

Appendix:*Table S1: Patient characteristics of the 180 subjects in this study.*

Characteristics	MRI (N=54)	CT (N=126)
Age	67.6 ± 14.6	69.7 ± 12.6
Sex	22 females	56 females
Treatment	17 control	72 control
Follow-up time	38.5 ± 28.7	26.9 ± 15.5
Baseline NIHSS	15	16
48-hour NIHSS	3	11

Table S2: Summary of critical regions across all six categories in score-based grouping. The average score per region is calculated using only the non-zero voxels.

Region	Consciousness	Language	Motor	Sensory	Neglect	Vision	Total
Left hemisphere							
Anterior segment of arcuate	0.36 ± 0.20	0.35 ± 0.20	X	X	X	0.28 ± 0.14	0.37 ± 0.21
Arcuate fasciculus	0.26 ± 0.16	0.34 ± 0.21	0.22 ± 0.10	0.16 ± 0.04	X	0.25 ± 0.12	0.03 ± 0.17
Corpus callosum	0.35 ± 0.17	X	X	X	X	X	X
Corticoponto cerebellum	0.39 ± 0.21	X	X	X	X	X	0.32 ± 0.16
Corticospinal tract	0.28 ± 0.18	0.27 ± 0.13	0.21 ± 0.09	X	X	X	X
Heschl's gyrus	0.38 ± 0.21	0.36 ± 0.17	X	X	X	X	X
Inferior Occipitofrontal fasciculus	0.27 ± 0.15	X	X	X	X	X	X
Long segment of arcuate	X	X	X	X	X	X	0.32 ± 0.15
Postcentral	X	X	X	X	X	X	0.34 ± 0.18
Posterior segment	0.28 ± 0.14	X	X	X	X	X	X
Rolandic operculum	0.40 ± 0.23	0.40 ± 0.22	X	X	X	X	X
Insula	X	0.26 ± 0.13	X	X	X	X	X
Right hemisphere							
Anterior segment of arcuate	X	X	X	X	0.33 ± 0.17	0.40 ± 0.24	0.19 ± 0.60
Arcuate fasciculus	X	X	0.30 ± 0.15	0.27 ± 0.15	0.27 ± 0.15	X	X
Corticoponto cerebellum	X	X	X	0.35 ± 0.23	0.31 ± 0.15	X	X
Corticospinal	X	X	0.35 ± 0.22	0.45 ± 0.25	0.27 ± 0.13	X	0.18 ± 0.06
Frontal inferior operculum	X	X	X	X	X	0.27 ± 0.13	X
Insula	X	X	X	X	0.21 ± 0.09	X	X

Internal capsule	X	X	0.37 ± 0.20	X	X	0.28 ± 0.14	X
Long segment of arcuate	X	X	0.34 ± 0.19	X	0.27 ± 0.16	0.30 ± 0.14	X
Posterior segment of arcuate	X	X	X	0.29 ± 0.16	X	X	X
Rolandic operculum	X	X	X	0.18 ± 0.06	X	X	X
Temporal superior	X	X	X	0.25 ± 0.13	X	0.30 ± 0.19	X

Table S3: Summary of critical regions across all six categories in anatomy-based grouping. The average score per region is calculated only using the non-zero voxels.

Region	Consciousness	Language	Motor	Sensory	Ataxia	Vision	Total
Left hemisphere							
Anterior segment of arcuate	X	X	X	X	X	X	0.37 ± 0.21
Arcuate fasciculus	X	X	0.21 ± 0.09	0.19 ± 0.08	X	0.27 ± 0.14	0.03 ± 0.17
Corpus callosum	X	0.29 ± 0.09	X	X	X	X	X
Corticoponto cerebellum	X	X	0.23 ± 0.11	X	X	X	0.32 ± 0.16
Corticospinal tract	0.13 ± 0.03	0.20 ± 0.09	0.22 ± 0.09	X	0.22 ± 0.11	0.23 ± 0.13	X
Heschl's gyrus	X	0.35 ± 0.16	X	X	X	X	X
Long segment of arcuate	X	X	X	X	X	X	0.32 ± 0.15
Postcentral gyrus	X	X	X	X	X	X	0.34 ± 0.18
Rolandic operculum	X	0.36 ± 0.19	X	X	X	X	X
Insula	X	0.32 ± 0.19	X	X	X	X	X
Right hemisphere							
Anterior segment of arcuate	X	X	0.34 ± 0.04	X	X	X	0.19 ± 0.60
Anterior commissure	X	X	X	X	0.38 ± 0.22	X	X
Arcuate fasciculus	0.34 ± 0.21	X	0.23 ± 0.10	X	0.16 ± 0.05	X	X
Caudate	X	X	X	0.22 ± 0.10	X	X	X
Corticospinal tract	0.27 ± 0.16	X	0.33 ± 0.19	0.28 ± 0.18	X	X	0.18 ± 0.06
Corticoponto cerebellum	0.20 ± 0.07	X	0.33 ± 0.18	0.34 ± 0.21	X	X	X
Inferior longitudinal fasciculus	X	X	X	X	0.38 ± 0.23	X	X
Internal capsule	0.18 ± 0.06	X	X	0.32 ± 0.18	X	X	X
Long segment of arcuate	0.43 ± 0.23	X	X	X	X	X	X

Pallidum	X	X	X	X	0.24 ± 0.12	X	X
Supramarginal gyrus	X	X	X	X	0.20 ± 0.08	X	X
Rolandic operculum	0.22 ± 0.09	X	X	X	X	0.36 ± 0.21	X
Temporal superior	X	X	X	X	X	0.38 ± 0.23	X