ACCURAY

CASE STUDY

T6 SPINAL SOLITARY BREAST METASTASIS

UPMC HEALTH SYSTEM

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ACCURAY CyberKnife

T6 SPINAL SOLITARY BREAST METASTASIS

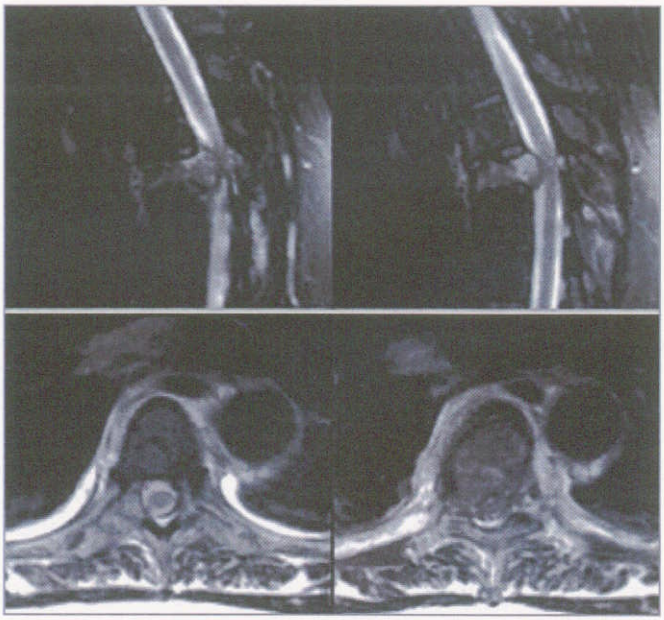
DEMOGRAPHICS		CLINICAL HISTORY	
Sex:	F	**Referred by:**	Medical Oncology
Age:	56	**Previous Treatment:**	External beam radiation of 30 Gy in 10 fractions to the T6 vertebral body
Histology:	Breast Metastasis to T6		

Case History

The patient originally was diagnosed with a T2, N0 infiltrating ductal carcinoma of the right breast. Her cancer was treated with segmental resection. This was followed by radiation therapy to the breast to 61.2 Gy and four cycles of adjuvant 5-FU and methotrexate. Six years later, she presented to her medical oncologist with complaints of back pain. MR imaging revealed a solitary destructive lesion of the T6 vertebral body. Further workup failed to demonstrate other areas of metastatic disease. This solitary metastatic lesion was treated with external beam radiation in ten fractions to 30 Gy with temporary improvement in her symptoms.

However, a month later, persistent symptoms of pain prevented the patient from returning to work and interfered with her activities of daily living. She was therefore referred to the CyberKnife® Spine Center for further evaluation.

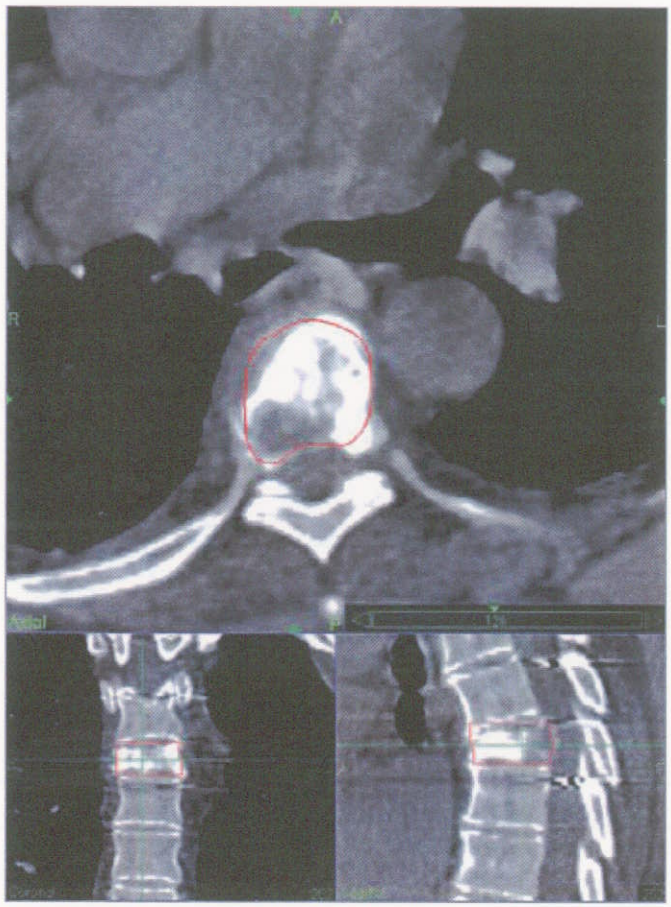
Her MRI showed tumor progression with significant compression of the spinal cord at the T6 level. She had no neurological deficits.



Pretreatment MR: Sagittal T2 weighted and axial T1 weighted gadolinium-enhanced MRI reveals a pathologic compression fracture with significant spinal canal compromise.

CyberKnife Treatment Rationale

The treatment of both malignant as well as benign tumors of the spine using CyberKnife radiosurgery began in 1997. Treatment of spine lesions using single fraction radiosurgery has been a successful treatment strategy at UPMC over the past four years.[1,2,3]



Pretreatment CT showing the outlined tumor at the T6 level. This image set was used for treatment planning and stereotactic radiosurgical targeting on the CyberKnife System.