Imaging Biometrics’ “IB Neuro” Integral to Low-Dose Perfusion Study

Study shows comparable output using single-dose of contrast agent in DSC-MRI brain tumor imaging

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Elm Grove, WI, USA – Imaging Biometrics™, LLC (IB), a subsidiary of IQ-AI Limited (LON:IQAI), was featured in a recent American Journal of Neuro Radiology publication titled: “Moving Towards a Consensus DSC-MRI Protocol: Validation of A Low Flip Angle Single Dose Option as a Reference Standard for Brain Tumors”.

The publication highlighted a study involving magnetic resonance dynamic susceptibility contrast in magnetic resonance imaging (DSC-MRI) for brain tumor patients. IB’s software products, IB Neuro and IB Delta Suite, were used to generate quantitative perfusion rCBV (relative cerebral blood volume) values with the specific goal of determining if a single-dose of contrast agent, combined with a low-flip angle DSC-MRI method, can provide rCBV information comparable to the commonly accepted double-dose method.

DSC-MRI is the most common approach used to measure brain tumor perfusion. It provides critical information regarding tumor grade, treatment response, and prognosis. Despite these benefits, full adoption has been impeded due to disagreement regarding how to collect and analyze the data.

The multi-center team, including researchers from the Medical College of Wisconsin (WI), The Mayo Clinic (AZ), The Barrow Neurological Institute (AZ), and Rhode Island Hospital (RI), revealed an interesting performance-based option for 3T MRI scanners. While using the well-established preload of contrast agent and applying the proven contrast leakage correction methods of IB Neuro, the team realized that data obtained without a preload dose of contrast and a lower flip-angle produced rCBV maps comparable to the accepted double-dose option. Moreover, an even better and less variable agreement was obtained between the double-dose and no-preload method when the rCBV data was standardized using IB Neuro’s exclusive technology. Standardization is an automated image intensity calibration step that renders the data to be truly quantitative - independent of scanner, field strength, patient or time point.

“This is the first study that directly compares the single-dose (no preload), low flip angle method to the conventional double-dose method for creation of rCBV maps,” said Michael Schmainda, President of Imaging Biometrics. He added, “This study is a significant step towards creating the standard in DSC MRI for brain tumor patients, and it has the added
benefit of a reducing the amount of contrast agent required to obtain good quality output. This marks an important step towards our ultimate goal of providing a contrast free option for MR imaging.”

ABOUT Imaging Biometrics™, LLC

Imaging Biometrics, a subsidiary of IQ-AI Limited (LON:IQAI), 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, visit the company’s website at www.imagingbiometrics.com.