Spinal Cord Compression Management in Cancer Patients

This practice algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. Moreover, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers. This algorithm should not be used to treat pregnant women.

### Suspected spinal cord compression (severe pain or abnormal neurology, or incidental finding on MRI - not intended for traumatic injuries. If in emergency center, triage patient as emergent.)

#### Pain and/or neurological symptoms with progression within 48 hours?

<table>
<thead>
<tr>
<th>Yes</th>
<th>MRI supports spinal cord compression?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>● Reconsider neurosurgery</td>
</tr>
<tr>
<td></td>
<td>● Palliative care for symptom control</td>
</tr>
</tbody>
</table>
| No  | ● Further work-up by treating physician
|     | ● Notify Neurosurgery if suspected spinal instability |

#### Tissue diagnosis if clinically indicated

<table>
<thead>
<tr>
<th>Yes</th>
<th>Chemosensitive disease?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Primary team to treat with chemotherapy</td>
</tr>
<tr>
<td>No</td>
<td>Surgery appropriate?</td>
</tr>
<tr>
<td>Yes</td>
<td>Radiation therapy appropriate?</td>
</tr>
<tr>
<td>No</td>
<td>Post-treatment follow up</td>
</tr>
</tbody>
</table>

#### Consider use of Epidural Spinal Cord Compression (ESCC) radiographic classification for cord compression assessment (see Appendix B)

1. Consider use of Frankel Classification to assist with patient’s current status (see Appendix A)
2. Use of steroids in undiagnosed lymphomas is not recommended
3. CT scan if not eligible for MRI
4. For instances where patient is already receiving chemotherapy, the oncologist will advise on whether treatment should be continued/discontinued/delayed
5. Consider radiosensitivity of tumor
6. Consider use of Epidural Spinal Cord Compression (ESCC) radiographic classification for cord compression assessment (see Appendix B)

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Approved by the Executive Committee of the Medical Staff on 02/28/2017

Department of Clinical Effectiveness V3
## APPENDIX A – Frankel Classification

<table>
<thead>
<tr>
<th>Grade</th>
<th>Status</th>
<th>Sensory Function Below Level of Compression</th>
<th>Motor Function Below Level of Compression</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Paraplegia</td>
<td>No sensation</td>
<td>Complete paralysis (no function)</td>
</tr>
<tr>
<td>B</td>
<td>Sensory function only</td>
<td>Some sensation</td>
<td>Complete paralysis (no function)</td>
</tr>
<tr>
<td>C</td>
<td>Non-ambulatory</td>
<td>-</td>
<td>Some motor function, but of no practical use to the patient</td>
</tr>
<tr>
<td>D</td>
<td>Ambulatory</td>
<td>-</td>
<td>Some motor function with some use to the patient</td>
</tr>
<tr>
<td>E</td>
<td>No neurologic signs or symptoms</td>
<td>Normal</td>
<td>Normal</td>
</tr>
</tbody>
</table>

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APPENDIX B – Epidural Spinal Cord Compression Scale (ESCC)

Schematic representation of the 6-point ESCC grading scale.

| Grade 0 | Bone-only disease |
| Grade 1a | Epidural impingement, without deformation of thecal sac |
| Grade 1b | Deformation of thecal sac, without spinal cord abutment |
| Grade 1c | Deformation of thecal sac, with spinal cord abutment, without cord compression |
| Grade 2 | Spinal cord compression, with cerebral spinal fluid (CSF) visible around the cord |
| Grade 3 | Spinal cord compression, no CSF visible around the cord |

Reproduced with permission from Bilsky et al, 2010, J Neurosurg: Spine 13(3), 324-328
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SUGGESTED READINGS


Suggested Readings Continued on Next Page
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SUGGESTED READINGS - continued


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DEVELOPMENT CREDITS

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