

CASE STUDY

Treatment Plan for a Spine Metastasis L3 from Breast Cancer

Every Patient has a Unique Treatment Plan:

This plan shows 4 views of where the radiation dose will hit the target and the spared critical structures (spinal cord).



Patient History

A 56-year-old female with a history of breast cancer diagnosed 10 years prior presented with back pain. PET/CT demonstrated increased uptake at L3. An MRI taken on 11-28-07 revealed a lumbar spinal lesion and a percutaneous CT-guided biopsy confirmed metastatic breast cancer.

CyberKnife® Advantage

Nearly 200,000 cases of metastatic spread to the spinal column present each year, often leading to pain, instability, and neurologic deficit. If left untreated, progressive myelopathy results in the loss of motor, sensory, and autonomic functions. While surgery is generally reserved for rapidly progressive neurologic deficit, instability or intractable pain, other treatment options include conventional fractionated radiation therapy consisting of 10-14 treatments over approximately 2-3 weeks or 1-3 CyberKnife stereotactic radiosurgery treatments. CyberKnife radiosurgery allows the safe and highly accurate delivery of a high dose of radiation close to critical structures (such as the spinal cord), while producing a more durable and robust relief of symptoms than conventional radiation therapy. The patient chose CyberKnife radiosurgery.

Treatment

The patient was custom-fitted for her body immobilization device. Both the 10 mm and a 25 mm collimators were used to treat the 35.6 cc GTV (Gross Tumor Volume) with 32.5 Gy prescribed to the 75% isodose line in 5 fractions using 155 beams. She completed treatment January 16, 2008.

Outcome & Follow-Up

The patient experienced complete pain relief by 10 days post-treatment and continues to lead an active lifestyle. She is still pain free at 1 year post treatment. A PET/CT taken 1 year after CyberKnife treatment revealed no evidence of disease.

If you would like your patient case reviewed at our weekly case conference, call 337-289-8070.

