|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Appendix: The Japanese Orthopaedic Association (JOA) score for myelopathy** |  |  |  |  |
| 　 | 　 | 　 | 　 | 　 | 　 | **Cervical myelopathy** | **Thoracic myelopathy** |
| Motor dysfunction of the upper extremity | 　 | 　 | 　 | 　 |
| 　 | Unable to feed oneself | 　 | 　 | (0) | 　 |
| 　 | Unable to use knife and fork; able to eat with a Spoon | (1) | 　 |
| 　 | Able to use knife and fork with much difficulty | (2) | 　 |
| 　 | Able to use knife and fork with slight difficulty | (3) | 　 |
| 　 | None | 　 | 　 | 　 | 　 | (4) | 　 |
| 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| Motor dysfunction of the lower extremity | 　 | 　 | 　 | 　 |
| 　 | Unable to walk | 　 | 　 | 　 | (0) | (0) |
| 　 | Able to walk on flat floor with walking aid | (1) | (1) |
| 　 | Able to walk up and/or down stairs with handrail | (2) | (2) |
| 　 | Lack of stability and smooth gait  | 　 | 　 | (3) | (3) |
| 　 | None | 　 | 　 | 　 | 　 | (4) | (4) |
| 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| Sensory deficit of the upper extremity |  |  |  |  | 　 | 　 |
| 　 | Severe sensory loss or pain | 　 | 　 | (0) | 　 |
| 　 | Mild sensory loss | 　 | 　 | 　 | (1) | 　 |
| 　 | None | 　 | 　 | 　 | 　 | (2) | 　 |
| 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| Sensory deficit of the lower extremity |  |  |  |  | 　 | 　 |
| 　 | Severe sensory loss or pain | 　 | 　 | (0) | (0) |
| 　 | Mild sensory loss | 　 | 　 | 　 | (1) | (1) |
| 　 | None | 　 | 　 | 　 | 　 | (2) | (2) |
| 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
|  |  |  |  |  |  |  |  |
| Sensory deficit of the trunk |  |  |  |  | 　 | 　 |
| 　 | Severe sensory loss or pain | 　 | 　 | (0) | (0) |
| 　 | Mild sensory loss | 　 | 　 | 　 | (1) | (1) |
| 　 | None | 　 | 　 | 　 | 　 | (2) | (2) |
| 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| Bladder dysfunction |  |  |  |  | 　 | 　 |
| 　 | Unable to void | 　 | 　 | 　 | (0) | (0) |
| 　 | Marked difficulty in micturition (retention)　 | (1) | (1) |
| 　 | Difficulty in micturition (frequency, hesitation) | (2) | (2) |
| 　 | None | 　 | 　 | 　 | 　 | (3) | (3) |
| 　 | 　 | 　 | 　 | 　 | 　 | 　 | 　 |
| Total score | 　 | 　 | 　 | 　 | 0–17 | 0–11 |