

New Study Highlights Diagnostic Power of Neuroreader in Alzheimer's

Quantitative AI enabled MRI Volumetry Differentiated Between Neurocognitive Disorders

Los Angeles, California — September 11, 2024 — A groundbreaking study published in *BMC Neurology* reveals the accuracy of MRI volumetry in distinguishing between common neurocognitive disorders. Traumatic Brain Injury, Early-Onset Alzheimer's Disease, Late-Onset Alzheimer's Disease, and Behavioral Variant Frontotemporal Dementia are all differentiated by distinct patterns of volume loss utilizing Neuroreader, an innovative software developed by Brainreader, Inc. that offers a unique quantitative analysis of brain MRI scans to aid in the diagnosis of these challenging conditions.

The study analyzed brain MRI scans from 137 participants using Neuroreader's advanced volumetric quantification. Each of these individuals had one of four common neurological issues: traumatic brain injury, early and late-onset Alzheimer's disease, and behavioral variant frontotemporal dementia. The findings of this study demonstrated that distinct brain atrophy patterns, often not visible through traditional MRI visual assessments, can be quickly and accurately identified using Neuroreader's AI-enabled software across the different diagnostic groups. In particular, traumatic brain injury was separated from dementia with 100% accuracy.

"As a practicing diagnostic neuroradiologist, it can be very hard to track distinct patterns of volume loss by visual assessment alone which is why a program that quantifies brain volumes such as Neuroreader is so important to improve diagnostic accuracy," said Dr. Cyrus A. Raji, Associate Professor of Radiology and Neurology at Washington University in St. Louis, co-lead author of the study.

Study co-lead author, Dr. Somayeh Meysami, Assistant Professor of Neurosciences at Saint John's Cancer Institute, said "This study highlights the significance of MRI volumetry in detecting subtle brain changes, offering valuable insights into the distinct patterns of atrophy seen in various neurocognitive disorders."

Dr. David A. Merrill, Director at the Pacific Brain Health Center and co-author of the study, added, "Our findings highlight that automated brain volumetry not only aids in diagnosis but also enriches our understanding of the unique neuropathological changes associated with each disorder. This is particularly crucial in settings where other diagnostic tools, like fluid biomarkers, are not readily available."

Thor Birkmand, Chairman of Brainreader, Inc. highlighted the company's commitment to advancing neuroimaging technology. "We are proud that our Neuroreader played a pivotal role in this study. This software's ability to provide precise and clinically relevant brain measurements supports healthcare providers in delivering more accurate

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diagnoses,” said the executive. “These findings validate our mission to bring cutting-edge solutions to the forefront of clinical neurology.”

The study’s results are expected to influence the diagnostic approach to neurocognitive disorders, making Brainreader’s MRI volumetry software an essential tool in neurology and radiology practices. The use of quantitative imaging software like Neuroreader offers a significant step forward in enhancing patient care through more precise and accessible diagnostic methods. NeuroQuant, icometrix and AccuBrain were also used in this study. Neuroreader compared favorably.

For more information, please contact:

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About the Pacific Brain Health Center:

The Pacific Brain Health Center specializes in comprehensive care for individuals with neurocognitive disorders, integrating the latest research and innovative treatments. Learn more at <https://www.pacificneuroscienceinstitute.org/brain-health/>.

About Washington University in St. Louis:

Washington University in St. Louis is a renowned institution dedicated to advancing knowledge and educating future leaders in various fields, including neurology and radiology. Learn more at <https://washu.edu/>.

About Brainreader:

Brainreader is a leading provider of neuroimaging solutions dedicated to improving diagnostic capabilities in clinical neuroscience through advanced software like Neuroreader, which offers automated volumetric analysis of brain MRI scans. Learn more at <https://brainreader.net/>.