



Commentary



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See the article “The Role and Clinical
Outcomes of Endoscopic Spine Surgery of
Treating Spinal Metastases; Outcomes of
29 Cases From 8 Countries” via <https://doi.org/10.14245/ns.2346274.137>.



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Commentary on “The Role and Clinical Outcomes of Endoscopic Spine Surgery of Treating Spinal Metastases; Outcomes of 29 Cases From 8 Countries”

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Spinal metastasis is a serious issue in spine care that can have a negative impact on a patient's quality of life by causing pain, neurological deficits, and ambulation issues. It affects approximately 20%–50% of cancer patients, with a higher prevalence in lung and breast cancer.^{1,2} The risk of spine metastases increases with age, time since diagnosis, and the number of comorbidities. Patients with spine metastases usually present with pain, spinal instability, and nerve function deficit, which can impact their quality of life.^{1,3} Spine metastases can be detected using various diagnostic methods, including computed tomography (CT), magnetic resonance imaging, bone scintigraphy, and positron emission tomography.^{2,3} The progression of spine metastases involves transportation from the primary tumor, arrest within the spine, and growth of cancer cells.³ Metastasis occurs more frequently in the thoracic and lumbar spine compared to the cervical spine, making the spine the third most common site for metastasis of malignant neoplasm.⁴ Spinal cord compression, which may affect up to 15% of individuals with metastatic neoplastic malignancies,³ can lead to myelopathy or radiculopathy, and in severe cases, debilitating and potentially fatal myelopathy. Early diagnosis and treatment are crucial in such cases.⁴ A modified Tomita score of 6 to 8 points indicates the need for radiation therapy or palliative surgery, and can also help predict a patient's survival and response to treatment.⁵

The widely accepted treatment protocol for spine metastases involves a multidisciplinary approach, including surgery, radiotherapy, bone cement, bisphosphonates, and chemotherapy. Radiotherapy is an efficient therapeutic approach for symptomatic spine metastases patients, while surgery remains the standard treatment for patients with rapidly progressive spinal cord compression or a high risk of fracture.^{2,6} The primary goal of surgical management is to decompress the neural elements by tumor mass, thereby improving the patient's neurological symptoms. However, in cases where the metastatic tumor compromises spinal stability, stabilization is needed.⁴ Open surgical procedures for spinal metastases carry a higher risk of complications, making minimally invasive procedures preferable as they can re-

lieve neural systems without compromising spinal stability. Minimally invasive surgery has shown promising outcomes, minimizing the damage to soft tissue and resulting in less blood loss.⁷⁻⁹ However, it is important to note that not all treatment methods are suitable for every patient, and each approach has its own advantages and limitations.⁴ A recent procedure, called endoscopic spine surgery, has emerged as a potential alternative. It minimizes collateral damage, blood loss, and duration of hospital stay, while being as effective as open surgery in alleviating pain and restoring neurological function.^{7,8,10,11} Despite being supported primarily by case reports or case series, endoscopic spine surgery remains underutilized in patients with spinal metastases.

This study¹² represents the first investigation using a worldwide collaborative network of endoscopic spine surgeons, known as 'ESSORG,' comprising 12 centers across 8 countries (South Korea, Thailand, Taiwan, Mexico, Brazil, Argentina, Chile, and India). The study evaluates the effectiveness and viability of endoscopic spine surgery as a symptomatic palliative surgery for patients with symptomatic spinal metastases. In this retrospective investigation, 29 patients who underwent endoscopic spine surgery between 2012 and 2022 were included. Consistent with previous minimally invasive spine surgery methods, the study concluded that endoscopic spine surgery is a viable alternative for treating people with spinal metastases. The average age of participants in the study was approximately 60 years, and 11 of them were female with the total number of 61 decompressed levels. The technique was similar to the uniportal and biportal full-endoscopic spine surgery techniques. The research reported statistically significant improvements in almost all clinical outcome measures, which sustained from 2 weeks to 6 months following the surgery. The procedure proved valuable in palliative oncologic spine surgery, aiming to enhance patients' quality of life. Only 4 surgical-related complications were reported.

Uniportal or biportal full-endoscopic spine surgery techniques are the most rapidly increasing techniques in contemporary spine surgery.^{10,11,13,14} The increasing acceptance of these techniques can be attributed to improved intraoperative visualization of pathological structures, lower complication rates, shorter recovery times, reduced postoperative discomfort, better symptom management, and earlier return to daily activities. With improved patient outcomes and cost-effectiveness, these techniques are likely to become more acceptable, relevant, and popular in the coming years.^{9,13,15-18}

In conclusion, we agree with the authors regarding the inherent limitations of retrospective study and the potential for bias-

es. Including patients who underwent open surgery or other minimally invasive techniques would strengthen the illustration of the efficacy of the endoscopic surgery technique. We strongly believe that endoscopic spine surgery will emerge as one of the preferred palliative surgeries for patients with spinal metastases, in the near future.

• **Conflict of Interest:** The authors have nothing to disclose.

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