

Turning Routine Brain MRI Into Quantitative Insight

FDA-cleared automated volumetric analysis with Neuroreader®

Brainreader delivers FDA-cleared, automated brain volumetric analysis that transforms routine MRI scans into objective, quantitative insights, improving diagnostic confidence while increasing efficiency across radiology and neurology workflows.

Structures	Color	Vol ml	Vol/mTIV in (%)	NR Index*	Z-score	Percentile
Whole Brain Matter	n/a	742.58	39.26	-38.79	-2.55	0.54
Gray Matter	n/a	354.90	18.76	-19.74	-1.30	9.70
White Matter	n/a	387.67	20.50	-6.68	-0.44	33.00
Hippocampus	n/a	6.38	0.34	-13.04	-0.86	19.54
Right Hippocampus		3.13	0.17	-13.90	-0.91	18.02
Left Hippocampus		3.26	0.17	-11.22	-0.74	23.03
Amygdala	n/a	2.26	0.12	-11.04	-0.73	23.37
Right Amygdala		1.07	0.06	-14.75	-0.97	16.60
Left Amygdala		1.19	0.06	-5.55	-0.37	35.75
Putamen	n/a	8.46	0.45	-4.47	-0.29	38.44
Right Putamen		4.14	0.22	-4.78	-0.31	37.65
Left Putamen		4.32	0.23	-3.95	-0.26	39.76
Thalamus	n/a	15.62	0.83	-15.51	-1.02	15.38
Right Thalamus		7.83	0.41	-14.66	-0.96	16.73
Left Thalamus		7.79	0.41	-15.70	-1.03	15.08

Without Neuroreader®



Time-Intensive Reads

Manual volumetric assessment slows interpretation



Subjective Interpretation

Results vary by reader and by site



Limited Scalability

Manual methods don't scale with MRI volume



Subtle Changes Missed

Early structural change may not be visually apparent

With Neuroreader®



Automated Quantification

83 brain structures measured from standard 3D T1 MRI



Objective & Standardized

Benchmarked against a validated normative database



Built to Scale

Standardized reports delivered in under 10 minutes



Clear, Actionable Insight

Objective data to support confident clinical decisions

About Brainreader

Founded in 2011, Brainreader is a global leader in automated brain volumetrics, delivering clinically validated tools that improve efficiency, consistency, and confidence in brain MRI interpretation.



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MRI Volumetry for Real-World Differential Diagnosis*

Peer-reviewed clinical evidence for confident, real-world diagnosis

A peer-reviewed clinical study published in BMC Neurology (2024) evaluated automated MRI volumetry with Neuroreader® in 137 patients across four diagnostic groups (TBI, EOAD, LOAD, bvFTD). The study demonstrated high diagnostic performance, with AUC values of 92–100%, sensitivity up to 100%, and specificity up to 100%, supporting objective, real-world differential diagnosis using routine MRI scans.

*Raji et al., BMC Neurology 2024

Disease-Specific Volumetric Patterns



Traumatic Brain Injury (TBI)

- White matter loss
- Frontal & parietal involvement



Early-Onset Alzheimer's Disease (EOAD)

- Parietal lobe predominance



Frontotemporal Dementia (bvFTD)

- Frontal lobe & caudate atrophy



Late-Onset Alzheimer's Disease (LOAD)

- Hippocampal atrophy
- Temporal lobe involvement

Why This Matters in Clinical Practice

- Uses **existing MRI scanners**
- Provides **objective data beyond visual reads**
- Valuable when **PET or fluid biomarkers aren't available**
- Relevant for **dementia and non-dementia evaluations**

Quantitative volumetrics help clinicians differentiate conditions that may appear similar on conventional MRI interpretation alone.



Clinically Validated. Clinically Practical.

Peer-reviewed evidence supports Neuroreader's ability to deliver objective, quantitative MRI insight for real-world differential diagnosis.

FDA-cleared medical device • CE-marked • MHRA registered • ISO 13485 certified • HIPAA compliant