There is an unmet clinical need for the treatment of progressive or recurrent anaplastic glioma (World Health Organization [WHO] grade III) with poor median survival despite available chemotherapy. Published literature indicates that gamma H2AX expression is high in tumor treatment fields (TTF) in patients with glioblastoma, which suggests that an alternative treatment could be developed targeting cancer cells by disrupting both spindle formation and normal cytokinesis selectively kills or arrests growth in glioma cell lines. The Optune® system is a novel non-invasive therapy approved by the FDA in 2011 for the treatment of recurrent (supratentorial) glioblastoma (GB) (WHO grade IV) based on the results of a phase 3 clinical trial comparing TTFields monotherapy with physician’s choice chemotherapy in patients with recurrent GB demonstrating comparable overall survival and improved quality of life. No data is currently available on the response of WHO grade III malignant glioma to this technology. In addition, no biomarker is yet available in order to predict which patients will have a better response to the Optune® technology. This is a phase 2, single arm study in patients with WHO grade III malignant glioma who have had progressive disease during first-line treatment with radiation, temozolomide (TMZ) and/or procarbazine/lomustine/vincristine (PCV) and who have not previously received bevacizumab (BEV) or any experimental agents. All patients are provided with the Optune® device. Frequency of treatment is determined based on study findings. This is a prospective, open label study. The primary objective will be to determine the efficacy of Optune® in recurrent malignant glioma patients (6-month progression-free survival). The secondary objectives will be to evaluate the safety and efficacy of Optune® in the subject population and to see if the presence of 1p/19q LOH, and/or IDH1 mutation, confers a better response to Optune®.

ACTR-44. TREATMENT OUTCOMES IN ELDERLY PATIENTS WITH Glioblastoma: The CLEVELAND Clinic EXPERIENCE
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BACKGROUND: Fifty percent of glioblastoma patients are ≥65 years old. There is limited literature on outcomes of these patients. We report our experience with elderly patients with glioblastoma treated at our tertiary care center. METHODS: With IRB approval, the Cleveland Clinic’s database was used to identify glioblastoma patients treated through 2000-2015. Overall survival (OS) from the diagnosis of glioblastoma was the primary end point. Cox proportional hazard models with stepwise variable selections were used for data analysis. RESULTS: 567 patients with a median age of 73 years (range, 65-96 years), 57% of whom were male, were analyzed. Anaplastic gliomas (WHO grade III) patients with known 1p/19q deletions had significantly increased OS and PFS compared with patients with WHO grade III anaplastic gliomas and patients with WHO grade IV glioblastomas. All patients received some form of systemic therapy and median OS and PFS were 10.0 and 4.6 months, respectively. Notable toxicities at least possibly related to treatment include: grade 3 skin ulceration (n=2), grade 2 fatigue (n=1), and grade 1 fatigue (n=1). Five patients discontinued treatment due to disease progression; one patient withdrew consent. Median duration of the treatment was 3.7 months (range 1.0-4.6 months). CONCLUSIONS: In this heavily pretreated population, 46 of 6 patients attained SD with Optune treatment. Trial accrual is ongoing.

ACTR-45. A PHASE IB STUDY EVALUATING THE C-MET INHIBITOR INC280 IN COMBINATION WITH BEVACIZUMAB IN Glioblastoma MULTIFORME (GBM) PATIENTS
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BACKGROUND: The HGF/C-MET pathway is deregulated in cancer affecting tumor cell proliferation, invasion, metastasis and angiogenesis. INC280 is an oral small molecule inhibitor of C-MET. Bevacizumab produces