

Leiden

Institutions

The C.J.Gorter Center for High Field MRI is located in the Department of Radiology at the Leiden University Medical Center, Leiden, The Netherlands

Principal Investigators



Andrew Webb Thijs van Osch Mark van Buchem

7T equipment

Hardware Whole body MR (Philips)-clinical and research (32ch head coil, parallel transmission, dynamic shim unit, Skope probes)
Operational since 2008
Other equipment (human imaging): 2 x 3T MR (Philips Ingenia) / 3T MR (Philips Achieva) / 1.5T MR (Philips Ingenia)

7T Methods (as relevant for EUFIND)

Acquisition

Navigator-based motion and frequency offset correction
Susceptibility-weighted imaging and QSM
TOF Imaging
Multidimensional, multinuclear spectroscopy
Prospective motion correction (ultra-high resolution anatomy, angiography)
Extensive MR-safety testing

Analysis

- Phase unwrapping algorithms
- High resolution visualization of small vessels LC model analysis for localized spectroscopy
Diffusion weighted spectroscopy analysis toolkit
- Automatic segmentation of images from elderly patients based on magnitude and phase images

Research in neurodegeneration

Clinical and basic research topics

Huntington's
Alzheimers and early onset Alzheimers
Small vessel disease
Migraine

Cohorts

- Healthy young and older controls
Small vessel disease (Katwijk disease)
- Migraine (with and without aura)
- Huntingtons

Ethics Procedures

Approval for volunteers in place (no upper age limit). Patients can be scanned with clinical approval. Protocol development umbrella agreement in place for up to twenty volunteers and twenty patients.