



SimonMed[®]
Imaging
See Tomorrow Today[®]

TRAUMATIC BRAIN INJURY & NEUROQUANT[®]

Traumatic Brain Injury (TBI)

TBI or Brain Trauma affects a person who experiences a traumatic event or condition(s) including:

- Foreign objects pierce the skull
- A severe fall or blow to the head
- Traffic accident
- Assault
- Head is struck by or against something

It is evaluated using:

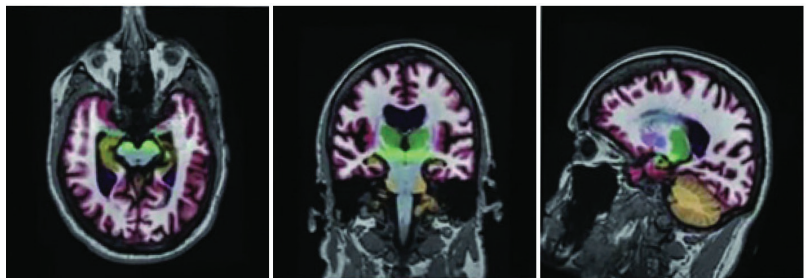
- MRI
- PET
- CT

Brain trauma may result in substantial brain volume loss, which may lead to many symptoms including cognitive ability:

- In children, TBI may disrupt developmental trajectories
- In adults, volume loss from a brain injury adds to age-related volume loss, potentially resulting in an acceleration of age-related decline

Fast, Accurate, Automated Quantitative MRI Analysis with NeuroQuant[®]

- Identify evidence of neurodegeneration
- Improve ongoing evaluation with longitudinal tracking
- Use quantitative measurements to aid clinical assessment and monitor disease progression



The NeuroQuant[®] Difference

- The first FDA cleared & CE marked solution
- Unique, patented Dynamic Atlas[™] technology increases segmentation accuracy across a broad age range from 3 to 100 years
- Fully automated, consistent and reproducible results
- Volumetrics of 72 cortical and subcortical structures
- Normative percentiles of each volume with color-coding for easy identification of brain structures below 2 standard deviations from the mean (red cells in table).
- Standardized, proven 3D T1 non-contrast sagittal MRI
- Compatible with GE, Philips and Siemens (1.5T and 3.0T)

Get Precise Volumetric Data and Reports in Minutes



Age Related Atrophy

Hippocampal and ventricle volume measurements compared to age and gender norms



Hippocampal Volume Asymmetry

Hippocampal volume left/right asymmetry measurements compared to age and gender norms



Multi Structure Atrophy

Total brain volume, white and gray matter, thalamus and more measurements compared to age and gender norms



Triage Brain Atrophy

Multiple volume measurements sorted by lobe and brain structures



Brain Development

Forebrain parenchyma and lateral ventricle volumes, with norms 3 years and up

Unleash the Power of NeuroQuant®

NeuroQuant is breakthrough software designed to make quantitative MRI measurement a routine part of clinical practice. NeuroQuant automatically segments and measures volumes of brain structures and compares them to our unique normative database ranging from ages 3 to 100. Reports contain absolute and relative volumes of brain structures in a DICOM-compatible format.

NeuroQuant®

Triage Brain Atrophy Report

CorTechs Labs, Inc.
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(858) 459-9700

PATIENT INFORMATION

Patient ID:	Patient Name:	Sex:	Age:	Referring Physician:
		F	63	

Version 3.0.0

SCAN INFORMATION

Scan Date:	Accession Number:

MORPHOMETRY RESULTS

Structure	Total Volume (cm³)	Percentile	Cortical Brain Regions		
			Left	Right	Total
Intracranial Volume	1579	78			
Whole Brain	1286	99			
Forebrain Parenchyma	1144	99			
Percentiles					
			Left	Right	Total
Cerebral White Matter	98	99	99	99	99
Cortical Gray Matter	99	19	99	19	96
Ventricles	6	20	11	11	11
Cerebral WM Hypointensities*	99	1	99	1	99
Subcortical Structures					
Cerebellar White Matter	10	11	10	11	10
Cerebellar Gray Matter	16	18	17	18	17
Brainstem	-	-	67	-	67
Thalamus	53	87	75	87	75
Ventral Diencephalon	72	80	77	80	77
Basal Ganglia					
Putamen	3	15	7	15	7
Caudate	1	17	1	17	1
Nucleus Accumbens	96	96	97	96	97
Pallidum	1	25	6	25	6
Cingulate	85	69	79	69	79
Anterior Cingulate	90	92	93	92	93
Posterior Cingulate	84	61	75	61	75
Isthmus Cingulate	40	8	21	8	21
Percentiles					
			Left	Right	Total
Frontal Lobes	99	19	89	19	89
Superior Frontal	99	31	82	31	82
Middle Frontal	76	54	68	54	68
Inferior Frontal	99	9	88	9	88
Lateral Orbitofrontal	53	14	31	14	31
Medial Orbitofrontal	24	40	33	40	33
Paracentral	95	80	92	80	92
Primary Motor	99	14	99	14	99
Parietal Lobes	99	19	93	19	93
Primary Sensory	99	46	98	46	98
Medial Parietal	99	45	91	45	91
Superior Parietal	63	9	29	9	29
Inferior Parietal	89	42	71	42	71
Supramarginal	99	22	99	22	99
Occipital Lobes	40	10	22	10	22
Medial Occipital	27	3	10	3	10
Lateral Occipital	52	33	42	33	42
Temporal Lobes	99	53	99	53	99
Transverse Temporal + Superior Temporal	99	43	99	43	99
Posterior Superior Temporal Sulcus	99	4	99	4	99
Middle Temporal	87	85	89	85	89
Inferior Temporal	98	6	66	6	66
Fusiform	99	59	98	59	98
Parahippocampal	99	28	80	28	80
Entorhinal Cortex	78	80	83	80	83
Temporal Pole	95	63	88	63	88
Amygdala	30	96	75	96	75
Hippocampus	99	67	98	67	98

Red-coded structures are below 2 s.d.

Blue-coded structures are above 2 s.d.

*White matter hypointensities are abnormally low signal intensity regions within white matter as observed on a T1-weighted MRI scan.

The power of NQ is distinguishing abnormal from normal:

- Segmentation of 72 brain substructures
- Volumetric measurements
- Age-matched normative percentiles
- Values below 5% represent a 2 standard deviation departure from the mean.
- Fully automated quantitative volumetric image segmentation and analysis
- Adds valuable quantitative measurements to aid in the assessment of neurodegenerative conditions and increases the quality of patient care
- Provides standardized and reproducible quantitative brain volume information with advanced Dynamic Atlas technology
- Volumetrics and percentiles for whole brain, white matter, gray matter, and ventricles.

