

\\USER\FMRIF\XT-ID:93-M-0170\Renzo\20231205_thirdordershim\localizer_irtfl_Richard

TA: 1:28 PM: REF Voxel size: 1.0×1.0×2.0 mmPAT: Off Rel. SNR: 1.00 : tfl

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | On |
| Auto close inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Contrast - Dynamic

| | |
|-----------------|------------------|
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| Base resolution | 192 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Routine

| | |
|--------------------|---------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Slice group | 2 |
| Slices | 8 |
| Dist. factor | 250 % |
| Position | L1.5 A21.0 H30.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slice group | 3 |
| Slices | 6 |
| Dist. factor | 700 % |
| Position | L1.5 A10.0 F25.9 mm |
| Orientation | Coronal |
| Phase enc. dir. | R >> L |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| TE | 3.46 ms |
| Averages | 1 |
| Concatenations | 20 |
| Filter | None |
| Coil elements | A32 |

Resolution - iPAT

| | |
|----------|------|
| PAT mode | None |
|----------|------|

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|------------------|---------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Slice group | 2 |
| Slices | 8 |
| Dist. factor | 250 % |
| Position | L1.5 A21.0 H30.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slice group | 3 |
| Slices | 6 |
| Dist. factor | 700 % |
| Position | L1.5 A10.0 F25.9 mm |
| Orientation | Coronal |
| Phase enc. dir. | R >> L |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| Multi-slice mode | Sequential |
| Series | Ascending |
| Concatenations | 20 |

Contrast - Common

| | |
|-------------------|---------------|
| TR | 4300.0 ms |
| TE | 3.46 ms |
| TD | 0 ms |
| Magn. preparation | Slice-sel. IR |
| T1 1 | 840 ms |
| T1 2 | 2540 ms |
| Flip angle 1 | 5.0 deg |
| Flip angle 2 | 8.0 deg |
| Fat suppr. | None |
| Water suppr. | None |

Contrast - Dynamic

| | |
|----------------|-----------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |

Geometry - AutoAlign

| | |
|-----------------|---------------------|
| Slice group | 1 |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| Slice group | 2 |
| Position | L1.5 A21.0 H30.0 mm |

Geometry - AutoAlign

| | |
|---------------------|---------------------|
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slice group | 3 |
| Position | L1.5 A10.0 F25.9 mm |
| Orientation | Coronal |
| Phase enc. dir. | R >> L |
| AutoAlign | --- |
| Initial Position | L1.5 A5.0 F25.3 |
| L | 1.5 mm |
| A | 5.0 mm |
| F | 25.3 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Sagittal |

Geometry - Navigator**System - Miscellaneous**

| | |
|---------------------|------------------|
| Positioning mode | REF |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Adaptive Combine |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Tune up |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| A >> P | 263 mm |
| R >> L | 350 mm |
| F >> H | 350 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 250.000 V |

Physio - Signal1

| | |
|-----------------|-----------|
| 1st Signal/Mode | None |
| TR | 4300.0 ms |
| Concatenations | 20 |

Physio - Cardiac

| | |
|-------------------|---------------|
| Magn. preparation | Slice-sel. IR |
| TI 1 | 840 ms |

Physio - Cardiac

| | |
|------------------|---------|
| TI 2 | 2540 ms |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Phase resolution | 100 % |

Physio - PACE

| | |
|----------------|-----|
| Resp. control | Off |
| Concatenations | 20 |

Inline - Common

| | |
|----------------------|-----|
| Subtract | Off |
| Measurements | 1 |
| StdDev | Off |
| Save original images | On |

Inline - MIP

| | |
|----------------------|-----|
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |
| MIP-Time | Off |
| Save original images | On |

Inline - Composing

| | |
|------------------|-----|
| Distortion Corr. | Off |
|------------------|-----|

Sequence - Part 1

| | |
|------------------|------------|
| Introduction | On |
| Dimension | 2D |
| Asymmetric echo | Off |
| Flow comp. | No |
| Multi-slice mode | Sequential |
| Echo spacing | 6.7 ms |
| Bandwidth | 240 Hz/Px |

Sequence - Part 2

| | |
|-------------------------|------------|
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slice-sel. |
| RF spoiling | On |
| Incr. Gradient spoiling | Off |
| Turbo factor | 192 |

Sequence - Nuclei

| | |
|-----------------------|------|
| TX/RX Nucleus | 1H |
| TX/RX delta frequency | 0 Hz |
| TX Nucleus | None |
| TX delta frequency | 0 Hz |
| Coil elements | A32 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\XT-ID:93-M-0170\Renzo\20231205_thirdordershim\CMRR_ax_1104_slab

TA: 2:27 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : epfid

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Auto close inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------------|--------------------|
| Slice group | 1 |
| Slices | 36 |
| Dist. factor | 0 % |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 175 mm |
| FoV phase | 99.0 % |
| Slice thickness | 0.84 mm |
| TR | 2680 ms |
| TE | 26.40 ms |
| Multi-band accel. factor | 1 |
| Filter | None |
| Coil elements | A32 |

Contrast - Common

| | |
|-------------------|----------|
| TR | 2680 ms |
| TE | 26.40 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 60 deg |
| Fat suppr. | Fat sat. |

Contrast - Dynamic

| | |
|-----------------|-----------|
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 50 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 175 mm |
| FoV phase | 99.0 % |
| Slice thickness | 0.84 mm |
| Base resolution | 206 |
| Phase resolution | 101 % |
| Phase partial Fourier | 6/8 |
| Interpolation | Off |

Resolution - iPAT

| | |
|---------------------|-----------|
| PAT mode | GRAPPA |
| Accel. factor PE | 3 |
| Ref. lines PE | 63 |
| Reference scan mode | Segmented |

Resolution - Filter Image

| | |
|-------------------|-----|
| Distortion Corr. | Off |
| Prescan Normalize | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |
| Hamming | Off |

Geometry - Common

| | |
|--------------------------|--------------------|
| Slice group | 1 |
| Slices | 36 |
| Dist. factor | 0 % |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| FoV read | 175 mm |
| FoV phase | 99.0 % |
| Slice thickness | 0.84 mm |
| TR | 2680 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Multi-band accel. factor | 1 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slice group | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L0.0 A12.6 H0.0 |
| L | 0.0 mm |
| A | 12.6 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Geometry - Saturation

| | |
|--------------|----------|
| Fat suppr. | Fat sat. |
| Special sat. | None |

System - Miscellaneous

| | |
|---------------------|----------------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|---------------|--------------------|
| ! Position | L0.4 A11.1 H0.3 mm |
| ! Orientation | T > C0.4 |
| ! Rotation | 90.00 deg |
| ! R >> L | 185 mm |
| ! A >> P | 179 mm |
| ! F >> H | 32 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 215.000 V |

Physio - Signal1

| | |
|--------------------------|---------|
| 1st Signal/Mode | None |
| TR | 2680 ms |
| Multi-band accel. factor | 1 |

BOLD

| | |
|-------------------------|----------|
| GLM Statistics | Off |
| Dynamic t-maps | Off |
| Ignore meas. at start | 0 |
| Ignore after transition | 0 |
| Model transition states | On |
| Temp. highpass filter | On |
| Threshold | 4.00 |
| Paradigm size | 20 |
| Meas[1] | Baseline |
| Meas[2] | Baseline |
| Meas[3] | Baseline |
| Meas[4] | Baseline |
| Meas[5] | Baseline |
| Meas[6] | Baseline |
| Meas[7] | Baseline |
| Meas[8] | Baseline |
| Meas[9] | Baseline |
| Meas[10] | Baseline |
| Meas[11] | Active |
| Meas[12] | Active |
| Meas[13] | Active |
| Meas[14] | Active |
| Meas[15] | Active |
| Meas[16] | Active |
| Meas[17] | Active |
| Meas[18] | Active |
| Meas[19] | Active |
| Meas[20] | Active |
| Motion correction | Off |
| Spatial filter | Off |
| Measurements | 50 |
| Delay in TR | 0 ms |
| Multiple series | Off |

Sequence - Part 1

| | |
|-------------------|-------------|
| Introduction | Off |
| Contrasts | 1 |
| Flow comp. | No |
| Multi-slice mode | Interleaved |
| Free echo spacing | Off |
| Echo spacing | 1.01 ms |
| Bandwidth | 1104 Hz/Px |

Sequence - Part 2

| | |
|---------------|------|
| EPI factor | 206 |
| Gradient mode | Fast |
| RF spoiling | On |

Sequence - Special

| | |
|--------------------------|-----------|
| Excite pulse duration | 3640 us |
| EPI noise scans | 0 |
| SENSE1 coil combine | On |
| Invert RO/PE polarity | Off |
| PF omits higher k-space | Off |
| Disable freq. update | Off |
| Force equal slice timing | Off |
| FFT scale factor | 0.75 |
| Fat saturation FA | 110.0 deg |
| Physio recording | Off |
| Triggering scheme | Standard |

\\USER\FMRIF\XT-ID:93-M-0170\Renzo\20231205_thirdordershim\2DGRE_Hires_1_from_Govind

TA: 17:57 PM: FIX Voxel size: 0.1×0.1×1.0 mmPAT: Off Rel. SNR: 1.00 : fl

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Auto close inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|---------------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 0 % |
| Position | R10.8 A19.8 F1.6 mm |
| Orientation | C > S-9.5 > T1.1 |
| Phase enc. dir. | R >> L |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 204 mm |
| FoV phase | 75.0 % |
| Slice thickness | 1.0 mm |
| TR | 1400.0 ms |
| TE 1 | 6.00 ms |
| TE 2 | 17.50 ms |
| TE 3 | 35.00 ms |
| Averages | 1 |
| Concatenations | 1 |
| Filter | Raw filter |
| Coil elements | A32 |

Contrast - Common

| | |
|-------------------|-----------|
| TR | 1400.0 ms |
| TE 1 | 6.00 ms |
| TE 2 | 17.50 ms |
| TE 3 | 35.00 ms |
| MTC | Off |
| Magn. preparation | None |
| Flip angle | 50 deg |
| Fat suppr. | None |
| Water suppr. | None |
| SWI | Off |

Contrast - Dynamic

| | |
|-----------------|-------------|
| Averages | 1 |
| Averaging mode | Short term |
| Reconstruction | Magn./Phase |
| Measurements | 1 |
| Multiple series | Off |

Resolution - Common

| | |
|-----------------------|--------|
| FoV read | 204 mm |
| FoV phase | 75.0 % |
| Slice thickness | 1.0 mm |
| Base resolution | 1024 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |

Resolution - Common

| | |
|---------------|----|
| Interpolation | On |
|---------------|----|

Resolution - iPAT

| | |
|----------|------|
| PAT mode | None |
|----------|------|

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | On |
| Elliptical filter | Off |

Geometry - Common

| | |
|------------------|---------------------|
| Slice group | 1 |
| Slices | 25 |
| Dist. factor | 0 % |
| Position | R10.8 A19.8 F1.6 mm |
| Orientation | C > S-9.5 > T1.1 |
| Phase enc. dir. | R >> L |
| FoV read | 204 mm |
| FoV phase | 75.0 % |
| Slice thickness | 1.0 mm |
| TR | 1400.0 ms |
| Multi-slice mode | Interleaved |
| Series | Interleaved |
| Concatenations | 1 |

Geometry - AutoAlign

| | |
|---------------------|---------------------|
| Slice group | 1 |
| Position | R10.8 A19.8 F1.6 mm |
| Orientation | C > S-9.5 > T1.1 |
| Phase enc. dir. | R >> L |
| AutoAlign | --- |
| Initial Position | R10.8 A19.8 F1.6 |
| R | 10.8 mm |
| A | 19.8 mm |
| F | 1.6 mm |
| Initial Rotation | 1.20 deg |
| Initial Orientation | C > S |
| C > S | -9.5 |
| > T | 1.1 |

Geometry - Saturation

| | |
|-----------------|----------|
| Saturation mode | Standard |
| Fat suppr. | None |
| Water suppr. | None |
| Special sat. | None |

Geometry - Tim CT

| | |
|-----------------|--------|
| Tim CT mode | Off |
| Slices | 25 |
| Slice thickness | 1.0 mm |
| Dist. factor | 0 % |
| FoV read | 204 mm |
| FoV phase | 75.0 % |
| Segments | 1 |

System - Miscellaneous

| | |
|---------------------|----------------------|
| Positioning mode | FIX |
| Table position | F |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | L >> R |
| Coronal | P >> A |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Off - AutoCoilSelect |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|---------------|--------------------|
| ! Position | R15.2 A0.2 F3.2 mm |
| ! Orientation | C > S-9.5 > T1.1 |
| ! Rotation | -44.90 deg |
| ! F >> H | 160 mm |
| ! F >> H | 160 mm |
| ! A >> P | 68 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ? Ref. amplitude 1H | 0.000 V |

Physio - Signal1

| | |
|-----------------|-----------|
| 1st Signal/Mode | None |
| TR | 1400.0 ms |
| Concatenations | 1 |
| Segments | 1 |

Physio - Cardiac

| | |
|-------------------|--------|
| Magn. preparation | None |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 204 mm |
| FoV phase | 75.0 % |
| Phase resolution | 100 % |

Physio - PACE

| | |
|----------------|-----|
| Resp. control | Off |
| Concatenations | 1 |

Inline - Common

| | |
|----------------------|-----|
| Subtract | Off |
| Measurements | 1 |
| StdDev | Off |
| Liver registration | Off |
| Save original images | On |

Inline - MIP

| | |
|----------------------|-----|
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |
| MIP-Time | Off |
| Save original images | On |

Inline - Soft Tissue

| | |
|--------------|-----|
| Wash - In | Off |
| Wash - Out | Off |
| TTP | Off |
| PEI | Off |
| MIP - time | Off |
| Measurements | 1 |

Inline - Composing

| | |
|------------------|-----|
| Distortion Corr. | Off |
|------------------|-----|

Sequence - Part 1

| | |
|---------------------|-------------|
| Introduction | Off |
| Dimension | 2D |
| Phase stabilisation | On |
| Asymmetric echo | Off |
| Contrasts | 3 |
| Flow comp. 1 | No |
| Readout mode | Bipolar |
| Multi-slice mode | Interleaved |
| Bandwidth 1 | 180 Hz/Px |
| Bandwidth 2 | 60 Hz/Px |
| Bandwidth 3 | 60 Hz/Px |

Sequence - Part 2

| | |
|--------------------------|------------|
| Segments | 1 |
| Acoustic noise reduction | None |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slice-sel. |
| RF spoiling | On |

Sequence - Nuclei

| | |
|-----------------------|------|
| TX/RX Nucleus | 1H |
| TX/RX delta frequency | 0 Hz |
| TX Nucleus | None |
| TX delta frequency | 0 Hz |
| Coil elements | A32 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\TFL_readin_z_DW_160

TA: 0:27 PM: REF Voxel size: 1.0×1.0×2.0 mmPAT: Off Rel. SNR: 1.00 : tfl

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | On |
| Auto close inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| TE | 4.49 ms |
| Averages | 1 |
| Concatenations | 6 |
| Filter | None |
| Coil elements | A32 |

Contrast - Common

| | |
|-------------------|---------------|
| TR | 4300.0 ms |
| TE | 4.49 ms |
| TD | 0 ms |
| Magn. preparation | Slice-sel. IR |
| T1 1 | 866 ms |
| T1 2 | 2660 ms |
| Flip angle 1 | 5.0 deg |
| Flip angle 2 | 8.0 deg |
| Fat suppr. | None |
| Water suppr. | None |

Contrast - Dynamic

| | |
|-----------------|------------------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| Base resolution | 192 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|----------|------|
| PAT mode | None |
|----------|------|

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| Multi-slice mode | Sequential |
| Series | Ascending |
| Concatenations | 6 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slice group | 1 |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L1.5 A5.0 F25.3 |
| L | 1.5 mm |
| A | 5.0 mm |
| F | 25.3 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Sagittal |

Geometry - Navigator**System - Miscellaneous**

| | |
|---------------------|------------------|
| Positioning mode | REF |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Adaptive Combine |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------|----------|
| B0 Shim mode | Tune up |
| B1 Shim mode | TrueForm |

System - Adjustments

| | |
|--------------------------|------|
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| A >> P | 263 mm |
| R >> L | 350 mm |
| F >> H | 350 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 250.000 V |

Physio - Signal1

| | |
|-----------------|-----------|
| 1st Signal/Mode | None |
| TR | 4300.0 ms |
| Concatenations | 6 |

Physio - Cardiac

| | |
|-------------------|---------------|
| Magn. preparation | Slice-sel. IR |
| TI 1 | 866 ms |
| TI 2 | 2660 ms |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Phase resolution | 100 % |

Physio - PACE

| | |
|----------------|-----|
| Resp. control | Off |
| Concatenations | 6 |

Inline - Common

| | |
|----------------------|-----|
| Subtract | Off |
| Measurements | 1 |
| StdDev | Off |
| Save original images | On |

Inline - MIP

| | |
|----------------------|-----|
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |
| MIP-Time | Off |
| Save original images | On |

Inline - Composing

| | |
|------------------|-----|
| Distortion Corr. | Off |
|------------------|-----|

Sequence - Part 1

| | |
|------------------|------------|
| Introduction | On |
| Dimension | 2D |
| Asymmetric echo | Off |
| Flow comp. | No |
| Multi-slice mode | Sequential |

Sequence - Part 1

| | |
|--------------|-----------|
| Echo spacing | 8.8 ms |
| Bandwidth | 160 Hz/Px |

Sequence - Part 2

| | |
|-------------------------|------------|
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slice-sel. |
| RF spoiling | On |
| Incr. Gradient spoiling | Off |
| Turbo factor | 192 |

Sequence - Nuclei

| | |
|-----------------------|------|
| TX/RX Nucleus | 1H |
| TX/RX delta frequency | 0 Hz |
| TX Nucleus | None |
| TX delta frequency | 0 Hz |
| Coil elements | A32 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\TFL_readin_z_DW_200

TA: 0:27 PM: FIX Voxel size: 1.0×1.0×2.0 mmPAT: Off Rel. SNR: 1.00 : tfl

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | On |
| Auto close inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| TE | 3.86 ms |
| Averages | 1 |
| Concatenations | 6 |
| Filter | None |
| Coil elements | A32 |

Contrast - Common

| | |
|-------------------|---------------|
| TR | 4300.0 ms |
| TE | 3.86 ms |
| TD | 0 ms |
| Magn. preparation | Slice-sel. IR |
| T1 1 | 866 ms |
| T1 2 | 2660 ms |
| Flip angle 1 | 5.0 deg |
| Flip angle 2 | 8.0 deg |
| Fat suppr. | None |
| Water suppr. | None |

Contrast - Dynamic

| | |
|-----------------|------------------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| Base resolution | 192 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|----------|------|
| PAT mode | None |
|----------|------|

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| Multi-slice mode | Sequential |
| Series | Ascending |
| Concatenations | 6 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slice group | 1 |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L1.5 A5.0 F25.3 |
| L | 1.5 mm |
| A | 5.0 mm |
| F | 25.3 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Sagittal |

Geometry - Navigator**System - Miscellaneous**

| | |
|---------------------|------------------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Adaptive Combine |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------|----------|
| B0 Shim mode | Tune up |
| B1 Shim mode | TrueForm |

System - Adjustments

| | |
|--------------------------|------|
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| A >> P | 263 mm |
| R >> L | 350 mm |
| F >> H | 350 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 250.000 V |

Physio - Signal1

| | |
|-----------------|-----------|
| 1st Signal/Mode | None |
| TR | 4300.0 ms |
| Concatenations | 6 |

Physio - Cardiac

| | |
|-------------------|---------------|
| Magn. preparation | Slice-sel. IR |
| TI 1 | 866 ms |
| TI 2 | 2660 ms |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Phase resolution | 100 % |

Physio - PACE

| | |
|----------------|-----|
| Resp. control | Off |
| Concatenations | 6 |

Inline - Common

| | |
|----------------------|-----|
| Subtract | Off |
| Measurements | 1 |
| StdDev | Off |
| Save original images | On |

Inline - MIP

| | |
|----------------------|-----|
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |
| MIP-Time | Off |
| Save original images | On |

Inline - Composing

| | |
|------------------|-----|
| Distortion Corr. | Off |
|------------------|-----|

Sequence - Part 1

| | |
|------------------|------------|
| Introduction | On |
| Dimension | 2D |
| Asymmetric echo | Off |
| Flow comp. | No |
| Multi-slice mode | Sequential |

Sequence - Part 1

| | |
|--------------|-----------|
| Echo spacing | 7.5 ms |
| Bandwidth | 200 Hz/Px |

Sequence - Part 2

| | |
|-------------------------|------------|
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slice-sel. |
| RF spoiling | On |
| Incr. Gradient spoiling | Off |
| Turbo factor | 192 |

Sequence - Nuclei

| | |
|-----------------------|------|
| TX/RX Nucleus | 1H |
| TX/RX delta frequency | 0 Hz |
| TX Nucleus | None |
| TX delta frequency | 0 Hz |
| Coil elements | A32 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\TFL_readin_z_DW_240

TA: 0:27 PM: FIX Voxel size: 1.0×1.0×2.0 mmPAT: Off Rel. SNR: 1.00 : tfl

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | On |
| Auto close inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| TE | 3.46 ms |
| Averages | 1 |
| Concatenations | 6 |
| Filter | None |
| Coil elements | A32 |

Contrast - Common

| | |
|-------------------|---------------|
| TR | 4300.0 ms |
| TE | 3.46 ms |
| TD | 0 ms |
| Magn. preparation | Slice-sel. IR |
| T1 1 | 866 ms |
| T1 2 | 2660 ms |
| Flip angle 1 | 5.0 deg |
| Flip angle 2 | 8.0 deg |
| Fat suppr. | None |
| Water suppr. | None |

Contrast - Dynamic

| | |
|-----------------|------------------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| Base resolution | 192 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|----------|------|
| PAT mode | None |
|----------|------|

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| Multi-slice mode | Sequential |
| Series | Ascending |
| Concatenations | 6 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slice group | 1 |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L1.5 A5.0 F25.3 |
| L | 1.5 mm |
| A | 5.0 mm |
| F | 25.3 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Sagittal |

Geometry - Navigator**System - Miscellaneous**

| | |
|---------------------|------------------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Adaptive Combine |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------|----------|
| B0 Shim mode | Tune up |
| B1 Shim mode | TrueForm |

System - Adjustments

| | |
|--------------------------|------|
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| A >> P | 263 mm |
| R >> L | 350 mm |
| F >> H | 350 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 250.000 V |

Physio - Signal1

| | |
|-----------------|-----------|
| 1st Signal/Mode | None |
| TR | 4300.0 ms |
| Concatenations | 6 |

Physio - Cardiac

| | |
|-------------------|---------------|
| Magn. preparation | Slice-sel. IR |
| TI 1 | 866 ms |
| TI 2 | 2660 ms |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Phase resolution | 100 % |

Physio - PACE

| | |
|----------------|-----|
| Resp. control | Off |
| Concatenations | 6 |

Inline - Common

| | |
|----------------------|-----|
| Subtract | Off |
| Measurements | 1 |
| StdDev | Off |
| Save original images | On |

Inline - MIP

| | |
|----------------------|-----|
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |
| MIP-Time | Off |
| Save original images | On |

Inline - Composing

| | |
|------------------|-----|
| Distortion Corr. | Off |
|------------------|-----|

Sequence - Part 1

| | |
|------------------|------------|
| Introduction | On |
| Dimension | 2D |
| Asymmetric echo | Off |
| Flow comp. | No |
| Multi-slice mode | Sequential |

Sequence - Part 1

| | |
|--------------|-----------|
| Echo spacing | 6.7 ms |
| Bandwidth | 240 Hz/Px |

Sequence - Part 2

| | |
|-------------------------|------------|
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slice-sel. |
| RF spoiling | On |
| Incr. Gradient spoiling | Off |
| Turbo factor | 192 |

Sequence - Nuclei

| | |
|-----------------------|------|
| TX/RX Nucleus | 1H |
| TX/RX delta frequency | 0 Hz |
| TX Nucleus | None |
| TX delta frequency | 0 Hz |
| Coil elements | A32 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\TFL_readin_z_DW_280

TA: 0:27 PM: FIX Voxel size: 1.0×1.0×2.0 mmPAT: Off Rel. SNR: 1.00 : tfl

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | On |
| Auto close inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| TE | 3.15 ms |
| Averages | 1 |
| Concatenations | 6 |
| Filter | None |
| Coil elements | A32 |

Contrast - Common

| | |
|-------------------|---------------|
| TR | 4300.0 ms |
| TE | 3.15 ms |
| TD | 0 ms |
| Magn. preparation | Slice-sel. IR |
| T1 1 | 866 ms |
| T1 2 | 2660 ms |
| Flip angle 1 | 5.0 deg |
| Flip angle 2 | 8.0 deg |
| Fat suppr. | None |
| Water suppr. | None |

Contrast - Dynamic

| | |
|-----------------|------------------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| Base resolution | 192 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|----------|------|
| PAT mode | None |
|----------|------|

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| Multi-slice mode | Sequential |
| Series | Ascending |
| Concatenations | 6 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slice group | 1 |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L1.5 A5.0 F25.3 |
| L | 1.5 mm |
| A | 5.0 mm |
| F | 25.3 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Sagittal |

Geometry - Navigator**System - Miscellaneous**

| | |
|---------------------|------------------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Adaptive Combine |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------|----------|
| B0 Shim mode | Tune up |
| B1 Shim mode | TrueForm |

System - Adjustments

| | |
|--------------------------|------|
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| A >> P | 263 mm |
| R >> L | 350 mm |
| F >> H | 350 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 250.000 V |

Physio - Signal1

| | |
|-----------------|-----------|
| 1st Signal/Mode | None |
| TR | 4300.0 ms |
| Concatenations | 6 |

Physio - Cardiac

| | |
|-------------------|---------------|
| Magn. preparation | Slice-sel. IR |
| TI 1 | 866 ms |
| TI 2 | 2660 ms |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Phase resolution | 100 % |

Physio - PACE

| | |
|----------------|-----|
| Resp. control | Off |
| Concatenations | 6 |

Inline - Common

| | |
|----------------------|-----|
| Subtract | Off |
| Measurements | 1 |
| StdDev | Off |
| Save original images | On |

Inline - MIP

| | |
|----------------------|-----|
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |
| MIP-Time | Off |
| Save original images | On |

Inline - Composing

| | |
|------------------|-----|
| Distortion Corr. | Off |
|------------------|-----|

Sequence - Part 1

| | |
|------------------|------------|
| Introduction | On |
| Dimension | 2D |
| Asymmetric echo | Off |
| Flow comp. | No |
| Multi-slice mode | Sequential |

Sequence - Part 1

| | |
|--------------|-----------|
| Echo spacing | 6.1 ms |
| Bandwidth | 280 Hz/Px |

Sequence - Part 2

| | |
|-------------------------|------------|
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slice-sel. |
| RF spoiling | On |
| Incr. Gradient spoiling | Off |
| Turbo factor | 192 |

Sequence - Nuclei

| | |
|-----------------------|------|
| TX/RX Nucleus | 1H |
| TX/RX delta frequency | 0 Hz |
| TX Nucleus | None |
| TX delta frequency | 0 Hz |
| Coil elements | A32 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\TFL_readin_z_DW_320

TA: 0:27 PM: FIX Voxel size: 1.0×1.0×2.0 mmPAT: Off Rel. SNR: 1.00 : tfl

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | On |
| Auto close inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| TE | 2.92 ms |
| Averages | 1 |
| Concatenations | 6 |
| Filter | None |
| Coil elements | A32 |

Contrast - Common

| | |
|-------------------|---------------|
| TR | 4300.0 ms |
| TE | 2.92 ms |
| TD | 0 ms |
| Magn. preparation | Slice-sel. IR |
| T1 1 | 866 ms |
| T1 2 | 2660 ms |
| Flip angle 1 | 5.0 deg |
| Flip angle 2 | 8.0 deg |
| Fat suppr. | None |
| Water suppr. | None |

Contrast - Dynamic

| | |
|-----------------|------------------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| Base resolution | 192 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|----------|------|
| PAT mode | None |
|----------|------|

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| Multi-slice mode | Sequential |
| Series | Ascending |
| Concatenations | 6 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slice group | 1 |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L1.5 A5.0 F25.3 |
| L | 1.5 mm |
| A | 5.0 mm |
| F | 25.3 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Sagittal |

Geometry - Navigator**System - Miscellaneous**

| | |
|---------------------|------------------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Adaptive Combine |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------|----------|
| B0 Shim mode | Tune up |
| B1 Shim mode | TrueForm |

System - Adjustments

| | |
|--------------------------|------|
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| A >> P | 263 mm |
| R >> L | 350 mm |
| F >> H | 350 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 250.000 V |

Physio - Signal1

| | |
|-----------------|-----------|
| 1st Signal/Mode | None |
| TR | 4300.0 ms |
| Concatenations | 6 |

Physio - Cardiac

| | |
|-------------------|---------------|
| Magn. preparation | Slice-sel. IR |
| TI 1 | 866 ms |
| TI 2 | 2660 ms |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Phase resolution | 100 % |

Physio - PACE

| | |
|----------------|-----|
| Resp. control | Off |
| Concatenations | 6 |

Inline - Common

| | |
|----------------------|-----|
| Subtract | Off |
| Measurements | 1 |
| StdDev | Off |
| Save original images | On |

Inline - MIP

| | |
|----------------------|-----|
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |
| MIP-Time | Off |
| Save original images | On |

Inline - Composing

| | |
|------------------|-----|
| Distortion Corr. | Off |
|------------------|-----|

Sequence - Part 1

| | |
|------------------|------------|
| Introduction | On |
| Dimension | 2D |
| Asymmetric echo | Off |
| Flow comp. | No |
| Multi-slice mode | Sequential |

Sequence - Part 1

| | |
|--------------|-----------|
| Echo spacing | 5.6 ms |
| Bandwidth | 320 Hz/Px |

Sequence - Part 2

| | |
|-------------------------|------------|
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slice-sel. |
| RF spoiling | On |
| Incr. Gradient spoiling | Off |
| Turbo factor | 192 |

Sequence - Nuclei

| | |
|-----------------------|------|
| TX/RX Nucleus | 1H |
| TX/RX delta frequency | 0 Hz |
| TX Nucleus | None |
| TX delta frequency | 0 Hz |
| Coil elements | A32 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\TFL_readin_z_DW_360

TA: 0:27 PM: FIX Voxel size: 1.0×1.0×2.0 mmPAT: Off Rel. SNR: 1.00 : tfl

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | On |
| Auto close inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| TE | 2.75 ms |
| Averages | 1 |
| Concatenations | 6 |
| Filter | None |
| Coil elements | A32 |

Contrast - Common

| | |
|-------------------|---------------|
| TR | 4300.0 ms |
| TE | 2.75 ms |
| TD | 0 ms |
| Magn. preparation | Slice-sel. IR |
| T1 1 | 866 ms |
| T1 2 | 2660 ms |
| Flip angle 1 | 5.0 deg |
| Flip angle 2 | 8.0 deg |
| Fat suppr. | None |
| Water suppr. | None |

Contrast - Dynamic

| | |
|-----------------|------------------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| Base resolution | 192 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|----------|------|
| PAT mode | None |
|----------|------|

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| Multi-slice mode | Sequential |
| Series | Ascending |
| Concatenations | 6 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slice group | 1 |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L1.5 A5.0 F25.3 |
| L | 1.5 mm |
| A | 5.0 mm |
| F | 25.3 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Sagittal |

Geometry - Navigator**System - Miscellaneous**

| | |
|---------------------|------------------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Adaptive Combine |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------|----------|
| B0 Shim mode | Tune up |
| B1 Shim mode | TrueForm |

System - Adjustments

| | |
|--------------------------|------|
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| A >> P | 263 mm |
| R >> L | 350 mm |
| F >> H | 350 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 250.000 V |

Physio - Signal1

| | |
|-----------------|-----------|
| 1st Signal/Mode | None |
| TR | 4300.0 ms |
| Concatenations | 6 |

Physio - Cardiac

| | |
|-------------------|---------------|
| Magn. preparation | Slice-sel. IR |
| TI 1 | 866 ms |
| TI 2 | 2660 ms |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Phase resolution | 100 % |

Physio - PACE

| | |
|----------------|-----|
| Resp. control | Off |
| Concatenations | 6 |

Inline - Common

| | |
|----------------------|-----|
| Subtract | Off |
| Measurements | 1 |
| StdDev | Off |
| Save original images | On |

Inline - MIP

| | |
|----------------------|-----|
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |
| MIP-Time | Off |
| Save original images | On |

Inline - Composing

| | |
|------------------|-----|
| Distortion Corr. | Off |
|------------------|-----|

Sequence - Part 1

| | |
|------------------|------------|
| Introduction | On |
| Dimension | 2D |
| Asymmetric echo | Off |
| Flow comp. | No |
| Multi-slice mode | Sequential |

Sequence - Part 1

| | |
|--------------|-----------|
| Echo spacing | 5.3 ms |
| Bandwidth | 360 Hz/Px |

Sequence - Part 2

| | |
|-------------------------|------------|
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slice-sel. |
| RF spoiling | On |
| Incr. Gradient spoiling | Off |
| Turbo factor | 192 |

Sequence - Nuclei

| | |
|-----------------------|------|
| TX/RX Nucleus | 1H |
| TX/RX delta frequency | 0 Hz |
| TX Nucleus | None |
| TX delta frequency | 0 Hz |
| Coil elements | A32 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\TFL_readin_z_DW_400

TA: 0:27 PM: FIX Voxel size: 1.0×1.0×2.0 mmPAT: Off Rel. SNR: 1.00 : tfl

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | On |
| Auto close inline display | Off |
| Start measurement without further preparation | On |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|--------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Phase oversampling | 0 % |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| TE | 2.61 ms |
| Averages | 1 |
| Concatenations | 6 |
| Filter | None |
| Coil elements | A32 |

Contrast - Common

| | |
|-------------------|---------------|
| TR | 4300.0 ms |
| TE | 2.61 ms |
| TD | 0 ms |
| Magn. preparation | Slice-sel. IR |
| T1 1 | 866 ms |
| T1 2 | 2660 ms |
| Flip angle 1 | 5.0 deg |
| Flip angle 2 | 8.0 deg |
| Fat suppr. | None |
| Water suppr. | None |

Contrast - Dynamic

| | |
|-----------------|------------------|
| Averages | 1 |
| Averaging mode | Long term |
| Reconstruction | Magnitude |
| Measurements | 1 |
| Multiple series | Each measurement |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| Base resolution | 192 |
| Phase resolution | 100 % |
| Phase partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|----------|------|
| PAT mode | None |
|----------|------|

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|------------------|--------------------|
| Slice group | 1 |
| Slices | 6 |
| Dist. factor | 600 % |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Slice thickness | 2.0 mm |
| TR | 4300.0 ms |
| Multi-slice mode | Sequential |
| Series | Ascending |
| Concatenations | 6 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slice group | 1 |
| Position | L1.5 A5.0 F25.3 mm |
| Orientation | Sagittal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L1.5 A5.0 F25.3 |
| L | 1.5 mm |
| A | 5.0 mm |
| F | 25.3 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Sagittal |

Geometry - Navigator**System - Miscellaneous**

| | |
|---------------------|------------------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Adaptive Combine |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------|----------|
| B0 Shim mode | Tune up |
| B1 Shim mode | TrueForm |

System - Adjustments

| | |
|--------------------------|------|
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|-------------|-------------|
| Position | Isocenter |
| Orientation | Transversal |
| Rotation | 0.00 deg |
| A >> P | 263 mm |
| R >> L | 350 mm |
| F >> H | 350 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | High |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 250.000 V |

Physio - Signal1

| | |
|-----------------|-----------|
| 1st Signal/Mode | None |
| TR | 4300.0 ms |
| Concatenations | 6 |

Physio - Cardiac

| | |
|-------------------|---------------|
| Magn. preparation | Slice-sel. IR |
| TI 1 | 866 ms |
| TI 2 | 2660 ms |
| Fat suppr. | None |
| Dark blood | Off |
| FoV read | 200 mm |
| FoV phase | 100.0 % |
| Phase resolution | 100 % |

Physio - PACE

| | |
|----------------|-----|
| Resp. control | Off |
| Concatenations | 6 |

Inline - Common

| | |
|----------------------|-----|
| Subtract | Off |
| Measurements | 1 |
| StdDev | Off |
| Save original images | On |

Inline - MIP

| | |
|----------------------|-----|
| MIP-Sag | Off |
| MIP-Cor | Off |
| MIP-Tra | Off |
| MIP-Time | Off |
| Save original images | On |

Inline - Composing

| | |
|------------------|-----|
| Distortion Corr. | Off |
|------------------|-----|

Sequence - Part 1

| | |
|------------------|------------|
| Introduction | On |
| Dimension | 2D |
| Asymmetric echo | Off |
| Flow comp. | No |
| Multi-slice mode | Sequential |

Sequence - Part 1

| | |
|--------------|-----------|
| Echo spacing | 5 ms |
| Bandwidth | 400 Hz/Px |

Sequence - Part 2

| | |
|-------------------------|------------|
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slice-sel. |
| RF spoiling | On |
| Incr. Gradient spoiling | Off |
| Turbo factor | 192 |

Sequence - Nuclei

| | |
|-----------------------|------|
| TX/RX Nucleus | 1H |
| TX/RX delta frequency | 0 Hz |
| TX Nucleus | None |
| TX delta frequency | 0 Hz |
| Coil elements | A32 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\rslh_1104_dual_polarity_bw_836

TA: 0:25 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5k

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Auto close inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - Common

| | |
|---------------|-----|
| Interpolation | Off |
|---------------|-----|

Resolution - iPAT

| | |
|----------------------|---------------|
| PAT mode | CAIPIRINHA |
| Acc. factor PE | 1 |
| Ref. lines PE | 63 |
| Acc. factor 3D | 3 |
| Ref. lines 3D | 36 |
| CAIPI 3D Shift | 1 |
| Reference Scan Mode | EPI/separate |
| CAIPI Mode (tooltip) | Skipped-CAIPI |
| Total PAT factor | 3 |

Routine

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Averages | 1 |
| Filter | None |
| Coil elements | A32 |

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |

Contrast - Common

| | |
|--------------------|----------|
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Multi-echo spacing | 68.5 ms |
| Magn. preparation | None |
| Flip angle | 20 deg |
| Fat suppr. | Fat sat. |
| Magn. Prep. Shots | 1 |

Contrast - Dynamic

| | |
|---------------------|-------------|
| Averages | 1 |
| Averaging mode | Short term |
| Reconstruction | Magn./Phase |
| Measurements | 4 |
| Pause after meas. 1 | 0.0 s |
| Pause after meas. 2 | 0.0 s |
| Pause after meas. 3 | 0.0 s |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slab group | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L0.0 A12.6 H0.0 |
| L | 0.0 mm |
| A | 12.6 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| Base resolution | 206 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |

Geometry - Saturation

| | |
|-----------------|----------|
| Saturation mode | Standard |
| Fat suppr. | Fat sat. |

System - Miscellaneous

| | |
|------------------|-----------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |

System - Miscellaneous

| | |
|---------------------|----------------|
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|---------------|--------------------|
| ! Position | L0.4 A11.1 H0.3 mm |
| ! Orientation | T > C0.4 |
| ! Rotation | 90.00 deg |
| ! R >> L | 185 mm |
| ! A >> P | 179 mm |
| ! F >> H | 32 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 215.000 V |

Sequence - Part 1

| | |
|--------------|-----------|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Echo spacing | 1.3 ms |
| Bandwidth | 836 Hz/Px |

Sequence - Part 2

| | |
|---------------|-----------|
| EPI factor | 52 |
| Segmentation | 3 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |
| Turbo factor | 36 |

Sequence - Special

| | |
|--------------------|---------|
| PATRef FA | 3 deg |
| RF duration | 2000 us |
| RF BWT product | 8 |
| Ernst T1 | 1200 ms |
| PATRef prep. shots | 10 |
| Volume dummy shots | 0 |
| Dummy Measurements | 0 |
| ETL per RTEB | 1 |
| Invert PE | Off |
| Min. TE if PF | On |
| Echo Time Shift | On |
| Ramp Sampling | On |

Sequence - Special

| | |
|-----------------------|-------------|
| NORDIC | Off |
| SVDPC | Off |
| Sym VASO | Off |
| Dual-pol. EPI | On |
| Invert RO | Off |
| Invert 3D | Off |
| Disable PF reco | Off |
| Disable PF reco | Off |
| Save sampling | Off |
| PE VComp | Off |
| Water Exc. | -none- |
| External PC | per Series |
| Saturation RF | per Shot |
| FIDNavs | -none- |
| EPI rise time factor | 1.10 |
| Mosaic DICOMs | On |
| Modify Ice Config | On |
| G-factor map | Off |
| GRAPPA Regularization | 50000 10^-6 |
| Var. FA /MAGEC | 0 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\rslh_1104_dual_polarity_bw_898

TA: 0:25 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5k

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Auto close inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - Common

| | |
|---------------|-----|
| Interpolation | Off |
|---------------|-----|

Resolution - iPAT

| | |
|----------------------|---------------|
| PAT mode | CAIPIRINHA |
| Acc. factor PE | 1 |
| Ref. lines PE | 63 |
| Acc. factor 3D | 3 |
| Ref. lines 3D | 36 |
| CAIPI 3D Shift | 1 |
| Reference Scan Mode | EPI/separate |
| CAIPI Mode (tooltip) | Skipped-CAIPI |
| Total PAT factor | 3 |

Routine

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Averages | 1 |
| Filter | None |
| Coil elements | A32 |

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |

Contrast - Common

| | |
|--------------------|----------|
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Multi-echo spacing | 64.3 ms |
| Magn. preparation | None |
| Flip angle | 20 deg |
| Fat suppr. | Fat sat. |
| Magn. Prep. Shots | 1 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slab group | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L0.0 A12.6 H0.0 |
| L | 0.0 mm |
| A | 12.6 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Contrast - Dynamic

| | |
|---------------------|-------------|
| Averages | 1 |
| Averaging mode | Short term |
| Reconstruction | Magn./Phase |
| Measurements | 4 |
| Pause after meas. 1 | 0.0 s |
| Pause after meas. 2 | 0.0 s |
| Pause after meas. 3 | 0.0 s |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| Base resolution | 206 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |

Geometry - Saturation

| | |
|-----------------|----------|
| Saturation mode | Standard |
| Fat suppr. | Fat sat. |

System - Miscellaneous

| | |
|------------------|-----------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |

System - Miscellaneous

| | |
|---------------------|----------------|
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|---------------|--------------------|
| ! Position | L0.4 A11.1 H0.3 mm |
| ! Orientation | T > C0.4 |
| ! Rotation | 90.00 deg |
| ! R >> L | 185 mm |
| ! A >> P | 179 mm |
| ! F >> H | 32 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 215.000 V |

Sequence - Part 1

| | |
|--------------|-----------|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Echo spacing | 1.22 ms |
| Bandwidth | 898 Hz/Px |

Sequence - Part 2

| | |
|---------------|-----------|
| EPI factor | 52 |
| Segmentation | 3 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |
| Turbo factor | 36 |

Sequence - Special

| | |
|--------------------|---------|
| PATRef FA | 3 deg |
| RF duration | 2000 us |
| RF BWT product | 8 |
| Ernst T1 | 1200 ms |
| PATRef prep. shots | 10 |
| Volume dummy shots | 0 |
| Dummy Measurements | 0 |
| ETL per RTEB | 1 |
| Invert PE | Off |
| Min. TE if PF | On |
| Echo Time Shift | On |
| Ramp Sampling | On |

Sequence - Special

| | |
|-----------------------|-------------|
| NORDIC | Off |
| SVDPC | Off |
| Sym VASO | Off |
| Dual-pol. EPI | On |
| Invert RO | Off |
| Invert 3D | Off |
| Disable PF reco | Off |
| Disable PF reco | Off |
| Save sampling | Off |
| PE VComp | Off |
| Water Exc. | -none- |
| External PC | per Series |
| Saturation RF | per Shot |
| FIDNavs | -none- |
| EPI rise time factor | 1.10 |
| Mosaic DICOMs | On |
| Modify Ice Config | On |
| G-factor map | Off |
| GRAPPA Regularization | 50000 10^-6 |
| Var. FA /MAGEC | 0 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\rslh_1104_dual_polarity_bw_970

TA: 0:24 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5k

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Auto close inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Averages | 1 |
| Filter | None |
| Coil elements | A32 |

Contrast - Common

| | |
|--------------------|----------|
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Multi-echo spacing | 59.6 ms |
| Magn. preparation | None |
| Flip angle | 20 deg |
| Fat suppr. | Fat sat. |
| Magn. Prep. Shots | 1 |

Contrast - Dynamic

| | |
|---------------------|-------------|
| Averages | 1 |
| Averaging mode | Short term |
| Reconstruction | Magn./Phase |
| Measurements | 4 |
| Pause after meas. 1 | 0.0 s |
| Pause after meas. 2 | 0.0 s |
| Pause after meas. 3 | 0.0 s |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| Base resolution | 206 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |

Resolution - Common

| | |
|---------------|-----|
| Interpolation | Off |
|---------------|-----|

Resolution - iPAT

| | |
|----------------------|---------------|
| PAT mode | CAIPIRINHA |
| Acc. factor PE | 1 |
| Ref. lines PE | 63 |
| Acc. factor 3D | 3 |
| Ref. lines 3D | 36 |
| CAIPI 3D Shift | 1 |
| Reference Scan Mode | EPI/separate |
| CAIPI Mode (tooltip) | Skipped-CAIPI |
| Total PAT factor | 3 |

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slab group | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L0.0 A12.6 H0.0 |
| L | 0.0 mm |
| A | 12.6 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Geometry - Saturation

| | |
|-----------------|----------|
| Saturation mode | Standard |
| Fat suppr. | Fat sat. |

System - Miscellaneous

| | |
|------------------|-----------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |

System - Miscellaneous

| | |
|---------------------|----------------|
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|---------------|--------------------|
| ! Position | L0.4 A11.1 H0.3 mm |
| ! Orientation | T > C0.4 |
| ! Rotation | 90.00 deg |
| ! R >> L | 185 mm |
| ! A >> P | 179 mm |
| ! F >> H | 32 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 215.000 V |

Sequence - Part 1

| | |
|--------------|-----------|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Echo spacing | 1.13 ms |
| Bandwidth | 970 Hz/Px |

Sequence - Part 2

| | |
|---------------|-----------|
| EPI factor | 52 |
| Segmentation | 3 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |
| Turbo factor | 36 |

Sequence - Special

| | |
|--------------------|---------|
| PATRef FA | 3 deg |
| RF duration | 2000 us |
| RF BWT product | 8 |
| Ernst T1 | 1200 ms |
| PATRef prep. shots | 10 |
| Volume dummy shots | 0 |
| Dummy Measurements | 0 |
| ETL per RTEB | 1 |
| Invert PE | Off |
| Min. TE if PF | On |
| Echo Time Shift | On |
| Ramp Sampling | On |

Sequence - Special

| | |
|-----------------------|-------------|
| NORDIC | Off |
| SVDPC | Off |
| Sym VASO | Off |
| Dual-pol. EPI | On |
| Invert RO | Off |
| Invert 3D | Off |
| Disable PF reco | Off |
| Disable PF reco | Off |
| Save sampling | Off |
| PE VComp | Off |
| Water Exc. | -none- |
| External PC | per Series |
| Saturation RF | per Shot |
| FIDNavs | -none- |
| EPI rise time factor | 1.10 |
| Mosaic DICOMs | On |
| Modify Ice Config | On |
| G-factor map | Off |
| GRAPPA Regularization | 50000 10^-6 |
| Var. FA /MAGEC | 0 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\rslh_1104_dual_polarity_bw_1056

TA: 0:24 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5k

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Auto close inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - Common

| | |
|---------------|-----|
| Interpolation | Off |
|---------------|-----|

Resolution - iPAT

| | |
|----------------------|---------------|
| PAT mode | CAIPIRINHA |
| Acc. factor PE | 1 |
| Ref. lines PE | 63 |
| Acc. factor 3D | 3 |
| Ref. lines 3D | 36 |
| CAIPI 3D Shift | 1 |
| Reference Scan Mode | EPI/separate |
| CAIPI Mode (tooltip) | Skipped-CAIPI |
| Total PAT factor | 3 |

Routine

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Averages | 1 |
| Filter | None |
| Coil elements | A32 |

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |

Contrast - Common

| | |
|--------------------|----------|
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Multi-echo spacing | 55.5 ms |
| Magn. preparation | None |
| Flip angle | 20 deg |
| Fat suppr. | Fat sat. |
| Magn. Prep. Shots | 1 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slab group | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L0.0 A12.6 H0.0 |
| L | 0.0 mm |
| A | 12.6 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Contrast - Dynamic

| | |
|---------------------|-------------|
| Averages | 1 |
| Averaging mode | Short term |
| Reconstruction | Magn./Phase |
| Measurements | 4 |
| Pause after meas. 1 | 0.0 s |
| Pause after meas. 2 | 0.0 s |
| Pause after meas. 3 | 0.0 s |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| Base resolution | 206 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |

Geometry - Saturation

| | |
|-----------------|----------|
| Saturation mode | Standard |
| Fat suppr. | Fat sat. |

System - Miscellaneous

| | |
|------------------|-----------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |

System - Miscellaneous

| | |
|---------------------|----------------|
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|---------------|--------------------|
| ! Position | L0.4 A11.1 H0.3 mm |
| ! Orientation | T > C0.4 |
| ! Rotation | 90.00 deg |
| ! R >> L | 185 mm |
| ! A >> P | 179 mm |
| ! F >> H | 32 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 215.000 V |

Sequence - Part 1

| | |
|--------------|------------|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Echo spacing | 1.05 ms |
| Bandwidth | 1056 Hz/Px |

Sequence - Part 2

| | |
|---------------|-----------|
| EPI factor | 52 |
| Segmentation | 3 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |
| Turbo factor | 36 |

Sequence - Special

| | |
|--------------------|---------|
| PATRef FA | 3 deg |
| RF duration | 2000 us |
| RF BWT product | 8 |
| Ernst T1 | 1200 ms |
| PATRef prep. shots | 10 |
| Volume dummy shots | 0 |
| Dummy Measurements | 0 |
| ETL per RTEB | 1 |
| Invert PE | Off |
| Min. TE if PF | On |
| Echo Time Shift | On |
| Ramp Sampling | On |

Sequence - Special

| | |
|-----------------------|-------------|
| NORDIC | Off |
| SVDPC | Off |
| Sym VASO | Off |
| Dual-pol. EPI | On |
| Invert RO | Off |
| Invert 3D | Off |
| Disable PF reco | Off |
| Disable PF reco | Off |
| Save sampling | Off |
| PE VComp | Off |
| Water Exc. | -none- |
| External PC | per Series |
| Saturation RF | per Shot |
| FIDNavs | -none- |
| EPI rise time factor | 1.10 |
| Mosaic DICOMs | On |
| Modify Ice Config | On |
| G-factor map | Off |
| GRAPPA Regularization | 50000 10^-6 |
| Var. FA /MAGEC | 0 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\rslh_1104_dual_polarity_bw_1156

TA: 0:23 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5k

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Auto close inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - Common

| | |
|---------------|-----|
| Interpolation | Off |
|---------------|-----|

Resolution - iPAT

| | |
|----------------------|---------------|
| PAT mode | CAIPIRINHA |
| Acc. factor PE | 1 |
| Ref. lines PE | 63 |
| Acc. factor 3D | 3 |
| Ref. lines 3D | 36 |
| CAIPI 3D Shift | 1 |
| Reference Scan Mode | EPI/separate |
| CAIPI Mode (tooltip) | Skipped-CAIPI |
| Total PAT factor | 3 |

Routine

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Averages | 1 |
| Filter | None |
| Coil elements | A32 |

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |

Contrast - Common

| | |
|--------------------|----------|
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Multi-echo spacing | 51.3 ms |
| Magn. preparation | None |
| Flip angle | 20 deg |
| Fat suppr. | Fat sat. |
| Magn. Prep. Shots | 1 |

Contrast - Dynamic

| | |
|---------------------|-------------|
| Averages | 1 |
| Averaging mode | Short term |
| Reconstruction | Magn./Phase |
| Measurements | 4 |
| Pause after meas. 1 | 0.0 s |
| Pause after meas. 2 | 0.0 s |
| Pause after meas. 3 | 0.0 s |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slab group | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L0.0 A12.6 H0.0 |
| L | 0.0 mm |
| A | 12.6 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| Base resolution | 206 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |

Geometry - Saturation

| | |
|-----------------|----------|
| Saturation mode | Standard |
| Fat suppr. | Fat sat. |

System - Miscellaneous

| | |
|------------------|-----------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |

System - Miscellaneous

| | |
|---------------------|----------------|
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|---------------|--------------------|
| ! Position | L0.4 A11.1 H0.3 mm |
| ! Orientation | T > C0.4 |
| ! Rotation | 90.00 deg |
| ! R >> L | 185 mm |
| ! A >> P | 179 mm |
| ! F >> H | 32 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 215.000 V |

Sequence - Part 1

| | |
|--------------|------------|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Echo spacing | 0.97 ms |
| Bandwidth | 1156 Hz/Px |

Sequence - Part 2

| | |
|---------------|-----------|
| EPI factor | 52 |
| Segmentation | 3 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |
| Turbo factor | 36 |

Sequence - Special

| | |
|--------------------|---------|
| PATRef FA | 3 deg |
| RF duration | 2000 us |
| RF BWT product | 8 |
| Ernst T1 | 1200 ms |
| PATRef prep. shots | 10 |
| Volume dummy shots | 0 |
| Dummy Measurements | 0 |
| ETL per RTEB | 1 |
| Invert PE | Off |
| Min. TE if PF | On |
| Echo Time Shift | On |
| Ramp Sampling | On |

Sequence - Special

| | |
|-----------------------|-------------|
| NORDIC | Off |
| SVDPC | Off |
| Sym VASO | Off |
| Dual-pol. EPI | On |
| Invert RO | Off |
| Invert 3D | Off |
| Disable PF reco | Off |
| Disable PF reco | Off |
| Save sampling | Off |
| PE VComp | Off |
| Water Exc. | -none- |
| External PC | per Series |
| Saturation RF | per Shot |
| FIDNavs | -none- |
| EPI rise time factor | 1.10 |
| Mosaic DICOMs | On |
| Modify Ice Config | On |
| G-factor map | Off |
| GRAPPA Regularization | 50000 10^-6 |
| Var. FA /MAGEC | 0 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\rslh_1104_dual_polarity_bw_1214

TA: 0:23 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5k

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Auto close inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - Common

| | |
|---------------|-----|
| Interpolation | Off |
|---------------|-----|

Resolution - iPAT

| | |
|----------------------|---------------|
| PAT mode | CAIPIRINHA |
| Acc. factor PE | 1 |
| Ref. lines PE | 63 |
| Acc. factor 3D | 3 |
| Ref. lines 3D | 36 |
| CAIPI 3D Shift | 1 |
| Reference Scan Mode | EPI/separate |
| CAIPI Mode (tooltip) | Skipped-CAIPI |
| Total PAT factor | 3 |

Routine

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Averages | 1 |
| Filter | None |
| Coil elements | A32 |

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |

Contrast - Common

| | |
|--------------------|----------|
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Multi-echo spacing | 49.2 ms |
| Magn. preparation | None |
| Flip angle | 20 deg |
| Fat suppr. | Fat sat. |
| Magn. Prep. Shots | 1 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slab group | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L0.0 A12.6 H0.0 |
| L | 0.0 mm |
| A | 12.6 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Contrast - Dynamic

| | |
|---------------------|-------------|
| Averages | 1 |
| Averaging mode | Short term |
| Reconstruction | Magn./Phase |
| Measurements | 4 |
| Pause after meas. 1 | 0.0 s |
| Pause after meas. 2 | 0.0 s |
| Pause after meas. 3 | 0.0 s |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| Base resolution | 206 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |

Geometry - Saturation

| | |
|-----------------|----------|
| Saturation mode | Standard |
| Fat suppr. | Fat sat. |

System - Miscellaneous

| | |
|------------------|-----------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |

System - Miscellaneous

| | |
|---------------------|----------------|
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|---------------|--------------------|
| ! Position | L0.4 A11.1 H0.3 mm |
| ! Orientation | T > C0.4 |
| ! Rotation | 90.00 deg |
| ! R >> L | 185 mm |
| ! A >> P | 179 mm |
| ! F >> H | 32 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 215.000 V |

Sequence - Part 1

| | |
|--------------|------------|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Echo spacing | 0.93 ms |
| Bandwidth | 1214 Hz/Px |

Sequence - Part 2

| | |
|---------------|-----------|
| EPI factor | 52 |
| Segmentation | 3 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |
| Turbo factor | 36 |

Sequence - Special

| | |
|--------------------|---------|
| PATRef FA | 3 deg |
| RF duration | 2000 us |
| RF BWT product | 8 |
| Ernst T1 | 1200 ms |
| PATRef prep. shots | 10 |
| Volume dummy shots | 0 |
| Dummy Measurements | 0 |
| ETL per RTEB | 1 |
| Invert PE | Off |
| Min. TE if PF | On |
| Echo Time Shift | On |
| Ramp Sampling | On |

Sequence - Special

| | |
|-----------------------|-------------|
| NORDIC | Off |
| SVDPC | Off |
| Sym VASO | Off |
| Dual-pol. EPI | On |
| Invert RO | Off |
| Invert 3D | Off |
| Disable PF reco | Off |
| Disable PF reco | Off |
| Save sampling | Off |
| PE VComp | Off |
| Water Exc. | -none- |
| External PC | per Series |
| Saturation RF | per Shot |
| FIDNavs | -none- |
| EPI rise time factor | 1.10 |
| Mosaic DICOMs | On |
| Modify Ice Config | On |
| G-factor map | Off |
| GRAPPA Regularization | 50000 10^-6 |
| Var. FA /MAGEC | 0 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\rslh_1104_dual_polarity_bw_1516

TA: 0:24 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5k

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Auto close inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Resolution - Common

| | |
|---------------|-----|
| Interpolation | Off |
|---------------|-----|

Resolution - iPAT

| | |
|----------------------|---------------|
| PAT mode | CAIPIRINHA |
| Acc. factor PE | 1 |
| Ref. lines PE | 63 |
| Acc. factor 3D | 3 |
| Ref. lines 3D | 36 |
| CAIPI 3D Shift | 1 |
| Reference Scan Mode | EPI/separate |
| CAIPI Mode (tooltip) | Skipped-CAIPI |
| Total PAT factor | 3 |

Routine

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Averages | 1 |
| Filter | None |
| Coil elements | A32 |

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |

Contrast - Common

| | |
|--------------------|----------|
| TR 1 | 78.2 ms |
| TR 2 | 3142 ms |
| TE 1 | 25.50 ms |
| Multi-echo spacing | 60.2 ms |
| Magn. preparation | None |
| Flip angle | 20 deg |
| Fat suppr. | Fat sat. |
| Magn. Prep. Shots | 1 |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slab group | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L0.0 A12.6 H0.0 |
| L | 0.0 mm |
| A | 12.6 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Contrast - Dynamic

| | |
|---------------------|-------------|
| Averages | 1 |
| Averaging mode | Short term |
| Reconstruction | Magn./Phase |
| Measurements | 4 |
| Pause after meas. 1 | 0.0 s |
| Pause after meas. 2 | 0.0 s |
| Pause after meas. 3 | 0.0 s |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| Base resolution | 206 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |

Geometry - Saturation

| | |
|-----------------|----------|
| Saturation mode | Standard |
| Fat suppr. | Fat sat. |

System - Miscellaneous

| | |
|------------------|-----------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |

System - Miscellaneous

| | |
|---------------------|----------------|
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|---------------|--------------------|
| ! Position | L0.4 A11.1 H0.3 mm |
| ! Orientation | T > C0.4 |
| ! Rotation | 90.00 deg |
| ! R >> L | 185 mm |
| ! A >> P | 179 mm |
| ! F >> H | 32 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 215.000 V |

Sequence - Part 1

| | |
|--------------|------------|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Echo spacing | 1.14 ms |
| Bandwidth | 1516 Hz/Px |

Sequence - Part 2

| | |
|---------------|-----------|
| EPI factor | 52 |
| Segmentation | 3 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |
| Turbo factor | 36 |

Sequence - Special

| | |
|--------------------|---------|
| PATRef FA | 3 deg |
| RF duration | 2000 us |
| RF BWT product | 8 |
| Ernst T1 | 1200 ms |
| PATRef prep. shots | 10 |
| Volume dummy shots | 0 |
| Dummy Measurements | 0 |
| ETL per RTEB | 1 |
| Invert PE | Off |
| Min. TE if PF | On |
| Echo Time Shift | On |
| Ramp Sampling | On |

Sequence - Special

| | |
|-----------------------|-------------|
| NORDIC | Off |
| SVDPC | Off |
| Sym VASO | Off |
| Dual-pol. EPI | On |
| Invert RO | Off |
| Invert 3D | Off |
| Disable PF reco | Off |
| Disable PF reco | Off |
| Save sampling | Off |
| PE VComp | Off |
| Water Exc. | -none- |
| External PC | per Series |
| Saturation RF | per Shot |
| FIDNavs | -none- |
| EPI rise time factor | 1.10 |
| Mosaic DICOMs | On |
| Modify Ice Config | On |
| G-factor map | Off |
| GRAPPA Regularization | 50000 10^-6 |
| Var. FA /MAGEC | 0 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\rslh_1104_dual_polarity

TA: 13:14 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5k

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Auto close inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Routine

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 62.9 ms |
| TR 2 | 2592 ms |
| TE 1 | 20.30 ms |
| Averages | 1 |
| Filter | None |
| Coil elements | A32 |

Contrast - Common

| | |
|--------------------|----------|
| TR 1 | 62.9 ms |
| TR 2 | 2592 ms |
| TE 1 | 20.30 ms |
| Multi-echo spacing | 53.4 ms |
| Magn. preparation | None |
| Flip angle | 20 deg |
| Fat suppr. | Fat sat. |
| Magn. Prep. Shots | 1 |

Contrast - Dynamic

| | |
|-------------------|-------------|
| Averages | 1 |
| Averaging mode | Short term |
| Reconstruction | Magn./Phase |
| Measurements | 302 |
| Pause after meas. | 0.0 s |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| Base resolution | 206 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|----------------------|---------------|
| PAT mode | CAIPIRINHA |
| Acc. factor PE | 1 |
| Ref. lines PE | 63 |
| Acc. factor 3D | 3 |
| Ref. lines 3D | 36 |
| CAIPI 3D Shift | 1 |
| Reference Scan Mode | EPI/separate |
| CAIPI Mode (tooltip) | Skipped-CAIPI |
| Total PAT factor | 3 |

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 62.9 ms |
| TR 2 | 2592 ms |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slab group | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L0.0 A12.6 H0.0 |
| L | 0.0 mm |
| A | 12.6 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Geometry - Saturation

| | |
|-----------------|----------|
| Saturation mode | Standard |
| Fat suppr. | Fat sat. |

System - Miscellaneous

| | |
|------------------|-----------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |

System - Miscellaneous

| | |
|---------------------|----------------|
| Coil Combine Mode | Sum of Squares |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|---------------|--------------------|
| ! Position | L0.4 A11.1 H0.3 mm |
| ! Orientation | T > C0.4 |
| ! Rotation | 90.00 deg |
| ! R >> L | 185 mm |
| ! A >> P | 179 mm |
| ! F >> H | 32 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 215.000 V |

Sequence - Part 1

| | |
|--------------|------------|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Echo spacing | 1.01 ms |
| Bandwidth | 1104 Hz/Px |

Sequence - Part 2

| | |
|---------------|-----------|
| EPI factor | 52 |
| Segmentation | 3 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |
| Turbo factor | 36 |

Sequence - Special

| | |
|--------------------|---------|
| PATRef FA | 3 deg |
| RF duration | 2000 us |
| RF BWT product | 8 |
| Ernst T1 | 1200 ms |
| PATRef prep. shots | 10 |
| Volume dummy shots | 0 |
| Dummy Measurements | 0 |
| ETL per RTEB | 1 |
| Invert PE | Off |
| Min. TE if PF | On |
| Echo Time Shift | On |
| Ramp Sampling | On |
| NORDIC | Off |
| SVDPC | Off |
| Sym VASO | Off |

Sequence - Special

| | |
|-----------------------|-------------|
| Dual-pol. EPI | On |
| Invert RO | Off |
| Invert 3D | Off |
| Disable PF reco | Off |
| Disable PF reco | Off |
| Save sampling | Off |
| PE VComp | Off |
| Water Exc. | -none- |
| External PC | per Series |
| Saturation RF | per Shot |
| FIDNavs | -none- |
| EPI rise time factor | 1.10 |
| Mosaic DICOMs | On |
| Modify Ice Config | On |
| G-factor map | Off |
| GRAPPA Regularization | 50000 10^-6 |
| Var. FA /MAGEC | 0 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|

\\USER\FMRIF\[XT-ID:93-M-0170]Renzo\20231205_thirdordershim\rslh_1104_dual_polarity_T1

TA: 4:32 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : nih5k

Properties

| | |
|---|--------------------|
| Prio recon | Off |
| Load images to viewer | On |
| Inline movie | Off |
| Auto store images | On |
| Load images to stamp segments | Off |
| Load images to graphic segments | Off |
| Auto open inline display | Off |
| Auto close inline display | Off |
| Start measurement without further preparation | Off |
| Wait for user to start | Off |
| Start measurements | Single measurement |

Contrast - Dynamic

| | |
|----------------------|-------|
| Pause after meas. 12 | 0.0 s |
| Pause after meas. 13 | 0.0 s |
| Pause after meas. 14 | 0.0 s |
| Pause after meas. 15 | 0.0 s |
| Pause after meas. 16 | 0.0 s |
| Pause after meas. 17 | 0.0 s |
| Pause after meas. 18 | 0.0 s |
| Pause after meas. 19 | 0.0 s |
| Pause after meas. 20 | 0.0 s |
| Pause after meas. 21 | 0.0 s |
| Pause after meas. 22 | 0.0 s |
| Pause after meas. 23 | 0.0 s |
| Pause after meas. 24 | 0.0 s |
| Pause after meas. 25 | 0.0 s |
| Pause after meas. 26 | 0.0 s |
| Pause after meas. 27 | 0.0 s |
| Pause after meas. 28 | 0.0 s |
| Pause after meas. 29 | 0.0 s |
| Pause after meas. 30 | 0.0 s |
| Pause after meas. 31 | 0.0 s |
| Pause after meas. 32 | 0.0 s |
| Pause after meas. 33 | 0.0 s |
| Pause after meas. 34 | 0.0 s |
| Pause after meas. 35 | 0.0 s |
| Pause after meas. 36 | 0.0 s |
| Pause after meas. 37 | 0.0 s |
| Pause after meas. 38 | 0.0 s |
| Pause after meas. 39 | 0.0 s |
| Pause after meas. 40 | 0.0 s |
| Pause after meas. 41 | 0.0 s |
| Pause after meas. 42 | 0.0 s |
| Pause after meas. 43 | 0.0 s |
| Pause after meas. 44 | 0.0 s |
| Pause after meas. 45 | 0.0 s |
| Pause after meas. 46 | 0.0 s |
| Pause after meas. 47 | 0.0 s |
| Pause after meas. 48 | 0.0 s |
| Pause after meas. 49 | 0.0 s |

Routine

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 62.9 ms |
| TR 2 | 5224 ms |
| TE 1 | 20.30 ms |
| Averages | 1 |
| Filter | None |
| Coil elements | A32 |

Contrast - Common

| | |
|--------------------|-----------------|
| TR 1 | 62.9 ms |
| TR 2 | 5224 ms |
| TE 1 | 20.30 ms |
| Multi-echo spacing | 53.4 ms |
| Magn. preparation | Non-sel. HSN IR |
| TI 1 | 576.1 ms |
| TI 2 | 1708.3 ms |
| Flip angle | 20 deg |
| Fat suppr. | Fat sat. |
| Magn. Prep. Shots | 2 |

Contrast - Dynamic

| | |
|----------------------|-------------|
| Averages | 1 |
| Averaging mode | Short term |
| Reconstruction | Magn./Phase |
| Measurements | 50 |
| Pause after meas. 1 | 0.0 s |
| Pause after meas. 2 | 0.0 s |
| Pause after meas. 3 | 0.0 s |
| Pause after meas. 4 | 0.0 s |
| Pause after meas. 5 | 0.0 s |
| Pause after meas. 6 | 0.0 s |
| Pause after meas. 7 | 0.0 s |
| Pause after meas. 8 | 0.0 s |
| Pause after meas. 9 | 0.0 s |
| Pause after meas. 10 | 0.0 s |
| Pause after meas. 11 | 0.0 s |

Resolution - Common

| | |
|-----------------------|---------|
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| Base resolution | 206 |
| Phase resolution | 100 % |
| Slice resolution | 100 % |
| Phase partial Fourier | 6/8 |
| Slice partial Fourier | Off |
| Interpolation | Off |

Resolution - iPAT

| | |
|----------------------|---------------|
| PAT mode | CAIPIRINHA |
| Acc. factor PE | 1 |
| Ref. lines PE | 63 |
| Acc. factor 3D | 3 |
| Ref. lines 3D | 36 |
| CAIPI 3D Shift | 1 |
| Reference Scan Mode | EPI/separate |
| CAIPI Mode (tooltip) | Skipped-CAIPI |
| Total PAT factor | 3 |

Resolution - Filter Image

| | |
|-------------------|-----|
| Image Filter | Off |
| Distortion Corr. | Off |
| Prescan Normalize | Off |
| Normalize | Off |
| B1 filter | Off |

Resolution - Filter Rawdata

| | |
|-------------------|-----|
| Raw filter | Off |
| Elliptical filter | Off |

Geometry - Common

| | |
|-----------------|--------------------|
| Slab group | 1 |
| Slabs | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| Slab Scale | -10 % |
| Slices per slab | 36 |
| FoV read | 175 mm |
| FoV phase | 100.0 % |
| Slice thickness | 0.84 mm |
| TR 1 | 62.9 ms |
| TR 2 | 5224 ms |

Geometry - AutoAlign

| | |
|---------------------|--------------------|
| Slab group | 1 |
| Position | L0.0 A12.6 H0.0 mm |
| Orientation | Transversal |
| Phase enc. dir. | A >> P |
| AutoAlign | --- |
| Initial Position | L0.0 A12.6 H0.0 |
| L | 0.0 mm |
| A | 12.6 mm |
| H | 0.0 mm |
| Initial Rotation | 0.00 deg |
| Initial Orientation | Transversal |

Geometry - Saturation

| | |
|-----------------|----------|
| Saturation mode | Standard |
| Fat suppr. | Fat sat. |

System - Miscellaneous

| | |
|---------------------|----------------|
| Positioning mode | FIX |
| Table position | H |
| Table position | 0 mm |
| MSMA | S - C - T |
| Sagittal | R >> L |
| Coronal | A >> P |
| Transversal | F >> H |
| Coil Combine Mode | Sum of Squares |
| Save uncombined | Off |
| Matrix Optimization | Off |
| AutoAlign | --- |
| Coil Select Mode | Default |

System - Adjustments

| | |
|--------------------------|----------|
| B0 Shim mode | Brain |
| B1 Shim mode | TrueForm |
| Confirm freq. adjustment | Off |
| Assume Dominant Fat | Off |
| Assume Silicone | Off |
| Adjustment Tolerance | Auto |

System - Adjust Volume

| | |
|---------------|--------------------|
| ! Position | L0.4 A11.1 H0.3 mm |
| ! Orientation | T > C0.4 |
| ! Rotation | 90.00 deg |
| ! R >> L | 185 mm |
| ! A >> P | 179 mm |
| ! F >> H | 32 mm |
| Reset | Off |

System - Tx/Rx

| | |
|---------------------|----------------|
| Frequency 1H | 297.184309 MHz |
| Correction factor | 1 |
| Gain | Low |
| Img. Scale Cor. | 1.000 |
| Reset | Off |
| ! Ref. amplitude 1H | 215.000 V |

Sequence - Part 1

| | |
|--------------|------------|
| Introduction | On |
| Dimension | 3D |
| Reordering | Linear |
| Contrasts | 1 |
| Echo spacing | 1.01 ms |
| Bandwidth | 1104 Hz/Px |

Sequence - Part 2

| | |
|---------------|-----------|
| EPI factor | 52 |
| Segmentation | 3 |
| RF pulse type | Normal |
| Gradient mode | Fast |
| Excitation | Slab-sel. |
| RF spoiling | On |
| Turbo factor | 18 |

Sequence - Special

| | |
|----------------------|------------|
| PATRef FA | 3 deg |
| RF duration | 2000 us |
| RF BWT product | 8 |
| Ernst T1 | 1200 ms |
| PATRef prep. shots | 10 |
| Volume dummy shots | 0 |
| Dummy Measurements | 0 |
| ETL per RTEB | 1 |
| Invert PE | Off |
| Min. TE if PF | On |
| Echo Time Shift | On |
| Ramp Sampling | On |
| NORDIC | Off |
| SVDPC | Off |
| Sym VASO | Off |
| Dual-pol. EPI | On |
| Invert RO | Off |
| Invert 3D | Off |
| Disable PF reco | Off |
| Disable PF reco | Off |
| Save sampling | Off |
| PE VComp | Off |
| Water Exc. | -none- |
| External PC | per Series |
| Saturation RF | per Shot |
| FIDNavs | -none- |
| EPI rise time factor | 1.10 |
| Mosaic DICOMs | On |
| Modify Ice Config | On |
| G-factor map | Off |

Sequence - Special

| | |
|-----------------------|------------------------|
| GRAPPA Regularization | 50000 10 ⁻⁶ |
| HSN RF power scale | 2.00 |
| Inversion Delay | 0 ms |
| Relaxation Delay | 0 ms |
| Var. FA /MAGEC | 0 |

Sequence - Assistant

| | |
|------|-----|
| Mode | Off |
|------|-----|