NT-21. PRELIMINARY CLINICAL OUTCOMES FOLLOWING RAPID DELIVERY RADIOSURGERY FOR MULTIPLE BRAIN METASTASES
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BACKGROUND: Stereotactic radiosurgery (SRS) is increasingly used in the management of patients with brain metastases. High rates of local control and low neurocognitive risk have made SRS an appealing alternative to whole brain radiotherapy, even in patients with numerous metastases. Since traditional SRS techniques may be extended several hours in the setting of numerous targets, in an immobilized position, this may discourage patients and clinicians from utilizing SRS. The current retrospective study measures clinical outcomes in patients treated using existing technology for a rapid treatment delivery technique.

METHODS: All patients were managed in a multidisciplinary approach with neurosurgery and radiation oncology participation. Targeting was carried out with a 3T MRI using 1 mm axial slices. SRS was delivered using a unique linac-based platform capable of delivering volumetric arc therapy to multiple simultaneous targets without a flattening filter and a relocatable mask between 1/2012-4/2013. Eleven patients were treated with a median of 6 brain metastases (range 4-12) for a total of 74 targets.

RESULTS: All treatments were delivered in less than 30 minutes. SRS was well-tolerated with no acute grade 2 acute complications. Median overall survival was 27 weeks.

CONCLUSION: Rapid SRS delivery using volumetric arc therapy with a flattening filter free beam appears to be feasible and well-tolerated treatment with acceptable toxicity and survival. This technique carries the potential to offer patients a more comfortable treatment in an abbreviated procedure time. These encouraging preliminary outcomes warrant further study.