Sup. Table S1: Pulseq sequence, raw data, metadata and image filenames in the GitHub repository linked to the Figures in the paper. Additionally, the reconstruction scripts, the sequence source code for PyPulseq sequences and XML files for JEMRIS sequences are listed.

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| FIG. 4 | Pulseq: gre\_3D\_caipi\_nonsel\_rfspoil\_te5.seq (upper)  gre\_3D\_caipi\_nonsel\_rfspoil\_te5\_fatimg.seq (lower)  JEMRIS: gre\_3D\_caipi\_nonsel\_rfspoil\_te5.xml (upper)  gre\_3D\_caipi\_nonsel\_rfspoil\_te5\_fatimg.xml (lower)  Reconstruction: bart\_jemris.py  Raw data/images/metadata available on: https://osf.io/vnh4a/ (DOI 10.17605/OSF.IO/VNH4A)  or on request due to large file size. |
| FIG. 5 | Pulseq: gre\_3D\_caipi\_nonsel\_te25.seq (upper)  gre\_3D\_nocaipi\_nonsel\_te25.seq (lower)  JEMRIS: gre\_3D\_caipi\_nonsel\_te25.xml (upper)  gre\_3D\_nocaipi\_nonsel\_te25.xml (lower)  Reconstruction: bart\_jemris.py  Raw data/images/metadata available on: https://osf.io/vnh4a/ (DOI 10.17605/OSF.IO/VNH4A)  or on request due to large file size. |
| FIG 6. | Pulseq: gre\_b0mapping\_4e1a6.seq  Metadata: gre\_b0mapping\_4e1a6.h5  Raw data: raw\_gre\_b0mapping.h5  Image data: b0mapping.h5  Seq. source: write\_cartesian.py  Reconstruction: bart\_pulseq\_cartesian.py |
| FIG 7. | Sequences: spiralout\_gre\_jemris.seq (a), spiralout\_gre\_fatsat\_7T\_15f2a.seq (b+c),  spiralout\_gre\_fatsat\_3T\_d9aac.seq (d+e), spiralout\_gre\_fatsat\_3T\_GE\_9e1f5.seq (f)  Metadata: spiralout\_gre\_jemris.h5 (a), spiralout\_gre\_fatsat\_7T\_15f2a.h5 (b+c),  spiralout\_gre\_fatsat\_3T\_d9aac.h5 (d+e), spiralout\_gre\_fatsat\_3T\_GE\_9e1f5.h5 (f)  Raw data: raw\_spiralout\_gre\_jemris.h5 (a), raw\_spiralout\_gre\_fatsat\_7T.h5 (b+c),  raw\_spiralout\_gre\_fatsat\_3TSkyra.h5 (d), raw\_spiralout\_gre\_fatsat\_3TPrisma.h5 (e)  raw\_spiralout\_gre\_fatsat\_3T\_GE\_UHP.h5 (f)  Image data: spiralout\_jemris.h5 (a), spiralout\_fatsat\_pypulseq\_7T.h5 (b)  spiralout\_fatsat\_pypulseq\_b0corrected.h5 (c), spiralout\_fatsat\_pypulseq\_3TSkyra.h5 (d),  spiralout\_fatsat\_pypulseq\_3TPrisma.h5 (e), spiralout\_fatsat\_pypulseq\_3T\_GE\_UHP.h5 (f)  JEMRIS: spiralout\_gre.xml (a)  Seq. source: write\_spiral.py (b-f)  Reconstruction: bart\_jemris.py (a)  bart\_pulseq\_spiral.py (b,d,e,f)  B0-corrected reonstruction (c): See README on GitHub repo |
| FIG 8. | JEMRIS: spiralout\_gre.xml  Raw data: signals\_spiralout\_clean\_slc30.h5 / signals\_spiralout\_clean\_slc30.h5 (1st col.)  signals\_spiralout\_CS\_slc30.h5 / signals\_spiralout\_CS\_slc30.h5 (2nd col.)  signals\_spiralout\_Susc70Mhz\_slc30.h5 / signals\_spiralout\_Susc70Mhz\_slc90.h5 (3rd col.)  Image data: reco\_spiralout\_clean\_slc30.h5 / reco\_spiralout\_clean\_slc90.h5 (1st col.)  reco\_spiralout\_CS\_slc30.h5 / reco\_spiralout\_CS\_slc90.h5 (2nd col.)  reco\_spiralout\_Susc70Mhz\_slc30.h5 / reco\_spiralout\_Susc70Mhz\_slc90.h5 (3rd col.)  Reconstruction: bart\_jemris.py |