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Neuro-Oncology Paper Affirms Prognostic Value of MR Perfusion as Biomarker for Overall Survival in GBM Patients

For Immediate Release

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Elm Grove, WI – Imaging Biometrics®, LLC (IB), a biotechnology company specializing in the development of software solutions for advanced visualization and analytics, proudly announces the results of a recently published multicenter American College of Radiology Imaging Network (ACRIN) trial. It was the first advanced imaging study of its kind to be performed in a multicenter trial setting.

Dynamic susceptibility contrast MRI measures of relative cerebral blood volume as a prognostic marker for overall survival in recurrent glioblastoma: results from the ACRIN 6677/RTOG 0625 multicenter trial, by Schmainda, et al. [1], summarizes the results of a study performed as part of an ACRIN - Radiation Therapy Oncology Group (RTOG) trial. It demonstrates that decreases in MR perfusion-derived blood volume metrics are predictive of overall survival (OS) in patients with recurrent glioblastoma multiforme (GBM) being treated with Avastin. A GBM is the most common and most aggressive malignant primary brain tumor.

The ability to predict which patients will benefit from treatment has grown increasingly challenging with standard anatomical imaging in the context of treatment with anti-angiogenic agents such as Avastin. In this study, 21 patients representing five different sites agreed to participate in the advanced MRI component of the study. Imaging Biometrics software was used to create relative cerebral blood volume (rCBV) images from the dynamic susceptibility contrast (DSC) data. The results show that a decreasing rCBV value, measured at either 2 or 16 weeks after treatment initiation, predicted a clear improvement in overall survival for patients.

The study used delta T1 maps to automatically determine the areas of true enhancement by processing pre- and post-contrast T1 images. Delta T1 maps, when created with IB Delta Suite, use an image intensity standardization step to translate image intensities to a calibrated scale. This technology, exclusive to IB, enables accurate and repeatable determination of the tumor region of interest (ROI).

IB's standardization feature was also used in the trial data analysis as a method to produce consistent rCBV maps across time and MRI platforms. The standardized rCBV maps, generated by IB Neuro, require no user input to create, unlike other methods, such as normalization. Creating standardized maps decreases the potential for user error and inter-observer differences, while simultaneously speeding workflow.

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Standardization of rCBV maps may therefore provide an easier and more reliable solution for future clinical trials.

“Standardization is currently built into IB Neuro and IB Delta Suite. We believe the clinical benefits of this technology have been clearly demonstrated once again by this study,” said Timothy Dondlinger, COO of Imaging Biometrics. “Standardization further builds upon the proven robustness of our MR-DSC approach, both qualitatively and quantitatively, and simplifies clinical workflows by eliminating the need to manually draw reference regions-of-interest,” Dondlinger added. “It also enables simpler, faster and more consistent assessment of therapeutic response.”

About Imaging Biometrics™ LLC

Imaging Biometrics develops and provides visualization and analytical solutions that enable clinicians to better diagnose and treat diseases with greater confidence. Through close collaboration with top researchers and clinicians, sophisticated advancements are translated into platform-independent software plug-ins which can extend the base functionality of workstations, imaging systems, PACS, or medical viewers. By design, IB's advanced visualization software seamlessly integrates into routine workflows. For more information about Imaging Biometrics, LLC, visit the company's website at www.imagingbiometrics.com.

[1] Dynamic susceptibility contrast MRI measures of relative cerebral blood volume as a prognostic marker for overall survival in recurrent glioblastoma: results from the ACRIN 6677/RTOG 0625 multicenter trial

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