Supplementary for Deep Predictive Motion Tracking in Magnetic Resonance Imaging: Application to Fetal Imaging

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Figure S1: Volume reconstruction from multiplanar fetal MRI scans with motion parameters estimated with our method (Our) compared to reconstruction with slice-to-volume registration (SVR) for 6 fetuses in the test set. The normalized root mean square error (NRMSE) (lower is better) and structural similarity image metric (SSIM) (higher is better) have been reported between the two reconstructions for each subject. These results show that retrospective volume reconstructions with the motion parameters estimated using our method compared favorably against retrospective SVR.

Figure S2: Three plane views (coronal, sagittal, and axial) of volumes reconstructed by NiftyMIC using motion parameters estimated with our method (Our, top) and with slice-to-volume registration (SVR, middle), and the error between the two reconstructions (bottom).

Figure S3: An example of a failed volume reconstruction using slice-to-volume registration (SVR, bottom), where our method improved the reconstruction (Our, top).

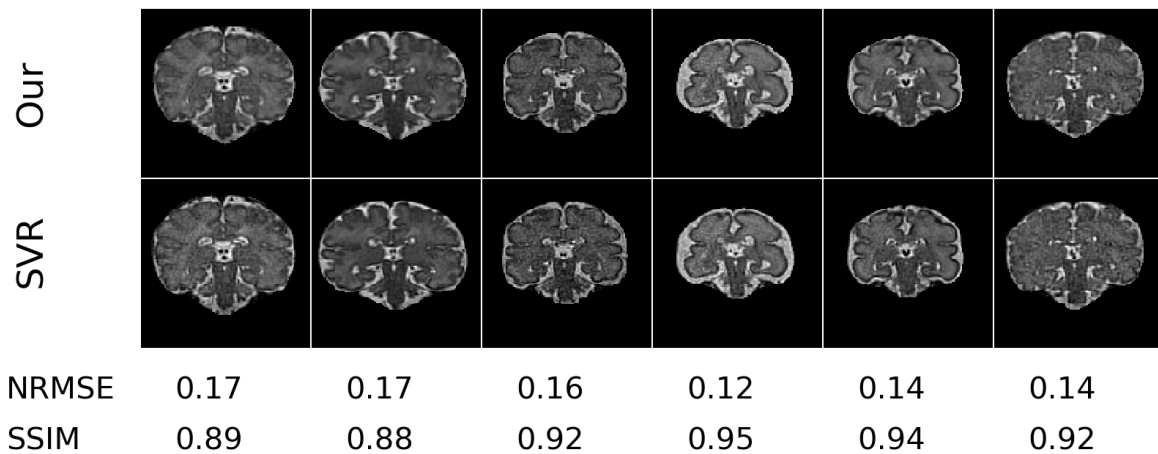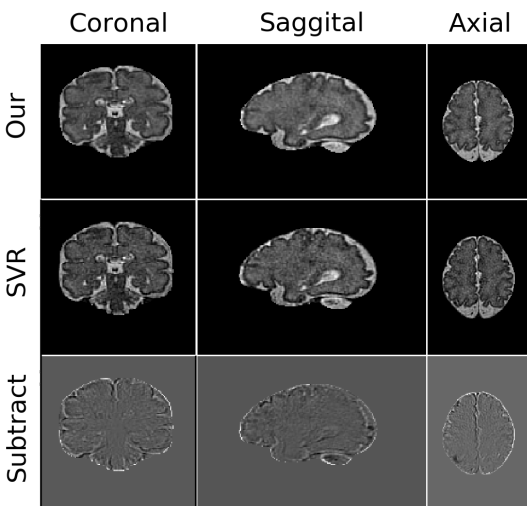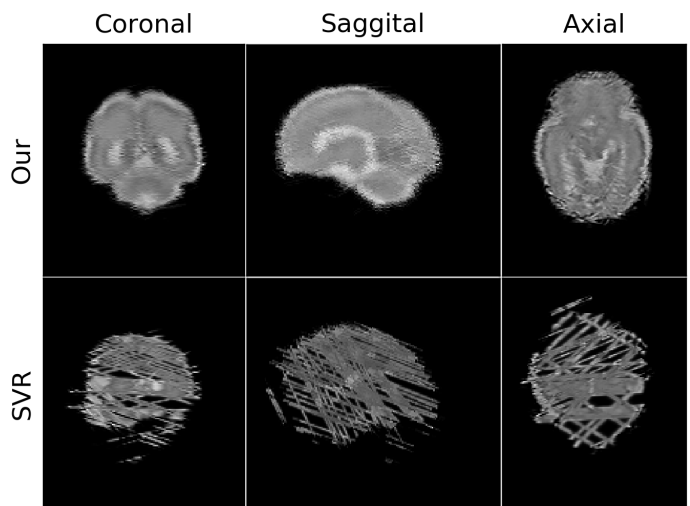|					
NRMSE	0.17	0.17	0.16	0.12	0.14	0.14
SSIM	0.89	0.88	0.92	0.95	0.94	0.92

Figure S1

Figure S2

Figure S3