

Glioblastoma multiforme is the most common primary tumor in adults. It is a lethal disease with a median survival of 12-15 months despite multimodality treatment that includes surgery, chemotherapy and radiation therapy. Novel therapeutic approaches are urgently needed. We have recently shown that measles virus strains engineered to produce CEA (MV-CEA) have potent antitumor activity against glioblastoma models. Toxicology studies in appropriate animal models support the safety of administration of the MV-CEA virus in brain tumors. Furthermore, MV-CEA treatment has been well tolerated in another clinical trial in ovarian cancer patients. We now propose to perform a clinical trial in patients with recurrent glioblastoma multiforme for whom no good treatment options exist. Aims of the study are to assess the safety and efficacy of MV-CEA administration into recurrent tumors and resection cavities, to evaluate if detection of CEA in the patient's blood can be used to monitor viral replication in the tumor, and to assess distribution of the virus after administration into the tumor.