

On-line Table 1: RIS diagnostic criteria, as defined by Okuda et al,³ and main clinical reasons/criteria for which patients were excluded

Okuda Criteria	Requirements	No. of Excluded Patients	Examples
A	Incidental WM anomalies in the CNS meeting the following MRI criteria:		
A1	Ovoid, well-circumscribed, and homogeneous foci with or without involvement of the corpus callosum		
A2	T2 hyperintensities measuring >3 mm and fulfilling Barkhof criteria (≥3 of 4) for dissemination in space		
A3	CNS WM anomalies not consistent with a vascular pattern ^a		
B	No historical accounts of remitting clinical symptoms consistent with neurologic dysfunction	13	Optic neuritis (n = 4), dysesthesia (n = 4), hemiparesis (n = 3), walking difficulties and positive Babinski sign (n = 1), Lhermitte sign (n = 1)
C	The MRI anomalies do not account for clinically apparent impairment in social, occupational, or generalized areas of functioning	3	Severe dementia (n = 3)
D	The MRI anomalies are not due to the direct physiologic effects of substances (recreational drug abuse, toxic exposure) or a medical condition	2	Long-term alcohol abuse (n = 2)
E	Exclusion of individuals with MRI phenotypes suggestive of leukoaraiosis or extensive WM pathology lacking involvement of the corpus callosum ^a		
F	The CNS MRI anomalies are not better accounted for by another disease process	22	Stroke (n = 5), myocardial infarction (n = 4), malignant tumor with chemotherapy (n = 4), diabetes mellitus type 2 with long-term complications and hypertension (n = 3), transient ischemic attacks (n = 3), aortic stenosis (n = 2), carotid artery stenosis (n = 1)

^a Exclusions according to Okuda criteria E and A3 were performed simultaneously.

On-line Table 2: MRI findings in the clinical radiologic readings in all patients having a brain examination in 2013 (1907 patients, 2272 examinations)^a

MRI Findings	No.
Normal findings	654
Neurodegenerative disorders	718
Degenerative or unspecific white matter changes	489
Marked perivascular spaces	50
Other degenerative findings	33
Cerebrovascular disorders	444
Infarctions	257
Intracranial bleeding	154
Arterial stenosis, dissections	13
Aneurysms	11
Venous thrombosis	4
Vasculitis	3
Progressive supranuclear palsy	2
Wernicke encephalopathy	1
Other cerebrovascular disorders	2
Intracranial neoplasms	247
Meningiomas	104
Gliomas	59
Suspected neoplasm or neoplasm of unknown origin	38
Metastasis	30
Intracranial lipoma	6
Lymphoma	4
Schwannomas	3
Other neoplasms	3
Neuroinflammatory disorders	160
MS findings in patients with known MS	121
Other and suspected demyelinating disorders	39
Sinonasal disorder	158
Sinusitis, mastoiditis, polyps	156
Other ear/nose pathology	2
Intracranial cysts	94
Arachnoid cysts	30
Pineal body cysts	28
Neuroglial cyst	7
Fissure choroid cyst	7
Colloid cyst	4
Epi-/dermoid cyst	3
Unspecified cysts	15
Malformations	84
Cavernous venous malformation	20
Developmental venous anomaly	20
Chiari malformations	11
Mega cisterna magna	7
Agenesis of the corpus callosum	5
Dandy-Walker malformations	2
Other malformations	9
Hydrocephalus	50
Normal pressure hydrocephalus	40
Secondary hydrocephalus	10
Infectious disorders	16
Encephalitis	5
Meningitis	5
Other infectious disorders	6

^a Each type of finding is only reported once per patient. Some patients may be represented in several rows due to multiple types of findings.

On-line Table 3: The main indications for MRI for all persons fulfilling Okuda A for Barkhof and Swanton criteria for DIS

Indications for MRI	N = 42 (20 + 22)
Headache	8
Meningioma	5
Convulsions	4
Follow-up of CT findings ^a	4
Paresis	3
Dementia	3
Decreased visual acuity	3
Headache and vertigo	2
Vertigo	2
Dysesthesia	2
Hearing loss	1
Anosmia	1
Mitosis and ptosis	1
Parkinsonism and nystagmus	1
Psychosis	1
Trauma	1

^a Suspected intracranial tumor, cyst, and hyper- and hypodensity that needed further investigation with MRI.