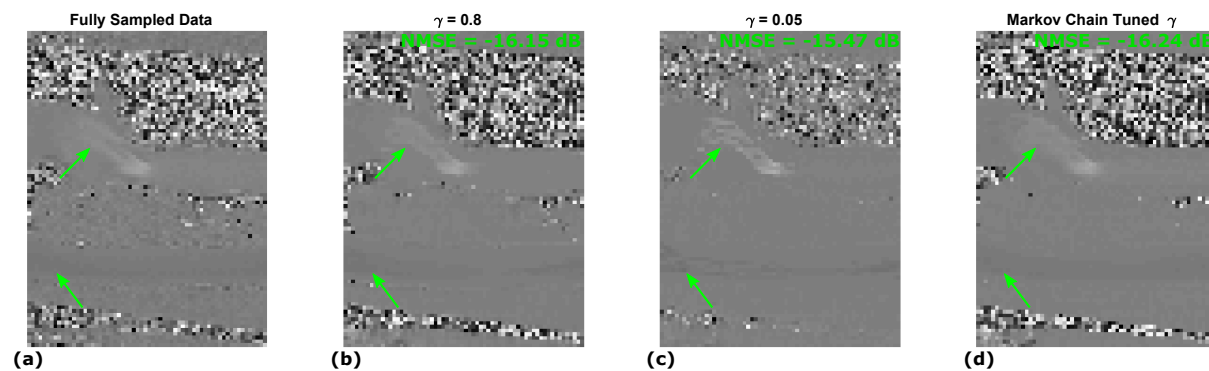


Supporting Figure S1: Box and whisker plots from in vivo repeatably test. Data acquisition was repeated 10 times on the same volunteer and reconstructed using ReVEAL4D. (a) Stroke volume. (b) Peak velocity.



Supporting Figure S2. Evaluating the impact of γ selection on ReVEAL4D image quality. (a) Velocity component map from one of the fully sampled phantom datasets. (b) Velocity component map from ReVEAL4D with manually optimized γ value of 0.8. (c) Velocity component map from ReVEAL4D with suboptimal γ value of 0.05. (d) Velocity component map from ReVEAL4D with voxel-wise γ value learned from the data using expectation maximization. A suboptimal choice of γ leads to artifacts in the velocity maps and increases the normalized mean squared error. The Markov chain slightly improves image quality over manually optimized $\gamma = 0.8$, but, more importantly, eliminates the need for hand-tuning.