VISTAT

Innovative Predictor of Cognitive Change

Vascular Integrity SysTem for Assessment and Treatment (VISTAT) is a patent-pending technology to predict cognitive change.

NON-INVASIVE TECHNOLOGY
Identifies individuals susceptible to cognitive decline

RISK LEVEL MEASUREMENT
Uses the “Arterial Compliance Index” (ACI) biomarker

SUPERIOR PREDICTIVE ABILITY
In multiple sclerosis (MS) patients

EVALUATION CAPACITY
Potential to determine efficacy of experimental therapeutics to improve cognition

CAN HELP CLINICIANS:
Better monitor the cognitive trajectory of patients and research participants
Intervene earlier in people more susceptible to developing cognitive decline
Assess the impact of targeted treatments

PATH TO VISTAT
For the first time ever, researchers have created a reliable predictor of future cognitive change

• Novel technology offers a more accurate method to assess the stiffness of blood vessels, arteries and veins in the brain
• Functional organization of arteries in the brain can be mapped and can indicate areas with abnormalities
• Innovative analysis techniques of MRI scans assess the elasticity of arteries and veins in nested layers of the brain
• New biomarkers that reflect the integrity of the arterial and venous systems along the vascular tree in the brain
• Degree of arterial injury along the cerebrovascular tree quantified through ACI
• Specificity of ACI is demonstrated in research comparing cognitively impaired MS patients, cognitively normal MS patients and healthy control participants

PEER-REVIEWED RESEARCH
Developed by a collaborative team of world renowned physicians, neuroscientists, cognitive psychologists, statisticians and biomedical engineers

• Results are published in Multiple Sclerosis Journal (August 2019)
• Prior to this work, limited information existed about blood vessel elasticity in the brain, the organization of these blood vessels, how MS affects this organization and their effects on cognition

GROUNDBREAKING BIOMARKER
ACI demonstrates superior ability in predicting cognitive performance in MS patients

• The “Arterial Compliance Index” (ACI) is a novel biomarker reflecting the extent of injury in brain blood vessels
• Research demonstrates that ACI performs approximately 15% better than all other currently available MS metrics combined (i.e., age, disease duration, Expanded Disability Status Scale, total lesion volume, brain atrophy and 9-hole peg test performance)

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