

NEUROQUANT IMAGING

EARLY DETECTION AND DIAGNOSIS FOR
ALZHEIMER'S, EPILEPSY, TRAUMATIC BRAIN
INJURY AND MULTIPLE SCLEROSIS

WE BRING BRILLIANCE TO HEALTH & WELLNESS



NeuroQuant software combines with MRI to quantify structural changes in the brain with precision. FDA-cleared and powered by a normative database, it adjusts for age, gender and intracranial volume, offering clear, objective data to support your clinical decisions.

This technology is especially valuable when evaluating Alzheimer's, epilepsy, traumatic brain injury (TBI) and multiple sclerosis (MS).

BENEFITS OF VOLUMETRIC BRAIN IMAGING

- Get comprehensive imaging and analysis from a single source
- Support your impression with measurable, quantitative data
- Track changes over time to guide treatment and assess progress
- Detect degeneration early to inform care and planning

KEY NEUROQUANT REPORT	PRIMARY USE
AGE-RELATED ATROPHY	Compares hippocampal and ventricle volumes to age-based norms to aid in AD detection
MULTI-STRUCTURE ATROPHY	Helps assess brain volume loss in patients with multiple sclerosis
TRIAGE BRAIN ATROPHY	Provides a fast overview of regional brain loss for traumatic brain injury cases
GENERAL MORPHOMETRY	Measures 11 bilateral structures to support diagnosis of epilepsy, MS, TBI, and AD
HIPPOCAMPAL VOLUME ASYMMETRY	Identifies hippocampal size differences that may indicate mesial temporal epilepsy
BRAIN DEVELOPMENT	Aids in identifying atypical brain development in pediatric patients
LONGITUDINAL STUDIES <i>(A feature of several reports)</i>	Compares scans over time to visualize structural change and assess treatment impact

When ordering specify "NeuroQuant" on the form or in your notes.
NeuroQuant is a registered trademark of CorTechs Labs.

**SCHEDULE
A PATIENT**

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KEY REPORTS

ALZHEIMER'S DISEASE

Emerging diagnostic criteria for Alzheimer's¹ identify early episodic memory impairment as a primary indicator, along with one or more of the following:

- Quantitative MRI showing mesial temporal lobe atrophy compared to age norms
- Abnormal cerebrospinal fluid (CSF) biomarkers
- A specific pattern of positron emission tomography (PET) abnormality
- A confirmed autosomal dominant mutation associated with Alzheimer's

Patients with mild cognitive impairment and a small hippocampus are four times more likely to progress to AD within two to three years compared to those with a larger hippocampus.

¹Note: Dubois, B. et al. (2007). Position paper: Research criteria for the diagnosis of Alzheimer's disease: Revising the NINCDS-DRDA criteria. *Lancet Neurology*, Vol 6 (August): p. 734-746.

TRAUMATIC BRAIN INJURY

TBI can lead to significant volume loss in functional brain tissue, resulting in diminished cognitive ability, including:

- In children, altered developmental trajectories that may never return to baseline
- In adults, injury-related volume loss added to normal age-related decline, potentially accelerating neurological aging
- A compounded aging burden that may advance age-related effects by several decades

The Triage Brain Atrophy report provides a high-level overview, flagging regions outside the normative range and helping identify affected lobes or sub-regions related to the injury.

EPILEPSY

This chronic neurological disorder is controlled with medication in approximately 75% of patients. Those who do not respond to two medications, around 3%, may be considered candidates for surgical intervention.

Quantifying volumetric asymmetry with MRI and NeuroQuant supports diagnosis in ways that are:

- Nearly impossible to achieve without automation
- Less invasive and more patient-friendly compared to the Wada test
- Helpful in identifying hippocampal epilepsy, as the right hippocampus is typically 10% larger than the left

A clear understanding of brain structure can also guide surgical planning when appropriate.

MULTIPLE SCLEROSIS

Brain volume loss begins early in the course of MS and continues as the disease progresses, leading to:

- Progressive disability and cognitive decline that are strongly correlated with brain volume reduction
- The need to identify and address volume loss early to support the timely adoption of disease-modifying treatments

The use of the Multi-Structure Atrophy report alongside longitudinal studies to track volume changes over time and help evaluate treatment effectiveness.

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