Radiation therapy is shown to provide pain relief in patients with multiple myeloma (MM) who have epidural spinal cord compression (ESCC) as a result of bone destruction. More than one-third patients with MM having high-grade ESCC had poor neurologic outcomes with radiation therapy, highlighting the need for a multidisciplinary treatment approach and better patient selection. Assessment of factors associated with poor neurologic outcomes after radiation therapy via a retrospective cohort study:

- 162 patients with MM having high-grade ESCC
- Radiation therapy of the spine (January 2010 to July 2021)
- Evaluation of American Spinal Injury Association (ASIA) score after 12–24 months (last known score used for those with repeated treatment or mortality)
- Multivariable logistic regression

Greater risk of worse neurologic outcomes in patients with:
- Worse baseline ASIA scores
- Multiple vertebral levels affected by ESCC

- 1 out of 3 patients deteriorated or showed no improvement
- 1 out of 5 patients needed secondary treatment (surgery or repeat irradiation)
- Poorer outcomes (in terms of movement) for non-ambulatory patients

However, its effects on neurologic outcomes in patients with high-grade ESCC are not well understood.

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