

An artificial intelligence driven magnetic resonance imaging synthesis framework

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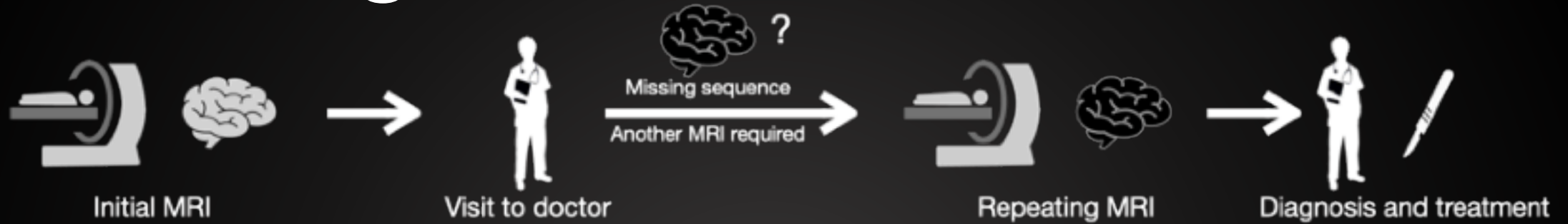


November 11-15, 2023

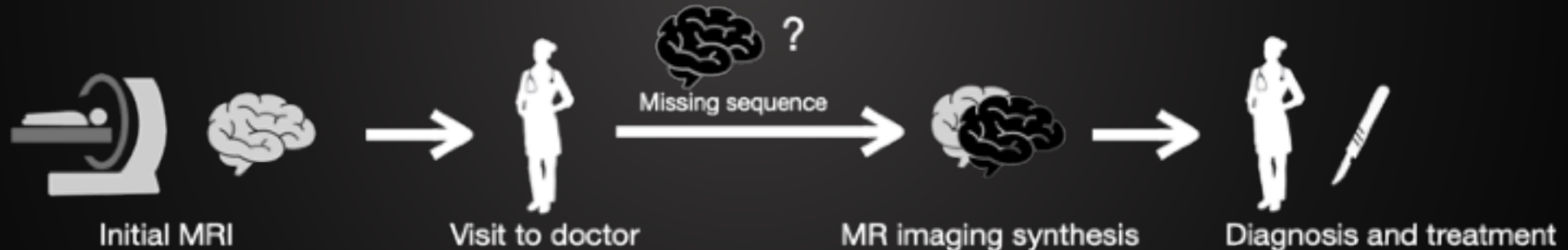
Hodaie Lab



Challenge



- MRI techniques and parameters vary across scanners
- Missing sequences require additional acquisition
- Increased cost of procedures, delay in diagnosis and treatment



Solution: an artificial intelligence (AI)-based approach to Magnetic Resonance (MR) data synthesis. We use existing acquired contrast-free T1-weighted (T1w) images to generate missing Diffusion Tensor Imaging Fractional anisotropy (DTI FA) and contrast-enhanced T1 (T1c) data