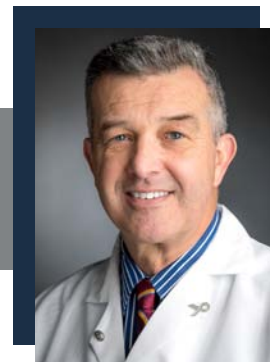


Ivy Foundation

Optimizing Immunotherapy for Glioblastoma

PRINCIPAL INVESTIGATOR

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OBJECTIVES

- Perform a pilot clinical trial evaluating the efficacy and safety of NeoVax, a patient and tumor-specific vaccination against neoantigens (abnormal proteins found only in cancer cells).
- Optimize the ability of an implantable vaccine that uses a small, surgically implanted, disk-like scaffold, which recruits and reprograms the patient's own immune cells to destroy cancer cells.
- Define the most active therapeutics to neutralize immune system suppression and re-activate the immune system to fight cancer cells.
- Study the safety and efficacy of new drug combinations for glioblastoma patients via subsequent clinical trials conducted through the Ivy Foundation Early Phase Clinical Trials Consortium.

PROGRESS REPORT

- For the NeoVax trial, 8 patients have fully enrolled, 4 have initiated treatment, vaccine preparation is underway for an additional 4 patients, and 5 more patients are screening for eligibility to participate. Anticipated accrual completion is February 2016.
- Confirmed that production of patient/tumor specific NeoVax vaccine is readily feasible and extremely well tolerated among treated patients.
- Demonstrated that immune checkpoint therapies show promise; PD-1 therapy and combination anti-PD-1/anti-CTLA-4 blockade can cure approximately 50% and 75% of glioblastoma tumors in animal models (as published in Cancer Immunology Research).



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