European Reference Network

for rare or low prevalence complex diseases

Network Neurological Diseases (ERN-RND)

Minimal requirements for information given about MRI data in publications

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Introduction to the European Reference Network for Rare Neurological Diseases (ERN-RND):

ERN-RND is a European Reference Network established and approved by the European Union. ERN-RND is a healthcare infrastructure which focuses on rare neurological diseases (RND). The three main pillars of ERN-RND are (i) network of experts and expertise centres, (ii) generation, pooling and dissemination of RND knowledge, and (iii) implementation of e-health to allow the expertise to travel instead of patients and families.

ERN-RND unites 32 of Europe's leading expert centres in 13 Member States and includes highly active patient organizations. Centres are located in Belgium, Bulgaria, Czech Republic, France, Germany, Hungary, Italy, Lithuania, Netherlands, Poland, Slovenia, Spain and the UK.

The following disease groups are covered by ERN-RND:

- Ataxias and Hereditary Spastic Paraplegias
- Atypical Parkinsonism and genetic Parkinsons' Disease
- Dystonia, Paroxysmal Disorder and Neurodegeneration with Brain Ion Accumulation
- Frontotemporal Dementia
- Huntingtons' Disease and other Choreas
- Leukodystrophies

Specific information about the network, the expert centres and the diseases covered can be found at the networks web site www.ern-rnd.eu.

Recommendation for MRI data in publications:

The European Reference Network for Rare Neurological Diseases strongly recommends to give at least the following additional information when presenting MRI images in publications.

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METHODOLOGY

The requirements for additional information to MRI pictures in publications was compiled by the Disease group for Leukodystrophies of ERN-RND.

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Minimal requirements for information to be given with MRI pictures in publications:

Structure	**Affected / not affected**
Periventricular white matter (par occ / temp / fron)	
Central white matter (par occ / temp / fron)	
Subcortical white matter (par occ / temp / fron)	
Corpus callosum (genu)	
Corpus callosum (body)	
Corpus callosum (splenium)	
Cortex	
Basal ganglia	
Thalamus	
Mesencephalon	
Brain stem	
Cerebellar white matter	
Dentate nucleus	
Cerebellar cortex	
Spinal cord	
Dorsal colums	
lateral corticospinal tracts	
ventral corticospinal tracts	
grey matter	
General	
Supratentorial atrophy: inner CSF spaces	
Supratentorial atrophy: outer CSF spaces	
Cerebellar atrophy: vermis	
Cerebellar atrophy: hemispheres	
Other important findings	

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Illustration (minimal requirements)	**level**
axial t2	centrum semiovale
	Basal ganglia / thalami
	(mesencephalon)
	cerebellar white matter
sag image (T1 or T2)	mid sagittal
ALWAYS provide age at MRI	
additional images depending on pathology	
T1 (with / without contrast)	
FLAIR	
SWI	
DWI (incl ADC)	

Describe white matter findings using standard terminology	predominant where?
	confluent / multifocal
	contrast enhancing?
	cystic/rarefied?
	symmetric / asymmetric ?
	other characteristics (calcifications, microbleeds…)
	signal intensity on T2 and T1

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