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Research Updates at the Brian D. Silber Spine Tumor Clinic, Massachusetts General Hospital June 2022

There are two cutting-edge areas of research that are taking place at the Clinic:

Ganesh M. Shankar, MD, PhD Assistant Professor, Neurosurgery, Harvard Medical School Massachusetts General Hospital

Dr. Ganesh Shankar and his team are working on the development of a safe and ultrarapid diagnostic test for brain and spinal cord tumors – bypassing the need for an invasive biopsy.

- They have developed a rapid, sensitive, and cost-effective method to identify the molecular information in brain and spinal cord tumors.
- Since December 2020, they have performed the test on cerebrospinal fluid samples from 137 patients undergoing evaluation for possible brain and spinal cord tumors at MGH and have identified the presence of tumor-specific mutations in 14 patients.
- Patients who would previously have required a brain or spinal cord biopsy to secure a diagnosis have been initiated on appropriate treatments without exposure to the additional risks of invasive neurosurgical tissue sampling.

Bryan D. Choi, MD, PhD Assistant Professor, Neurosurgery, Harvard Medical School Associate Director, Brain Tumor Immunology and Immunotherapy Massachusetts General Hospital

Dr. Bryan Choi and his team are hoping to develop treatments that drive a patient's immune system to attack tumor cells.

- CAR T cells represent a rapidly growing area of antitumor immune therapy that has revolutionized cancer care for patients with hematological malignancies.
- Several proteins have recently been characterized that may aid in translating this strategy for patients with solid tumors of the brain and spinal cord.
- Their goals are to explore the potential of CAR T cells for brain and spinal cord tumors.