

## ■ ILAE Neuroimaging Task Force Highlight

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Epileptic  
Disorders

# ILAE Neuroimaging Task Force Highlight: harnessing optimized imaging protocols for drug- resistant childhood epilepsy

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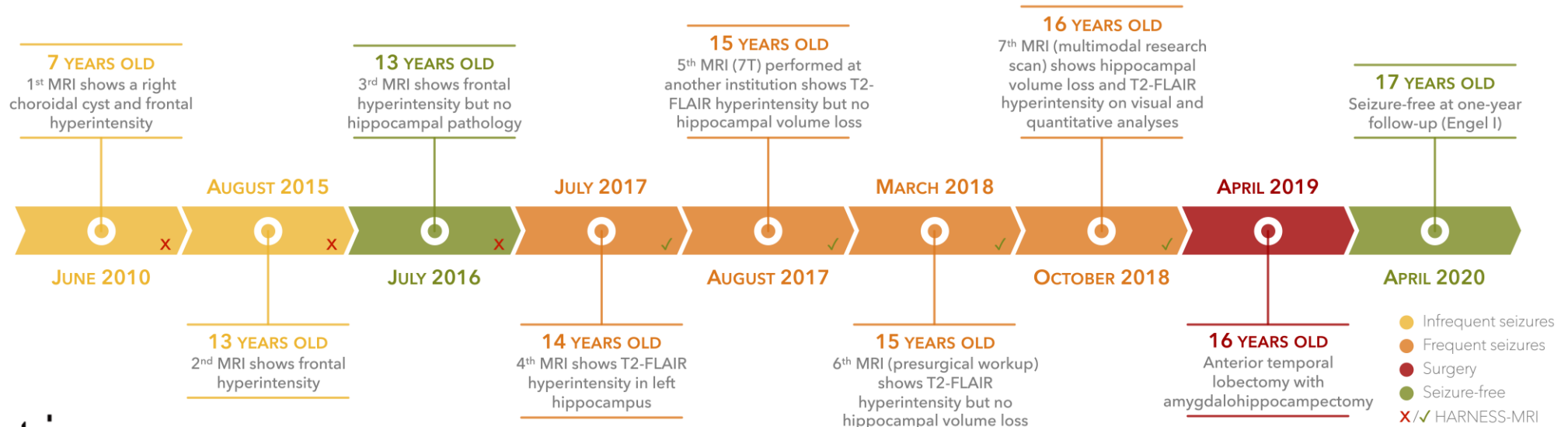
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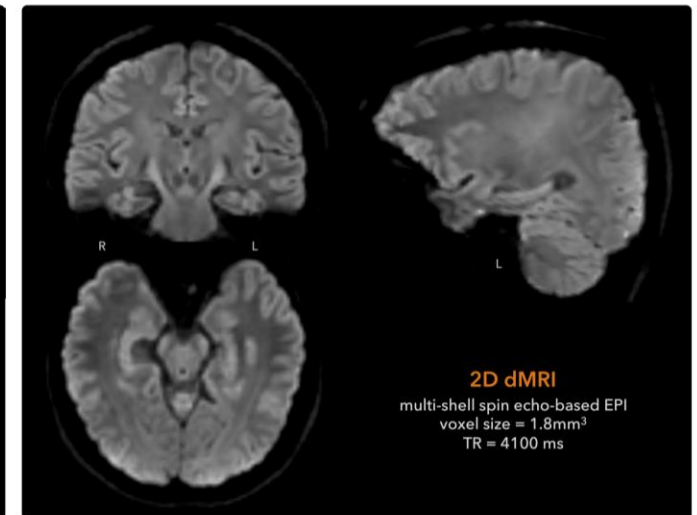
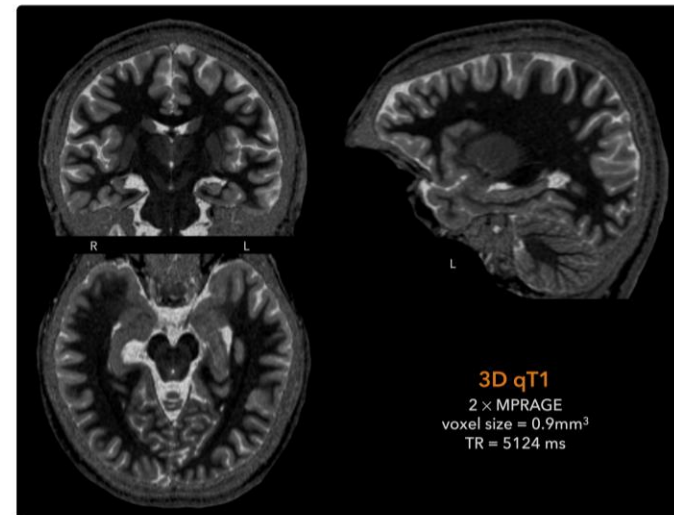
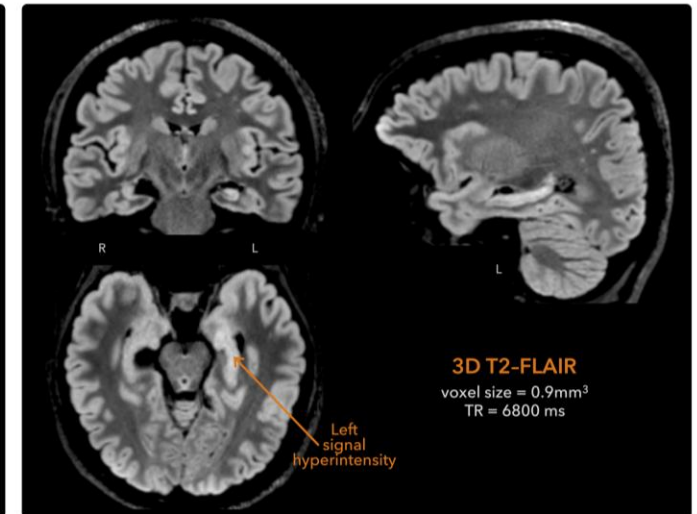
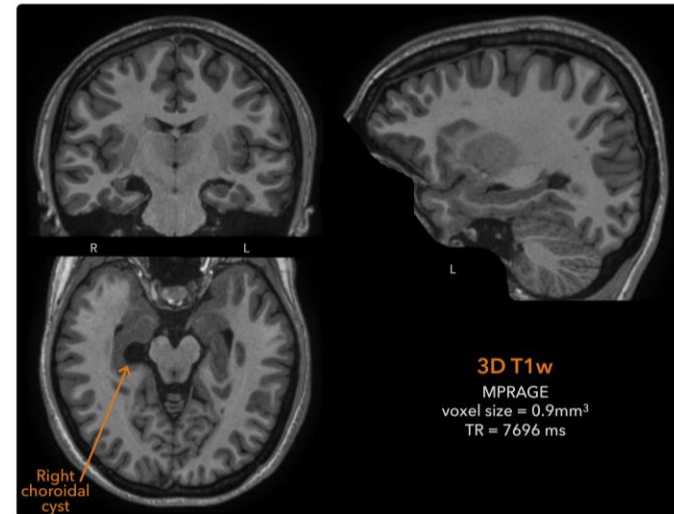
# CASE PRESENTATION

- 🧠 | MRI investigations in a female with drug-resistant pediatric epilepsy
- 🧠 | Spanning a decade, the patient underwent seven MRI scans
- 🧠 | At 16 years old, she underwent a left anterior temporal lobectomy with amygdalohippocampectomy
- 🧠 | The patient remains seizure-free since surgery (ILAE 1)



# MULTIMODAL IMAGING SEQUENCES

- 🧠 | Multimodal MRI data acquired at 16 years old
- 🧠 | These MRI scans followed HARNESS-MRI scan protocols (3D scans with isotropic voxel size of 1mm or less)
- 🧠 | A benign right choroidal cyst can be seen on the T1w (top left)
- 🧠 | Left hippocampal signal hyperintensity can be seen on the T2-FLAIR (top right)



# MULTIMODAL HIPPOCAMPAL ASYMMETRY

- Quantitative hippocampal asymmetry analysis of the multimodal MRI data
- Multivariate measures include hippocampal columnar volume (T1w), mean diffusivity (dMRI), qT1 intensity, T2-FLAIR intensity
- Marked changes can be observed in anterior portions of CA1–3 and CA4–DG in the left, relative to right, hippocampus

