PROTOCOL FOR ASSESSMENT AND MANAGEMENT OF PATIENTS REQUIRING SPINAL BRACES OR HARD CERVICAL COLLARS DUE TO UNSTABLE SPINE / OR AT RISK OF

THE CHRISTIE, GREATER MANCHESTER & CHESHIRE

Procedure Reference:		Version:	*V4*
Document Owner:	Dr. V. Misra	Accountable Committee:	*Acute Oncology Group Network MSCC Group*
Date Approved:	*November 2013*	Review date:	*January 2020*
Target audience:	*All Clinicians*		

Collar and brace supply:

All patients with suspected MSCC in the cervical spine and / or instability within any area of the spine require stabilisation with a cervical collar (C2-C7) or other appropriate external bracing for Thoracic/Lumbar spine (CTO/TLSO/CTLSO/LSO). This should be provided by the orthotics departments or rehabilitation staff in local trusts. This document mainly refers to cervical collars; however, this guidance also applies to spinal braces for the thoracic and lumbar spine.

- Aspen Vista collars support the spine from C1-C7, and Miami J collars from C2–C5, however, C1 lesions may require Halo fixation. C6 to T2 lesions may require Aspen Vista CTO extension
- T3-T7 unstable lesions may require CTLSO
- T8-S1 unstable lesions may require TLSO
- L1-S1 unstable lesions may require LSO

At the Christie NHS Foundation Trust the following criteria for fitting of collars apply:

- Patients already at The Christie will be supplied and fitted with Aspen Vista (lesions C1-C7) or Miami J collars (lesions C2–C5). Refer patients to the Physiotherapy Department from 8am – 4pm (Mon-Fri) or the Advanced Nurse Practitioners (ANPs) on bleep 12002 from 4pm – 9.30pm. Overnight and weekends (9.30pm – 8am) referral should be made to the on-call physiotherapists via switchboard for initial fitting (stock of collars available 24/7). If problems exist with collar fit and comfort, orthotics should be contacted for specialist assessment and collar provision (GAIN 2014) – For Christie patients, if long-term use of bracing required, patients should be referred to their local orthotics department for assessment and bespoke provision to ensure support is available locally.
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- In thoracic/lumbar MSCC patients, spinal bracing may be required when mobility is allowed. This will involve consultation between medical staff and physiotherapy/OT staff and may require specialist orthotic assessment and fitting (GAIN 2014). These braces are ordered on a bespoke basis.
- Braces (CTO/CTLSO/TLSO/LSOs) to be ordered by the Rehabilitation Unit from manufacturers as necessary (Mon–Fri 8 am-4 pm). Patients require these to be measured and ordered on a bespoke basis and therefore are to remain on flat bed rest / log rolled until appropriate brace can be fitted or as guided by the consulting and therapy teams.
- Collars and CTO braces should be provided with a spare set of pads to allow washing to maintain hygiene.

Other organisations:

- Arrangements for patients in other organisations should be discussed with the relevant clinicians, rehabilitation staff and orthotics departments.

Considerations for collars and spinal bracing: (GAIN 2014)

- Patients with suspected or unstable MSCC or awaiting surgery
- Patients with unstable MSCC but not suitable for surgery
- Patients with unstable MSCC but not suitable for surgery, with significant preservation of power and sensation, for protection of neurology
- Patients with significant mechanical pain to reduce pain
- Post-operative spinal surgery patients as per consultant recommendation

Referral:

- The referral for assessment for a brace or cervical collar must be made by a **Registrar or above** and must be documented in the medical notes.
- Documentation in the medical notes must include: Documentation of spinal instability, as per the Spinal Stability protocol – www.christie.nhs.uk/MSCC.

Care of Collars and braces:

- Once the hard collar or brace has been fitted by the orthotist, physiotherapist or ANP, general care will be managed by the ward staff, who have received training in fitting of the collar/brace, i.e. removing and replacing for skin care and hygiene. Training on application / care of the collar / brace will be provided by the orthotist or physiotherapist looking after the patient on initial fitting. For support and advice please refer to the **'Possible reasons for pain / discomfort in a hard collar' at the bottom of this document. If unable to resolve** contact the Physiotherapy Department on ext. 3795 or ANPs on bleep 12002.
- All patients who are prescribed with a collar/brace require routine follow up by clinical team to review the need for continued use of this. Brace prescription should include rationale for brace (spinal stability/pain control), duration of use (24 hours/day / for mobilising only).
- If replacement pads or braces/collars are required please contact the primary fitting team. At the Christie this will be the physiotherapy department (0161 4463795)

Infection Control:

- If a collar has been tried on a patient and was not suitable due to size, fit, etc., the collar can be re-used after cleaning with a 2% chlorhexidine gluconate (CHG):
  Sani-cloth CHG 2% (in 70% alcohol wipe) or
  Clinell
- When the collar (plastic and padding) has been cleaned, it must be completely dry prior to storing.

Nursing Management:

(Patients with unstable cervical spine while awaiting assessment for hard cervical collar)

- All patients should be nursed flat with neutral spine alignment (including 'log rolling' or turning beds) until bony and neurological stability is ensured and cautious remobilisation may begin.

- Positioning for eating: As the patient must be nursed flat and is unable to use arms due to the spinal precautions, a straw should be used in supine for feeding / drinking and assistance given by nursing staff for administration of medication. (Please refer to nursing care plan)

- Transferring the patient: Spinal alignment must be maintained throughout the transfer. A spinal board or pat slide may be used. Transfer patient by positioning the board / slide under the sheet and slide patient from bed across to trolley using 4-5 people, depending on the size and general health of the patient.

- Toileting: Patients must use a slipper pan or incontinence pad for toileting, and if collar has not been fitted, a spinal turn procedure must be used in order to remove pan or change the pads. If a spinal turn cannot be performed, or a collar fitted, then the patient must not be moved. This must be documented by nursing staff. At this point, the patient's spinal stability takes priority. *Catheterisation may need to be considered if the patient is being nursed flat without a collar. This should be discussed with the medical team.*

- It is **contraindicated** for patients to mobilise at this stage.

In order to turn a patient with unstable cervical spine, it is essential that spinal alignment is maintained. Without a collar this can only be achieved by performing a full spinal turn. This procedure requires 5 people to perform, and should be led by a competent member of the multi-disciplinary team. (Log rolling training is part of Manual Handling training)

Management of patients in a hard collar:

- The Aspen Vista and Miami J Collars are the hard collars of choice within The Christie NHS Foundation Trust. Any hard collar meeting the same standards and specifications is acceptable.

- The collar should ideally be applied / changed / removed with the patient in supine, by two people, with a 'head hold' to maintain alignment. Sometimes a sitting position may be more practical if this has been agreed with the consulting and therapy team following assessment of clinical stability. At least one member of staff will have received training in fitting of collar.

- Once the collar is fitted the patient can resume all normal activities, without spinal precautions, as long as documentation of spinal stability, with the collar in situ, has been made in the medical notes by the appropriate medical team. Mobilisation will be guided by the physiotherapy team as per mobilisation guidelines. A 5 person spinal turn should still be performed and flat bed rest continue until the appropriate documentation has been made regarding spinal stability.

- During radiotherapy the collar may need to be removed. This must be done by radiotherapy staff fully trained in collar management. Spinal alignment must be maintained in flat supine lying while the patient is not wearing the collar. (At the Christie, the physiotherapy team can be contacted between 8am – 4pm Monday to Friday on bleep 12527 should any queries or support be required for removal / refitting of braces.)

- All patients who are prescribed with a collar/brace require routine follow up by clinical team to review the need for continued use of collar. Collar/brace prescription should include rationale for collar (spinal stability / pain control), duration of use (24 hours/day / for mobilising only).

- **Very occasionally a patient may choose not to wear a cervical collar despite advice from their oncology team. This is ultimately the patient's decision, but it is essential that they have made a fully informed choice. Therefore, if this situation arises, then the appropriate Registrar or above must be contacted immediately in order to discuss this with the patient. The outcome of the discussion must be *fully documented* in the medical notes and the physiotherapist and nurse in-charge of the ward made aware.**

Possible reasons for pain / discomfort in a hard collar:

- Check the position of the collar on the patient, ensuring that the padding extends beyond the plastic edges. This must only be performed by members of staff who have had previous training on fitting of collars. NB: 2 people are required to adjust / check the position of the collar.

- If routine skin care (see SCC nursing plan) has been observed and the appropriately sized collar had been fitted the patient should not develop pressure areas. If pressure areas do occur despite this, then this type of collar may not be suitable for the patient. Please contact the Physiotherapy Department or ANP for reassessment. For patients attending as an outpatient or transferring daily from another hospital then a referral should be made immediately to the Orthotics Department at the patient's local hospital for assessment for a different type of collar.

- The central button on the Aspen Vista Collar or screws on the Miami J collar can be adjusted for comfort. This should only be undertaken by a member of staff who has been fully trained in collar management. **No responsibility can be taken by any staff for adjustments made to the collar by patients or carers.**

Skin Care:
Proper collar hygiene and maintenance is the best line of defence to prevent collar related skin breakdown.

- **Cleaning Instructions:**
  Wash pads and wipe shell with mild facial soap and water

Rinse pads
Wring out water in towel and lay pads to dry
Attach replacement pads

- **Skin Assessment:**
  Skin should be assessed every shift and prn
  Skin cleaned
  Appropriate cream applied if indicated
  Pads changed / cleaned once/day and prn
  Pressure, moisture, head, dirt – lead to skin breakdown.
  N.B. Keep pads clean, dry and free of debris

- **Document:** (nursing chart)
  Skin care and pad replacement
  Skin integrity under collar / action taken
  Size and fit of collar
  Maintenance of stability and neck alignment

For Miami J Collars, please refer to the Össur UK Ltd. Miami J Collar Competency interactive training course available on the online education forum 'competency program' through the following link: http://www.ossuracademy.net/miamijcomp/

References:

- West of Scotland Cancer Network (2007). *West of Scotland Guidelines for Malignant Spinal Cord Compression.* Scotland: NHS West of Scotland Cancer Network. (Online). Available: http://www.beatson.scot.nhs.uk/content/mediaassets/doc/west_of_scotland_mscc_guidelines.pdf (16/9/13).

- National Institute for Health and Care Excellence (2008) *Metastatic Spinal Cord Compression*: *Diagnosis and management of patients at risk of or with metastatic spinal cord compression.* Cardiff: National Collaborating Centre for Cancer, cg75. (Online). Available: http://publications.nice.org.uk/metastatic-spinal-cord-compression-cg75 (16/9/13).

- Kilbride L, Cox M, Kennedy C, Lee SH and Grant R (2010) Metastatic spinal cord compression: a review of practice and care. *Journal of Clinical Nursing,* **19**, pp.1767-1783.

- Fourney DR, Frangou EM, Ryken TC, et al. (2011) Spinal Instability Neoplastic Score: An Analysis of Reliability and Validity from the Spine Oncology Study Group. *Journal of Clinical Oncology,* **29** (22): 3072-3077.

- GAIN (Guidelines and Audit Implementation Network) - Northern Ireland Cancer Network (NICaN) MSCC Allied Health Professional (AHP) sub group (2014) Guidelines for the Rehabilitation of Patients with Metastatic Spinal Cord Compression (MSCC), Assessment and Care Provision by Occupational Therapists and Physiotherapists. ISBN Number:978-1-906805-28-9.

- Lee SH, Cox KM, Grant R, Kennedy C and Kilbride L (2012) Patient positioning (mobilisation) and bracing for pain relief and spinal stability in metastatic spinal cord compression in adults. *Cochrane database of Systematic Reviews*, issue 3, art no.: cd007609.

- Lee SH, Grant R, Kennedy C, Kilbride L (2015) Positioning and spinal bracing for pain relief in metastatic spinal cord compression in adults (Review). *Cochrane database of Systematic Reviews,* 2015 Sep 24:9:cd007609.

***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	Lena Richards	Creation	
V2	Dec 2010	Lena Richards Kristina Coe	Update Review	Updated document Reviewed content
V3	Nov 2013	Lena Richards Vivek Misra Kristina Coe	Update Review Review	Updated document Reviewed content Reviewed content
V4	Jan 2016	Lena Richards Kristina Coe	Update Update	Updated document Updated document
V5	Jan 2018	Kristina Coe	Review	Updated document