MEDICAL BREAKTHROUGHS
RESEARCH SUMMARY

TOPIC: FAST TRACK TO STOPPING BRAIN CANCER
REPORT: **MB #4932**

BACKGROUND: Glioblastoma is an aggressive type of cancer that can occur in the brain or spinal cord. Glioblastoma forms from cells called astrocytes that support nerve cells. Glioblastoma can occur at any age but tends to occur more often in older adults. It can cause worsening headaches, nausea, vomiting and seizures. Glioblastoma, also known as glioblastoma multiforme, can be very difficult to treat and a cure is often not possible. Treatments may slow progression of the cancer and reduce signs and symptoms. (Source: https://www.mayoclinic.org/diseases-conditions/glioblastoma/cdc-20350148)

DIAGNOSING: Doctors use several tests to diagnose a low-grade glioma. Your doctor will ask about your medical history, including any prior illnesses that might have weakened your immune system or involved radiation therapy. Your doctor will also ask about your family history, your habits, and your lifestyle. Doctors use a neurological exam to diagnose low grade gliomas. During this exam, your doctor looks for changes to your vision, hearing, balance, coordination, strength and reflexes. These changes can identify which part of your brain may be affected by a tumor. Imaging tests that take pictures of your brain also help diagnose low grade gliomas. Doctors use a variety of imaging technologies, each offering insights to confirm the presence, location, and type of tumor that may be present. They may also take a sample of the tumor. (Source: https://stanfordhealthcare.org/medical-conditions/brain-and-nerves/glioma/about-this-condition/diagnosis.html)

NEW TECHNOLOGY: Researchers at The University of Texas at Austin's Oden Institute for Computational Engineering and Sciences, Texas Advanced Computing Center (TACC) and The University of Texas MD Anderson Cancer Center have merged various quantitative imaging measurements with computational simulations to create an accurate model for calculating the progression of high-grade glioma. Throughout this project, researchers at the Oden Institute and MD Anderson have gone back and forth on the type of data needed, model components and the overall goal or application of this model. TACC, the third partner in the collaboration to end cancer, made it possible for the researchers to simultaneously calibrate a large family of biologically based mathematical models for each patient.
(Source: https://news.utexas.edu/2021/05/10/new-technique-predicts-response-of-brain-tumors-to-chemoradiation/)

FOR MORE INFORMATION ON THIS REPORT, PLEASE CONTACT:

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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