Panel of 5 genes that can accurately determine glioma prognosis

Gliomas are a very aggressive type of brain cancer with typically fatal patient outcomes. Current diagnosis techniques rely upon early detection of glioma-related symptoms and brain magnetic resonance imaging (MRI) and computed tomography (CT) to confirm diagnosis. Diagnosis often occurs at later stages of glioma development where successful treatment becomes difficult or impossible. There are no current widely used tests or biomarkers which can directly determine the prognosis of disease. This technology has identified a 5 gene pathway which, depending on the expression levels of the genes, identifies specific types of high grade gliomas. Measurement of the activation state of the pathway from a diagnostic sample from the patient is able to delineate accurately between types of gliomas which require different treatment plans for optimal patient outcomes.

Accurate diagnosis of the type of glioma aids in determining the best course of treatment

Current diagnostic technologies for glioma are limited in their ability to diagnose the type of glioma present in a patient. This technology can accurately delineate between aggressive vs. non-aggressive types of glioma from a measurement of the levels of expression of a 5 gene panel in a glioma sample vs. a sample of normal brain tissue. Firm knowledge of the type of glioma enables clinicians to choose the best course of treatment for the patient.

The ability of this technology to determine accurately the type of glioma present was demonstrated through animal experiments on mouse model of malignant glioma.

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Applications:

- Determine the prognosis of glioma tumors.
- Technology may aid in designing treatment strategies for glioma tumors.
• Technology may be used to determine prognosis of different types of tumors reliant on genetic pathway.

**Advantages:**

• Accurately delineates between aggressive vs. non-aggressive types of gliomas.
• Enables clinicians to choose the best treatment plan for their patients.
• Patient specific treatment plans potentially improve patient care and outcomes.

**Patent information:**

Patent Pending

**Licensing Status:**

Available for licensing and sponsored research support

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**Related Publications:**


**Inventors**

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