The Christie
NHS Foundation Trust

GUIDELINES FOR INVESTIGATION

THE CHRISTIE, GREATER MANCHESTER & CHESHIRE

Procedure Reference:		Version:	*V6*
Document Owner:	Dr V. Misra	Accountable Committee:	*Acute Oncology Group* *Network MSCC Group*
Date Approved:	*November 2013*	Review date:	*January 2023*
Target audience:	*All Clinicians*		

1. Referral

After full neurological assessment with a clear clinical intention to treat, clinical suspicion of cord compression requires urgent investigation and treatment.

2. Imaging choice

a) MRI whole spine: Gold standard imaging for diagnosis MSCC, the least invasive and most comfortable test.

Note MRI contraindicated in the following:

Absolute – incompatible cardiac pacemaker
intracranial aneurysm clips
cochlear implant
intraorbital metallic foreign bodies

Relative - metal fragments or shrapnel injuries anywhere in the body
recent major surgery
metal implants e.g. joint replacements, Harrington rods or any type of implant
artificial heart valves
claustrophobia
Discuss relative contraindications with radiographer / radiologist

b) CT: this is more sensitive than conventional radiographs and an option for a patient ineligible for MRI. CT whole spine with thin slices and saggital reconstruction should be requested.

c) Conventional radiographs: not indicated

d) Myelography: not indicated

3. Where should scan be performed?

7 day OP Pathway: Use this pathway for patients with low level of clinical suspicion to rule out or confirm bone metastases, early or actual MSCC. Warn the patient to report any significant change in pain or neurology (safety net red flags) immediately to GP, CNS, Christie Hotline, etc or attend A&E (see alert guide)

Urgent 24 hour Pathway:
Request urgent MRI of the WHOLE SPINE to be done at the patients local or admitting hospital on the same day or within 24 hours of clinical suspicion and ensure timely reporting.
MRI scan OOH (Out of hours):

a) Patients to be scanned at their local or admitting hospital – (Salford Royal Radiology department does not accept imaging requests from anywhere outside Salford). See Radiology provision document within this guidelines section.
b) If neurology is stable then appropriate to scan on Monday – (i.e. patient remains at their DGH). If neurology is changing and scan cannot be done locally, then referring medical consultant at referring DGH to discuss with RMO at SRFT (via switchboard 789 7373 bleep 3693). If Emergency Assessment Unit (EAU) at SRFT accept patient, they will request MR scan
c) A bed should be kept at referring DGH so that patient can be transferred back for on-going social/medical treatment (this should be clarified by EAU Consultant when accepting referral)

4. Scan timeframe and communicating findings

a) During the working week, it is recommended that each department keeps a daily slot allocated for suspected cord compression on the MRI lists. Preferably in the morning.
b) MRI scans should be performed within 24 hours of referral during the working week
c) The scan report should be available in writing (in patients notes or on PACS) as soon as possible
d) Where an emergency MR is requested to assess for MSCC, the referring clinician should read the verified report as a matter of urgency and act upon the findings. If an unexpected finding of MSCC, or 'high risk of MSCC' is found in a CT or MRI scan by reporting radiologist, this should be communicated urgently to the referring clinician in person.

5. MRI technique

a) Patient preparation: Patient to be kept on flat bed rest and log rolled during the journey to and from the MRI department and during transfers between the trolley and MRI couch
b) Coil: Phased array spine coil, coverage CI down to the lower sacrum
c) Sequences:
T1W sagittal
STIR sagittal
Transaxial imaging through focal lesions (either T1W or T2W)
d) Intravenous Gadolinium administration:
Not routinely applicable for cord compression. If the spinal cord / cauda equina appear thickened on the protocol sequences, administer Gadolinium to detect meningeal disease.

6. CT Protocol

a) Spiral or multislice
b) Thin section coverage of the whole spine will entail a high radiation dose and the examination may have to be tailored somewhat to the clinical areas of abnormality
c) Intravenous contrast should be administered
d) Scan parameters depends on equipment available
e) Reformats in the sagittal plane required.

7. Staging CT Chest/Abdomen and Pelvis

a) Indicated for patients with no known primary
b) Indicated for patients with a good Tokuhashi score being considered for surgery if they do not have an up to date scan within the last 3 months

For more information and protocols on management of MSCC see:
http://www.christie.nhs.uk/MSCC

CONSULTATION, APPROVAL & RATIFICATION PROCESS

All documents must be involved in a consultation process either locally within a department or division or throughout the trust at relevant board/committee meetings before being submitted for approval.

VERSION CONTROL SHEET

Version	Date	Author	Status	Comment
V1	Aug 2007	Vivek Misra	Creation	
V2	Dec 2010	Vivek Misra Lena Richards	Update Review	Updated document Reviewed content
V3	Nov 2013	Lena Richards Vivek Misra	Update Review	Updated document Reviewed content
V4	Jan 2016	Lena Richards Vivek Misra	Review	Updated document
V5	Jan 2017	Lena Richards	Update	Communication of radiology reports added
V6	Sept 2020	Lena Richards Claire Shanahan Rohit Kochhar	Update	7-day OP pathway