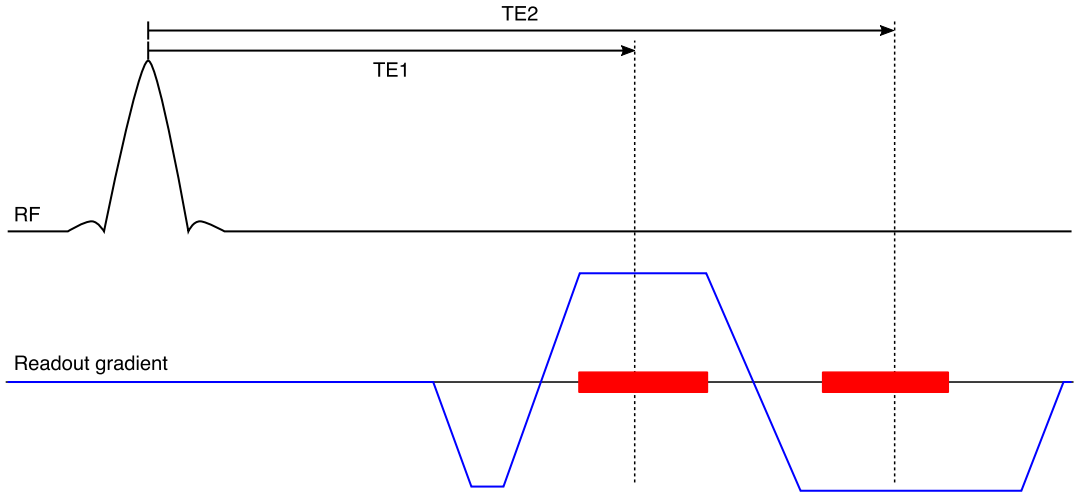
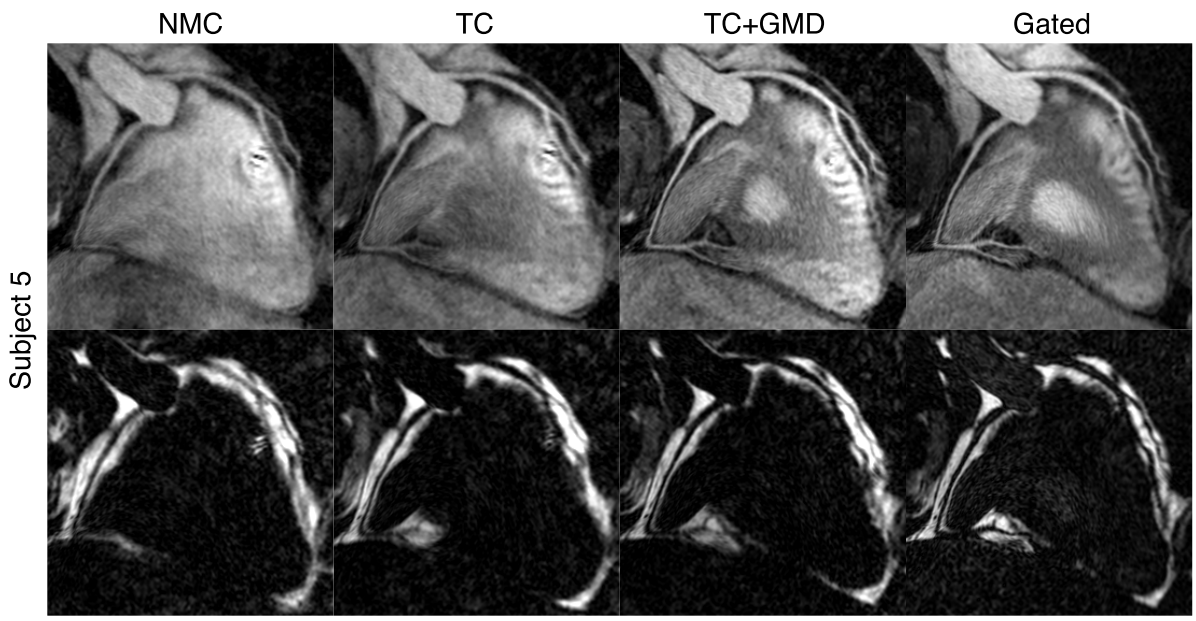
| Image Metrics | | NMC | TC | TC+GMD | Gated |
|---|---|---|---|---|---|
| Normalised vessel length | | | | | |
| RCA | mean±SD | 67.6±16.6% | 94.1±14.5% | 105.0±7.5% | NA |
| | p-value | $3.18\times10^{-4}$* | $1.87\times10^{-1}$ | $7.91\times10^{-2}$ | |
| LAD | mean±SD | 74.6±22.1% | 89.8±17.3% | 104.9±10.3% | NA |
| | p-value | $5.29\times10^{-3}$* | $9.93\times10^{-2}$ | $1.73\times10^{-1}$ | |
| Vessel sharpness (first 4 cm), a.u. | | | | | |
| RCA | mean±SD | 0.282±0.047 | 0.381±0.072 | 0.446±0.062 | 0.467±0.078 |
| | p-value | $1.83\times10^{-5}$* | $2.75\times10^{-4}$* | $1.60\times10^{-1}$ | |
| LAD | mean±SD | 0.269±0.045 | 0.389±0.047 | 0.436±0.021 | 0.442±0.059 |
| | p-value | $2.70\times10^{-5}$* | $4.14\times10^{-2}$ | $7.60\times10^{-1}$ | |
| Vessel sharpness, a.u. | | | | | |
| RCA | mean±SD | 0.287±0.036 | 0.386±0.056 | 0.444±0.041 | 0.472±0.060 |
| | p-value | $1.25\times10^{-5}$* | $7.08\times10^{-4}$* | $5.63\times10^{-2}$ | |
| LAD | mean±SD | 0.298±0.038 | 0.376±0.056 | 0.411±0.039 | 0.443±0.071 |
| | p-value | $2.28\times10^{-4}$* | $1.80\times10^{-2}$ | $1.50\times10^{-1}$ | |

*p-value < 0.01 vs. Gated

Supporting Information Table S1. Image quality metrics for the RCA and LAD arteries for NMC, TC, TC+GMD and Gated water images, including vessel length and vessel sharpness, for both the first 4 cm and full length of each vessel. p-values compared to the Gated images are indicated for each case. RCA: right coronary artery, LAD: left anterior descending artery. NMC: no motion corrected, TC: 2D translational motion corrected, TC+GMD: 2D translational plus 3D non-rigid motion-corrected, Gated: 1D diaphragmatic navigator gated and tracked acquisition.




Supporting Information Figure S1. Pulse sequence diagram, showing RF excitations and readout gradient, indicating echo times TE1/TE2. The intervals where data is acquired are indicated in red.




Supporting Information Figure S2. Reformatted CMRA water/fat images for an additional representative subject showing uncorrected (NMC), translational motion-corrected (TC), translational plus non-rigid motion-corrected (TC+GMD) and Gated images