# Poliovirus vaccine trial shows early promise for recurrent glioblastoma

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An attack on glioblastoma brain tumor cells that uses a modified poliovirus is showing encouraging results in an early study to establish the proper dose level, researchers at Duke Cancer Institute report.

The treatment, developed at Duke and tested in an ongoing phase 1 study, capitalizes on the discovery that cancer cells have an abundance of receptors that work like magnets drawing the poliovirus, which then infects and kills the cells.

The investigational therapy, known as PVSRIPO, uses an engineered form of the virus that is lethal to cancer cells, while harmless to normal cells. Infused directly into the patient's tumor, the virus-based therapy also triggers the body's immune fighters to launch an attack against the infected tumor cells.

Preliminary data, presented at the upcoming 2013 Annual Meeting of the American Society of Clinical Oncology in Chicago (ASCO abstract #2094), previews the results of seven patients enrolled in the study whose tumors reoccurred despite traditional treatments for glioblastoma multiforme, the most common and aggressive brain tumor.

Of the patients enrolled in the study, three have responded well to the drug. One patient remains disease-free 12 months after treatment, another 11 months post-treatment and the third is disease-free after five months. With traditional treatment, about half of glioblastoma patients see recurrent tumor growth within eight weeks.

Two patients in the study did not fair as well; one had recurrent tumor growth after two months, and another's condition declined after four months. The remaining two patients have been treated in the last three and two months, respectively, and currently remain disease free.

"These early results are intriguing," said Annick Desjardins, M.D., FRCPC, principal investigator and associate professor of medicine at Duke University School of Medicine. "Current therapies for glioblastoma are limited because they cannot cross the blood-brain barrier and often do not specifically attack the tumor. This treatment appears to overcome those problems. We are eager to see additional results as we move forward with our study."

Provided by Duke University Medical Center

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