NEUROIMAGING SURVEY 2017

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Neuroimaging Survey

26/28 EpiCARE centres responded
- 22/26 perform epilepsy surgery in adults
- 24/26 perform epilepsy surgery in children

15/26 centers have a specialized imaging database of epilepsy patients
- 8/26 centers able or might be able to share their normative data

MRI protocols – standard investigation in children with epilepsy

Out of 24 centres

- – 92% use volumetric T1
- – 28% use volumetric T2
- – 68% use volumetric FLAIR
- – 72% use SWI/T2*/ other hemosiderin sequence

- 22/24 centers use 3T scanner
- 7/24 centers do not use recommended slice thickness (3mm or less)

MRI protocols – standard investigation in adults with epilepsy

Out of 22 centers

- – 75% use volumetric T1
- – 10% use volumetric T2
- – 65% use volumetric FLAIR
- – 70% use SWI/T2*/ other hemosiderin sequence

- 19/22 centers use 3T scanner
- 4/22 centers do not use recommended slice thickness (3mm or less)

MRI protocols – presurgical investigation in children with epilepsy

Out of 24 centers

- 100% use volumetric T1
- 29% use volumetric T2
- 79% use volumetric FLAIR
- 79% use SWI/T2*/ other hemosiderin sequence
- 92% DTI available
- 79% fMRI available

• 19/24 centers use 3T

MRI protocols – presurgical investigation in adults with epilepsy

Out of 22 centers

- – 100% use volumetric T1
- – 15% use volumetric T2
- – 82% use volumetric FLAIR
- – 82% use SWI/T2*/ other hemosiderin sequence
- – 100% DTI available
- – 91% fMRI available

- All centers use 3T

Other neuroimaging methods

- 15/26 centres use ictal SPECT
  - 4 use group comparison (ISAS)
- 22/26 centres use PET
  - 4 use group comparison
- 14/26 centres use both methods

MRI protocols – postprocessing

- Curvilinear reformatting
- VBM/ MAP-07
- Cortical thickness/ junctions
- HippoSeg
- NODDI
- Mrtrix
- Spike-informed general linear model
- Regional homogeneity, Amplitude of low frequency fluctuations

- SPM
- FSL
- Freesurfer
- 3D Slicer
- EpiNav
- GIF (Geodesic Information Flow)