



# Combined Laminoplasty and Posterior Fusion for Treatment of Cervical Spondylotic Myelopathy: Systematic Review of the Literature

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## Introduction

The authors describe a systematic literature review of laminoplasty in combination with posterior instrumented fusion for treatment of cervical spondylotic myelopathy (CSM).

## Methods

A US National Library of Medicine PubMed search was conducted for manuscripts pertaining to cervical laminoplasty and fusion for management of CSM. Several relevant studies were found for review, and manuscript bibliographies searched for additional references. The search was limited to human studies, English-language literature, and reports with more than 1 patient.

## Results

Combined laminoplasty and fusion was found to result in at least comparable, if not superior, neurological outcomes in specific patient populations with cervical spondylotic myelopathy. Japanese Orthopedic Association (JOA) scores, local kyphosis, and C2-C7 angle were reviewed in many manuscripts, and improvement in each of these categories was found with laminoplasty and fusion.

## Conclusions

The treatment of CSM necessitates an individualized approach based on pathoanatomical variation. Laminoplasty and fusion can be appropriately used for patients with CSM in the setting of local kyphotic deformity, ossification of the posterior longitudinal ligament, associated segmental instability, and need for strong stabilization.

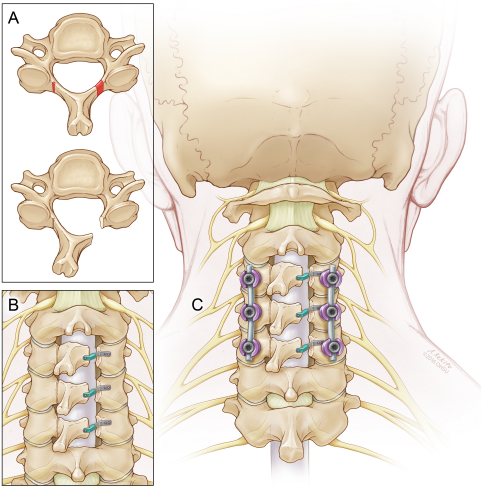
## Learning Objectives

By the conclusion of this session, participants should be able to understand the benefits of combined laminoplasty and fusion in the setting of cervical spondylotic myelopathy in various settings including local kyphotic deformity, Ossification of the Posterior Longitudinal Ligament (OPLL), and athetoid cerebral palsy.

## References

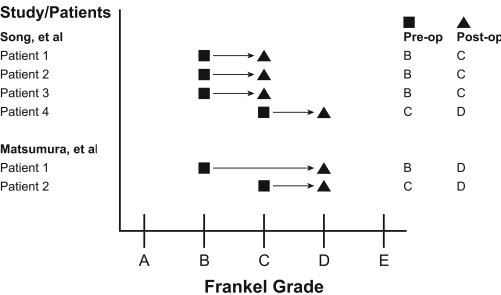
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## Illustration of Cervical Laminoplasty and Posterior Fusion



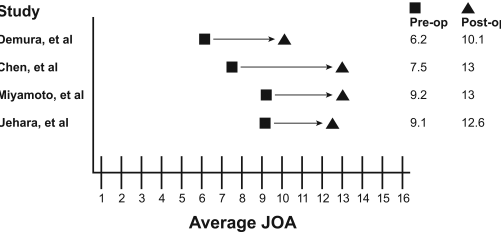
Artist Illustration of Cervical Laminoplasty and Posterior Fusion

## Frankel Grade Forest Plot



Pre-op and Post-op Frankel Grades for patients undergoing cervical laminoplasty and posterior fusion

## JOA Forest Plot



Pre-op and Post-op JOA scores for patients undergoing cervical laminoplasty and posterior fusion

## C2-C7 Forest Plot