Researchers Discover Non-Surgical Test for Brain Cancer

Boston - In a breakthrough for the way brain cancer is diagnosed and monitored, a team of researchers, lead by Anna M. Krichevsky, PhD, of the Center of Neurologic Diseases at Brigham and Women's Hospital (BWH), have demonstrated that brain tumors can be reliably diagnosed and monitored without surgery. Previously, an accurate non-surgical test to detect brain tumors was unavailable and methods of monitoring a brain tumor's progression or response to treatment were not reliable. The results from this pilot study are published in the online edition of Neuro-Oncology [1].

"We are excited about the potential that this test has to ease the process of detecting and monitoring brain tumors," said Krichevsky. "The test needs to be further developed before it is used in a clinical setting, but I expect it could be particularly valuable for patients who are not surgical candidates due to the tumor's size or location, or due to an underlying medical condition."

In a study of 118 patients with different types of brain cancers, researchers showed that microRNA profiling of cerebrospinal fluid can be used to determine the presence of glioblastoma, the most common and lethal type of brain tumor. The test utilizes microRNAs, tiny RNA molecules that provide excellent biomarkers for various conditions, and whose levels can be accurately measured in body fluids simply and inexpensively. The same process can be used to detect the presence of cancer that started in another part of the body and spread to the brain, and furthermore, the process can also be used to monitor the tumor as it is treated.

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