Metastatic Spinal Cord Compression Pathway Guidelines for Cheshire & Merseyside

May 2021

MSCC Contacts

Triage Hotline 0800 169 5555 (24 hours)

On Call Registrar 0151 556 5000 Bleep 9104

MSCC Co-ordinator 07584 312 049

Email: ccf-tr.MSCC-Service@nhs.net

- Using the MSCC Referral Proforma (Appendix 1)

- Patient Information Sheet https://be.macmillan.org.uk/downloads/bemacmillan%20pdfs/MSCC_leaflet_New%20brand.pdf

- Transfer Information: CCC Transfer for Radiotherapy (Appendix 2). Transfer to CCC-WC-RLBUHT as an Inpatient (Appendix 3)

This pathway is for all patients who have suspected or confirmed impending metastatic spinal cord compression (IMSCC) or established metastatic spinal cord compression (MSCC)

Foreword

This guideline is to support the Cheshire & Merseyside (C&M) Network to ensure that facilities are available and treatment is co-ordinated to effectively manage patients with metastatic spinal cord compression.

We are committed to promoting best practice by reducing delays and avoidable disability, including preventing paralysis, from adversely affecting the quality of life for people with metastatic spinal cord compression.

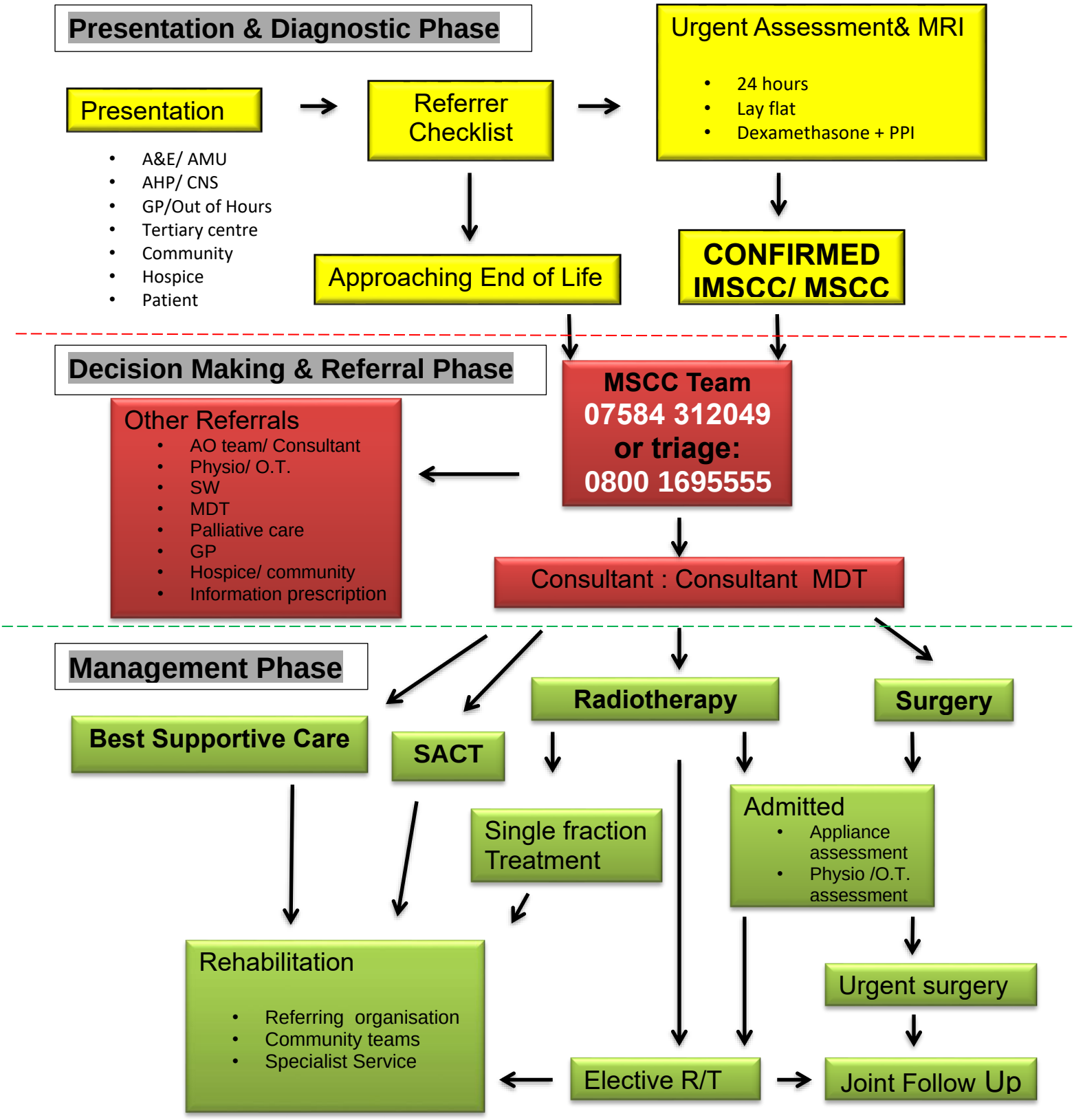
Definition of metastatic spinal cord compression

Metastatic Spinal Cord Compression (MSCC) occurs when there is pathological vertebral body collapse or direct tumour growth causing compression of the spinal cord or cauda equina, which may result in irreversible neurological damage and possible paralysis

Cauda equina syndrome occurs at or below the level of the conus medullaris in the lumbosacral region

Impending Metastatic Spinal Cord Compression (IMSCC) occurs where the spinal cord is threatened but not yet compressed and should be managed the same way as established MSCC

MSCC Pathway



Section 1: Referrer Checklist: Available on the Intranet- Clinical section- Clinical guidelines- Acute oncology folder (link)

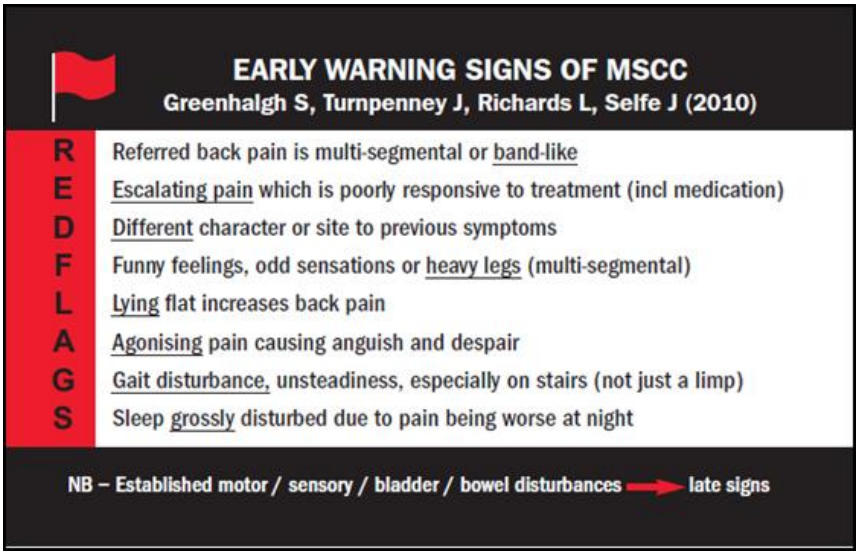
Symptoms

Any of these symptoms can trigger the pathway-

Pain

Motor dysfunction

Sensory dysfunction



What To Do- Found in the Acute Oncology guidelines on intranet (link)

Lay flat, complete neurological assessment

Imaging whole spine within 24 hours. Ensure rationale on request form. (CT with contrast if not suitable for MRI, consider eGFR)

Analgesia prior to movement- consider Fentanyl 100mcg SL for MRI scan

Dexamethasone 16mg and PPI until primary intervention, monitor for hyperglycaemia and candida

Protect spine- Air wave mattress not to be used, PAC 2-3 hourly

Await decision on surgery before commencing thromboprophylaxis, TEDS

Stop NSAIDS and Aspirin

COMPLETE REFERRAL PROFORMA

- Advice available at any point in the pathway, not just at point of referral
- Impending or Confirmed MSCC discuss with MSCC C even if not fit for treatment
- Transfer/ Escort information available on the front page of the pathway guidelines

Complete Referrer Proforma (Appendix 1)

Presentation and Diagnostic Phase

MSCC Team Contact Numbers

Triage Hotline: 0800 169 5555

On Call Reg: 0151 556 5000 Bleep 9104

MSCC Co-ordinator: 07584 312 049

Section 1: Referrer Checklist

Approaching End of Life	
-	Consider pre- triage assessment to ensure patient is not approaching end of life to avoid inappropriate diagnostic testing:
-	**Performance Status** If PS 4 with no pain and neurological deficit has been longer than 24 hours do not perform MRI- discuss with MSCC-Coordinator for advice
-	**Pain or neurological deficit** If pain is present but full diagnostic procedures are not appropriate, radiotherapy may still be appropriate for symptom control
-	**Neurology** If there is no neurological deficit and no pain and patient is approaching end of life, Best Supportive Care (BSC) will be more appropriate
-	Discuss with MSCC Co-ordinator (MSCC-C) for oncology opinion even if patient is not fit for treatment to ensure additional support service referrals are made.
Protect Spine	
-	On admission, and until clinical/ radiographic assessment is complete, avoid weight bearing and keep on bed rest- as flat as possible with neutral spinal alignment (pain, respiratory and cardiac symptoms permitting)
-	Log roll if spinal instability suspected (severe mechanical pain)
-	Will need cervical collar if cervical spine lesion suspected and as flat as possible with neutral spinal alignment (pain, respiratory and cardiac symptoms permitting)
Complete MSCC Referral Proforma	
-	**(Appendix 1)**
Neurology	
-	NICE recommended neurological assessment completed before imaging request (in referral proforma)
Analgesia	
-	Do not start Morphine unless already on at least regular weaker opioid.
-	Severe pain on movement: consider Fentanyl 100mcg tab sublingual for MRI scan
Imaging	
-	MRI scan **WHOLE SPINE (T1 and T2 sequences with T2 axials of any region of interest) within 24 hours** (1 week if no neurology)
-	CT Thorax, Abdo, Pelvis + contrast if no contraindication or recent scan within 8 weeks(see section 8- Imaging)**** Do not delay referral for this****
Steroids	
-	PO Dexamethasone 16mg stat followed by either 16mg O.D. (morning) or 8mg B.D. (morning and lunch time)

-	NB Conversion to SC: Dex 4mg PO = Dex 3.3mg SC
-	PPI (Lansoprazole 30mg or Omeprazole 40mg)
-	Stop NSAIDs and Aspirin
	Monitor for hyperglycaemia and candida
Thrombo-prophylaxis	
-	Complete organisational VTE assessment and be guided by advice.
Bladder & Bowel Management	
-	Palpable bladder / not passed urine > 4 hrs – bladder scan
-	Bowels not opened for 48 hrs, commence bowel regime (see section 12- Bladder & bowel management)
Review/ Request Bloods	
	To be done on admission:
-	**FBC, INR, LFTs, U&Es** - normal eGFR for CT?
-	**Bone profile** -
-	**Glucose** -
-	**Consider LDH** - high with poor prognosis
-	**Unknown primary** – Myeloma screen and PSA
Referrals	
-	**Ring C&M MSCC Coordinator/ Triage team – 07584312049/ 0800 169 5555**

Section 2 : Advice & Support

Recommendation: Advice can be requested at any point during the pathway from MSCC-C/ Triage team- **07584312049/ 0800 1695555**

Acute Oncology / Haematology Teams/ Nursing Teams:

Acute Oncology Team	Contacts	Phone numbers	Email addresses
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The Walton Centre Spinal Nurses	Keren Smallwood Faye Mangan Elizabeth Heaps Carla Louise McKay Joanne Leahy Katie Bradbrook Laura Whitfield	Direct Line: 0151 529 8853 Bleep 5385 8am - 4pm (would prefer bleep over email) 4.30 onwards Bleep 5445	keren.smallwood@thewaltoncentre.nhs.uk Faye.Mangan@thewaltoncentre.nhs.uk Elizabeth.Heaps@thewaltoncentre.nhs.uk Carlalouise.mckay@thewaltoncentre.nhs.uk joanne.leahy@thewaltoncentre.nhs.uk katie.bradbrook@thewaltoncentre.nhs.uk laura.whitfield@thewaltoncentre.nhs.uk Spinalnurses@thewaltoncentre.nhs.uk
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Section 3 : Roles & Responsibility

Roles & Responsibilities

Clinical team diagnosing bone mets	- Counsel patient on risks of MSCC - Give MSCC leaflet & alert card
Patient	- Be aware of MSCC signs and symptoms
IT	- Ensure alert system in place when people known to have bone mets are admitted
Primary care team	- Use red flag alert cards for signs and symptoms of impending MSCC -Refer urgently for investigation as per guidance
Acute hospital team/ hospice team	- Complete “referrer checklist”
Imaging department	- Perform and report whole spine MRI within: 1 week if new diagnosis of metastasis is suspected 24 hours if MSCC is suspected
Acute Oncology Service	- Liaise with MSCC-C and clinical oncology team to expedite pathway - Prospectively collect and report audit data - Ongoing education and awareness
Clinical Oncology team CCC	-Be accessible to provide prompt oncology opinion - Liaise with spinal surgeons, palliative care Consultants and Radiologist if appropriate through patient specific MDT prior to primary intervention - Management decision & intervention to be within 24 hrs of diagnosis
Consultant Spinal Surgeons WC & RLBUHT	- Be accessible as per C&M spinal on call rota to provide prompt surgical opinion including spinal stability advice
Radiologist	-To ensure whole spine MRI is completed & reported in 24hrs in patients with suspected MSCC - To use C&M reporting tool and SINS scoring system when possible to aid management decision making - To ensure MSCC-C/ triage team are alerted when an MRI shows IMSCC/MSCC
MSCC-C/ CCCTriage Team	- Coordinate the care pathway at all times - Provide a central point of contact for clinicians/ health professionals/ patients - Perform an initial telephone triage by assessing requirement for, and urgency of, investigations, transfer, and treatment - Gather baseline information to aid decision-making and collate data for audit purposes - Liaise with senior clinical advisers to optimise patient treatment and care

Section 4 : Psychological Needs

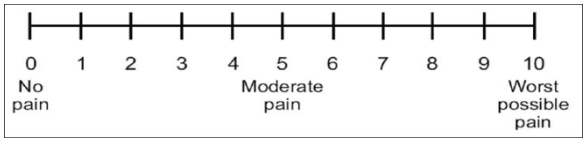
Recommendation: Psychological well-being consideration should be given to the patients' and families' concerns, emotions, distressing issues, mood and interests, anxiety, adjustment to illness and treatment, strengths and existing support.	
Patient Experience and Psychological Need	
-	Ensure that communication 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.
-	Mental capacity assessment: should be completed if there are any concerns regarding capacity **(Appendix 4)**
-	People with MSCC often experience significant functional losses coupled with the emotional distress associated with advancing disease Psychological distress: The brief screening tool should be used at presentation to identify the level and nature of the initial distress- this is to be handed over to team of primary intervention **(Appendix 5)**
	Once received at organisation of primary intervention, a more robust assessment of psychological need should be completed e.g. Holistic Needs Assessment (HNA)

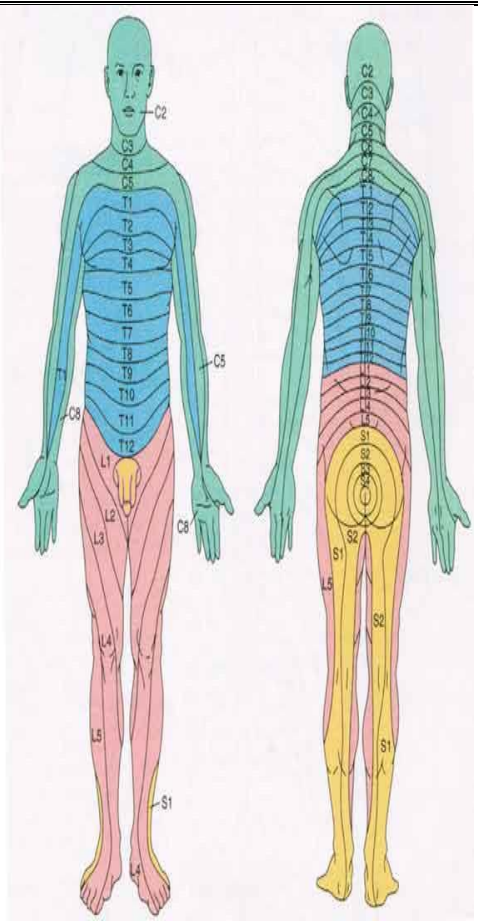
Section 5: Spine Protection

Recommendation: If there is spinal instability (severe mechanical pain) or neurological symptoms present- protect spinal alignment and maintain cord perfusion until radiological exclusion of MSCC	
Lay Flat	
-	On admission and until clinical/ radiographic assessment is complete, avoid weight bearing and keep on bed rest- as flat as possible with neutral spinal alignment (pain, respiratory and cardiac symptoms permitting).
-	Log roll if spinal instability suspected (severe mechanical pain)'
-	Contact departmental physio/ manual handling team for further information on log rolling https://www.mascip.co.uk/wp-content/uploads/2015/02/MASCIP-SIA-Guidelines-for-MH-Trainers.pdf
-	Urgent Physio referral to be made at the point of management decision making
Possible Cervical Lesion	
-	**Will need cervical collar if cervical spine lesion suspected and lay as flat as possible neutral spinal alignment (pain, respiratory and cardiac symptoms permitting)**
-	Assess for neurological deficit in arms/hands - sensory and/ or movement

-	If neck pain + /- motor /sensory deficit in upper limbs, immobilise neck with collar
-	Lie flat and log roll
Commence High Dose Dexamethasone if MSCC Suspected	
-	Check no contraindications to using steroids/ steroid dose
-	PO Dexamethasone 16mg stat followed by 16mg O.D. (morning) or 8mg B.D. (morning and lunch time) until primary intervention
-	NB Conversion to SC: Dex 4mg PO = Dex 3.3mg SC
-	PPI (Lansoprazole 30mg or Omeprazole 40mg)
-	Stop NSAIDs and Aspirin
	Monitor for hyperglycaemia and candida
Analgesia For Movement	
-	If pain at rest, give analgesia prior to rolling
-	Give analgesia before imaging
-	Consider Fentanyl 100mcg tab sublingual for MRI scan if pain severe on movement or proving difficult to control
Do NOT place patient on air wave mattress for pressure relief	
-	Ensure 2-3 hourly pressure relief / assessment pressure areas (see section 11-Pressure ulcer prevention and management)

Section 6: Examination and Neurological Assessment

Recommendation: Full clinical history, presentation, and sensory & motor function baselines to be documented on MSCC referral proforma prior to ringing MSCC-C/ triage team.	
Pain	
-	Location and type
-	Onset and duration
-	Character and description of pain (intermittent or constant, “burning”, “a tight band”)
	
Sensory function - (sensation & proprioception)	
-	Light touch sensation (Anterior spinothalamic tract)
-	Sharp / blunt or pin-prick sensation (Lateral spinothalamic tract)
-	Joint proprioception
	Dermatome chart- sensory levels



C2-C3	Neck
C4	Upper shoulder Upper anterior chest
C5 **C6**	Lateral shoulder Radial forearm Thumb Index finger
C7	Middle finger Median strip of hand back of hand
C8	Ring and little finger Ulnar forearm
T1-T2	Proximal medial arm Axilla
T2-T-12 –	
T4	Nipple line
T7	Lower costal margin
T10	Umbilicus
T12	Groin
L1-L2	Proximal anterior thigh
L3	Anterior knee
L4	Anterior lower leg
L5	Great toe Medial dorsum of foot
S1	Lateral border of foot Sole Along Achilles tendon
S2	Proximal posterior thigh
S3, S4, S5	Genitals and saddle area

Motor Function

- Muscle Power

Oxford Muscle Strength Grading Scale

5/5	*Movement against gravity with full resistance*
4/5	*Movement against gravity with some resistance*
3/5	*Movement against gravity only*
2/5	*Movement with gravity eliminated*
1/5	*Visible /palpable muscle contraction but no movement*
0/5	*No muscle contraction*

- Muscle tone: flaccidity or spasticity

The Modified Ashworth Scale of Spasticity

0	No increase in muscle tone
1	Slight increase in muscle tone, manifested by a catch and release or by minimal resistance at the end of the range of motion when the affected part(s) is moved in flexion or extension
1+ (2)	Slight increase in muscle tone, manifested by a catch, followed by minimal resistance throughout the remainder (less than half) of the ROM (range of movement)
2 (3)	More marked increase in muscle tone through most of the ROM, but affected part(s) easily moved
3 (4)	Considerable increase in muscle tone passive movement difficult
4 (5)	Affected part(s) rigid in flexion or extension

Bladder and Bowel Dysfunction

- Retention of urine, incontinence, or constipation
- Check anal tone either present or absent

Respiratory Function

- MSCC above T6- increased risk of chest complications due to respiratory muscle paralysis and immobility
- **Effects of MSCC on Respiration**

-Reduced lung volumes and vital capacity and atelectasis

-Increased work of breathing

-Poor cough and ineffective clearance of secretions causing retention of secretions and risk of infection

- Accessory muscles (C1-C8): role in respiration
- Diaphragm (C3,C4,C5): major inspiratory muscle
- Intercostals (T1-T11): role in inspiration and expiration
- Abdominals (T6-L1): involved in forced expiration and cough

- Assess lung volumes e.g. vital capacity (VC) or FEV1 99. VC is considered the simplest and most appropriate measure of ventilatory status after spinal cord injury

Autonomic Dysreflexia

- Autonomic response to painful stimuli below the level of the lesion- especially lesions above T6

- Unresolved can cause fatal cerebral haemorrhage

- This reflex response is usually suppressed during spinal shock initially; is a potential complication for patients with established spinal cord injury (SCI) who are readmitted to acute care environments

The most common presenting symptoms:

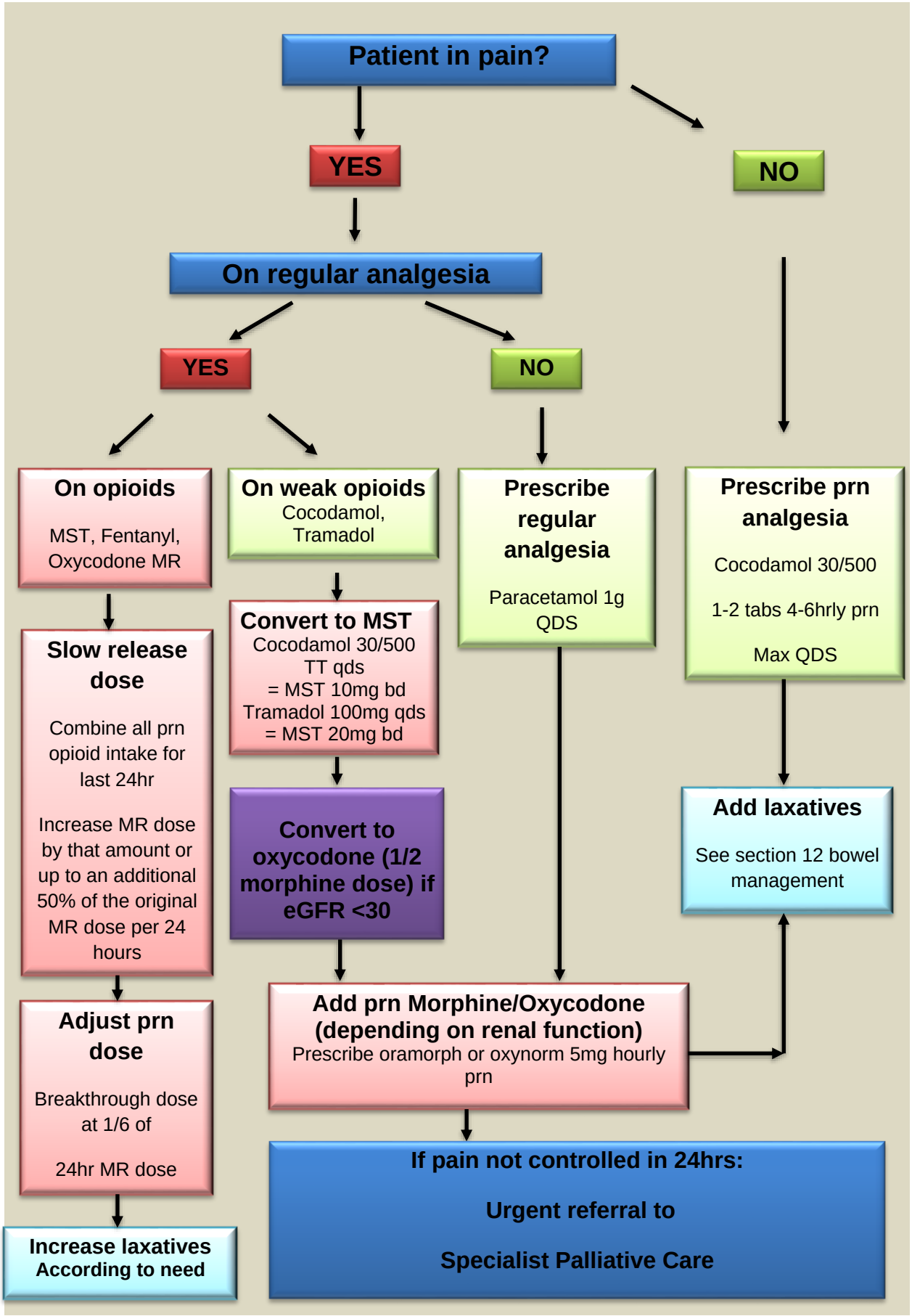
- Severe hypertension systolic blood pressure can easily exceed 200 mm/Hg
- Bradycardia
- “Pounding” headache
- Flushed or blotchy skin above the level of lesion
- Profuse sweating above the level of lesion
- Pallor below the level of lesion
- Nasal congestion
- Non-drainage of urine (urinary obstruction being the most common cause).

This is a medical emergency and requires immediate medical input

Section 7: Analgesia

Recommendation: Offer conventional analgesia including NSAIDs, non-opiate and opiate medication as required in escalating doses as described.

Consider referral for specialist pain care including invasive procedures (such as epidural or intrathecal analgesia) and neurosurgical interventions for patients with intractable pain from spinal metastases.


Patient in pain?
YES
NO
On regular analgesia
YES
NO
On opioids
MST, Fentanyl, Oxycodone MR
On weak opioids
Cocodamol, Tramadol
Prescribe regular analgesia
Paracetamol 1g QDS
Prescribe prn analgesia
Cocodamol 30/500
1-2 tabs 4-6hrly prn
Max QDS
Slow release dose
Combine all prn opioid intake for last 24hr
Increase MR dose by that amount or up to an additional 50% of the original MR dose per 24 hours
Convert to MST
Cocodamol 30/500 TT qds
= MST 10mg bd
Tramadol 100mg qds
= MST 20mg bd
Add laxatives
See section 12 bowel management
Convert to oxycodone (1/2 morphine dose) if eGFR <30
Adjust prn dose
Breakthrough dose at 1/6 of
24hr MR dose
Add prn Morphine/Oxycodone (depending on renal function)
Prescribe oramorph or oxynorm 5mg hourly prn
Increase laxatives
According to need
If pain not controlled in 24hrs:
Urgent referral to
Specialist Palliative Care

Section 8: Imaging

Recommendations: MRI whole spine within 24hours if pain is suggestive of spinal instability or neurological symptoms are present. (Cancer patients who develop clinical feature of spinal metastasis (pain) should have an MRI whole spine within a week). Patients with MSCC should have CT staging completed to aid management decision making ******* If MRI request is urgent the referrer should discuss in person with radiologist to ensure timely reporting********	
Urgent Whole Spine MRI (T1 and T2 sequences with T2 axials of any region of interest)	
-	MRI exclusion criteria may vary depending on department specific MRI **Absolute:** Cardiac pacemaker Cochlear implant Clipping cerebral aneurysm Metal fragments in eyes Recent metal implants (< 6 week) **Possible:** Metal fragments anywhere in body Metal prosthesis < 6 weeks ago Harrington rods Cardiac valve or annuloplasty rings
-	CT spine with contrast: if unable to have MRI Check eGFR and known allergies (Appendix 6)
Urgent CT	
-	CT thorax, abdo, pelvis with contrast required within last 8 weeks (eGFR- Appendix 6)
RADIOLOGICAL SCORING SYSTEMS	
	The agreed system for C&M radiologists to classify MSCC on MRI whole spine: The Cheshire & Merseyside MSCC Radiology Classification Grade 0 and 1a: No cord compression Grade 1b and 1c: Impending cord compression Grade 2 and 3: Metastatic spinal cord compression The below descriptions should be used when reporting a study in which malignant thecal sac or cord compression is present for each anatomical level involved:

a. The degree of thecal sac compression is given : mild/moderate/severe
b. The degree of direct cord compression is indicated: none/mild/moderate/severe

Radiological Spinal Stability

This scoring system is used by radiology, oncology and surgical teams to aid decision making regarding spinal stability

SINS Component	Score
Location	
Junctional: occiput-C2, C7-T2, T11-L1, L5-S1	3
Mobile spine: C3-C6, L2-L4	2
Semirigid: T3-T10	1
Rigid: S2-S5	0
Pain	
Yes	3
Occasional, not mechanical	1
Pain free lesion	0
Bone lesion	
Lytic	2
Mixed	1
Sclerotic	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% body involved	1
None of the above	0
Posteriolateral involvement of spinal elements	
Bilateral	3
Unilateral	1
None of the above	0
Interpretation	
0-6 stable	
7-12 indeterminate (possibly impending) instability	
13-18 instability	
7-18 warrant surgical consultation	

Responsibility

- It is the referrers responsibility to access the radiology report and refer into the MSCC pathway – **do not rely on alert system or automatic referral**

Section 9: Steroids

Recommendation: Corticosteroids reduce tumour bulk and spinal cord swelling relieving pressure. They can improve symptoms and treatment outcomes.
Dose reduction is vital as high-dose, long-duration can be debilitating.

Suspected MSCC,Confirmed MSCC or IMSCC with neurological deficit

- **Commence Dexamethasone:** Unless contraindicated (including a significant suspicion of lymphoma as steroids impair the histological diagnosis of lymphoma)
- PO Dexamethasone 16mg stat. Continue 16mg O.D. (morning) or 8mg B.D. (morning and lunch time) until 1st intervention

- NB Conversion to SC: Dexamethasone 4mg PO = Dexamethasone 3.3mg SC
- After surgery or start of radiotherapy- dose gradually reduce and stopped over 7 days (see table below)
- If neurological function deteriorates at any time the dose should be increased temporarily and reassessed
- If management decision is no surgery or radiotherapy, see table weaning regime

- **Commence PPI for gastric protection**
- Lansoprazole 30mg daily, Omeprazole 40mg daily or Esomeprazole 40mg daily

- **Stop NSAIDs including Aspirin**
- Concurrent NSAID and Dexamethasone increases risk of gastric ulceration

- **Monitor for hyperglycaemia**
- T2DM – monitor with daily peripheral glucose estimation
- T1DM– may require insulin dose increase or sliding scale insulin
- Contact local Diabetic Nurse if any concerns

- **Review Daily**
- Monitor for side effects of steroids: hyperglycaemia, candidiasis and severe mood swings- treat accordingly

No MSCC

- If no MSCC on MRI scan**, stop Dexamethasone immediately if steroids commenced within last 3 days.** If >3 days, see table for weaning regime

IMSCC- No Neurological Deficit

- If patient has IMSCC**, stop Dexamethasone immediately if steroids commenced within last 3 days.** If >3 days, see table for weaning regime

Dexamethasone Reduction Following Radiotherapy or Surgery

- Follow weaning regime from table below. Observe for worsening pain or neurological status – return to dose that previously maintained clinical situation.

For all Radiotherapy regimes & surgery- dose reduce regime is the same (16mg until 1st intervention)	
Day	**Dexamethasone daily**
1 - 2 (2 days)	16mg
3 - 4 (2 days)	8mg
5 - 6 (2 days)	4mg
7 – 8 (2 days)	2mg

- Aim to discontinue within a week post treatment, unless the patient previously taking long term steroids.
- Dexamethasone 2mg = Prednisolone 15 mg.
- Conversion to SC: Dex 4mg PO = Dex 3.3mg SC

Other Considerations

- The dose of dexamethasone may have to be higher in patients receiving phenytoin or carbamazepine (see Guidelines on Antiepileptics and Corticosteroids)

https://pallaborative.org.uk/clinical-standards-and-guidelines/

Patient Information	
-	Ensure dose reduction card given to patient

Section 10: Thrombo-prophylaxis Low molecular weight heparin (LMWH) e.g. Enoxaparin (see section 10- Thrombo-prophylaxis) unless for surgical intervention

If unable to have low molecular weight heparin (LMWH) 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

Recommendations: For patients with MSCC, individually assess the duration of thrombo-prophylactic treatment, based on ongoing risk factors, overall clinical condition and return to mobility.	
Prior Considerations	
-	Risk of bleeding: - Medications - Thrombocytopenia - Clotting disorders - Patient already on Warfarin or NOACs (novel oral anticoagulants)
-	Potential surgical candidate: not to commence thrombo-prophylaxis until definitive management plan excludes surgery/ surgical procedure
VTE	
-	**Complete VTE assessment:** be guided by advice **https://www.nice.org.uk/guidance/ng89/resources/department-of-health-vte-risk-assessment-tool-pdf-4787149213**
Patient Information	
-	Ensure patient information leaflet given if available or print off NHS information **https://www.nhs.uk/conditions/anticoagulants/**

Section 11: Pressure Ulcer Prevention and Management

Recommendations: Due to impaired mobility, sensation and compromised bladder and bowel function- very high risk of developing pressure ulcers. Pressure ulcers may affect quality of life and rehabilitation outcomes.	
-	Undertake and document a risk assessment for pressure ulcers daily https://www.nice.org.uk/guidance/cg7
-	Do not use pressure relieving mattress before definitive treatment
- -	Bed rest- turn every 2-3 hours Not on bed rest- mobilise every few hours

Section 12: Bladder & Bowel Management

Recommendations: The management of bladder and bowel disturbance and paraplegia may differ depending on the level of neurological disability.

Health professionals' assessment of constipation often differs from that of the patient, therefore when reaching a diagnosis of constipation, the views of the patient should be sought and whether they believe themselves to be constipated.

Offer a bladder & bowel management programme

Assess & Document

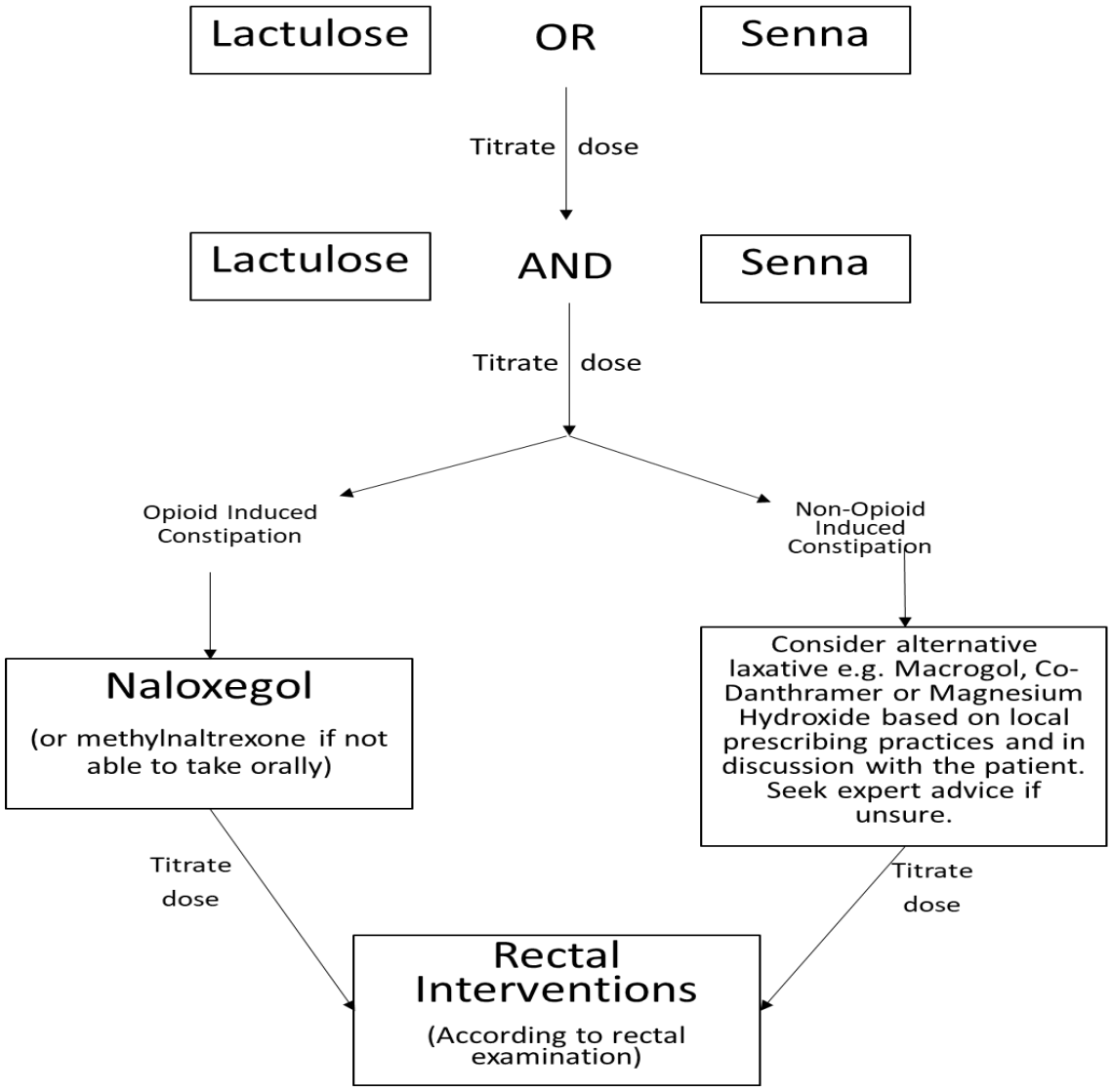
- Assess bladder and bowel function at presentation and start a care plan
- Monitor and document daily

Bladder

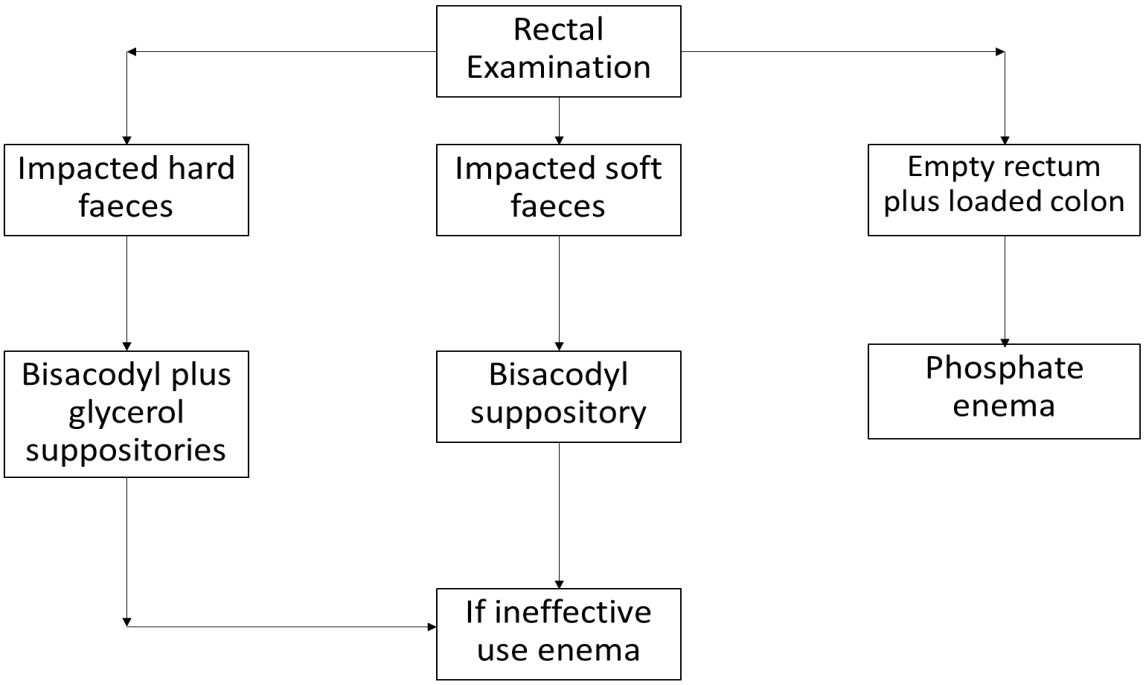
- If at any stage the patient has a palpable bladder / not passed urine > 4 hrs – bladder scan
- Manage bladder dysfunction by a urinary catheter on free drainage
- If long-term catheterisation is required, consider intermittent catheterisation or suprapubic catheters

Bowel

- Laxative choice for opioid induced and non-opioid induced constipation



Rectal Interventions

-	The choice of rectal intervention should be based on the results of a digital rectal examination  A rectal intervention should be given on alternate days combined with an alternate day stimulant or oral laxative i.e. senna
Patient information	
-	Patients should be offered (verbal or written) information about constipation , or the risk of developing constipation when medications which increase this risk (in particularly, opioids) are commenced

Section 13: Circulatory & Respiratory Function

Recommendations: Alterations of sympathetic vascular tone, relative parasympathetic over-activity, and respiratory muscle paralysis may cause complex and sometimes life-threatening vascular and cardio-respiratory changes in people with MSCC. These include hypoventilation, hypotension, bradycardia, and autonomic dysreflexia especially in the acute phase of paralysis or with high spinal cord lesions.	
-	Ensure a set of routine observations are measured at baseline to monitor change
-	Avoid over-hydration which can provoke pulmonary oedema

Section 14: Bloods & Screening

Recommendation: Ensure full diagnostic work up at the earliest opportunity to aid management decision.	
-	**FBC, INR, LFTs, U&Es** - normal eGFR for CT?
-	**Bone profile** - hypercalcaemia?
-	**Glucose** - Dexamethasone can precipitate hyperglycaemia
-	**Consider LDH** - high with poor prognosis

-	**Unknown primary** – Myeloma screen and PSA

Decision Making and Referral Phase

Section 15: Estimating Prognosis

Recommendations: Scoring systems using a combination of prognostic factors have been devised and have been correlated with the clinical outcome to predict survival.

WHO / ECOG Performance Status - record status prior to and at presentation

ECOG		KARNOFSKY	
0	Fully active, able to carry on all pre-disease performance without restriction	100 90	Normal, no complaints; no evidence of disease Able to carry on normal activity; minor signs or symptoms of disease
1	Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light house work, office work	80 70	Normal activity with effort, some signs or symptoms of disease Cares for self but unable to carry on normal activity or to do active work
2	Ambulatory and capable of all selfcare but unable to carry out any work activities; up and about more than 50% of waking hours	60 50	Requires occasional assistance but is able to care for most of personal needs Requires considerable assistance and frequent medical care
3	Capable of only limited selfcare; confined to bed or chair more than 50% of waking hours	40 30	Disabled; requires special care and assistance Severely disabled; hospitalization is indicated although death not imminent
4	Completely disabled; cannot carry on any selfcare; totally confined to bed or chair	20 10	Very ill; hospitalization and active supportive care necessary Moribund
5	Dead	0	Dead

Tokuhashi score
FOR REFERENCE ONLY – not expected to calculate, this will be done at the management decision MDT. Used to assess suitability for surgery - recent CT Thorax, Abdo, Pelvis required

Tokuhashi score	**0**	**1**	**2**	**Score**
General condition	Poor (PS 10-40%)	Moderate (PS 50-70%)	Good (PS 80-100%)	
Number of extra-spinal bone mets	>3	1-2	0	
No vertebral mets	>3	1-2	0	
Mets to major internal organs	Irremovable/ untreatable	Removable/ treatable	No mets	
Spinal cord palsy	Complete	Incomplete	None	
Primary cancer site	- 0 points: lung, osteosarcoma, stomach, bladder, oesophagus, pancreas - 1 point: liver, gallbladder, cancer unknown primary - 2 points: others - 3 points: kidney, uterus - 4 points: rectum - 5 points: thyroid, breast, prostate, carcinoid tumour			

Survival prognosis

Score 0 - 8: 85% live < 6 months = consider radiotherapy or palliative surgery

Score 9 - 11: 73% live > 6 months (and 30% > 1 year) = palliative surgery or (exceptionally) excisional surgery. Also consider Radiotherapy

Score 12 - 15: 95% live > 1 year = excisional surgery + post-op radiotherapy

Surgical aims

- Score > 9 = Excisional operation
- Score < 5 = Palliative care

Radiotherapy aims

- Score < 9 and prognosis less than 6 months = possible radiotherapy only
- Score < 6 weeks or permanent cord damaged = best supportive care

Section 16: MSCC-C Referral & Decision Making

Recommendation: Once MSCC referral proforma is complete contact MSCC-C on **07584 312049**/ CCC triage team on **0800 1695555**

Advice can be requested at any point during the pathway, not just at the point of referral and is a 24hr service

Referral Proforma/ Decision Making Tools

- Referral proforma will be completed by referrer
- Contact MSCC-C on **07584312049** / triage team on 24 hr accessible hotline **0800 169 5555**
- Completed proforma will be discussed by MSCC-C with on-call registrar and Consultant to determine management plan

Multi- Agency Decision Making

- Consultant to Consultant discussion will take place prior to the definitive management plan- co-ordinated by MSCC-C
  Decision will be communicated to referrer by MSCC-C/ Triage team
- Acute oncology/ ward involvement to communicate patient wishes and ability to tolerate treatment
-

Multi-profession Referral (made by MSCC-C)

At the point of decision making, MSCC-C/ Triage team will make several multi-professional referrals to aid efficient access to the appropriate services

- Acute Oncology Nurse Practitioner (AONP) of referral organization: to ensure patient is referred to appropriate MDT
- Primary Oncology Consultant: If applicable for follow up
- If Patient is admitted to CCCL the following referrals will be made:
  Palliative care team: for patients having a single treatment as an out-patient- (8gy/1#) this will be community team and local hospice if coming from home or referring organization team if returning there, CCC in-patients will be seen by
- hospital team- including Holistic Needs Assessment (HNA) completion
  Physio team: for patients having a single treatment as an out-patient- (8gy/1#) this will be community team if coming from home or referral organization if
- returning there, in-patients will be seen within **24hours** of diagnosis at CCC
  O.T. team: for patients having a single treatment as an out-patient- (8gy/1#) this will be community team if coming from home or referring organization if
- returning there, in-patients will be seen within **48hours** of diagnosis
- Social worker: to facilitate discharge planning
  Patient information centre: to provide individual patient information prescription

Audit

- Surgical provision: MSCC teams at WCNN to maintain audit data on surgical patients (to measure outcomes/ cross check against main audit at CCC)

  CCC: as the central point of access, all audit data will be captured through CCC Triage referral proforma/ IT systems
  COSD data: to be uploaded by CET at CCC
-

Management and Treatment Phase

Section 17: Treatment Options

Recommendations: Following triage through the single point of access at CCC, oncology Consultant of the Week (COW) will make the overall management decision. Where appropriate Consultant to Consultant MDT will take place with Radiologist, spinal surgeon, and Consultant in palliative medicine.	
Analgesia	
-	Refer to section 7
-	Surgical intervention: rarely, and for those with intractable pain, invasive treatments may be used including epidural or intrathecal analgesia or neurolysis, open or percutaneous cordotomy, intraventricular or intracisternal opioids, or other interventional pain procedures
Bisphosphonates	
-	If conventional analgesia fails, bisphosphonates can be used to treat spinal pain in patients with vertebral involvement from myeloma, breast cancer or prostate cancer (not for preventing MSCC) (Myeloma/ breast ca to reduce pain/ risk of fracture or collapse, prostate to reduce pain)
Surgery Surgery may provide the best clinical outcome and is treatment of choice for bony instability and/or neurological disability.	
-	Spinal instability: patients with spinal metastases and imaging evidence of structural spinal failure with spinal instability should be considered for surgery to stabilise the spine and prevent MSCC.
-	Mechanical pain and paralysis: consider patients with spinal metastases and mechanical pain resistant to conventional analgesia for spinal stabilisation surgery even if completely paralysed. Surgery will not reverse paralysis
-	External spinal support: patients with MSCC who have severe mechanical pain and/or imaging evidence of spinal instability, but who are unsuitable for surgery, should be given external spinal support (for example, a halo vest or cervico-thoraco-lumbar orthosis)
Radiotherapy (R/T) External beam radiotherapy may be effective in treating pain for up to 12 months. Radiotherapy helps control pain if there is vertebral involvement but does not reduce mechanical pain which may progress to bony instability, vertebral collapse and MSCC.	
-	Paralysis and pain: If paralysis >24hrs- unlikely to recover neurological function but 8gy/1# can still be used to reduce pain
-	Tokuhashi and SINS: will be used to aid decision making regarding surgery or radiotherapy
-	All surgical patients should have a R/T follow up to consider consolidation R/T
-	Palliative R/T regimes: 8gy/1#, 20gy/5# (or 30gy/10# in some cases)
-	High-dose R/T: SABR for consideration in patients with good prognostic

-	indicators and a single metastasis.
-	SCORAD-study reported that single fraction provides equally effective pain relief as fractionated regimes
-	Radiotherapy is occasionally used in patients with spinal metastases without pain with the aim of preventing MSCC but it is unclear whether this is effective.
Best Supportive Care	
-	Suspected MSCC with paralysis >24hrs: discuss with MSCC-C before imaging or hospital transfer.
-	Patients who are too frail or unfit for specialist treatment for MSCC should not be transferred unnecessarily.
-	MSCC-C will give guidance on Hospice, community and hospital team referral **(Appendix 7)**
-	If the patient has an unstable spine and not fit for surgery or R/T: - discuss mobilization risks - help patient position themselves and mobilise as symptoms permit - consider appliances and orthotics advice
Systemic Anti-Cancer Therapy (SACT)	
-	Limited to those who have tumours that are sensitive to systemic medication
-	Treatment of choice for non-Hodgkin's lymphoma of the spine or germ cell tumours
-	MDT to include haematology team/ Medical oncology Consultant
Psychological Care	
-	Cognitive Behavioural Therapy: can include cognitive restructuring, increasing the person's access and willingness to engage in rewarding activities, various forms of relaxation training, problem solving strategies, as well as assertiveness and coping skills training, is moderately effective in improving symptoms of depression, coping and adjustment

Section 18: Appliances- Collars & Bracing

Recommendation: Mechanical vertebral pain may be due to weakening of the bone and is aggravated by spinal movement, lifting light weights, and even by standing. Cervical spine collars and spinal bracing significantly reduce spinal motion, stabilise the spine, protect spinal cord and may reduce spinal pain.	
Fitting and Prescription	
-	To be completed by specialist orthotics trained staff, Physio, MSCC spinal nurses, MSCC CNS
-	

Spinal Prescription	Nursed flat instruction given: Yes ☐ No ☐ Requested ☐ Instructed by:		
Appliance Needed: Yes ☐ No ☐	Does patient need to be log rolled: Yes ☐ No ☐	Instructor:	Date:

	Yes	No	Comment and further Instruction
Mobilisation			
Patient requires check neck xray before mobilising			
Patient can mobilise before or without check x-ray			
Type of appliance required			
Rigid cervical collar			
Soft cervical collar			
Cervical thoracic orthosis (CTO)			
Lumbar sacral orthosis (LSO)			
Thoracic/lumbar sacral orthosis (TSLO)			
Individual jacket (made by physio)			
Other please specify			
Duration to be worn			
Must wear 24hours/ day, at all times			
Wear during day remove at night when in bed			
Wear during day change to soft collar at night			
Must wear at all times when elevated above 35 degrees			
Wear only when out of bed (can sit up in bed without)			
Other please specify			
Appliance must be worn a minimum period of [ ] weeks			
Appliance can be removed after this period			
Patient must be assessed by specialist team before appliance instructions can be altered			

Unstable Spine

Appliances, collars and bracing maybe suitable for the following:

- Suspected unstable MSCC
- Patients awaiting surgery
- Patients whereby surgery is not suitable
- For C-spine: rigid collar fitted on bed rest by specialist staff in organisation eg orthotists, physio, MSCC CNS

Stable Spine

- To reduce mechanical pain
- Post surgery

Skin Care

- Areas at risk include points of contact e.g. shoulders, occiput, chin and back, extra care should be taken with skin care in these areas

Section 19:Transfer for Intervention

Recommendations: Effective communication and efficient transfer of patients from referrer to first intervention must be within 24hours and can have a detrimental effect on outcome and quality of life for the patient.

Transport Booking Responsibility for Radiotherapy

Treatment Regime	To Treatment	Return from Treatment
Single- hospital/hospice	CCC Booking Desk	CCC Booking desk
Single- home	CCC Booking Desk	CCC Booking desk
>1# from hospital/ hospice	Referrer	Ward staff
>1# from home	Referrer	Ward staff

Transport Booking for surgery at WC

- Referrer books transport into hospital
- Hospital ward books transfer out to home/ rehabilitation organisation

Ambulance Booking Instructions

- Ringing an ambulance from home- referrer needs to inform ambulance control that this is a “clinical emergency to arrive within 1 hour”
- Return bookings can be within 4hrs to organisation or home

Ambulance staff instructions for transfer

- Clinical handover: obtained from nurse attending with patient to CCC/ including relevant medical information and spinal stability status
- Spinal stability status: if there is spinal instability (severe mechanical pain) or neurological symptoms present- protect spinal alignment and maintain cord perfusion. Log roll.
- Lay flat and keep on bed rest: as flat as possible with neutral spinal alignment (pain, respiratory and cardiac symptoms permitting)

Transfer to CCC for single fraction of Radiotherapy as an Out-patient

- Liaise with MSCC-C to organise appointment time
- Transport 2 way journey to be booked by CCC booking desk
- Clinical handover of patient given to MSCC-C to give to ward at CCC
- Transfer checklist to be completed by MSCC-C/ intra-hospital note on meditech to be completed by bookings team
- **(Appendix 8)**

  Inform referring ward of confirmed transfer details
- Alert Senior Nurse on duty of need for nurse escort – patient must not go for radiotherapy alone, Health Care Worker (HCW) escort is only suitable if drugs do not need to be administered

-	Notes, drug chart and DNAR to be copied and accompany patient
-	Analgesia to be administered before transfer
-	Patient and family to be informed of urgent transfer
-	Cleaning /continence materials -ensure patient has emptied bladder before journey, is clean and has sufficient clothing. Take cleaning /continence materials with you if patient incontinent
Transfer to Radiotherapy Escort Information Sheet	
	(Appendix 2)
Transfer to CCC for >1# Radiotherapy or to WC for Surgery- Treatment as an In-patient	
-	Liaise with MSCC-C to organise appointment time
-	Transport 1 way journey to be booked by referring organisation
-	Clinical handover of patient given to MSCC-C to give to ward at CCC
	(Appendix 3)
	Inform referring ward of confirmed transfer details
-	No nurse chaperone needed as patient being transferred by paramedic ambulance
-	Notes, drug chart and DNAR to be copied and accompany patient
-	Analgesia to be administered before transfer
-	Patient and family to be informed of urgent transfer
-	Cleaning /continence materials -ensure patient has emptied bladder/ has continence materials before journey, is clean and has sufficient belongings
-	

Section 20: Mobilisation & Rehabilitation

Recommendations: Mobilisation and care of the threatened spinal cord requires close monitoring and interval assessment regardless of management plan.

The impaired spinal cord is vulnerable to changes in vascular perfusion pressure; sitting prematurely may provoke hypotension, loss of cord perfusion, and irretrievably permanent loss of neurological function.

Referral to Physiotherapy < 24 hrs, Occupational Therapy < 48 hrs of diagnosis

The aim of rehabilitation is:

- to improve quality of life

- maintain or increase functional independence
- prolong life by preventing complications

Focus should be on holistic, client centred rehabilitation and care through well organised, multi-professional team working.

In reference to patient needs the rehabilitative approach the therapist may take will be aiming to maximise the patients functional potential in one or a combination of 4 ways

Preventative: maintaining normal activity/ function and preventing/ signposting for potential symptoms (health and wellbeing services)
Restorative: returning to as normal activities/ function pre MSCC
Supportive/Compensatory: use of rehabilitation strategies and equipment to adapt to changed levels of mobility/ function
Palliative: the use of rehabilitation strategies/ interventions to support patients and carers/ adapting to a deteriorating level of mobility/ function through best supportive strategies

The therapist will need to balance their chosen rehabilitation approaches to best meet the patients' needs in relation to their disease, prognosis, wishes/ expectations and quality of life and should work with the patients and family/ carers to achieve this.

Day 0: Definitive Diagnosis of MSCC- Confirmed by MRI and Clinical Examination

Nursing/ medical
- Spinal Shock: continue to monitor BP 4 hourly for signs spinal shock due to cord injury:
- Loss of deep tendon reflexes - Hypotension + bradycardia

Physiotherapy

It will not be possible to complete a full assessment when the MSCC is managed as unstable. Once deemed stable then this can take place

If the patient is in severe pain, medically unstable, fatigued, distressed or at a terminal stage of care the therapist should consider and document the outcome of the decision regarding the appropriateness of completing assessments

Assessments should include:

Pain	Formalised assessment tool- See gain document
Subjective assessment	History of present condition, results of investigations, past medical history, pre- admission mobility/ function, social and drug history
Neurology	Including sensation, proprioception, motor function, muscle tone
Clinical observations	HR, BP, RR, SPO2 and TEMP
Respiratory	Including auscultation, palpation, cough

function	
Mobility	Joint range of movement

Occupational therapy

Day 0
Referral to OT to be completed as soon as possible. For OT initial assessment within 48 hours of diagnosis

Day 0 – 2
Once referral received, OT to read medical, nursing and other health professional notes to date. To understand the level/s of compression and potential implications

If the patient is medically unstable, distressed, symptomatic e.g. high levels of pain or fatigue or receiving end of life care, it may not be appropriate to complete OT assessments

Initial assessments should include:

OT initial interview	Verbal information gathering: Usual Activities of Daily Living (ADL), usual social and living circumstances including housing, roles and occupations. Cognitive ability, support networks and other relevant details of the patient's usual occupational level. Finding out about patients understanding of their condition. Asking about goals and wishes (ongoing through assessment and treatment process).
Assessments (if patient on bed rest)	Including: **Assessment of feeding** on ward and provision of hospital feeding aids if available e.g. non slip mat and plate guard and one handed / large handled feeding aids (depending on position of patient and any weakness e.g. flat in bed or hand weakness). Advise if assistance is required or food choices that could be made to enhance independence. Quality of life and leisure activities e.g. access to TV, technology, reading, phone. Use of environmental controls / assistive technology options. Cognition and psychological care.
Development of treatment plan	Gather information from MDT assessments including up to date information about patient's progress with physiotherapy following verticalisation. Use information about the patients current physical motor function, spinal stability, sensory function, bowel and bladder function, pain, cognition, prognosis and current medical and physio plans to inform further OT assessment and treatment planned at this point.

Physiotherapy and Occupational Therapy

Treatments may include:

1. Positioning/ bed rest
2. Moving/ handling
3. Bracing
4. Physiotherapy bed exercises
5. Pain control
6. Respiratory care
7. Prevention of contractures and/ or spasticity control
8. Swelling management/ prevention
9. Pressure ulcer prevention & skin care
10. Self care in bed
11. Communication assistance
12. Cognitive care
13. Psychological care
14. Controlled/ gradual mobilisation (commencing with sitting up)
15. Verticalisation
16. Seating assessment
17. Retraining function
18. Wheelchair use and mobility
19. Activities of daily living
20. Physiotherapy exercises
21. Fatigue management/ increase exercise tolerance
22. Sensory/ proprioceptive re- education
23. Adjustment to disability
24. Involvement and education of patient/ family/ carer
25. Discharge planning & onward referral

There is more detail added in each section and is based on GAIN guidance. Please note some sections will apply across the treatment pathway (for example psychological care)

1. Positioning / bed rest

Patients should be nursed in flat supine with neutral spine alignment and patients with s**uspected or unstable cervical spine MSCC patients should be fitted in an appropriately sized rigid collar** (e.g. Aspen / Miami J)

If problems exist with collar fit and comfort, orthotics should be contacted for specialist assessment and collar. Sandbags may be used in addition to collars to increase immobilisation and should be placed either side of the neck

One or no pillows should be used with suspected or unstable cervical spine MSCC patients

Foot drop and tendo achilles shortening should be prevented by propping up the feet to at least 90° with pillows or using soft supportive foot splint boots

Consider: self-care in bed including wash / dressing and feeding, Quality of life and leisure activities e.g. access to TV, technology, reading, and phone. Cognition, psychological care. Use of environmental controls / assistive technology

2. Moving and handling

Nursing/ Physiotherapy/ OT

Severe mechanical pain: suggestive of spinal instability, or any neurological symptoms or signs suggestive of spinal shock

Nursed flat with neutral spine alignment until definitive management plan given

Log roll

Slipper pan for toilet

Continue until bony and neurological stability are ensured and cautious remobilisation may begin

Unstable spine- Cervical and Above T6: log roll with manual stabilisation of the cervical spine with 5 staff (5th member of staff is needed when patients require e.g. a collar change, repositioning and skin checks, upper limb support, positioning of pillows or positioning for radiotherapy treatment / investigations)

Unstable Spine below T6: Log roll with 4 staff (no need for stabilisation of C spine)

3. Bracing

Please see Section 18: Appliances- Collars & Bracing

4. Physiotherapy bed exercises

Physiotherapy exercises are advocated for the suspected or unstable MSCC patient on bed rest to:

- stretch muscles and joints
- maintain ROM
- strengthen muscle
- promote circulation
- improve psychological well-being and QOL

Exercises may be performed on the hips, knees, ankles and toes, shoulders, elbows, forearms, wrists and fingers

Exercises may include static, passive, active assisted or active rhythmic, controlled movements and stretching techniques, depending on the patient's muscle activity, spinal stability and pain

Physiotherapy bed exercises should be performed at least 1-2 daily within strict pain limits and with monitoring of pain, power and sensation, considering precautions and any other contraindicating pathology. Movement worsening pain or neurology should be stopped and medical advice sought

Key safety precautions on exercise / movement for suspected or unstable MSCC:	
Thoracolumbar MSCC patients	< 30˚ hip flexion in T10 and below lesions
	< 45˚hip abduction in T10 and below lesions.
	No straight leg raise / long sitting in T10 and below lesions.
	No back movements in thoracic, lumbar or sacral lesions. No pelvic movements in T10 and below lesions.
Cervical MSCC patients	<90˚ shoulder flexion and abduction if creating pain
	No resisted arm movements
	Bilateral arm movements with 2 staff to < 90˚ may be considered if unilateral arm movements are creating pain.
	Avoid overstretching of the wrist and finger flexors in C6/7 tetraplegics who require a tenodesis grip
	No neck exercises / movements

5. Pain control

Patients who experience and / or anticipate pain on movement, administration of pain relief prior to movement should be considered and break through analgesia provided as appropriate

A range of non-pharmacological interventions can be useful in managing pain:

- Positioning
- Massage
- Collars/ bracing
- Relaxation
- Transcutaneous electrical nerve stimulation (TENS)
- Acupuncture
- Heat (contraindicated over the site of cancer and pressure ulcers)
- Cognitive Behavioural Therapy (CBT) aimed at modifying dysfunctional pain cognitions and coping abilities
- Motivational interviewing
- Liaise with medical and palliative care services

6. Respiratory care

- Breathing exercises
- Forced expiratory techniques and coughing
- Expiratory flow resistive devices
- Positioning
    - The recommendations for supine positioning may need to be medically reviewed considering the degree of spinal instability and risk of neurological damage, breathlessness, pain, pressure, shear and if relevant, the patient's end of life goals.
- Use of oxygen
- Inhalers / nebulisers
- Non-invasive positive pressure ventilation (NIPPV)
- Invasive positive pressure ventilation (IPPV)

7. Prevention of contractures and/or spasticity control

Prevention of contractures and/or spasticity control may include:

- Corrective positioning and splinting
- Physiotherapy stretching and exercises
- Muscle relaxants

8. Swelling/DVT management and prevention

- Use of prophylactic graduated compression stockings
- Active Exercises
- Passive Exercises
- Positioning
- Elevation

9. Pressure ulcer prevention & skin care

To be considered during all therapeutic activities

Day 1:

10. Self-care in bed

Continued nursing support for personal care, arrangement of bed area and feeding

See in OT initial assessment (day 0) about support and exploring patients function level while on bed rest

Consider referral to Dietitian/ SALT as appropriate

11. Communication assistance

Ensure access to call bell at all times

Patients who have difficulties with communication including loss of voice, or difficulty using phone or technology to communicate may need assessment or

assistance including positioning of equipment e.g. phone stands, book stands, referral for environmental controls, use of assistive technology

Consider referral to SALT as appropriate

12. Cognitive care

Assessment of acute confusion as may impact on function- consider use of screening tools

Patients with acute confusion or longer term cognitive impairment may struggle to remember and follow advice about bed rest. This will need to be considered as part of the medical and nursing care plan with regards to the risks associated with this and how it will be managed at ward level e.g. use of falls alarms / bed pressure pads or 1:1 nursing care

OT assessment of cognitive impairment and the impact on function and usual occupational performance
Consider:

-Reinforcing previously learned patterns of behaviour. Establishing new patterns of cognitive activity if possible. Establishing new patterns of activity through external compensatory mechanisms such as environmental structuring and support

-Enabling persons, families and carers to adapt to their cognitive disability, even though it may not be possible to directly modify or compensate for cognitive impairment, in order to improve their overall level of functioning and QOL

-Consider risks and safety associated with discharge from hospital

13. Psychological care

Understanding the potential impact of the diagnosis of MSCC on patients, families and carers
Providing opportunities to explore and discuss emotions, issues, mood, worries and help patients, families and carers adjust to changed levels of ability and health

Consider use of tools to explore patients psychological need e.g. holistic needs assessment

Consider onward referral to specialists on psychological care as appropriate

14. Gradual/ controlled mobilisation

Continue as day 0 until clinical decision made regarding spinal shock and spinal stability prior to verticalisation

If patients spine unstable a decision regarding bracing to be made (please see separate section on bracing)

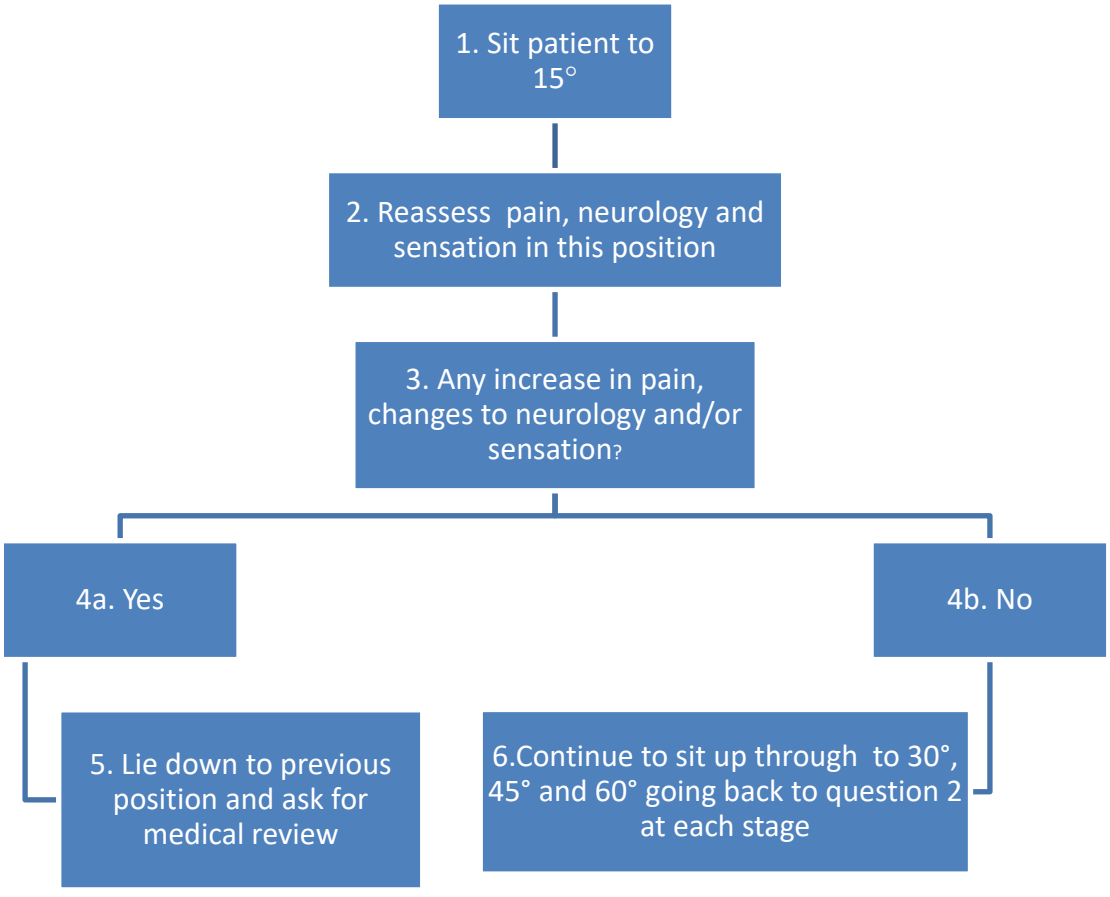
Bracing
Indications:

- Patients with unstable MSCC but not suitable for surgery (see bracing section)
- Patients with unstable MSCC but not suitable for surgery but with significant preservation of power and sensation (to protect neurological status)
- Patients with significant mechanical pain
- Post- operatively as per consultant recommendation

15. Standing

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

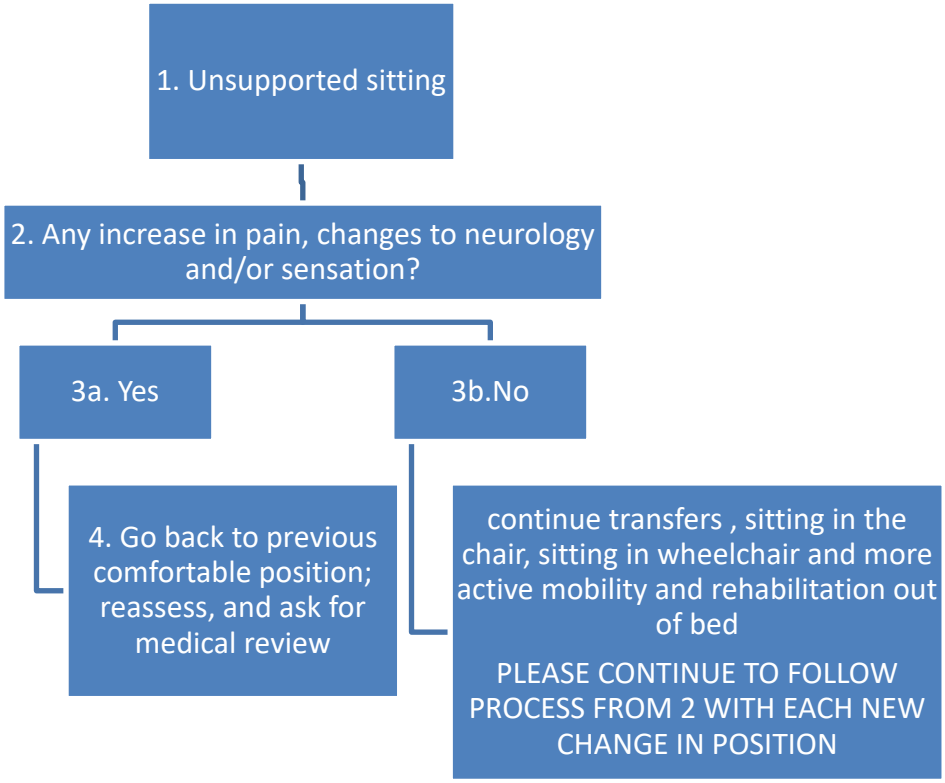


Day 1- 2 and onwards

- **Physiotherapy**

When the patient can sit upright in bed comfortably with no increase in pain or changes in neurological symptoms then remobilisation can commence as

follows



Red Flag symptoms: if a significant increase in pain or neurological symptoms occurs with any mobilisation, return to a position where these changes reverse and reassess the stability of their spine. Consider increasing Dexamethasone, consider bracing for pain relief, consider re-scanning if potential further MSCC. **If no changes in management and clinical decision to continue remobilisation, then the medical team will need to clearly document and the consequences discussed with the patient and family/ carer**

16. Seating assessment

Physiotherapy/ OT

- ROM for hip flexion, abduction and adduction and knee flexion / extension should be obtained when in supine.
- On initial sitting up over the edge of bed, pain, balance, tonal changes, weight distribution, preferred sitting posture, spinal alignment, pelvic position, limitations in ROM, requirement for bracing, fatigue, tolerance for sitting, ability to maintain posture and reposition and respiratory function should be assessed.
- Body measurements to guide the prescription of seating should be carried out.
- The patient's skin integrity and pressure ulcer risk will also influence the

selection of seating and pressure-redistributing seat cushion.

- Other factors that should be considered during the seating assessment include transfer ability and technique, level of function and independence, continence, overall comfort and cognition, potential for improvement.

- Consider implications for discharge planning

Sitting time

Patients should be closely monitored for pain, changes in neurology, ability to maintain posture and skin integrity on initial sitting out.

Consider restricting sitting out for < 2 hours initially with gradual progression

Repositioning

Repositioning should be considered for all those deemed at risk of pressure ulcers

- Those who can safely walk should be encouraged to so every few hours

- Those who can reposition themselves in sitting should be encouraged to do so every 15-30 minutes.

When a manual weight shift cannot be performed the use of a mechanical reclining or powered tilt chair/ wheelchair should be considered

17. Retraining Function and Movement- stable MSCC

Degree of functional independence achievable is dependent on the level and completeness of the spinal cord compression and resulting motor weakness, sensory dysfunction and pain.

Physiotherapy and OT

Bed Mobility
To maximise independence with monitoring of pain and neurology there is a need to assess an individual's ability to :
- rolling in bed
- moving up, down & across bed
- getting in and out of bed
- lying to sitting to lying
- getting into and out of bed

Functional Transfers on ward (e.g. beds to chairs)
Moving and handling:
- assistance required
- transfer technique
- devices required
- weight

- size
- mobility
- space
- pressure relief & skin care
- Sitting balance
- cognitive status
- fatigue

Therapy handling:
- 180° transfers
- Chair to floor transfers
- Height difference transfers
- Car transfers

Balance, gait and mobility re-education
Re-education should be commenced to restore more independent mobility, whether by ambulation or wheelchair mobility

18. Wheelchair use and mobility

OT/ Physiotherapy
- Sensitive introduction of wheelchair use
- Inpatient wheelchair assessment or referral to wheelchair services for assessment.
- Check with the patients' medical team regarding patient ability to self- propel considering mechanical stress.
- Assessment of suitable size and type of wheelchair e.g. self-propel wheelchair, tilt in space wheelchair for those patients with reduced sitting balance
- Assessment of pressure care needs for the wheelchair.
- Training in use of wheelchair of patients unable to walk
- Consider provision of wheelchair for discharge from hospital

19. Rehabilitation of activities of daily living

Understanding patients goals, wishes and usual occupations and relate rehab sessions and goals accordingly

Treatment sessions including use of meaningful occupation to improve function and activity tolerance

Upper limb and hand function
Transfers including toilet, bed, chair and bath/shower
Personal ADL including wash / dress, toileting, feeding
Domestic ADL including cooking, housekeeping, laundry, use of transport, managing money and managing medication
Usual occupations and roles
Leisure activities

Patients with braces and collars: clarify in what position the brace is to be put on, need for log rolling, is assistance required to put on / take off brace in lying

position or in the position recommended by the patients' Medical team
Impact the immobilisation of spine / part of spine has on function / ADLS.
Assessment for discharge. Potential need for additional support for discharge from hospital

Patients remaining on bed rest: The patient may remain cared for in bed in flat, spine straight position. Consider: moving and handling, positioning and pressure care, log rolling, self care in bed including wash / dressing and feeding, Quality of life and leisure activities e.g. access to TV, technology, reading, phone. Cognition, psychological care. Use of environmental controls / assistive technology. Discharge planning for a patient on bed rest

Consider the use of compensatory strategies:
Equipment including:
Moving and handling equipment
Equipment to assist transfers at home inc toilet, chair, bed, bath/shower
Daily living equipment
Advice re: smaller equipment for ADLs including feeding and dressing aids
Assistive technology and environmental control systems
Wheelchair
Seating
Environmental needs including potential need for home or environmental assessment pre-discharge
Pressure care and positioning needs
Cognitive needs
Additional assistance required to manage ADL.
Consideration of further inpatient / intermediate care rehabilitation

Discharge planning to a home environment may be simple or complex depending on the patient's circumstances and / or level of disability

Consider onward referral for patients to have OT for rehab, further assessment, equipment or adaptations at home (usually via social services OT, community health service OT or OT services in community palliative care teams or hospices)

20. Physiotherapy exercises

Exercises may include:

- static
- passive
- active assisted
- active and resisted exercises
- stretching techniques
- balance exercises
- use of Bobath techniques in various positions depending on the patient's muscle activity, spinal stability and pain
- Written instructions issued to patients and carers

- FES of the muscles may be a useful adjunct to exercise and movement

21. Fatigue Management and increasing exercise tolerance

Assessment of fatigue and exercise tolerance should be assessed

- Education offered including:

    - understanding nature of cancer related fatigue
    - pacing
    - planning
    - balancing
    - prioritising activities
    - energy conservation techniques
- Patients should be encouraged self-monitor fatigue levels
- Graduated exercises taught to reduce fatigue and increase exercise tolerance
- Relaxation techniques taught
- use of adaptive equipment and additional support to manage with increased levels of fatigue

22. Sensory and Proprioceptive Re-education

Use and exercise of the affected limb(s)
Compensatory techniques and environmental modifications may be needed
Education on increased safety awareness

23. Adjustment to disability

Patients with MSCC have to live with the psychological, physical and emotional effects of advanced cancer as well as the consequences of a disability and the impact this has on their day to day lives

In the early stages, patients may be uncertain and unrealistic of their abilities and the potential impact their disability has on their lives

An opportunity should be given to explore and set goals. Realistic goal setting as part of the rehabilitation process to maximise independence and control should be negotiated and implement

While patients may describe goals and plans that seem overly optimistic and impracticable, other goals may be feasible and grounded

Rather than directly contradict unrealistic goals, reasonable and achievable goals should be encouraged and agreed

24. Involvement and education – patient, family, carer

Patients, families and carers should be educated early from admission about the rehabilitation process

They should be encouraged to participate in discharge planning discussions from admission

	Patient, family and caregiver education should be provided as appropriate in the following areas: - Skin care and pressure ulcer prevention - Respiratory care - Stretches and exercises - Handling and transfer methods - Walking and walking aids - Fitting and use of any orthosis and bracing with advice on hygiene / changing of liners and skin checks - Stair techniques - Personal care activities - Safe use of prescribed equipment - Relaxation techniques - Fatigue management - Reporting of increased or recurrence of signs and symptoms e.g. pain or neurological symptoms or worsening mobility

Section 22: Discharge Planning

Recommendations: Multidisciplinary discharge planning should start from the admission involving the patient, their family and carers	
MDT Health professionals	
-	Consultant oncologist/ haematologist
-	Consultant surgeon
-	Consultant in Palliative medicine
-	Hospital Physio/ O.T.
-	Social Worker
-	MSCC-C
-	Ward medics
-	Ward nurses
-	GP
-	Community palliative care team
-	Hospice
-	Community Physio and O.T. teams (home assessment)
-	Rehabilitation services
-	Moving and handling team
Discharge Plan Inclusion	
-	Residence following discharge
-	Expected functional outcomes
-	Care needs
-	Follow up information and appointments
-	Equipment needs and recommended changes to residents
Discharge Summary	
-	Appendix
-	Spinal stability/ appliance prescription

Onward referral for rehabilitation	
-	Survival following MSCC may be short but this varies greatly between different diagnostic groups
-	Rehabilitation teams must balance the goals and prognosis with an appropriate period of rehabilitation
-	Specialised rehabilitation services- specialist palliative care rehabilitation teams, hospice rehabilitation and day therapy, primary care rehabilitation teams, spinal cord injury unit rehabilitation home from hospital schemes, step down beds and community rehabilitation may be considered

Discharge Planning Pathway

Admission- Discharge planning begins

- MSCC-C referral to social worker at diagnosis
- Mental capacity assessed and documented if concerns (Appendix x)

Ascertain Functional Ability During & Post Treatment

- Physio/O.T assessment

Discharge Discussion

-MDT/ patient/ Family

Social Worker Assessment & Referral

-Appendix x (assessment of SC need/ Section 2 delayed discharge act 2003)

-Appendix X(Continuing Healthcare checklist)

- Discharge summery (Appendi X form)

Social Care needed - YES

Social Care needed- NO

Social services

- >3 months prognosis

Continued Health Care

- Checklist triggered
- Complex needs

Fast track

-<3 – 6 months

DGH

- Complex medical

Home

Hospice

Specialist Rehabilitation Services Directory

- Local specialist palliative care rehabilitation teams
- Hospice rehabilitation and day therapy
- Primary care rehabilitation teams
- Spinal cord injury unit rehabilitation
- Home from hospital schemes
- Step down beds and
- Community rehabilitation

Section 23: Patient Information &Red Flag Cards for Health Professionals

Recommendations: All patients should have equitable access to information regarding their cancer, it's management and other related information.
Information should be in an appropriate language and format that also explains how to access psychological and/or spiritual support services when needed.

MSCC Patient information Leaflet

https://be.macmillan.org.uk/downloads/bemacmillan%20pdfs/MSCC_leaflet_New%20brand.pdf

MSCC Alert Card

https://be.macmillan.org.uk/Downloads/CancerInformation/MAC17346MSCCAlertZcard.pdf

Individual Information Prescriptions

- All Patients should be offered and provided with an individual patient pack that contains information appropriate to their needs

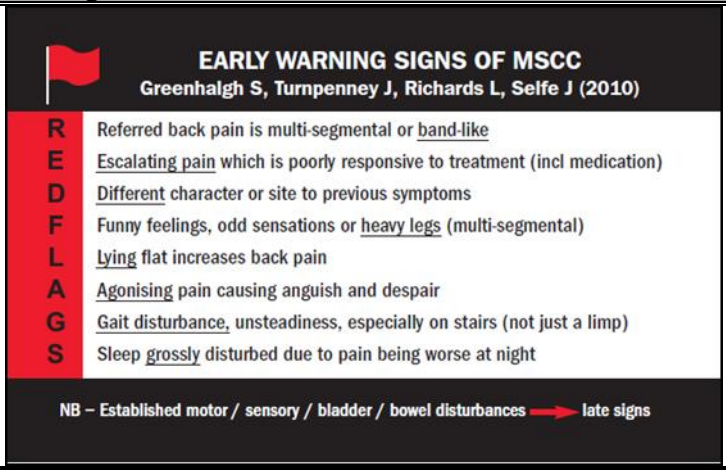
https://www.macmillan.org.uk/

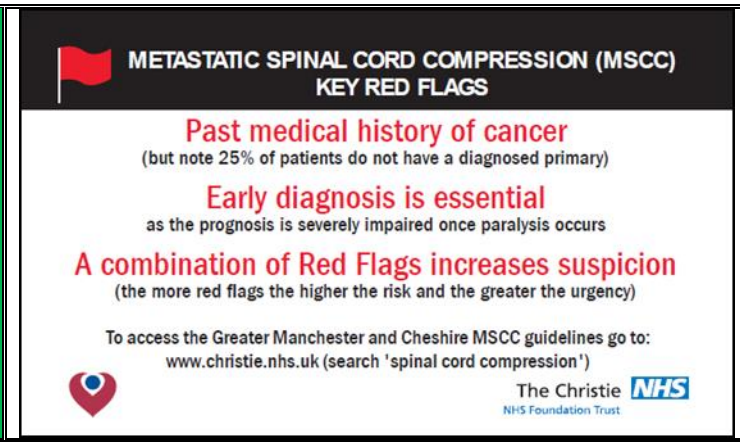
Bereavement Support

Offer families and carers support links regarding bereavement services if appropriate to their needs

https://www.macmillan.org.uk/search/search.html?query=bereavement+

Red Flag Cards for Health Professionals





Service Configuration and Key Priorities

1. **MSCC Service provision:** ensure there is a C & M network service commissioned that has a clear pathway for diagnosis, treatment, and rehabilitation that is monitored and audited.

2. **MSCC site specific steering group:** includes representatives from primary, secondary and tertiary care with strong links to primary tumour site specific groups.

3. **MSCC lead is responsible for:**
   − advising the network, commissioners and providers about the provision and organisation of relevant clinical services
   − ensuring pathway for diagnosis and management are documented, agreed and consistent across the network
   − ensuring 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.

4. **Patient information & health professional red flag cards**: educate health care professionals and provide them with red flag alert cards so they can 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.

5. **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

- 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.

Neurology

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

6. **MRI whole spine:** within 24 hours if pain is suggestive of spinal instability or neurological symptoms are present.

7. **Lay flat with neutral spine alignment:** if mechanical pain suggestive of spinal instability or signs of MSCC

8. **Definitive treatment within 24 hours of diagnosis:** to maximise outcome

9. **Discharge planning and rehabilitation:** to start at diagnosis

Epidemiology

- MSCC is a well-recognised complication of cancer and is usually an oncological emergency.

- Metastases to the spinal column occur in 3–5% of all patients with cancer, most commonly those with breast cancer, prostate cancer and lung cancer, in whom the incidence may be as high as 19%.

- Patients with breast, lung and prostate cancer account for more than 50% of MSCC cases.

- MSCC occurs when there is pathological vertebral body collapse or direct tumour growth causing compression of the spinal cord or cauda equine which results in irreversible neurological damage and possible paraplegia.

- The ability to walk at the time of diagnosis is a statistically significant predictor of outcome in terms of survival. Once paraplegia develops it is usually irreversible.

Incidence

- Due to the lack of a recognised coding system for the diagnosis of MSCC in the UK, its estimated it effects 5–10% of patients with advanced cancer.

- It is likely that the incidence of MSCC will increase in the future with improving cancer treatments resulting in better survival and outcomes.

- The median age at time of MSCC diagnosis is 65 years.

- 24% presented with MSCC as the first presentation of malignancy.

Aetiology and Pathophysiology

- In 7% of patients the site of primary tumour may remain unidentified

- Three mechanisms are responsible for MSCC:

    - haematogenous spread to the vertebral spine causing collapse and compression, accounting for over 85% of cases

    - Less commonly it occurs secondary to direct tumour extension into the vertebral column

    - or by direct deposition of tumour cells.

- Direct compression results in oedema, venous congestion and demyelination.

- **Gradual and of recent onset with some preservation of neurological function:** the effects are often reversible.

- **Prolonged compression:** vascular injury ensues causing infarction of the spinal cord, recovery is unlikely.

- **Slow onset compression with an accompanying gradual neurological deficit:** often there is a degree of cord adaptation and usually predicts a better outcome than sudden onset compression and neurological loss.

Clinical Signs & Symptoms

- **Back pain in 95%:** most common localised spinal pain or neurogenic radicular pain.

- **Weakness of the limbs 85%:** is the second most common symptom.

- **Sensory symptoms 52%:** include paraesthesia, decreased sensation and numbness of toes and fingers which may extend to the level of cord compression.

- **Autonomic dysfunction:** such as impotence or bladder and bowel dysfunction presenting as urinary retention, incontinence or constipation (Constipation was the commonest bowel symptom and occurred in 67% of patients).

- Over two thirds of cases of MSCC occur in the thoracic spine and between 4% and 7% occur in the cervical cord.

- 17% of patients have two or more levels of cord compression.

Survival/ Mortality

- Median survival after diagnosis is 2-3 months

- Primary tumour site and ability to walk at diagnosis of MSCC as independent predictors of survival.

- The histology of the primary tumour is probably the best predictor of survival.

- Patients with MSCC can be divided into three groups:

  - those with myeloma (especially solitary plasmacytoma), lymphoma, breast or thyroid cancer: survival 18 months or more.

  - those with renal or prostate cancer, or metastatic sarcoma: survival 12 to 18 months.

  - those with melanoma, lung or gastro-intestinal cancer, or unknown primary tumours: survival less than 12 months.

- Longest survival in patients with haematological malignancies (lymphoma,leukaemia and multiple myeloma 66% at 3 months) and prostate cancer.

- Lung cancer patients had the shortest survival 22% at 3 months.
- Surgically treated patients had significantly better survival at one year (57.4% vs 13.3%).

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Appendix 1: Metastatic Spinal Cord Compression Service Referral Form

ALL referrals must be sent to: ccf-tr.MSCC-Service@nhs.net

Clatterbridge Road, Bebington, Wirral CH63 4JY
Triage hotline: 0800 169 5555

Patient Details

Surname: Click here to enter text.

Forename: Click here to enter text.

Address: Click here to enter text.

Date of Birth: Click here to enter text.

NHS Number: Click here to enter text.

CCC No. if known to Clatterbridge? Click here to enter text.

Site of Primary Cancer: Click here to enter text.

GP & address: Click here to enter text.

Referral Details

Date of Admission: Click here to enter a date. Time: Click here to enter text.

Date of Referral: Click here to enter a date. Time: Click here to enter text.

Patient location: Enter Location / Ward here. Referring hospital number: Click here to enter text.

Referrer/Designation: Click here to enter text. Referrer Contact Details: Click here to enter text.

Referring Consultant:

Presentation

Please enter details of patient presentation: Symptoms and symptom duration, specific site(s) of pain (please note: 'Back pain' is not specific enough). Please include levels and if/where pain is radiating

Neurological Examination- power, sensation, bladder/bowel

Past medical history and relevant co-morbidities

Please provide details of past oncology history if known. Include relevant co-morbidities. Please provide details of what patient was like functionally before admission- detail gradual or sudden change. Include any current acute medical issues

Acute Oncology Team informed? ☐ **Performance Status= ☐** **NEWS=☐**

Imaging Studies

Please attach details of MRI (or CT spine with contrast if MR not possible) and any other recent relevant imaging, or date of planned additional imaging.

Bloods

Please attach relevant bloods (If a CUP presentation include myeloma screen and PSA)

Transfer for treatment and return journey can take up to 6 hours. This may be a single visit, or the process outlined below may be split into two separate visits – 1 to plan treatment and 1 to give treatment.

1. Ensure patient has had painkillers and any toileting needs have been met prior to journey.
2. Any movement of the patient between the bed, stretcher or trolley must be with a 'Patslide'. The patient must be log rolled until you are advised this is no longer the case.
3. The ambulance crew will transport the patient on a stretcher – keep the patient flat as possible. Inform the crew of the need to drive gently to prevent making any pain worse.
4. Take notes, prescription charts, medications and DNAR if appropriate - if originals, ensure you bring them back. Advise the patient of possible waiting – they may like to take an activity/ book etc.
5. Upon arrival at CCC, advise the ambulance crew of the area the patient is to report to eg. ward, patient triage area etc. You will be informed of this by the MSCC-C/ Triage team when transfer details are discussed.
6. A doctor will come and examine the patient, discuss next steps and obtain written consent. The patient will be given a copy to take on their return.
7. You may have to wait a while before the patient is taken for the CT planning scan – this is where the treatment area is marked up.
8. Following the planning CT, the patient is returned to the ward/triage area. There will be another wait whilst the radiotherapy treatment is planned. The whole process of scanning, planning and preparing for treatment may take up to 3 hours.
9. The treatment stage then follows, and this is given by linear accelerator – staff may refer to this as the 'linac'. This will take about the same time as the planning scan.
10. The patient will then return to the ward/ triage area. Staff at CCC will then inform the transport provider that the patient and yourself are ready to return. Whilst waiting please ensure that you have any original notes, prescription charts, medications and DNAR.
11. If your patient requires anything whilst you are there, please approach the ward/ triage staff, or the Therapy Radiographers (dressed in maroon scrubs). This may be for a drink, pain relief or to pass urine etc.
12. During your wait, the patient will be offered an individual information prescription from the patient information centre containing any relevant information they want to access.

Transfer to CCCL for Treatment as an Inpatient

1. MSCC-C will liaise between referring organisation and accepting organisation, all relevant transfer information will be communicated.
2. Ensure patient has had painkillers, any toileting needs have been met prior to journey and they have their belongings.
3. Inform transport crew of ward of destination.
4. Any movement of the patient between the bed, stretcher or trolley must be with a 'Patslide'. The patient must be log rolled until you are advised this is no longer the case.
5. The ambulance crew will transport the patient on a stretcher – keep the patient flat as possible. Inform the crew of the need to drive gently to prevent making any pain worse.
6. Crew must take notes, prescription charts, medications and DNAR if appropriate - if originals, ensure you bring them back. Advise the patient of possible waiting – they may like to take an activity/ book etc.

Standard Operating Procedure (SOP) Management of the link walkway for patient transfers between CCC & LUHFT

Version number	Changes made	Date
1	First draft version V01	07.08.20
2	2nd Draft V02	27.08.20
3	3rd Draft V03	03.09.20
4	4th Draft V04. Amendments following Patient Transfer Simulation exercise.	08.09.20
5	5th Draft V05. Amendments following review by patient safety lead at LUHFT.	08.09.20

Service specification number (if applicable)	This SOP is to be read in conjunction with the following service specifications: • RS2, • RS3, • CCC / LUHFT Transfer SOP
Lead Author/s	M Warwick, Head of Transformation
Lead LUHFT	A Banks, Patient Safety Lead
Lead CCC	
Approval Group LUHFT	QAR
Approval Group CCC	Clinical & Operational Group / CCCL Programme Board 09.09.20

1. Purpose

This SOP describes the responsibilities and operational management of the link walkway and retractable tunnel for patient transfers between CCCL and LUHFT. This must be read in conjunction with the existing CCC / LUHFT patient transfer SOP.

2. Background

There will be a requirement to transfer patients from the new Clatterbridge Cancer Centre Liverpool (CCC-L) to the Liverpool University Hospital Foundation Trust (LUHFT) on the Royal Hospital site (and vice versa) for a range of reasons including investigations, clinical procedures and transfer to inpatients wards, treatment facilities or critical care areas. In the absence of a permanent corridor link joining both buildings, a temporary walkway structure is in place to provide access for patients requiring transfer.

The link walkway consists of retractable section of tunnel that will remain retracted until the patient transfer process is initiated. Once a decision has been made to transfer a patient the retractable section of the walkway will be required to be moved into place and moved back into its retracted state once the transfer has been completed and all staff / equipment have returned to the respective hospital base.

Therefore clarity is required on the responsibilities of staff across both organisations on how this process will be managed

3. .Scope

The link walkway between CCC & LUHFT is to accommodate patient transfers to and from CCCL and the following departments in LUHFT:

- Intensive Care Unit
- High Dependency Unit
- AED / AMAU
- Wards
- Radiology / Theatres for interventional procedures

4. Procedure/s

4.1 The Transfer

4.1.1. The decision to transfer a patient must be agreed by both CCC & LUHFT clinical teams.

4.1.2. **For Emergency Transfers**: The Clinical team attending the patient will dial **2222** (switchboard) to notify the operator that the emergency transfer protocol has been initiated. Staff will state "**EMERGENCY PATIENT TRANSFER from CLATTERBRIDGE CANCER CENTRE LIVERPOOL TO ROYAL LIVERPOOL HOSPITAL**" clearly stating the ward / department and hospital building. The Clinical team will provide switchboard with an ETA (Expected time of arrival) with a minimum of 15 mins notice prior to transfer.

4.1.3. The Switchboard operator will notify both security teams of the activation of the transfer protocol via emergency voiceover *.

4.1.4 A member of the CCC Security team will immediately attend the relevant ward area to provide the transfer team with a radio for direct communication. This will allow the transfer team to alert security staff to any delays the transfer. The security officer will re-confirm the ETA for the transfer

4.1.5 CCC security staff will initiate the lift over-ride on the patient bed lift ready for transfer.

4.1.6. A member of both CCC / LUHFT security will attend the transfer walkway and secure the retractable canopy in place.

4.1.7. CCC / LUHFT security staff will remain at the entrance of the walkway to assist with access control in the area and clear the transfer route on both sites. Communication with the clinical transfer team will be maintained via radio.

4.1.8. LUHFT security team will ensure lift over-ride access on the LUHFT hospital site to mitigate any delays during the transfer process.

4.1.9 If the transfer is going to be delayed beyond the original ETA it is vital this is communicated to security staff via the radio and a new plan agreed. This will allow held lifts to be released until the transferring team is ready.

4.1.10 Should an issue arise requiring the tunnel to be retracted prior to transferring e.g. fire call, major incident etc CCCL security must inform the transferring team to allow for alternative arrangements

Upon completion of the transfer:

4.1.10. CCC / LUHFT security staff will retract the canopy following the transfer to maintain access to the road.

4.1.11. The LUHFT / CCC Transfer team will contact the relevant CCC / LUHFT security team to ask for assistance and / or escort back to the respective hospital site. Security staff will ensure the canopy is secured in place to provide a safe return for staff and equipment as required.

For Planned Transfers:

4.1.12 Both the transferring and receiving areas will need to inform their respective security control rooms (RLH ext 2200, CCCL ext 8777) of the need to transfer a patient via the connecting walkway, no less than 30 mins prior to the transfer time.

4.1.13 On receiving the requests both security teams will acknowledge the request and confirm the proposed time acceptable.

4.1.14 If at any point the transfer is not likely to happen at the agreed time the transferring area **must** inform the respective control room so a revised time can be agreed, and the team on the other site can be informed

4.1.15 If due to operational reasons either security team is unable to facilitate the transfer they must inform the transferring ward so a revised time can be agreed in turn this will need to be communicated to the other security team.

* both trusts use the same bleep system the relevant bleep numbers for each security team will be in the one group, meaning 1 voiceover will be required.

**. This will be to maintain the integrity of the 2222 line as emergencies only.

4.2 Access

4.2.1 Access to the transfer walkway will be for designated CCC and LUHFT staff via swipe card. This will include staff from the following groups:

- Critical Care staff (LUHFT)
- Anaesthetic staff (LUHFT)
- Acute Care Team (CCC)
- ANP Out-of-hours team (CCC)
- Patient Safety Officer (LUHFT)
- Security teams (CCC & LUHFT)
- Portering teams (CCC & LUHFT)
- CCC Duty site manager/s

4.2.2 Should emergency road access be required during a patient transfer e.g. in the event of a fire / major incident, Switchboard will alert the CCC & LUHFT clinical teams via the emergency response call and CCC / LUHFT security teams will retract the canopy.

4.2.3 In the event that the Transfer Walkway cannot be used to transfer a critically unwell patient to ITU / HDU, transfer will be undertaken by the NWAS Intra-hospital ambulance transfer service by calling **03451400144, following** stabilisation of the patient.

4.3 Route

4.3.1. The designated route will be signposted to cover access routes to and from both organisations (Map of route to be added)

4.3.2 The transfer route will be designated for the transfer of patients only and will not be a thoroughfare for staff or the general public.

5. Responsibilities (CCCL / LUHFT)

5.1 It is the responsibility of CCC & LUHFT medical / clinical teams and portering staff to safely transfer the patient and any equipment required.

5.2 Where porters are required for transfer e.g. LUHFT AED dept to CCCL, the Portering team from the Trust where the patient is being moved from will support the transfer.

5.3 CCCL will be responsible for implementing a cleaning regime for the transfer walkway to the point where the canopy joins LUHFT premises.

5.4 LUHFT will be responsible for implementing a cleaning regime for the transfer walkway within the LUHFT building.

5.5 CCCL & LUHFT portering teams will ensure the entrance to the walkway and walkway route remain clear and unobstructed within their respective premises.

5.6 CCCL & LUHFT security teams will be responsible for providing cascade training to their respective staff on the safe manouvering of the retractable canopy and for ensuring teams are aware of this SOP.

5.7 Maintenance / testing of the walkway will be undertaken by Vinci facilities (based at CCC).

6 Related policies and procedures

- CCC / LUHFT Patient Transfer SOP
- CCC / LUHFT Deteriorating patient SOP
- CCC / LUHFT Access to Specialist Advice SOP

7 Appendices

Not applicable

MCA1 Record of a Mental Capacity Assessment v15

This form must be completed by a healthcare professional. MCA1 is not needed for babies and young children or for minor decisions (eg. washing). For other individuals and for any key care decision, complete MCA1 if there is an indication of an impairment or disturbance of the individual's mind or brain.

Individual Name: dob: MRN:

Assessor: Name: Status:

Description of the decision to be made in relation to the individual's care or treatment:

Date of assessment:

STAGE 1 - Is there an impairment or disturbance in the functioning of the individual's mind or brain?

YES NO Reason:

If you have answered YES to Question 1, **proceed to stage 2**
If you have answered NO to the above then the individual has capacity for the above decision within the meaning of the Mental Capacity Act and must give valid consent.

STAGE 2 – Test of capacity for this specific decision

Q2. Is the individual able to **communicate their decision in <u>any</u> way**? YES NO
If the answer is NO then Q3-5 are not needed
Explain your answer:

Q3. Can the individual **understand all the relevant information** about the decision? NB. The information must be provided in a way that enables the individual to understand. YES NO
Explain your answer:

Q4. Do you consider the individual able to **retain the information** long enough to use it to make a choice or an effective decision? YES NO
Explain your answer:

Q5. Do you consider the individual able to **use or weigh that information** as part of the process of making the decision? YES NO
Explain your answer:

If you have answered YES to ALL questions 2-5, the individual is considered on the balance of probability, to have the capacity to make the decision above.

If you have answered NO to ANY of the questions, on the balance of probability, the impairment or disturbance as identified in STAGE 1 is sufficient that the individual lacks the capacity to make this particular decision.

Outcome (cross out statement that does not apply)

Individual has the capacity to make the decision above.

Individual lacks the capacity to make the decision above. Go to MCA2

Signature:		**Date:**	
Summary added to patients notes on:		**Date:**	

MCA2 **Record of actions taken to make a best interest decision**

v15

Individual's details **Name:**

Dob: MRN

Use MCA2 if this is a baby or young child or if MCA 1 overleaf has confirmed a lack of capacity.
For key decisions (eg. surgery) or complex situations a best interests decision is best done at one meeting where everyone is present. This is not always possible and one healthcare professional can complete this form, especially for simpler decisions (eg. urinary catheterisation, cataract treatment). However, they must **document** the views of those consulted (see Q1 below).

Description of the decision to be made in relation to the individual's care or treatment:

Date of assessment:

Determining best interests (document the reasons for your answers on pages 3 and 4)

Q1. Have you consulted others? You must consult with all those who can speak for the individual (eg. partner, parents, legal guardian, relatives, carer, health/social care professional, health & welfare LPA, court appointee). If time allows and there is no relative, legal guardian or court appointee for anyone 16yrs or over, you must instruct an Independent Mental Capacity Advocate (IMCA)	YES	NO
Q2. Have you avoided making assumptions merely on the basis of the individual's age, appearance, condition or behaviour?	YES	NO
Q3. Have you considered if the individual is likely to have capacity at some date in the future and if the decision can be delayed until that time?	YES	NO
Q4. Have you done whatever is possible to permit and encourage the individual to take part in making the decision?	YES	NO
Q5. If this is about life-sustaining treatment have you ensured that no-one a) is solely motivated by a desire to bring about the individuals death? b) has made assumptions about the individual's quality of life?	YES	NO
Q6. Have you determined the individual's wishes and feelings, beliefs and values, including any statement made when they had capacity?	YES	NO
Q7. Has consideration been given to the least restrictive option for the individual?	YES	NO
Q8. Have you considered factors such as emotional bonds, family obligations that the person would be likely to consider if they were making the decision?	YES	NO

Q9. Having considered all the relevant circumstances, what is the decision/action to be taken in the best interests of the individual?

Please record summary in the patient's notes how and why you came to this best interests decision (eg. risks, benefits) Entry in patients notes dated: ……../……./……..

Signature: **Date**

MCA 1

Every individual adult should be assumed to have the capacity to make a decision unless it is proved that they lack capacity. An assumption about someone's capacity cannot be made merely on the basis of a patient's age or appearance, condition or aspect of his or her behaviour. For babies and young children it can be assumed they do not have capacity. You are completing this form because you are uncertain if the individual identified below has mental capacity to make a particular decision

Stage 1: Assessment of capacity should only proceed if an impairment or disturbance of mind or brain is suspected.

Stage 2: You now need to complete your assessment and form your opinion as to whether the impairment or disturbance is sufficient to indicate that the patient lacks the capacity to make this particular decision at this moment in time.

Signature: the person completing the assessment should sign.

MCA 2

Any act done for, or any decision made on behalf of a person who lacks capacity must be done, or made, in that individual's best interests. To do this, use this checklist. The Mental Capacity Act (2005) requires that all carers follow specific steps to decide the best interests on any individual aged 16 years and above who has either lost capacity or has never had capacity, for that decision. Below 16 years the MCA is not a legal requirement but the MCA best interests framework is a useful guide at any age, and parents will be heavily involved in the decision making process. In babies and young children the decision is one made by those present in the child's best interests. For older children and adults, the aim is not to decide for the individual, but to estimate what decision they would have made if they had capacity for this decision.

People taking part: there is legal duty to consult with others. Apart from the clinical staff, if there are no other carers, partners, relatives or LPA who know the individual, you must consider instructing an Independent Mental Capacity Advocate (IMCA) and receive a report from an IMCA. The meeting may have to be deferred until the IMCA is arranged. If the treatment is urgent the decision must be made by the clinicians present at the time.

Signature: the senior clinician responsible for the individual's care (and who was present at the best interests meeting) should sign this section.

Additional information and notes for MCA2

List all those consulted for the best interests decision

State who is present at a meeting or how they were consulted (eg. telephone)

PTO

Additional information and notes for MCA2 (add as much text as needed)

Q1. What are the views of all those who have been consulted?

Q2. Explain how you have avoided making assumptions merely on the basis of the individual's age, appearance, condition or behaviour?

Q3. Explain why the individual will not regain capacity or why any delay would cause additional harm.

Q4. Explain how you have supported the individual to be involved, or explain why this was not possible.

Q5. Where the decision relates to life sustaining treatment, explain how you ensured that the decision has not been motivated in any way by a desire to bring about their death and that no-one has made assumptions about the individuals quality of life?

Q6. Explain how you identified all the issues the individual would have taken into account when making the decisio?

Q7. Explain why the chosen care option is the least restrictive option

Q8. Have you considered factors such as emotional bonds, family obligations that the person would be likely to consider if they were making the decision?

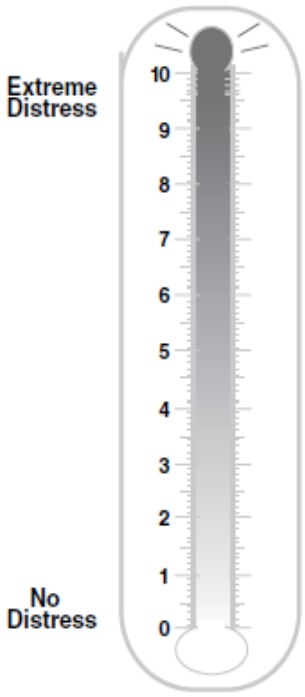
On what issues did everyone agree?

Are there any areas of disagreement?

Explain the rational for the care decision

Appendix 5: Psychological Distress Thermometer

During the past week,
how distressed have you been?



Please indicate your level of distress on the thermometer and check the causes of your distress.

Practical problems
__ Housing
__ Insurance
__ Work/school
__ Transportation
__ Child care

Family problems
__ Partner
__ Children

Emotional problems
__ Worry
__ Sadness
__ Depression
__ Nervousness

Spiritual/religious concerns
__ Relating to God
__ Loss of faith
__ Other problems

Physical problems
__ Pain
__ Nausea
__ Fatigue
__ Sleep
__ Getting around
__ Bathing/dressing
__ Breathing
__ Mouth sores
__ Eating
__ Indigestion
__ Constipation/diarrhea
__ Bowel changes
__ Changes in urination
__ Fevers
__ Skin dry/itchy
__ Nose dry/congested
__ Tingling in hands/feet
__ Feeling swollen
__ Sexual problems

BRIEF SCREENING TOOL AND PROBLEM LIST

Identification of possible areas of support

In order for the patient to be appropriately supported it is essential that any areas of psychological distress are identified at the earliest opportunity.

Emotional and family support

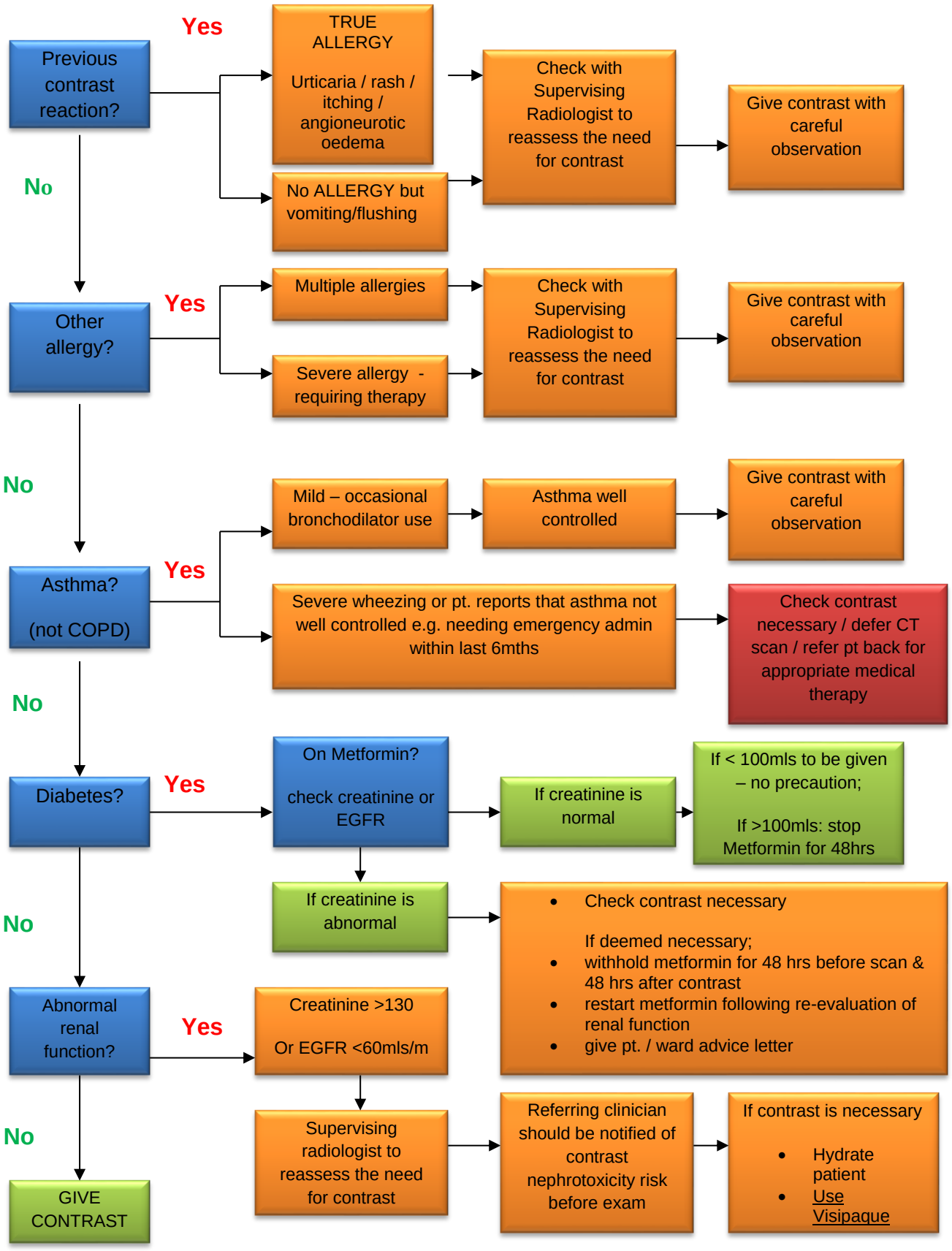
The diagnosis of MSCC in patients with known cancer can cause significant psychological distress for them and their families and carers. Primary presentation with MSCC combines the distress of new neurological disability with the diagnosis of a life limiting diseases. It is important therefore that all healthcare professionals are alert to the potential psychological support needed.

Supporting patient decisions

The options for treating spinal metastases and MSCC are numerous, and the decisions about best treatment are complex. Neurological ability at the time of treatment is the prime consideration, but the nature and technical aspects of optimal treatment depend on the behaviour of the primary cancer including its effects on the spinal column, the patient's general health, and their expected longevity. Patients may be poorly informed prior to diagnosis and overwhelmed on diagnosis especially if there is an urgency to treat and a need to transfer for definitive treatment.

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.

CHECKLIST PRIOR TO ADMINISTRATION OF INTRAVENOUS CONTRAST MEDIUM



Appendix 7: Hospice/Community Teams and Hospital Palliative Care Teams

Section	Hospice/Community Team	Contact number
1. Wirral Chester & Cheshire	Hospice of the Good Shepherd	01244 851091
	Chester Hospital	01244 366 086
	Ellesmere Port and Neston Community Palliative Care Team	01244 340 631
	Chester City and Rural	01244 340 631
	Wirral Hospice St John's	0151 482 8989
	Wirral Community Specialist Palliative Care Team	0151 328 0481
	Wirral Hospital Specialist Palliative Care Team	0151 604 7433
2. Liverpool	Aintree Community Palliative Care Team	0151 295 3676
	Aintree Hospital Palliative Care Team	0151 529 2098
	Woodlands Hospice (inpatients)	0151 529 6056/8674
	Woodlands Hospice (Day Hospice)	0151 529 2299
	Sefton Community Palliative Care Team	0151 475 4015
	Marie Curie Hospice	0151 801 1400
	RLBHUT Pallaitive Care Services	0151 706 2274
	Cardiothoracic Palliative Care Services	0151 293 2247
	Liverpool Women's Palliative Care Services	0151 702 4186
	Community Palliative Care Team	0151 295 3676
3. Southport, West Lancs & Formby	Queenscourt Hospice	01704 544 645
	Southport Palliative Care Team Hospital/Community	01704 704 540
4. St Helen's & Knowsley	Willowbrook Hospice	0151 430 8736
	Whiston Hospital Palliative Care Team	0151 290 4266
	St Helens and Knowsley Community Palliative Care Team	0151 431 0156
5. Warrington	Warrington Community Palliative Care Team	01925 570 781
	Halton & St Helens Community Palliative Care Team	01928 714 927
	Warrington & Halton Hospital Palliative Care Team	
	St Rocco's Hospice	01925 575 780
	Halton Haven Hospice	01928 712 728
6. Wigan & Leigh	Wigan & Leigh Hospice	01942 525 566
	Wigan Community Palliative Care Team	01942 525 566
	Wigan Hospital Palliative Care Team	01942 822 009
7. Cheshire South, Mid & East	St Luke's Hospice	01606 551 246
	Community Macmillan Nurse, South & Mid based St Lukes	01606 544 155
	East Cheshire Hospice	01625 665 683
	East Cheshire Community Palliative Care Team	01625 663 177
8. Wales East, Central & West	St Kentigern Hospice	01745 585 221
	St David's Hospice	01492 879 058
	North Wales Community Palliative Care Team	01745 448 720
	Nightingale House	01978 316800
	Flintshire and Wrexham Community Palliative Care Team	01978 727 177
	West Wales Anglesey	01286 662 775

9. Isle of Man	Isle of Man Hospice	01624 647 406
10. Preston	St Catherine's Hospice, Preston	01772 629 171

Appendix 8: Patient Handover Information from External Care Environment

PATIENT HANDOVER INFORMATION FROM EXTERNAL CARE ENVIRONMENT

(NB – it is the responsibility of the radiotherapy team to complete this form and checklist)

Referring Hospital :		Patient Name:
Ward:		
Contact Name /Number:		NHS No:
CCC Consultant:		Date of Birth:

Ambulance booking ref: **Arrival time:** **Collection time:**

Return journey booked – Yes ☐ No ☐ (ensure this is arranged on arrival at CCC)

Treatment Site						
Method of transfer	Chair ☐ Stretcher ☐					
Transfer checklist (reiterate we **will not** accept patient without these onto Sulby radiotherapy holding area)						
Medication ☐ Prescription Chart☐ Medical Notes☐ Escort (as required) ☐	Name of staff on ward advised:	Sign that this has been discussed and agreed: Name: Designation:				
Capacity Issues? (if yes-patient needs relative attendance to support consent						Yes □ No □
Can patient take medication orally?	Yes □	No □ PEG / I.V. / Sublingual				
Does the patient have any allergies?	Yes □ please state-					No □
Is patient having regular observations?	Yes □ how often -					No □
If Yes – current MEWS score: Date/time of last observations:	Blood Pressure (Systolic >90)	Pulse (<120bpm)	O^2 Sat (>90%)			
Diabetic: (If yes testing must be completed on arrival to CCC)	Yes □ Managed by- diet □ tablet □ injection □ Last Blood glucose result: Date time taken:					No □
Dietary Needs (please state)						
Is oxygen required:	Yes □ Dose:					No □
Does the patient have any pressure damage?	Yes □ state areas: Mattress reqd:					No □
If yes please state Waterlow score						
Bladder Status:	Nephrostomy	Catheterised	Incontinent	Using urinal	Self-care	
Bowel Status:	Stoma	Incontinent	Abscesses	Bed pan	Slipper pan	Self-care
Infection control alerts:	MRSA □	C.Diff □	VRE □	CDE □		
Tracheostomy?	Yes	No				
Patient allowed to mobilise in dept?	Yes □ No □ Falls risk score (state tool used): M&H Issues:					
Spinal stability assessed & documented	Yes	No				
Additional Information:						