Neuroreader® Report 2.7.0

Standard Report – PACS

Analysis Date:	2022-Aug-01 11:07:16	**Patient Name:**	
Report Type:	Neuroreader® Report	**Accession Number:**	
NR Upload ID:	BrBr_20220801_012	**Birth Date: Gender:**	01-01-1
Group Name:	DEMO	**Age:**	Male
Study ID:			72
Patient ID:	45536		

Reference Head Size

The measured total intracranial volume (mTIV)	2118 mL

Left-Right Asymmetry Index

Structures	Asymmetry Index	NR Index*	Z-score	Percentile
Hippocampus	0.063918	11.64	0.77	77.81
Amygdala	-0.021099	1.92	0.13	55.03
Caudate	0.102133	15.84	1.04	85.13
Lateral Ventricle	0.109361	0.88	0.06	52.30
Pallidum	-0.013062	-8.09	-0.53	29.73
Putamen	0.016906	-1.56	-0.10	45.91
Thalamus	-0.122106	-26.54	-1.75	4.04
Ventral Diencephalon	0.000205	1.89	0.12	54.95
Cerebellum	0.002228	3.40	0.22	58.84
Frontal Lobe	-0.005513	-2.00	-0.13	44.77
Parietal Lobe	-0.023012	-7.58	-0.50	30.91
Occipital Lobe	0.035018	0.96	0.06	52.52
Temporal Lobe	-0.041678	-6.47	-0.43	33.50

Brain Volume Assessment

Structures	Color	Vol mL	Vol/mTIV in (%)	NR Index*	Z-score	Percentile
Whole Brain Matter	**n/a**	1107.24	52.29	-8.07	-0.53	29.78
Gray Matter	**n/a**	552.00	26.07	-7.31	-0.48	31.52
White Matter	**n/a**	555.24	26.22	0.35	0.02	50.93

Structures	Color	Vol mL	Vol/mTIV in (%)	NR Index*	Z-score	Percentile
Hippocampus	n/a	6.60	0.31	-16.63	-1.09	13.69
Right Hippocampus		3.19	0.15	-18.03	-1.19	11.77
Left Hippocampus		3.41	0.16	-14.24	-0.94	17.43
Amygdala	n/a	2.90	0.14	-3.20	-0.21	41.67
Right Amygdala		1.46	0.07	-3.62	-0.24	40.59
Left Amygdala		1.43	0.07	-2.34	-0.15	43.87
Putamen	n/a	10.36	0.49	5.93	0.39	65.19
Right Putamen		5.13	0.24	6.06	0.40	65.50
Left Putamen		5.22	0.25	5.53	0.36	64.20
Thalamus	n/a	19.09	0.90	-1.26	-0.08	46.71
Right Thalamus		10.13	0.48	4.68	0.31	62.09
Left Thalamus		8.96	0.42	-7.23	-0.48	31.72
Ventral Diencephalon	n/a	10.28	0.49	-7.27	-0.48	31.63
Right Ventral Diencephalon		5.14	0.24	-7.08	-0.47	32.06
Left Ventral Diencephalon		5.14	0.24	-7.03	-0.46	32.19
Pallidum	n/a	2.91	0.14	-10.14	-0.67	25.23
Right Pallidum		1.46	0.07	-7.93	-0.52	30.08
Left Pallidum		1.44	0.07	-11.51	-0.76	22.45
Caudate	n/a	11.92	0.56	32.60	2.14	98.40
Right Caudate		5.65	0.27	26.58	1.75	95.99
Left Caudate		6.26	0.30	37.78	2.49	99.35
Brain Stem		21.19	1.00	-0.86	-0.06	47.75
Frontal Lobe	n/a	382.64	18.07	-8.57	-0.56	28.64
Right Frontal Lobe	n/a	191.85	9.06	-8.19	-0.54	29.50
Right Frontal Lobe GM		90.30	4.26	-5.50	-0.36	35.88
Right Frontal Lobe WM		101.55	4.80	-1.30	-0.09	46.60
Left Frontal Lobe	n/a	190.79	9.01	-8.76	-0.58	28.21
Left Frontal Lobe GM		91.31	4.31	-4.88	-0.32	37.40
Left Frontal Lobe WM		99.49	4.70	-2.24	-0.15	44.15
Parietal Lobe	n/a	205.05	9.68	-4.02	-0.26	39.58
Right Parietal Lobe	n/a	103.70	4.90	-2.11	-0.14	44.48

Structures	Color	Vol mL	Vol/mTIV in (%)	NR Index*	Z-score	Percentile
Right Parietal Lobe GM		51.79	2.45	2.04	0.13	55.33
Right Parietal Lobe WM		51.91	2.45	-3.65	-0.24	40.50
Left Parietal Lobe	n/a	101.34	4.79	-5.68	-0.37	35.44
Left Parietal Lobe GM		40.80	1.93	-9.22	-0.61	27.20
Left Parietal Lobe WM		60.54	2.86	3.17	0.21	58.26
Occipital Lobe	n/a	95.48	4.51	-6.11	-0.40	34.39
Right Occipital Lobe	n/a	46.90	2.21	-6.26	-0.41	34.01
Right Occipital Lobe GM		21.61	1.02	-2.65	-0.17	43.09
Right Occipital Lobe WM		25.30	1.19	-6.30	-0.41	33.93
Left Occipital Lobe	n/a	48.57	2.29	-4.94	-0.33	37.25
Left Occipital Lobe GM		**18.34**	**0.87**	**-10.87**	**-0.72**	**23.73**
Left Occipital Lobe WM		30.23	1.43	5.69	0.37	64.61
Temporal Lobe	n/a	**199.71**	**9.43**	**-15.56**	**-1.02**	**15.29**
Right Temporal Lobe	n/a	**101.94**	**4.81**	**-13.89**	**-0.91**	**18.04**
Right Temporal Lobe GM		56.56	2.67	-8.24	-0.54	29.39
Right Temporal Lobe WM		45.37	2.14	-4.62	-0.30	38.07
Left Temporal Lobe	n/a	**97.78**	**4.62**	**-16.32**	**-1.07**	**14.14**
Left Temporal Lobe GM		**51.30**	**2.42**	**-12.98**	**-0.85**	**19.65**
Left Temporal Lobe WM		46.48	2.19	-2.98	-0.20	42.24
Cerebellum	n/a	145.77	6.88	2.41	0.16	56.30
Right Cerebellum	n/a	72.80	3.44	1.80	0.12	54.72
Right Cerebellar GM		45.44	2.15	-9.87	-0.65	25.79
Right Cerebellar WM		27.36	1.29	13.70	0.90	81.63
Left Cerebellum	n/a	72.97	3.45	2.93	0.19	57.64
Left Cerebellar GM		50.42	2.38	-4.50	-0.30	38.37
Left Cerebellar WM		22.55	1.06	7.08	0.47	67.94
CSF (+ dura)		573.89	27.10	4.11	0.27	60.66
Lateral Ventricle	n/a	**106.05**	**5.01**	**28.30**	**1.86**	**96.87**
Right Lateral Ventricle		**50.12**	**2.37**	**26.76**	**1.76**	**96.08**
Left Lateral Ventricle		**55.92**	**2.64**	**28.20**	**1.86**	**96.82**

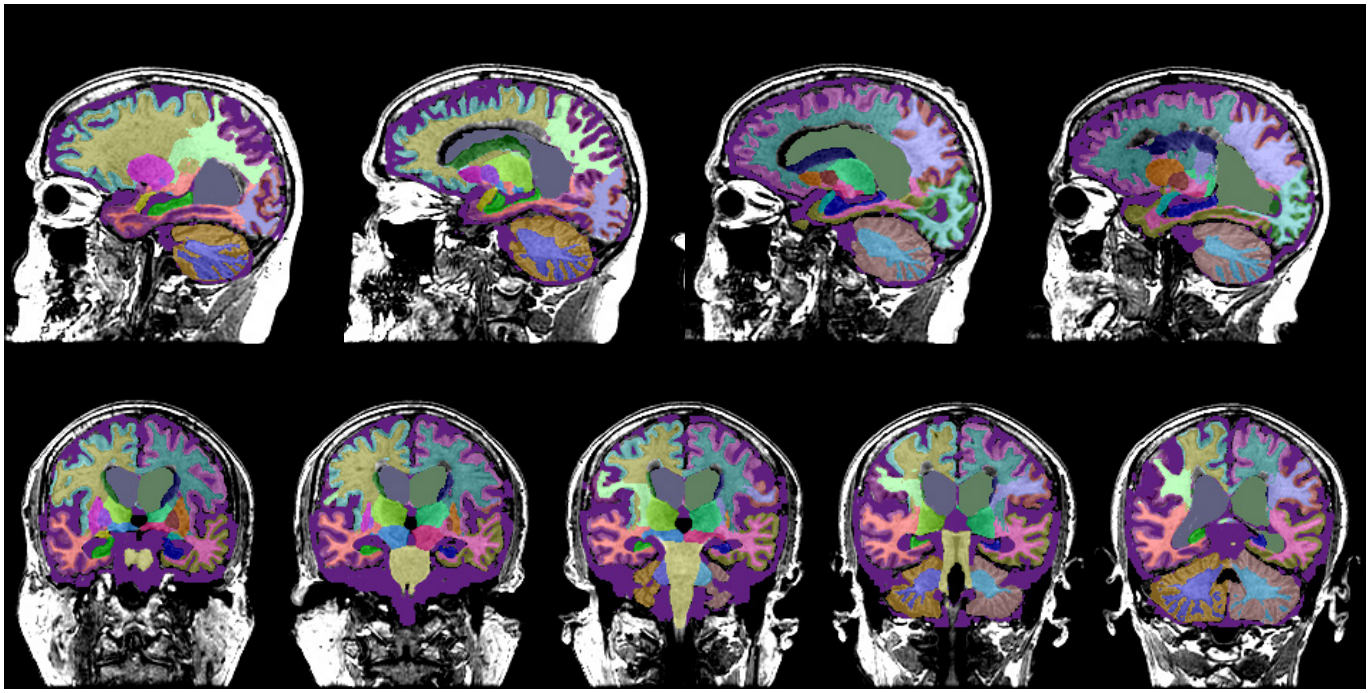
Text with **orange** color: All brain matter volumes with a percentile lower than 25% and all CSF structures with a percentile over 75%.
*) NR Index: Neuroreader® Index

Summary

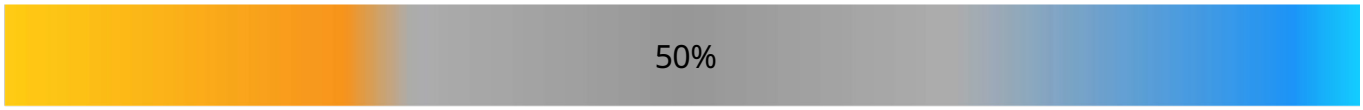
All brain matter volumes with a percentile lower than 25% and all CSF structures with a percentile over 75% (orange font):

- Hippocampus (13.69%)
- Right Hippocampus (11.77%)
- Left Hippocampus (17.43%)
- Left Pallidum (22.45%)
- Temporal Lobe (15.29%)
- Right Temporal Lobe (18.04%)
- Left Temporal Lobe (14.14%)
- Left Occipital Lobe GM (23.73%)
- Left Temporal Lobe GM (19.65%)
- Lateral Ventricle (96.87%)
- Right Lateral Ventricle (96.08%)
- Left Lateral Ventricle (96.82%)

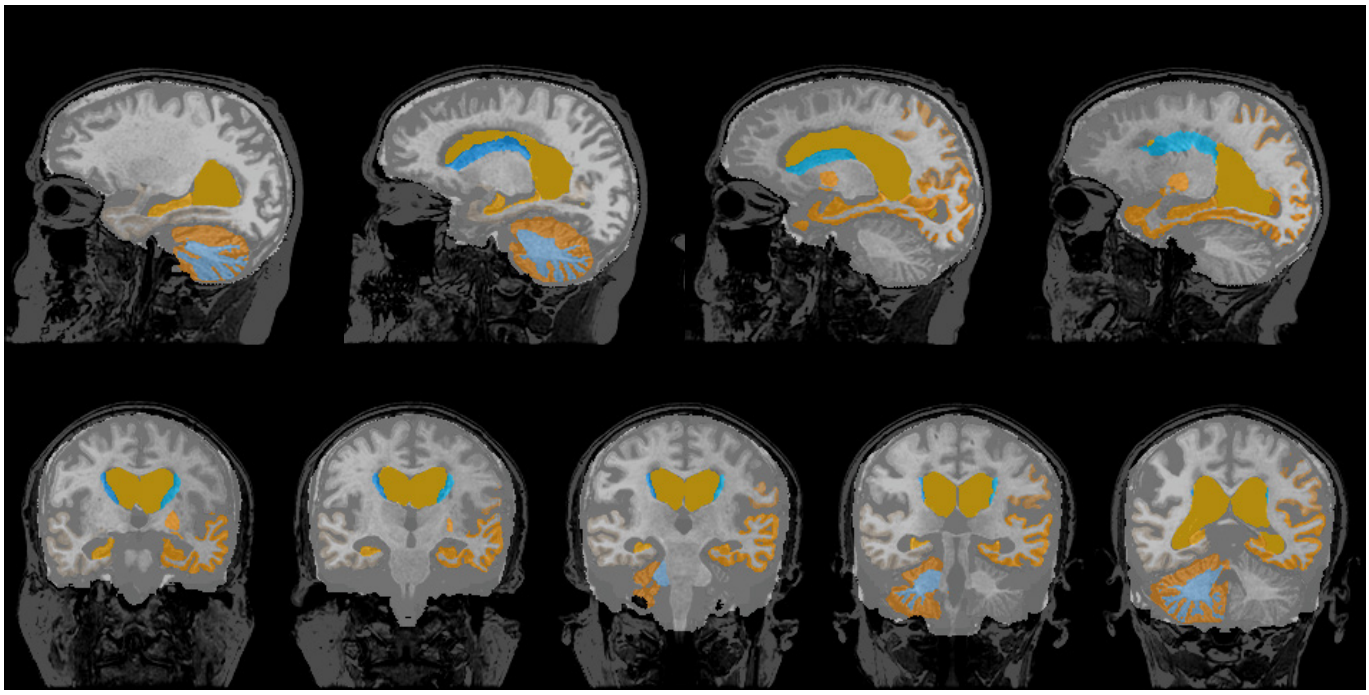
Quality Assessment Overlay Images



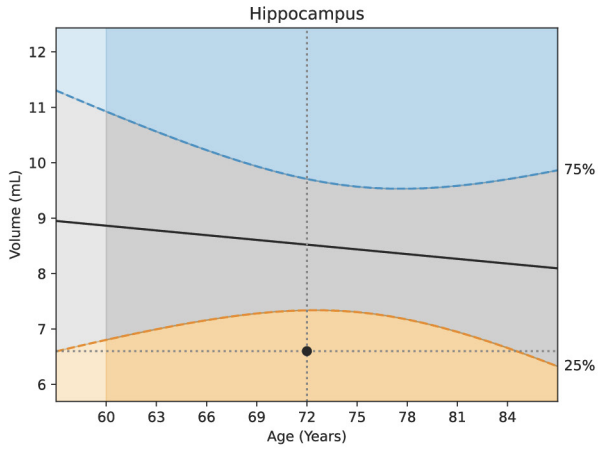
Brain Heat Maps

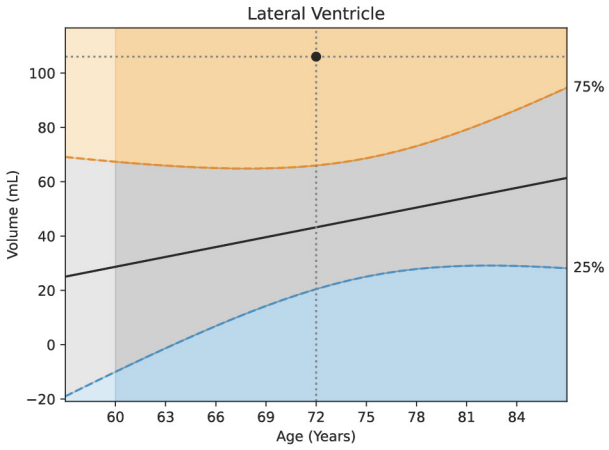


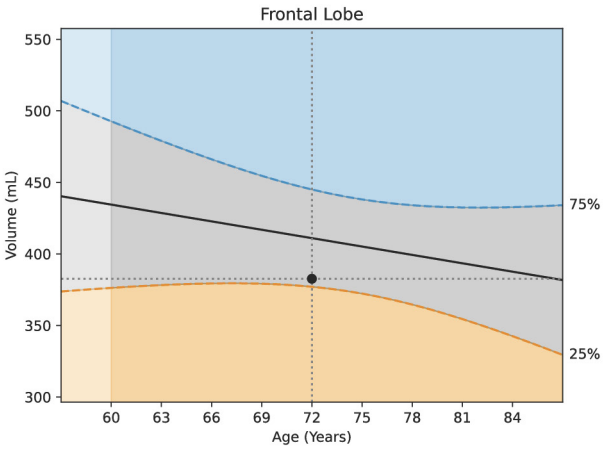
Statistical percentile for each brain structure shown in a color gradient. The orange color scale indicates all brain matter volumes with a low percentile and all CSF and ventricular structures with a high percentile.

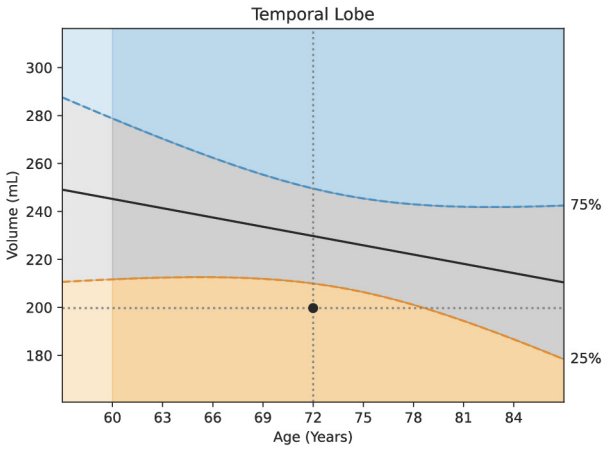


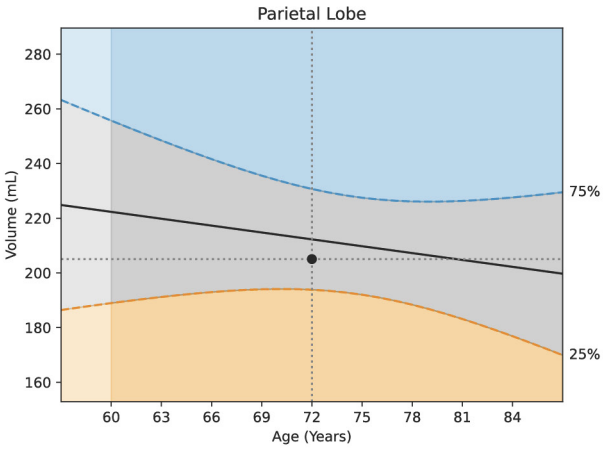
Charts

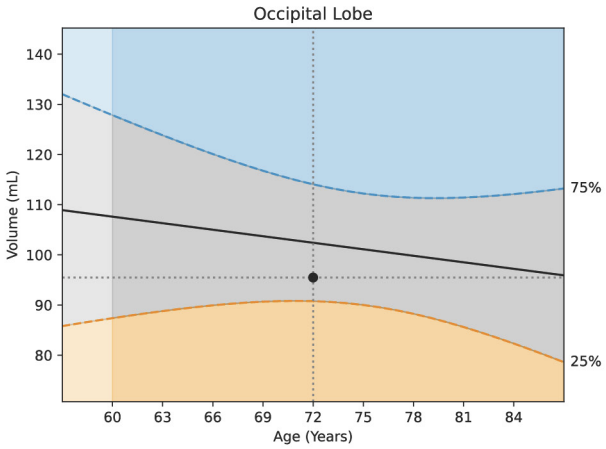

Hippocampus
Volume (mL)
Age (Years)
75%
25%


Lateral Ventricle
Volume (mL)
Age (Years)
75%
25%

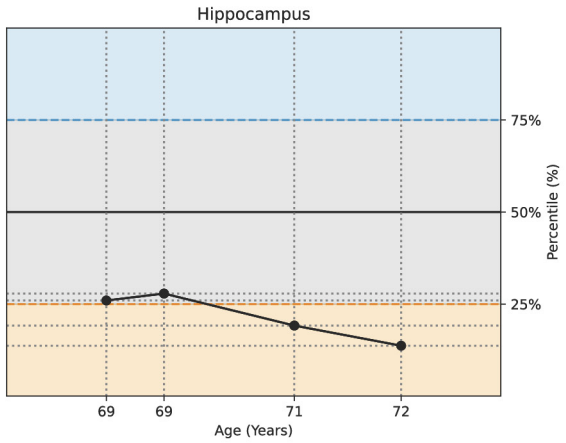

Frontal Lobe
Volume (mL)
Age (Years)
75%
25%

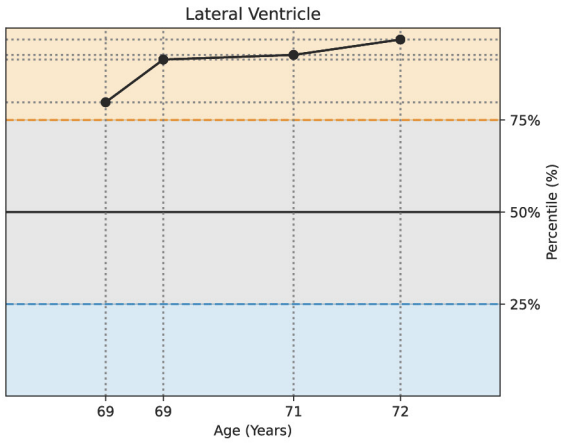

Temporal Lobe
Volume (mL)
Age (Years)
75%
25%

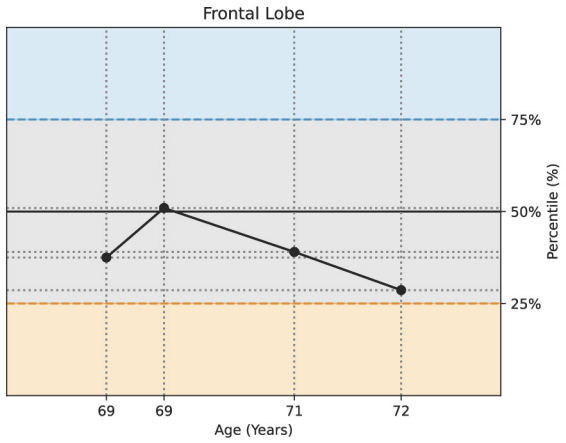

Parietal Lobe
Volume (mL)
Age (Years)
75%
25%

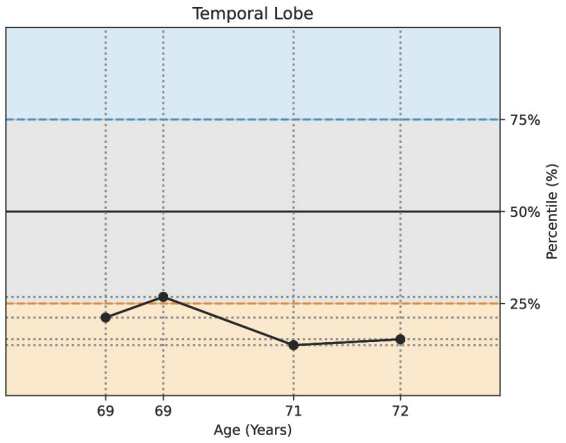

Occipital Lobe
Volume (mL)
Age (Years)
75%
25%

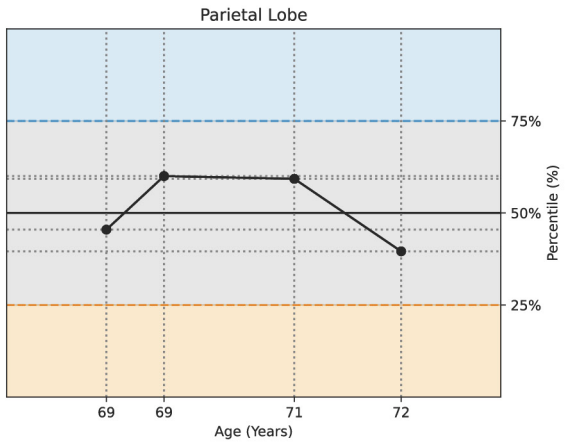
Longitudinal Charts

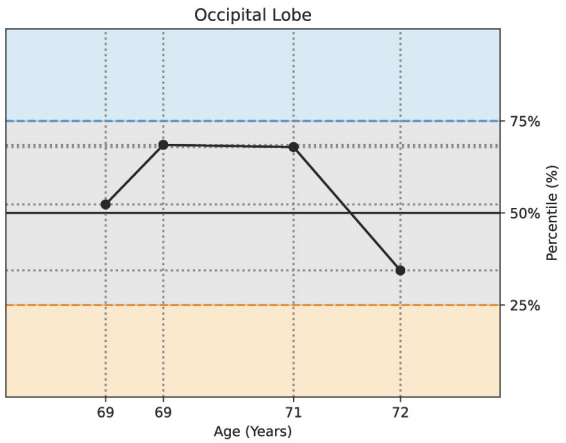










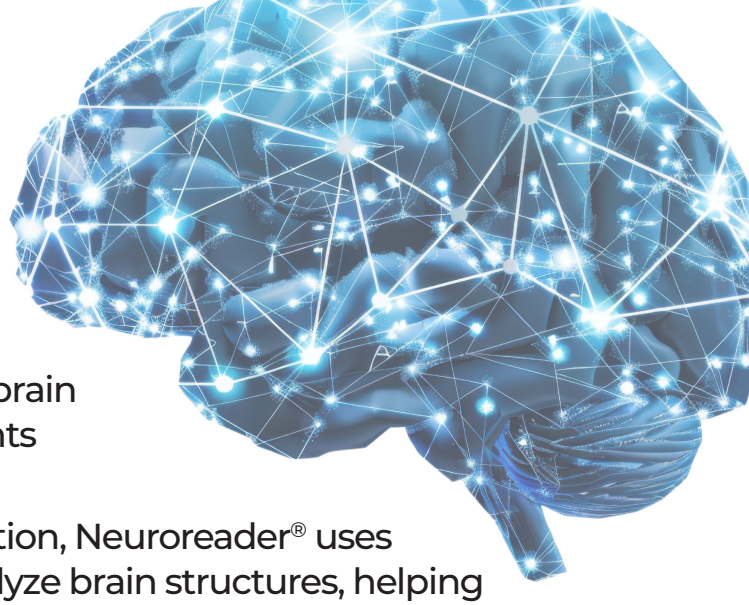


Brain Segmentation Color Table

(The Brain Segmentation Color Table contains the color codes and IDs of the overlays used for the segmentation overlay images. See Neuroreader manual for more information)

Id	Color	Label	Red	Green	Blue
53		Right Hippocampus	0	255	0
17		Left Hippocampus	0	0	255
54		Right Amygdala	255	255	0
18		Left Amygdala	0	255	255
51		Right Putamen	255	0	255
12		Left Putamen	255	128	0
49		Right Thalamus	128	255	0
10		Left Thalamus	0	255	128
60		Right Ventral Diencephalon	0	128	255
28		Left Ventral Diencephalon	255	0	128
52		Right Pallidum	128	0	255
13		Left Pallidum	128	0	0
50		Right Caudate	0	128	0
11		Left Caudate	0	0	128
16		Brain Stem	255	255	128
303		Right Frontal Lobe GM	128	255	255
302		Left Frontal Lobe GM	255	128	255
313		Right Frontal Lobe WM	128	128	0
312		Left Frontal Lobe WM	0	128	128
305		Right Parietal Lobe GM	128	0	128
304		Left Parietal Lobe GM	255	128	128
315		Right Parietal Lobe WM	128	255	128
314		Left Parietal Lobe WM	128	128	255
307		Right Occipital Lobe GM	192	64	64
306		Left Occipital Lobe GM	64	192	64
317		Right Occipital Lobe WM	64	64	192
316		Left Occipital Lobe WM	64	192	192
309		Right Temporal Lobe GM	192	64	192
308		Left Temporal Lobe GM	192	192	64
319		Right Temporal Lobe WM	255	64	64
318		Left Temporal Lobe WM	255	64	192
47		Right Cerebellar GM	255	192	64
8		Left Cerebellar GM	255	192	192
46		Right Cerebellar WM	64	64	255
7		Left Cerebellar WM	64	192	255
24		CSF (+ dura)	192	64	255
43		Right Lateral Ventricle	192	192	255
4		Left Lateral Ventricle	192	255	192

Turning Brain Data Into Better Decisions.



Neuroreader® is an advanced medical software that works alongside a standard brain MRI to provide deeper, more precise insights into brain health.

Instead of relying only on visual interpretation, Neuroreader® uses advanced algorithms to measure and analyze brain structures, helping physicians identify subtle changes that may be difficult to assess through visual interpretation alone.

Why Does This Matter?

Quantitative Measurements

Traditional MRI interpretation can vary between clinicians. Neuroreader® provides quantitative, reproducible measurements to support clinical interpretation, reducing uncertainty.

Better Monitoring Over Time

If you've already been diagnosed with a neurological condition, Neuroreader® can help your care team track changes and progression more clearly.

Supports Better Care Decisions

By providing quantitative data, Neuroreader® helps physicians make more informed treatment and care plans, which can improve quality of life and long-term outcomes.

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