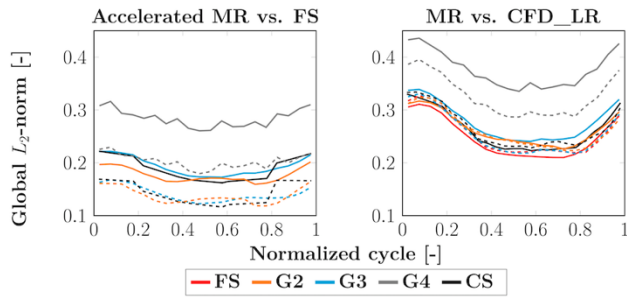


1 SUPPORTING INFORMATION - FIGURES

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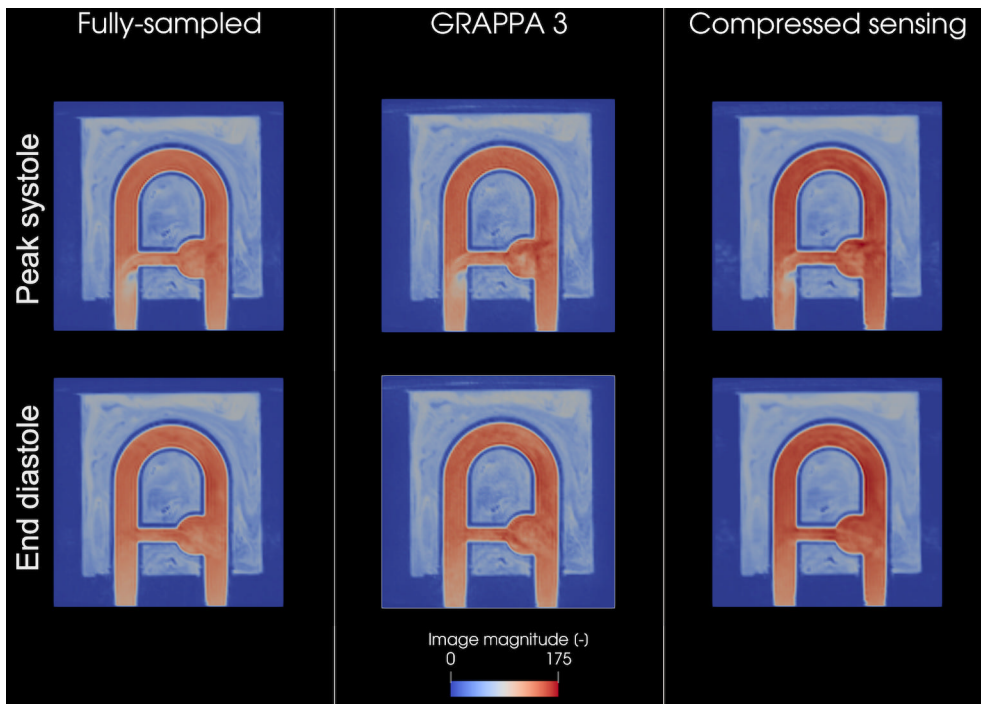


3

4 *Figure S1: Global L_2 -norm of the velocity vector differences along the cardiac cycle for all MR*
 5 *acquisitions. On the left, the accelerated MR sequences are compared to the fully sampled*
 6 *MR acquisition. On the right, the MR sequences are compared to CFD_LR. The solid lines*
 7 *refer to the average over all voxels of the segmented volume, whereas the dashed ones*
 8 *correspond to the average over the voxels strictly included inside the phantom segmentation.*

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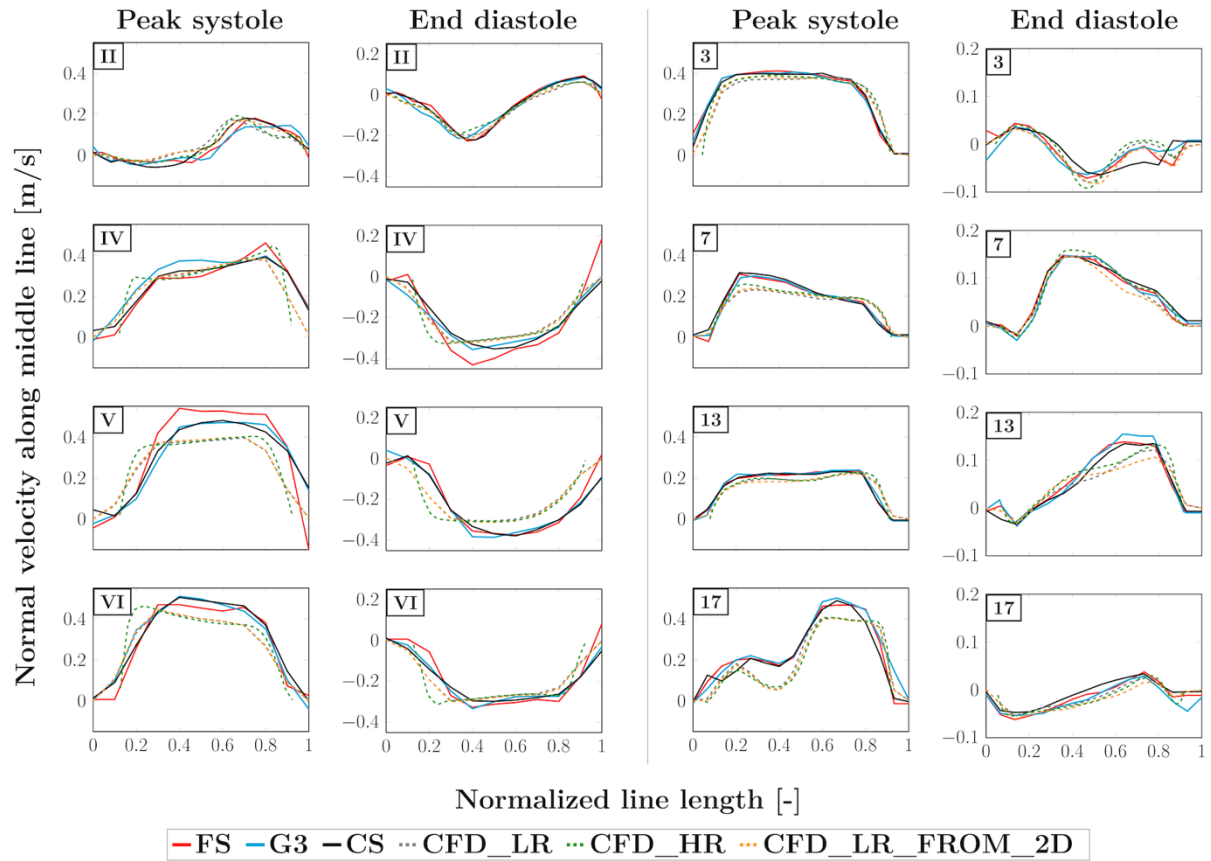
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Figure S2: Image magnitude before any correction at peak systole (above) and end diastole
(below) for the fully sampled, GRAPPA 3 and compressed sensing 4D flow MRI acquisitions.

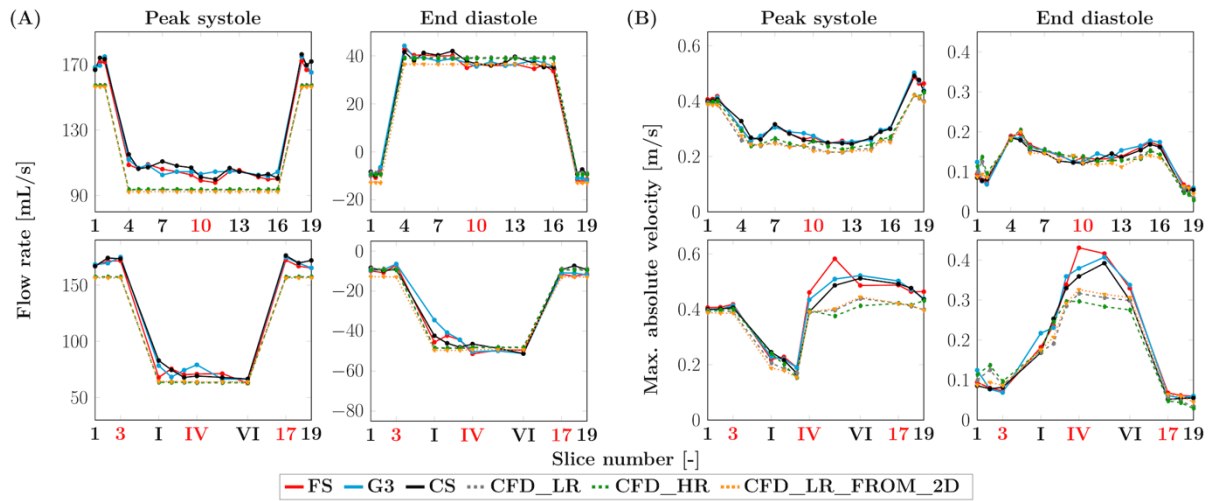


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16 *Figure S3: Velocity profiles along lines located in the coronal plane passing through the middle*
 17 *of the phantom. The velocity displayed corresponds to the projection onto the normal of the*
 18 *planes perpendicular to the ducts, referenced as in Figure 3. It is the analogous plot of Figure*
 19 *6, where the curves from the additional downsampled CFD simulations based on a 2D PC-*
 20 *MRI have been added (CFD_LR_FROM_2D). The former curves are kept for reference.*

21

WITH EDDY CURRENT CORRECTION



22

23 *Figure S4: Flow rates (computed on all voxels) and peak velocities (computed on inner voxels*
 24 *only) for the velocity fields after eddy current correction, divided in (A) Flow rates and (B) Peak*
 25 *velocities at peak systole and end diastole. **Above:** along the main duct from planes 1 to 19.*
 26 ***Below:** along the collateral duct, from planes 1-3, I-VI and 17-19, as referenced in Figure 3. It*
 27 *is the analogous plot of Figure 9, where the curves from the additional downsampled CFD*
 28 *simulations based on a 2D PC-MRI have been added (CFD_LR_FROM_2D). The former*
 29 *curves are kept for reference.*

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