**Appendix Table A.3. Results of the decision tree analysis of the patient characteristics that best define the clinical scenarios where spinal mobilization and spinal manipulation were rated as inappropriate**

This table contains the information shown in Figures 1 and 2 in a format that could be included in clinical guidelines.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Applicable to Mobilization, Manipulation or Both | Presence of Red Flags1 | Prior experience with manual therapy | Presence of neuro-logical findings2 | Traumatic etiology | Previous non-manual conservative care tried | Painful range of motion | Add-itional testing |
| Both | Yes | -- | -- | -- | -- | -- | -- |
| Both | No | Unfavorable | Major | -- | -- | -- | -- |
| Mobilization | No | Unfavorable | No or minor | -- | No | -- | Shows serious3 pathology |
| Manipulation | No | Unfavorable | No or minor | None or minimal | No | -- | -- |
| Manipulation | No | Unfavorable | No or minor | Clinically substantial | -- | No | -- |
| Manipulation | No | Unfavorable | No or minor | Clinically substantial | -- | Yes | None done |
| Manipulation | No | No response | Major | None or minimal | No | -- | -- |
| Manipulation | No | No experience | Major | Clinically substantial | No | -- | -- |

Blank cells (--) indicate a patient characteristic that did not affect whether that clinical scenario was rated inappropriate.

1Red flags are those factors where the risk may outweigh the benefit, such as: fever greater than 100 degrees F; prolonged corticosteroid use; unexplained weight loss; history of cancer; history of serious systemic inflammatory arthritides or vasculitides; endocrinopathies that affect calcium metabolism.

2Neurological findings can involve major neurological findings, minor neurological findings, or there can be no neurological findings. Major neurologic findings include at least one of the following: neurologic signs of cervical myelopathy; progressive unilateral muscle weakness and/or motor loss documented by repeat exam over time; sensory deficits other than related to dermatomes or peripheral nerves; and/or electrodiagnostic findings of acute and/or progressive radiculopathy. Minor neurologic findings include at least one of the following: asymmetrically decreased reflexes in upper extremity; documented dermatomal or peripheral nerve sensory changes which may include deficit, paresthesia, and hyperesthesia; non-progressive unilateral muscle weakness and/or parasthesia that follows a radicular pattern.

3Additional testing (advanced imaging) shows findings of cervical disc herniation, cervical canal stenosis, or cervical spinal foraminal osteophytosis.