

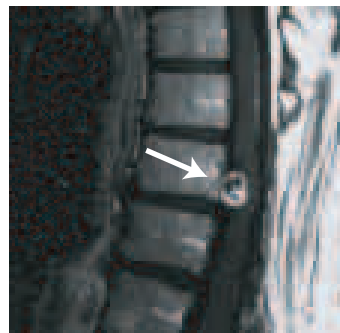
CASE STUDY

Thoracic Spinal Schwannoma

Extracranial Treatment of a T9 Level Extramedullary Schwannoma



Courtesy of J. Adler MD, Stanford University, Stanford, CA USA
BEFORE TREATMENT



2-YEAR FOLLOW-UP

CYBERKNIFE TREATMENT PLAN

Patient History

A 62-year-old female with a history of breast carcinoma was diagnosed with an intradural, extra-medullary T9-T10 level schwannoma, which was resected with a T8-T10 laminectomy when the patient was 56. Over the next 5 years, the patient developed progressive leg dysesthesias and pain in the mid-thoracic back. MRI showed a recurrent schwannoma at the T9 level mildly compressing the spinal cord.

CyberKnife Advantage

Lesions located in the thoracic spine typically are not treatable with radiosurgery since the location is below the limit of conventional frame-based radiosurgical systems. However, with the CyberKnife which does not rely on a frame for lesion tracking, radiosurgery became an option. The patient elected this less invasive procedure over surgical resection.

Treatment

Fiducials were implanted in the T9 and T10 transverse processes to allow lesion tracking with the CyberKnife System. The patient was treated by the CyberKnife at Stanford University with 3 fractions to a total peripheral dose of 21 Gy.

Outcome & Follow-Up

At 2 year follow-up, the patient reported significant relief of leg and back pain. Follow-up MRI showed loss of central contrast enhancement and a significant decrease in the tumor size.

CyberKnife Team



Radiations Oncologist:

Steven Hancock, M.D.

Neurosurgeons:

John Adler, M.D.

David Martin, M.D.

Physicists:

Paul Geis, Ph.D.

Martin Murphy, Ph.D.

Radiation Therapist:

Nalani Brown, RTT