NICE National Institute for Health and Care Excellence

NICE Pathways

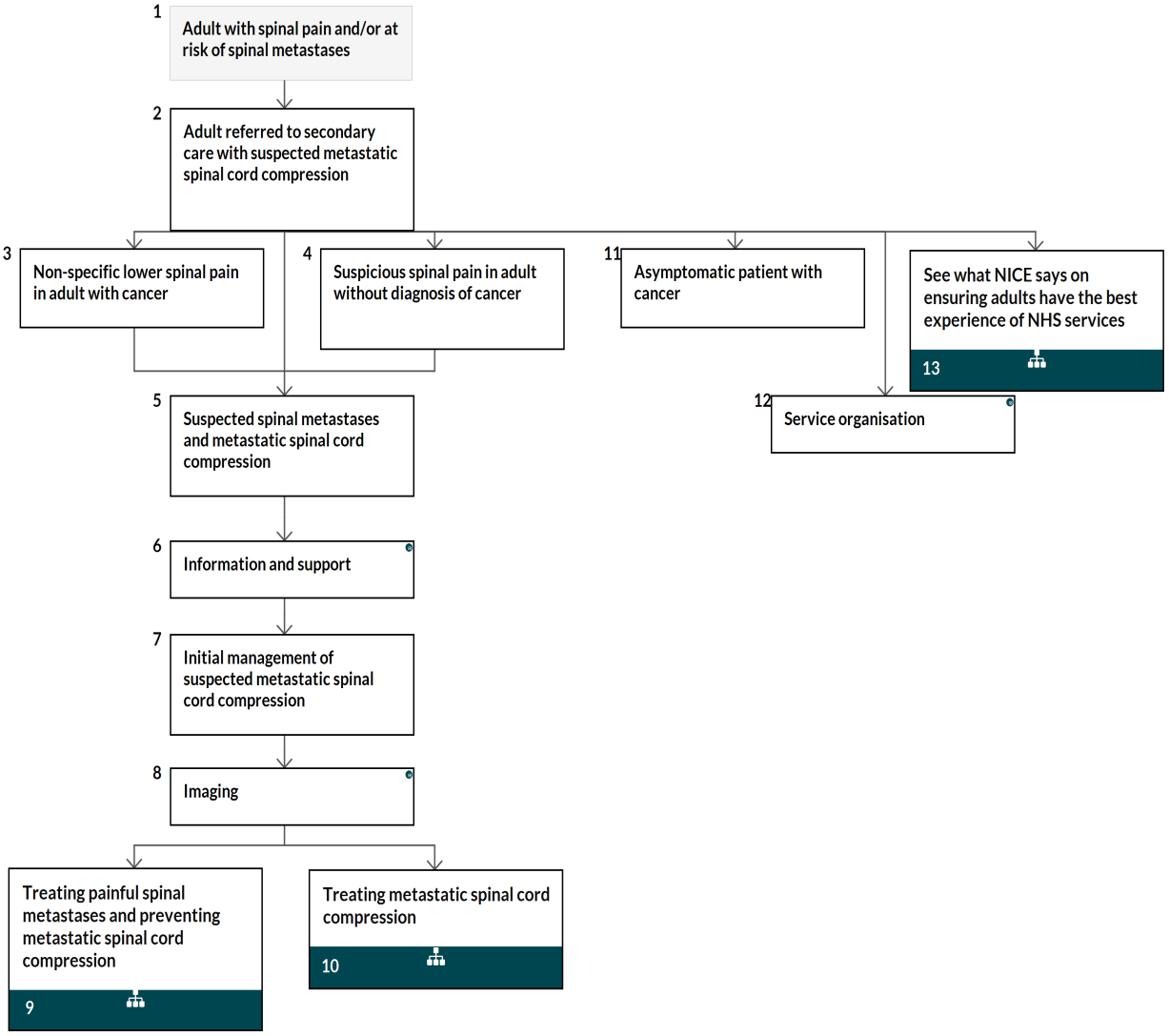
Metastatic spinal cord compression overview

NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

http://pathways.nice.org.uk/pathways/metastatic-spinal-cord-compression
NICE Pathway last updated: 04 November 2020

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Adult with spinal pain and/or at risk of spinal metastases

No additional information

2 Adult referred to secondary care with suspected metastatic spinal cord compression

See what NICE says on recognition and referral from primary to secondary care for suspected metastatic spinal cord compression.

3 Non-specific lower spinal pain in adult with cancer

Perform frequent clinical reviews of patients with cancer who develop lower spinal pain that is clinically thought to be of non-specific origin (that is, it is not progressive, severe or aggravated by straining and has no accompanying neurological symptoms). In particular, look for:

- development of progressive pain or other symptoms suggestive of spinal metastases (contact the MSCC coordinator within 24 hours), or
- development of neurological symptoms or signs suggestive of MSCC (contact the MSCC coordinator immediately).

4 Suspicious spinal pain in adult without diagnosis of cancer

Perform frequent clinical reviews of patients without a prior diagnosis of cancer who develop suspicious spinal pain with or without neurological symptoms. Treat or refer patients with stable and mild symptoms by normal non-specific spinal pathways, or refer by cancer pathway if concerned. In particular, look for:

- development of progressive pain or other symptoms suggestive of spinal metastases (contact the MSCC coordinator within 24 hours), or
- development of neurological symptoms or signs suggestive of MSCC (contact the MSCC coordinator immediately).

See what NICE says on suspected cancer recognition and referral and metastatic malignant disease of unknown primary origin.

5 Suspected spinal metastases and metastatic spinal cord compression

Contact the MSCC coordinator urgently (within 24 hours) to discuss the care of patients with cancer and any of the following symptoms suggestive of spinal metastases:

- 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, at stool, or when coughing or sneezing)
- localised spinal tenderness
- nocturnal spinal pain preventing sleep.

Contact the MSCC coordinator immediately to discuss the care of patients with cancer and symptoms suggestive of spinal metastases who have any of the following neurological symptoms or signs suggestive of MSCC, and view them as an oncological emergency:

- neurological symptoms including radicular pain, any limb weakness, difficulty in walking, sensory loss or bladder or bowel dysfunction
- neurological signs of spinal cord or cauda equina compression.

6 Information and support

Ensure that communication with patients with known or suspected MSCC is clear and consistent, and that the patients, their families and carers are fully informed and involved in all decisions about treatment.

Offer patients with MSCC and their families and carers specialist psychological and/or spiritual support appropriate to their needs at diagnosis, at other key points during treatment and on discharge from hospital.

Provide information to patients with MSCC in an appropriate language and format that explains how to access psychological and/or spiritual support services when needed.

Inform patients at high risk of developing bone metastases, patients with diagnosed bone metastases, or patients with cancer who present with spinal pain about the symptoms of MSCC. Offer information (for example, in the form of a leaflet) to patients and their families and carers which explains the symptoms of MSCC, and advises them (and their healthcare professionals) what to do if they develop these symptoms.

Ensure that patients with MSCC and their families and carers know who to contact if their symptoms progress while they are waiting for urgent investigation of suspected MSCC.

Offer bereavement support services to patients' families based on the three component model outlined in improving supportive and palliative care for adults with cancer.

NICE has written information for the public on metastatic spinal cord compression.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

1. Information about recognising the symptoms of metastatic spinal cord compression

7 Initial management of suspected metastatic spinal cord compression

Patients with severe mechanical pain suggestive of spinal instability, or any neurological symptoms or signs suggestive of MSCC, should be nursed flat with neutral spine alignment (including 'log rolling' or turning beds, with use of a slipper pan for toilet) until bony and neurological stability are ensured and cautious remobilisation may begin.

Offer all patients who are on bed rest with suspected MSCC thigh-length graduated compression/anti-embolism stockings unless contraindicated, and/or intermittent pneumatic compression or foot impulse devices.

Patients with suspected MSCC, a poor performance status and widespread metastatic disease should wherever possible be discussed with their primary tumour site clinician and spinal senior clinical adviser before any urgent imaging or hospital transfer.

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 tumour site clinician and spinal senior clinical adviser before any imaging or hospital transfer.

8 Imaging

Perform MRI of the whole spine in patients with suspected MSCC, unless there is a specific contraindication. This should be done in time to allow definitive treatment to be planned within 1 week of the suspected diagnosis in the case of spinal pain suggestive of spinal metastases, and

within 24 hours in the case of spinal pain suggestive of spinal metastases and neurological symptoms or signs suggestive of MSCC, and occasionally sooner if there is a pressing clinical need for emergency surgery.

MRI of the spine in patients with suspected MSCC should be supervised and reported by a radiologist and should include sagittal T1 and/or STIR sequences of the whole spine, to prove or exclude the presence of spinal metastases. Sagittal T2 weighted sequences should also be performed to show the level and degree of compression of the cord or cauda equina by a soft tissue mass and to detect lesions within the cord itself. Supplementary axial imaging should be performed through any significant abnormality noted on the sagittal scan.

Contact the MSCC coordinator to determine the most appropriate method of imaging for patients with suspected MSCC in whom MRI is contraindicated and where this should be carried out.

Consider targeted CT scan with three-plane reconstruction to assess spinal stability and plan vertebroplasty, kyphoplasty or spinal surgery in patients with MSCC.

Consider myelography if other imaging modalities are contraindicated or inadequate. Myelography should only be undertaken at a neuroscience or spinal surgical centre because of the technical expertise required and because patients with MSCC may deteriorate following myelography and require urgent decompression.

Do not perform plain radiographs of the spine either to make or to exclude the diagnosis of spinal metastases or MSCC.

If MRI is not available at the referring hospital, transfer patients with suspected MSCC to a unit with 24-hour capability for MRI and definitive treatment of MSCC.

Out of hours MRI should only be performed in clinical circumstances where there is an emergency need and intention to proceed immediately to treatment, if appropriate.

Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

2. Imaging and treatment plans for adults with suspected spinal metastases

3. Imaging and treatment plans for adults with suspected metastatic spinal cord compression

9 Treating painful spinal metastases and preventing metastatic spinal cord compression

See Metastatic spinal cord compression / Treating painful spinal metastases and preventing metastatic spinal cord compression

10 Treating metastatic spinal cord compression

See Metastatic spinal cord compression / Treating metastatic spinal cord compression

11 Asymptomatic patient with cancer

In patients with a previous diagnosis of malignancy, routine imaging of the spine is not recommended if they are asymptomatic.

Serial imaging of the spine in asymptomatic patients with cancer who are at high risk of developing spinal metastases should only be performed as part of a randomised controlled trial.

12 Service organisation

Cancer network

Every cancer network should have a clear care pathway for the diagnosis, treatment, rehabilitation and ongoing care of patients with MSCC.

Every cancer network should ensure that appropriate services are commissioned and in place for the efficient and effective diagnosis, treatment, rehabilitation and ongoing care of patients with MSCC. These services should be monitored regularly through prospective audit of the care pathway.

Cancer networks should ensure that there is local access to urgent MRI within 24 hours for all patients with suspected MSCC. This service should be available outside normal working hours and with 24-hour capability in centres treating patients with MSCC.

Every cancer network should have a network site specific group for MSCC. The group should include representatives from primary, secondary and tertiary care and should have strong links

to network site specific groups for primary tumours.

The cancer network should appoint a network lead for MSCC whose responsibilities include:

- advising the cancer network, commissioners and providers about the provision and organisation of relevant clinical services
- ensuring that the local care pathway for diagnosis and management are documented, agreed and consistent across the network
- ensuring that there are appropriate points of telephone contact for the role of an MSCC coordinator and senior clinical advisers
- maintaining a network-wide audit of the incidence, timeliness of management, and outcomes of patients with MSCC using nationally agreed measures
- arranging and chairing twice-yearly meetings of the network site specific group for MSCC, at which patient outcomes will be reported and the local care pathway reviewed and amended if necessary.

Secondary or tertiary care centre

Every secondary or tertiary care centre should have an identified lead healthcare professional for MSCC (who is usually, but not necessarily, medical) whose responsibilities include:

- representing the hospital at network level in the development of care pathways
- implementing the care pathway and disseminating information about the diagnosis and appropriate management of patients with known or suspected MSCC
- ensuring timely and effective communication between all relevant healthcare professionals involved in the care of patients with MSCC, including primary care and palliative care
- raising and maintaining the awareness and understanding of treatments for MSCC among all clinical staff across the locality
- contributing to regular network audits of the care of patients with MSCC
- attending and contributing to the twice-yearly network site specific group meeting.

Commissioners should establish a joint approach with councils responsible for local social services to ensure efficient provision of equipment and support, including nursing and rehabilitation services, to meet the individual needs of patients with MSCC and their families and carers.

Each centre treating patients with MSCC should identify or appoint individuals responsible for performing the role of MSCC coordinator and ensure its availability at all times.

Each centre treating patients with MSCC should have a single point of contact to access the MSCC coordinator who should provide advice to clinicians and coordinate the care pathway at

all times.

The MSCC coordinator should:

- provide the first point of contact for clinicians who suspect that a patient may be developing spinal metastases or MSCC
- perform an initial telephone triage by assessing requirement for, and urgency of, investigations, transfer, and treatment
- advise on the immediate care of the spinal cord and spine and seek senior clinical advice, as necessary
- gather baseline information to aid decision-making and collate data for audit purposes
- identify the appropriate place for timely investigations and admission if required
- liaise with the acute receiving team and organise admission and mode of transport.

The optimal care of patients with MSCC should be determined by senior clinical advisers (these include clinical oncologists, spinal surgeons and radiologists with experience and expertise in treating patients with MSCC), taking into account the patient's preferences and all aspects of their condition, with advice from primary tumour site clinicians or other experts, as required.

Every centre treating patients with MSCC should ensure 24-hour availability of senior clinical advisers to give advice and support to the MSCC coordinator and other clinicians, inform the decision-making process and undertake treatment where necessary.

Imaging departments should configure MRI lists to permit time for examination of patients with suspected MSCC at short notice during existing or extended sessions (by moving routine cases into ad hoc overtime or to alternative sessions, if overtime is not possible).

Ensure urgent (within 24 hours) access to and availability of radiotherapy and simulator facilities in daytime sessions, 7 days a week for patients with MSCC requiring definitive treatment or who are unsuitable for surgery.

NICE has published cancer service guidance on improving supportive and palliative care for adults with cancer.

Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

4. Coordinating investigations for adults with suspected metastatic spinal cord compression

5. Coordinating care for adults with metastatic spinal cord compression

13 See what NICE says on ensuring adults have the best experience of NHS services

See Patient experience in adult NHS services

Glossary

MSCC

metastatic spinal cord compression

STIR

short T1 inversion recovery

Sources

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

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of

implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this

interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.