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early September of the same year, and was treated with single fraction of 11 Gy using Gamma Knife radiosurgery to three metastatic lesions (Figures 1 and 2). In October 2014, she presented with severe back pain, later proven to be due to metastatic disease to the lower thoracic and upper lumbar spine secondary to metastatic RCC. In November 2014 she received palliative SBRT, in 5 fractions of 5 Gy each to the T12 to L3 spine with a volume of 383 cc (Figure 3), using a Linear Accelerator (LINAC). The patient was pain-free immediately after the spinal SBRT and had a complete negative follow up brain MRI in January 2015 and continues to do well as of March 2015. This case demonstrates the feasibility and efficacy of using SRS for brain metastasis after WBRT, as well as the value of SBRT for large volume spinal metastasis for palliation of severe bone pain. The precise delivery of spinal SBRT avoided large dose of radiation to the adjacent spinal cord and bowels significantly minimizing toxicity.

This case study demonstrates the value of the hypofractionation with SRS/SBRT in the management of an advanced cancer patient with bone and brain metastasis with improved quality of life.

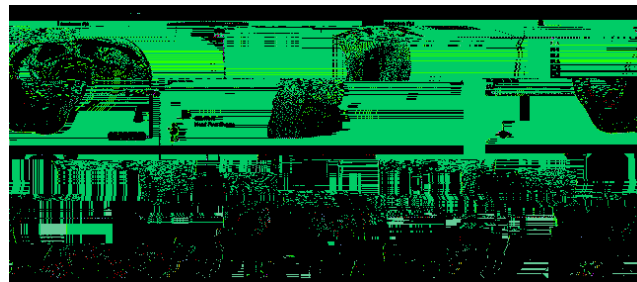


Figure 3

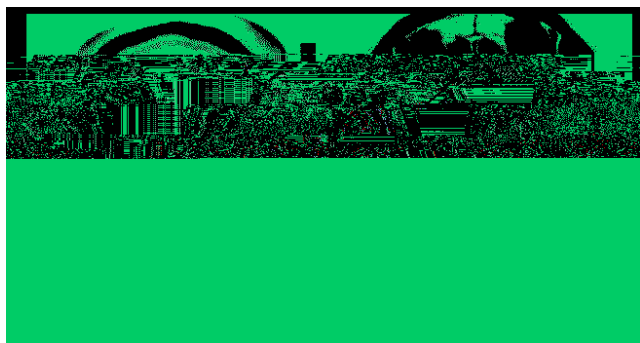


Figure 1: Axial views from contrast enhanced MRI of the brain obtained for treatment planning for single fraction GammaKnife radiosurgery showing multiple brain metastases from renal cell carcinoma (RCC) (3 lesions - arrows) consistent with recurrence after WBRT in May 2014 (courtesy of Sammie R Coy, PhD Miami Neuroscience, South Miami, FL)



Figure 2 Follow-up MRI obtained in the same patient 4 months after GammaKnife (January 2015) demonstrating no evidence of metastatic disease with mild edema in the occipital lobe (courtesy of Sammie R Coy, PhD Miami Neuroscience, South Miami, FL)

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