

Advanced Clinical Practitioner Led Radiotherapy Assessment for Metastatic Spinal Cord Compression and Metastatic Spinal Disease

Procedure Reference:		Version:	V1
Document Owner:	Clare Greenbaum	Accountable Committee:	<i>Lead Clinician at The Christie at Salford</i>
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Target audience:	<i>All Clinicians & ACPs</i>		

INTRODUCTION

An Advanced Clinical Practitioner (ACP) led assessment in MSCC and metastatic spinal disease at The Christie @ Salford offers:

- Improved access to urgent radiotherapy for patients where spinal surgery has been excluded
- Allows for seamless care with Salford Royal NHS Foundation Trust Spinal Team
- Reduces the need to transfer patients to Withington site
- Reduces pressures on radiotherapy services including Withington and on call teams
- Optimisation of wider skills
- Improved experience for patients and workforce involved
- Improved patient quality and safety

The purpose of this document is to identify the expected standards required by the organisation in ACP led clinical assessment in MSCC and metastatic spinal disease requiring radiotherapy at The Christie @ Salford.

Policy covers all ACPs who have followed the training outlined in this document and achieved assessed competencies to undertake ACP led assessment in patients with MSCC or metastatic spinal disease who require radiotherapy at The Christie @ Salford in accordance with their job description and KSF outlines.

SCOPE OF ACP PRACTICE

Qualification, Training and Competence

Qualification

- Minimum 5 years post registration experience
- MSc in Advanced Clinical Practice
- ACP qualification must include clinical examination & diagnostics modules
- Registered NMC

Training

- ACP must have undergone 6 months of observation and supervised practice with Clinical Oncology consultant with dedicated sessions in acute



oncology at Salford Royal NHS Foundation Trust and The Christie @ Salford. During this period, the ACP should keep a log of all patients assessed for urgent radiotherapy.

- ACP must have completed Advanced Competency Framework (see Appendix B) including portfolio of evidence/ISHAR/Reflective/literature reviews
- Consent training as per Trust policy

Competence

- Successful completion of ACP Advanced Competency Framework (Appendix B) as outlined in section 5.12
- 10 Assessed cases
- Annual audit /peer review

Patient Referral

Patient Referral – See appendix A

- Referral triaged by MSCC co-coordinator / on call clinical oncology trainee
- Inpatient at SRFT with:
 - Impending or confirmed MSCC, not suitable for surgery
 - Impending or confirmed MSCC, declining surgery
 - Spinal metastases with no evidence of MSCC but poorly controlled pain
- Decision to treat with radiotherapy confirmed by primary consultant or on call clinical oncology team and documented by either MSCC coordinator or on-call team on Clinical Web Portal (CWP).
- MSCC co-ordinator/on-call clinical oncology team to discuss patient with ACP at The Christie @ Salford
- On-call team to submit radiotherapy booking form
- ACP assessment as per MSCC protocol
- Decision to treat or not to treat following ACP assessment
- ACP to consent patient
- On-call team to (remotely) plan and verify patient's radiotherapy treatment, including IRMER prescription.

Patient Selection:

Inclusion criteria

- Followed MSCC pathway via co-ordinator / on call clinical oncology trainee
- Known malignancy
- Histologically or radiologically confirmed primary malignancy
- Radiologically confirmed metastatic spinal disease +/- MSCC/cauda equina compression
- Decision to treat confirmed by clinical oncology consultant or trainee (on call or primary teams)
- Senior clinician satisfied that remote planning is appropriate
- Surgery has been excluded

Exclusion Criteria

- No radiologically confirmed primary site
- Surgery is indicated



- Previous XRT, resulting in treatment overlap or re-treat
- Remote planning unavailable

Radiotherapy Prescribing

- Prescribing completed by primary or on call clinical oncologist
- Fractionation should be confirmed on booking form

Audit of practice and process

Audit of practice

- Annual peer review as per PDR process / random selection of cases
- Annual OSCE
- Discussion regarding reported incidents
- Audit of impact of service and patient experience

Continuing Professional Development (CPD)

As per the Health and Care Professions Council registration standards, all radiographers must demonstrate evidence of CPD within their scope of practice.

CONSULTATION, APPROVAL & RATIFICATION PROCESS

This policy has been developed in collaboration with the Clinical Leads for i) Acute Oncology at SRFT, ii) MSCC sub-group radiographer, clinical director of radiotherapy, radiotherapy clinical services manager and Networked services division. Overall approval of this policy will be by the Patient Safety committee and ratified by the document ratification committee.

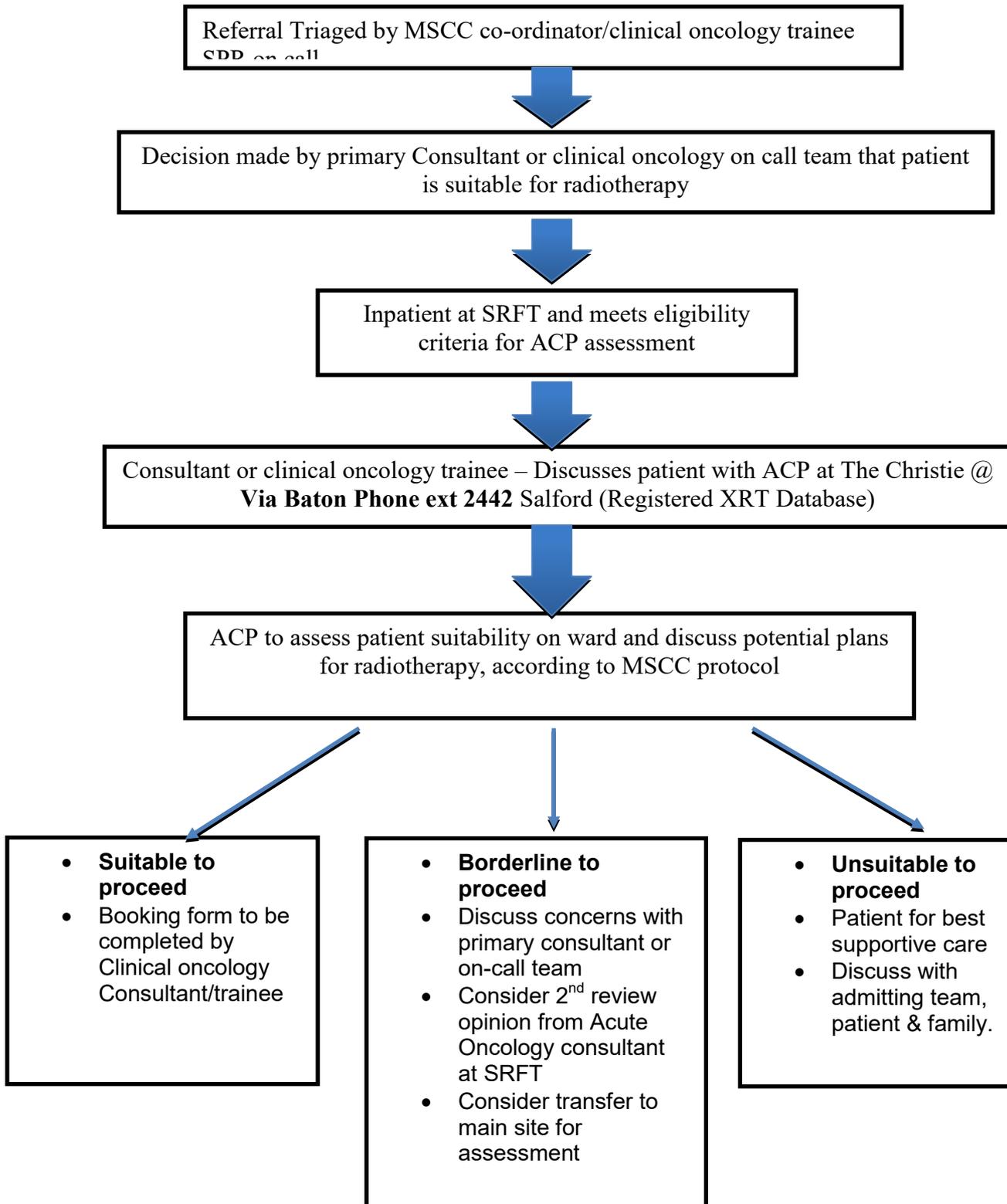
VERSION CONTROL SHEET

Version	Date	Author	Status	Comment
V1	Apr 2020	Clare Greenbaum	Creation	



APPENDICES

The Christie @ Salford MSCC (known and unknown primary disease) – Advanced Practitioner (AP) Assessment & Treatment Pathway



Appendix B - Advanced Clinical Practitioner – Advanced Competencies for Radiotherapy in Metastatic Spinal Cord Compression - Adapted from MSCC Policy (The Christie 2020)

Able to understand and demonstrate with supporting evidence the following

	Evidence to support (ISHAR, reflection, literature review,	Self Assessment Score	Supervised Assessment Score
Indications for Radiotherapy: <ul style="list-style-type: none"> • Cancer diagnosis • Metastatic spinal cord or cauda equina compression • Following clinical triage pathway • Following spinal surgery pathway for MSCC unless then patient has had previous radiotherapy to the same level • Not suitable for surgery 		0/1/2/3/4	0/1/2/3/4
Aims of Radiotherapy: <ul style="list-style-type: none"> • To reduce pressure on cord through tumour shrinkage, and to achieve local tumour control at this site. • To maximise patient’s mobility. Can lead to partial or complete resolution of neurological symptoms and signs and may prevent further deterioration • May relieve spinal or radicular pain 		0/1/2/3/4	0/1/2/3/4
Relative contraindications to radiotherapy: <ul style="list-style-type: none"> • No histological diagnosis of cancer • Relatively radio resistance tumour, if surgery is an option (renal carcinoma, sarcoma, melanoma) • MSCC is due to vertebral displacement / spinal instability • Previous radiotherapy to same spinal site • Poor general condition due to other major and irreversible comorbidities • Prognosis likely to be less than 1-2 months (The Christie MSCC Policy 2020) 		0/1/2/3/4	0/1/2/3/4
Indications for seeking a surgical opinion: <ul style="list-style-type: none"> • Medically fit for a general anaesthetic • If patient are expected to survive longer than 3 months • (Tokushahi score) • Have limited disease elsewhere • Have minimal neurological deficit • Have limited levels of compression Surgery is also indicated if there is:			



<ul style="list-style-type: none"> • Spinal instability and/or deformity • No tissue diagnosis • Worsening of symptoms/disease progression during /after radiotherapy • No scope for further radiotherapy to involved spinal site 			
<p>Referrals for Radiotherapy:</p> <ul style="list-style-type: none"> • All patients should be referred via MSCC co-ordinator service 0161 446 3658 • All patients will then be triaged on CWP MSCC electronic form • If triage decision for radiotherapy this will be arranged by the on-call speciality trainee in conjunction with the radiotherapy department at Withington/Salford/Oldham • MSCC coordinator/on-call team should liaise with Christie at Salford as to whether patient can be simulated and treated locally • If unable to manage locally, or eligibility criteria not fulfilled, patient should be brought to main site • Responsibility of the ACP to inform the on call clinical oncology team or primary consultant if urgent radiotherapy is indicated at weekends/bank holidays (as satellites are closed at weekends) • Aim to give radiotherapy within 24 hours of confirmed diagnosis of MSCC 			
<p>Consent Process:</p> <ul style="list-style-type: none"> • Completed Trust's consent training online • Discuss indication for radiotherapy • Discuss other options which have been excluded and why • Discuss risks of not having or delaying urgent radiotherapy treatment • Discuss potential side effects of treatment • Discuss management of side effects 			

Radiotherapy Treatment Planning

<p>Radiotherapy should be planned using reported MRI (CT if MRI contraindicated) of the whole spine</p> <p><u>Treatment volume:</u></p> <ul style="list-style-type: none"> • The field is centred on the cord compression including 1 vertebra above and below 	<p><u>Awareness of but not competent</u></p>		
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<ul style="list-style-type: none"> • Attention to the transverse axial imaging is important to ensure that any lateral or paravertebral extension is covered in the volume width • Treatment may be required to more than one level of compression • Junctional overlap with previously irradiated fields should be avoided / taken into account when deciding dose and fractionation <p>Technique:</p> <ul style="list-style-type: none"> • Treat supine using single mega voltage beam through the grid /dose max couch top • Where the depth of the field as assessed by the MRI scan, exceeds the mid plane, a parallel opposed pair arrangement in indicated • The cervical spine may be treated with a lateral opposed pair to reduce potential side effects (mucositis) 			
<p>Dose and fractionation:</p> <ul style="list-style-type: none"> • SCORAD III Trial suggests single exposure of 8Gy is as effective as 20Gy in 5 fractions in terms of neurological recovery and overall survival (Hoskin et al 2017) <p>Based on this evidence the standard recommended doses are:</p> <ul style="list-style-type: none"> • 8Gy single fraction (suitable for most patients) • 20Gy in 5 fractions (where a long prognosis is expected or there is significant soft tissue disease) <p>Prescription point:</p> <ul style="list-style-type: none"> • Dose prescribed at depth • Recommended depth is distance from the skin to the anterior edge of spinal cord or posterior edge of vertebral body as assessed on the diagnostic MR/CT scan or virtual sim scan • The depth should be assessed at the centre of the planned field 	<p><u>Awareness of but not competent</u></p>		
<p>Good prognosis patients:</p> <ul style="list-style-type: none"> • Patients who are likely to improve following radiotherapy and maintain benefit: • Estimated survival of over 3 months (assess with the Touhashi score) • Still Ambulatory • Limited and treatable disease elsewhere • These patients may benefit from fractionated treatment (2000cGy in 5 treatments) 			



<p><u>Poor prognosis patients:</u></p> <ul style="list-style-type: none"> • Patients who are unlikely to improve following radiotherapy and maintain benefit: • Estimated survival less than 3 months (assess with the Touhashi score) • Extensive untreatable disease elsewhere • Severe established neurological deficit (especially of acute onset or > 48 hours) • Treatment is unlikely to lead to useful functional improvement, but may contribute to pain relief • These patients may be treated with a single fraction of radiotherapy with single fraction of 800cGy at depth • For patients with myeloma 800-1000 cGy may be prescribed <p><u>Post operative recovery:</u></p> <ul style="list-style-type: none"> • Good prognosis patients would warrant fractionated treatment of 3000cGy in 10 fractions <p><u>Special circumstances:</u></p> <ul style="list-style-type: none"> • Patients which may warrant alternative fraction schedules: • Solitary plasmacytoma : 40-50 cGy in 20-25 fractions • Lymphoma: primary radiotherapy for chemo resistant or low grade lymphoma • Post chemo radiotherapy for high grade lymphoma 30cGy in 15 fractions 			
<p><u>Retreatment: (RCR 2020)</u></p> <ul style="list-style-type: none"> • Evidence of benefit of retreatment after initial benefit from radiotherapy for recurrent MSCC • Absolute max treatment dose has not been established • Cumulative BED (initial & reirradiation) of 120 Gy₂ appears to be safe & effective • Effects of previous radiation, time to develop motor deficit, presence of visceral metastases and performance status have impact on effectiveness of repeat treatments but schedule of treatment does not. • Re irradiation should be considered for patients with good performance status, absent or controlled visceral metastases and slow development of motor deficit • 8 Gy single exposure or 20 Gy in 5 daily fractions prescribed at depth should be considered as long as the cumulative BED <120 Gy₂ 	<p><u>Awareness of but not competent</u></p>		
<p><u>General care of patients receiving radiotherapy:</u> <u>Steroid management:</u></p> <ul style="list-style-type: none"> • all patients with confirmed MSCC should 			



<p>have dexamethasone 16mg daily before the first treatment with PPI for gastric protection – minimises additional nerve compression from increased inflammation/oedema</p> <ul style="list-style-type: none"> • Steroid protocol for reduction • Steroid induced diabetes management policy <p>Pain relief:</p> <ul style="list-style-type: none"> • Needs to be adequate so they can lie flat • Breakthrough analgesia • Entonox <p>Anti-emetics:</p> <ul style="list-style-type: none"> • Ondansetron 8mg PO should be given 30 minutes prior to treatment if lower dorsal or lumbar spine is being irradiated <p>Mucositis/oesophagitis:</p> <ul style="list-style-type: none"> • soluble paracetamol advised 			
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