



American  
Association of  
Neurological  
Surgeons

American Association of Neurological Surgeons  
Congress of Neurological Surgeons  
AANS/CNS Joint Section on Disorders of the  
Spine and Peripheral Nerves  
AANS/CNS Joint Section on Neurotrauma and  
Critical Care



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## Position Statement

on the

### AO Spine/PRAXIS Clinical Practice Guidelines for the Management of Acute Spinal Cord Injury<sup>1</sup>

#### **Background**

Cervical spinal cord injuries (cSCI) are catastrophic events for patients that often require surgical intervention to decompress the spinal cord and/or stabilize the spine. The current literature has clearly established the role of surgical intervention in these injuries. Based on the most recent AANS/CNS guidelines, there is presently insufficient evidence to support a recommendation regarding the timing of surgical intervention.<sup>2</sup> Both the AANS and the CNS adhere strictly to the scientific process for review of the current literature, abstraction of data, and grading of evidence relevant to the timing of intervention for cervical spine injuries. This process must also include a weighted assessment of potential risks and harms. Strong recommendations based on an inadequate level of evidence run counter to the mission statement of our organizations, may be misleading to the surgeon caring for a spinal cord-injured patient, and may compromise overall patient safety.

#### **Position Statement**

Complete and incomplete cervical spinal cord injuries that require surgical intervention deserve individualized treatment. Decisions regarding the timing of surgical management must take into account both the particular characteristics of the injury and additional patient-specific factors that may influence outcomes. Injury-specific factors include neurological status, the degree and type of bony and/or ligamentous disruption, and the degree and cause of spinal cord compression. Patient-specific factors may include age, medical comorbidities, and the use of certain high-risk medications such as antiplatelet/anticoagulant therapy or immune-modulating agents. The choice of timing also depends upon the ability to ensure that the right resources are in place to perform the procedure efficiently and safely. Only the surgeon — weighing these essential elements — will be able to determine the optimal timing of surgical intervention to maximize both safety and outcome.

#### **Rationale**

- The best current evidence regarding the timing of surgery is constrained by heterogenous patient populations, inconsistent treatment protocols, and variable outcome measures. These deficiencies limit the ability to draw conclusions regarding the timing of surgical intervention that will have a meaningful impact on the patient's neurological outcome.
- There is no prospective class I evidence that supports a recommendation for the timing of surgical intervention.

#### **References**

1. Fehlings MG, Kwon BK, Evaniew N, and Tetreault LA, editors. Special Issue: AO Spine & Praxis Spinal Cord Institute Guidelines for the Management of Acute Spinal Cord Injury. *Global Spine Journal* 2024;14 (3\_suppl): 5S-230S.
2. Walters BC, Hadley MN, Hurlbert RJ, Aarabi B, Dhall SS, Gelb DE, et al. Guidelines for the management of acute cervical spine and spinal cord injuries: 2013 update. *Neurosurgery*. 2013;60 (CN\_suppl I\_1):82-91.