

# A Phase I Study of AdV-tk + Prodrug Therapy in Combination with Radiation Therapy for Pediatric Brain Tumors

## Information for Referring Physicians

### About pediatric malignant gliomas

Pediatric malignant gliomas have a very poor prognosis with median survival measured in months rather than years. These tumors have proven extremely resistant to standard treatment, combination therapy with surgery, radiation and chemotherapy.

### About the trial

An area of promise with encouraging clinical results in adult malignant gliomas is the use of immunotherapy, especially in combination with standard therapies, to improve outcome from surgery, radiation and chemotherapy.

To investigate this treatment option for children, Dana-Farber/Children's Hospital Cancer Center recently opened an immunotherapy based gene therapy Phase I trial for children with a supratentorial malignant glioma.

- Study is based off of the ongoing results of an adult trial which showed that the simultaneous use of gene therapy based immunotherapy in combination with temozolomide and radiation followed by adjuvant temozolomide was well tolerated and resulted in increased median survival.
- Temozolomide has been shown to be well tolerated in children, and efficacy studies in combination with radiation for pediatric malignant gliomas are ongoing.
- The safety of the gene therapy vector used in this protocol has already undergone extensive clinical testing in over a dozen adult and one pediatric clinical trial.

Our primary objective is to evaluate the safety of this treatment approach. We will also collect data on the overall survival, progression-free survival, objective tumor response and immunologic function of enrolled patients.

### Treatment plan

Patients will receive an injection of AdV-tk into the tumor or tumor bed during a surgical procedure followed by 14 days of prodrug starting 1-3 days after vector injection. Standard radiotherapy will begin 3-7 days after AdV-tk injection. Standard temozolomide chemotherapy may begin after completion of the prodrug at the discretion of the treating physician and family. Two dose levels of AdV-tk will be evaluated with a fixed dose of prodrug.

### Who is eligible?

Patients must be:

- Newly diagnosed with supratentorial malignant glioma
- > 3 years of age to < 22y/o
- Tumor must be accessible for injection and located in the supratentorial compartment and must have an area of residual disease after initial biopsy or partial resection
- Performance Score: Karnofsky  $\geq 60\%$  if >10 years old; Lansky  $\geq 60\%$  if  $\leq 10$  years old.

This Phase I trial is open to 12 patients nationally.

### How to refer a patient

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