The days of a single therapeutic approach to all metastatic spine tumors are coming to a close. For more than 20 years, external beam radiation has been the standard of care for patients with these tumors. Now the paradigm is shifting to surgical treatment prior to radiation as a better option for many patients.

There is compelling evidence that aggressive management of these tumors, including radiosurgery or surgical resection and decompression, followed by radiotherapy to sterilize the tumor bed, improves pain control and ambulation, preserves or restores bowel and bladder function, and may confer a survival benefit.

Based on physician experience as well as data from several small retrospective studies, Cleveland Clinic has been utilizing this broader treatment approach for patients with metastatic spine tumors for several years. A recent study in *Lancet* (2005;366(9486):643-648), in which surgery plus radiotherapy resulted in significantly better outcomes in quality of life measures and pain control compared with conventional radiotherapy alone, has sparked widespread interest in surgical treatment as an adjunct to radiotherapy for these patients.

At Cleveland Clinic, surgical resection and spinal reconstruction, kyphoplasty to stabilize the spine, radiosurgery with the Novalis system, external beam radiation and chemotherapy all are potential elements of the treatment plan for spinal tumor patients.

The key is to create an individualized plan for each patient based on the tumor stage, the levels of the spine involved, the patient’s age and life expectancy, and the patient’s quality of life. Because of the often complex nature of these cases, the treatment decision is best made by a multidisciplinary team that includes spine surgeons, oncologists and radiation oncologists.

To implement this strategy, Cleveland Clinic has established a Spine Tumor Board, an interdisciplinary committee that meets regularly to discuss these cases and plan appropriate treatment. The main candidates for consideration are patients with primary renal cell carcinoma, melanoma, or lung or breast cancer that has metastasized to the spine.

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