MEDICAL BREAKTHROUGHS
RESEARCH SUMMARY

TOPIC: **KILLING GLIOBLASTOMA: TURNING THE BODY AGAINST THE BRAIN**
REPORT: **MB #4726**

BACKGROUND: Each year, there are 12,000 cases of glioblastoma diagnosed in the United States. Each case is a grade IV brain tumor. Tumors develop from astrocytes, which are star- shaped brain cells that help protect the brain from diseases that can form in the blood. These cells supply nutrients to the brain and give the brain its physical structures; they also insulate neurons from each other and create a stable chemical environment. There is not a set spot where the disease can develop in the brain. Most commonly it forms in the frontal lobe or the temporal lobe. The temporal lobe sits toward the bottom of the brain and is responsible for new memories, processing language and input from the senses of hearing, taste, touch and sight.
(Source: https://www.mdanderson.org/cancer-types/glioblastoma.html)

DIAGNOSIS: Headache, nausea, memory loss, confusion, difficulty with balance, and speech difficulties are symptoms of glioblastoma. There are three other types of brain cancers that occur in glioma: astrocytoma, oligodendroglioma and ependymoma. Exposure to radiation such as electromagnetic fields from power lines, radiofrequency radiation from microwave ovens, age and family history are all risk factors. Doctors may give a neurological exam to check vision, hearing, balance, strength and reflexes. If there are problems in one or more of these areas, it could be a sign that a brain tumor could be present. MRI, CT and PET scans may also show what is going on inside the brain. There are a few treatment options for treating the brain tumors depending on size, type, grade and location. Patients may turn to surgery, targeted drug therapy, chemotherapy and radiation therapy.
(Source: https://www.mayoclinic.org/diseases-conditions/glioma/diagnosis-treatment/drc-20350255)

NEW PROCEDURE: With glioblastoma being incurable, patients' life expectancy after diagnosis is under 15 months on average with standard treatments. Texas A&M University is researching a new pathway for treatment. The team research is focused on the AH receptor, which controls the expression of a set of genes. The research team used patient glioblastoma cells looking at several receptor ligands, including Kynurenine. The findings suggested that the AH receptor could be a target for the development of drugs to inhibit the disease. The research team is now looking to see what binds with the receptor.

(Source: https://www.sciencedaily.com/releases/2019/08/190821163812.htm)

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com