    - radiological imaging techniques in diagnosis
    - radiological imaging techniques to guide management
  - 5 Prognostic tools
    - scoring systems to determine spinal instability
    - scoring systems to determine survival
  - 6 Treatment
    - pain management
    - techniques or methods of immobilisation
    - radiotherapy (both fractionated and unfractionated)
    - invasive interventions such as vertebroplasty, kyphoplasty, ablation and surgery
    - corticosteroid therapy

Note that we will not look at evidence for bisphosphonates or denosumab in this update. The recommendations on bisphosphonate treatment in the 2008 guideline will be retained and we will review the evidence in a later update to take into account upcoming patent changes.

### **Areas that will not be covered**

- 1 Management of the following complications of spinal cord compression
  - venous thromboembolism
  - pressure ulcers
  - bowel and bladder incontinence
  - respiratory and cardiovascular complications
- 2 Systemic oncological treatment
- 3 Long-term rehabilitation (Note that a cross reference to [NICE's guideline on rehabilitation for chronic neurological disorders including traumatic](#)

[brain injury](#), publication expected August 2023, may be included if relevant).

## Related NICE guidance

### Published

- [Chronic pain \(primary and secondary\) in over 16s: assessment of all chronic pain and management of chronic primary pain](#) (2021) NICE guideline NG193
- [COVID-19 rapid guideline: delivery of radiotherapy](#) (2021) NICE guideline NG162
- [Suspected cancer: recognition and referral](#) (last updated 2021) NICE guideline NG12
- [Low back pain and sciatica in over 16s: assessment and management](#) (last updated 2020) NICE guideline NG59
- [Neuropathic pain in adults: pharmacological management in non-specialist settings](#) (last updated 2020) NICE guideline CG173
- [Lung cancer: diagnosis and management](#) (2019) NICE guideline NG122
- [Prostate cancer: diagnosis and management](#) (2019) NICE guideline NG131
- [Myeloma: diagnosis and management](#) (last updated 2018) NICE guideline NG35
- [Advanced breast cancer: diagnosis and treatment](#) (last updated 2017) NICE guideline CG81
- [Palliative care for adults: strong opioids for pain relief](#) (last updated 2016) NICE guideline CG140
- [Percutaneous insertion of craniocaudal expandable implants for vertebral compression fracture](#) (2016) NICE interventional procedure guidance IPG568
- [Pressure ulcers: prevention and management](#) (2014) NICE guideline CG179
- [Urinary incontinence in neurological disease: assessment and management](#) (2012) NICE guideline CG148

- [Denosumab for the prevention of skeletal-related events in adults with bone metastases from solid tumours](#) (2012) NICE technology appraisal guidance TA265
- [Metastatic malignant disease of unknown primary origin in adults: diagnosis and management](#) (2010) NICE guideline CG104
- [Faecal incontinence in adults: management](#) (2007) NICE guideline CG49
- [Percutaneous cementoplasty for palliative treatment of bony malignancies](#) (2006) NICE interventional procedure guidance IPG179
- [Balloon kyphoplasty for vertebral compression fractures](#) (2006) NICE interventional procedure guidance IPG166
- [Percutaneous vertebroplasty](#) (2003) NICE interventional procedure guidance IPG12

### **In development**

- [Rehabilitation for chronic neurological disorders including traumatic brain injury](#). NICE guideline. Publication expected August 2023.
- [Medicines associated with dependence or withdrawal symptoms: safe prescribing and withdrawal management for adults](#). NICE guideline. Publication expected November 2021.
- [Radiofrequency ablation for palliation of painful spinal metastases](#). NICE interventional procedure guidance. Publication date to be confirmed.

### **NICE guidance that will be updated by this guideline**

- [Metastatic spinal cord compression in adults: risk assessment, diagnosis and management](#) (2008) NICE guideline CG75

### **NICE guidance about the experience of people using NHS services**

NICE has produced the following guidance on the experience of people using the NHS. This guideline will not include additional recommendations on these topics unless there are specific issues related to metastatic spinal cord compression:

- [Medicines optimisation](#) (2015) NICE guideline NG5
- [Patient experience in adult NHS services](#) (2012) NICE guideline CG138

- [Service user experience in adult mental health](#) (2011) NICE guideline CG136
- [Medicines adherence](#) (2009) NICE guideline CG76

### **3.3 Economic aspects**

We will take economic aspects into account when making recommendations. We will develop an economic plan that states for each review question (or key area in the scope) whether economic considerations are relevant, and if so whether this is an area that should be prioritised for economic modelling and analysis. We will review the economic evidence and carry out economic analyses, using an NHS and personal social services (PSS) perspective, as appropriate.

### **3.4 Key issues and draft questions**

- 1 Information and support
  - 1.1 What information and support is valued by adults with suspected or confirmed spinal metastases, direct malignant infiltration of the spine or associated spinal cord compression, and by their families and carers?
- 2 Service configuration and delivery
  - 2.1 What service configuration and delivery arrangements are effective for the investigation and referral of adults with suspected or confirmed spinal metastases, direct malignant infiltration of the spine or associated spinal cord compression?
  - 2.2 What service configuration and delivery arrangements are effective in the management and early rehabilitation of adults with suspected or confirmed spinal metastases, direct malignant infiltration of the spine or associated spinal cord compression?
- 3 Recognition
  - 3.1 What symptoms or signs, individually or in combination, or validated clinical tools, suggest the presence of spinal metastatic malignant disease or direct malignant infiltration of the spine?

3.2 What symptoms or signs, individually or in combination, or validated clinical tools, suggest spinal cord compression because of spinal metastatic malignancy or direct malignant infiltration of the spine?

#### 4 Investigations

4.1 How effective are radiological imaging techniques in the diagnosis of spinal metastases, direct malignant infiltration of the spine or associated spinal cord compression?

4.2 How effective are radiological imaging techniques in guiding the management of spinal metastases, direct malignant infiltration of the spine or associated spinal cord compression?

#### 5 Prognostic tools

5.1 What is the prognostic value of validated scoring systems in evaluating spinal instability in people with spinal metastases or direct malignant infiltration of the spine, with or without spinal cord compression?

5.2 What is the prognostic value of validated scoring systems for determining survival in people with spinal cord compression caused by spinal metastases or direct malignant infiltration of the spine?

#### 6 Treatment

6.1 How effective are analgesic interventions in managing pain related to spinal metastases, direct malignant infiltration of the spine or associated spinal cord compression?

6.2 How effective are techniques or methods of immobilisation in managing spinal metastases, direct malignant infiltration of the spine or associated spinal cord compression?

6.3 How effective is radiotherapy, including both fractionated and unfractionated radiotherapy, for the management of spinal

metastases, direct malignant infiltration of the spine or associated spinal cord compression?

6.4 How effective are invasive interventions, such as vertebroplasty, kyphoplasty, ablation and surgery, in managing spinal metastases, direct malignant infiltration of the spine or associated spinal cord compression?

6.5 How effective is corticosteroid therapy in managing the neurological consequences of metastatic spinal cord compression?

The key issues and draft questions will be used to develop more detailed review questions, which guide the systematic review of the literature.

### **3.5 Main outcomes**

The main outcomes that may be considered when searching for and assessing the evidence are:

- 1 Overall survival
- 2 Disease-related morbidity
- 3 Treatment-related morbidity
- 4 Treatment-related mortality
- 5 Health-related quality of life
- 6 Mental health status
- 7 Emergency admission to hospital and length of hospital stay
- 8 Mobility or ambulatory status
- 9 Bladder function
- 10 Bowel function
- 11 Neurological status
- 12 Pain
- 13 Patient-reported outcome measures

## 4 NICE quality standards and NICE Pathways

### 4.1 NICE quality standards

**NICE quality standards that will need to be revised or updated when this guideline is published**

- [Metastatic spinal cord compression in adults](#) (2014) NICE quality standard 56

### 4.2 NICE Pathways

When this guideline is published, we will update the existing [NICE Pathway on metastatic spinal cord compression](#). NICE Pathways bring together everything we have said on a topic in an interactive flowchart.

## 5 Further information

This is the final scope, which takes into account comments from registered stakeholders during consultation.

The guideline is expected to be published in August 2023.

You can follow progress of the [guideline](#).

Our website has information about how [NICE guidelines](#) are developed.

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