Supplementary Material

Longitudinal deformation based morphometry pipeline to study neuroanatomical differences in structural MRI based on SyN unbiased templates

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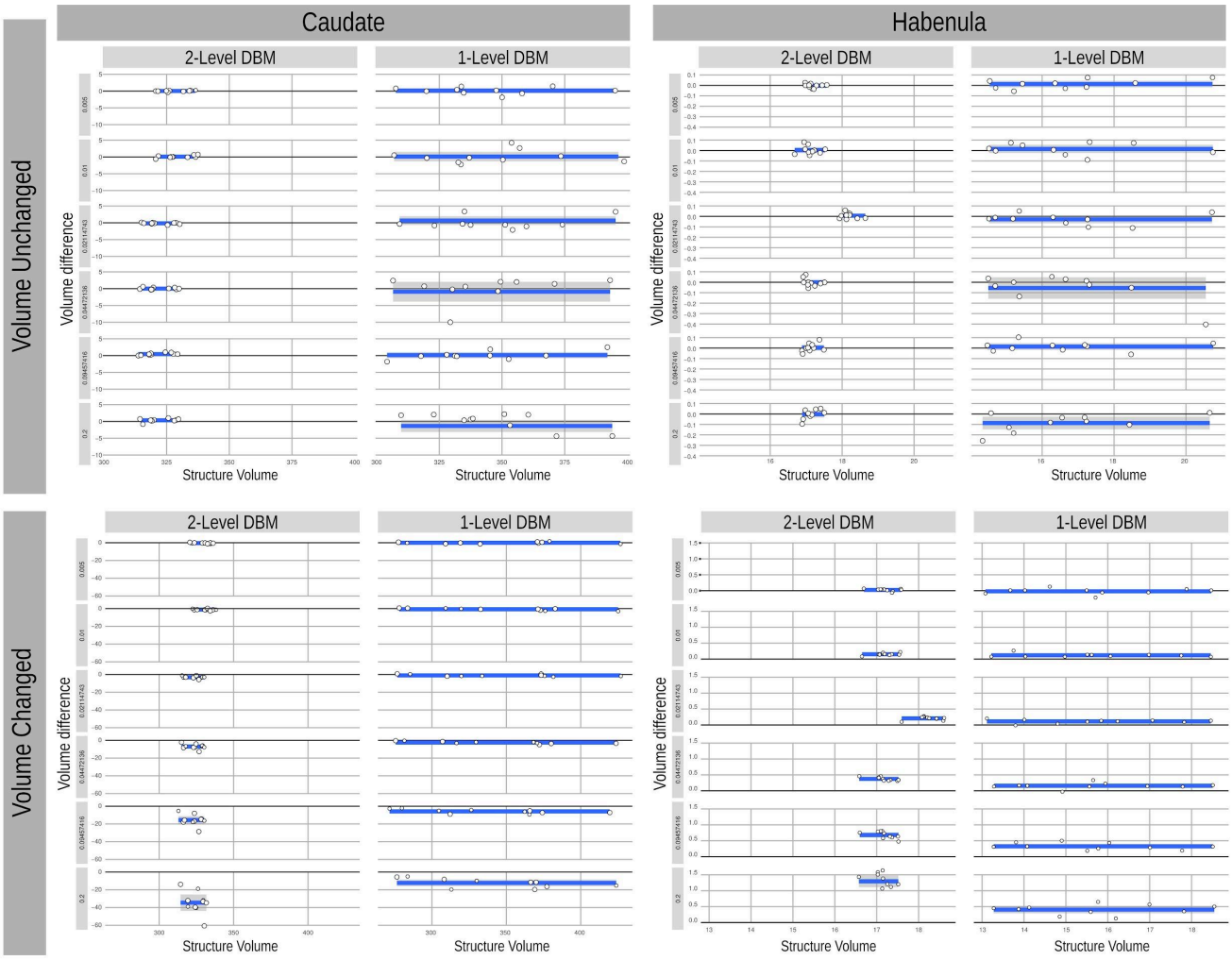
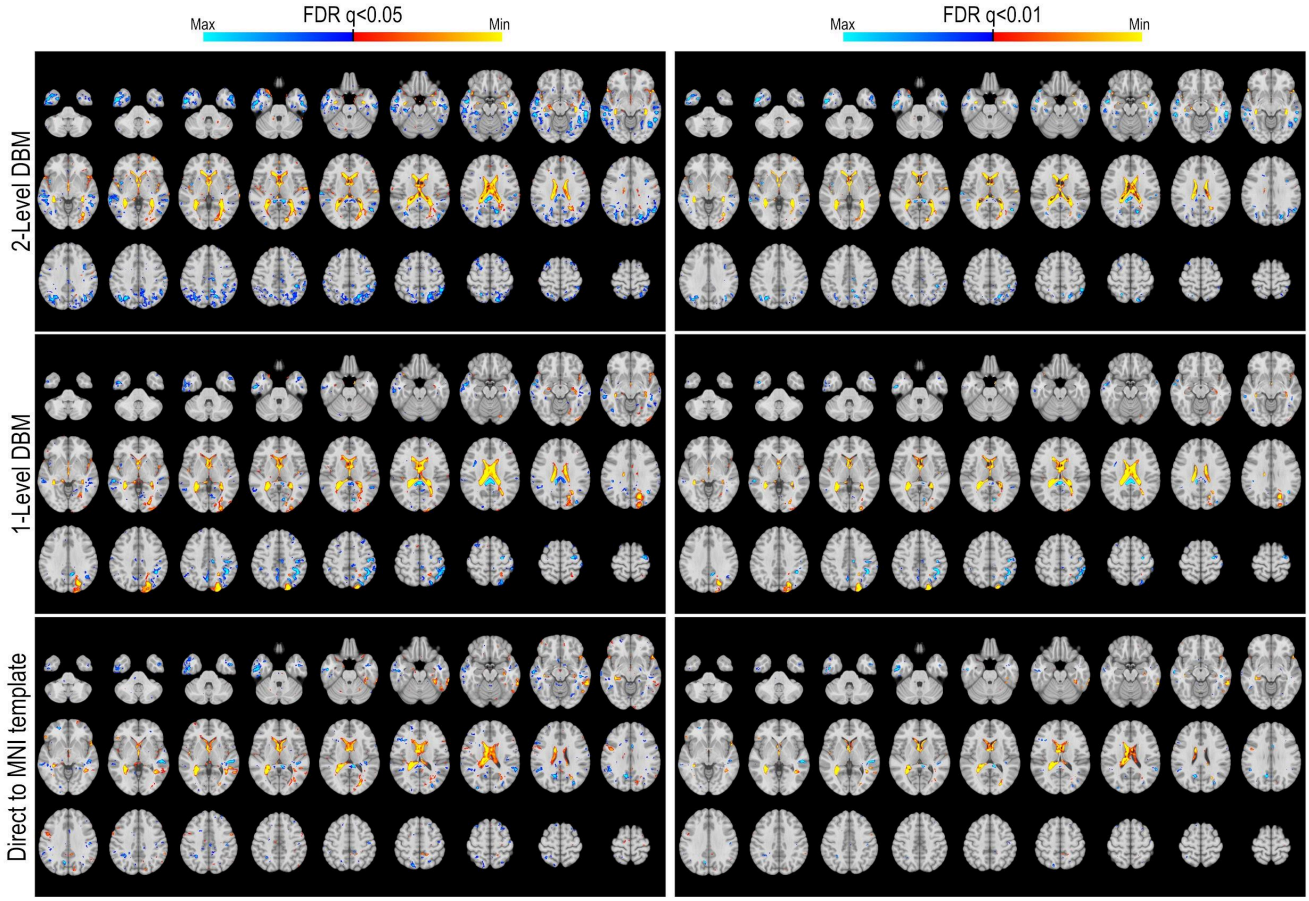
Supplementary Figures



Supplementary Figure 1: Plots comparing fidelity and variation of capturing induced volume change between one and two-level DBM across all the levels of induced volume change tested.



Supplementary Figure 2: Sagittal sections showing significant (FDR q<0.05 one left, FDR q<0.001 one right) voxel-wise volume changes captured associated with increasing MMSE score over time. The top row reports results using Jacobians generated using the two-level DBM with unbiased averaging - the novel method outlined in this work, the middle row reports results using Jacobians generated using the one-level DBM with unbiased averaging, the lower row reports results using Jacobians generated using the one level DBM to template space - the classical DBM method.

Supplementary Video: Example of an original and modified caudate at 20%. The video alternates between the original and reduced local volume. The (20%) reduced caudate is shown at 0:01s, 0:05s, 0:09s.